

Curriculum Vitae and Bibliography

Abigail L Stockham, MD

Personal Information

Place of Birth: Maquoketa, IA
Work Address: Mayo Clinic Cancer Center
700 West Avenue South
La Crosse, WI 54601
608-392-7196
Email Address: Stockham.Abigail@mayo.edu

Present Academic Rank and Position

Assistant Professor of Radiation Oncology - Mayo Clinic College of Medicine and Science 02/2016 - Present
Consultant - Department of Radiation Oncology, Mayo Clinic, Rochester, Minnesota 08/2017 - Present

Education

Wartburg College, Waverly, Iowa - BA 08/1999 - 12/2002
University of Iowa, Iowa City, Iowa - MD, Elective Research Experience in Neuro-Oncology, distinction in research 08/2003 - 05/2008
University of Texas M.D. Anderson Cancer Center, Houston, Texas - Research Internship, Elective Research Experience in Neuro-Oncology 06/2006 - 06/2007
Cleveland Clinic, Cleveland, Ohio – Internship in Oncology (Combined Medical Oncology/ER/ENT/Urology/Colorectal Surgical Oncology/Pathology) 07/2008 - 06/2009
Cleveland Clinic, Cleveland, Ohio - Resident, Radiation Oncology 07/2009 - 06/2013
Brigham and Women's Hospital/Dana-Farber Cancer Institute, Boston, Massachusetts – Harvard Radiation Oncology Fellow, Neuro-Radiation Oncology 07/2013 - 06/2014

Additional Education

Cleveland Clinic Gamma Knife Stereotactic Radiosurgery Course 2013
The Plummer Dialogues 08/2015
Oxford Student Exchange Program, Oxford University - University of Iowa 2008

Certification

Board Certifications

Mayo Clinic Quality Academy

Mayo Clinic Quality Fellow: Bronze Level Certification 2017

American Board of Radiation Oncology

2014

Licensure

Ohio Ohio Medical Trainee License (#57.015528) (Medical) 01/2008 - 2013
United States DEA Trainee License (#AC2895437D68) (Medical) 01/2008 - 2013
United States National Practitioner ID (#1730352550 (Medical) 01/2008 - Present
of America
Massachusetts Massachusetts Medical Trainee License (Medical) 2013 - 2014

United States of America	DEA Trainee License (#BB5204071) (Medical)	2013 - 2014
Wisconsin	62605-20 (Medical)	01/2017 - current
Wisconsin	DEA License - WI (#FS4861868) (Medical)	01/2017 - current
Minnesota	DEA License - MN (#FS4827715) (Medical)	09/2017 - current
Minnesota	58468 (Medical)	02/2019 - current

Honors and Awards

Regents Full -Tuition Scholarship - Wartburg College, Waverly, Iowa	1999 - 2002
Mariousis Scholarship Merit/Service Award - Jackson County, IA	2005
Alpha Omega Alpha - University of Iowa, Iowa City, Iowa	2006
Mariousis Scholarship Merit/Service Award - Jackson County, IA	2007
Oxford Educational Fellowship - University of Iowa, Iowa City, Iowa	2008
Research Distinction Track - University of Iowa, Iowa City, Iowa	2008
Merlin Bumpus Distinguished Junior Investigator Award for Clinical Research - Cleveland Clinic, Cleveland, Ohio	2011
Scholarship to attend SRS Course for Residents - AANS/ASTRO	2012
RSNA Resident Research Award - Cleveland Clinic, Cleveland, Ohio	2013
Travel Award - Radiation Therapy Oncology Group	2013
Mayo Clinic Values in Practice Award - Mayo Clinic	2015
Recognition for Respect, Healing, Excellence, Teamwork, and Compassion - Mayo Clinic	04/2015
Recognition for Service and Teamwork - Mayo Clinic	06/2015
Mayo Clinic Midwest Clinical Practice Innovation Grant – Competitive award to develop a program for Thoracic Surgery/Interventional Pulmonology eVisits with MCHS patients	2019-2020
Coulee Region Rising Star – 7-River Alliance Recognition of Rising Stars Under Age 40	2020
Mayo Clinic Enterprise Values Council Research Grant – Grant to study internal working environment and values	2020

Previous Professional Positions and Major Appointments

Ambulance Dispatch/Hospital Registration/Switchboard Operator - Jackson County Public Hospital, Maquoketa, Iowa 40 hours per week	1996 - 1997
Nursing Assistant - Jackson County Public Hospital, Maquoketa, Iowa 20-40 hours per week, later PRN; end of life care	1997 - 2002
Nursing Assistant - Virginia Gay Hospital, Vinton, Iowa 40 hours per week; end of life care	01/2003 - 05/2003
Resident Supervisor - Cleveland Clinic, Cleveland, Ohio Supervision of medical students through case initial report, manuscript development/submission	07/2009 - 06/2013
Resident Physician in Radiation Oncology - Cleveland Clinic, Cleveland, Ohio Teaching of junction residents and medical students	2012
Resident Physician in Radiation Oncology Supervisor - Cleveland Clinic, Cleveland, Ohio Supervision of medical students through abstract development/submission	2012

Fellow Physician in Neuro-Radiation Oncology - Brigham and Women's Hospital/Dana-Farber Cancer Institute, Boston, Massachusetts Teaching of Radiation Oncology residents and medical students	07/2013 - 06/2014
Senior Associate Consultant - Department of Radiation Oncology, Mayo Clinic, Rochester, Minnesota	09/2014 - 08/2017
Instructor in Radiation Oncology - Mayo Clinic College of Medicine and Science	03/2015 - 01/2016
Assistant Professor of Radiation Oncology – Mayo Clinic College of Medicine and Science	02/01/2016 - Present

Service

Community Memberships and Services

GROW La Crosse Board of Directors	2014 - 2017
Mayo Clinic Health System Mayo Clinic Health System - Franciscan Healthcare in La Crosse Volunteer at Dragon Boat Cancer Fundraiser	07/2019
MCHS - FH Cancer Center Celebrate Life Event Community Service Member	06/2015
MCHS-FH Dragon Boat Team Participant	07/2015
Sparta Area Cancer Support Group Guest Speaker	08/2019
Women's Fund of Greater La Crosse Fall Luncheon Welcome Address and Mayo Clinic Representative	10/2019
American Board of Radiology Maintenance of Certification Software Volunteer MOC Volunteer	2018 – 2019 2019 – Present
La Crosse Urban Development Summit Lecture/presentation La Crosse, WI	05/20/2016
ASTRO Ask a Radiation Oncologist LiveStream Panel Facebook Livestream Brain/CNS Malignancy Radiation Oncologist Panel	2021
Mayo Clinic Alumni Association Biennial Meeting for Women Physicians & Scientists, Planning Committee	2021

Professional Memberships and Societies

Professional Memberships and Services

Alpha Omega Alpha Member	2006 - Present
American Society for Radiation Oncology Member Communications Committee Member	2008 - Present 09/2016 - Present
EPIC – National Radiation Oncology Steering Committee Member Chair	2017 – Present 2019 - Present
American College of Radiation Oncology	

Resident National Committee, Chair	2011-2012
Member-in-Training Representative	2011 - 2012
Member-in-Training Representative	2012 - 2013
Member-in-Training Representative	2013 - 2014
Member	2014 - 2019
American Medical Association	
Member	2009 - 2016

Journal Responsibilities

Journal Other Responsibilities

International Journal of Radiation Oncology Biology and Physics	
Ad-hoc Reviewer	2016
ASTRO Brain Metastases Guideline Reviewer	2021

Education Interests and Accomplishments

Curriculum and Course Development

Post-SRS Radiation Necrosis Identification and Treatment	08/2017, 09/2019
Mayo Clinic Resident Lecture Series	
Rochester, MN, United States of America	
Family Medicine Lecture Series	2016 - Present
Mayo Clinic Healthcare – Franciscan Healthcare	
La Crosse, WI, United States of America	
Upward Bound Federal Program for at-risk students	2021
Teacher/Professor, University of Wisconsin-La Crosse Work Study/Career Skills	

Teaching

Radiation-Induced Malignancies	
Cleveland Clinic Radiation Therapist Continuing Education Series	
Radiation Therapist/Dosimetrist Lecture Series	2010 - 2012
Cleveland Clinic	
Cleveland, Ohio	
Gynecologic Malignancies	2011
Cleveland Clinic Dosimetry Program	
CT Anatomy of the Pelvis	2012
Cleveland Clinic Radiation Therapist Continuing Education Series	
Radiation Oncology for the Non-Oncologist; Introduction and Treatment Planning/Simulation	03/18/2015
Radiation Oncology for the Non-Oncologist; Treatment Planning	05/13/2015
Radiation Oncology for the Non-Oncologist; Mock Treatment and Side Effect Management	05/20/2015
Dosimetry Teaching	08/17/2015
Radiation therapy dosimetric contouring of heart and bowel	
Radiation Oncology Lecture Series for MCHS-FH Family Medicine Residents	2016 - 12/29/2016
Four separate Radiation Oncology specific lectures to MCHS-FH resident physicians (11/14/2016, 11/30/2016, 12/19/2016, 12/29/2016).	
Radiation Oncology Lecture Series for MCHS-Family Medicine Residents	03/01/2017 - 04/26/2017
Radiation Oncology Lecture Series for MCHS-FH Family Medicine Residents	03/01/2018 - 04/25/2018

Radiation Oncology Lecture Series for MCHS-FH Resident Physicians	04/01/2019
Mayo Rochester Department of Radiation Oncology Resident CNS Disease Site Lecture	09/06/2019
Radiation Oncology Lecture Series for MCHS-FH Resident Physicians, first of 3-4 lecture series	09/13/2019

Academic Career Development

New Physician & Scientist - Leading with Emotional Intelligence	02/2015
New Physician & Scientist - The Leadership Effect	02/2015
New Physician & Scientist - Mayo Leader 360	07/2015

Institutional/Departmental Administrative Responsibilities, Committee Memberships and Other Activities

Mayo Clinic Health System – La Crosse

MCHS – SWWI Executive Operations Team	2020 - Present
MCHS – SWWI Professionalism, Values, and Mission Committee Chair	2020 - Present
MCHS – SWWI Vice Regional Medical Informatics Officer	2020- Present
MCHS – FH Cutaneous Oncology Working Group Consulting Staff	2015 - 2018
Mayo Health System MCHS-FH Multidisciplinary Breast Cancer Conference Consulting Staff	09/01/2014 - Present
MCHS - La Crosse Cancer Center Clinical Practice Committee Committee Member	09/01/2014 – 04/18/2018
MCHS - La Crosse Radiation Oncology Clinical Practice Committee Chair	04/18/2018 - Present
MCHS-FH Cancer Committee Committee Member	09/01/2014 - Present
MCHS-FH Medical Oncology Interview Committee Interviewer	2014 - Present
MCHS-FH Multidisciplinary Lung Cancer Conference Consulting Staff	2014 - Present
MCHS-FH Urology Interview Committee Interviewer	2014 – as needed
Radiation Oncology Regional Practice Committee Committee Member	2014 - Present
MCHS-FH – Radiation Oncology Regional Practice Executive Committee	2021 - Present
MCHS-FH – Research Committee	2021 – Present

Mayo Clinic Enterprise

Mayo Clinic Practice Subcommittee on Marketing and Communication Committee Member	08/08/2015 - Present
EPIC Optimization Committee Committee Member	04/02/2018 - Present
Office of Patient Education/Health Education & Content Services, Enterprise Executive Committee/Advisory Group Committee Member	2017 – Present
Mayo Clinic Enterprise Values Council	2020 – Present

Mayo Clinic Enterprise Program in Professionalism and Values 2020 - Present

Activities at Other Institutions

Washington University in St. Louis	
Consultant/Visiting Professor regarding EPIC	2018
ASTRO Annual Meeting in Boston	
Panelist	09/24/2016
Faculty Panel Discussion	
Cleveland Clinic Appeals Task Force	
Member	2012
Voting Member for dismissed residents	
Cleveland Clinic Bioethics Committee	
Member	2011 - 2013
Cleveland Clinic Care Pathways	
Head and Neck Committee	
Larynx sub-site, Contributor	2013
Cleveland Clinic House Staff Association	
Member, Member of Executive Committee	2010 - 2013
University of Iowa Medical Student Ambassador Program	
Vice President	2003 - 2005
Vice President for Internal Affairs	
University of Iowa Carver College of Medicine	
Discussions - a Dialogue on Diversity	
Member	2003 - 2004
University of Iowa Deeded Body Ceremony Committee	
Member/Speaker	2004
University of Iowa Foundations of Clinical Practice Core Curriculum Committee	
Co-Chair	2003 - 2005
Student chair for three of four courses	
University of Iowa Humanism in Medicine Committee	
Member	2007
University of Iowa Local Outreach Free Mobile Clinic	
Coordinator	2003 - 2005
University of Iowa Orientation Committee	
Member	2004
University of Iowa Promotions Committee	
Voting Member	2007 - 2008
University of Iowa Simulated Patient Appreciation Luncheon Committee	
Member and Invited Speaker	2004
Wartburg College Regents Scholarship Selection Committee	
Invited Interviewer	2004

Presentations Extramural

National or International

Invited

Principles of Brachytherapy	2013
Cleveland Clinic Course on Ophthalmic Brachytherapy	
International Society of Ocular Oncology Meeting	
Cleveland, Ohio	

Poster

Inter-Fraction Prostate Motion with Endorectal Balloon Placement
Stockham AL, Djemil T, Stephans K, Xia P
ASTRO
Atlanta, Georgia

2013

Regional**Invited**

La Crosse Urban Development Summit Presentation
lecture/presentation

05/20/2016

Other

Prostate LDR - 48 cases completed

Extracranial SBRT - 37 cases completed

Practice Marketing

Meeting with MCHS-FH Department of Marketing regarding new/changing
marketing strategies.

MCHS-FH Department of Marketing

Tutor/Registrar

2004 - 2005

Biochemistry

University of Iowa

Tutor/Registrar

2006

USMLE Step 1

University of Iowa

ASTRO Focus Group

09/2016

ASTRO Annual Conference

Boston, Massachusetts

Bibliography

Peer-reviewed Articles

1. **Stockham AL**, Tievsky AL, Koyfman SA, Reddy CA, Suh JH, Vogelbaum MA, Barnett GH, Chao ST. Standard MRI Findings Do Not Reliably Distinguish Radiation Necrosis from Tumor Recurrence. *J Neurooncology*. 2012 Aug; 109(1):149-58. Epub 2012 May 26 DOI: 10.1007/s11060-012-0881-9
2. Chao ST, Ahluwalia MS, Barnett GH, Stevens GH, Murphy ES, **Stockham AL**, Shiue K, Suh JH. Challenges with the Diagnosis and Treatment of Cerebral Radiation Necrosis. *IJROBP*. 2013 Nov 1; 87(3):449-57. Epub 2013 Jun 19 DOI: 10.1016/ijrobp.2013.05.015
3. **Stockham AL**, Reddy CA, Murphy ES, Kumar AK, Vogelbaum MA, Barnett GH, Suh JH, Chao ST. Results of a Questionnaire Regarding Practice Patterns of the Diagnosis and Treatment of Intracranial Radiation Necrosis Following SRS. *J Neurooncology*. 2013 Dec. Epub 2013 Sep 18 DOI: 10.1007/s11060-013-1248-6
4. **Stockham AL**, Arvold ND. The Role of Radiotherapy in the Management of Brain Metastases. *Contemporary Oncology*. 2014.
5. Li Wen, Lu Lan, Stephans Kevin, Sharma Naveen, Vassil Andrew, Shen Zhilei, **Stockham Abigail**, Djemil Toufik, Tendulkar Rahul, Xia Ping. Volumetric-Based Image Guidance is Superior to Marker-Based Alignments for SBRT of Prostate Cancer *Journal of Applied Clinical Medical Physics*. 2018.

Non-Peer-reviewed Articles

1. **Stockham AL**, Chao ST, Suh JH. Wanted - Dead or Alive? Distinguishing radiation necrosis from tumor recurrence after stereotactic radiosurgery. *Applied Radiation Oncology*. 2012 Oct:26-29.
2. Kumar SSS*, **Stockham AL**, Chao ST, Ahluwalia M, Suh JH. Radiation Necrosis: Now you see it, now you don't. *Applied Radiation Oncology*. 2013 Feb:24-27.

Book Chapters

1. **Stockham AL**, Chao ST, Suh JH. Radiotherapy of Central Nervous System Tumors. In: Videtic GM, Vassil AD. *Handbook of Planning Treatment in Radiation Oncology* NY: Springer; 2010. p. 25-39.
2. Hunter GK, Vassil AD, **Stockham AL**, Chao ST, Videtic GMM. Soft Tissue Sarcoma Radiotherapy. In: Videtic GM, Vassil AD. *Handbook of Planning Treatment in Radiation Oncology* NY: Springer; 2010. p. 181-92.
3. **Stockham AL**, Suh J, Chao S. Difficult Cases: Management of Recurrent Brain Metastasis after Radiosurgery. In: Kim, Dong Gyu and Lunsford, L Dade. *Current and Future Management of Brain Metastasis, A Volume in 'Progress in Neurological Surgery'*. *Prog Neurol Surg*. Vol. 25. 2012. p. 273-86.
4. Balagamwala EH*, **Stockham AL**, Macklis RM, Pelayes D, Seregar S, Singh AD. Introduction to Radiotherapy - Standard Teletherapy Techniques. In: Singh AD, Pelayes D, Seregar S, Macklis RM. *Ophthalmologic Radiation Therapy - Techniques and Applications, Developments in Ophthalmology*. Vol. 52. Karger; 2013. p. 1-14.
5. **Stockham AL**, Balagamwala EH, Macklis RM, Singh AD. Principles of Radiation Therapy. In: Singh and Damato: *Clinical Ophthalmic Oncology*. 2 ed. Vol. 1. Karger; 2013.
6. **Stockham AL**, Balagamwala EH, Macklis RM, Pelayes D, Seregar S, Singh AD. Teletherapy - Advanced Techniques. In: Singh AD, Pelayes D, Seregar S, and Macklis RM. *Ophthalmologic Radiation Therapy - Techniques and Applications, Developments in Ophthalmology*. Vol. 52. Karger; 2013. p. 15-28.
7. **Stockham AL**, Chao ST, Suh JH. Radiotherapy of Central Nervous Systems. In: Videtic GM, Woddy NM. *Handbook of Planning Treatment in Radiation Oncology*. NY: Springer; 2014.
8. **Stockham AL**, Arvold ND. Brachytherapy: Applications and Techniques. In: Devlin PM. *CNS Brachytherapy*. Lippincott Williams & Wilkins; 2015.
9. Funk RK, **Stockham AL**, Laack NNI. Basics of radiation therapy. In: Herrmann J editor., *Clinical cardio-oncology*. 2016. p. 39-60.
10. **Stockham AL**, Schwartz DJ. Meningioma. In: Ward, Videtic and Tendulkar. *Essentials of Clinical Radiation Oncology* .1st Edition ed. Volume 2018. New York, NY: Demos Medical Publishing; 2017.p. Pages 24-31
11. **Stockham AL**, Schwartz DJ. Meningioma. In: Ward MC; Tendulkar RD; Videtic GMM editors., *Essentials of clinical radiation oncology*. New York: Demos Medical; 2018. p. 24-31.

Miscellaneous

1. **Stockham AL.** Radiation Oncology for the Non-Oncologist. Outline of the technical aspects of each step in radiotherapy consultation/simulation/treatment/side effects. 2015 – present.
2. **Stockham AL.** System-wide Management Guidelines for the Treatment of Central Nervous System Malignancies. Mayo Clinic Department of Radiation Oncology Internal Webpage. 2015.
3. **Stockham AL.** Essay/Internal News Center Publication – Leadership reflection regarding values and navigating through COVID-19. 4.02.2020.
4. **Stockham AL.** Invited Essay/News Center Publication – Invited essay for internal enterprise-wide publication regarding institutional values and work against racism. 01.25.2021.

* Indicates that the primary author was a mentee of this author.

Curriculum Vitae and Bibliography

Adebisi Alli, DO, MS

Personal Information

Email Address: Alli.Adebisi@mayo.edu

Present Academic Rank and Position

Clinical Assistant Professor - Department of Internal Medicine, University of Arizona College of Medicine, Phoenix, Arizona	2016 - Present
Assistant Professor of Medicine - Mayo Clinic College of Medicine and Science	05/2019 - Present
Consultant - Division of Women's Health, Department of Internal Medicine, Mayo Clinic, Scottsdale/Phoenix, Arizona	07/2021 - Present

Education

University of Michigan, Ann Arbor, Michigan - BS, Biopsychology	08/2000 - 04/2004
Wayne State University School of Medicine, Detroit, Michigan - MS, Basic Medical Sciences	09/2004 - 12/2005
Wayne State University School of Medicine, Detroit, Michigan - Graduate Research Assistant, Department of Pathology	08/2006 - 06/2007
Michigan State University College of Osteopathic Medicine, Lansing, Michigan - Doctor of Osteopathic Medicine	06/2007 - 06/2011
Banner Good Samaritan Medical Center/Phoenix VA Health Care System, Phoenix, Arizona - Residency, Internal Medicine	06/2011 - 06/2014
Banner University Medical Center-Phoenix/Phoenix VA Healthcare System, Phoenix, Arizona - Chief Resident	06/2014 - 05/2015

Additional Education

White Belt Certification	2014
Lean Six Sigma VA	
Yellow Belt Certification	2015
Lean Six Sigma VA	
Green Belt Certification	2015
Lean Six Sigma VA	
Chronic Pain Champion	2016
Phoenix VA Health Care System, Phoenix, Arizona	
Hypertension Champion	2016
Phoenix VA Health Care System, Phoenix, Arizona	
Foundation of Servant Leadership Course	2016
Goals of Care Conversation	2017
Intensive Leadership Program for Physicians	
Phoenix VA Health Care System, Phoenix, Arizona	
Black Belt Certification	2017
Lean Six Sigma VA	
Women's Wellness Through Equity and Leadership - Certification	03/2020
American College of Physicians	

Certification

Board Certifications

American Board of Internal Medicine (ABIM)

Internal Medicine 2014 - Present

American Heart Association (AHA)

Advanced Cardiovascular Life Support (ACLS)

Basic Life Support (BLS)

Other Certifications

Mayo Clinic Quality Academy

Mayo Clinic Quality Fellow: Bronze Level Certification 2018

Licensure

Arizona 006334 (Medical)

Honors and Awards

Acorn Award - St. John Hospital 1999

Award - Lakeshore Optimist Club of Grosse Pointe 2000

Betty Campau Spirit Award - University of Michigan 2000

Determined by peers

Creative Pen Award - William C. Prescott 2000

Cum Laude - University Liggett School 2000

Michigan Competitive Scholar - State of Michigan 2000

Spanish Honors Society - University of Michigan 2000

Ventures Scholar - University of Michigan 2000

Successful Completion - Scholars Program, Undergraduate Research Opportunity Program 2002

Determined by peers

Acorn Award - St. John Hospital 2004

Kaplan Scholarship - Wayne State University Association of Pre-Med Students 2004

Super Peer Award - Undergraduate Research Opportunity Program 2004

Determined by peers

Two-Year Peer Advisor Certificate of Recognition - Undergraduate Research Opportunity Program 2004

Determined by peers

Graduate Research Assistantship - Department of Pathology, Wayne State University School of Medicine 2006

Service Excellence Award - St. John Hospital 2006

Acknowledgement of Three Years of Dedicated Service - St. John Hospital 2007

Thomas C. Rumble University Graduate Fellowship - Wayne State University School of Medicine 2007

Edward N. Hodges III, J.D. Endowed Scholarship Fund - Michigan State University College of Osteopathic Medicine 2008

Dr. Stefan H. Kobiljak Jr. Scholarship - Michigan State University College of Osteopathic Medicine 2009

SOMA Minority Leadership Award - SOMA 2009

TOUCH Community Service Award - Michigan State University College of Osteopathic Medicine 2009

Dr. Stefan H. Kobiljak Jr. Scholarship - Michigan State University College of Osteopathic Medicine 2010

Internal Medicine Resident Community Service - Banner Good Samaritan Medical Center 2013 - 2014

Resident of the Year - Internal Medicine Center, Banner Good Samaritan Medical Center; Internal Medicine Center 2013 - 2014

Director Award - Phoenix Veterans Affairs Healthcare System 2014

First Place - Patient Safety/Quality Improvement - Arizona Chapter, American College of Physicians	2014
Nominee, Resident of the Year - Arizona Chapter, American College of Physicians	2014
Top Poster Presentation - IHI 2014 20th Annual Scientific Symposium	2014
Young Achievers in Medicine Recognition - American College of Physicians	2015
Nominee, Volunteerism & Community Service Award - Arizona Chapter, American College of Physicians	2016
2016-2017 Best Required Rotation - VA Ambulatory, University of Arizona College of Medicine	2017
Certificate of Appreciation for Improvement of SAIL Measures - Phoenix VA Health Care System	2017
Early Career Physician National Abstract Competition - Winner - American College of Physicians, Phoenix, Arizona	2017
Early Career Physician of the Year, Chapter Award - American College of Physicians, Phoenix, Arizona	2017
Inspiration Award - Womens Physician Section, American Medical Association	2019
2020 Exceptional Mentor Award - American Medical Women's Association	2020
I Stand With Her Awards - She for She Nominee - Women in Medicine, Mayo Clinic	2020

Previous Professional Positions and Major Appointments

Research and Office Assistant - BSA and Associates, Detroit, Michigan	08/1992 - 01/2007
UROP Student - Department of Organizational Psychology, University of Michigan, Ann Arbor, Michigan Under Dr. Margaret Shih	11/2000 - 08/2002
UROP Student - School of Social Work, University of Michigan, Ann Arbor, Michigan Under Dr. Beth Glover Roeed	11/2000 - 08/2002
Research Assistant - Department of Clinical Psychology, University of Michigan, Ann Arbor, Michigan	2002 - 2004
Peer Advisor - University of Michigan, Ann Arbor, Michigan Undergraduate Research Opportunity Program (UROP) & UROP in Residence	2002 - 2004
Resident Advisor - University of Michigan, Ann Arbor, Michigan	2002 - 2004
Research Assistant - Department of Pathology, Wayne State University School of Medicine, Detroit, Michigan	05/2004 - 05/2007
Office Assistant - St. John Hospital; Imaging Services, Detroit, Michigan	05/2004 - 05/2007
Scribe Liaison - Scribe Services, Michigan State University College of Medicine, East Lansing, Michigan	08/2007 - 05/2009
Co-Founder - Michigan State University-Lansing Eastern High School; S.T.A.R.T. Mentorship Program, East Lansing, Michigan	08/2008 - 06/2011
President - Housestaff Council, Banner University Medical Center-Phoenix, Phoenix, Arizona	06/2013 - 06/2014
Co-Director and Co-Founder - Diversity Mentorship Initiative Affiliated with UofACOM-P, Midwestern University, & National Medical Association—Arizona Chapter	06/2014 - 07/2018
VISN Coordinator - Goals of Care Training Life-Sustaining Treatment Decisions Initiative, Phoenix Veterans Affairs Health Care System	06/2014 - 07/2018
Medical Director and Co-Founder - VA Academic Patient Aligned Care Team Residency Clinic & Post-Hospital Discharge Clinic, University of Arizona College of	06/2014 - 2018

Medicine, Phoenix, Arizona
In affiliation with BUMC-P & PVAHCS

Director - VA Quality Improvement & Patient Safety Education Program, University of Arizona College of Medicine 06/2014 - 07/2018

Associate Program Director - Internal Medicine Residency Program, The University of Arizona College of Medicine, Phoenix, Arizona
In affiliation with BUMC-P & PVAHCS

Senior Associate Consultant - Division of Community Internal Medicine, Department of Internal Medicine, Mayo Clinic, Scottsdale, Arizona 07/2018 - 06/2021

Senior Associate Consultant - Division of Women's Health, Department of Internal Medicine, Mayo Clinic, Scottsdale, Arizona 06/2021 - 07/2021

Service

Community Memberships and Services

Children's Hospital of Michigan		
Volunteer		1999
Diversity Mentorship Initiative		
Co-Founder & Mentor		2015 - Present
Friendship Clinic		
Volunteer		2007 - 2009
Joy Southfield Health & Education Center		
Volunteer		2006 - 2007
Lansing Eastern High School		
Mentor		2008 - 2011
Mayo Clinic CARES Program		
Volunteer		2019 - Present
St. John Hospital		
Volunteer		1999

Professional Memberships and Societies

Professional Memberships and Services

American College of Physicians		
Fellow		2017 - Present
American College of Physicians - Arizona Chapter		
Early Career Physicians Committee		
Member		2017 - Present
American College of Physicians - Women's Wellness Through Equality and Leadership (WEL) Program		
National Representative		09/2018 - Present
American College of Physicians		
Arizona Chapter		
Member		2011 - Present
Poster Chair		2020
Internal Medicine Meeting		
Poster Judge		2016
American Medical Association		
Michigan State University		
Member		2008 - Present
Building the Next Generation of Academic Physicians		
Member		2016 - Present

Diversity Mentorship Initiative	2015 - Present
Co-Founder & Mentor	
Michigan State Medical Society	
Ingham County Medical Society	
Member	2008 - 2011
National Medical Association	
Phoenix Chapter	
Mentorship Committee	
Chair	2015 - Present
Student National Medical Association	
E-board	
Community Liaison	2008 - 2009

Education Interests and Accomplishments

Curriculum and Course Development

Interprofessional Patient Safety and Quality Improvement - Course Director	2014 - 2018
Monthly conference for internal medicine residents and faculty	
Phoenix VA Health Care System and Banner University Medical Center - Phoenix	
Phoenix, Arizona	
VA Ambulatory Clinical and QI Curriculum - Associate Program Director	07/2014 - 06/2018
Phoenix VA Medical Center and Banner University Medical Center	
Phoenix, Arizona	
Diversity, Equity, Inclusion, and Anti-Racism Curriculum - Course Co-Director	07/2014 - 06/2018
Mayo Clinic Alix School of Medicine	
Scottsdale, Arizona	
Diversity Mentorship Initiative Conference - Course Director	2016 - 2018
Monthly conference for internal medicine residents and faculty	
Banner University Medical Center - Phoenix	
Phoenix, Arizona	
ASU Engineering Senior Capstone Project - Site Director	07/2017 - 06/2018
Phoenix VA Health Care System	
Phoenix, Arizona	

Teaching

Leukocytoclastic Vasculitis	08/2011 - 08/2012
Morning Report	
Phoenix VA Health Care System & Banner University Medical Center-Phoenix	
Phoenix, Arizona	
Post-obstructive Diuresis	12/2011 - 12/2012
Morning Report	
Phoenix VA Health Care System & Banner University Medical Center-Phoenix	
Phoenix, Arizona	
Role of Albumin Treatment in Patients with Spontaneous Bacterial Peritonitis	09/2012
Journal Club	
Phoenix VA Health Care System & Banner University Medical Center-Phoenix	
Phoenix, Arizona	
Fruit & Vegetables 101 Course	2013 - 2014
Facilitator	
Phoenix, Arizona	
Chief Resident Quality & Patient Safety Program	2014 - 2015
Mentor	
Malnutrition in Alcohol Use Disorder	03/2014
Morning Report	
Phoenix VA Health Care System & Banner University Medical Center-Phoenix	

Phoenix, Arizona	
Sick vs. Not Sick	06/2014 - 05/2015
Medical Student Discussion	
Phoenix VA Health Care System & Banner University Medical Center - Phoenix	
Phoenix, Arizona	
Interprofessional Patient Safety and Quality Improvement	06/2014 - 05/2015
Serial presentations	
Phoenix VA Health Care System & Banner University Medical Center-Phoenix	
Phoenix, Arizona	
Topic: How to start and sustain a QI project	08/2014 - 06/2018
BETTER week, Didactic teaching sessions for 2nd and 3rd year Internal Medicine Residents	
Phoenix VA Health Care System & Banner University Medical Center-Phoenix	
Phoenix, Arizona	
Chief Resident in Quality & Patient Safety—Inpatient & Outpatient Mentor	2015 - 2016
Resident Advisor	2015 - 2018
Coach	
Banner University Medical Center & Phoenix VA Health Care System	
Phoenix, Arizona	
Diversity Mentorship in Medicine Initiative	2016 - Present
Mentor	
University of Arizona College of Medicine & NMA	
Diversity Mentorship in Medicine Initiative Monthly Conferences	01/2016 - Present
Serial presentations	
Banner University Medical Center-Phoenix	
Phoenix, Arizona	
Doctoring Program	2016 - 2017
Clinical Skills Evaluator	
University of Arizona College of Medicine	
Facility Hypertension HEDIS Champion	2016 - 2018
Phoenix VA Health Care System	
Interprofessional Patient Safety and Quality Improvement - Monthly Presentation	2016 - 2018
Phoenix VA Health System and Banner University Medical Center - Phoenix	
Phoenix, Arizona	
Diversity Mentorship Initiative - Monthly Presentation	2016 - 2018
Banner University Medical Center - Phoenix	
Phoenix, Arizona	
Hypertension & HEDIS	2016
Primary Care Grand Rounds	
Phoenix VA Health Care System	
Phoenix, Arizona	
LCME Accreditation	2017
Junior Faculty Committee	
University of Arizona College of Medicine	
ASU Engineering Senior Capstone Project	2017 - 2018
Phoenix VA Health Care System	
Didactician of the Day	07/2018 - Present
Mayo Clinic Alix School of Medicine	
Scottsdale, Arizona	
Faculty	2018 - Present
Mayo Clinic Quality Academy	
Phoenix, Arizona	
Faculty	09/2018 - Present

Mayo Clinic CARES - Arizona
Phoenix, Arizona

Senior Sages - Faculty
Mayo Clinic Alix School of Medicine
Scottsdale, Arizona

11/2019 - Present

MCCMS Diversity, Equity, Inclusion, & Anti-Racism Curriculum
Education Grand Rounds
Mayo Clinic (virtual)
Rochester, Minnesota

10/2020

Mentorship

Parker, Brittane (Resident) 07/2013 - Present

Description: CIM Hospitalist

Current Status: Mayo Clinic Hospital Internal Medicine Resident

Outcome: Academic medicine promotion

Awuah, Paulina (Graduate Student) 06/2015 - Present

Description: MS in Health Sciences- Health Education Concentration

Current Status: Graduate Student, Touro University Las Vegas

Outcome:

Benoit, Janeeka (Internal Medicine Resident) 06/2015 - Present

Description:

Current Status: Internal Medicine Resident, Queens Hospital Center

Outcome:

Thomas, Alyssa (Emergency Medicine Resident) 06/2015 - Present

Description:

Current Status: Carolinas Medical Center, Emergency Medicine Residency

Outcome:

Chopra, Madhay (Pulmonary Fellow) 06/2015 - 06/2018

Description:

Current Status: Banner University Medical Center -- Tucson, Pulmonary Fellowship

Outcome:

Renszel, Krystal (Resident) 07/2015 - Present

Description: CIM Hospitalist

Current Status: Mayo Clinic Hospital Internal Medicine Resident

Outcome: Academic medicine promotion, Silver Award - Mayo Clinic Quality

Academy, Lean Sigma Six Green Belt

Maharam, Edward (Chief Medical Resident) 06/2016 - 06/2017

Description: Chief Resident in Quality and Patient Safety

Current Status: Hospitalist, Vanderbilt University Medical Center

Outcome:

Sharer, Rustan (Chief Medical Resident) 06/2016 - 06/2017

Description: Chief Resident in Quality and Patient Safety

Current Status: Primary Care Provider, Honor Health

Outcome:

Marallag, Mam (Chief Medical Resident) 06/2017 - 06/2018

Description: Chief Resident in Quality & Patient Safety

Current Status: Primary Care Provider, University of Washington Medical Center

Outcome:

Ramanthan, Meera (Chief Medical Resident) 06/2017 - 06/2018

Description: Chief Resident in Quality & Patient Safety

Current Status: Hospitalist, Chicago, Illinois

Outcome:

Todsen, Jessica (Medical Student) 02/2019 - Present

Description:

Current Status: Mayo Clinic Alix School of Medicine - 2nd year medical student

Outcome:

Das, Devika (Medical Student) 10/2019 - Present

Description:

Current Status: Mayo Clinic Alix School of Medicine - 3rd year medical student

Outcome:

Academic Career Development

Foundation of Servant Leadership Course 2016
Phoenix VA Health Care System
Phoenix, Arizona

Goals of Care and Conversation 2017
Intensive Leadership Program for Physicians - Phoenix VA Health Care System
Phoenix, Arizona

Educational Activities

Battlefield Acupuncture, United States Airforce Acupuncture Center 6/2017

Institute for Healthcare Improvement Open School 2013-2014 -Patient Safety: 100, 101, 102, 103, 104, 105 and 106; Quality Improvement: 101, 102, and 103.

VHA Core Mentor Certification Program-Training on Mentorship and Coaching, 12/2015.

Institutional/Departmental Administrative Responsibilities, Committee Memberships and Other Activities

Mayo Clinic

Department of Education Administration
Mayo Clinic College of Medicine and Science
Mayo Clinic Alix School of Medicine - Arizona
Admissions Committee
Member 06/2020 - Present

Mayo Clinic Committees
Mayo Clinic Mortality Review Subcommittee - Mayo Clinic
Member 2019 - Present

Mayo Clinic Quality Academy
Member 07/2018 - Present

Mayo Clinic in Arizona

Internal Medicine Residency - Clinical Competency Committee
Member 07/2018 - Present

Readmissions Committee
Chair 11/2018 - 10/2020

Activities at Other Institutions

Banner Good Samaritan Medical Center - Housestaff Council Community Services & Social
Chair 07/2001 - 06/2002

Banner University Medical Center-Phoenix
Graduate Medical Education Committee
Member 2014 - 2015
Patient Safety and Quality Improvement
Member 2014 - 2018

Resident Advisory Committee
Member 2017 - 2018

Banner University Medical Center-Phoenix/Phoenix VA Health Care System
Residency Admissions
Interviewer 2014 - 2018

Michigan State University

Community Integrated Medicine	
Volunteer	2007 - 2009
Michigan State University College of Medicine	
Michigan Osteopathic Association	
Student Liaison	2007 - 2011
OMM Clinic	
Participant	2008 - 2009
Sigma Sigma Phi E-Board	
Diversity Liaison	2008 - 2009
Student Osteopathic Medical Association	
Member	2007 - 2011
Study Buddies E-Board	
Study Buddies Course Leader	2008 - 2009
Michigan State University-LEHS	
S.T.A.R.T. Mentorship Program	
Mentor	2008 - 2011
Phoenix VA Healthcare System	
Chronic Pain Champion	2016
Hypertension Champion	2016
HEDIS Performance Measures Committee	
Member	2016 - 2018
Peer Review Committee	
Member	2014 - 2015
Quality Executive Board	
Member	2014 - 2018
Phoenix VA Medical Center - Lean Six Sigma VA	
White Belt Certification	2014
Yellow Belt Certification	2015
Green Belt Certification	2015
Black Belt Certification	2017
ULS Lower School Mentoring Program	
Mentor	1998 - 2000
University of Arizona College of Medicine	
Admissions	
Multiple Mini-Interviewer	2015 - Present
University of Michigan	
Black Pre-Med Club	
Member	2000 - 2004
Macy's Minorities in Medicine Program (Summer)	
Member	1999
Pathways to Student Success and Excellence	
Member	2000 - 2001
Wayne State University School of Medicine	
Association of Pre-Med Students	
Member	2004 - 2005
Black Medical Association	
Member	2004 - 2006

Presentations Extramural

National or International

Invited

Improving Appointment Timeliness in Internal Medicine Residency Clinic
Institution for Healthcare Improvement (IHI) 30th Annual National Forum
Orlando, Florida 12/2018

Gender Equity and Leadership in Clinical Medicine
Swiss Society of General Internal Medicine (Cancelled in 2020 due to COVID)
Basel, Switzerland 2021

Creating Safe Learning Environments to Explore a Diversity, Equity, Inclusion, &
Anti-Racism Curriculum
Group on Education Affairs Annual Conference (virtual) 04/2021

Mayo Clinic Alix School of Medicine Curricular Response to I-DARE (Inclusion,
Diversity, Anti-Racism, & Equity) during Pandemic
Mayo Clinic Quality Conference (virtual) 07/2021

Office Based Quality Improvement: Practical Tips for Primary Care
Mayo Clinic Updates in Internal Medicine (Cancelled in 2020 due to COVID)
Sedona, Arizona 10/2021

Oral

Patient Safety as a Consultative Service: Teaching to Evaluate Adverse Events and
Near Misses 06/2016

Association of American Medical Colleges Integrating Quality Meeting
Chicago, Illinois

Standardizing a Patient Check-In Process within the Emergency Department: An
Interprofessional Approach to Quality Improvement
ACP Internal Medicine Scientific Meeting
San Diego, California 03/2017

Adapting New TB Screening Protocols in Low Prevalence Environment Project
Clinical Project Category 1st Place prize
PVAHCS, VISN 22 Improvement Expo
Phoenix, Arizona 06/2018

Poster

Mayo Clinic Alix School of Medicine Curricular Response to I-DARE (Inclusion,
Diversity, Anti-Racism, & Equity) during Pandemic
Mayo Clinic Quality Conference (virtual) 10/2021

Regional

Invited

Transitioning out of the Hospital: Discussions of Advance Care Planning
American College of Physicians - Arizona Chapter - Internal Medicine Scientific
Meeting
Scottsdale, Arizona 10/2020

Creating Safe Learning Environments to Explore a Diversity, Equity, Inclusion, &
Anti-Racism Curriculum
AAMC Central Group on Education Affairs (virtual) 04/2021

Oral

Patient Safety as a Consultative Service: An Innovative Curriculum
WIHI Web-based Talk show
Institution for Healthcare Improvement (IHI) 20th Annual Scientific Symposium on
Improving the Quality and Value of Health Care 02/2015

Orlando, Florida

Standardizing our Process to Update Veteran Contact Information during Check-In into the Emergency Department: An Interprofessional Approach to Quality Improvement

10/2016

Society for General Internal Medicine Mountain West Regional Meeting
Phoenix, Arizona

Effective Leadership for the 21st Century

03/2017

Building the Next Generation of Academic Physicians (BNGAP) Southwest Regional Conference
Tucson, Arizona

Clinical Practice, Interests, and Accomplishments

Academic medicine, quality improvement, and patient safety with national/international acknowledgements by AAMC, ACP, and IHI.

Quality Initiatives

Quality Improvement Projects

Launching a Diversity, Equity, Inclusion and Anti-Racism Curriculum (Gold Project) 07/22/2021

Amy M. Seegmiller Renner, PhD, MS, Barbara L. Jordan, MA, Shannon K. Laughlin-Tommaso, MD, Amit A. Shah, MD, James (Jim) R. Gross, PhD, MS, **Adebisi (Bisi) Alli, DO, MS.**

Quality

Quality Academy - Faculty

08/2019 - Present

Bibliography

Peer-reviewed Articles

1. **Alli A.** Helping Patients to Adopt Healthier Lifestyles. 2010 Spring TRIAD Journal of the Michigan Osteopathic Association. 2010; 21(2).
2. Amin RH, Mathews ST, **Alli A**, Leff T. Endogenously produced adiponectin protects cardiomyocytes from hypertrophy by a PPARgamma-dependent autocrine mechanism. *Am J Physiol Heart Circ Physiol.* 2010 Sep; 299 (3):H690-8 Epub 2010 July 09 PMID: 20622112 PMCID: 2944479 DOI: 10.1152/ajpheart.01032.2009
3. **Alli A.** Never Waste a Pandemic: Strategies to Increase Advance Care Planning Now. *MCP: Innovations, Quality & Outcomes* (accepted). 2021.
4. **Alli A**, et al. Advancing Women to Leadership Positions through Individual Actions and Institutional Reform. *Pediatrics Supplemental* (accepted). 2021 Sep.

Audio/Video/CD-ROM/etc.

1. Christensen A, Lorenz A, Feely MA, Havyer RD, Kilpatrick M, **Alli A**, Carey EC. Ask-Tell-Ask <http://intranet.mayo.edu/charlie/center-palliative-medicine/files/2020/05/5.-Ask-Tell-Ask-Single-Slide-1.pdf>.2020;
2. Lorenz AK, Christensen A, Feely MA, Havyer R, **Alli A**, Kilpatrick M, Carey EC. COVID-19: Clinical Communication Tools <http://intranet.mayo.edu/charlie/center-palliative-medicine/covid-19-communication/.2020>;
3. Havyer RD, Lorenz A, Feely MA, Christensen A, **Alli A**, Kilpatrick M, Carey EC. Discussing Prognosis - ADAPT <http://intranet.mayo.edu/charlie/center-palliative-medicine/files/2020/06/2.-Discussing-Prognosis-ADAPT.pdf>.2020;
4. Christensen A, Lorenz A, Feely MA, Havyer RD, Kilpatrick M, **Alli A**, Carey EC. Exploring Patient Values <http://intranet.mayo.edu/charlie/center-palliative-medicine/files/2020/05/5.-Exploring-Patient-Values-1.pdf>.2020;
5. Lorenz A, Feely MA, Christensen A, Havyer RD, Kilpatrick M, **Alli A**, Carey EC. Finding and Documenting Advance Directives in EPIC <http://intranet.mayo.edu/charlie/center-palliative-medicine/files/2020/05/EPIC-ACP-Document.pdf>.2020;
6. Feely MA, Lorenz A, Christensen A, Havyer RD, Kilpatrick M, **Alli A**, Carey EC. Framework for Discussing Goals of Care-REMAP <http://intranet.mayo.edu/charlie/center-palliative-medicine/files/2020/05/2.-GOC-REMAP-with-links-1.pdf>.2020;
7. Havyer RD, Lorenz A, Christensen A, Feely MA, Kilpatrick M, **Alli A**, Carey EC. Hope and Worry <http://intranet.mayo.edu/charlie/center-palliative-medicine/files/2020/06/5.-Hope-and-Worry.pdf>.2020;
8. Lorenz A, Feely MA, Christensen A, Havyer RD, Kilpatrick M, **Alli A**, Carey EC. Making a Recommendation <http://intranet.mayo.edu/charlie/center-palliative-medicine/files/2020/05/5.-Making-a-recommendation-Assent-1.pdf>.2020;
9. Feely MA, Lorenz A, Christensen A, Havyer RD, Kilpatrick M, **Alli A**, Carey EC. Rapid Code Status Conversation Guide for High-Risk Patients <http://intranet.mayo.edu/charlie/center-palliative-medicine/files/2020/05/3.-RAPID-CODE-STATUS-DISCUSSION-1.pdf>.2020;
10. Christensen A, Lorenz A, Havyer RD, Feely MA, Kilpatrick M, **Alli A**, Carey EC. Responding to Emotions - NURSE(s) and Wish http://intranet.mayo.edu/charlie/center-palliative-medicine/files/2020/05/5.-Responding-to-Emotions-NURSEs_Wish-1-1.pdf.2020;
11. **Alli A**, Lorenz A, Christensen A, Feely MA, Havyer RD, Kilpatrick M, Carey EC. Responding When They are Hoping for a Miracle <http://intranet.mayo.edu/charlie/center-palliative-medicine/files/2020/06/5.-Responding-when-they-are-hoping-for-a-miracle.pdf>.2020;
12. Lorenz A, Feely MA, Christensen A, Havyer RD, Kilpatrick M, **Alli A**, Carey EC. Setting Up a Time-limited Trial <http://intranet.mayo.edu/charlie/center-palliative-medicine/files/2020/05/5.-Time-Limited-Trial.pdf>.2020;

Abstracts

1. **Alli A.** Influence of Authoritarian Style Parenting on Child Anxiety and the Corresponding Changes in the Brain (Poster) Department of Psychology, University of Michigan. Ann Arbor, MI.. 2004.
2. **Alli A.** The Effects of Stereotypes in Organizations (Poster) University of Michigan, School of Social Work; Ann Arbor, Michigan. 2004.

3. **Alli A**, Orme J, Sein V, Kolli G. Clot or Not: The Case of the Vanishing Thrombus American College of Physicians-Arizona Chapter. Tempe, AZ.. 2012 Nov.
4. **Alli A**, Prosser R. Fruits and Veggies 101: Improving Patient Produce Consumption BUMC-P. Phoenix, AZ.. 2014 May.
5. **Alli A**. Patient Safety & Quality Improvement Corner (but really nobody puts safety in a corner) (Weekly Newsletter) PVAHCS & BUMC-P, Phoenix, AZ.. 2014 Jun.
6. **Alli A**, et al. Patient Safety as a Consultative Service: Teaching Residents to Evaluate Medical Errors American College of Physicians (ACP)-Arizona Chapter, Tempe, AZ.. 2014 Oct.
7. **Alli A**, et al. Patient Safety as a Consultative Service: An Innovative Curriculum Institution for Healthcare Improvement (IHI) 20th Annual Scientific Symposium on Improving the Quality and Value of Health Care. Orlando, FL.. 2014 Dec.
8. **Alli A**, et al. Assessing Competency of the Resident Patient Safety Consult Service Using a Published Quality Improvement Proposal Assessment Tool Second Annual House Staff Quality and Safety Day. BUMC-P. Phoenix, AZ.. 2015 May.
9. **Alli A**, et al. Innovation of Stethoscope Hooks on 8th floor of BUMC-P: An Example of Resident-Driven Interprofessional Quality Improvement. Second Annual House Staff Quality and Safety Day. BUMC-P. Phoenix, AZ.. 2015 May.
10. **Alli A**, et al. Patient Safety as a Consultative Service: An Innovative Curriculum American College of Physicians 100th Anniversary Internal Medicine Meeting. Boston, MA.. 2015 May.
11. **Alli A**, et al. That's One Small Click for Intern; One Giant Leap for Housestaff: An Example of Resident-led, Collaborative Quality Improvement in Computerized Physician Order Entry Second Annual House Staff Quality and Safety Day. Banner University Medical Center-Phoenix Campus. Phoenix, AZ.. 2015 May.
12. Aasen T, **Alli A**, et. al. Implementation of a Standardized ED Process for Updating Patient Demographics Following Root Cause Analysis of An Adverse Patient Event 3rd Annual BUMC-P Housestaff Quality & Safety Day. Phoenix, AZ.. 2016 May.
13. Chopra M, **Alli A**, et al. Persistent Dysphonia: A Rare Extrapulmonary Complication of Tuberculosis American Thoracic Society International Conference. San Francisco, CA.. 2016 May.
14. Chopra M, Sharer R, Mohammed Arif S, Rowley M, Maestas C, Albasha W, Encina M, Stander P, **Alli A**. Applying the ARIADNE Serious Illness Script to Veterans in a VA Academic Patient Aligned Care Team Residency Clinic ACP-AZ Chapter Symposium. Phoenix, AZ.. 2016 Nov.
15. Maharam E, Sharer R, Gallogly C, Varker A, Rivias S, Garner C, Copp C, Renszel K, **Alli A**, Coulston J, Zubriski M, Abbaszadegan H, O'Malley C, Plummer E. Revolutionizing and Improving Glycemic Control at Phoenix VAHCS: A QI Initiative ACP-AZ Chapter Symposium. Phoenix, AZ.. 2016 Nov.
16. Thomas A, **Alli A**, Ball R, Behera M, Deka V. The Case of the Fibroid Takeover ACP-AZ Chapter Symposium. Phoenix, Arizona. 2016 Nov.
17. Maharam E, Sharer R, Gallogly C, Varker A, Rivias S, Garner C, Copp C, Renszel K, **Alli A**, Coulston J, Zubriski M, Abbaszadegan H, O'Malley C, Plummer E. Revolutionizing and Improving Glycemic Control at Phoenix VAHCS: A QI Initiative Institution for Healthcare Improvement (IHI) 20th National Forum on Improving the Quality and Value of Health Care. Orlando, FL.. 2016 Dec.
18. Maharam E, Sharer R, Gallogly C, Varker A, Rivias S, Garner C, Copp C, Renszel K, **Alli A**, Coulston J, Zubriski M, Abbaszadegan H, O'Malley C, Plummer E. Revolutionizing and Improving Glycemic Control at Phoenix VAHCS: A QI Initiative ACP Internal Medicine Scientific Meeting. San Diego, CA. 2017 Mar.
19. **Alli A**, et al. Standardizing our Process to Update Veteran Demographics during Check-In into the Emergency Department: An Interprofessional Approach to Quality Improvement (ePoster) American College of Physicians Internal Medicine Meeting 2017. San Diego, CA.. 2017.
20. Thomas A, **Alli A**, Ball R, Behera M, Deka V. The Case of the Fibroid Takeover ACP Internal Medicine Scientific Meeting. San Diego, CA.. 2017 Mar.
21. Ramanathan M, Marallag M, **Alli A**, Coulston J. Teaching Residents to Evaluate Patient Safety Events Through a Consult Sercie: A Review of Outcomes ACP Arizona Chapter Scientific Meeting. 2017 Oct.
22. Skylar E, Lekic M, **Alli A**, Reardon C. Unique presentation of superficial subcutaneous leiomyosarcoma ACP Arizona Chapter Scientific Meeting. 2017 Oct.

Thesis

1. **Alli A**. The Effects of Ethanol on GABAergic and Glutamatergic Neurotransmission—A Link to Cancer? Wayne

State University School of Medicine. Detroit, MI..2005;

Ask Mayo Expert Topic

1. Discussing Code Status Ask Mayo Expert.2020;
2. Feely MA, Lorenz AK, Christensen A, Havyer R, **Alli A**, Kilpatrick M, Carey EC. Discussing Code Status Ask Mayo Expert.2020;
3. Amanda Lorenz , Molly Feely , April Christensen , Rachel Havyer , **Adebisi Alli** , Molly Kilpatrick , Elise Carey . Time-limited treatment trial in serious illness AskMayoExpert.2020;

Miscellaneous

1. Gelbart D, **Alli A**. Endless Possibilities: Rising Voice Dr. Bisi Alli Banner University Medical Center Banner University Medical Center. 2015.
2. Probyn L, **Alli A**. MSUCOM Mentoring Program Started with a Student Initiative Communique Michigan State University College of Osteopathic Medicine. 2016.
3. **Alli A**. Just Stay Home - <https://connect.sgim.org/sgimforum/viewdocument/just-stay-home> SGIM Forum. 2020.

Forthcoming

1. **Alli A**. Launching an Academic PACT Residency Clinic in the Phoenix VA Health Care System IHI Abstract in Progress 2020
2. **Alli A**. Parasitic Fibroid in Young African American Women In progress 2020

* Indicates that the primary author was a mentee of this author.

Brief Bio

Dr. Adebisi (Bisi) Alli is a board-certified internal medicine physician. She is an Assistant Professor for the Mayo Clinic Alix School of Medicine (MCASOM) and Consultant for the Division of Women's Health Internal Medicine. She is active in research and education, serving as MCASOM faculty and an admissions committee member. Formerly, she served as medical director for the residency clinic she launched through the Phoenix VA Healthcare System & Associate Program Director for the University of Arizona-Phoenix Internal Medicine Residency Program in Phoenix. Proudly, she is a national American College of Physician representative for the Women's Wellness through Equity and Leadership (WEL) Project. As a Lean Six Sigma Black Belt, she has a strong passion for quality improvement and patient safety in the areas of advance care planning, population health, and academic mentorship.

BIOGRAPHICAL SKETCH

Provide the following information for the Senior/key personnel and other significant contributors.
Follow this format for each person. **DO NOT EXCEED FIVE PAGES.**

NAME: Anastasiadis, Panagiotis (Panos) Z.

eRA COMMONS USER NAME (credential, e.g., agency login): ANASTASIADIS

POSITION TITLE: Professor of Cancer Biology

EDUCATION/TRAINING (*Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.*)

INSTITUTION AND LOCATION	DEGREE (if applicable)	Completion Date MM/YYYY	FIELD OF STUDY
Aristotelian University, Thessaloniki, Greece	BS	07/1987	Biology
Wayne State University, Detroit, MI	PhD	04/1993	Neurobiology
Henry Ford Hospital, Detroit, MI	Fellowship	08/1996	Neurobiology
Vanderbilt University, Nashville, TN	Fellowship	08/2001	Cancer Cell Biology

A. Personal Statement

My lab focuses on signaling events that regulate cell-cell adhesion or cell migration/invasion and transformed cell growth. We recently reported that PLEKHA7, an adhesion-related protein with a limited distribution at the apical cell-cell junctions, recruits the RNAi machinery to the junctions to regulate the expression and function of select miRNAs and to inhibit epithelial cell growth. We also showed that PLEKHA7 is misregulated in human cancer and that restoring the levels of affected miRNAs reverses the malignant growth of cultured colon cancer cells. In recent work using primary cell lines and conditional knockout mice we are exploring the role of PLEKHA7 in the progression from an adenoma to a malignant carcinoma. Additionally, my lab has identified a key role for Syx, a RhoA-specific GEF, in endothelial junction stability, vascular permeability and leakiness downstream of VEGF-A, as well as front-rear polarity and directed migration of malignant gliomas. Recent studies focus on the role of Syx in glioma cell mitosis, crystallization of the Syx/RhoA complex, and generation of specific Syx inhibitors for the treatment of gliomas. In addition to classic cell biological techniques to study cell adhesion, migration, and mitosis signaling events, my lab uses organotypic 3D cultures, integrated genomics, proteomics and antibody-based methodologies including Elisa, Luminex-based high-throughput assays, phospho-proteomics, and bioinformatics as a means of identifying oncogenic pathways that are activated in individual patient's tumors and can be targeted for therapy on an individualized basis with available therapeutics. In collaboration with the Center for Individualized Medicine we have launched the *Ex Vivo* clinical project in multiple cancer types, including lung cancer, and across Mayo Clinic sites. I have served as a Tumor Progression and Metastasis NIH study section member, as Chair of the Neural regulation of cancer NIH special emphasis panel, and ad hoc member of the R35 MIRA study section at NIGMS. I also serve as the deputy director of Education and the co-director of the Cell Biology Program within the Mayo Clinic Comprehensive Cancer Center, and I am an executive committee member for the Mayo Clinic Center for Biomedical Discovery. Below are select publications relevant to the proposed project:

1. Vasmatzis G, Liu MC, Reganti S, Feathers RW, Smadbeck J, Johnson SH, Schaefer Klein JL, Harris FR, Yang L, Kosari F, Murphy SJ, Borad MJ, Thompson EA, Cheville JC, **Anastasiadis PZ**. Integration of comprehensive genomic analysis and functional screening of affected molecular pathways to inform cancer therapy. Mayo Clin Proc. 2020 Feb;95(2):306-318. doi: 10.1016/j.mayocp.2019.07.019. Epub 2019 Nov 2. PMID: 31685261

2. Ganguli A, Mostafa A, Saavedra C, Kim Y, Le P, Faramarzi V, Feathers RW, Berger J, Ramos-Cruz KP, Adeniba O, Pagan Diaz GJ, Drnevich J, Wright CL, Hernandez AG, Lin WH, Smith AM, Kosari F, Vasmatzis G, **Anastasiadis PZ***, Bashir R*. Three-Dimensional Microscale Hanging Drop Arrays with Geometric Control for Drug Screening and Live Tissue Imaging: *Science Adv.* 2021 Apr 23;7(17):eabc1323. doi: 10.1126/sciadv.abc1323. Print 2021 Apr. PMID: 33893093

B. Positions, Scientific Appointments, and Honors

Positions and Scientific Appointments

2021-present Deputy Director, Education, Mayo Clinic Comprehensive Cancer Center
 2019-2020 NIGMS Peer Review Committee: MIRA program
 2017-2019 NIH Peer Review Committee: Neural Regulation of Cancer, Chair
 2015-present Professor of Cancer Biology, Mayo Clinic College of Medicine, Jacksonville, FL
 2012-2016 NIH Peer Review Committee: Tumor Progression and Metastasis, Member
 2012-present Cell Biology Program co-director, Mayo Clinic Comprehensive Cancer Center
 2013-present Member, American Society for Microbiology
 2011-2015 Assoc. Professor of Biochem/Molecular Biology, Mayo Clinic College of Medicine, Jacksonville, FL
 2011-2020 Chair, Department of Cancer Biology, Mayo Clinic Cancer Center, Jacksonville, FL
 2010-present Consultant, Mayo Clinic Cancer Center, Jacksonville, Jacksonville, FL
 2007-2012 Assistant Dean/Director, Mayo Graduate School, Jacksonville, FL
 2006-2011 Assistant Prof. of Biochem/Molecular Biology, Mayo Clinic College of Medicine, Jacksonville, FL
 2006-present Member, American Society for Neuro-Oncology
 2005-present Member, American Association for Cancer Research
 2004-2010 Senior Assoc. Consultant, Mayo Clinic Cancer Center Jacksonville, FL
 2003-2004 Assoc. Consultant II, Department of Cancer Biology, Mayo Clinic Cancer Center, Jacksonville, FL
 2003-present Member, American Society for Biochemistry and Molecular Biology
 2003-present Member, Federation of American Societies for Experimental Biology
 2001-2003 Assistant Prof., Human Biological Chemistry and Genetics, University of Texas Medical Branch, Galveston, TX
 2001-2003 Scientist, Sealy Center for Cancer Cell Biology, University of Texas Medical Branch, Galveston, TX
 1996-present Member, American Society for Cell Biology
 1989-1997 Member, Society for Neuroscience

Honors

2019 Chair, First International Symposium in Mathematical and Computational Oncology, Lake Tahoe, Nevada
 2018 Chair, Mayo Clinic Angiogenesis and Tumor Microenvironment Symposium, Ponte Vedra, Florida
 2017 Keynote Speaker, Biology of the Cell Scientific Meeting, Paris, France
 2016 Keynote Speaker, International Conference on Cancer Research and Targeted Therapy
 2016 Chair, Individualizing Medicine: Advancing care through genomics, Rochester, MN
 2015 Chair, 21st Annual Karolinska Institute/Mayo Clinic Scientific meeting, Stockholm, Sweden
 2014 Chair, 20th Annual Karolinska Institute/Mayo Clinic Scientific meeting, Rochester, MN
 2013 Health Care Hero, Jacksonville Business Journal, Jacksonville, FL
 2013 Chair, Oncology Signaling session, 18th Oncology Symposium, Crete, Greece
 2012 Member, NIH Tumor Progression and Metastasis Study Section
 2012 Distinguished Mayo Educator Award
 2012 Mayo Graduate School Dean's Recognition Award
 2000 Vanderbilt-Ingram Cancer Center award
 1992 Thomas C. Rumble University Graduate Fellowship
 1991 WSU Graduate Teaching Assistantship
 1990 Thomas C. Rumble University Graduate Fellowship
 1988-90 Bodosaki Foundation (Athens, Greece) competitive fellowship to attend graduate school in the United States.

C. Contributions to Science

1. **Characterized p120 catenin function in the cadherin complex:** My early publications in the fields of cell adhesion and cancer centered on the function of p120 catenin (p120), a key mediator of E-cadherin function whose role was unclear at the time. In a number of seminal papers, we fine-mapped the p120 binding site of E-cadherin and showed that uncoupling p120 disrupts strong cell-cell adhesion, demonstrated that p120 inhibits RhoA activity, identified tyrosine and serine/threonine phosphorylation sites on p120, and reported a novel p120 role in promoting E-cadherin stability and function. These publications highlighted the importance of p120 in E-cadherin function and opened up new fields of scientific investigation. I served as the primary investigator or co-investigator in all of these studies.
 - a. **Anastasiadis PZ**, Moon SY, Thoreson MA, Mariner DJ, Crawford HC, Zheng Y and Reynolds AB: Inhibition of RhoA by p120 catenin. *Nature Cell Biol* 2000; 2: 637-644 (Cover Photograph)
 - b. Thoreson MA, **Anastasiadis PZ**, Daniel JM, Ireton RC, Wheelock MJ, Johnson KR, Hummingbird DK, Reynolds AB: Selective uncoupling of p120(ctn) from E-cadherin disrupts strong adhesion. *J. Cell Biol*, 2000; 148: 189-202. PMCID: PMC2156209.
 - c. **Anastasiadis PZ**, Reynolds AB: The p120 catenin family: complex roles in adhesion, signaling and cancer. *J. Cell Sci*, 2000; 113: 1319-1334.
 - d. Mariner DJ, **Anastasiadis PZ**, Keilhack H, Bohmer F-D, Wang J, and Reynolds AB: Identification of Src phosphorylation sites in the catenin p120^{ctn}. *J Biol Chem*, 2001; 276(30): 28006-28013.
2. **Assessed pro- and anti-tumorigenic roles of p120 catenin:** Continuing work on p120 and Rho GTPases as an independent investigator, I uncovered a novel interaction of p120 with microtubules, characterized the p120's role in vertebrate development and synapse formation, examined p120 isoform function in breast cancer and renal cancer, and showed tumor cells expressing mesenchymal cadherins require p120 for growth and migration. These publications established p120's dual function in human cancer.
 - a. Yanagisawa M, Kaverina IN, Wang A, Fujita Y, Reynolds AB, **Anastasiadis PZ**: A novel interaction between kinesin and p120 modulates p120 localization and function. *J Biol Chem*, 2004; 279: 9512-9521.
 - b. Yanagisawa M, **Anastasiadis PZ**: p120 catenin is essential for mesenchymal cadherin-mediated regulation of cell motility and invasiveness. *J Cell Biol*, 2006; 174(7):1087-96. PMCID: PMC2064398.
 - c. Yanagisawa M, Huveldt D, Kreinest P, Lohse CM, Cheville JC, Parker AS, Copland JA and **Anastasiadis PZ**: A p120 isoform switch affects Rho activity, induces tumor cell invasion and predicts metastatic disease. *J Biol Chem*, 2008; 283(26):18344-354.
 - d. Soto E, Yanagisawa M, Marlow LA, Copland JA, Perez EA, **Anastasiadis PZ**: p120 catenin induces opposing effects on tumor cell growth depending on E-cadherin expression. *J Cell Biol* 2008; 183(4):737-749. PMCID: PMC2582886.
3. **Elucidated the composition and function of pro- and anti-tumorigenic cadherin complexes and their crosstalk with the RNAi machinery:** Based on our findings that both p120 and E-cadherin can act as tumor suppressors or promoters depending on cellular context, we identified a miRNA-mediated mechanism whereby apical E-cadherin-p120 complexes at the zonula adherens recruit PLEKHA7 and the RISC to suppress epithelial cell growth induced by basolateral E-cadherin-p120 complexes lacking PLEKHA7. The work established p120 as a key mediator of tumor progression, PLEKHA7 as a tumor suppressor, identified pathways affected by the junctional RISC, and suggested ways to reprogram cancer cells to a less malignant state.
 - a. Kourtidis A, Ngok SP, Pulimeno P, Feathers RW, Carpio LR, Baker TR, Carr JM, Yan IK, Borges S, Perez EA, Storz P, Copland JA, Patel T, Thompson EA, Citi S, **Anastasiadis PZ**: Distinct E-cadherin-based complexes regulate cell behavior through miRNA processing or Src and p120-catenin activity. *Nat Cell Biol* 2015; 17(9):1145-57. *Highlighted in*: Faculty of 1000; *Nature Med*, 21:1112-13, 2015.
 - b. Kourtidis A and **Anastasiadis PZ**: Close encounters of the RNAi kind: the silencing life of the adherens junctions. *Curr Opin Cell Biol*. 2018 Mar 24; 54:30-36 PMID: 29587176
 - c. Kourtidis A, Necela B, Lin W-H, Lu R, Feathers RW, Asmann YW, Thompson EA, and **Anastasiadis PZ**: Cadherin complexes recruit mRNAs and RISC to regulate epithelial cell signaling. *J Cell Biol*, 2017 Oct 2; 216 (10):3073-3085, PMCID: 5626537
 - d. Pence LJ, Kourtidis A, Feathers RW, Haddad MT, Sotiriou S, Decker PA, Nassar A, Ocal IT, Shah SS, **Anastasiadis PZ**. PLEKHA7, an Apical Adherens Junction Protein, Suppresses Inflammatory Breast Cancer in the Context of High E-Cadherin and p120-Catenin Expression. *Int J Mol Sci.*, 2021 Jan 28;22(3):1275. doi: 10.3390/ijms22031275.
4. **Examined deregulated pathways and therapeutic targets in GBM:** We have examined the role of cadherins and p120 catenin in human gliomas, identified p120 tyrosine phosphorylation and increased Src

family kinase (SFK) activity as markers of aggressiveness in GBM, and characterized the role of individual SFKs in GBM. The work resulted in two clinical trials testing the efficacy of dasatinib in the treatment of gliomas, and suggested that the relative expression of Yes and Lyn may predict response to dasatinib treatment. We have also optimized 3-dimensional culture models for GBM growth ex vivo, for use in combination with integrated genomics in precision medicine.

- a. Huveldt D, Lewis-Tiffin LJ, Carlson BL, Schroeder MA, Rodriguez F, Giannini C, Galanis E, Sarkaria JN, **Anastasiadis PZ**: Targeting Src family kinases inhibits bevacizumab-induced glioma cell invasion. *PLoS ONE*, 8(2):e56505, 2013. PMCID: PMC3572988.
- b. Lewis-Tiffin LJ, Feathers R, Hari P, Durand N, Li Z, Rodriguez FJ, Bakken K, Carlson B, Schroeder M, Sarkaria JN, **Anastasiadis PZ**: Src family kinases differentially influence glioma growth and motility. *Mol Oncol* 2015; 9(9):1783-98.
- c. Galanis E, Anderson SK, Twohy EL, Carrero XW, Dixon JG, Tran DD, Jeyapalan SA, Anderson DM, Kaufmann TJ, Feathers RW, Giannini C, Buckner JC, **Anastasiadis PZ**, Schiff D. A phase 1 and randomized, placebo-controlled phase 2 trial of bevacizumab plus dasatinib in patients with recurrent glioblastoma: Alliance/North Central Cancer Treatment Group N0872. *Cancer*. 2019 Nov 1;125(21):3790-3800. doi: 10.1002/cncr.32340. Epub 2019 Jul 10. PubMed PMID: 31290996; PubMed Central PMCID: PMC6788934.
- d. Ganguli A, Mostafa A, Saavedra C, Kim Y, Le P, Faramarzi V, Feathers RW, Berger J, Ramos-Cruz KP, Adeniba O, Pagan Diaz GJ, Drnevich J, Wright CL, Hernandez AG, Lin WH, Smith AM, Kosari F, Vasmatzis G, **Anastasiadis PZ***, Bashir R*. Three-Dimensional Microscale Hanging Drop Arrays with Geometric Control for Drug Screening and Live Tissue Imaging. *Science Adv*. 2021 2021 Apr 23;7(17):eabc1323. doi: 10.1126/sciadv.abc1323. Print 2021 Apr. PMID: 33893093

5. Examined the role of junctional RhoGEFs and polarity complexes in cell adhesion and migration: We systematically explored the function of RhoGEFs and polarity complexes in endothelial monolayer function and leakiness, directed cell migration, as well as glioma cell invasion and aggressiveness. We identified the RhoGEF Syx as essential in mediating VEGF and Ang1 responses in endothelial cells, and showed the RhoA downstream effector Dia1 mediates Syx effects. Our results clarified VEGF-mediated signaling leading to increased vascular leakiness, identified Syx as a novel member of the Crumbs polarity complex, and indicated a crucial function for Syx in increased directed migratory potential of glioma tumor cells.

- a. Ngok SP., Geyer R (co-first author), Liu M, Kourtidis A., Agrawal S., Wu C., Seerapu HR., Lewis-Tiffin LJ., Moodie K, Huveldt D., Marx R., Baraban J., Storz P., Horowitz A, **Anastasiadis PZ**: VEGF and Angiopoietin-1 exert opposing effects on cell junctions by regulating the Rho GEF Syx. *J Cell Biol*. 199(7):1103-15, 2012. PMCID: PMC3529520. (Highlighted in: how junctions get deep-Syx'd. *JCB* 199(7):1018, 2012; Editor's Choice: Converging on Syx, *Science Signaling* 257(6):ec9, 2013.)
- b. Ngok SP, Geyer R, Kourtidis A, Storz P, **Anastasiadis PZ**: Phosphorylation-mediated 14-3-3 binding regulates the function of the RhoGEF Syx. *J Biol Chem*., 288(9):6640-50, 2013. PMCID: PMC3585103.
- c. Ngok SP, Geyer R, Kourtidis A, Feathers RW, Mitin N, Der C, **Anastasiadis PZ**: TEM4 is a junctional RhoGEF required for cell-cell adhesion, monolayer integrity, and barrier function. *J Cell Sci* 126(15):3271-77, 2013. PMCID: PMC3730241. (Cover Photograph)
- d. Daechsel JC, Ngok SP, Lewis-Tiffin LJ, Kourtidis A, Johnston L, Feathers RW, **Anastasiadis PZ**: Dia-dependent downregulation of ROCK by the Rho GEF Syx. *Mol Cell Biol* 33(24):4909-18, 2013. (Cover Photograph)

Complete list of published work in MyBibliography: <https://www.ncbi.nlm.nih.gov/>

Anne Schletty, MBA, is a Principle Business Analyst for Department of Medicine at Mayo Clinic. Anne has been at Mayo since 2002, serving in multiple roles within Human Resources and Department of Medicine. Currently, she is responsible for the leadership and faculty development strategies and the equity, inclusion, and diversity strategies for the Department of Medicine. In her previous HR role, she supported the leadership development, succession management and assessment strategies for Mayo Clinic. She received a BS in Business Administration/Human Resource Management from Winona State University and an MBA from University of Minnesota. She is currently working becoming a Certified Professional Coach (CPC).

Anne Schletty, MBA, is a Principle Business Analyst for Department of Medicine at Mayo Clinic. Anne has been at Mayo since 2002, serving in multiple roles within Human Resources and Department of Medicine. Currently, she is responsible for the leadership and faculty development strategies and the equity, inclusion, and diversity strategies for the Department of Medicine. In her previous HR role, she supported the leadership development, succession management and assessment strategies for Mayo Clinic. She received a BS in Business Administration/Human Resource Management from Winona State University and an MBA from University of Minnesota. She is currently working becoming a Certified Professional Coach (CPC).

Ana K. L. Norell, M.D.

Anorell11@gmail.com

Home Address
413 Tiffany Drive
Hastings, MN 55033
507-269-9984

Work Address
1880 N. Frontage Road
Hastings, MN 55033
651-438-1800

EDUCATION

June 2016-June 2019	La Crosse-Mayo Family Medicine Residency Graduation Date: June 2019
August 2012-May 2016	Creighton University School of Medicine , Omaha, NE Graduation Date: May 2016 Medical Doctorate
August 2007-May 2011	Gustavus Adolphus College , St. Peter, MN Graduation Date: May 2011 Bachelor of Arts Degree in Biology, Cum Laude GPA: 3.57
January-May 2010	Danish Institute for Study Abroad , Copenhagen, Denmark <i>Medical Practice and Policy Program</i> Credits transferred to home institution
June-August 2009	Winona State University , Winona, MN Courses: Physics I and II GPA: 4.0 Credits transferred to home institution

CERTIFICATIONS/MEMBERSHIPS

2019-Present	American Board of Family Medicine Certified
2013-Present	American Academy of Family Physicians
2013-Present	American Medical Women's Association
2012-Present	American Medical Association
2012-Present	Phi Rho Sigma Medical Fraternity, Eta Chapter, Lifetime member

CLINICAL EXPERIENCE

2019-Present	Allina Health Hastings Clinic Family Medicine Physician, 1.0 FTE
	<ul style="list-style-type: none">Primary physician for a large panel of patients with acute and chronic conditions and demographics

	<ul style="list-style-type: none"> • Participate in the NRP call pool for the labor and delivery floor • Neonatal hospital rounding • Procedural experience including joint injections, fracture care, incision and drainage, pap smears, IUD insertions and removals, Nexplanon insertions and removals, newborn circumcisions, etc
2018-2019	Chief Resident for La Crosse-Mayo Family Medicine Residency
2016-2019	<p>La Crosse-Mayo Family Medicine Residency</p> <p>Resident Physician, average 70 hours/week</p> <ul style="list-style-type: none"> • Primary physician for a panel of patients with a wide array of demographics and medical conditions • Responsible for providing care in the ER, hospital, clinic, and labor and delivery settings • Procedural experience including vaginal deliveries, colposcopies, endometrial biopsies, joint injections, incision and drainage, suturing, IUD insertions, pap smears, etc
2012-2016	<p>Creighton University Magis Clinic, Omaha, NE</p> <p>Medical Student Volunteer, 5 hours/semester</p> <ul style="list-style-type: none"> • Perform a History and Physical Exam on patients in the underserved communities of Omaha during the hours of our completely student-run free clinics of Acute Care, Psychiatry, Women's Health, and Sexual Health • Assist the physician volunteers in diagnoses, plans, and prescription writing • Write notes in the electronic health record for the clinic to use in future encounters
2001-2016	<p>Dr. Deborah Lien Orthodontics, Blooming Prairie, MN</p> <p>Lab, Clerical Staff, 8 variable hours/week</p> <ul style="list-style-type: none"> • Provide office assistance to a private, rural orthodontist by organizing charts, pulling charts for daily visits, sterilizing instruments and office chairs, and vacuuming patient waiting areas • Developing x-rays and assisting in oral mold preparations
2011-2012	<p>Mayo Clinic, Rochester, MN</p> <p>Clinical Laboratory Technologist, 40 hours/week</p> <ul style="list-style-type: none"> • Followed procedures to test human blood samples for levels of Vitamin D₂ and D₃, testosterone (total, free, and bioavailable), 17-hydroxyprogesterone, and androstenedione • Engaged in team work to finish testing procedures in a sufficient turn-around-time for patient satisfaction • Worked with centrifuges, mass spectrometers, positive pressure manifolds, Hamilton pipetting equipment, serial dilutions, fume hoods, and other laboratory equipment to perform tests smoothly and accurately • Used laboratory software, SoftLab, to report results and query patient samples
2011-2011	Olmsted Medical Center Rural Clinics, Chatfield and Stewartville, MN

Job Shadow, 30 hours/week

- Observed how a small, rural clinic is organized and how they performed daily tasks to keep the clinic running smoothly
- Shadowed two rural general practitioners in their daily interactions with patients, their charting techniques, and their interactions with office staff and nurses

2010-2010

Mayo Clinic, Rochester, MN

Summer Lab Science Student, 40 hours/week

- Performed the accepted protocol for testing serum samples for Dihydroxy Vitamin D (D₂ and D₃ analytes)
- I was proficient in the procedure as well as using Lab3 software to report patient results, query samples, and build load trays
- Took a leadership role on the bench for co-workers who had not circulated to that bench recently and was able to answer questions from teammates, consultants, and out-of-network physicians

2009-2009

Mayo Clinic, Rochester, MN

Plastic Surgery Job Shadow, 8-12 hours/week

- Observed the clinical aspect of pre-operative and post-operative carpal tunnel and breast augmentation surgeries

2008-2009

Drs. Amundson, Knaup, Mensing, Bouquet, Becker, Michelich

Rochester, MN

January Term Job Shadow, 40 hours/week

- Observed dental practices of a general dentist, pedodontist, endodontist, oral surgeon, and periodontist to determine if I had interest in dentistry
- Assisted in routine procedures by providing suction, retraction, and instrument sterilization

**RESEARCH/QUALITY
IMPROVEMENT**

VanDeGraaff, J., **Norell, A.**, Lirio, R., Stinar, M., Singh, S., Fernandez, C., Zapata, F., Hopp, R. (2013, May). *The Incidence of non-esophageal gastrointestinal tract problems as Co-morbidity of Eosinophilic Esophagitis*. Poster presented at the Children's Hospital Pediatric Research Forum May 2013, Omaha, NE.

Carol Goulet, Ph.D., Erin Morcomb, M.D., Emily Favret, D.O., Emily Guerber, M.D., **Ana Norell, M.D.**, Mengyi Zha, M.D., Drew Berger LPN, Amber Krump, R.N., Catherine Miller, M.A., Nicole Sprague, R.N. **Quality Improvement: Changing how we utilize patient questionnaires**. La Crosse-Mayo Family Medicine Residency. Mayo Clinic Health System, La Crosse, WI. August 2017-May 2019.

Erika Crockford, D.O., Emily French, M.D., Emily Guerber, M.D., Erin Morcomb, M.D., **Ana Norell, M.D.**, Cheri Olson, M.D., Christopher Smith, M.D., Olivia Thiel, M.D. **Reproductive Health Quality Improvement.** La Crosse-Mayo Family Medicine Residency. Mayo Clinic Health System, La Crosse, WI. August 2018-May 2019.

Norell, A. MD and Guerber, E. MD. (2019, June). *How Comfortable are Initial Contact Providers with Recognizing and Managing Suspected Human Trafficking?* Presented to La Crosse-Mayo Family Medicine Residency June 2019, La Crosse, WI.

UNIVERSITY SERVICE

2015-2016

M1/M4 Team Learning at Creighton University School of Medicine Coordinator

- Plan and schedule M4 students to teach M1 students various physical exam techniques throughout the year, including the cardiac exam, lung exam, musculoskeletal exam, and abdominal exam.
- Edit and update the student handouts to include the most recent techniques for proper exams.

2015-2016

Family Medicine Interest Group, Creighton Chapter

Vice President

- Plan and organize an educational meeting with the affiliated hospice care team to teach our members about hospice and how primary care physicians can work with hospice teams and benefit the patients.
- Contact the Nebraska Academy of Family Physicians and organize the annual meeting for the local physicians to address the group about rural family medicine.
- Assist other officers with any needs and help organize meetings, community service events, and the caravan to the national conference.

2014-2016

American Medical Women's Association (AMWA) Creighton Chapter President

- Oversee organization of meetings, recruitment, mentoring events, fundraising and community service opportunities
- Be available for questions and assistance to other chapter members
- Attend the annual National AMWA conference to network and develop ideas for future local advocacy and community service events
- Provide mentoring to younger classmates through: Surviving M2 year, mentor brunches, book club, and the annual mentoring Wine and Sweets night

2012-2016

Phi Rho Sigma Medical Fraternity

- Participate in fraternity meetings for medical service and volunteer work
- Learn how to complete an accurate physical exam efficiently and teach underclassmen key aspects of a physical exam based on system

2012-2016

Family Medicine Interest Group, Creighton University School of Medicine

- Attend panel conversations about what a family medicine practice consists of and the lifestyle of a family physician
- Use the interest group as a learning tool for finding shadowing experiences, learning how to suture, and learning how to deliver a baby

2012-2016

American Medical Association

- Attend meetings to learn more about the political aspect of medicine and become educated on upcoming legislation that will be integral to my practice in the future

2013-2014

American Medical Women's Association (AMWA) Creighton Chapter Fundraising Chair and Treasurer

- Managed the organization's ledger and organized fundraising opportunities to enhance the ability of the organization to host mentoring and community service activities. Some examples of the fundraising events are t-shirt sales, winter ornament sales, and gathering donations for the annual Wine and Sweets mentoring night we host for members and local female physicians.

2012-2013

Project C.U.R.A. community and international medical relief

- Volunteered and fundraised for monetary donations as well as silent auction items for the annual CURA fundraiser.
- Traveled to Romania May-June 2013 to provide medical assistance such as hypertension care, diabetic medication distribution, recording vital signs, and assistance in other general clinic areas.
- Provided care to underserved gypsy, rural, and urban clinics in several Romanian regions.

2013-2013

Healer's Art medical curriculum elective

- Participated in this elective coursework to better understand myself and my motives for being a physician as well as learned how to incorporate the values of service, healing relationships, reverence for life, and compassionate care into practice.

2008-2011

Pre-Health Club, Gustavus Adolphus College

- Contributed to locating speakers to present on different medical and health careers such as physical therapy, allopathic medicine, and osteopathic medicine
- Attended panels to learn how to create cover letters and resumes for specific career and academic endeavors

2008-2009

Wellness Advisory Board, Gustavus Adolphus College

- Coordinated physical activities for the student body to participate in such as dodge ball tournaments, kickball games, and Relay for Life

2009-2010

Gustavus Adolphus College Student Athletic Association Liaison

- Coordinated events for the student athletes such as dodgeball tournaments
- Brought concerns of the student athletes to the college's Athletic Director and Board.

COMMUNITY SERVICE

2014-2016

American Medical Women's Association: Be One Teach One Program

- Participate in monthly Health Occupations Students of American (HOSA) meetings at a local high school to teach girls about topics in the healthcare field such as goal setting, reflex testing, ace wrap placement, and surgical scrubbing
- The main goal of the program is to keep young ladies interested in science-related careers.

2012-2016

Creighton University Magis Clinic, 15 hours

- Obtain the history and physical exam on patients as well as form an assessment and plan to discuss with the attending physician
- Acute Care, Women's Medicine, Psychiatry Clinic

2004-2012

Salvation Army Good Samaritan Medical Clinic and Dental Clinic

Seasonal 6 hours/week

- Perform clerical duties in the front office such as check-in patients, organize charts, help physicians make referrals, scheduling appointments
- Assist in taking vital signs and cleaning exam rooms

2013

Alzheimer's Association Midlands Chapter, 4.5 hours

- Fundraising gala and silent auction volunteer
- Encouraged guests to bid on silent auction items and was a "runner" to collect names and bids for the live auction

2012, 2015

Medical aid volunteer at Azzurri Invitational Soccer tournament, 7 hours

- Offered aid to injured players by performing a focused physical exam, taping, icing, bandaging, or stretching their injuries

2012

Make-A-Wish 5K, 5 hours

- Volunteered to check in runners and pass out t-shirts, water, and snacks

2009-2011

Relay for Life, 24 hours

- Helped organize the campus event by making fliers, raising money, and walking for the cause

2008	Flu Shot clinic at Gustavus Adolphus College, 4 hours
	<ul style="list-style-type: none"> • Registration regulator
2007	Robin's Nest Orphanage volunteer in Jamaica, 100 hours
	<ul style="list-style-type: none"> • Assist the care team with childcare, cleaning, painting, and clearing out an old school house to be remodeled for use

2005-2007

Appalachian Service Project, 120 hours

- Aid in interior and exterior home repair in areas of extreme poverty in the Appalachian Mountains
- Provide monetary support for current high school youth to give aid

AWARDS/RECOGNITIONS

2018-2019	<ul style="list-style-type: none"> • Elected Chief Resident for La Crosse-Mayo Family Medicine Residency
2016	<ul style="list-style-type: none"> • Mayo Clinic Silver level certification for quality improvement
2015	<ul style="list-style-type: none"> • Honors marks in Family Medicine: Hospice Care of the Terminally Ill coursework
2015	<ul style="list-style-type: none"> • Family Medicine Leads Scholarship recipient for the AAFP National Conference in Kansas City, MO
2015	<ul style="list-style-type: none"> • American Medical Women's Association Travel Grant recipient for the National Conference in Chicago, IL
2007-2011	<ul style="list-style-type: none"> • Gustavus Adolphus College President's Scholarship
2007	<ul style="list-style-type: none"> • Past President's Parley Healthcare Scholarship from American Legion Auxiliary
2007	<ul style="list-style-type: none"> • American Legion Post #92 William T. McCoy Americanism Scholarship
2007	<ul style="list-style-type: none"> • Zumbro Lutheran Church Academic Scholarship
2007	<ul style="list-style-type: none"> • Peace United Church of Christ Allan Carl Schroeder Memorial Scholarship
2006	<ul style="list-style-type: none"> • American Legion Minnesota Girls State Representative
2006	<ul style="list-style-type: none"> • Minnesota Girls State Samsung American Legion Scholarship winner
2006	<ul style="list-style-type: none"> • National Finalist Samsung American Legion Scholarship

HOBBIES

2012-2016	Reading, camping, traveling, soccer, figure skating, hiking with my golden retriever
2003-2010	Creighton University Intramural Soccer
	Varsity Soccer <ul style="list-style-type: none"> • High School and College varsity letter winner 7 years • Team captain 2006
1993-2009	Synchronized Figure Skating <ul style="list-style-type: none"> • Moves in the Field Gold Medalist 2007

- Varsity letter winner 6 years 2002-2007
- Two-time Midwestern Regional Silver Medalist 2004, 2006

July 2021

Carl Lewis Backer, M.D.

EDUCATION

College	B.A., Northwestern University College of Arts and Sciences Evanston, IL, 1976
Medical	M.D., Mayo Medical School Rochester, MN, 1980

GRADUATE MEDICAL EDUCATION

Internship - Residency General Surgery	1980-85	Northwestern University - McGaw Medical Center Chicago, IL
Residency - Cardiothoracic Surgery	1985-87	Northwestern University - McGaw Medical Center Chicago, IL

POST-DOCTORAL RESEARCH TRAINING

Pediatric Cardiovascular-Thoracic Surgery 1987-88 Children's Memorial Hospital
Chicago, IL
Preceptor: Farouk S. Idriss, MD

BOARD CERTIFICATION AND MEDICAL LICENSURE

American Board of Surgery, April 8, 1986, #31261
Recertification American Board of Surgery, October 21, 1994
American Board of Thoracic Surgery, May 13, 1988, #4633
Recertification American Board of Thoracic Surgery, January 13, 1997
Recertification American Board of Thoracic Surgery, December 20, 2007
Recertification American Board of Thoracic Surgery, December 15, 2016
(Valid through December 31, 2028)
Certificate for Congenital Heart Surgery, February 12, 2010, (#15)
Recertification Congenital Heart Surgery, December 15, 2016
(Valid through December 31, 2028)
Medical License: 1980 - Illinois 36-6415

HONORS AND AWARDS

B.A. with Honors, 1976
Phi Beta Kappa, 1976
Northwestern Memorial Hospital Surgical Award, 1985
The Wausau School District Twenty-Five Year Club Hall of Fame Award, 1994
Charter Member: Children's Circle of Care, The White House, September 27, 1995

Southern Thoracic Surgical Association President's Award, 1995
Best Scientific Paper "Taussig-Bing Anomaly: Arterial Switch Versus Kawashima Intraventricular Repair"
American Medical Association Physician's Recognition Award, February 1, 1997-2000

Strathmore's Who's Who--Lifetime member
 National Registry of Who's Who--Lifetime member (#90042)
 Children's Heart Foundation-Research Champion Award, 2014
 Saving tiny Hearts Society, Medical Advisory Board (Emeritus), 2019

MILITARY SERVICE	None
EMPLOYMENT	Cincinnati Children's Hospital Medical Center – 2020 -
FACULTY APPOINTMENTS	
Professor of Surgery	University of Kentucky – 2020 -
Professor of Cardiothoracic Surgery	Cincinnati Children's Hospital Medical Center – 2020 -
Professor of Surgery	Northwestern University Medical School – 2000 - 2020
Associate Professor of Surgery	Northwestern University Medical School – 1996 - 2000
Assistant Professor of Surgery	Northwestern University Medical Schoo – 1988-1996
HOSPITAL AFFILIATIONS	
Chief, Section of Pediatric Cardiothoracic Surgery	University of Kentucky Healthcare – 2020 - Kentucky Children's Hospital
Professor, Cardiothoracic Surgery	Cincinnati Children's Hospital Medical Center – 2020 -
Chief Medical Philanthropy Officer	Ann & Robert H. Lurie Children's Hospital of Chicago 2018 – 2020
Attending Surgeon	Division of Cardiovascular-Thoracic Surgery 1988 – 2020
Division Head	2008 – 2018
A.C. Buehler Professor of Surgery	2001 – 2020
Surgical Director Pediatric Heart Transplant Program	2001 – 2020

Associate Staff Surgeon

Northwestern Memorial Hospital, Chicago
Division of Cardiothoracic Surgery
1992 - 2020

Central DuPage Hospital, Winfield, IL
2006 - 2020

Northwest Community Hospital, Arlington Heights, IL
2011 - 2020

Mercyhealth Hospital, Rockford, IL
2012 - 2020

PROFESSIONAL SOCIETIES

National and International

American Academy of Pediatrics - Surgical Section

American Association for Thoracic Surgery

American College of Cardiology

American College of Chest Physicians

American College of Surgeons

American Heart Association

- Fellow, Council on Cardio-Thoracic and Vascular Surgery
- Cardiovascular Disease in the Young Council

American Medical Association

American Society of Transplant Surgeons

American Surgical Association

- Fellow

Congenital Heart Surgeons Society

- Membership Committee, 2005 - 2006
- Secretary-Treasurer, 2006 - 2011
- President-elect, 2014 - 2016
- President, 2016 - 2018
- Immediate Past President, 2018 – 2020
- Chair, Resource and Development Committee, 2020 - 2024

Doctor's Mayo Society, 1996

European Association for Cardio-Thoracic Surgery

International Pediatric Transplant Association

International Society for Heart & Lung Transplantation

Midwest Pediatric Cardiology Society

- Executive Committee -Surgical Liaison

North American Society of Pacing and Electrophysiology

Pediatric Cardiac Intensive Care Society: Charter member

Pediatric Heart and Lung Transplant Study Group

Society of Thoracic Surgeons

Southern Thoracic Surgical Association

World Society for Pediatric and Congenital Heart Surgery

- Governing Council, 2018

Local

The Chicago Cardiothoracic Surgical Society– Founding Member

Chicago Medical Society

Chicago Surgical Society

Illinois Surgical Society

Illinois Medical Society

ADMINISTRATIVE APPOINTMENTS

Co-Director, Farouk S. Idriss Cardiac Registry, 1992
Director, Heart Transplant Program – 2003

COMMITTEE SERVICE

Northwestern University Medical School

Undergraduate Surgical Education Committee, 1990
Feinberg Cardiovascular Research Institute, 1995
Search Committee for Chief, Division of Cardiothoracic Surgery, 1995

Children's Memorial Hospital

Department of Surgery, Promotions Committee, 2001
Search Committee for Chair, Department of Pathology, 2000
Adult Care Committee, 1999
Credentialling Committee, Faculty Practice Plan, 1999, 2000, 2007-
Search Committee for Chief, Division of Cardiology, 1997
Multidisciplinary ICU Committee, 1989
Heart-Lung Transplant Committee, 1989
Transfusion Committee, 1992
Safety Quality Leadership Team 2007-
Clinical Risk Committee 2007-

Children's Memorial Institute for Education and Research

Faculty Advisory Committee, 1992

Illinois

American College of Cardiology
Membership Committee
Cardiovascular Economics Committee
Gift of Hope – Organ & Tissue Donor Network, Cardiopulmonary Subcommittee

PROFESSIONAL AND SCIENTIFIC ACTIVITY

Coordinating Committee for Continuing Education in Thoracic Surgery, 1995
 Member, SESATS (Self-Education/Self-Assessment in Thoracic Surgery) Editorial Board, 1995
 Section Editor, Section IV-Cardiac Congenital
 SESATS VIII-2000; SESATS IX-2004; SESATS X-2008; SESATS XI-2012
 Member, Society of Thoracic Surgeons Congenital Heart Surgery Nomenclature Committee, 1998
 Member, STS National Databases Resource Group, 2002
 Member, STS Workforce on Annual Meeting, 2004, 2005, 2006, 2017-2019 (New Appointment)
 Chair, American Association for Thoracic Surgery Membership Committee, 2010-2012
 Chair, Program Committee, STS Workforce on Annual Meeting, 2008
 Residency Review Committee for Thoracic Surgery (2011-2017), Vice Chair, 2013-
 Accreditation Council for Graduate Medical Education (ACGME), 2010-2017
 American Association for Thoracic Surgery (AATS) Foundation Advisory Council, 2019-2021

National Institutes of Health

Division of Research Grants Special Study Section, Bethesda, Maryland
 October 28-30, 1992
 November 17-19, 1993
 July 11-13, 1994
 July 10-12, 1995

National

Children's Circle of Care Leadership Conference, National Institutes of Health, Bethesda, MD, September 27, 1995
 Charter Member, Medical Advisory Board, Children's Heart Foundation, 1996
 Chairman, Medical Advisory Board, The Children's Heart Foundation, 2003 - 2014
 Medical Advisory Board (Emeritus), Saving tiny Hearts Society
 Society of Thoracic Surgeons' Ad Hoc Committee for Congenital Heart Surgery Initiatives
 Thoracic Surgery Directors Association, Congenital Program Representative
 – Chair, Congenital Subcommittee (2010 - 2014)
 Co-Chairman, American Association for Thoracic Surgery, Evarts A. Graham Memorial Traveling Fellowship Committee (2013)
 Mayo Clinic Alumni Association (2010 – 2025)
 Vice-President (2015 - 2017)
 President-elect (2017 - 2019)
 President (2019 - 2023)
 Past President (2023 - 2025)
 Thoracic Surgery Foundation for Research and Education Board of Directors, 2014 –
 Congenital Heart Public Health Consortium
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Child's Nervous System

Critical Care Medicine

RESEARCH GRANTS/CONTRACTSPrimary Investigator

Backer CL, Takami H: Effect of Diltiazem on transplant coronary artery disease. American Heart Association Grant Proposal, submitted September 30, 1992, American Heart Association of Metropolitan Chicago. (Approved, not funded)

Backer CL, Bronicki R: The effects of glucocorticoids on the post-cardiopulmonary bypass systemic inflammatory response, IRB# 10783. (Internally funded study, 1995-1996).

Strasburger J, **Backer CL**: Clinical investigation of the models 10295B/4965 epicardial steroid eluting pacing lead: Phase two (Medtronics Corp. 1996).

Backer CL, Mavroudis, C: Cylexin PT-205 project; A Multicenter, double-blind, placebo controlled study to evaluate the efficacy and safety of CY-1503 in the prevention of reperfusion injury in neonates and infants undergoing hypothermic cardiopulmonary bypass during surgical repair of congenital heart defects. 1997-1999.

Backer CL, Horn B, Mavroudis C: A Multi-Center Study to Evaluate the Efficacy, Safety, and Pharmacokinetics of Brevibloc for the Treatment of Hypertension in Infants and Children After Surgical Repair of Coarctation of the Aorta, IRB#2001-11666. (Sponsored by Baxter Corporation, 2001-2003).

Backer CL, Mavroudis, C: A Comparative, Evaluator-Masked, Randomized, Parallel, Multicenter Study to Determine the Safety and Effectiveness of REPEL-CV for Reducing Post-Operative Adhesions Following Pediatric Cardiothoracic Surgery, IRB# 2003-12080. (Sponsored by Life Medical Sciences, Inc., 2003)

Collaborating Investigator

Przybylo HJ, **Backer CL**, Bysani GK: Oxygen free radical production during the repair of congenital heart defects. IRB #10516.

Mavroudis C, **Backer CL**: Secondary prospective study for the evaluation of the safety and effectiveness of cryopreserved human allograft heart valves, IRB# 10423. (Externally funded clinical trial, Cryolife and CryoInstitute, 1992-1995).

Mavroudis C, **Backer CL**: Optimization of an implantable artificial lung (Internally funded study, 1995-1996). Mavroudis C, Cook K, **Backer CL**: Intrathoracic Artificial Lung. NIH Grant (IR01BL59537-01), 1998-2001.

Crawford SE, Deal B, Mavroudis, C, **Backer CL**, Pahl E: Dr. Scholl Foundation: Molecular Basis of long QT Syndrome.

Crawford SE, **Backer CL**, Mavroudis, Pahl E, Gidding S: Regulation of Angiogenic Inhibitors in cardiac remodeling and hypertrophy. Children's Heart Foundation.

Curran RD, Mavroudis C, **Backer CL**, Hall SC: Inhaled nitric oxide therapy for pulmonary hypertension. American Heart Association Grant Proposal, submitted September 30, 1992, American Heart Association of Metropolitan Chicago. (Approved, not funded)

Crawford SE, Hsueh W, Mavroudis C, **Backer CL**: TNF-Alpha, PAF, and angiotensin II in cardiac allograft arteriosclerosis. American Heart Association Grant Proposal, submitted September 30, 1992, American Heart Association of Metropolitan Chicago. (Approved, not funded)

Mavroudis C, Steele JA, **Backer CL**: HAL-C coating solution for the reduction of post-surgical adhesions, IRB# 10510 (Externally funded clinical trial, Genzyme Corporation, 1992-1993). Mavroudis C, Backer CL, Webb C, Gottsche N, Randolph G, Bryk-Serva: Phase II Clinical Protocol 9202-99C Medtronic Converge Pulmonary Valved Conduit, IRB# 2002-11565. (Sponsored by Medtronic Corporation, 2001-2003).

Kaushal S, **Backer CL**: Cell based therapy for congenital cardiomyopathy using endogenous cardiac stem cells. Children's Heart Foundation. \$100,000 per year for 2 years. Funded 2009-2010.

Epting C, **Backer CL**: Transcriptional Profiling of Pediatric Cardiac Stem Cells. Children's Heart Foundation. \$100,000 per year for 2 years. Funded 2013.

Welke K, **Backer CL**: Developing A National Model for Regionalization of Care for Children Undergoing Congenital Cardiac Surgery in the United States. Children's Heart Foundation. \$100,000 per year for 2 years. Funded 2014.

Rigsby C, **Backer CL**, Robinson J. Patient Specific In-vitro Modeling of Hemodynamic Outcome in Aortic Coarctation Repair. (# 16-0278). Northwestern University / NIH Subcontract.

Consultant

Curran RD, Mavroudis C, **Backer CL**, Hall SC: Inhaled nitric oxide therapy for pulmonary hypertension. American Heart Association Grant Proposal, submitted September 30, 1992, American Heart Association of Metropolitan Chicago. (Approved, not funded)

Crawford SE, Hsueh W, Mavroudis C, **Backer CL**: TNF-Alpha, PAF, and angiotensin II in cardiac allograft arteriosclerosis. American Heart Association Grant Proposal, submitted September 30, 1992, American Heart Association of Metropolitan Chicago. (Approved, not funded)

Mavroudis C, Steele JA, **Backer CL**: HAL-C coating solution for the reduction of post-surgical adhesions (Externally funded clinical trial, Genzyme Corporation 1992-1993)

SCHOLARLY PRODUCTIVITY

Refereed Journal Articles

1. **Backer CL**, Tinker JH, Robertson DM, Vlietstra RE: Myocardial reinfarction following local anesthesia for ophthalmic surgery. *Anesth Analg* 1980 Apr;59:257-62.
2. **Backer CL**, Sener SF, Scanlon EF: Complications of drainage system for modified radical mastectomy. *Arch Surg* 1982;117:859.
3. **Backer CL**, LoCicero J: Surgical management of esophageal disorders. *CCQ* 1986;9:12-9.
4. **Backer CL**, Shields TW, Lockhart CG, Vogelzang R, LoCicero J: Selective preoperative evaluation for possible N₂ disease in carcinoma of the lung. *J Thorac Cardiovasc Surg* 1987 Mar;93:337-43.
5. Idriss FS, Ilbawi MN, DeLeon SY, Duffy CE, Muster AJ, **Backer CL**, Berry TE, Paul MH: Transposition of the great arteries with intact ventricular septum. Arterial switch in the first month of life. *J Thorac Cardiovasc Surg* 1988 Feb;95:255-62.
6. **Backer CL**, Hartz RS, Meyers SN, Davis G: Coronary embolism following atrial septal defect repair. *Ann Thorac Surg* 1988 May;45:561-3.
7. DeLeon SY, Idriss FS, Ilbawi MN, Duffy CE, Benson DW Jr, **Backer CL**: Comparison of single versus multidose blood cardioplegia in arterial switch procedures. *Ann Thorac Surg* 1988 May;45:548-53.
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9. DeLeon SY, Ilbawi MN, Idriss FS, **Backer CL**, Ohtake S, Zales VR, Muster AJ, Benson DW Jr: Direct tricuspid valve closure versus atrial partitioning in Fontan operation for complex lesions. *Ann Thorac Surg* 1989 May;47:761-4.
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14. **Backer CL**, Idriss FS, Zales VR, Mavroudis C: Cardiac transplantation for hypoplastic left heart syndrome: a modified technique. *Ann Thorac Surg* 1990 Dec;50:894-8.

15. **Backer CL**, LoCicero J III, Hartz RS, Donaldson JS, Shields T: Computed tomography in patients with esophageal perforation. *Chest* 1990 Nov;98:1078-80.
16. **Backer CL**, Ohtake S, Zales VR, LoCicero J III, Michaelis LL, Idriss FS: Living related lobar lung transplantation in beagle puppies. *J Pediatr Surg* 1991 Apr;26:429-33.
17. **Backer CL**, Zales VR, Harrison HL, Idriss FS, Mavroudis C: Intermediate term results of infant orthotopic cardiac transplantation from two centers. *J Thorac Cardiovasc Surg* 1991 May;101:826-32.
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29. Zales VR, Crawford S, **Backer CL**, Lynch P, Benson DW Jr, Mavroudis C: Spectrum of humoral rejection following pediatric cardiac transplantation. *J Heart-Lung Transplant* 1993 Jul-Aug;12:563-72.

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31. Kobayashi J, Mavroudis C, Crawford SE, Zales VR, **Backer CL**: A new rat-infection transplant model: effect of infection on graft survival studies. *J Heart-Lung Transplant* 1993 Jul-Aug;12:659-64.
32. Votapka T, **Backer CL**, Mavroudis C: Giant popliteal false aneurysm in an eight-year-old child. *J Pediatr Surg* 1993 Dec;28:1594-6.
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34. Sakakibara Y, Furukawa T, Singer DH, Jia H, **Backer CL**, Arentzen CE, Wasserstrom JA. Sodium current in isolated human ventricular myocytes. *Am J Physiol* 1993 Oct;265 (4 Pt 2): H1301-H1309.
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50. **Backer CL**, Zales VR, Alboliras E, Mavroudis C: Repair of complete atrioventricular canal defects: Results with the two patch technique. *Ann Thorac Surg* 1995 Sep;60:530-7.
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Presentations and Abstracts (continued)

169. Dodge-Khatami A, **Backer CL**, Mavroudis C: Surgical strategy for coarctation based on a 40-year review of recoarctation risk factors. 13th Annual Meeting, European Association for Cardio-Thoracic Surgery, Glasgow, Scotland, September 5-8, 1999.
170. **Backer CL**, Hillman N, Mavroudis C: ALCAPA: Successful surgical strategy in 18 consecutive children. Annual Meeting, Congenital Heart Surgeons' Society, Chicago, September 17, 1999.
171. Hillman ND, **Backer CL**, Mavroudis C, Duffy E.: The Ross operation in children. 23rd Annual Meeting, Midwest Pediatric Cardiology Society, Ann Arbor, MI, September 23-24, 1999.
172. **Backer CL**, Mavroudis C, Dunham ME, Holinger LD: Intermediate term results of the free tracheal autograft for long segment congenital tracheal stenosis. Section on Surgery, 51st Annual Meeting, American Academy of Pediatrics, Washington DC, October 9-11, 1999.
173. **Backer CL**: Tracheal restoration in children: Tracheoplasty for congenital tracheal stenosis. Multidisciplinary Panel Sponsored by the Program Committee and the Advisory Council for Pediatric Surgery. 85th Annual Clinical Congress, American College of Surgeons, San Francisco, CA, October 12, 1999.
174. Dodge-Khatami A, **Backer CL**, Crawford SE, Cook KE, Holinger LD, Mavroudis C: Topical vascular endothelial growth factor (VEGF) enhances free tracheal autograft healing in an experimental rabbit model of tracheal reconstruction. Surgical Forum, American College of Surgeons, San Francisco, CA, October 13, 1999.
175. **Backer CL**: Post-operative care after congenital heart surgery. Specialty Review in Thoracic Surgery, National Center for Advanced Medical Education, Chicago, October 30, 1999.
176. **Backer CL**: Patent ductus arteriosus, vascular rings, coarctation of the aorta, interrupted aortic arch, and hypoplastic left heart syndrome. Specialty Review in Thoracic Surgery, National Center for Advanced Medical Education, Chicago, October 30, 1999.
177. **Backer CL**: Atrial septal defect, partial anomalous pulmonary venous connection, atrioventricular canal defect. Specialty Review in Thoracic Surgery, National Center for Advanced Medical Education, Chicago, November 1, 1999.
178. **Backer CL**: Ebstein's anomaly, tricuspid atresia. Specialty Review in Thoracic Surgery, National Center for Advanced Medical Education, Chicago, November 1, 1999.
179. Mavroudis C, **Backer CL**: Arterial switch after failed atrial baffle procedure for transposition. 46th Annual Meeting, Southern Thoracic Surgical Association, Puerto Rico, November 4-6, 1999.
180. **Backer CL**: Hypoplastic left heart syndrome: Surgical treatment of advanced disease. Symposium on Hypoplastic Left Heart Syndrome, Maywood, IL, November 20, 1999.
181. **Backer CL**: Pectus repair. Meet the Experts Session, 36th Annual Meeting, Society of Thoracic Surgeons, Ft. Lauderdale, FL, February 2, 2000.
182. Mavroudis C, **Backer CL**, Deal BJ, Johnsrude CL: Arrhythmia surgery and Fontan conversion. Congenital Heart Disease Symposium, American Association for Thoracic Surgery, Toronto, Ontario Canada, April 30, 2000.

Presentations and Abstracts (continued)

183. Johnsrude CL, Deal BJ, Mavroudis C, **Backer CL**: Incidence of atrial arrhythmias prior to Fontan surgery: indications for “prophylactic” surgical intervention. 21st Annual Meeting, North American Society of Pacing and Electrophysiology, Washington DC, May 17, 2000.
184. **Backer CL**, Mavroudis, C, Deal BJ, Johnsrude CL: Intermediate term results of Fontan conversion with arrhythmia surgery. 24th Annual Meeting, Midwest Pediatric Cardiology Society, Milwaukee, WI, September 15, 2000.
185. **Backer CL**, Mavroudis C, Gerber M, Holinger L: Tracheal Surgery in children: An 18 year review of four techniques. European Association for Cardio-Thoracic Surgery. Frankfurt, Germany, October 8, 2000.
186. **Backer CL**: Long segment congenital tracheal stenosis with complete tracheal rings. Pediatric Airway Endoscopy Course, Chicago, October 21, 2000.
187. **Backer CL**: Post-operative care after congenital heart surgery. Specialty Review in Thoracic Surgery, National Center for Advanced Medical Education, Oak Brook, IL, October 28, 2000.
188. **Backer CL**: Patent Ductus Arteriosus, Vascular Rings, Coarctation of the Aorta, Interrupted Aortic Arch, and Hypoplastic Left Heart Syndrome. Specialty review in Thoracic Surgery, National Center for Advanced Medical Education, Oak Brook, IL, October 28, 2000.
189. **Backer CL**: Atrial Septal Defect, Partial Anomalous Pulmonary Venous Connection, Atrioventricular Canal Defect. Specialty review in Thoracic Surgery, National Center for Advanced Medical Education, Oak Brook, IL, October 30, 2000.
190. **Backer CL**: Ebstein’s anomaly, tricuspid atresia. Specialty Review in Thoracic Surgery, National Center for Advanced Medical Education, Oak Brook, IL, October 30, 2000.
191. Stuart R, Checchia PA, **Backer CL**, Bronicki RA, Crawford SE, Mavroudis C: Double versus single dose dexamethasone exerts an additive effect to reduce the inflammatory response to bypass in children. 73rd Scientific Sessions, American Heart Association, New Orleans, LA, November 12, 2000. Circulation 2000;102(18):II-469.
192. Kohr LM, Dargan M, Hague A, Nelson SP, Duffy CE, Mavroudis C, **Backer CL**: The Incidence of swallowing dysfunction in pediatric patients following open-heart surgery. 73rd Scientific Sessions, American Heart Association, New Orleans, LA, November 12, 2000. Circulation 2000;102(18):II-469.
193. Deal B, Johnsrude C, Mavroudis C, **Backer CL**: Comparison of anatomic isthmic block with modified right atrial Maze procedure for atrial reentry tachycardia in Fontan patients. 73rd Scientific Sessions, American Heart Association, New Orleans, LA, November 14, 2000. Circulation 2000;102(18):II-697.
194. Deal B, Mavroudis C, **Backer CL**, Johnsrude C: Maze III procedure for atrial fibrillation in association with repair of complex congenital heart disease. 73rd Scientific Sessions, American Heart Association, New Orleans, LA, November 15, 2000. Circulation 2000;102(18):II-820.
195. Cook KE, Maxhimer JB, Hubbared JE, Mavroudis C, Mockros LF. Effect of shear stress on coagulation and inflammation in implantable artificial lungs. ASAIO Abstracts 46:194, 2000.
196. Mavroudis C, **Backer CL**: Truncal valve remodeling by leaflet resection and reduction annuloplasty. 37th Annual Meeting, Society of Thoracic Surgeons, New Orleans, LA, January 30, 2001.

Presentations and Abstracts (continued)

197. **Backer CL**: Pediatric tracheal reconstruction. 37th Annual Meeting, Society of Thoracic Surgeons, New Orleans, LA, January 30, 2001.
198. Pahl E, Crawford SE, Wax DF, **Backer CL**, Mavroudis C, Gidding S: Safety and efficacy of pravastatin in pediatric heart transplant recipients. 21st Annual Meeting, International Society for Heart and Lung Transplantation, Vancouver, BC, Canada, April 25, 2001. *J Heart Lung Transplant* 2001;20:230.
199. Costello J, Wax D, **Backer CL**, Mavroudis C, Pahl E: Preliminary experience with IVUS in pediatric heart transplant recipients. 21st Annual Meeting, International Society for Heart and Lung Transplantation, Vancouver, BC, Canada, April 25, 2001. *J Heart Lung Transplant* 2001;20:231.
200. **Backer CL**: AV canal repair: Two patch technique. Congenital Heart Disease Symposium, American Association for Thoracic Surgery 81st Annual Meeting, San Diego, CA, May 6, 2001.
201. **Backer CL**: Late pulmonary valve insertion is beneficial for tetralogy of Fallot. Controversies in Cardiothoracic Surgery, 81st Annual Meeting, American Association for Thoracic Surgery, San Diego, CA, May 9, 2001.
202. **Backer CL**, Mavroudis C, Hillman N, Rodgers S, Crawford S, Pahl E: Results of bicaval heart transplantation in children. 3rd World Congress of Pediatric Cardiology and Pediatric Cardiac Surgery, Toronto, Canada, May 28, 2001. *Cardiol Young* 2001;11(Suppl 1):124.
203. Muster A, Idriss R, **Backer CL**: Evolution of aortic arches from fish to humans. 3rd World Congress of Pediatric Cardiology and Pediatric Cardiac Surgery, Toronto, Canada, May 29, 2001. *Cardiol Young* 2001;11(Suppl 1):206.
204. Kohr L, Creaden J, Koster N, **Backer CL**, Mavroudis C: Evaluation of a cardiovascular-thoracic nurse practitioner program. 3rd World Congress of Pediatric Cardiology and Pediatric Cardiac Surgery, Toronto, Canada, May 30, 2001. *Cardiol Young* 2001;11(Suppl 1):244 .
205. Mavroudis C, Kohr L, **Backer CL**, Gotteiner N, Randolph G, Webb C. Intraoperative transesophageal echocardiography for congenital heart surgery. 3rd World Congress of Pediatric Cardiology and Pediatric Cardiac Surgery, Toronto, Canada, May 30, 2001. *Cardiol Young* 2001;11(Suppl 1):300.
206. **Backer CL**: Indications for palliative procedures. American College of Surgeons, Postgraduate Course-Cardiac Surgery, New Orleans, LA, October 11, 2001.
207. **Backer CL**, Hillman N, Mavroudis C, Holinger LD: Resection of Kommerell's diverticulum and left subclavian artery transfer for recurrent symptoms after vascular ring division. Congenital Heart Surgeons' Society, Chicago, October 15, 2001.
208. **Backer CL**, Samson R: The child with congenital heart disease before and after surgery. American Academy of Pediatrics, Invited Lecture. San Francisco, CA, October 21, 2001.
209. **Backer CL**, Long segment congenital tracheal stenosis with complete tracheal rings. Pediatric Airway Endoscopy Course, Invited Lecture. Chicago, November 1, 2001.
210. Costello J, **Backer CL**, deHoyos A, Binns HJ, Mavroudis C. Aprotinin reduces operative closure time and blood product use after cardiopulmonary bypass in selected pediatric patients. 25th Annual Meeting, Midwest Pediatric Cardiology Society, Omaha, NE, November 30, 2001.

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211. **Backer CL**, Hillman N, Mavroudis C, Holinger LD: Resection of Kommerell's diverticulum and left subclavian artery transfer for recurrent symptoms after vascular ring division. 25th Annual Meeting, Midwest Pediatric Cardiology Society, Omaha, NE, November 30, 2001.
212. Costello J, **Backer CL**, Checchia PA, Mavroudis C, Goodman DM: Alterations in the natriuretic hormone system related to cardiopulmonary bypass and modified ultrafiltration in patients with congenital heart disease. 4th International Symposium on Pediatric Cardiology Intensive Care, Palm Beach, FL, December 6-8, 2001. *Pediatr Crit Care Med* 2002;3:215.
213. Perlman CE, Cook KE, **Backer CL**, Hillman N, Mavroudis C, Mockros LF. Hemodynamic consequences of artificial lung attachment in an in vivo porcine model. *ASAIO Abstracts* 2001;47: 144.
214. **Backer CL**: Tetralogy of Fallot –timing of repair. Meet the Experts Session, 38th Annual Meeting, Society of Thoracic Surgeons, Ft. Lauderdale, FL, January 29, 2002.
215. Deal B, Mavroudis C, **Backer CL**: Beyond Fontan: Surgical therapy of arrhythmias in young patients. 38th Annual Meeting, Society of Thoracic Surgeons, Ft. Lauderdale, FL, January 30, 2002.
216. **Backer CL**: Surgical techniques of mitral valve repair. 2nd International Symposium on Pediatric Echocardiography, St. Petersburg, FL, February 1, 2002.
217. **Backer CL**: Surgical management of interventional transcatheter complications. Congenital Heart Surgery Symposium, 82nd Annual Meeting, American Association for Thoracic Surgery, Washington DC, May 5, 2002.
218. **Backer CL**, Holinger, Gerber M, Mavroudis C: The role of bronchoscopy in the repair of congenital tracheal stenosis using the tracheal autograft technique. 12th World Congress for Bronchoesophagology, Boston, MA, June 17, 2002.
219. **Backer CL**: Indications and results of heart surgery/pediatric heart transplantation. Specialty Review in Pediatric Cardiology, National Center for Advanced Medical Education, Chicago, July 12, 2002.
220. Cook KE, Perlman CE, **Backer CL**, Hillman N, Mavroudis C, Mockros LF. In vivo verification of model for right ventricular power during thoracic artificial lung implantation. *ASAIO Abstracts* 2002;48:169.
221. Deal B, Franklin W, Parilli N, **Backer CL**, Mavroudis C: Surgical therapy of atrial fibrillation in young patients with complex congenital heart disease. 26th Annual Meeting, Midwest Pediatric Cardiology Society, Chicago, September 13, 2002.
222. **Backer CL**, Seipelt RG, Pahl E, Rodgers S, Frank M, Crawford SE, Mavroudis C: Cardiac transplantation after previous procedures for congenital heart disease. 26th Annual Meeting, Midwest Pediatric Cardiology Society, Chicago, September 13, 2002.
223. **Backer CL**: A history of pediatric tracheal surgery. 49th Annual Meeting, Southern Thoracic Surgical Association, Miami Beach, FL, November 8, 2002.
224. Seipelt RG, **Backer CL**, Mavroudis C, Stellmach V, Seipelt IM, Cornwell M, Hernandez J, Crawford S: Topical VEGF enhances healing of thoracic aortic anastomosis for coarctation in a rabbit model. 75th Scientific Sessions, American Heart Association, Chicago, November 20, 2002.
225. Kavey RE, Franklin WH, Deal BJ, Mavroudis C, **Backer CL**, Danduran M, Strasburger JF, Mesnik M: Exercise performance after Fontan conversion to total cavopulmonary connection. 82nd Annual

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Scientific Session, American College of Cardiology. Chicago, March 30, 2003. J Am Coll Cardiol 2003;41(6 Suppl A):476.

226. Pahl E, Crawford SE, Katz BZ, Kostyk MC, Morgan E, Wax DF, Mavroudis C, **Backer CL**: PTLD in a pediatric heart transplant cohort is not associated with traditional risk factors. 23rd Annual Meeting, International Society of Heart and Lung Transplantation, Vienna, Austria, April 10, 2003. J Heart Lung Transplant 2003;22:S134.

227. **Backer CL**, Holinger LD, Mavroudis C: Vascular rings and pulmonary artery sling: 1946-2003. 27th Annual Meeting, Midwest Pediatric Cardiology Society, Rochester, MN, September 19, 2003.

228. Kim P, Franklin W, Duffy E, Gotteiner N, Webb C, Mavroudis C, **Backer CL**, Parilli N, Deal B. Accuracy of transesophageal echocardiography in detecting right atrial thrombus in patients after the Fontan operation. 27th Annual Meeting, Midwest Pediatric Cardiology Society, Rochester, MN, September 19, 2003.

229. Ward KM, Crawford SE, Rodgers SR, Pophal SG, **Backer CL**, Mavroudis C, Pahl C. Basiliximab in pediatric heart transplantation-initial experience. 27th Annual Meeting, Midwest Pediatric Cardiology Society, Rochester, MN, September 19, 2003.

230. Mavroudis C, Deal BJ, **Backer CL**: Surgery for arrhythmias in children. 2nd Joint European/North American Symposium on Congenital Heart Disease in the Adult, Santorini, Greece, September 19-20, 2003.

231. **Backer CL**, Mavroudis C, Holinger LD: Vascular rings & pulmonary artery sling. Annual Meeting, Congenital Heart Surgeons' Society, Chicago, September 29, 2003.

232. Seipelt IM, Pahl E, Seipelt RG, Mavroudis C, Backer CL, Cornwell M: Neointimal inflammation and adventitial angiogenesis correlate with severity of cardiac allograft vasculopathy in pediatric cardiac recipients. 76th Scientific Sessions, American Heart Association, Orlando, FL, November 9-12, 2003. Circulation 2003;108(17):IV-328.

233. Kim P, Franklin W, Duffy E, Gotteiner N, Webb C, Mavroudis C, **Backer CL**, Parilli N, Deal B. Accuracy of transesophageal echocardiography in detecting right atrial thrombus in patients after the Fontan operation. 76th Scientific Sessions, American Heart Association, Orlando, FL, November 9-12, 2003. Circulation 2003;108(17):IV-

234. **Backer CL**: Severe pulmonary insufficiency should be *aggressively* treated. Controversies of Switch, Ross and Right Ventricular Outflow Tract Procedures, 4th International Symposium on Congenital Heart Disease, St. Petersburg, FL, February 15, 2004.

235. **Backer CL**: Valve repair techniques for the aortic valve and truncal valve. Controversies of Switch, Ross and Right Ventricular Outflow Tract Procedures, 4th International Symposium on Congenital Heart Disease, St. Petersburg, FL, February 16, 2004.

236. **Backer CL**: Aortic valve repair is best for children. Controversies of Switch, Ross and Right Ventricular Outflow Tract Procedures, 4th International Symposium on Congenital Heart Disease, St. Petersburg, FL, February 15, 2004.

237. Ward KM, Crawford SE, Pophal SG, Rodgers SR, **Backer CL**, Mavroudis C, Pahl E: Basiliximab in pediatric heart transplantation – initial experience. 24th Annual Meeting and Scientific Sessions,

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International Society for Heart and Lung Transplantation, San Francisco, CA, April 21-24, 2004. *J Heart Lung Transplant* 2004;23:S77.

238. **Backer CL**, Mavroudis C, Rigsby C, Holinger LD: Trends in vascular ring surgery. 84th Annual Meeting American Association for Thoracic Surgery, Toronto, Canada, April 27, 2004.

239. **Backer CL**: Congenital heart surgery – indications, techniques, and results. Specialty Review in Pediatric Cardiology, National Center for Advanced Medical Education, Chicago, July 15, 2004.

240. **Backer CL**, Mavroudis C, Stewart RD, Franklin W, Deal BJ: The impact of AV valve repair during Fontan conversion and arrhythmia surgery. 28th Annual Meeting, Midwest Pediatric Cardiology Society, Cleveland, OH, September 9-10, 2004.

241. Stewart RD, **Backer CL**, Mavroudis C, Young L: Tetralogy of Fallot: results of a pulmonary valve-sparing strategy. 28th Annual Meeting, Midwest Pediatric Cardiology Society, Cleveland, OH, September 9-10, 2004.

242. Mavroudis C, **Backer CL**, Stewart RD, Franklin W, Deal BJ: The impact of AV valve repair during Fontan conversion and arrhythmia surgery. Annual Meeting, Congenital Heart Surgeons' Society, Montreal, Canada, October 2-4, 2004.

243. **Backer CL**, Mavroudis C, Stewart RD, Young L: Tetralogy of Fallot: results of a pulmonary valve-sparing strategy. Annual Meeting, Congenital Heart Surgeons' Society, Montreal, Canada, October 2-4, 2004.

244. Seipelt RG, **Backer CL**, Mavroudis C, Stellmach V, Cornwell M, Seipelt IM, Schoendube FA, Crawford SE: Osteopontin expression and adventitial angiogenesis induced by local VEGF₁₆₅ reduce experimental aortic calcification. 77th Scientific Sessions, American Heart Association, New Orleans, LA, November 7-10, 2004. *Circulation* 2004;110(Suppl):III-591.

245. Seipelt RG, **Backer CL**, Mavroudis C, Stellmach V, Cornwell M, Seipelt IM, Schoendube FA, Crawford SE: Local delivery of osteopontin attenuates vascular remodeling by altering MMP-2 activity in a rabbit model of aortic injury. 77th Scientific Sessions, American Heart Association, New Orleans, LA, November 7-10, 2004. *Circulation* 2004;110(Suppl):III-316.

246. **Backer CL**: Closure of septal defects: catheter or surgery? Cardiovascular Seminars, 77th Scientific Sessions, American Heart Association, New Orleans, LA, November 8, 2004.

247. Costello JM, **Backer CL**, Checchia PA, Mavroudis C, Seipelt RG, Goodman DM: Impact of cardiopulmonary bypass and surgical intervention on the natriuretic hormone system in children. Poster presentation, Cardiology 2005, Orlando, FL, February 16-20, 2005.

248. **Backer CL**: Atrial arrhythmias after the Fontan operation: results of Fontan conversion, the Children's Memorial Hospital experience, 1994-2004. 69th Annual Scientific Meeting, Japanese Circulation Society, Yokohama, Japan, March 19-21, 2005. *Circ J* 2005;69(Suppl I):33.

249. **Backer CL**: Surgery for arrhythmias and cardiac failure in adults with congenital heart disease after repair. Japanese Society of Adult Congenital Heart Disease (JSACHD), Yokohama, Japan, March 20, 2005.

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250. **Backer CL**, Stewart RD, Mavroudis C: Surgical closure of ventricular septal defects: standards for comparison. Fourth World Congress of Pediatric Cardiology and Cardiac Surgery, Buenos Aires, Argentina, September 18-22, 2005.

251. Deal BJ, **Backer CL**, Mavroudis C, Tsao S: Evolving pacemaker and anti-tachycardic device management of arrhythmias following Fontan conversion. Fourth World Congress of Pediatric Cardiology and Cardiac Surgery, Buenos Aires, Argentina, September 18-22, 2005.

252. **Backer CL**: Surgery in tetralogy of Fallot. 27th Annual Program, ECHO Northwestern, Chicago, October 17, 2005

253. **Backer CL**, Mavroudis C, Stewart RD: Surgical closure of ventricular septal defects: standards for comparison. 29th Annual Meeting, Midwest Pediatric Cardiology Society, Iowa City, IA, October 20-21, 2005.

254. Tsao S, **Backer CL**, Mavroudis C, Deal BJ: Evolving pacemaker and anti-tachycardic device management of arrhythmias following Fontan conversion. 29th Annual Meeting, Midwest Pediatric Cardiology Society, Iowa City, IA, October 20-21, 2005.

255. Stewart RD, Hillman ND, **Backer CL**, Mavroudis C. The Ross operation in children: effects of aortic annuloplasty. 29th Annual Meeting, Midwest Pediatric Cardiology Society, Iowa City, IA, October 20-21, 2005.

256. Stewart RD, **Backer CL**, Mavroudis C. Use of partial cardiopulmonary bypass for coarctation repair via left thoracotomy in children without collaterals. 29th Annual Meeting, Midwest Pediatric Cardiology Society, Iowa City, IA, October 20-21, 2005.

257. **Backer CL**. Vascular rings and pectus repair. Children's Memorial Hospital's 2005-2006 Pediatric Pearls: Surgical Dilemmas Continuing Medical Education Series, Oak Brook, IL, November 18, 2005.

258. Stewart RD, Hillman N, **Backer CL**, Mavroudis C. The Ross operation in children: effects of aortic annuloplasty. 42nd Annual Meeting, Society of Thoracic Surgeons, Chicago, January 30-February 1, 2006.

259. **Backer CL**, Stewart RD, Kelle AM, Mavroudis C. Use of partial cardiopulmonary bypass for coarctation repair via left thoracotomy in children without collaterals. 42nd Annual Meeting, Society of Thoracic Surgeons, Chicago, January 30-February 1, 2006.

260. **Backer CL**. Congenitally corrected transposition of the great arteries: classic & 1 ½ ventricle repair. Sixth Annual International Symposium on Congenital Heart Disease, St. Petersburg, FL, February 18-22, 2006.

261. **Backer CL**. Vascular ring surgery. Annual Meeting, Society for Thoracic Surgical Education, White Sulphur Springs, WV, April 6-8, 2006.

262. Kelle AM, **Backer CL**, Tsao S, Stewart RD, Franklin WH, Mavroudis C. Dual-chamber epicardial pacing in newborns with congenital heart block. 30th Annual Meeting Midwest Pediatric Cardiology Society, Columbus, Ohio, September 7-8, 2006.

263. **Backer CL**. Complete atrioventricular canal: overview, history, anatomy, timing, results. Congenital Heart Disease Symposium, 86th Annual Meeting, American Association for Thoracic Surgery, Philadelphia, PA, April 30, 2006.

Presentations and Abstracts (continued)

264. Stewart RD, Kelle AM, Bailliard F, **Backer CL**, Young L, Mavroudis C. Evolving surgical strategy for sinus venosus atrial septal defect: effect on sinus node function and late venous obstruction. 53rd Annual Meeting, Southern Thoracic Surgical Association, Tucson, AZ, Nov. 8-11, 2006.
265. **Backer CL**, Stewart RD, Mavroudis C, Deal BJ, Pophal SG, Franklin W, Tsao S, Pahl E. Heart transplantation for the failing Fontan [abstract]. Am J Transplant 2006;6:732:P328-II
266. Backer CL, Stewart RD, Bailliard F, Kelle AM, Webb CL, Mavroudis C. Complete atrioventricular canal: a comparison of the modified single-patch technique to the two-patch technique. 43rd Annual Meeting of the Society of Thoracic Surgeons, San Diego, CA, Jan. 27-31, 2007.
267. MacIver RH, Stewart RD, **Backer CL**, Deal BJ, Franklin WH, Tsao S, Mavroudis C. Implantable cardiac defibrillators in the pediatric population. Second Annual Academic Surgical Congress, Phoenix, AZ, February 6-9, 2007.
268. MacIver RH, Mavroudis C, Stewart RD, **Backer CL**, Tsao S, Harrington D. Ablation of the atrioventricular node in a rabbit model. Second Annual Academic Surgical Congress, Phoenix, AZ, February 6-9, 2007.
269. Kelle AM, **Backer CL**, Stewart RD, Tsao S, Franklin WH, Deal BJ, Mavroudis C. Pediatric pacemakers: Results of a collaborative electrophysiology-surgery program. Poster, World Society for Pediatric and Congenital Heart Surgery, Washington, DC, May 2007.
270. **Backer CL**, Kelle AM, Stewart RD, Suresh SC, Ali FN, Seshadri R, Mavroudis C. Aprotinin is safe in pediatric patients undergoing cardiac surgery. 87th Annual Meeting of the American Association for Thoracic Surgery, Washington, DC, May 5-9, 2007.
271. **Backer CL**. Maze procedure in single ventricle patients. 87th Annual Meeting of the American Association for Thoracic Surgery, Washington, DC, May 5-9, 2007.
272. **Backer CL**. The Fontan operation: Then and now evolution and conversion. Grand Rounds Presentation, University of Pittsburgh, Heart, Lung, and Esophageal Surgery Institute, June 6, 2007.
273. **Backer CL**. Fontan conversion and arrhythmia surgery. 50th Annual Meeting of Kansai Association for Thoracic Surgery, Osaka, Japan, June 20-21, 2007.
274. Speicher PJ, **Backer CL**, Koenig PR, Kelle AM, Mavroudis C. Trends in repair of partial atrioventricular canal. 31st Annual Meeting of the Midwest Pediatric Cardiology Society, St. Louis, MO, September 28, 2007.
275. Kelle AM, **Backer CL**, Tsao S, Deal BJ, Mavroudis C. Optimizing the outcome of primary Fontan: Lessons learned from Fontan conversion. 31st Annual Meeting of the Midwest Pediatric Cardiology Society, St. Louis, MO, September 28, 2007.
276. **Backer CL**, Lodge AJ, Wells WJ, O'Brien JE Jr, Austin EH, Bacha EA, Yeh T, Lavin P, Weinstein S. A novel bioresorbable film reduces postoperative adhesions after infant cardiac surgery. 31st Annual Meeting of the Midwest Pediatric Cardiology Society, St. Louis, MO, September 28, 2007.
277. Deal BJ, **Backer CL**, Ward KM, Tsao S, Dechert B, de Freitas A, Franklin WH, Mavroudis C. Medical characteristics and midterm outcome: 100 consecutive Fontan conversions with arrhythmia surgery.

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American Heart Association, Scientific Sessions 2007, Orlando, FL, November 2007. Circulation 2007;116(Suppl II):II-414. Abstract 1923.

278. **Backer CL.** TOF Surgeries — What I think is important: pulmonary valve preservation. 8th Annual International Symposium on Congenital Heart Disease. All Children's Hospital, St. Petersburg, FL, Feb. 16-19, 2008.

279. **Backer CL.** Modified single-patch repair of AV canal. 54th Annual Conference, Indian Association of Cardiovascular Thoracic Surgeons, Pune, India, Feb. 21-24, 2008.

280. Backer CL. Vascular rings and pulmonary artery sling. 54th Annual Conference, Indian Association of Cardiovascular Thoracic Surgeons, Pune, India, Feb. 21-24, 2008.

281. **Backer CL.** Fontan conversion and arrhythmia surgery. Department of Cardiothoracic and Vascular Surgery, All India Institute of Medical Sciences, New Delhi, India, Feb. 25, 2008.

282. **Backer CL.** Long-term outcomes of coarctation repair: Surgery is the best primary treatment for aortic coarctation. 57th Annual Scientific Sessions, American College of Cardiology, Chicago, IL, March 29-April 1, 2008.

283. Pahl E, Petroski RA, Rodgers S, Sullivan C, Mavroudis C, **Backer CL.** Ten year survivors of pediatric heart transplantation: Current status and increased incidence of serious complications between 5 and 10 years after transplantation. American Transplant Congress, Ontario, Canada, May 31-June 4, 2008.

284. **Backer CL.** CTSNet: Web-based global education celebrating 10 years of service to the cardiothoracic community. World Society for Pediatric and Congenital Heart Surgery, Montreal, Canada, June 21, 2008.

285. **Backer CL**, Kelle AM, Mavroudis C, Rigsby CK, Kaushal S, Holinger L. Tracheal reconstruction with unilateral lung agenesis or severe hypoplasia. European Congenital Heart Surgeons Association and Congenital Heart Surgeons' Society Combined Meeting, Warsaw, Poland, Sept. 11-12, 2008.

286. **Backer CL.** Congenital heart surgery: Indications, techniques, and results. University of Illinois at Chicago College of Medicine-Society of Pediatric Cardiology Training Directors-Children's Memorial Hospital, Specialty Review in Pediatric Cardiology, September 15-19, 2008, Chicago, IL.

287. **Backer CL**, Kaushal S, Patel J, Patel S, Wax D, Mavroudis C: Coarctation of the aorta: Long-term outcomes of resection with extended end-to-end anastomosis. 32nd Annual Meeting, Midwest Pediatric Cardiology Society, Minneapolis, MN, September 25-26, 2008.

288. Kelle AM, **Backer CL**, Gossett JG, Kaushal S. Total anomalous pulmonary venous connection: Results of surgical repair of 100 patients at a single institution. 32nd Annual Meeting, Midwest Pediatric Cardiology Society, Minneapolis, MN, September 25-26, 2008.

289. Kelle AM, Young L, Kaushal S, **Backer CL.** The Gerbode VSD: The significance of a left ventricle to right atrial shunt. 32nd Annual Meeting, Midwest Pediatric Cardiology Society, Minneapolis, MN, September 25-26, 2008.

290. **Backer CL.** CTSNet – Web-based global education. Celebrating 10 years of service to the cardiothoracic surgical community. World Society for Pediatric and Congenital Heart Surgery, Chicago, IL, October 6, 2008.

Presentations and Abstracts (continued)

291. **Backer CL.** Aprotinin: the good, the bad, and the ugly. Postgraduate Program, 55th Annual Meeting, Southern Thoracic Surgical Association, Austin, TX, November 6, 2008.
292. **Backer CL.** Coarctation of the aorta. Congenital Heart Disease in the Adult Symposium. Cleveland Clinic Foundation, Cleveland, OH, November 14, 2008.
293. **Backer CL.** What I think is important. 7th International Conference of the Pediatric Cardiac Intensive Care Society, Miami FL, December 3, 2008.
294. **Backer CL**, Kelle AM, Rigsby CK, Mavroudis C, Kaushal S, Holinger L: Tracheal reconstruction in children with unilateral lung agenesis or severe hypoplasia. 45th Annual Meeting, Society of Thoracic Surgeons, San Francisco, CA, January 26-28, 2009.
295. Kaushal S, **Backer CL**, Patel JN, Patel SK, Wax D, Mavroudis C: Coarctation of the aorta: Long-term outcomes of resection with extended end-to-end anastomosis. 45th Annual Meeting, Society of Thoracic Surgeons, San Francisco, CA, January 26-28, 2009.
296. Patel A, Hickey E, Mavroudis C, Jacobs JP, Jacobs ML, Backer CL, Gevitz M, Mavroudis CD. Impact of syndromic abnormalities on outcomes in hypoplastic left heart syndrome. 45th Annual Meeting, Society of Thoracic Surgeons, San Francisco, CA, January 26-28, 2009.
297. **Backer CL.** Surgery for atrioventricular septal defects. 9th Annual International Symposium on Congenital Heart Disease, St. Petersburg, FL, Feb. 13-17, 2009.
298. **Backer CL.** The Gerbode VSD: The significance of a left ventricle-to-right atrial shunt. 9th Annual International Symposium on Congenital Heart Disease, St. Petersburg, FL, Feb. 13-17, 2009.
299. **Backer CL.** Infant atrioventricular valve repair: The modified single-patch technique. 17th Annual Meeting of the Asian Society for Cardiovascular and Thoracic Surgery, Taipei, Taiwan, March 5-8, 2009
300. **Backer CL.** Timing and conversion of Fontan to total cavopulmonary connection. 17th Annual Meeting of the Asian Society for Cardiovascular and Thoracic Surgery, Taipei, Taiwan, March 5-8, 2009.
301. **Backer CL.** The history of pediatric tracheal surgery and the contribution of Children's Memorial Hospital. Grand Rounds presentation, Children's Memorial Hospital, Chicago, IL, April 6, 2009.
302. **Backer CL.** Hypoplastic left heart syndrome: Surgical options over the last 10 years. Hypoplastic left heart syndrome: surgical evolution over the last 30 years. American Society of Echocardiography 2009 Chicago Sonographer Update: Post-Operative Congenital Heart Disease-Pathology and Echocardiography Review. Oak Brook, IL. April 25, 2009.
303. Kelle AM, **Backer CL**, Gossett JG, Kaushal S, Mavroudis C. Total anomalous pulmonary venous connection: results of surgical repair of 100 patients at a single institution. 32nd Annual Meeting, Western Thoracic Surgical Society, Banff, Alberta, CA, June 24-27, 2009.
304. **Backer CL.** The arterial switch operation: a 25-year experience with 258 patients. 33rd Annual Meeting, Midwest Pediatric Cardiology Society, Pittsburgh, PA, October 7, 2009.

Presentations and Abstracts (continued)

305. **Backer CL.** Cardiac transplantation for patients with adult congenital heart disease. 2nd Annual Congenital Heart Disease in the Adult Symposium. Cleveland Clinic Foundation, Cleveland, OH, October 9, 2009.
306. **Backer CL**, Rudra H, Webb CL, Kaushal S, Russell H, Michelson K, Sullivan C, Mavroudis C. The arterial switch operation: a 25-year experience with 258 patients. Congenital Heart Surgeons' Society, Chicago, IL, November 1-2, 2009.
307. Ferns S, **Backer CL**. Eustachian valve morphology in hypoplastic left heart syndrome. CHOP Cardiology 2010 – 13th Annual Update on Pediatric Cardiovascular Disease, Lake Buena Vista, FL, February 10-14, 2010.
308. **Backer CL**: Surgery for congenital tracheal stenosis: the Chicago approach. 10th Annual International Symposium on Congenital Heart Disease, All Children's Hospital, St. Petersburg, FL, February 9, 2010.
309. **Backer CL**: Anomalous aortic origin of coronary arteries from the wrong sinus of Valsalva. Influence of ostial orifice, intramural length, and coronary dominance. Society for Thoracic Surgical Education, Sedona, AZ, March 13, 2010.
310. **Backer CL**. The Fontan procedure: historical overview from a surgeon's perspective. The American Society of Echocardiography 2010 Chicago Sonographer Update: Post-Operative Congenital Heart Disease-Pathology and Echocardiography Review. Oak Brook, IL, April 24, 2010.
311. **Backer CL**. Congenital Skills Course: Slide tracheoplasty. 90th Annual Meeting of the American Association for Thoracic Surgery, Toronto, Ontario, Canada, May 1, 2010.
312. **Backer CL**. Extracardiac versus intra-atrial lateral tunnel Fontan: extracardiac is better. AATS/STS Congenital Heart Disease Symposium, 90th Annual Meeting of the American Association for Thoracic Surgery, Toronto, Ontario, Canada, May 2, 2010.
313. Kaushal S, Patel S, Sood A, Walker BL, **Backer CL**: The utility of a bioresorbable polymeric film and expanded polytetrafluoroethylene to prevent pericardial adhesions and provide a protective barrier after cardiac surgery. 36th Annual Meeting, Western Thoracic Surgical Association, Ojai, CA, June 25, 2010.
314. **Backer CL**. Cardiac transplantation for patients with adult congenital heart disease. 3rd Congress of Asia-Pacific Pediatric Cardiac Society, Chiba, Japan, July 6-9, 2010.
315. **Backer CL**. Fontan conversion: current practice. 3rd Congress of Asia-Pacific Pediatric Cardiac Society, Chiba, Japan, July 6-9, 2010.
316. **Backer CL**. The arterial switch operation for transposition of the great arteries with intact ventricular septum and ventricular septal defect: a 27-year experience with 277 patients. 11th Annual Meeting of the Turkish Society of Cardiovascular Surgery, Antalya, Turkey, October 27-31, 2010.
317. **Backer CL**. Late pulmonary valve replacement after tetralogy of Fallot: indications, timing, and choice of valve replacement. 11th Annual Meeting of the Turkish Society of Cardiovascular Surgery, Antalya, Turkey, October 27-31, 2010.

Presentations and Abstracts (continued)

318. Russell HM, Forsberg K, **Backer CL**, Kaushal S, Mavroudis C. Outcomes of radial incision of the tricuspid valve for VSD closure. 57th Annual Meeting, Southern Thoracic Surgical Association, Orlando, FL, November 3-6, 2010.

319. Mishra R, Vijayan K, Colletti EJ, Harrington DA, Matthiesen TS, Simpson D, Goh S-K, Walker BL, Almeida-Porada G, **Backer CL**, Wold LE, Kaushal S: Isolation and functionality of cardiac progenitor cells in congenital heart patients. American Heart Association Scientific Sessions 2010, Chicago, IL, November 13-17, 2010

320. **Backer CL**. Vascular rings and pulmonary artery sling. World Heart Foundation, International Symposium for Cardiac Care Webcast. January 13, 2011.

321. **Backer CL**. Complete atrioventricular septal defect: history, anatomy, techniques, outcomes. World Heart Foundation, International Symposium for Cardiac Care Webcast. January 13, 2011.

322. Kane J, Friedman M, Mitchell JB, Wang D, **Backer CL**. No association between atelectasis and fever in post-operative pediatric patients. 40th Critical Care Congress, Society of Critical Care Medicine San Diego, CA, Jan. 15-19, 2011. Crit Care Med 2010;38(Suppl). Abstract #211.

323. **Backer CL**. Arrhythmia surgery in the adult congenital heart patient with biventricular circulation. 47th Annual Meeting, Society of Thoracic Surgeons, San Diego, CA, January 30, 2011.

324. Kaushal S, **Backer CL**, Popescu A, Walker BL, Russell H, Koenig P, Rigsby C, Mavroudis C: Intramural coronary length correlates with symptoms in patients with anomalous aortic origin of the coronary artery. 47th Annual Meeting, Society of Thoracic Surgeons, San Diego, CA, January 31-February 2, 2011.

325. Russell H[M], Pasquali S, Jacobs J, Jacobs M, Shook G, O'Brien S, Mavroudis C, Backer C[L]. Outcomes of common arterial trunk with truncal valve insufficiency: a review of the STS Congenital Heart Surgery database. 47th Annual Meeting, Society of Thoracic Surgeons, San Diego, CA, January 31-February 2, 2011.

326. **Backer CL**. 12th Annual C. Walton Lillehei Memorial Lecture in Cardiovascular Surgery. Fontan conversion: the Chicago experience. Cardiology 2011, 15th Annual Update on Pediatric and Congenital Cardiovascular Disease, Scottsdale, AZ, February 5, 2011.

327. **Backer CL**. Transplantation for HLHS: what are the indications in 2011? 11th Annual International Symposium on Congenital Heart Disease. All Children's Hospital, St. Petersburg, FL, February 13, 2011.

328. **Backer CL**. d-Transposition of the great arteries: historical overview from a surgeon's perspective. American Society of Echocardiography, 2011 Chicago Sonographer Update, Oak Brook, IL, April 30, 2011.

329. **Backer CL**, Russell HM, Kaushal S, Rastatter JC, Rigsby C, Holinger LD. Pulmonary artery sling: current results with cardiopulmonary bypass. 91st Annual Meeting, American Association for Thoracic Surgery, Philadelphia, PA, May 7-11, 2011.

330. **Backer CL**. Fontan conversion: experience in 133 patients. Katkov-Lundeen 30th Annual Visiting Professorship in Pediatric Cardiology, Minneapolis, MN, June 6-7, 2011.

Presentations and Abstracts (continued)

331. **Backer CL.** Atrioventricular septal defects: outcomes of two patch and modified single patch repairs. Katkov-Lundeen 30th Annual Visiting Professorship in Pediatric Cardiology, Minneapolis, MN, June 6-7, 2011.
332. **Backer CL.** Arterial switch operation: late outcomes. Katkov-Lundeen 30th Annual Visiting Professorship in Pediatric Cardiology, Minneapolis, MN, June 6-7, 2011.
333. **Backer CL.** Tracheal reconstruction: the Children's Memorial experience. Katkov-Lundeen 30th Annual Visiting Professorship in Pediatric Cardiology, Minneapolis, MN, June 6-7, 2011.
334. **Backer CL.** Vascular rings and the aortic uncrossing procedure. Katkov-Lundeen 30th Annual Visiting Professorship in Pediatric Cardiology, Minneapolis, MN, June 6-7, 2011.
335. **Backer CL.** Optimal initial palliation for patients with functionally univentricular hearts. 3rd Scientific Meeting, World Society for Pediatric and Congenital Heart Surgery, Istanbul, Turkey, June 23-26, 2011.
336. **Backer CL.** Tracheal surgery: the Children's Memorial Hospital experience. Visiting Professor, Seattle Children's Hospital Heart Center, Seattle, WA, October 3, 2011.
337. **Backer CL.** Arrhythmia surgery in patients with congenital heart disease. Visiting Professor, Seattle Children's Hospital Heart Center, Seattle, WA, October 3, 2011
338. **Backer CL.** Management of vascular rings in the adult. Modern Day Management of Adults with Congenital Heart Disease, co-sponsored by the Society of Thoracic Surgeons and the American College of Cardiology Foundation, Rosemont, IL, October 22-23, 2011.
339. **Backer CL.** Arrhythmia surgery for patients with single ventricle. Postgraduate Program, 58th Annual Meeting, Southern Thoracic Surgical Association, San Antonio, TX, November 9-12, 2011.
340. Kaushal S, Mishra R, Simpson D, Sharma S, **Backer CL**, Ohye R, Pahl E. A strong regenerative ability of cardiac progenitor cells in hypoplastic left heart syndrome patients: a preclinical study. American Heart Association, November 12-16, 2011, Orlando, FL. Circulation 2011;124(Suppl 1):A13138.
341. Russell HM, Wurlitzer KC, Kaushal S, Rastatter JC, Rigsby CK, **Backer CL**. Primary resection of Kommerell's diverticulum (KD) and left subclavian artery transfer. Poster Presentation, 48th Annual Meeting of the Society of Thoracic Surgeons, Fort Lauderdale, FL, January 28-February 1, 2012.
342. Russell HM, **Backer CL**. Aortic uncrossing procedure for circumflex aorta. Motion picture presentation, 48th Annual Meeting of the Society of Thoracic Surgeons, Fort Lauderdale, FL, January 28-February 1, 2012
343. **Backer CL.** Truncus and transposition – the Chicago approach. 12th Annual International Symposium on Congenital Heart Disease, St. Petersburg, FL, February 17-21, 2012.
344. **Backer CL.** Surgical management: total anomalous pulmonary venous connection. World Society for Pediatric and Congenital Heart Surgery, Lima, Peru, March 19-20, 2012.
345. **Backer CL.** Is Fontan conversion a good alternative to transplantation? 32nd Annual Meeting and Scientific Sessions, International Society for Heart and Lung Transplantation, Prague, Czech Republic, April 18-21, 2012.

Presentations and Abstracts (continued)

346. **Backer CL.** Atrioventricular septal defect: modified single patch technique. Congenital Heart Disease Symposium: 92nd Annual Meeting, American Association for Thoracic Surgery, San Francisco CA, April 28, 2012.

347. **Backer CL.** Atrioventricular septal defects: the surgical perspective. American Society of Echocardiography 8th Chicago Sonographer Update: Oakbrook, IL, May 5, 2012.

348. **Backer CL.** Timing of surgical intervention on the aortic root in the pediatric patient with Marfan syndrome. Marfan Syndrome 2012: Multidisciplinary Approaches from Childhood to Adulthood: Chicago, IL, August 4, 2012.

349. **Backer CL.** Surgery for congenital heart disease and heart transplantation. American Academy of Pediatrics Specialty Review in Pediatric Cardiology, Chicago, IL, September 11, 2012.

350. **Backer CL**, Russell HM, Wurlitzer KC, Boles LH, Robinson D. Modified single patch: are we still worried about subaortic stenosis? 3rd Joint Meeting, Congenital Heart Surgeons' Society and the European Congenital Heart Surgeons Association, Chicago, IL, September 13-15, 2012.

351. Deal BJ, **Backer CL**, Russell HM, Mavroudis C. Long-term and mid-term follow-up after Fontan conversion. 3rd Joint Meeting, Congenital Heart Surgeons' Society and the European Congenital Heart Surgeons Association, Chicago, IL, September 13-15, 2012.

352. Devlin PJ, Russell HM, Mongé MC, Patel A, **Backer CL**. Surgical management of the doubly committed juxta-arterial ventricular septal defect and long-term outcomes of the aortic and pulmonary valves. 36th Annual Meeting, Midwest Pediatric Cardiology Society, Milwaukee, WI, September 28, 2012.

353. Russell HM, Devlin PJ, Mongé MC, deFreitas A, **Backer CL**. A 20 year experience with the standard and reinforced Ross operation. 36th Annual Meeting, Midwest Pediatric Cardiology Society, Milwaukee, WI, September 28, 2012.

354. Russell HM, Mongé MC, Kulat B, Zingle N, Moss S, **Backer CL**. Use of the TandemHeart® centrifugal axial flow ventricular assist device in children. Poster presentation, 36th Annual Meeting, Midwest Pediatric Cardiology Society, Milwaukee, WI, September 28, 2012.

355. Wurlitzer KC, Boles LH, Sarwark AE, Russell HM, Robinson J, **Backer CL**. Modified single patch: are we still worried about subaortic stenosis? Poster presentation, 36th Annual Meeting, Midwest Pediatric Cardiology Society, Milwaukee, WI, September 28, 2012.

356. Costello JM, Romano JW, Russell HM, Janoski JM, **Backer CL**. Association between age at repair of complete atrioventricular septal defects and resource utilization and outcomes. Presented at the 36th Annual Midwest Pediatric Cardiology Society Scientific Session, Milwaukee, WI, September 28th 2012.

357. **Backer CL.** Vascular rings: the Chicago contribution. 23rd Annual Arthur DeBoer Visiting Professor Lectureship: Chicago, IL, October 18, 2012.

358. Johnson S, Russell HM, Wurlitzer KC, **Backer CL**. Outcome of surgical therapy for endocarditis in a pediatric population: a twenty-one year review. 59th Annual Meeting, Southern Thoracic Surgical Association, Naples, Florida, November 7-10, 2012.

Presentations and Abstracts (continued)

359. **Backer CL**, Russell HM, Pahl E, Kindel SJ, Gambetta KE, Gossett JG, Deal BJ. Heart transplantation for the failing Fontan (poster presentation #46). 49th Annual Meeting, Society of Thoracic Surgeons, Los Angeles, CA, January 26-30, 2013.

360. Pasquali S, Costello JM, He X, Jacobs JP, Hill K, Cooper DS, **Backer CL**, Jacobs M. Gestational age at birth and outcome after neonatal cardiac surgery: an analysis of the Society of Thoracic Surgeons Congenital Heart Surgery database. *J Am Coll Cardiol* 2013;61:A104, #904-4.

361. Deal B[J], Tsao S, Webster [R]G, Ward K, Pahl E, Costello J[M], **Backer C[L]**, Mavroudis C. Life expectancy and the causes of death in a cohort of Fontan conversion patients. 6th World Congress Paediatric Cardiology & Cardiac Surgery, Cape Town, South Africa, February 17-22, 2013.

362. Pahl E, Gossett JG, Thrush P, Matthews KL, Nubani R, Bhagat H, **Backer CL**, Costello JM. Role for immune-monitoring to tailor induction prophylaxis in pediatric heart recipients. 6th World Congress Paediatric Cardiology & Cardiac Surgery, Cape Town, South Africa, February 17-22, 2013.

363. Pahl E, Thrush P, Kindel S, Gambetta K, Gossett J[G], Costello JM, Russell H[M], **Backer CL**. Early and intermediate-term outcomes after transplantation for restrictive cardiomyopathy in children. 6th World Congress Paediatric Cardiology & Cardiac Surgery, Cape Town, South Africa, February 17-22, 2013.

364. **Backer CL**. Atrioventricular septal defect repair: one-patch versus two-patch versus modified single patch. 2013 Scientific Sessions, American College of Cardiology, San Francisco, CA, March 9-11, 2013.

365. Pasquali SK, Costello JM, He X, Jacobs JP, Hill KD, Cooper DS, **Backer CL**, Jacobs ML. Gestational age at birth and outcome after neonatal cardiac surgery: an analysis of the Society of Thoracic Surgeons Congenital Heart Surgery Database. Oral abstract, American College of Cardiology 62nd Annual Scientific Sessions, March 9 , 2013, San Francisco, CA. *J Am Coll Cardiol* 2013,16(Supp A): A104.

366. **Backer CL**. Surgical perspective: d-TGA and CCTGA. 10th American Society of Echocardiography Update, Chicago, Illinois, April 6, 2013.

367. **Backer CL**. Optimal epicardial lead placement and pacemaker strategies for patients with congenital heart disease and rhythm disturbances. Arrhythmia Surgery in Patients with Congenital Heart Disease CME Conference, Orlando, Florida, May 23-24, 2013.

368. Kulat B, Russell HM, Zingle N, Moss S, Sarwark AE, **Backer CL**. Modified TandemHeart® ventricular assist device for pediatric circulatory support. ASAIO 59th Annual Conference, Chicago, IL, June 12-15, 2013.

369. Freud LR, Webster G, Tsao S, **Backer CL**, Deal BJ. The impact of obesity on survival in Fontan conversion patients. Oral presentation, 37th Annual Midwest Pediatric Cardiology Society Scientific Session, Chicago, IL, September 20, 2013.

370. Thrush PT, Pahl E, Gossett JG, Costello JM, Rychlik K, Wax DF, **Backer CL**. The utility of BNP to predict acute rejection in pediatric heart transplant recipients. Oral presentation, 37th Annual Midwest Pediatric Cardiology Society Scientific Session, Chicago, IL, September 20, 2013.

Presentations and Abstracts (continued)

371. Thrush PT, Pahl E, Kindel SJ, Gambetta KE, Gossett JG, Cosello JM, Russell HM, **Backer CL**. Importance of genetic evaluation in pediatric restrictive cardiomyopathy. Poster presentation, 37th Annual Midwest Pediatric Cardiology Society Scientific Session, Chicago, IL, September 20, 2013.

372. Gambetta KE, **Backer CL**, Russell HM, Deal BJ, Pahl E. Insights into protein-losing enteropathy: a single center's 24-year experience. Poster presentation, 37th Annual Midwest Pediatric Cardiology Society Scientific Session, Chicago, IL, September 20, 2013.

373. Boles LH, Tsao S, Webster G, Russell HM, Mongé MC, Deal BJ, **Backer CL**. Pediatric pacemakers: results of a collaborative electrophysiology-surgery program. Poster presentation, 37th Annual Midwest Pediatric Cardiology Society Scientific Session, Chicago, IL, September 20, 2013.

374. Devlin PJ, Russell HM, Mongé M, Patel A, Costello JM, Spicer D, Anderson RH, **Backer CL**. Surgical management of the doubly committed and juxta-arterial ventricular septal defect: long-term outcomes of the aortic and pulmonary valves, Southern Thoracic Surgical Association 60th Annual Meeting, Scottsdale, AZ, November 1, 2013.

375. **Backer CL**. The history of heart transplantation at Children's Memorial Hospital (1988-2012) and Ann & Robert H. Lurie Children's Hospital of Chicago (2012 -). Grand Rounds, Ann & Robert H. Lurie Children's Hospital of Chicago, November 4, 2013.

376. **Backer CL**. The ABCs of BAV: a surgeon's view. Community BAV Program, Ann & Robert H. Lurie Children's Hospital of Chicago, Chicago, IL, November 12, 2013.

377. **Backer CL**, Boles LH, Tsao S, Webster G, Mongé MC, Deal BJ. Pediatric pacemakers: results of a collaborative electrophysiology-surgery program, 22nd Annual Meeting of the Asian Society for Cardiovascular and Thoracic Surgery, Istanbul, April 3-6, 2014.

378. Özyuksel A, Webster G, **Backer CL**, Mongé MC, Tsao S, Deal BJ. Epicardial automated implantable cardioverter defibrillator (AICD) systems: midterm outcomes in children. 22nd Annual Meeting of the Asian Society for Cardiovascular and Thoracic Surgery, Istanbul, April 3-6, 2014.

379. **Backer CL**. Surgery for the failing Fontan. 22nd Annual Meeting of the Asian Society for Cardiovascular and Thoracic Surgery, Istanbul, April 3-6, 2014.

380. **Backer CL** Pulmonary valve: valve-sparing and reconstructive techniques. 22nd Annual Meeting of the Asian Society for Cardiovascular and Thoracic Surgery, Istanbul, April 3-6, 2014.

381. **Backer CL**. The symptomatic neonate with tetralogy of Fallot: primary repair first! 22nd Annual Meeting of the Asian Society for Cardiovascular and Thoracic Surgery, Istanbul, April 3-6, 2014.

382. **Backer CL**. Adults with single ventricle: Fontan conversion – surgical techniques and short-term outcomes – heart transplantation for the failing Fontan. Cardiac Research Symposium, Nemours Alfred DuPont Hospital for Children. Wilmington, DE June 13, 2014.

383. **Backer CL**. Paradigm shift in pediatric cardiac care: an acuity adaptable patient unit. University of Texas Health Science Center, San Antonio, TX, August 28-29, 2014.

384. **Backer CL**. Failing Fontan: conversion or transplant? University of Texas Health Science Center, San Antonio, TX, August 28-29, 2014.

Presentations and Abstracts (continued)

385. Hack MA, **Backer CL**, Eltayeb O, Mongé MC, Costello JM. Younger age at Rastelli may improve long-term outcomes. Midwest Pediatric Cardiology Society, Ann Arbor, MI September 11-12, 2014.
386. **Backer CL**. Surgery for congenital heart disease and heart transplantation. American Academy of Pediatrics Specialty Review in Pediatric Cardiology, Chicago, IL, September 15-19, 2014.
387. **Backer CL**. Failing Fontan: conversion or transplant. Frances Rather Seybold Visiting Professor. University of Texas Health Science Center at Houston. Houston, TX, October 2, 2014.
388. **Backer CL**. Advances in Quality & Outcomes: A Data Managers Meeting. Society of Thoracic Surgeons, Chicago, IL, October 8-10, 2014.
389. **Backer CL**, Eltayeb O, Mongé MC, Hack MA, Boles LH, Sarwark AE, Robinson JD. Modified single-patch: Are we still worried about subaortic stenosis? 61st Annual Meeting of the Southern Thoracic Surgical Association, Tucson, AZ, November 7, 2014.
390. **Backer CL**, Mongé MC, Eltayeb O, Costello JM, Sarwark AE, Carr MR, Aortic implantation of anomalous origin of the left coronary artery from the pulmonary artery: long-term outcomes. 61st Annual Meeting Southern Thoracic Surgical Association, Tucson, AZ, November 7, 2014.
391. **Backer CL**, Mavroudis C. My favorite operation on coronary arteries. 15th International Symposium on Congenital Heart Disease, St. Petersburg, FL, February 6-9, 2015
392. **Backer CL**, Balasubramanya S, Eltayeb O, Mongé MC, Sarwark AE, Popescu AR, Rigsby CK, Koenig PR, Costello JM. The correlation of intramural length of an AAOCA with symptoms. 15th International Symposium on Congenital Heart Disease, St. Petersburg, FL, February 6-9, 2015
393. **Backer CL**, Mongé MC, Eltayeb O, Costello JM, Sarwark AE, Carr MR. Long-term outcomes with ALCAPA. 15th International Symposium on Congenital Heart Disease, St. Petersburg, FL, February 6-9, 2015
394. **Backer CL**. Vascular rings: the Chicago contribution. Cardiac Surgery Grand Rounds, Johns Hopkins School of Medicine, Baltimore, Maryland, February 19, 2015.
395. **Backer CL**. Tandem Heart in pediatric patients waiting for transplantation. University of Virginia, Charlottesville, VA, February 26-28, 2015.
396. **Backer CL**. Fontan revision and takedown: Are we waiting too long? American College of Cardiology, March 14-16, 2015.
397. Bock MJ, Sehgal S, Gambetta K, Marino BS, **Backer CL**, Pahl E. Pediatric heart transplantation for anthracycline cardiomyopathy: A UNOS database review. International Society of Heart and Lung Transplantation. 35th Annual Meeting and Scientific Sessions, Nice, France, April 15-18, 2015.
398. Sehgal S, Bock MJ, Palac HL, Gossett JG, Marino BS, **Backer CL**, Pahl E. New onset diabetes mellitus after heart transplant in children. International Society of Heart and Lung Transplantation, 35th Annual Meeting and Scientific Sessions, Nice, France, April 15-18, 2015. (Abstract #904).
399. **Backer CL**. Aortic uncrossing for circumflex aorta. American Association for Thoracic Surgery 95th Annual Meeting, Seattle, WA, April 25-29, 2015.

Presentations and Abstracts (continued)

400. Rose-Felker K, Robinson JD, **Backer CL**, Rigsby CK, Eltayeb O, Mongé MC, Rychik K, Sammet CL, Gossett JG. Utility of CT angiography in infants with coarctation of the aorta. Poster Presentation. 27th Annual Scientific Sessions, American Society of Echocardiography, Seattle, WA, June 10-14, 2015.
401. Kleisli T, Mongé MC, Wax DF, Popescu AR, Reilly BA, Duffy CE, **Backer CL**. Successful repair of anomalous single coronary artery from the pulmonary artery with an intramural coronary artery. Poster presentation, Midwest Pediatric Cardiology Society 39th Annual Meeting, Children's Hospital of Illinois-Peoria, Peoria, IL, September 10-11, 2015.
402. Mongé MC, Kulat BT, Eltayeb O, Balasubramanya S, Sarwark AE, Zingle NR, Moss ST, Moga MA, Pahl E, Costello JM, **Backer CL**. Novel modifications of a ventricular assist device for infants and children. Presented at the Midwest Pediatric Cardiology Society 39th Annual Meeting, Children's Hospital of Illinois-Peoria, Peoria, IL, September 10-11, 2015.
403. Costello JM, Preze E, Nguyen N, McBride ME, Collins JW, Eltayeb O, Mongé MC, Deal BJ, Stephenson M, **Backer CL**. Pediatric cardiac surgical outcomes following implementation of a novel acuity adaptable care model. Presented at the Midwest Pediatric Cardiology Society 39th Annual Meeting, Children's Hospital of Illinois-Peoria, Peoria, IL, September 10-11, 2015.
404. Devlin PJ, **Backer CL**, Eltayeb O, Mongé MC, Hauck A, and Costello JM. Repair of partial atrioventricular septal defect: age and outcomes. Presented at the Midwest Pediatric Cardiology Society 39th Annual Meeting, Children's Hospital of Illinois-Peoria, Peoria, IL, September 10-11, 2015.
405. Balasubramanya S, Mongé MC, Eltayeb O, Sarwark AE, Costello JM, Rigsby CK, Popescu AR, **Backer CL**. Symptoms do not correlate with coronary artery intramural length or ostial diameter in patients with anomalous aortic origin of coronary artery. Poster presentation, Annual Meeting Congenital Heart Surgeons' Society, Chicago, IL, October 25-26, 2015.
406. Mongé MC, Kulat BT, Eltayeb O, Balasubramanya S, Sarwark AE, Zingle NR, Moss ST, Pahl E, Costello JM, **Backer CL**. Novel modifications of a ventricular assist device for infants and children. Poster presentation, Annual Meeting Congenital Heart Surgeons' Society, Chicago, IL, October 25-26, 2015.
407. Balasubramanya S, Eltayeb O, Mongé MC, **Backer CL**. Slide tracheoplasty in an infant with complete tracheal rings and left lung agenesis. Video presentation at the Annual Meeting of the Congenital Heart Surgeons' Society, Chicago, IL, October 25-26, 2015.
408. **Backer CL**, Devlin PJ, Eltayeb O, Mongé MC, Hauck A, Costello JM. Partial atrioventricular septal defect: what is the ideal age for repair? Oral presentation, Congenital Heart Surgeons' Society, Chicago, IL, October 25-26, 2015.
409. Karamlou T, Pasquali S, Overman D, **Backer CL**, Hirsch-Romano J, Welke K. Developing a national model for regionalization of care for children undergoing congenital cardiac surgery in the United States. Oral presentation, Congenital Heart Surgeons' Society, Chicago, IL, October 25-26, 2015.
410. **Backer CL**, Devlin PJ, Eltayeb O, Mongé MC, Hauck A, Costello JM. Partial atrioventricular septal defect: what is the ideal age for repair? 62nd Annual Meeting Southern Thoracic Surgical Association, Lake Buena Vista, FL, November 4-7, 2015.

Presentations and Abstracts (continued)

411. Mongé MC, Kulat BT, Eltayeb O, Balasubramanya S, Sarwark AE, Zingle NR, Moss ST, Moga MA, Pahl E, Costello JM, **Backer CL**. Novel modifications of a ventricular assist device for infants and children. Poster presentation, Society of Thoracic Surgeons 52nd Annual Meeting, Phoenix, AZ, January 23-27, 2016.
412. Patel A, Costello JM, **Backer CL**, Pasquali SK, Hill K, Wallace A, Jacobs JP, Jacobs ML. Prevalence of non-cardiac and genetic abnormalities in neonates undergoing surgery for congenital heart disease: analysis of the Society of Thoracic Surgeons-Congenital Heart Surgery Database. Richard E. Clark Memorial Paper, Society of Thoracic Surgeons 52nd Annual Meeting, Phoenix, AZ, January 23-27, 2016.
413. Balasubramanya S, Mongé MC, Eltayeb O, Sarwark AE, Costello JM, Rigsby CK, Popescu AR, **Backer CL**. Symptoms do not correlate with coronary artery intramural length or ostial diameter in patients with anomalous aortic origin of coronary artery. Society of Thoracic Surgeons 52nd Annual Meeting, Phoenix, AZ, January 23-27, 2016.
414. **Backer CL**. Complete AVSD: The Australian way. 52nd Annual Meeting of the Society of Thoracic Surgeons, Phoenix, AZ, January 23-27, 2016.
415. **Backer CL**. Borderline VSD. 52nd Annual Meeting of the Society of Thoracic Surgeons, Phoenix, AZ, January 23-27, 2016.
416. Casadonte JR, Mazwi ML, Gambetta KE, McBride ME, Mongé MC, Eltayeb OM, **Backer CL**, Costello JM. Factors predicting the need for mechanical circulatory support in patients with acute fulminant myocarditis. Poster presentation 19th Annual Update on Pediatric and Congenital Cardiovascular Disease. Orlando, FL, February 26, 2016..
417. **Backer CL**. Options for repair of CAVC. American College of Cardiology 65th Annual Scientific Session, Chicago, IL, April 2-4, 2016.
418. Carr HS, Du N, **Backer CL**, Epting CL. Pediatric heart failure epigenetically activates cardiac stem cells. Poster presentation Keystone Symposia 2015-2016: Heart Failure: Genetics, Genomics and Epigenetics, Snowbird, UT, April 3-7, 2016.
419. Du N, Carr HS, LeFever AV, **Backer CL**, Epting CL. Novel approaches to cryopreservation of intact atrial tissue: preserving cellular diversity. Poster presentation at 12th Annual Lewis Landsberg Research Day, Northwestern University Feinberg School of Medicine, Chicago, IL, April 7, 2016.
420. **Backer CL**. Arrhythmia surgery in pediatric congenital heart surgery. Asian Society for Cardiovascular and Thoracic Surgery (ASCVTS) Annual Meeting, Taipei, Taiwan, April 6-10, 2016 (by Invitation).
421. **Backer CL**. Long-term outcomes of Fontan and Fontan conversion. Asian Society for Cardiovascular and Thoracic Surgery (ASCVTS) Annual Meeting, Taipei, Taiwan, April 6-10, 2016 (by Invitation).
422. **Backer CL**. Vascular ring surgery. Asian Society for Cardiovascular and Thoracic Surgery (ASCVTS) Annual Meeting, Taipei, Taiwan, April 6-10, 2016 (by Invitation).
423. Du N, Carr HS, LeFever AV, **Backer CL**, Epting CL. Novel approaches to cryopreservation of intact atrial tissue: preserving cellular diversity. 12th annual Research Scholar's Day, Ann & Robert H. Lurie Children's Hospital and Stanley Manne Children's Research Institute, Chicago, IL, May 11, 2016.

Presentations and Abstracts (continued)

424. Carr HS, Du N, Haymond S, **Backer CL**, Epting CL. Pediatric heart failure epigenetically activates cardiac stem cells. 12th annual Research Scholar's Day, Ann & Robert H. Lurie Children's Hospital and Stanley Manne Children's Research Institute, Chicago, IL, May 11, 2016.

425. Costello JM, Preze E, Nguyen N, McBride ME, Collins JW, Eltayeb O, Mongé MC, Deal BJ, Stephenson MM, **Backer CL**. Pediatric cardiac surgical outcomes following implementation of a novel acuity adaptable care model. 96th Annual Meeting of the American Association for Thoracic Surgery, Baltimore, MD, May 14-18, 2016.

426. Mongé MC, Kulat BT, Eltayeb O, Zingle NR, Moss ST, Gossett JG, Pahl E, Costello JM, **Backer CL**. Successful bridge-to-transplant of functionally univentricular patients with a modified continuous-flow ventricular assist device. 12th International Conference on Pediatric Mechanical Circulatory Support Systems & Pediatric Cardiopulmonary Perfusion, NY, NY, May 18-21, 2016.

427. **Backer CL**, Eltayeb O, Mongé MC, Rastatter JC, Rigsby CK, Popescu AR. Right aortic arch: the new paradigm. 4th Joint Meeting European Congenital Heart Surgeons Association-Congenital Heart Surgeons' Society, Venice, Italy, June 22-24, 2016. World J Pediatr Congenit Surg 2016;7:535 (Abstract #Q-19).

428. Karamlou T, Pasquali S, Overman D, **Backer CL**, Hirsch-Romano J, Welke K. Geographic distribution of congenital heart surgery programs in the United States and potential impact of regionalization. 4th Joint Meeting European Congenital Heart Surgeons Association-Congenital Heart Surgeons' Society, Venice, Italy, June 22-24, 2016. World J Pediatr Congenit Surg 2016;7:539-539 (Abstract #Q-29).

429. Vricella L, Hibino N, Collica S, **Backer CL**, Bacha E, Dearani JA, Caldarone C, Vanderlaan R, Cameron DE. Surgical intervention for adults with vascular rings: a multi-center, 32-year experience. 4th Joint Meeting European Congenital Heart Surgeons Association-Congenital Heart Surgeons' Society, Venice, Italy, June 22-24, 2016. World J Pediatr Congenit Surg 2016;7:539 (Abstract #Q-31).

430. **Backer CL**. Surgical strategies for complex vascular rings: The Chicago contribution. James K. Kirklin Visiting Professor, University of Alabama, Birmingham, Alabama, September 9, 2016 (Invited Lecture).

431. **Backer CL**, Mongé MC, Eltayeb OM, Gossett JG, Gambetta K, Thrush PT, Hardy CA, Costello JM, Pahl E. Improving results of heart transplantation for the failing Fontan. Poster presentation, Midwest Pediatric Cardiology Society 2016 Annual Meeting, Madison, WI, September 15-16, 2016.

432. Shipp MM, Eltayeb OM, Mongé MC, Costello JM, **Backer CL**. Tetralogy of Fallot: Incidence and timing of pulmonary valve replacement after initial repair. Poster presentation, Midwest Pediatric Cardiology Society 2016 Annual Meeting, Madison, WI, September 15-16, 2016.

433. Mongé MC, **Backer CL**, Eltayeb OM, Johnson JT, Popescu AR, Rigsby CK, Costello JM. Brom (multisinus) aortoplasty for supravalvar aortic stenosis. Oral presentation, Midwest Pediatric Cardiology Society 2016 Annual Meeting, Madison, WI, September 15-16, 2016.

434. Rosenfeld BI, Rose-Felker K, Collins JW Jr, **Backer CL**, Costello JM. Associations between WGA status and outcomes in neonates undergoing cardiac surgery. Poster presentation. Midwest Pediatric Cardiology Society 2016 Annual Meeting, Madison, WI, September 15-16, 2016.

435. Wald E, Gunnala V, Du, NY, Palac HL, Costello JM, **Backer CL**, Petersen E, Hardy C, Epting CL. Cardiopulmonary bypass alters intracellular glucocorticoid receptors. Poster presentation. Midwest

Presentations and Abstracts (continued)

Pediatric Cardiology Society 2016 Annual Meeting, Madison, WI, September 15-16, 2016.

436. Mongé MC, **Backer CL**, Eltayeb OM, Johnson JT, Popescu AR, Rigsby CK, Costello JM. Brom (multisinus) aortoplasty for supravalvar aortic stenosis. Oral presentation, 63rd Annual Meeting of the Southern Thoracic Surgical Association, Naples, FL, November 9-12, 2016.

437. Costello, JM, Mongé MC, Hill KD, Kim SH, Pasquali SK, Yerokun B, Jacobs JP, **Backer CL**, Mazwi ML, Jacobs ML. Associations between unplanned cardiac reinterventions and early outcomes after pediatric cardiac surgery: Findings from the Society of Thoracic Surgeons Congenital Heart Surgery Database. *Circulation* 2016;134(Suppl 1):A13013

438. **Backer CL**. The failing Fontan: Two cases I wish I handled differently. Society of Thoracic Surgeons 53rd Annual Meeting, Houston, Texas, January 21-25, 2017.

439. **Backer CL**, Optimal management of the complete atrioventricular canal patient “Australian” one-patch repair. American College of Cardiology 66th Annual Scientific Sessions, Washington, DC, March 17-19, 2017.

440. Sainathan S, Eltayeb OM, Mongé MC, **Backer CL**. Outcome of transaortic patch closure for aortopulmonary window. Poster presentation, American Association for Thoracic Surgery Annual Meeting, Boston, MA, April 29-May 3, 2017.

441. **Backer CL**. Redo the Fontan: Fontan conversion. American Association for Thoracic Surgery, Boston, MA, April 29 – May 3, 2017.

442. **Backer CL**. Surgical strategies for complex vascular rings, European Congenital Heart Surgeons Annual Meeting, Leicester, United Kingdom, May 19-20, 2017.

443. **Backer CL**, Mongé MC, Eltayeb OM, Shipp MM, Costello JM. Tetralogy of Fallot: Incidence and timing of pulmonary valve replacement after initial repair. Oral presentation, 7th World Congress of Pediatric Cardiology and Cardiac Surgery, Barcelona, Spain, July 16-21, 2017.

444. **Backer CL**, Mongé MC, Eltayeb OM, Gambetta KE, Thrush PT, Hardy CA, Costello JM, Pahl E. Improving results of heart transplantation for the failing Fontan. Poster presentation, 7th World Congress of Pediatric Cardiology and Cardiac Surgery, Barcelona, Spain, July 16-21, 2017.

445. **Backer CL**. Repair of partial and transitional atrioventricular septal defect. 7th World Congress of Pediatric Cardiology and Cardiac Surgery, Barcelona, Spain, June 16-21, 2017. By invitation.

446. **Backer CL**. Surgical strategies: Anomalous origin of the coronary arteries right from left, left from right. Section on Cardiology and Cardiac Surgery, American Academy of Pediatrics, Chicago, Illinois, September 16-19, 2017

447. **Backer CL**. Pro: Surgical referral for all anomalous origin of the coronary artery from the aorta. American Academy of Pediatrics, Section on Cardiology and Cardiac Surgery, Chicago, Illinois, September 17, 2017.

448. Popescu AR, Eltayeb OM, Mongé MC, Rigsby CK, **Backer CL**. CT scan results of coronary unroofing. Congenital Heart Surgeons’ Society Annual Meeting, Chicago, Illinois, October 22-23, 2017.

449. Mongé MC, Rigsby CK, Eltayeb OM, Zingle NR, **Backer CL**. Aortico-left ventricular tunnel: the impact of the computed tomography fly through. Congenital Heart Surgeons’ Society Annual Meeting,

Presentations and Abstracts (continued)

Chicago, Illinois, October 22-23, 2017.

450. Karamlou T, Pasquali SK, Lin P, **Backer CL**, Overman DM, Hirsch JC, Jacobs JP, Welke KF. Characterizing congenital heart surgery care: current referral patterns in the U.S.: where are patients coming from and where are they going? Congenital Heart Surgeons' Society Annual Meeting, Chicago, Illinois, October 22-23, 2017.
451. Eltayeb OM, **Backer CL**. Vivien Thomas and his many contributions to congenital heart surgery: time to call it the BTT shunt. Poster presentation, Congenital Heart Surgeons' Society Annual Meeting, Chicago, Illinois, October 22-23, 2017.
452. **Backer CL**. Vascular rings: open technique is better. Society of Thoracic Surgeons 54th Annual Meeting, Fort Lauderdale, FL, January 27-31, 2018.
453. Gropler M, Marino BS, Carr MR, Russell WW, Gu H, Eltayeb OM, Mongé MC, **Backer CL**. Long-term outcomes of coarctation repair via left thoracotomy. Society of Thoracic Surgeons 54th Annual Meeting, Fort Lauderdale, FL, January 27-31, 2018.
454. **Backer CL**. The evolution of ventricular assist devices at a free-standing children's hospital. International Society for Pediatric Mechanical Cardiopulmonary Support. 14th Annual Conference, Chicago, May 3-4, 2018.
455. **Backer CL**. Fontan conversion – the Chicago Connection. European Congenital Heart Surgeons Association Annual Meeting, Cascais, Portugal, May 31 – June 2, 2018.
456. **Backer CL**. Total artificial heart in pediatric patients. European Congenital Heart Surgeons Association Annual Meeting, Cascais, Portugal, May 31 – June 2, 2018.
457. Mongé MC, Hauck AL, Popescu AR, Forbess JM, **Backer CL**. Descending aortic translocation and right pulmonary artery reimplantation for midline descending aorta and crossed pulmonary arteries in an infant with severe pulmonary hypertension and left bronchial compression. Poster presentation, 46th Annual Meeting of the Congenital Heart Surgeons' Society, Chicago, Illinois, October 21-22, 2018.
458. **Backer CL**, Eltayeb O, Readdy WJ, Mongé MC, Forbess JM, Sarwark AE.. Mitral valve replacement in infants using a 15-mm mechanical valve, Southern Thoracic Surgical Association 65th Annual Meeting, Amelia Island, FL, November 7-10, 2018.
459. **Backer CL**, Bharadwaj SN, Eltayeb O, Forbess JM, Popescu AR, Mongé MC. Double aortic arch with Kommerell diverticulum. Southern Thoracic Surgical Association 65th Annual Meeting, Amelia Island, FL, November 7-10, 2018.
460. Kanter KR, **Backer CL**, Mitchell MB, Chen JM, Kogon BE, Hammel JM, Jaggers J, Fraser CD. Mitral valve replacement in children with a 15 mm mechanical valve. Society of Thoracic Surgeons 55th Annual Meeting, San Diego, CA, January 27-29, 2019.
461. **Backer CL**, Stephens EH, Eltayeb O, Mongé MC. Pediatric tracheal surgery: a 25-year review. Society of Thoracic Surgeons 55th Annual Meeting, San Diego, CA, January 27-29, 2019.
462. **Backer CL**. Surgical approach to the single ventricle: Fontan and transplantation. 16th Annual Chicago Sonographer Update. American Society of Echocardiography, Chicago, IL, April 6, 2019.

Presentations and Abstracts (continued)

463. **Backer CL.** Vascular rings with tracheoesophageal compression: management considerations, 99th Annual Meeting of the American Association for Thoracic Surgery, Toronto, Ontario, Canada, May 4-7, 2019.

464. Stephens H, Tannous P, Mongé MC, Eltayeb O, **Backer CL**, Forbess JM, Pahl E. Normalization of hemodynamics is delayed in single ventricle patients after pediatric heart transplantation. 99th Annual Meeting of the American Association for Thoracic Surgery, Toronto, Ontario, Canada, May 4-7, 2019.

465. **Backer CL.** Annual ACS Summit on Surgical Training. American College of Surgeons, Chicago, IL, May 22-23, 2019.

466. Welke KF, Pasquali SK, Lin P, **Backer CL**, Overman DM, Romano JC, Karamlou T. Children Deserve the Best: A Theoretical Model for Optimal Care Delivery of Congenital Heart Surgery in the United States. Poster presentation, Congenital Heart Surgeons' Society annual meeting, Chicago, IL, October 27-28, 2019.

467. Stephens EH, Mongé MC, Eltayeb OM, Patel A., Webster G, Kennedy C, Cornicelli M, Popescu AR, Rigsby CK, **Backer CL.** Evolution And Current Results Of A Unified Strategy For Sinus Venosus Surgery. Poster presentation, Congenital Heart Surgeons' Society annual meeting, Chicago, IL, October 27-28, 2019.

468. Stephens EH, Talwar A, Eltayeb OM, Mongé MC, Devlin PJ, **Backer CL.** 24 Year Results Of Non-fenestrated Extracardiac Fontans. Poster presentation, Congenital Heart Surgeons' Society Annual Meeting, Chicago, IL, October 27-28, 2019.

469. Stephens EH, Gupta D, Bleiweis M, **Backer CL**, Anderson RH, Spicer DH. Pathologic Characteristics of 119 Archived Specimens showing the Phenotypic Features of Hypoplastic Left Heart Syndrome. Poster presentation, Congenital Heart Surgeons' Society Annual Meeting, Chicago, IL, October 27-28, 2019.

470. Stephens E[H], Monge M[C], Eltayeb O[M], Patel A, Webster RG, Rigsby C, **Backer C[L].** Evolution and current results of a unified strategy for sinus venosus surgery. Southern Thoracic Surgical Association 66th Annual Meeting, Marco Island, FL, November 6-9, 2019.

471. **Backer CL.** 30th Annual John W. Kirklin Visiting Professor Lecture in Cardiovascular Surgery. Surgical Strategies for Complex Vascular Rings: The Chicago Contribution. The Mayo Clinic, Rochester, MN, November 15, 2019.

472. DeMarais N, Mongé MC, **Backer CL**, Balmert L, Wilkens S, Marino B, Pahl E. Pediatric Cardiac Retransplantation: A 25 Year Single Center Experience. Poster presentation. Abstract #10350, American Heart Association Scientific Sessions, Philadelphia, PA, November 16-18, 2019

473. **Backer CL.** Rational Regionalization. Grand Rounds: Inaugural Sanford Lecture. Duke University, Durham, NC (Virtual presentation). September 2, 2020.

474. Galantowicz M, del Nido PJ, Baird C, **Backer CL.** Early Results of a Novel EPTFE-based Pulmonary Valved Conduit in a Pediatric Patient Population. Poster Presentation with Audio. AHA Scientific Sessions, Virtual Presentation. November 13-17, 2020.

475. Galantowicz ME, Baird CW, del Nido PJ, **Backer CL.** Initial Results With A Novel Expanded Polytetrafluoroethylene (ePTFE) Pulmonary Valved Conduit. CHSS & ECHSA Joint Meeting 2020 (Virtual), October 24-25, 2020.

Presentations and Abstracts (continued)

475. **Backer CL.** Neonatal Coarctation, Hypoplastic Aortic Arch: Indications and Surgical Repairs via Left Thoracotomy. World University for Pediatric and Congenital Heart Surgery 5th Webinar (Virtual), February 20, 2021
476. **Backer CL.** Vascular Rings: Fetal Diagnosis and Complex Anomalies. Regina Gluck Lectureshuo Grand Rounds, Cohen Children's Medical Center, New Hyde Park, NY (Virtual), March 5, 2021.

Yvonne Baerga Varela, MD FACS

Dr. Baerga obtained her medical degree from the University of Puerto Rico Medical School in 1987. She completed her five year general surgery residency at Mayo Clinic Graduate School of Medicine, Rochester MN in 1992. Proceeded to complete two surgical subspecialties, Surgical Critical Care (1993) and Vascular Surgery (1994) at Mayo Clinic Graduate School of Medicine. She obtained the American Board of Surgery certifications in General Surgery, Surgical Critical Care and Vascular Surgery. She practiced as consultant and assistant professor of Surgery at Mayo Clinic until her return to Puerto Rico in 2007. She is currently Assistant Professor of Surgery Ad-Honorem at the University of Puerto Rico School of Medicine and Surgical Critical Care & General Surgery Attending at the Veterans Administration Caribbean Healthcare System, San Juan, PR. She is currently a member of the Board of Governors of the American College of Surgeons. She has been a dedicated mentor and educator of medical students, surgical trainees, and fellows throughout her career.

Additional Personal Information:

Passionate Latin female surgeon protective of her immediate and extended family. Married for 33 years to Dr. Enrique Sabater, Interventional Radiologist and Mayo Alumni (Mayo Medical School '93, Radiology '97, Vascular and Interventional Radiology '98). They are the proud parents of three young adult children. Grateful to be able to share with her family in Puerto Rico.

Multiple other hobbies and interests: Love of cooking, baking, and dining; photography; traveling; wellness/health of mind/body/spirit; avid practice of Pilates currently in training to become a Pilates instructor.

Email: Yvonne.baerga-varela@va.gov



Yvonne Baerga-Varela MD

Yvonne Baerga Varela, MD FACS

Dr. Baerga obtained her medical degree from the University of Puerto Rico Medical School in 1987. She completed her five year general surgery residency at Mayo Clinic Graduate School of Medicine, Rochester MN in 1992. Proceeded to complete two surgical subspecialties, Surgical Critical Care (1993) and Vascular Surgery (1994) at Mayo Clinic Graduate School of Medicine. She obtained the American Board of Surgery certifications in General Surgery, Surgical Critical Care and Vascular Surgery. She practiced as consultant and assistant professor of Surgery at Mayo Clinic until her return to Puerto Rico in 2007. She is currently Assistant Professor of Surgery Ad-Honorem at the University of Puerto Rico School of Medicine and Surgical Critical Care & General Surgery Attending at the Veterans Administration Caribbean Healthcare System, San Juan, PR. She is currently a member of the Board of Governors of the American College of Surgeons. She has been a dedicated mentor and educator of medical students, surgical trainees, and fellows throughout her career.

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Multiple other hobbies and interests: Love of cooking, baking, and dining; photography; traveling; wellness/health of mind/body/spirit; avid practice of Pilates currently in training to become a Pilates instructor.

Email: Yvonne.baerga-varela@va.gov



Yvonne Baerga-Varela MD

Resume/CV sketch for Mayo Clinic Alumni Assn 72nd Biennial Meeting Oct. 2021, Phoenix, AZ

As a member of the Dept. of Integrative Medicine and Health for Mayo Clinic Arizona, Maria Caselli has, since the department's inception Feb 2016, provided instruction in various practices to enhance overall wellness of mind, body and spirit.

Maria is a certified yoga instructor recognized by Yoga Alliance as an E-RYT500 which acknowledges over 1000 hours of teaching experience in addition to extensive formal study of Hatha Yoga. In addition, she holds certification in: Lu Jong Tibetan Healing Yoga, representing the lineage of Tulku Lobsang Rinpoche; Tai Chi Easy from the Integral Institute of Qigong and Tai Chi; and Kundalini Yoga. Maria is a certified Reiki Master Teacher in Usui Shiki Ryoho system of Reiki.

Maria has, much to her delight, taught movement to individuals of all ages and movement abilities for over 30 years.

Maria Caselli

9/15/21

Dr. Claudia Chou is an Assistant Professor of Neurology and Senior Associate Consultant in the Division of Community Internal Medicine, Geriatrics, and Palliative Care at Mayo Clinic in Rochester, Minnesota. Her clinical goals are to provide palliative care across the spectrum of neurologic disease, to develop models of integrating palliative care into neurology, and to teach trainees and providers in neurology and palliative care about neuropalliative care. Outside of work, she enjoys cheering on her Ohio State Buckeyes and spending time with her husband, toddler, and dog.

Curriculum Vitae and Bibliography

Claudia Chou, MD

1. Personal Information

2. Present Academic Rank and Position

Senior Associate Consultant - Division of General Internal Medicine, Department of Internal Medicine, Mayo Clinic, Rochester, Minnesota	08/2020 - Present
Assistant Professor of Neurology - Mayo Clinic College of Medicine and Science	04/2021 - Present

3. Education

Ohio State University, Columbus, Ohio - BS	09/2006 - 06/2010
College of Medicine, Ohio State University, Columbus, Ohio - MD	08/2010 - 05/2014
Internal Medicine, Mayo School of Graduate Medical Education, Rochester, Minnesota - Internship	06/2014 - 06/2015
Neurology, Programs in Rochester, Mayo School of Graduate Medical Education, Mayo Clinic College of Medicine, Rochester, Minnesota - Resident	07/2015 - 06/2018
The Ohio State University, Columbus, Ohio - Fellow, Hospice and Palliative Medicine	07/2018 - 06/2019
Movement Disorders, Programs in Rochester, Mayo School of Graduate Medical Education, Mayo Clinic College of Medicine, Rochester, Minnesota - Fellow	07/2019 - 08/2020

4. Certification

Board Certifications

American Board of Internal Medicine (ABIM)

Hospice and Palliative Medicine - 146	2020 - Present
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American Board of Psychiatry and Neurology (ABPN)

Neurology - 61336	2018 - Present
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Other Certifications

Mayo Clinic Quality Academy

Mayo Clinic Quality Fellow: Bronze Level Certification	2014
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5. Licensure

Minnesota (Medical)	2015 - 2021
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6. Honors and Awards

Mortar Board Senior Class Honor Society - The Ohio State University, Columbus, Ohio	2009 - Present
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Summa Cum Laude - The Ohio State University	2010
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Excellence in Volunteer Community Service Award - The Ohio State University, Ohio	2011
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Awarded to students who completed >100 hours of community service during the academic year

Samuel J. Roessler Summer Research Scholarship - The Ohio State University College of Medicine, Columbus, Ohio	2011
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Letter of Commendation - The Ohio State University College of Medicine, Columbus, Ohio	2012
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Awarded to the top 25% of the class in the Clinical Assessment and Problem

Solving (CAPS) curriculum	
Letter of Commendation - The Ohio State University College of Medicine, Columbus, Ohio	2012
Awarded to the top 25% of the class in the pre-clinical curriculum	
Alpha Omega Alpha Honor Medical Society - The Ohio State University College of Medicine, Ohio	2013 - Present
Gold Humanism Honor Society - The Ohio State University College of Medicine, Ohio	2013 - Present
Magna Cum Laude - The Ohio State University College of Medicine	2014

7. Previous Professional Positions and Major Appointments

8. Service

Military

Community Memberships and Services

9. Professional Memberships and Societies

Professional Memberships and Services

American Academy of Hospice and Palliative Medicine	
Member	08/2018 - Present
Annual Assembly Abstract Reviewer	2019 - 2020
Annual Assembly Interactive Educational Exchange Abstract Reviewer	2019
Annual Assembly Case Poster Judge	2021
American Academy of Neurology	
Member	07/2014 - Present
Annual Meeting Pain & Palliative Care Topic Work Group Member	2018
Annual Meeting Pain & Palliative Care Abstract Reviewer	2019 - 2020
Annual Meeting Moderator, "Pain and Palliative Care: Targeted Therapy in Chronic Pain Disorders"	04/2021
AAN Neurology Podcast Focus Group Member	04/2021
International Neuropalliative Care Society	
Member	07/2020 - Present
Clinical Committee Member	2020
Patient & Caregiver Education Task Force Lead	2020
International Parkinson and Movement Disorder Society	
Member	12/2017 - Present
2021 Annual Meeting Post-Session Discussion Moderator, Palliative Medicine in Parkinson's Disease	09/2021

Journal Editorial Responsibilities

Journal of Geriatric Psychiatry and Neurology	
Ad Hoc Reviewer	09/2020 - Present
Journal of Palliative Medicine	
Ad Hoc Reviewer	07/2018 - Present
Journal of Parkinson's Disease	
Ad Hoc Reviewer	04/2021 - Present

10. Education Interests and Accomplishments

A. Curriculum and Course Development

American Academy of Neurology Palliative Care Section Core Curriculum Committee
Develop core curriculum covering palliative care topics for neurology residents

B. Teaching

Autonomic Neurology Resident Journal Club Rochester, Minnesota	03/2016
Neurology Morbidity & Mortality Conference Rochester, Minnesota	02/2017
Ross Syndrome Neurology Case of the Week Rochester, Minnesota	05/2018
Clinical Pathology Conference Neurology Grand Rounds Rochester, Minnesota	05/2018
Intravascular Lymphoma: The Mayo Clinic Experience Neurology Grand Rounds: Resident Research Presentation Rochester, Minnesota	06/2018
The Changing Field of Neuropalliative Care Division of Palliative Medicine Grand Rounds Ohio State University, Columbus Ohio	04/2019
Palliative Care in Movement Disorders Neurology Friday Subspecialty Conference Rochester, Minnesota	02/2020
Recurring Lectures to Residents on Palliative Medicine Rotations Presentations on various topics in Palliative Medicine Resident Virtual Didactics Rochester, Minnesota	10/2020 - Present
Palliative Care in Stroke PMR Brain Fellowship Didactics Rochester, Minnesota	04/2021
Center for Palliative Medicine Journal Club Rochester, Minnesota	04/2021 - Present
Palliative Care in Movement Disorders Virtual lecture series covering topics in Hospice and Palliative Care Hospice and Palliative Care (HAPC) Virtual Didactics	05/2021
Palliative Neurology Virtual lecture to HPM fellows Hospice and Palliative Medicine Fellowship Tri-Site Monthly Education Rochester, Minnesota	10/2021

C. Academy of Educational Excellence**D. Mentorship**

Individual and Position	Timeframe	Outcomes	Current Status
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E. Academic Career Development**F. Educational Activities****11. Institutional/Departmental Administrative Responsibilities, Committee Memberships and Other Activities**

Mayo Clinic in Rochester

Evening Rounds	
Creator	2017 - 2018
Neurology Wellness Committee	
Member	07/2019 - 06/2020

Activities at Other Institutions

Mayo Alumni Association	
Women's Biennial Program Planning Committee Member	05/2021 - 10/2021
Mayo Fellows Association	
Social Co-chair	07/2017 - 06/2018
The Ohio State University	
Biomedical Science Major Interviewer	2019 - Present
Interviewed high school seniors seeking entry into the Biomedical Science major, as an alumna of the program	
The Ohio State University College of Medicine Admissions Committee	
Member	2011 - 2014

12. Presentations Extramural**National or International****Oral**

Buprenorphine for Refractory Zoster Neuralgia and Chemical Coping: Hardly a Rash	03/15/2019
Choice	
Annual Assembly of Hospice and Palliative Care	
Orlando, Florida	

Poster

Orthostatic Hypotension and Near-Total Cervical Artery Atherosclerotic Occlusion - A Case Report	04/15/2016 - 04/21/2016
American Academy of Neurology 68th Annual Meeting	
Vancouver, British Columbia, Canada	
Intravascular lymphoma (IVL): A single institution study from the modern neuro-imaging era	11/17/2016 - 11/20/2016
21st Annual Scientific Meeting and Education Day of the Society for Neuro-Oncology.	
Scottsdale, Arizona	
Clinical characteristics of 32 patients with rapidly progressive dementia with Lewy bodies	04/22/2017 - 04/28/2017
American Academy of Neurology 69th Annual Meeting	
Boston, Massachusetts	
Facial Diplegia after Pembrolizumab Treatment	04/22/2017 -
American Academy of Neurology 69th Annual Meeting	04/28/2017
Boston, Massachusetts	
Electrophysiology screening for functional tremor amongst essential tremor patients referred for surgical treatment	04/17/2021 - 04/22/2021
American Academy of Neurology Virtual Annual Meeting 2021	

Unclassified

Palliative Care in MSA	10/2021
Discussion of palliative care role in MSA. Presented along with Laura Rhee, DO	
MSA Coalition Annual Patient and Family Conference Virtual 2021	

13. Visiting Professorship

14. Clinical Practice, Interests, and Accomplishments

Palliative care in neurologic disease

15. Quality Initiatives**Quality Improvement Projects****Quality**

Conor S. Ryan, M.D., I. Darin Carabenciov, M.D., Catherine E. Arnold, M.D., TIA Chkraborty, M.D., Shannon Y. Chiu, M.D., Claudio Z. Chou, M.D., Hildalicia Guerra, M.D., Setty M. Magana, M.D., Ph.D., William G. Mantyh, M.D., Jennifer L. Pitts, M.D., Derek W. Stitt, M.D., Mary J. Widmeyer, M.D., Andrea N. Leep Hunderfund, M.D., M.P.H.E. Optimizing Use of Neurology Subspecialty Consults: A Quality Improvement Project.

16. Research Interests and Accomplishments**17. Research Grants Awarded****Active Grants****Completed Grants****18. Inventions, Commercialization and Offering****A. Patents**

	Patent Number	Country	Date Filed	Date Issued
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B. Other

19. Bibliography

Peer-reviewed Articles

1. **Chou C**, Bourekas EC, Slivka A. Clinical Deterioration and Early Imaging Changes after Intravenous Tissue Plasminogen Activator Administration in Acute Ischemic Stroke Patients. *J Stroke Cerebrovasc Dis.* 2016 Jul; 25 (7):1823-1827 Epub 2016 Apr 25 PMID: 27133771 DOI: 10.1016/j.jstrokecerebrovasdis.2016.03.016
2. Yost MD, **Chou CZ**, Botha H, Block MS, Liewluck T. Facial diplegia after pembrolizumab treatment. *Muscle Nerve.* 2017 Sep; 56 (3):E20-E21 Epub 2017 May 06 PMID: 28398689 DOI: 10.1002/mus.25663
3. **Chou CZ**, Hopkins TJ, Badiola I, Gazelka HM, Gohil S, Kitt A, Luke WR, Vaughan CL, Jones CA, Varhabhatla N. Top Ten Tips Palliative Care Clinicians Should Know About Interventional Pain and Procedures. *J Palliat Med.* 2020 Oct; 23 (10):1386-1391 Epub 2020 Aug 27 PMID: 32865443 DOI: 10.1089/jpm.2020.0487

Non-Peer-reviewed Articles

Conference Reports

Books

Book Chapters

Edited Books

Editorials

Commentaries

Audio/Video/CD-ROM/etc.

Abstracts

1. **Chou CZ**, Scharf EL, Singer W. Orthostatic Hypotension and Near-Total Cervical Artery Atherosclerotic Occlusion - A Case Report *Neurology.* 2016;86:Abstract no.P5.123.
2. O'Neill Brian Patrick, **Chou Claudia**, Bennani Nabila, Johnston Patrick, McPhail Ellen, Schiff David. Intravascular lymphoma (IVL): A single institution study from the modern neuro-imaging era. *Neuro-Oncology.* 2016; 18(suppl_6):vi161. Abstract no. Rare-01.
3. **Claudia Chou**, Jonathan Graff-Radford, Rodolfo Savica. Clinical characteristics of 32 patients with rapidly progressive dementia with Lewy bodies *Neurology.* 2017; 88(16 Supplement). Abstract no. P4.187.
4. Kamdar Hera, Strohm Tamara, Gianchandani Sachi, **Chou Claudia**, Norton Kavitha, Hinduja Archana. Early Palliative Integration in Neurocritical Care Patients: A Prospective Study *Neurocrit Care.* 2019; 31(S1-S341). Abstract no. 47.
5. Ramanathan U, **Chou C**, Richfield E, Oliver D, Creutzfeldt C, Kluger B. Advocacy for Neuropalliative Care in Parkinson Disease Care: The Need for an International Neuropalliative Care Society (INPCS) Movement Disorders. 2021; 36(S1). Abstract no. 361.

Letters

Stamp Vignettes

Thesis

Ask Mayo Expert Model

Ask Mayo Expert Topic

Book Reviews

Scientific Reports

Miscellaneous

Social Media Activity

Forthcoming

1. **Chou Claudia Z**, Bower James H, Ali Farwa, Coon Elizabeth A, Klassen Bryan T, Hassan Anhar. Electrophysiology screening identifies functional tremor amongst essential tremor patients referred for surgical treatment (Preparing for submission) 2021
2. **Chou Claudia Z**. Pain in the Non Verbal Adult (Book Chapter Currently in Editing Process) What Do I Do Now: Palliative Care 2021

* Indicates that the primary author was a mentee of this author.

Dr. Ann Colbourne is a visionary systems transformer, innovator, leader, governor, mentor and educator. Dr. Colbourne is Clinical Professor Emeritus, University of Alberta; Chair Mayo Clinic Alumni Women Physicians and Scientists Group; Active Member of Strategic Committees with the Rhodes Trust. Prior to retiring from Alberta Health Services, Dr. Colbourne served as Senior Medical Director, Culture, Transformation and Innovation as well as Chair, NorQuest College Board of Governors.

Dr. Colbourne is passionate about systems, governance and philanthropy. She has a career history of mobilizing individuals and teams in transformational activity to maximize quality outcomes. Dr. Colbourne and team received the 2013 and 2017 Alberta Health Services President's Excellence Awards: Quality & Safety, Patient & Family Centred Care for Collaborative Care innovation.

A Rhodes Scholar, Dr. Colbourne's lifelong learning journey moved from Memorial University to University of Oxford to Mayo Clinic, and to University of Alberta. She holds biochemistry, theology and medical degrees as well as the Institute of Corporate Directors ICD.D certification in Governance. Dr. Colbourne was the first woman and the first international recipient of the Mayo Clinic Plummer Society Award of Excellence (2011). Most recently she was awarded the prestigious Mayo Clinic Distinguished Alumni Award (2019).

Dr. Ann Colbourne is a visionary systems transformer, innovator, leader, governor, mentor and educator. Dr. Colbourne is Clinical Professor Emeritus, University of Alberta; Chair Mayo Clinic Alumni Women Physicians and Scientists Group; Active Member of Strategic Committees with the Rhodes Trust. Prior to retiring from Alberta Health Services, Dr. Colbourne served as Senior Medical Director, Culture, Transformation and Innovation as well as Chair, NorQuest College Board of Governors.

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A Rhodes Scholar, Dr. Colbourne's lifelong learning journey moved from Memorial University to University of Oxford to Mayo Clinic, and to University of Alberta. She holds biochemistry, theology and medical degrees as well as the Institute of Corporate Directors ICD.D certification in Governance. Dr. Colbourne was the first woman and the first international recipient of the Mayo Clinic Plummer Society Award of Excellence (2011). Most recently she was awarded the prestigious Mayo Clinic Distinguished Alumni Award (2019).

Curriculum Vitae and Bibliography

Michael Pham, MD

Personal Information

Email Address: Pham.Michael@mayo.edu

Present Academic Rank and Position

Assistant Professor of Medicine - Mayo Clinic College of Medicine and Science 10/2021 - Present

Instructor in Medicine - Mayo Clinic College of Medicine and Science 07/2017 - 9/2021

Senior Associate Consultant - Division of Rheumatology, Department of Internal Medicine, Mayo Clinic, Scottsdale, Arizona 07/2019 - Present

Education

Portland State University, Portland, Oregon - BS, Biology, Microbiology/Molecular Biology Track; Minor, Chemistry 2005 - 2009

Creighton University School of Medicine, Omaha, Nebraska - MD 2009 - 2013

Internal Medicine Residency, Internal Medicine, Programs in Arizona, Mayo School of Graduate Medical Education, Mayo Clinic College of Medicine, Scottsdale, Arizona - Resident 06/2013 - 06/2016

Rheumatology, Programs in Rochester, Mayo School of Graduate Medical Education, Mayo Clinic College of Medicine, Rochester, Minnesota - Fellow 07/2016 - 06/2019

Certifications

Board Certifications

American Board of Internal Medicine (ABIM)

Rheumatology 2018 - Present

Internal Medicine 2016 - Present

Other Certifications

American College of Rheumatology (ACR)

Musculoskeletal Ultrasound Certification in Rheumatology, RhMSUS 2019 - Present

European League Against Rheumatism (EULAR)

8th EULAR Course on Capillaroscopy 2018

Ultrasound School of North American Rheumatologists (USSONAR)

USSONAR course completion 2018

Mayo Clinic Quality Academy

Mayo Clinic Quality Fellow: Bronze Level Certification 2016

Honors and Awards

Rheumatology Teacher of the Year 2020-2021

William Albano Award for Outstanding Research 2013
Creighton University School of Medicine

Summer Research Fellowship Award 2010
Creighton University School of Medicine

Summa Cum Laude 2009
Portland State University

Microbiology/Molecular Biology Departmental Research Honors 2009
Portland State University

Previous Professional Positions and Major Appointments

American College of Rheumatology , member	7/2016 - Present
Mayo Clinic Scholar - Division of Rheumatology, Department of Internal Medicine, Mayo Clinic, Scottsdale, Arizona	07/2017 - 06/2019

Education Interests and Accomplishments

Continuing Medical Education

Co-Director, 72 nd Biennial Mayo Clinic Alumni Association Meeting	10/2021
Co-Director, 2021 STiR Conference: Select Topics in Rheumatology	2/2022

Internal Medicine Residency

Rheumatology Section Education Coordinator	7/2021 - Present
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Medical School Teaching

Musculoskeletal/Rheumatology	2019 - Present
Rheumatology curriculum	
Mayo Medical School, Scottsdale, Arizona	
Musculoskeletal/Rheumatology	11/2016
Rheumatology curriculum small groups instructor for 2nd year medical students	
Mayo Medical School, Rochester, Minnesota	

Institutional/Departmental Administrative Responsibilities, Committee Memberships and Other Activities

Activities at Other Institutions

Creighton University School of Medicine	
Midwest Student Biomedical Research Forum	
Co-Director	2010 - 2013

Presentations Extramural

National or International

Poster

Effects of Mycophenolate Mofetil on Pulmonary Function in Interstitial Lung Disease of Systemic Sclerosis	2014
American College of Rheumatology Annual Meeting	
Boston, Massachusetts	

Acetaminophen associated 5-Oxoproline Acidosis in an Anuric End-Stage Renal Disease Patient	2015
American Society of Nephrology's Kidney Week	
San Diego, California	

Regional

Poster

Something's Brewing: Lupus Myocarditis with an Unusual Preceding Prodrome	2014
American College of Physicians Arizona Chapter Scientific Meeting	
Phoenix, Arizona	

Research Interests and Accomplishments

Laboratory Aide, Casey Eye Institute, Oregon Health Sciences University, PI: EJ Lee, OD, PhD. 06/2007-06/2009

Research Assistant, Pacific Dental Institute, PI: J.A. Sorensen, DMD, PhD. 02/2006-09/2006

Student Research Fellowship, Creighton University, PI: D.K. Agrawal, PhD, MBA. 06/2010-09/2010

Mayo IRB Protocols

Active

Co-Investigator	The Efficacy of Mycophenolate Mofetil in the Treatment of Scleroderma-associated Interstitial Lung Disease . No specific funding. (13-008996)	11/2013 - 10/2022
Other Study Staff	A Multicenter, Double-Blind, Randomized, Placebo-Controlled, Phase 3 Study Evaluating the Safety and Efficacy of Intravenous Iloprost in Subjects With Systemic Sclerosis Experiencing Symptomatic Digital Ischemic Episodes (AURORA Study). . (19-008606)	01/2020 - 01/2022
Other Study Staff	A Phase 2 Open-Label Pilot Study of the Safety and Tolerability of Ixazomib Administered Orally to Patients with Scleroderma-Related Interstitial Lung Disease. Mayo Clinic. (20-004201)	01/2021 - 01/2022

Completed

Principal Investigator	Scleroderma Renal Crisis: A Retrospective Review. No Funding. (17-006450)	12/2017 - 12/2020
Co-Investigator	Clinical Outcomes of Renal Allograft Recipients with Preexisting Rheumatologic Conditions. no funds - just chart review. (14-008946)	12/2014 - 11/2020
Co-Investigator	Clinical Performance of Antiphosphatidylserine-Prothrombin Antibodies. Antibody Immunology Laboratory. (17-003706)	07/2017 - 07/2020
Other Study Staff	Epidemiology of Antiphospholipid Syndrome: A Population Based Study. Retrospective chart review, no specific funding. (16-007231)	09/2016 - 09/2019

Exempt

Co-Principal Investigator	The Rheum-Covid Registry. . (20-003167)	04/2020 - Present
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Bibliography

Peer-reviewed Articles

1. Sorensen JA, **Pham MM**, McInnes C. In Vitro Safety Evaluation of a New Ultrasound Power Toothbrush. *J Clin Dent.* 2008;19:(1):28-32.
2. **Pham MM**, Swanson KL. Pulmonary Case of the Month: Get Down. *Southwest J Crit Care.* 2015;10(4):152-8.
3. **Pham M**, Ressler S, Rosenthal A, Kelemen K. Classical Hodgkin lymphoma masquerading as chronic recurrent multifocal osteomyelitis: a case report. *J Med Case Rep.* 2017 Feb 18; 11 (1):45 PMID: 28212666 PMCID: 5316143 DOI: 10.1186/s13256-017-1224-4
4. Hoversten P, Beachey J, **Pham M**, Bhagra A. A rare cause of oligoarthritis with septic presentation. *BMJ Case Rep.* 2018 Apr 17; 2018 PMID: 29666092 PMCID: 5905807 DOI: 10.1136/bcr-2017-223941
5. Duarte-Garcia A, **Pham MM**, Crowson CS, Amin S, Moder KG, Pruthi RK, Warrington KJ, Matteson EL. The Epidemiology of Antiphospholipid Syndrome: A Population-Based Study. *Arthritis Rheumatol.* 2019 Sep; 71 (9):1545-1552 Epub 2019 Aug 01 PMID: 30957430 PMCID: 6717037 DOI: 10.1002/art.40901

Abstracts

1. **Pham MM**, Shao Z, Lorence L, Guarev R, Agrawal DK. Effects of Neuropeptide Y on Monocyte-derived Dendritic Cell Function. *J Allergy Clin Immunol.* 2011 Feb;127:(2)AB220.
2. Bulian BP, **Pham MM**, Griffing WL. Scleroderma Vasculitis - Does it Exist? American College of Physicians Chapter Meeting, Phoenix, Arizona.2014 Nov;
3. Wojeck B, **Pham MM**, Bulian B, Ertz-Archambault N, Narichania A, Hines B, Garrett A, Patel S. Thirty-Day Intractable Pain Readmission Reduction via Improved Pain Control on Discharge. American College of Physicians Chapter Meeting, Tucson, Arizona.2015 Nov;
4. Berg ZM, **Pham M**, Baumann C, McCambridge A, Sen A, Cartin-Ceba R, Mertz L. Hypoxia as a harbinger of a hematologic malignancy American Journal Of Respiratory And Critical Care Medicine. 2016; 193:A5352.
5. Cortes-Puentes GA, Koslow M, Stroh G, Dulohery M, Davis J, **Pham M**, Escalante P. Unmasking A Great Imitator: Lupus Pneumonitis American Journal of Respiratory and Critical Care. 2017 May 01;195:A1450:
6. Duarte-Garcia A, **Pham M**, Crowson CS, Moder K, Pruthi R, Matteson EL. Epidemiology of antiphospholipid syndrome: a population-based study Arthritis & Rheumatology. 2017 Oct; 69:24-5
7. **Pham MM**, Orsolini G, Crowson CS, Snyder MR, Pruthi RK, Moder KG. Are anti-phosphatidylserine prothrombin antibodies a useful screening tool for the lupus anticoagulant? *Ann Rheum Dis.* 2018; 77(Suppl):A401.
8. **Pham MM**, Orsolini G, Crowson CS, Snyder MR, Pruthi RK, Moder KG. Precision of serum and plasma testing in anti-cardiolipin and anti-?2 glycoprotein-1 antibodies *Ann Rheum Dis.* 2018; 77(Suppl):A1702.
9. **Pham M**, Orsolini G, Crowson C, Snyder M, Pruthi R, Moder K. Anti-phosphatidylserine prothrombin antibodies as a predictor of the lac in an all-corner population *Arthritis & Rheumatology.* 2019 Oct; 71.
10. **Pham M**, Orsolini G, Crowson C, Snyder M, Pruthi R, Moder K. Is there clinically relevant plasma interference with elisa detection of aps antibodies? Reproducibility of serum and plasma testing in a real-world clinical setting *Arthritis & Rheumatology.* 2019 Oct; 71.

Thesis

1. **Pham MM.** Cell Death Analysis in *Pseudomonas aeruginosa* Corneal Infection. Portland State University, Portland, OR.;()

* Indicates that the primary author was a mentee of this author.

Shengliang He, M.D. (Sheng)

E-mail: he.shengliang@mayo.edu | Tel: 210-702-1306

Add: 14212 N Scottsdale Rd, #1410, Scottsdale, AZ, 85255

EMPLOYMENT

2019-2022 General Surgery Resident, Department of Surgery, Mayo Clinic Arizona (current)

2017-2019 Halsted Surgery Resident, Department of Surgery, The Johns Hopkins Hospital

EDUCATION

2008-2017 Shanghai Medical College, Fudan University

Major: Eight-year Doctor of Medicine program

Degree: Bachelor of Medicine [07/2014], Doctor of Medicine [06/2017]

HONORS & AWARDS

2021 W. Deprez Inlow Award for best surgical research project (Mayo Clinic)

2015 Annual Excellent Student (Fudan University)

2012 Annual Excellent Student (Fudan University)

QUALIFICATIONS

2021 ABSITE(PGY4): 82%

2020 Arizona Board of Medical License #61539

2020 ABSITE(PGY3): 76%

2019 ABSITE(PGY2): 88%

2018 Fundamentals of Endoscopic Surgery (passed)

2018 Fundamentals of Laparoscopic Surgery (passed)

2018 ABSITE(PGY1): 95%

2016 Step 2 CS & Step 3

2015 Step 1: 255; Step 2 CK: 245

PUBLICATION

He S, Ding D, Wright M J, et al. The impact of high body mass index on patients undergoing robotic pancreatectomy: A propensity matched analysis[J]. *Surgery*, 2020, 167(3): 556-559.

He S, Efron D, Hicks CW. Primary aortoenteric fistula. *Journal of Vascular Surgery Cases and Innovative Techniques*. 2019 Dec;5(4):538-539.

He S, He J. Is pylorus resecting pancreaticoduodenectomy a better surgical alternative than pylorus preserving pancreaticoduodenectomy regarding delayed gastric emptying? *Dig Med Res* 2018;1:9.

He S, Du J, Liu F. Advance in research on the correlation between genotypes of susceptible mutations and clinical phenotype of familial adenomatous polyposis[J]. *Chinese Journal of Medical Genetics*, 2017, 34(6): 919-923.

PODIUM/POSTER PRESENTATION

He S, Lu P, Etzioni D, Young-Fadok T, Kelley S, Merchea A, Mishra N, Management of acute diverticulitis in immunocompromised patients- the Mayo Clinic experience, podium presentation, American Society of Colon and Rectal Surgeons, San Diego, California; April 23, 2021

He S, Murphy A, Voltaggio L, Leeds I, Fang S, Mucosal Prolapse: Unusual anorectal “mass?”, poster presentation, American Society of Colon and Rectal Surgeons, Cleveland, Ohio; June 4, 2019

Overton N, Valero V, Griffin J, Taylor J, Giuliano K, Blair A, Moeckli B, Fransman R, Graham A, AwadElkarim A, Beckman R,

He S, Liu J, DiBrito S, Bicket M, Makary M, Haut R, Sacks B, Patient-specific Postoperative Opioid Prescribing: A Pre-Post Analysis of an Educational Intervention; Academic Surgical Congress 2018, Jacksonville, FL; Jan 2018

Curriculum Vitae and Bibliography

Craig E Daniels, MD

Personal Information

Place of Birth: Sioux Falls, SD
Citizenship: United States of America
Work Address: Mayo Clinic Rochester
200 First St SW
Rochester, MN 55905-0001
Email Address: Daniels.Craig@mayo.edu

Present Academic Rank and Position

Consultant - Division of Pulmonary and Critical Care Medicine, Department of Internal Medicine, Mayo Clinic, Rochester, Minnesota 12/12/2007 - Present
Associate Chair - Inpatient Practice, Department of Internal Medicine, Mayo Clinic, Rochester, Minnesota 05/17/2017 - Present
Professor of Medicine - Mayo Clinic College of Medicine and Science 03/01/2020 - Present

Education

South Dakota State University - BS, Biology, Minor in Chemistry 1990 - 1994
University of South Dakota School of Medicine - MD 1994 - 1998
Mayo Graduate School of Medicine, Mayo Clinic College of Medicine - Resident, Internal Medicine 1998 - 2001
Mayo Graduate School of Medicine, Mayo Clinic College of Medicine - Fellow, Pulmonary and Critical Care 2001 - 2005

Certification

Board Certifications

American Board of Critical Care Medicine
Critical Care Medicine 2005 - Present
American Board of Internal Medicine (ABIM)
Internal Medicine 2001 - 2011
Pulmonary Disease 2004 - Present

Other Certifications

Mayo Clinic Quality Academy
Mayo Clinic Quality Fellow: Bronze Level Certification 2011
Mayo Clinic Quality Fellow: Silver Level Certification 2018

Licensure

Minnesota	41600 (Medical)	
Missouri	2013016207 (Medical)	- 2014
Kentucky	46071 (Medical)	- 2014
Wisconsin	60101 (Medical)	2013
Montana	23709 (Medical)	2013 - 2015
Iowa	40818 (Medical)	2013 - 2014

Michigan	4301102320 (Medical)	2013 - 2014
New York	269334 (Medical)	2013 - 2015
Illinois	036132164 (Medical)	2013 - 2014
Idaho	M-12017 (Medical)	2013 - 2014
North Dakota	12727 (Medical)	2013 - Present
South Dakota	8758 (Medical)	2014 - Present
Kansas	04-37096 (Medical)	2014 - Present
Colorado	DR.0053547 (Medical)	2014 - Present
Georgia	073554 (Medical)	2015 - Present

Honors and Awards

Alma Carlson Scholarship - award based on scholastic achievement - South Dakota State University	1995 - Present
Edward T. Jelesma Memorial Scholarship and Edward and Minna Walkes Scholarship - Awards based on scholastic achievement - South Dakota State University	1996 - Present
Alma Carlson Scholarship - award based on scholastic achievement - South Dakota State University	1997 - Present
Junior Member and President - Alpha Omega Alpha Honor Medical Society	1997 - Present
Loren H. Amundson Award - service award as Chapter President - Alpha Omega Alpha Honor Medical Society	1997 - Present
Outstanding Academic Achievement Award for highest ranking medical school graduate - University of South Dakota School of Medicine	1998 - Present
Achievement, Commitment, Excellence Award (ACE Award) Given by peers to outstanding Internal Medicine Resident - Department of Internal Medicine, Mayo Clinic	1999 - Present
Achievement, Commitment, Excellence Award (ACE Award) Given by peers to outstanding Internal Medicine Resident - Department of Internal Medicine, Mayo Clinic	2000 - Present
Outstanding Achievement Award - Distinguished award to recognize the highest performing Internal Medicine Resident for the class of 2001 - Department of Internal Medicine, Mayo Clinic	2001 - Present
Travel Award - American Federation for Medical Research	2002 - Present
Best Poster in Category - American College of Chest Physicians Annual Meeting	2003 - Present
Best Case report in Category - American College of Chest Physicians Annual Meeting	2004 - Present
Best Educator, Resident Education - Internal Medicine Residency Program, Mayo Clinic	2008 - Present
Teacher of the Year - Mayo Fellows Association, Mayo School of Graduate Medical Education, Mayo Clinic College of Medicine, Mayo Clinic	2008 - Present
Best Educator, Resident Education - Internal Medicine Residency Program, Mayo Clinic	2009 - Present
Best Educator, Resident Education - Internal Medicine Residency Program, Mayo Clinic	2010 - Present
Faculty of the Year Award - Mayo School of Continuous Professional Development, Mayo Clinic College of Medicine	2011 - Present
Best Educator, Resident Education - Internal Medicine Residency Program, Mayo Clinic	2011 - Present

Clinic

Best Educator, Resident Education - Internal Medicine Residency Program, Mayo 2012 - Present
Clinic

Best Educator, Resident Education - Internal Medicine Residency Program, Mayo 2013 - Present
Clinic

Excellence in Leadership - Mayo Clinic Awards for Excellence, Employee Recognition Program, Department of Human Resources 2013 - Present

Clinician of the Year (Internal Medicine) - Critical Care 2013 - Present

Laureate Award, Division of Pulmonary and Critical Care Medicine - Department of Internal Medicine, Mayo Clinic 2014 - Present

Clinician of the Year (Internal Medicine) - Critical Care 2014 - Present

Clinician of the Year (Internal Medicine) - Critical Care 2015 - Present

Best Educator, Resident Education - Internal Medicine Residency Program, Mayo 2016 - Present
Clinic

Critical Care Master Clinician - Critical Care 2016 - Present

Best Educator, Resident Education - Internal Medicine Residency Program, Mayo 2018 - Present
Clinic

Best Educator, Resident Education - Internal Medicine Residency Program, Mayo 2019 - Present
Clinic

Best Educator, Resident Education - Internal Medicine Residency Program 2020 - Present

Previous Professional Positions and Major Appointments

Instructor of Medicine - Mayo Clinic College of Medicine and Science 01/01/2002 - 01/31/2007

Senior Associate Consultant - Division of Pulmonary and Critical Care Medicine, Department of Internal Medicine, Mayo Clinic, Rochester, Minnesota 01/01/2005 - 12/11/2007

Assistant Professor of Medicine - Mayo Clinic College of Medicine and Science 02/01/2007 - 12/31/2012

Associate Professor of Medicine - Mayo Clinic College of Medicine and Science 01/01/2013 - 02/29/2020

Professional Memberships and Societies

Professional Memberships and Services

Alpha Omega Alpha Honor Medical Society
Member

American College of Chest Physicians
Member

American College of Physicians
Medical Knowledge Self-Assessment Program (MKSAP) Committee
Member

2008 - 2018

American Medical Association
Society of Critical Care Medicine
Member

American Thoracic Society
Member

Mayo Clinic Alumni Association
Member

2015 - Present

Sigma Xi, The Scientific Research Society
Member

2010 - Present

Tri-State Thoracic Society (Minnesota, Wisconsin, and Michigan)

Chair

Member

2005 - 2009

2005 - 2012

Education Interests and Accomplishments

Curriculum and Course Development

Thoracentesis and Chest Tube Thoracostomy Workshop
Developed for the Pulmonary and Critical Care fellows
Mayo Clinic College of Medicine
Rochester, Minnesota

01/30/2009

Critical Care Airway workshop
Assisted in curriculum development and instruction
Mayo Clinic College of Medicine
Rochester, Minnesota

07/2010

Teaching

How to Search the Medical Literature

1999 - 2001

Developed, implemented and instructed course. Instructor from inception. Course taught to medical students, residents and consultants
Mayo Clinic
Rochester, Minnesota

Resident Jeopardy Teaching Venue
Co-Director. Monthly Resident Education Conference
Mayo Clinic
Rochester, Minnesota

2000 - 2001

Evidence Based Medicine course for third year medical students
Instructor
Mayo Clinic
Rochester, Minnesota

2001 - 2002

Developed and Directed the Pulmonary Fellows Journal Club
Mayo Clinic
Rochester, Minnesota

07/2001 - 12/2004

Pulmonary issues in the Intensive Care Unit
Core curriculum lecture for Respiratory Therapy students in 3rd year of training
Mayo Clinic College of Medicine; School of Respiratory Therapy

2005 - Present

Thoracentesis and Ultrasound Imaging

2005 - Present

Semi-annual training course demonstrating the basics of ultrasound imaging and thoracentesis. Points of emphasis are procedural indications, complications, and competence.
Mayo Clinic College of Medicine

Shock Management

2005 - 2008

Yearly core curriculum lecture for internal medicine residency.
Mayo Clinic College of Medicine

Management of difficult Pleural Disease

08/25/2008

Monday Pulm/CC Fellowship Core Curriculum
Rochester, Minnesota

Bronchoscopy in the ICU Practice

10/2008

Lecture

Respiratory Therapy Week
Rochester, Minnesota

Approach to the patient with Interstitial Lung Disease

11/25/2008

Mayo Clinic College of Medicine; School of Respiratory Therapy
Rochester, Minnesota

Critical Care: Clinical-Pathologic-Case presentation

01/14/2009

Critical Care Case Conference
Rochester, Minnesota

Principles of Thoracentesis and Ultrasound Imaging
Thoracentesis Training Workshop
Rochester, Minnesota

Airway workshop
Trained direct laryngoscopy and emergent airway management techniques for critical care fellows.

Mayo Clinic College of Medicine
Rochester, Minnesota

Critical Care Procedural "Boot Camp"
Faculty instructor and course developer of pleural procedures workshop to train fellows in bedside ultrasound, thoracentesis, and chest tube placement.

Mayo Clinic College of Medicine
Rochester, Minnesota

Introduction to Bronchoscopy workshop
Faculty instructor for multi-centered bronchoscopy training course directed at beginning pulmonary fellows.

Mayo Clinic College of Medicine
Rochester, Minnesota

Critical Care Ultrasound Training Workshop
Mayo Clinic College of Medicine
Rochester, Minnesota

Diagnosis and Management of Idiopathic Pulmonary Fibrosis
Mayo Clinic College of Medicine; School of Respiratory Therapy
Rochester, Minnesota

Update in Pulmonary and Critical Care Medicine: Critical Care Board Review
Mayo Clinic Arizona
Scottsdale, Arizona

Advanced airway management course
Multidisciplinary Update in Pulmonary and Critical Care Medicine 2010
Scottsdale, Arizona

The Patient With Interstitial Lung Disease Is In Your ICU
Advanced Critical Care Specialty Day--Critical Care Nurses
Rochester, Minnesota

The Role of Hospice in the ICU
Hospice and Palliative Medicine Noon Didactics
Rochester, Minnesota

Introduction to thoracentesis and tub thoracostomy
Basic Bronchoscopy and Pleural Procedural Workshop
Rochester, Minnesota

Pleural Procedures and Basic Bronchoscopy Course
Multi-Institutional (Mayo Simulation Center-based) procedural workshop for 1st year Pulmonary Fellows
Mayo Clinic Graduate School of Medicine

Sepsis Recognition and Rescue in Hospitalized Patients
2nd Annual Hospital Medicine for NP/PA's Course
Rochester, Minnesota

Sepsis: Recognition, Rescue, and Resuscitation
NP/PA Grand Rounds
Rochester, Minnesota

Update in Pulmonary and Critical Care Medicine: Can't Miss 2011 Critical Care Manuscripts
Mayo Clinic Arizona

Scottsdale, Arizona

Update in Pulmonary and Critical Care Medicine: Critical Care Board Review 04/2011

Mayo Clinic Arizona

Scottsdale, Arizona

Critical Care Ultrasound Imaging Course 04/15/2011

Multidisciplinary Update in Pulmonary and Critical Care Medicine

Scottsdale, Arizona

Pleural Procedures and Basic Bronchoscopy Course 07/2011

Multi-Institutional (Mayo Simulation Center-based) procedural workshop for 1st year

Pulmonary Fellows

Mayo Clinic College of Medicine

Selected Topics in Internal Medicine: Sepsis Early Recognition and Management 01/27/2012

Mayo Clinic College of Medicine

Maui, Hawaii

Preventing Futility Through Communication 02/01/2012

Critical Care Ethics CME course hosted by Mayo Clinic

Mayo Clinic College of Medicine

Rochester, Minnesota

Update in Pulmonary and Critical Care Medicine: Rapid Response and Recognition 04/2012

of Critical Illness

Mayo Clinic Arizona

Scottsdale, Arizona

Respiratory Therapy Grand Rounds: Rapid Response Teams, Controversies and 05/2012

Direction

Mayo Clinic College of Medicine; School of Respiratory Therapy

Rochester, Minnesota

Hospital Medicine for NP/PAs: Surviving Sepsis 05/23/2012

Mayo Sponsored CME course for Hospital mid-level providers

Mayo Clinic College of Medicine

Rochester

Pleural Procedures and Basic Bronchoscopy Course 07/2012

Multi-Institutional (Mayo Simulation Center-based) procedural workshop for 1st year

Pulmonary Fellows

Mayo Clinic College of Medicine

U2U Hand-Off Project 03/12/2013

Emergency Medicine Grand Rounds

Rochester, Minnesota

Faculty Hands-On Instructor 03/22/2013

Mayo Clinic Point of Care, Critical Care Ultrasound Conference

Rochester, Minnesota

Thoracic Ultrasound 03/22/2013

Mayo Clinic Point of Care, Critical Care Ultrasound Conference

Rochester, Minnesota

EUS and EBUS for Lung Cancer Staging: View from the Dark Side 08/01/2013

Mayo Clinic EUS Summit

Rochester, Minnesota

Approach to the Critically Ill Patient with Severe Influenza: Expert Discussion with 03/06/2014

Audience Participation-Part II

Critical Care Grand Rounds

Rochester, Minnesota

Clinical Pearls in Pulmonary Medicine 07/30/2014

Medical Grand Rounds

Rochester, Minnesota

Approach to the Patient with Dyspnea Medical Grand Rounds	06/29/2016
Interstitial Lung Disease: Recognition and Management Respiratory therapy core lecture Mayo School of Respiratory Therapy Rochester, Minnesota	10/2018
Update in Pleural Disease Lecture Fellows Core Curriculum lecture Rochester, Minnesota	06/11/2019
Stopping Health Care Associated Violence: the Mayo Clinic Experience Medical Grand Rounds Rochester, Minnesota	07/10/2019

Mentorship

Fernandez Perez, Evans (Pulmonary and Critical Care Resident)	07/2004 - 06/2009
Description: Mentored research projects in interstitial lung disease	
Current Status: Pulmonary and Critical Care faculty at National Jewish, Denver CO	
Outcome: 1) Fernandez-Perez ER, Yilmaz M, Jenad H, Daniels CE, Ryu JH, Hubmayr RD, Gajic O. Ventilator settings and outcome of respiratory failure in chronic interstitial lung disease. <i>Chest</i> . 2008 May; 133(5):1113-92) Fernandez Perez ER, Daniels CE, Schroeder DR, St Sauver J, Hartman TE, Bartholmai BJ, Yi ES, Ryu JH. Incidence, prevalence, and clinical course of idiopathic pulmonary fibrosis: a population-based study. <i>Chest</i> . 2010 Jan; 137(1):129-37.	
Pietila, Michael (Pulmonary and Critical Care Resident)	01/2005 - 06/2007
Description: Mentored Critical Care administrative development while in fellowship and for two years following fellowship.	
Current Status: Pulmonary and Critical Care faculty at Avera McKennan, Yankton SD campus	
Outcome: Hospital Practice administrative leader at Avera McKennan, Yankton South Dakota. ICU director, Avera McKennan, Yankton South Dakota.	
Henriques Forsythe, Marshaleen (Pulmonary and Critical Care Resident)	07/2007 - 06/2011
Description: Met monthly with Dr. Henriques-Forsythe for 2 years during her fellowship to provide mentorship and career counseling advice.	
Current Status: Assistant professor of Clinical Medicine, Morehouse School of Medicine, Atlanta, GA	
Outcome: Obtained Pulmonary Critical Care faculty position as educator and clinician at Morehouse School of Medicine	
Gunderson, Nancy (Internal Medicine Resident)	01/2008 - 01/2009
Description:	
Current Status: Faculty Hospitalist, Intermountain Health Care, Salt Lake City, Utah	
Outcome: Published abstract and traveled for presentation; N.E. Gundersen, M.D., J.J. Mullon, M.D., C.E. Daniels, M.D., Silica Induced Adenopathy as a Complication of Silica Breast Implantation: Case Series, American Thoracic Society 2008[Publication Page: A905]	
Scott, Jacob (Internal Medicine Resident)	06/2008 - 05/2009
Description: Achieved Pulmonary and Critical Care Fellow at University of Michigan	
Current Status: Faculty Pulmonary Physician, Spectrum Health, Grand Rapids, Michigan	
Outcome: Decided to pursue Pulmonary/CCM as a career. Published abstract, Value of culture data from Transbronchoscopic tissue biopsy.	
Sekiguchi, Hiroshi (Pulmonary and Critical Care Resident)	06/2008 - 06/2012
Description: Guided career focus towards critical care ultrasound and education. Helped develop CC ultrasound curriculum for internal and external courses and served as instructor	
Current Status: SAC Mayo Clinic Rochester	
Outcome: 1) Mentored and supported development of focus in critical care	

ultrasound education 2) Assisted in development and participated in critical care ultrasound internal and external CME/workshop courses 3) mentored critical care clinical interest towards achievement of faculty appointment 4) Published - H. Sekiguchi et al, A novel multimedia workshop on portable cardiac critical care ultrasonography: a practical option for the busy intensivist. *Anaesthesia and Intensive Care*, Vol. 40, No. 5, September 2012

Nelson, Darlene (Faculty)

06/2009 - 09/2019

Description: Multi-stage and prolonged mentorship from visiting medical student to Assistant professor achieving career goals of educational leadership. Initially met in ICU when Darlene was a visiting medical student. Mentored through residency and helped focus career to Pulmonary/CCM. Mentored through fellowship as an educator (appointed Chief Fellow). Mentored through several research projects. Mentoring staff development in CC and as a member of our IP group.

Current Status: Assistant professor of Medicine, Consultant, Pulmonary and Critical Care Medicine. Associate program director, Pulmonary and Critical Care Fellowship, Mayo Clinic Rochester Program Director, Pulmonary and Critical Care Fellowship

Outcome: 1) Quality improvement project completed 2) Publication of research manuscript: Duncan DR, Morgenthaler TI, Ryu JH, Daniels CE. Reducing iatrogenic risk in thoracentesis: establishing best practice via experiential training in a zero-risk environment. 3) Achieved educational goal of Program Director - PCCM fellowship *Chest*. 2009 May; 135(5):1315-20. Epub 2008 Nov 18. 3) Case-report Intravascular Large B-cell lymphoma is an uncommon cause of hypoxic respiratory failure 4) Career development - education focus and Pulm/CCM career.

Oeckler, Richard (MD, PhD)

06/2011 - 09/2019

Description: Administrative and leadership mentorship over a series of years. Continued regular meetings to advise on leadership challenges and opportunities

Current Status: Assistant Professor of Medicine and Physiology, College of Medicine, Mayo Clinic Rochester Director of Medical ICU, Rochester, MN

Outcome: Director of medical ICU

Cawcut, Kelly (Fellow)

01/2014 - 01/2018

Description:

Current Status: Assistant Professor, Department of Internal Medicine Associate Medical Director, Infection Control & Epidemiology Co-Director, Digital Innovation and Social Media Strategy University of Nebraska, School of Medicine

Outcome: Academic Appointment and Advancement at outside Academic Medical Center

Hoskote, Sumedh (Faculty)

01/2014 - 01/2018

Description: Mentored completion of book chapter. Flail Chest.

Current Status: Assistant Professor of Medicine, Senior Associate Consultant, Division of Pulmonary and Critical Care Medicine, Mayo Clinic, Rochester MN

Outcome: 1) mentored published manuscript - Chylothorax and increased risk of DVT/PE. 2) Mentored Book Chapter. Flail Chest 2) Progressed from SAC to Consultant and developed Critical Care career

Yadov, Hemang (Pulmonary Fellow)

01/2014 - 01/2018

Description: Clinical and research mentor (defined project) for tension chylothorax.

Current Status: Consultant, Mayo Clinic, Rochester, Division of Pulmonary and Critical Care Medicine

Outcome: 1) Hired as Senior Associate Consultant with continued career mentorship 2) Published Manuscript (Respiratory Medicine Case Reports 14 (2015) 16e18) 3) Advanced to Associate Consultant 2019 Direct mentorship through Critical Care leadership fellow appointment

Daniels, Lisa (MD)

06/2015 - 06/2017

Description: Mentored quality project - Prevention of Unrecognized Hyperkalemia in Adult Patients hospitalized at Mayo Clinic Rochester.

Current Status: Assistant Professor of Medicine, Emory University School of Medicine

Outcome: Silver Quality Fellow Project Assistant professor at Emory University, director of Inpatient critical care education.

Clain, Jeremy (Administrative Leader)

01/2016 - 04/2017

Description: Mentored SAC development clinically and development of administrative career in critical care. Currently assumed role of mortality director, MICU.

Current Status: Mortality review leader, MICU

Outcome: Advanced from SAC to AC (2017). Administrative leadership role attained in Medical CC.

Barreto, Erin (PharmD)

09/2017 - 09/2019

Description: Mentoring Dr. Barreto in her pursuit to become the first Clinical Pharmacist to develop a dedicated NIH research funding pathway. Current K-award applicant.

Current Status: Clinical and Research Pharmacist

Outcome: Achieved K-award fundable score.

Hocker, Sara (MD)

05/2018 - 09/2019

Description: Invited member of Dr. Hocker's Mentorship committee. Provide feedback for ongoing administrative development as an inpatient leader of a large hospital practice.

Current Status: Professor of Neurology, Division Chair Critical Care Neurology and Inpatient Neurology

Outcome: Dr. Hocker has advanced to Professor and assumed the leadership of Neurology Critical Care and Neurology Hospital Services. I continue to mentor her as a developing leader in the hospital.

Academic Career Development

Faculty Enhancement and Educational Development Program (FEED)

2010 - 2011

6 educational modules

Mayo Clinic College of Medicine

Rochester, Minnesota

MSGME 8th Biennial Program Directors Workshop

09/2011

Mayo Clinic College of Medicine

Amelia Island, Florida

Personal Leadership Assessment: PDI 9th House

11/28/2011 - 11/29/2011

Leadership Education and Development (LEAD) Program 2011-2013

Active Leader Simulation

02/06/2012 - 02/08/2012

Leadership Education and Development (LEAD) Program 2011-2013

Chaska, Minnesota

All Staff Leadership

04/29/2012 - 05/01/2012

Leadership Education and Development (LEAD) Program 2011-2013

Chaska, Minnesota

Institutional/Departmental Administrative Responsibilities, Committee Memberships and Other Activities

Mayo Clinic

Patient Safety Incident Review Group (PSIRG)

Member

2019 - Present

Mayo Clinic in Rochester

Critical Care IMP

Clinical Practice Subcommittee

Member

2014 - 2017

Medical Intensive Care Unit

Chair

2008 - 2017

Department of Internal Medicine

Accreditation Council of Graduate Medical Education

Core Competency Work Group	
Member	2005 - 2010
Department of Medicine Executive Team	
Associate Chair	2017 - Present
Division of Pulmonary and Critical Care Medicine	
Education Chair	2010 - 2013
Critical Care Education Committee	
Member	2008 - 2018
Executive Committee	
Member	2008 - 2017
MICU Leadership Team	
Chair	2008 - 2017
Pulmonary and Critical Care Medicine Fellowship	
Associate Program Director	2008 - 2010
Program Director	2010 - 2013
Pulmonary Division Education Committee	
Member	2009 - 2018
Section of Critical Care Medicine	
Section Head	2008 - 2017
Graduate Education Committee	
Member	2011 - 2013
Inpatient Practice	
Vice Chair	2012 - 2015
Associate Chair	2017 - Present
Internal Medicine Hospital Practice Committee	
Member	2008 - 2017
Subcommittee on Subspecialty Training	
Member	2010 - 2013
Hospital Practice Subcommittee	
Vice Chair	2017 - Present
Mayo Clinic Rochester Committees	
Clinical Practice Committee - Rochester	
Operations Coordinating Group - Rochester	
Member	2017 - 2019
Hospital Operations Committee	
Vice Chair	2017 - Present
Officers & Councilors of Staff - Rochester	
Member	2017 - 2019
Mayo Clinic Rochester Programs	
Independent Multidisciplinary Programs	
Critical Care IMP	
Executive Committee Member	2010 - Present
Activities at Other Institutions	
American College of Physicians	
Medical Knowledge Self-Assessment Program (MKSAP)	
Member	2007 - 2008
Writing committee member for MKSAP 15	

Chair	2010 - 2018
Pulmonary and Critical Care writing committee Chairperson and Book Editor for MKSAP version 16, 17, and 18	
American Pulmonary and Critical Care Medicine Program Directors	01/01/2010 - 01/01/2012
Member	
Committee formed of Current Pulmonary and Critical Care Program Directors in ACGME affiliated programs. Responsible for in-training exam and liaison with ACGME to advance fellowship education.	
Society of Critical Care Medicine	
Special Interest Group Committee - Member	05/01/2019 - Present
Critical Care; Choosing Wisely - Knowledge Engagement Group (KEG)	
Tristate Thoracic Society	01/2005 - 12/2009
Co-Chair	
Minnesota Chair of Tristate Thoracic society sharing organizational and director duties with co-chairs from Wisconsin and Michigan.	

Presentations Extramural

National or International

Invited

The Nocturnal Intensivist: Soft Data - Hard Mattress	09/26/2013
Podium lecture	
Cleveland Clinic Lung Summit	
Cleveland, Ohio	
Fibrotic Lung Diseases: Distinguishing HP, NSIP and UIP	09/27/2013
Cleveland Clinic Lung Summit	
Cleveland, Ohio	
Clinical Pearls in Pulmonary Medicine	04/01/2014
Podium lecture	
American College of Physicians Annual meeting	
Orlando, Florida	
From Admission to Discharge	04/2014
American College of Physicians Precourse	
Orlando, Florida	
Lung Cancer Screening	04/01/2014
Key Note Address	
American College of Physicians Annual meeting	
Orlando, Florida	
Rapid Response Teams: How effective are they?	02/26/2015
Cardiology at Cancun	
Cancun, Mexico	
Sepsis - applying current literature to your practice	02/26/2015
Podium lecture	
Cardiology at Cancun	
Cancun, Mexico	
Interstitial Lung Diseases and Critical Care	11/17/2016 -
Podium Lecture	11/20/2016
West China Hospital – Mayo Critical Care Symposium 2016	
Chengdu, Sichuan, China	
Sepsis: Recognition and Resuscitation	11/17/2016 -
Podium lecture	11/20/2016
West China Hospital - Mayo Critical Care Symposium 2016	
Chengdu, Sichuan, China	
Pulmonary and Critical Care Workshop: Acute Illness	01/31/2017 -
Workshop	02/01/2017

Selected Topics in Internal Medicine Maui, Hawaii	
Clinical Pearls in Pulmonary Medicine Podium lecture	03/31/2017
American College of Physicians (ACP) Annual Meeting San Diego, California	
Volume and Fluid management in Critical Care Podium Lecture	03/31/2017
Mayo Clinic, Multidisciplinary Update in Pulmonary and Critical Care Scottsdale, Arizona	
Serious Illness in the Inpatient Setting Workshop	01/27/2018 - 01/29/2018
Selected Topics in Pulmonary and Critical Care Medicine Hawaii	
Challenges and Solutions for Medical ICU Directors Workshop	10/08/2018
American College of Chest Physicians (ACCP) San Antonio, Texas	
Lung Cancer Screening and Lung Nodules Podium Lecture	01/30/2019
Selected Topics in Internal Medicine Hawaii	
Violence and the ICU Practice Podium lecture	04/04/2019
Mayo Clinic, Multidisciplinary Update in Pulmonary and Critical Care Scottsdale, Arizona	
Pulmonary Nodules and Lung Cancer Screening Podium lecture	05/08/2019
39th Annual Practice of Internal Medicine Rochester, Minnesota	
Oral	
Placing Evidence Based Medicine in the Hands of the Learner: A Guide for Effective Journal Clubs	09/2000
Workshop instructor and presenter	
The Royal College of Physicians and Surgeons of Canada. Sixth Annual Meeting on Residency Education	
International Workshop: Evidence Based Medicine Workshop instructor and presenter	12/16/2000 - 12/17/2000
Lima, Peru	
Aspergillus in the ICU Conference Presentation	09/07/2001 - 09/09/2001
Tri-State Medical Conference	
Egg Harbor, Wisconsin	
CT Screening for Incidence Lung Cancer - Managing Nodules Conference Presentation	09/05/2002 - 09/08/2002
Tri-State Medical Conference	
Egg Harbor, Wisconsin	
Imatinib Mesylate in the Treatment of Pulmonary Fibrosis Oral Presentation	11/02/2002 - 11/07/2002
American College of Chest Physicians	
San Diego, California	
Utility of FDG-PET in the Diagnostic Evaluation of Small Pulmonary Nodules Oral Presentation	08/10/2003 - 08/14/2003
10th World Congress on Lung Cancer	

Vancouver, British Columbia, Canada

Proteus Syndrome Presenting with Massive Hemoptysis Oral Case Report Presentation; American College of Chest Physicians	10/2004
Utility of FDG-PET in the Diagnostic Evaluation of Small Pulmonary Nodules 11th World Congress on Lung Cancer Barcelona, Spain	07/02/2005 - 07/06/2005
Unexplained Organizing Pneumonia in Patients with Hematologic Malignancies: A Steroid-responsive Lesion Tri-State Medical Conference Egg Harbor, Wisconsin	09/2005
ABIM--Update in Critical Care Medicine Multidisciplinary Update in Pulmonary and Critical Care Medicine 2009 Scottsdale, Arizona	04/23/2009
Evaluation and Management of the Patient with Pleural Effusion Multidisciplinary Update in Pulmonary and Critical Care Medicine 2009 Scottsdale, Arizona	04/25/2009
Update in Idiopathic Pulmonary Fibrosis Multidisciplinary Update in Pulmonary and Critical Care Medicine 2009 Scottsdale, Arizona	04/25/2009
Critical care ABIM board review Multidisciplinary Update in Pulmonary and Critical Care Medicine 2010 Scottsdale, Arizona	04/2010
Year in Review: Critical Care literature 2009 Multidisciplinary Update in Pulmonary and Critical Care Medicine 2010 Scottsdale, Arizona	04/2010
Critical Care Medicine Literature Review 2010-2011 Multidisciplinary Update in Pulmonary and Critical Care Medicine Scottsdale, Arizona	04/15/2011
Presentation - Sepsis: Early Recognition and Management 24th Annual Selected Topics in Internal Medicine Kapalua, Hawaii	01/2012
Pulmonary and Critical Care Board Review Podium lecture 22nd Annual Mayo Internal Medicine Board Review Course Rochester, Minnesota	07/10/2012
Thoracic Ultrasound Mayo Clinic Point of Care, Critical Care Ultrasound Conference Rochester, Minnesota	03/22/2013
Hypoxic Respiratory Failure in patients with Interstitial Lung Disease Multidisciplinary Update in Pulmonary and Critical Care Medicine Scottsdale, Arizona	04/11/2013
Pulmonary and Critical Care Medicine Board Review Podium lecture 22nd Annual Mayo Clinic Internal Medicine Board Review Rochester, Minnesota	07/19/2013
Comprehensive Pleural and Bronchoscopic Procedural Course Procedural Workshop to teach advanced interventional skills American College of Chest Physicians Chicago, Illinois	06/20/2014 - 06/22/2014
Approach to the Patient with Dyspnea Selected Topics in Internal Medicine Maui, Hawaii	01/28/2015

Poster

Retrieval Bias: Now You See It, Now You Don't Poster Presentation Society of General Internal Medicine National Meeting	04/1999
Publication Bias is the Main Etiologic Factor in Retrieval Bias Poster Presentation Society of General Internal Medicine National Meeting	04/2000
Imatinib Mesylate is a Potential Therapeutic Agent in the Treatment of Pulmonary Fibrosis Poster Presentation American Federation of Medical Researchers Chicago, Illinois	09/26/2002 - 09/28/2002
Utility of FDG-PET in the Diagnostic Evaluation of Small Pulmonary Nodules Poster Presentation American College of Chest Physicians Seattle, Washington	05/17/2003 - 05/21/2003
Utility of FDG-PET in the Evaluation of Carcinoid Tumors Poster Presentation American College of Chest Physicians Seattle, Washington	05/17/2003 - 05/21/2003
Normal Spirometry in Patients with Mixed Obstructive and Restrictive Lung Disease Poster Presentation American Thoracic Society Orlando, Florida	05/21/2004 - 05/26/2004

Regional

Clinical Pearls in Pulmonary Medicine Podium Lecture 38th Annual Practice of Internal Medicine Rochester, Minnesota	05/03/2017
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Invited

Tyrosine Kinase Inhibitors in the Treatment of Interstitial Lung Disease: Hype or Hope University of Minnesota Twin Cities, Minnesota	11/13/2008
Protein Kinase Inhibitors in Treatment of Fibrotic Disease New York University, Rheumatology Grand Rounds New York, New York	03/2010
Sepsis: Recognition and Rescue Faculty for Brazilian Hospital Medicine with invited lecture and participation on panel discussion for Hospital Leadership. Third Congress of Brazilian Society of Hospital Medicine Maceió, Brazil	11/16/2017 - 11/18/2017

Oral

Approach to the Patient with Pleural Effusion Podium lecture Practice of Internal Medicine Rochester, Minnesota	05/03/2007
"Difficult Pleural Cases" ATS Sunrise Seminar San Francisco, California	05/21/2007
Inhalational Lung Disorders: World Trade Center Respiratory Complications Tri-State Thoracic Society Egg Harbor, Wisconsin	09/2009
Sleep disorders: Parasomnias	09/2009

Tri-State Thoracic Society
Egg Harbor, Wisconsin

Unclassified

Oral

Imatinib Mesylate in Pulmonary Fibrosis: Laboratory Lessons Provide Clinical Insight	12/2004
Internal Medicine Grand Rounds Rochester, Minnesota	
Difficult Pleural Disease Cases Sunrise Seminar Series for the American Thoracic Society American Thoracic Society Annual Meeting San Francisco, California	05/2007
Approach to the Patient with Pleural Space Infection: Lessons From the MIST 65th Mayo Clinic Alumni Meeting Rochester, Minnesota	10/2007

Visiting Professorship

Visiting Professorships

University of Minnesota Invited Professor. Met with fellows and faculty. Engaged in teaching rounds. Gave invited lecture at Dept. Grand Rounds. Minneapolis, Minnesota	11/13/2008
New York University Invited professor. Teaching rounds with fellows and fellows lecture followed by Grand Rounds Presenation New York University, Department of Rheumatology New York, New York	03/01/2010
Cleveland Clinic Invited guest of Pulmonary and Critical Care Chair. Met with Fellows and Faculty. Toured facilities and gave lecture(s). Cleveland Clinic Lung Summit Cleveland, Ohio	09/27/2013 - 09/28/2013
University of South Dakota School of Medicine Invited professor -- Met with Clinicians and Hospital leaders to discuss Sepsis recognition and reponse Rapid City Regional Hospital Sepsis Symposium Rapid City, South Dakota	09/17/2015
West China Hospital Invited professor. Meetings with Hospital leadership, ICU teams, CC fellows. Gave invited lectures for ICU care and Sepsis. West China Hospital -- Mayo Critical Care Symposium Chengdu, Sichuan, China	11/17/2016 - 01/20/2017
The Jikei University School of Medicine Invited Professor. Met with faculty, students, and administrative leaders. Gave invited lecture(s) and exchanged ideas in hospital leadership. Jikei Hospital Health Care Symposium Tokyo, Japan	09/21/2018 - 09/22/2018

Research Interests and Accomplishments

Idiopathic Pulmonary Fibrosis Research: 2007 - 2008 Principle Investigator TGF-beta antibody Infusion Study for IPF. Industry sponsored, Multicenter. 2007 - Present Principle Investigator IL-13 antibody infusion Study for IPF. Industry sponsored, Multicenter. 2002 - 2007 Principal Investigator, Investigator initiated, Multicenter, Randomized, Double-Blind, Placebo-Controlled, Clinical Trial to assess the safety and efficacy of Imatinib Mesylate for the treatment of Idiopathic Pulmonary Fibrosis Interventional Pulmonary Research: Beginning 2008 Co-investigator, Joint Surgical/Medical project. A Minimally Invasive Clinical Pathway for Stage I NSCLC. Study assessing Endobronchial Ultrasound to evaluate the Mediastinum. Institutional funding Critical Care Research: Principal Investigator of prospective NIH sponsored trial investigating the role of BNP to differentiate Transfusion Related Acute Lung Injury (TRALI) from Transfusion Associated Circulatory Overload (TACO).

Quality Initiatives

Quality

"Prevention of unrecognized hyperkalemia in an adult patient's hospitalized at Mayo Clinic Rochester" 2017 - Present
Gold Certified project, Mayo Clinic Quality Academy

Research Grants Awarded

Completed Grants

Federal sub award

Co-Investigator Step IPF-Sildenafil trial of exercise performance in idiopathic pulmonary fibrosis. Funded by National Institutes of Health 06/2008 - 05/2009

Foundation

Principal Investigator The Accuracy of Natriuretic Peptides (BNP and N-pro-BNP) in the Differentiation Between Transfusion Related Acute Lung Injury (TRALI) and Transfusion Associated Circulatory Overload (TACO). Funded by National Blood Foundation 07/2005 - 06/2007

Program Director / Principal Investigator European Union Agreement - Dr. Virend Somers. Funded by St. Anne's University Hospital Brno. (St. Anne's Collaboration) 01/2011 - 12/2015

Industry

Program Director / Principal Investigator A Phase I, Open-Label, Multi-Center, Single Dose, Dose-Escalating, Safety, Tolerability and Pharmacokinetic Study of GC1008 in Patients with Idiopathic Pulmonary Fibrosis. Funded by Genzyme Corporation. (GENZYME #18; 1A5841) 07/2005 - 06/2009

Program Director / Principal Investigator A open-label, multi-center study, with a single intravenous dose of QAX576 to determine IL-13 production in patients with Idiopathic Pulmonary Fibrosis. Funded by Novartis. (QAX576A2202) 03/2008 - 02/2009

Program Director / Principal Investigator A 52 Week, Double Blind, Randomized, Placebo Controlled Trial Evaluating the Effect of Oral BIBF 1120, 150 mg Twice Daily, on Annual Forced Vital Capacity Decline, in Patients with Idiopathic Pulmonary Fibrosis (IPF). Funded by Boehringer Ingelheim. (BI Trial No. 1199.34) 06/2011 - 05/2013

Program Director / Principal Investigator Replacement Am #2: IRB 13-003391/GB28547 A Phase II, Randomized, Double-Blind, Placebo-Controlled, Study to Assess the Efficacy and Safety of Lebrikizumab in Patients with Idiopathic Pulmonary Fibrosis. Funded by Genentech Incorporated. (SOW #GB28547) 06/2015 - 11/2016

Co-Investigator Phase II, Randomized, Double-Blind Placebo Controlled Study of the Safety and Clinical Effects of Gleevec (imatinib mesylate) Administered Orally to Patients with Idiopathic Pulmonary Fibrosis. Funded by Novartis. (CST1571E2401) 01/2003 - 12/2009

Co-Investigator A Randomized, Double-Blind, Placebo-Controlled, Phase 3 Study of the 08/2011 - 07/2014

Efficacy and Safety of Pirfenidone in Patients with Idiopathic Pulmonary Fibrosis. Funded by InterMune, Inc.. (Work Order #8 / Protocol PIPF-016)

Co-Investigator	A Phase 2, Randomized Dose-Ranging Study to Evaluate the Efficacy of Tralokinumab in Adults with Idiopathic Pulmonary Fibrosis. Funded by MedImmune, Inc.. (Protocol Number CD-RI-CAT-354-1066)	12/2012 - 12/2014
Co-Investigator	A Phase 2, Randomized, Double-Blind, Placebo-Controlled, Multi-Center Study to Assess the Efficacy and Safety of GS-6624 in Subjects with Idiopathic Pulmonary Fibrosis (RAINIER) . Funded by Gilead Sciences. (Protocol GS-US-322-0207)	03/2013 - 02/2017
Co-Investigator	Amendment 1 - Replacement - A Phase 2, Randomized, Double-Blind, Placebo-Controlled, Multi-Center Study to Assess the Efficacy and Safety of GS-6624 in Subjects with Idiopathic Pulmonary Fibrosis (RAINIER) . Funded by Gilead Sciences. (Protocol GS-US-322-0207)	03/2013 - 02/2017
Co-Investigator	A Multicenter, Randomized, Double-Blind, Placebo-Controlled, Phase 2 Study of the Safety and Efficacy of BMS-986020 in Subjects with Idiopathic Pulmonary Fibrosis IM136003 . Funded by Bristol Meyers Squibb. (Protocol IM136003)	06/2013 - 05/2014
Co-Investigator	An Open-Label Extension Study of the Long-Term Safety of Pirfenidone in Patients with Idiopathic Pulmonary Fibrosis (IPF) PIPF012. Funded by InterMune, Inc.. (Work Order #9 / Protocol PIPF-012)	06/2013 - 05/2015
Co-Investigator	A Treatment Protocol to Allow Patients in the US with Idiopathic Pulmonary Fibrosis Access to Pirfenidone. Funded by InterMune, Inc.. (Protocol: PIPF-031 / Work Order #13)	06/2014 - 05/2016
Co-Investigator	Replacement Budget - A Treatment Protocol to Allow Patients in the US with Idiopathic Pulmonary Fibrosis Access to Pirfenidone. Funded by InterMune, Inc.. (Protocol: PIPF-031 / Work Order #13)	06/2014 - 05/2016

Bibliography

Peer-reviewed Articles

1. Daniels CE, Montori VM, Dupras DM. Effect of publication bias on retrieval bias. *Acad Med*. 2002 Mar; 77 (3):266 PMID: 11891168 DOI: 10.1097/00001888-200203000-00019
2. Daniels CE, Wilkes MC, Edens M, Kottom TJ, Murphy SJ, Limper AH, Leof EB. Imatinib mesylate inhibits the profibrogenic activity of TGF-beta and prevents bleomycin-mediated lung fibrosis. *J Clin Invest*. 2004 Nov; 114 (9):1308-16 PMID: 15520863 PMCID: 524221 DOI: 10.1172/JCI19603
3. Daniels CE, Driscoll DJ, Edell ES, Wylam ME. Hemoptysis in Proteus Syndrome: Case Report and Topic Review. *J. of Bronchology*. 2005; 12(3):171-3.
4. Daniels CE, Jett JR. Does Interstitial Lung Disease Predispose to Lung Cancer? *Curr Opin Pulm Med*. 2005 Sep; 11(5):431-7. PMID: 0
5. Daniels CE, Jett JR. Does interstitial lung disease predispose to lung cancer? *Curr Opin Pulm Med*. 2005 Sep; 11 (5):431-7 PMID: 16093818 DOI: 10.1097/01.mcp.0000170521.71497.ba
6. Parambil JG, Daniels CE, Zehr KJ, Utz JP. Alkaptonuria diagnosed by flexible bronchoscopy. *Chest*. 2005 Nov; 128(5):3678-80. PMID: 16304331 DOI: 10.1378/chest.128.5.3678
7. Rana R, Vlahakis NE, Daniels CE, Jaffe AS, Klee GG, Hubmayr RD, Gajic O. B-type natriuretic peptide in the assessment of acute lung injury and cardiogenic pulmonary edema. *Crit Care Med*. 2006 Jul; 34(7):1941-6. PMID: 16691132 DOI: 10.1097/01.CCM.0000220492.15645.47
8. Daniels CE, Ryu JH. Treatment of idiopathic pulmonary fibrosis. *Semin Respir Crit Care Med*. 2006 Dec; 27 (6):668-76. PMID: 17195143 DOI: 10.1055/s-2006-957338
9. Daniels CE, Myers JL, Utz JP, Markovic SN, Ryu JH. Organizing pneumonia in patients with hematologic malignancies: a steroid-responsive lesion. *Respir Med*. 2007 Jan; 101: (1)162-8. PMID: 16704928 DOI: 10.1016/j.rmed.2006.03.035
10. Daniels CE, Lowe VJ, Aubry MC, Allen MS, Jett JR. The utility of fluorodeoxyglucose positron emission tomography in the evaluation of carcinoid tumors presenting as pulmonary nodules. *Chest*. 2007 Jan; 131: (1)255-60. PMID: 17218584 DOI: 10.1378/chest.06-0711
11. Daniels CE. Clinical consultation. Managing IPF: taking a hard look at today's choices... idiopathic pulmonary fibrosis. *J Respir Dis*. 2007 Mar; 28(3):91-2. PMID: 0
12. Ryu JH, Daniels CE, Hartman TE, Yi ES. Diagnosis of interstitial lung diseases. *Mayo Clin Proc*. 2007 Aug; 82 (8):976-86. PMID: 17673067 DOI: 10.4065/82.8.976
13. * Maldonado F, Daniels CE, Hoffman EA, Yi ES, Ryu JH. Focal organizing pneumonia on surgical lung biopsy: causes, clinicoradiologic features, and outcomes. *Chest*. 2007 Nov; 132: (5)1579-83. PMID: 17890462 DOI: 10.1378/chest.07-1148
14. Fernandez-Perez ER, Yilmaz M, Jenad H, Daniels CE, Ryu JH, Hubmayr RD, Gajic O. Ventilator settings and outcome of respiratory failure in chronic interstitial lung disease. *Chest*. 2008 May; 133 (5):1113-9 Epub 2007 Nov 07 PMID: 17989156 PMCID: 4003484 DOI: 10.1378/chest.07-1481
15. Daniels CE, Yi ES, Ryu JH. Autopsy findings in 42 consecutive patients with idiopathic pulmonary fibrosis. *Eur Respir J*. 2008 Jul; 32(1):170-4. Epub 2008 Feb 06. PMID: 18256070 DOI: 10.1183/09031936.00176307
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19. Li G, Daniels CE, Kojicic M, Krpata T, Wilson GA, Winters JL, Moore SB, Gajic O. The accuracy of natriuretic peptides (brain natriuretic peptide and N-terminal pro-brain natriuretic) in the differentiation between transfusion-related acute lung injury and transfusion-related circulatory overload in the critically ill. *Transfusion*. 2009 Jan; 49(1):13-20. Epub 2008 Oct 14. PMID: 18954397 PMCID: 2752382 DOI: 10.1111/j.1537-2995.2008.01941.x
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23. **Daniels CE**, Lasky JA, Limper AH, Mieras K, Gabor E, Schroeder DR, Imatinib-IPF Study Investigators. Imatinib treatment for idiopathic pulmonary fibrosis: Randomized placebo-controlled trial results. *Am J Respir Crit Care Med*. 2010 Mar 15; 181 (6):604-10 Epub 2009 Dec 10 PMID: 20007927 DOI: 10.1164/rccm.200906-0964OC

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37. Yadav H, Nolan ME, Nichols FC 3rd, **Daniels CE**. Tension chylothorax following pneumonectomy. *Respir Med Case Rep*. 2015; 14:16-8 Epub 2014 Dec 09 PMID: 26029569 PMCID: 4356031 DOI: 10.1016/j.rmcr.2014.11.002

38. Fazee EN, Personett HA, Bauer SR, Dzierba AL, Stollings JL, Ryder LP, Elmer JL, Caples SM, **Daniels CE**. Intensive Care Nurses' Knowledge About Use of Neuromuscular Blocking Agents in Patients With Respiratory Failure. *Am J Crit Care*. 2015 Sep; 24 (5):431-9 PMID: 26330436 DOI: 10.4037/ajcc2015397

39. Guru PK, Reddy DR, **Daniels CE**. Bladder diverticula. *Indian J Nephrol*. 2016 Jan-Feb; 26 (1):59-60 PMID: 26937084 PMCID: 4753747 DOI: 10.4103/0971-4065.155729

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41. Moua T, Westerly BD, Dulohery MM, **Daniels CE**, Ryu JH, Lim KG. Patients With Fibrotic Interstitial Lung Disease Hospitalized for Acute Respiratory Worsening: A Large Cohort Analysis. *Chest*. 2016 May; 149 (5):1205-14 Epub 2016 Jan 11 PMID: 26836940 DOI: 10.1016/j.chest.2015.12.026

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44. **Daniels CE**, Litin SC, Bundrick JB. Clinical pearls in pulmonary diseases. *Dis Mon*. 2017 Jun; 63 (6):141-148 PMID: 28651690 DOI: 10.1016/j.dismonth.2017.03.012

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48. Hoskote SS, Yadav H, Jagtap P, Wigle DA, **Daniels CE**. Chylothorax as a Risk Factor for Thrombosis in Adults: A Proof-of-Concept Study. *Ann Thorac Surg*. 2018 Apr; 105 (4):1065-1070 Epub 2018 Feb 14 PMID: 29452999 DOI: 10.1016/j.athoracsur.2017.11.011

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51. Wieruszewski PM, Barreto JN, Frazee E, **Daniels CE**, Tosh PK, Dierkhising RA, Mara KC, Limper AH. Early Corticosteroids for Pneumocystis Pneumonia in Adults Without HIV Are Not Associated With Better Outcome. *Chest*. 2018 Sep; 154 (3):636-644 Epub 2018 Apr 26 PMID: 29705221 DOI: 10.1016/j.chest.2018.04.026

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2. **Daniels CE**. Diffuse Parenchymal Lung Diseases: Medical Knowledge Self-Assessment Program. In: MKSAP 15 2009 Dec.
3. **Daniels CE**, Ryu JH. Other uncommon pleural effusions. In: Light RW; Lee YCG, Textbook of pleural diseases. Third Edition. Boca Raton: CRC Press/Taylor & Francis Group; 2016. p. 439-46.
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2. **Daniels CE**, Eisenstaedt , RS. Medical Knowledge Self-Assessment Program 17, Pulmonary and Critical Care Medicine Craig Daniels, MD. 17 Edition. Volume 17. American College of Physicians; 2015.
3. **Daniels CE**, Alguire , PC. Medical Knowledge Self-Assessment Program 18, Pulmonary and Critical Care Medicine Craig Daniels, MD. 18 Edition. Volume 18. American College of Physicians; 2018.

Abstracts

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2. **Daniels C**, Montori VM, Dupras D. Publication bias is the main etiologic factor in retrieval bias. *J Gen Intern Med*. 2000; 15(Suppl 1):29.
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5. **Daniels CE**, Doerger KM, Jett JR, Love VJ. Utility of FDG-PET in the diagnostic evaluation of small pulmonary nodules (Abstract O-35). *Lung Cancer*. 2003 Aug; 41(Suppl 2):S14.
6. **Daniels CE**, Wylam ME, Driscoll DJ, Edell ES. Massive hemoptysis secondary to proteus syndrome. *Chest Meeting Abstracts*. 2004 Oct; 126:940S-941S.
7. Wilkes MC, **Daniels CE**, Edens M, Standing J, Kottom TJ, Murphy SJ, Limper AH, Leof EB. c-Abl is a small-independent target of TGF-beta signaling in mesenchymal cells and contributes to TGF-beta- induced fibrosis (Abstract 87). *Mol Biol Cell*. 2004 Nov; 15(Suppl):17a.
8. **Daniels CE**, Utz JP, Myers JL, Ryu JH. Organizing pneumonia associated with hematologic malignancy. *Proc Am Thoracic Soc*. 2005; 2:A387.
9. **Daniels C**, Lowe V, Jett J. Sensitivity of FDG-PET in the diagnostic evaluation of small pulmonary nodules (Abstract O-068). *Lung Cancer*. 2005 Jul; 49(Suppl 2):S25-6.
10. Holland W, **Daniels C**, Lowe V, Bungum A, Jett J. Utility of FDG-PET in the evaluation of small cell lung carcinoma (Abstract P-368). *Lung Cancer*. 2005 Jul; 49(Suppl 2):S212.
11. Rana R, Vlahakis NE, **Daniels CE**, Hubmayr RD, Gajic O, Jaffe AS, Klee GG. Utility of early measurement of plasma B type natriuretic peptide (BNP) in the assessment of acute lung injury and cardiogenic pulmonary edema (Abstract 78). *Crit Care Med*. 2005 Dec; 33(12 Suppl):A20.
12. Fernandez Perez ER, Jenad H, **Daniels CE**, Ryu JH, Gajic O. Ventilator settings and outcome in patients with interstitial lung disease requiring mechanical ventilation in the intensive care unit. *Chest*. 2006 Oct; 130 (4):152S.
13. Peikert T, **Daniels CE**, Beebe TJ, Meyer KC, Ryu JH. American College of Chest Physicians (ACCP) survey on the diagnosis and therapy of idiopathic pulmonary fibrosis. *Chest*. 2007 Oct; 132(4 Suppl S):585S.
14. Maldonado F, **Daniels CE**, Hoffman EA, Yi ES, Ryu JH. Focal organizing pneumonia on surgical lung biopsy: Causes, clinicoradiologic features, and prognosis. *Chest*. 2007 Oct; 132(4 Suppl S):584S-5S.
15. Fernandez ER, Bungum AO, St Sauver J, **Daniels CE**, Ryu JH. Survival of patients with idiopathic pulmonary

fibrosis: a single center experience. *Am J Respir Crit Care Med.* 2008; 177:A249.

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17. * Scott JP, **Daniels CE**, Utz JP. Diagnostic yield of transbronchial lung biopsy sent for tissue culture versus gold standard. *Chest.* 2009 Oct; 136(4):38S.

18. Dong Y, Diedrich D, Comfere T, Kennedy C, Afessa B, **Daniels C**, Kashani K, Rickman O, Dunn W, Mullon J. Simulation based airway workshop improve critical care fellows competency of airway management skill. *Crit Care Med.* 2009 Dec; 37(Suppl S):565.

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20. Frazee E, Personett H, Caples S, **Daniels C**. Perceived safety and efficacy of neuromuscular blockers for acute respiratory distress syndrome among medical intensive care unit providers. *Crit Care Med.* 2012 Dec; 40 (12):U257.

21. Patel PA, **Daniels CE**. Deadly golytely. *Cardiology.* 2014; 128:304.

22. Yadav H, Nolan M, Nichols FC, **Daniels CE**. Post-Pneumonectomy Tension Chylothorax American Journal of Respiratory and Critical Care Medicine. 2014;189: Abstract no.A4062.

23. Frazee EN, Personett HA, Bauer S, Dzierba A, Stollings J, Ryder L, Elmer J, **Daniels C**, Caples S. Knowledge about neuromuscular blocking agents for respiratory failure among medical intensive care unit nurses: a multicenter survey. *Pharmacotherapy.* 2014 Oct; 34(10):E189.

24. Hoskote S, Yadav H, Jagtap P, **Daniels C**. Chylothorax is associated with an increased risk of thrombosis in adults. *Crit Care Med.* 2014 Dec; 42(12):A1380.

25. Segraves JM, **Daniels CE**. Diagnosis of pulmonary embolus by endobronchial ultrasound American Journal Of Respiratory And Critical Care Medicine. 2015; 191:

26. O'Horo JC, Birkenkamp K, Kashyap R, Kloesel B, Lahr B, Nichols FC, **Daniels CE**, Baddour LM. Epidemiology and outcomes of empyema: a single center's experience of 11 years American Journal Of Respiratory And Critical Care Medicine. 2015; 191:

27. Kogan A, **Daniels CE**. Ultrasound diagnosis of cardiac sarcoma obstructing mitral valve American Journal Of Respiratory And Critical Care Medicine. 2015; 191:

28. Harrison AM, Thongprayoon C, Park JG, **Daniels CE**, Clements CM, Goyal DG, Elmer JL, Gajic O, Pickering BW, Herasevich V. Before-after implementation of the sniffer for the detection of failure to recognize and treat severe sepsis AMIA 2015 Symposium Proceedings. 2015; 1462.

29. Harrison AM, Thongprayoon C, Park JG, **Daniels CE**, Clements CM, Goyal DG, Elmer JL, Gajic O, Pickering BW, Herasevich V. Management to Reimbursement Sepsis & Shock Sniffer: Preliminary Results of Implementation Mayo Clinic Quality conference 2016. 2016.

30. * Hoskote SS, Yadav H, **Daniels CE**. Chylothorax as a risk factor for thrombosis in adults: A proof-of-concept study Critical Care Medicine.2016;44:(12)100. Abstract no.55.

31. Wieruszewski PM, Barreto JN, Frazee E, **Daniels CE**, Tosh PK, Dierkhising RA, Mara KC, Limper AH. Effects of adjuvant corticosteroids on pneumocystis jirovecii pneumonia in non-HIV adults American Journal of Respiratory and Critical Care Medicine. 2017; 195:A4025. Epub 1900 Jan 01.

32. Wieruszewski PM, Barreto JN, Barreto EF, **Daniels CE**, Tosh PK, Dierkhising RA, Mara KC, Limper AH. Effects of Adjuvant Corticosteroids on Clinical Outcomes in Adults with Pneumocystis jirovecii Pneumonia Not Attributable to HIV Minnesota Society of Health-System Pharmacists Annual Meeting 2017. 2017.

33. Wieruszewski PM, Frazee E, Barreto JN, **Daniels CE**, Tosh PK, Mara KC, Dierkhising RA, Limper AH. Preadmission Corticosteroids and Risk for Respiratory Failure in Non-HIV Pneumocystis Pneumonia Critical Care Medicine. 2018; 46(1):495. Abstract no. 1022.

34. Egan A, **Daniels CE**. A denuding drug: a case of methotrexate-induced toxic epidermal necrolysis American Journal Of Respiratory And Critical Care Medicine. 2019; 199:A4853

Letters

1. Ashton RW, **Daniels CE**, Ryu JH. Thrombolytic therapy in patients with submassive pulmonary embolism. *N Engl J Med.* 2003 Jan 23; 348(4):357. PMID:12540653 DOI:
2. Bauer PR, **Daniels CE**, Sampathkumar P. Complications of Central Venous Catheterization. *N Engl J Med* 2016 Apr 14; 374 (15):1491 PMID:27074079 DOI:10.1056/NEJMc1600131

Ask Mayo Expert Topic

1. Wylam ME, Bauer PR, Park JG, Gajic O, Oeckler RA, Clements CM, **Daniels CE**, Caples SM, Peters SG, Chapital AB, Moss JE, Banaei KB. Sepsis and septic shock AskMayoExpert.2017;

* Indicates that the primary author was a mentee of this author.

Dr. Craig Daniels is a Professor of Medicine practicing Pulmonary and Critical Care at Mayo Clinic in Rochester, Minnesota. He received his M.D. from the University of South Dakota in 1998 prior to completing training in Internal Medicine, Pulmonary, and Critical Care Medicine at Mayo Clinic in Rochester, MN. Since Joining the Mayo Staff in 2005, Dr. Daniels has focused his clinical practice in medical Critical Care, advanced diagnostic Pulmonary procedures, and Interstitial Lung Disease. Dr. Daniels started as a physician leader in education, as Program Director for the Pulmonary and Critical Care Fellowship from 2009 – 2012. Over the past decade, Dr. Daniels has focused his leadership efforts to improve the hospital practice and patient care. He is prior Head of Medical Critical Care and director of the Medical ICU practice, responsible for growing and transforming the medical critical care practice into a 32-bed, 24x7 staffing model with integration of APPs. Since 2017, Dr. Daniels has held the roles of Associate Chair for the Dept. of Internal Medicine Inpatient practice, and Vice Chair of the Midwest hospital practice and Rochester Hospital Operations Team, which have operational oversight of Mayo's Rochester hospital practice and over 20 Mayo Clinic Health system hospitals in the Midwest. In 2019, Dr. Daniels led the clinical team to successfully plan and open the 4th Mayo Clinic Destination practice in Abu Dhabi, inclusive of the outpatient, surgical, and hospital practices within the campus of a new 700-bed hospital facility. He is currently leading the Rochester Smart Hospital of the Future team, which responsible for aligning capital investment to align future built space to drive practice transition and to achieve Mayo Clinic's 2030. Bold. Forward. Vision.

Curriculum Vitae

Claude Deschamps, MD

PERSONAL INFORMATION

Place of Birth:	Montreal Canada
Citizenship:	Canada, United States
Work Address:	UVM Medical Center 111 Colchester Ave Burlington, VT 05401 802-847-5986
Email Address:	claude.deschamps@uvmhealth.org
Home Address:	316 South Street South Hero, VT 05486
Additional Information:	Married (Brigitte Barrette)

EDUCATION

College de Rosemont DEC, Health Sciences	1974
University of Montreal MD	1979
University of Montreal Affiliated Hospitals Internship	1979 - 1980
University of Montreal Affiliated Hospitals Resident, General Surgery	1980 - 1984
University of Montreal Affiliated Hospitals Resident, Thoracic Surgery	1984 - 1985
Mayo Clinic in Rochester Research Fellowship, Thoracic Diseases Laboratory	1985 - 1987
Mayo Clinic in Rochester Resident, Thoracic and Cardiovascular Surgery	1987 - 1989

CERTIFICATION(S)

Board Certification(s)

American Board of Surgery	
Surgery	1984 - Present
Quebec Provincial Certification in General Surgery	
General Surgery	1984 - Present
Royal College of Physicians and Surgeons, Canada	

General Surgery	1984 - Present
Thoracic and Cardiovascular Surgery	1989 - Present

Mayo Certification(s)

Mayo Clinic Quality Academy

Mayo Clinic Quality Fellow: Bronze Level Certification

10/09/2011

LICENSURE

Canada	CPMQ	01/1980
Canada	LMCC	01/1980
Minnesota	029921-9	01/1986 - 2021
Arizona	40975	01/2009
Vermont	042.0012806	12/2013
New York	281753-1	09/2015

HONORS/AWARDS

America's Top Doctors, Third Edition - National Castle Connolly Guide	01/2003
America's Top Doctors - National Castle Connolly Guide	01/2004
Who's Who in Medical Sciences Education	01/2005
America's Top Doctors - National Castle Connolly Guide	01/2005
Best Doctors in America	11/2005
America's Top Doctors - National Castle Connolly Guide	01/2006
Best Doctors in America	01/2007 - 01/2008
America's Top Doctors - Castle Connolly	2012

Honors and Awards for Education

Excellence in Teaching Recognition 2001-2002 - Mayo Medical School, Mayo Clinic College of Medicine

Excellence in Teaching Recognition 2002-2003 - Mayo Medical School, Mayo Clinic College of Medicine

**CURRENT INSTITUTIONAL/DEPARTMENTAL ADMINISTRATIVE
RESPONSIBILITIES, COMMITTEE MEMBERSHIPS AND OTHER
ACTIVITIES**

University of Vermont Health Network:

President/CEO, UVMHN Medical Group (Over 1000 employed physicians, 150 advanced providers, across 6 Hospitals)	01/2014 - Present
Executive Vice-President, Clinical Affairs UVMHN	01/2020 - Present
Strategic Management Council, member	03/2020 - Present
Senior Associate Dean, Clinical Affairs, UVM Larner College of Medicine	01/2014 - Present
Professor of Surgery, with tenure, UVM Larner College of Medicine	01/2014 - Present
UVMHN COVID Reentry Steering Committee Chair	03/2020 - Present
UVMHN Strategic Management Council Member	01/2020 - Present
High Value Care Council Chair	01/2020 - Present
UVMHN Medical Group Board Director	01/2014 - Present
Finance Committee UVMH MG Member	01/2014 - Present
Patient Care & Operations Committee UVMHN MG Member	11/2014 - Present
Provider Workforce Management Committee UVMHN MG Member	01/2014 - Present
Research & Education Committee UVMHN MG Member	01/2014 - Present
VMC Indemnity Company LTD. Board UVMHN Director	01/2014 - Present
Care Delivery Optimization Committee UVMHN Chair	01/2014 - Present
Network Leadership Council UVMHN Member	01/2014 – Present

PROFESSIONAL & COMMUNITY MEMBERSHIPS, SOCIETIES AND SERVICES

Professional Memberships & Services

Available upon request

Journal Responsibilities

Available upon request

EDUCATIONAL ACTIVITIES

Available upon request

BIBLIOGRAPHY

Peer-reviewed Articles (242)

Available upon request

Book Chapters, Books, Editorials (44)

Available upon request

Symposiums

Co-chair, Mayo Clinic General Thoracic Surgery Symposium
Rochester, Minnesota 5/2013

Chair, first UVMHN MG Health Care Summit on Clinical
Integration 10/2017

Chair, Second UVMHN MG Health care Summit on Clinical
Integration 11/2018

Chair, Third UVMHN MG Health Care Summit Clinical Integration
11/2019

PREVIOUS PROFESSIONAL POSITIONS AND MAJOR APPOINTMENTS

Staff, Thoracic and Vascular Surgery - Hotel-Dieu and St. Jeanne d'Arc Hospital, Montreal, Quebec, Canada	1989 – 1991
Assistant Professor of Surgery - University of Montreal, Montreal, Quebec, Canada	1989 - 1991
Senior Associate Consultant (Surgeon on staff) - Division of General Thoracic Surgery, Department of Surgery, Mayo Clinic, Rochester, Minnesota	09/01/1991 - 12/15/1993
Assistant Professor of Surgery - Mayo Clinic College of Medicine	10/01/1991 - 07/01/1996
Consultant (surgeon on staff with voting privilege) - Division of General Thoracic Surgery, Department of Surgery, Mayo Clinic, Rochester, Minnesota	12/16/1993 - 12/12/2013
Associate Professor of Surgery - Mayo Clinic College of Medicine	07/01/1996 - 01/01/2002
Professor of Surgery – Mayo Clinic College of Medicine	01/01/2001 – 12/2013
Editor , Surgery, Journal of Diseases of the Esophagus	2000 - 2005
Chair - Department of Surgery , Mayo Clinic, Rochester, Minnesota	08/ 2005 - 11/2013
Joseph I. and Barbara Ashkins Professor of Surgery - Mayo Clinic, Rochester, Minnesota	2010 – 12/2013
Master's Faculty Privileges in Clinical & Translational Science - Mayo Graduate School, Mayo Clinic College of Medicine	02/13/2008 - 12/31/2013
Chair - Mayo Clinic in the Midwest Strategy Work Group Project Charter, Rochester, Minnesota	2013

Curriculum Vitae and Bibliography

LaTonya Hickson, MD

1. Personal Information

2. Present Academic Rank and Position

Member - Robert D. and Patricia E. Kern Center for the Science of Healthcare Delivery, Rochester, Minnesota	11/2018 - Present
Kern Society Affiliate. Focus: Champion transformation in health care for patients with chronic kidney disease.	
Associate Professor of Medicine - Mayo Clinic College of Medicine and Science	12/2018 - Present
Teaching/Examining Privileges in Clinical & Translational Science - Mayo Clinic Graduate School of Biomedical Sciences, Mayo Clinic College of Medicine and Science	02/2019 - Present
Chair - Division of Nephrology & Hypertension, Department of Internal Medicine, Mayo Clinic, Jacksonville, Florida	05/2020 - Present
Consultant - Division of Nephrology & Hypertension, Department of Internal Medicine, Mayo Clinic, Jacksonville, Florida	05/2020 - Present
Principal Investigator and Director - Translational and Regenerative Nephrology Research Laboratory, Jacksonville, Florida	07/2020 - Present
Basic Science Laboratory	
Medical Director- Mayo Clinic Dialysis Florida - Mayo Clinic in Florida, Mayo Clinic, Jacksonville, Florida	07/2020 - Present
Medical Director of Dialysis services for inpatient, outpatient incenter, and home therapies.	
Associate Chair Research & Innovation - Department of Medicine, Mayo Clinic Florida, Jacksonville, Florida	08/2020 - Present
Interim Chair (Aug 2020 - Feb 2021)	
Full Faculty Privileges in Regenerative Sciences - Mayo Clinic Graduate School of Biomedical Sciences, Mayo Clinic College of Medicine and Science	09/2021 - Present

3. Education

South Carolina State University - BS	1994 - 1998
University of Louisville School of Medicine - MD	1998 - 2002
Wake Forest University Baptist Medical Center - Internship	2002 - 2003
Wake Forest University Baptist Medical Center - Resident, Internal Medicine	2003 - 2005
Mayo School of Graduate Medical Education, Mayo Clinic College of Medicine - Fellow, Nephrology	2005 - 2008
Mayo Graduate School, Mayo Clinic College of Medicine, Rochester, Minnesota—Masters in Clinical and Translational Science	09/2016 - 09/2021

4. Certification

Board Certifications

American Board of Internal Medicine (ABIM)

Internal Medicine	2005 - 2016
Nephrology	2008 - Present

Other Certifications

5. Licensure

North Carolina	(Medical)	2003 - 2005
Minnesota	(Medical)	2005 - Present
Florida	(Medical)	2020 - Present

6. Honors and Awards

Dean's List - South Carolina State University	1994 - 1998
Presidential Gold Medallion Academic Recipient - South Carolina State University	1994 - 1998
Miss South Carolina State University - South Carolina State University	1997 - 1998
Non-resident Medical School Tuition Scholarship - University of Louisville	1998 - 2002
Travel Grant, Renal Week 2003 - American Society of Nephrology Annual Meeting, San Diego, CA	2003
Travel Grant, Transplant Fellows' Symposium - American Society of Transplantation, Tempe, Arizona	2006
Outstanding Clinical Fellow Award- Department of Medicine, Nephrology division - Mayo School of Graduate Medical Education, Mayo Clinic College of Medicine	2008
First Place Poster Presentation Award Midwest Regional Conference, Chicago, IL - NIH/NIDDK National Minority Research Investigators	2008
Fellow of the American Society of Nephrology - American Society of Nephrology	2011
Top Educator - Internal Medicine Residency Program, Department of Internal Medicine, Mayo Clinic	09/2011
Honorable Mention - Good Author Project Recognition provided for being an exceptional dictation author	2012
Fellow of the American College of Physicians - American College of Physicians	2014
Health Care Delivery Scholar - Mayo Clinic - Robert D. and Patricia E. Kern Center for the Science of Health Care Delivery, Rochester, Minnesota	2014 - 2017
Quality Improvement Project - Project RED -ReEngineering Dialysis - Mayo School of Continuous Professional Development, Mayo Clinic	2014
2016 New Investigator Award, Department of Medicine - Mayo Clinic Department of Medicine, Rochester, Minnesota Recognition of recent research achievements of a new investigator with evidence of important new insights in the field of biomedical science and publication of work in high-quality, peer-reviewed journals.	2016

7. Previous Professional Positions and Major Appointments

Director - Wabasha Dialysis Unit, Division of Nephrology & Hypertension, Department of Internal Medicine, Mayo Clinic, Wabasha, Minnesota	2008 - 2011
Served as Director of the outreach dialysis unit providing patient care, nursing and dialysis technician staff leadership, quality improvement initiative implementation, and regulatory-required reviews and management.	
Instructor of Medicine - Mayo Clinic College of Medicine and Science	03/2008 - 04/2011
Senior Associate Consultant - Division of Nephrology & Hypertension, Department of Internal Medicine, Mayo Clinic, Rochester, Minnesota	06/2008 - 06/2011
Co-Director - Chronic Kidney Disease Clinic, Mayo Clinic, Rochester, Minnesota Planned and established the Mayo Clinic Rochester Chronic Kidney Disease Clinic beginning in 2008. Chaired meetings and initiatives for clinic establishment, staffing, protocol development, quality improvement. Innovative model for the division combining specialty nurses with providers to improve clinical experience, education	08/2008 - 06/2016

and outcomes in patients with kidney disease. Clinic model remains in effect.

Assistant Professor of Medicine - Mayo Clinic College of Medicine and Science 05/2011 - 11/2018

Consultant - Division of Nephrology & Hypertension, Department of Internal Medicine, Mayo Clinic, Rochester, Minnesota 06/2011 - 05/2020

Physician - Northeast Dialysis Unit, Division of Nephrology and Hypertension, Rochester, Minnesota 2012 - 2016

Served as Physician of the 20+ chair dialysis unit providing patient care, nursing and advanced practitioner partnership, fellow education and staffing, and quality improvement initiative implementation.

Consultant (Joint Appointment) - Section of Geriatric Medicine and Gerontology, Department of Internal Medicine, Mayo Clinic, Rochester, Minnesota 03/2018 - 05/2020

8. Service

Military

Community Memberships and Services

Operation Blessing International
Physician Volunteer 2007 - Present

9. Professional Memberships and Societies

Professional Memberships and Services

American College of Physicians	
Member	2010 - Present
Fellow	2014 - Present
American Diabetes Association	
Member	2018 - Present
American Medical Association	
Member	1998 - Present
American Medical Women's Association	
Member	12/2020 - Present
American Society of Nephrology	
Member	2005 - Present
Planning and Development	2009 - 2013
Fellow	2011 - Present
Advisory Member	2014 - 2017
Abstract Reviewer Chair	02/2017 - 07/2017
Participant	2020 - Present
American Society of Transplantation	
Member	2006 - Present
Diabetic Complications Consortium (DiaComp)	
Member	2019 - Present
Florida Medical Association	
Member	12/2020 - Present
International Federation for Adipose Therapeutics and Science	
Member	2017 - Present
Abstract Review Committee Member	06/2019 - Present
International Society for Cell and Gene Therapy	
Member	2017 - Present
Mentor in the Mentor/Mentee Program	2020 - Present

International Society of Nephrology		
Member	2011 - Present	
Kentucky Medical Association		
Member	1998 - 2002	
Mayo Alumni Association		
Member	12/2020 - Present	
Minnesota Medical Association		
Member	01/2005 - Present	
Zumbro Valley Medical Society		
Member	01/2005 - Present	
National Institutes of Health		
National Institute of Diabetes and Digestive and Kidney Diseases		
Member	12/2020 - Present	
National Kidney Foundation		
Planning and Development	07/2007	
Member	02/2011 - Present	
National Medical Association		
Member	12/2020 - Present	
Network of Minority Health Research Investigators		
Member	2008 - Present	
Member, Planning Committee	2021 - Present	
Reviewer for Scientific Abstracts at the Annual Meeting	2021 - Present	
Moderator	2021 - Present	
Phi Delta Epsilon Medical Fraternity		
Member	01/1998 - 01/2002	
President	01/1999 - 01/2000	
Student National Medical Association		
Member	01/1998 - 01/2002	
Translational Geroscience Network Subcommittee		
Member	2021 - Present	
Wake Forest University Baptist Medical Center		
Resident Liaison	01/2003 - 01/2005	
Women in Nephrology		
Member	2009 - Present	

Study Sections

Benefactor Funded Career Development Awards		
Ad Hoc Grant Reviewer	02/2021 - Present	
CCaTS – CBD Pilot Awards for Team Science program		
Ad Hoc Grant Reviewer	10/2019 - Present	
Diabetic Complications Consortium (DiaComp) Funding Program		
Ad Hoc Grant Reviewer	08/2020 - Present	
Mayo Clinic Cardiovascular Research Center		
Ad Hoc Grant Reviewer	06/2018 - Present	
Mayo Clinic Center for Clinical and Translational Science (CCaTS), Community Engagement Program		
Ad Hoc Grant Reviewer	10/2016 - Present	
Mayo Clinic Center for Clinical and Translational Science, Center for Biomedical Discovery		
Ad Hoc Grant Reviewer	11/2018 - Present	

Mayo Clinic Center for the Science of Healthcare Delivery, Kern Scholar Program	
Ad Hoc Grant Reviewer	01/2016 - Present
Ad Hoc Grant Reviewer	01/2019 - Present
Ad Hoc Grant Reviewer	01/2020 - Present
Ad Hoc Grant Reviewer	01/2021 - Present
Mayo Clinic Department of Medicine, Catalyst Award Review Committee	
Ad Hoc Grant Reviewer	11/2020 - Present
Mayo Clinic Department of Medicine, STARDOM Award Review Committee	
Ad Hoc Grant Reviewer	07/2021 - Present
National Institute of Health, National Institute of Diabetes and Digestive and Kidney Diseases	
Ad Hoc Grant Reviewer	06/2021 - Present
National Institute of Health, National Institute on Aging	
Ad Hoc Grant Reviewer	01/2021 - Present
Ad Hoc Grant Reviewer	2021 - Present
National Institute of Health, Regenerative Medicine Innovation Projects	
Ad Hoc Grant Reviewer	08/2017 - Present
Ad Hoc Grant Reviewer	01/2019 - Present

Journal Editorial Responsibilities

Mayo Clinic Family Health Book	
Assistant Editor	2017 - Present

Journal Other Responsibilities

American Journal of Kidney Diseases	
Journal Reviewer	2009 - Present
American Journal of Transplantation	
Journal Reviewer	2008 - Present
Annals of Internal Medicine	
Journal Reviewer	2014 - Present
Diabetes Care	
Journal Reviewer	2019 - Present
Journal of Cellular and Molecular Medicine	
Journal Reviewer	2021 - Present
Journal of the American Society of Nephrology	
Journal Reviewer	2001 - Present
Mayo Clinic Proceedings	
Journal Reviewer	2010 - Present
Scientific Reports	
Journal Reviewer	2016 - Present
Stem Cells International	
Journal Reviewer	2019 - Present
Stem Cells Translational Medicine	
Journal Reviewer	2019 - Present
Transplantation	
Journal Reviewer	2017 - Present

10. Education Interests and Accomplishments

A. Curriculum and Course Development

An Introduction to Chronic Kidney Disease	2008 - 2009
Patient Education Booklet; Full revision of educational content 2008-2009	
Rochester, Minnesota	
Keeping Your Kidneys Healthy	2009
Patient Education Class; Course Revision/Modifications 2009	
Rochester, Minnesota	
Clinically Speaking Newsletter: Chronic Kidney Disease Clinic Initiative	02/2009
Author of Educational Content for General Internal Medicine Colleagues	
Rochester, Minnesota	
Inpatient Nephrology Teaching Service Course Curriculum- Peritoneal Dialysis Basics	2010 - Present
Developed review lecture for Internal Medicine and Nephrology trainees' educational website during consultation rotation.	
Rochester, Minnesota	
Inpatient Nephrology Teaching Service Course Curriculum- Kidney Transplantation Basics	2010 - Present
Developed review lecture for Internal Medicine and Nephrology trainees' educational website during consultation rotation.	
Rochester, Minnesota	
Professional Development Seminar: Early and Mid Careers	2010 - 2013
Women in Nephrology Organizing Committee Member. Seminar hosted to provide career and leadership skills during Renal Week 2010, American Society of Nephrology Conference.	
Denver, Colorado	
Content reviewer, Keeping Your Kidneys Healthy Class	2012
Patient Education Course, Content reviewer and creator	
Rochester, Minnesota	
Co-Moderator, Presentation Skills Workshop	06/2012
Mayo Clinic Rochester, Charter House	
Rochester, MN, United States of America	
Faculty Track Director for Nephrology and Hypertension CME content CME	03/2013 - 10/2013
Pri-Med Midwest Annual Conference	
Rosemont, Illinois	
Glomerular Disease	2015
Mayo Patient Education Booklet; Content Creator	
Rochester, Minnesota	
Mayo Clinic Medical Nutrition Therapy Guideline: Chronic Kidney Disease - Adult Medical Content Reviewer	2016 - Present
Mayo Clinic: Patient Education- Nephrotic Syndrome Medical Content Reviewer	2017 - Present
Mayo Clinic Health Letter: Diabetes and risk of uncontrolled blood pressure Medical Content Reviewer	2020 - Present

B. Teaching

Comparing the Risk of Death with Peritoneal Dialysis and Hemodialysis	2005
Nephrology Journal Club	
Mayo Clinic, Division of Nephrology	
Rochester, Minnesota	
Rapamycin for treatment of Chronic Allograft Nephropathy in renal transplant patients	2006
Nephrology Journal Club	
Mayo Clinic, Division of Nephrology	

Rochester, Minnesota

Bone marrow derived stem cells repair of basement membrane collagen defects and reverse genetic kidney disease
Podocyte Journal Club, Mayo Clinic, Division of Nephrology
Rochester, Minnesota

Hyperparathyroidism in CKD: Sevelamer Dosing Study
Nephrology Journal Club
Mayo Clinic, Division of Nephrology
Rochester, Minnesota

Hyperparathyroidism in Renal transplantation
Nephrology Journal Club, Mayo Clinic, Division of Nephrology
Rochester, Minnesota

CV disease in ESRD and Renal transplant candidates with Dobutamine Stress
Echocardiogram and Troponin screening
Nephrology Journal Club
Mayo Clinic, Division of Nephrology
Rochester, Minnesota

Homocysteine effect on lowering mortality and vascular disease in CKD and ESRD (HOST) study
Nephrology Journal Club
Mayo Clinic, Division of Nephrology
Rochester, Minnesota

Clinical Research courses-Clinical Research Training Program
Mayo Graduate School
United States of America

Lithium Nephrotoxicity
Morning Report Lecture
Mayo Internal Medicine Residency Program
Jacksonville, Florida

Effects of statins in patients with chronic kidney disease
Nephrology Journal Club
Mayo Clinic, Division of Nephrology
Rochester, Minnesota

Rhabdomyolysis and Acute Renal Failure, Morbidity and Mortality Conference
Mayo Internal Medicine Residency Program
Rochester, Minnesota

Chronic Kidney Disease
Mayo Medical School
Rochester, MN

Your Career in Medicine
MN Future Doctors, Clinician Speaker
Rochester, Minnesota

Glomerulonephritis and Chronic Kidney Disease
Nephrology Board Review Session
Mayo Internal Medicine Residency, Board Review Series
Rochester, Minnesota

Glomerulonephritis and Chronic Kidney Disease, Nephrology Board Review Session
Mayo Internal Medicine Residency Program
Rochester, Minnesota

Microscopic Hematuria
Family Medicine Resident Lecture Series
Kasson, Minnesota

Risk Factors for Morbidity and Mortality in Patients with Hypertension and Renal Disease

Summer Research Seminar Series, Mayo College of Medicine Office for Diversity
Rochester, Minnesota

Hyperparathyroidism and Bone Disorder in CKD & Kidney Transplantation
Education Lecture to Nurse Practitioners, Physician Assistants, and Transplant
Nurse Coordinators

Mayo Clinic, Division of Nephrology and Hypertension; Kidney Transplant
Rochester, Minnesota

Risk Factors for Morbidity and Mortality in Patients with Hypertension and Renal
Disease

Summer Research Seminar Series, Mayo College of Medicine Office for Diversity
Rochester, Minnesota

Glomerulonephritis...The Basics of Renal Biopsy and Other Necessary Evaluations
Education Lecture to Nurse Practitioners, Physician Assistants, and Transplant
Nurse Coordinators

Mayo Clinic, Division of Nephrology and Hypertension; Kidney Transplant
Rochester, Minnesota

The Basics of Nephrotic Syndrome and Glomerulonephritis
Family Medicine Residency Education Lecture Series
Rochester, Minnesota

Chronic Kidney Disease Management for Fellows
Core Curriculum Conference for Nephrology Fellows Mayo Clinic
Rochester, Minnesota

Studying Morbidity in ESRD Patients...and my academic journey
Summer Research Seminar Series, Mayo College of Medicine Office for Diversity
Rochester, Minnesota

Mayo Clinic (Incident) Hemodialysis Patients: Renal Recovery, Hospitalizations, and Infections.

Nephrology and Hypertension Grand Rounds

Recurring Issues Faced by Chronic Dialysis Patients
Core Curriculum Conference for Nephrology Fellows Mayo Clinic
Rochester, Minnesota

Public Speaking for Medical Students
Mayo Clinic - Rochester
Rochester, Minnesota

Career Paths: Making Research The Fun Part
Summer Research Seminar Series, Mayo College of Medicine Office for Diversity
Rochester, Minnesota

Optimizing K23 Specific Aims for Study of Mesenchymal Stem Cells in Diabetic
Nephropathy
Health Care Delivery - Works in Progress (WIP)
Rochester, Minnesota

Career Paths: Making Research The Fun Part
Summer Research Seminar Series, Mayo College of Medicine Office for Diversity
Rochester, Minnesota

Fundamentals of CKD
Core Curriculum Nephrology Fellows Conference
Rochester, Minnesota

Career Paths: Making Research The Fun Part
Summer Research Seminar Series, Mayo College of Medicine Office for Diversity
Rochester, Minnesota

Mesenchymal Stromal/Stem Cells (MSC) Research in Kidney Disease
Mayo Nephrology Fellows' Conference
Rochester, MN

NephSAP: Chronic Kidney Disease

Mayo Nephrology and Hypertension Grand Rounds
Rochester, Minnesota

Career Paths: Making Research The Fun Part
Summer Research Seminar Series, Mayo College of Medicine Office for Diversity
Rochester, Minnesota

2018 - Present

Stem Cell Research in Kidney Disease
Mayo Nephrology Fellows' Conference
Rochester, MN

2018

Considerations in Trial Design
IMM RSTP 6865 "Regenerative T cell Immunology in the Treatment of Cancer"

2020 - Present

Diabetic Nephropathy
Nephrology Fellowship Core Curriculum
Jacksonville, Florida

2021 - Present

Careers and Research in Nephrology and Hypertension
Summer program for pre-medical undergraduate students, underrepresented in
medicine and science.
Undergraduate Plummer Scholars - Virtual Summer Program 2021

2021 - Present

Regenerative Nephrology
MCASOM REGS 5210 Advanced Regenerative Medicine and Surgery Course

06/2021 - Present

Chronic Kidney Disease-Mineral Bone Disease
Nephrology Fellowship Core Curriculum
Jacksonville, Florida

2021 - Present

C. Academy of Educational Excellence

D. Mentorship

Individual and Position	Timeframe	Outcomes	Current Status
Nwoko, Rosemary Nephrology Fellow	1/2009 - Present Professional/career mentorship	Nephrologist	Nephrologist Marshfield Clinic, Marshfield, WI
Vootukuru, Srividya Nephrology Fellow	1/2009 - 1/2010 Research Project: Focal segmental glomerulosclerosis recurrence research; Pregnancy in kidney transplant recipients	Poster presentation, abstract publication	Transplant Nephrologist Denver Nephrology, Denver, CO
Burgess, Mary Internal Medicine Resident	10/2009 Case Poster Presentation. Title: Hypercalcemia: The presenting symptom of Non Hodgkin's Large B cell Lymphoma. 2009 Minnesota American College of Physicians Resident Poster Competition	Poster presentation	Infectious Disease Specialist, University of Arkansas for Medical Sciences, Little Rock, AR
Olsen, Molly Internal Medicine Resident	1/2010 Research Project: Palliative care and End of life issues in advanced chronic kidney disease	Protocol development	Internist Providence Medical Group - Hood River, Hood River, OR
Chaudhary, Sanjay Nephrology	8/2010 - 10/2014 Research Project: Fistula Outcomes and Mortality in	Manuscript publication. Abstract publication, poster presentation	Critical Care Specialist, Mayo Clinic, Jacksonville, Florida

Fellow	Incident Hemodialysis patients. Abstract presentation and travel grant recipient. Renal Research Institute Conference in Miami, Florida, January 2011.		
Schoonover, Kimberly Fellow	1/2011 - 12/2013 Research Project: Hospitalizations in Elderly Incident Hemodialysis Patients.	Manuscript publication, abstract publication, poster presentation	Hospitalist, Assistant Professor of Medicine Mayo Clinic Rochester, Hospice and Palliative Medicine
Steuernagle IV, Jon Internal Medicine Resident	2/2011 - 12/2012 Research Project: Non-Diabetic Renal Disease in Diabetic Patients: Renal Biopsy and Clinical Data from over 3,500 patients. Abstract presentation at ASN Kidney Week 2012.	Poster presentation, abstract publication	Critical Care/Intensivist Howard County General Hospital, Columbia, MD
Khangura, Kirandeep Hospitalist	1/2012 - 7/2013 Research Project: Bacteremias in hemodialysis patients. ASN Kidney week 2014 Poster.	Poster presentation, abstract publication	Nephrologist, Crossroads Specialty Clinic Mount Vernon, IL
Gooden, Janelle Internal Medicine Resident	1/2012 - 12/2013 Research Project: Cardiovascular Implantable Device Infections in Hemodialysis Patients.	Manuscript publication (1)	Cardiologist, Kaiser Permanente Medical Center Jonesboro, GA
Kloesel, Benjamin Internal Medicine Resident	5/2012 - 2/2013 Severe hyponatremia and acute inflammatory demyelinating polyneuropathy: a case report	Manuscript publication.	Assistant Professor, Anesthesiology. University of Minnesota. Minneapolis, MN
Muriithi, Angela Nephrology Fellow	10/2013 - 7/2014 Research Project: Bacteremias in Dialysis Patients. Abstract presentation at National Kidney Foundation conference 2014.	Poster presentation, abstract publication	Nephrologist, Providence Regional Medical Center, Everett, WA
Scantlebury, Dawn Cardiology Fellow	12/2013 - 3/2014 Case Report: Cardiopulmonary complications of end-stage renal disease and severe refractory hyperparathyroidism	Manuscript publication.	Senior Associate Lecturer, Cardiologist. University of the West Indies at Cave Hill, Barbados
Brown, Sherry-Ann Internal Medicine Resident	4/2014 - 1/2015 Research Project: Acute Renal Allograft Dysfunction Due to Cecal Volvulus: A Case Report	Manuscript publication	Instructor in Medicine Cardiovascular Diseases Fellow Mayo Clinic Rochester
Bourne, Michael Internal Medicine	8/2014 - 1/2015 Case Poster Presentation: Trading Methotrexate for a	Poster presentation	Assistant Professor of Medicine Pulmonary and Critical

Resident	Mahurkar. 2014 Minnesota American College of Physicians Resident Poster Competition.		Medicine Mayo Clinic Rochester
Negrotto, Sara Internal Medicine Resident	8/2014 - 7/2016 Research Project: Structural heart disease in incident hemodialysis patients. ACC poster presentation 2015. ASE poster presentation 2015.	Manuscript publication (1), abstract presentations (2)	Cardiology Fellowship Vanderbilt University Medical Center, Nashville, TN
Hamadah, Abdurrahman Nephrology Fellow	9/2014 - 6/2017 Research Projects (2): 1) Tolerance of Anti-Tuberculosis Therapy in Hemodialysis Patients. Poster presentation at Renal Research Institute 2014. 2) Arteriovenous fistulae maturation outcomes in hemodialysis patients with preexisting cardiovascular implantable devices. Poster presentation at ASDIN 2017.	Manuscript publication (1). Abstract publications (2). Poster presentations (2).	Instructor in Medicine Mayo Clinic Albert Lea Hospital, Albert Lea, MN
Kaufman, Gregory Internal Medicine Resident	10/2014 Case Poster Presentation: Renal Failure and Nephromegaly Manifesting from Progressive CLL. 2014 Minnesota American College of Physicians Resident Poster Competition.	Poster presentation	Hematology Fellow, Stanford University, Stanford, CA
Gonzalez Suarez, Maria (Lourdes) Nephrology Fellow	1/2015 - 6/2017 Research Project: Outcomes of models of care in end stage renal disease: a systematic review	Manuscript publication. Abstract publication.	Assistant Professor of Medicine, Nephrologist, Nephrology and Clinical Immunology, University of Mississippi Medical Center, Department of Medicine Jackson, MS
Vork, Diana Medical Student	2/2015 - 3/2018 Research Project: Depression and Healthcare Utilization in Incident Dialysis Patients. Presentation at ASN Kidney Week 2016.	Manuscript publication (1). Poster presentation (1).	Dermatology Resident, Mayo Clinic Rochester
Farah, Wigdan Research Trainee	7/2015 - 7/2017 Research Project: Outcomes following hip fracture repairs in dialysis-dependent patients – comparison to a matched cohort. ADC 2017.	Manuscript acceptance. Poster presentation.	Internal Medicine Resident, St. Joseph Mercy Health System Internal Medicine Residency, Ann Arbor, MI
Baffour, Francis Radiology Resident	8/2015 - 12/2016 Research Project: Renal Allograft Biopsy Bleeding Complications. RSNA 2015.	Manuscript publication. Poster presentation.	Assistant Professor of Radiology, Radiologist, Mayo Clinic

Chen, Chieh-Yu (Joy) Internal Medicine Resident	9/2016 - 7/2019 Research Project: 1) Death and Dialysis Withdrawal in Incident Hemodialysis Patients. 2) Palliative care utilization in Dialysis. ADC 2017. ADC 2018.	Manuscript publication (1). Poster presentations (2).	Nephrology Fellow, University of Michigan Health System
Hommos, Musab Nephrology Fellow	10/2016 - 7/2017 Research Project: Outcomes of Arteriovenous Fistula in Patients with Implantable Cardiac Defibrillator. Presentation ASDIN 2017.	Poster presentation.	Assistant Professor of Medicine, Nephrologist, Mayo Clinic, Arizona
Pawar, Aditya Nephrology Fellow	11/2016 - 11/2017 Case Poster Presentation: Trimethoprim-sulfamethoxazole: possible trigger for atypical HUS. RRI 2017	Poster presentation.	Nephrology Fellowship Nephrology Mayo Clinic Rochester
Conley, Sabena Basic Scientist Postdoctoral Fellow	3/2017 - Present Laboratory Director/PI. T23 NIH Grant Mentor Committee member; Post-doctoral training; Mesenchymal stem cell senescence in obesity.	NIDDK R03 Diversity Supplement (Hickson Mentor). Burroughs Wellcome Fund grant awarded 2018. NIH F32 grant submission 2018. Manuscripts (5). Abstract submission (3). Grants (1 - NIH; R03 Supplement).	Post-doctoral Senior Research Fellow. Translational and Regenerative Nephrology Laboratory (Hickson), Nephrology and Hypertension, Mayo Clinic Florida
D'Costa, Matthew Nephrology Fellow	9/2017 - Present 1) Elderly Dialysis Patients and Structural Heart Disease ISN, Tokyo 2018. RRI 2018. 2) Case: Hyperoxalosis Vitamin C ingestion. ASN 2017.	Manuscripts (2) . Oral presentation (1). Poster presentations (2).	Assistant Professor of Medicine, Transplant and General Nephrologist, Mayo Clinic Rochester (supplemental)
Bobart, Shane Nephrology Fellow	10/2017 - 3/2019 Research Project: Mesenchymal stem/stromal cells and senolytic therapy in diabetic kidney disease. CCaTS Certificate Program 2018, Co-Mentor.	CCaTS Certificate program acceptance. Manuscript (co-authored) publication (1).	Instructor of Medicine, Nephrologist, Cleveland Clinic Florida
Bian, Xiaohui Research Fellow/Scientist	9/2018 - Present Projects: 1) Activin A as a biomarker of diabetic kidney disease; 2) Creating an in vitro model of diabetic injury in renal cells; 3) Developing accelerated nephropathy model of diabetic kidney disease (mice)	Manuscript publication (2); Grants in home institution (2); Academic rank promotion in home institution.	Nephrology and Hypertension Research Fellow. Nephrologist, Shengjing Hospital of China Medical University, Shenyang, China Translational and Regenerative Nephrology Laboratory (Hickson), Nephrology and Hypertension, Mayo Clinic Florida
Abedalqader, Tala Mentee	6/2019 - 8/2019 Program: SPIRIT (Summer Program for International Research Internship Training). Project:	Manuscript (1). Poster presentation (1).	Medical student; Alfaaisal University, Riyadh, Saudi Arabia.

	Systematic Review and Meta-Analysis of Stem Cell Therapy in Animals with Diabetic Kidney Disease		
Ben-Bernard, Gift	6/2019 - 7/2020 Program: Mayo Nephrology & Urology Summer Undergraduate Research Fellows (nSURF; R25-DK101405). Project: Systematic Review and Meta-Analysis of Stem Cell Therapy in Animals with Diabetic Kidney Disease	Manuscript creation: (1). Poster presentation: (2)	Graduate Research Education Program, Mayo Clinic
Mondy, Jayla Mentee	6/2019 - 8/2019 Program: Mayo Nephrology & Urology Summer Undergraduate Research Fellows (nSURF; R25-DK101405). Project: Systematic Review and Meta-Analysis of Stem Cell Therapy in Animals with Diabetic Kidney Disease	nSURF Star award recipient. Travel award ASN Kidney Week 2019 Washington, D.C. Manuscript (1). Abstract: Oral (1) and Poster (2).	College student; Mississippi State University; Accepted to Medical School (2021)
Holloway, D'Asia Mentee	8/2020 Program: Mayo Clinic Summer Foundations in Research (MCSFIR). Project: Testing mesenchymal stem cell therapy effects in diabetic nephropathy	SFIR Poster presentation	Undergraduate student; Spelman College
Smith, Iyanna Mentee	8/2020 Program: Mayo Clinic Summer Foundations in Research (MCSFIR). Project: Understanding models of diabetic nephropathy for the study of stem cell therapy	SFIR Poster presentation	Undergraduate student; University of Rochester
Kansagra, Ankit Clinician	11/2020 - Present 2020-2021 ISCT Early Stage Professionals (ESP) Mentoring Program.	Provided career development mentoring in cellular therapy - clinical studies, research.	Assistant Professor of Internal Medicine, Hematologist, University of Texas Southwestern Medical Center, Dallas, Texas
Hemeyer, Connie Jo (CJ)	12/2020 - Present	Mini-oral abstract presentation. ERA-EDTA 58th Congress. June 2021. Comparison of hemodialysis connectors caps vs antimicrobial barrier caps in central line-associated bloodstream infection rates for hemodialysis patients	APRN Nephrology and Hypertension
Elizabeth, Lorenz Consultant	1/2021 - Present Dr. Lorenz is an NIDDK K23-funded investigator.	Manuscript publications (3); Clinical Trials (2); Grants (1)- Intramural funding in aging-related research. Focus: Frailty, CKD and Kidney Transplantation.	Assistant Professor of Medicine, Transplant Nephrologist, Mayo Clinic Rochester, MN
Baker, Sarah Postdoctoral Fellow	2/2021 - Present K01 recipient	Grant funded: 2021 Research Career Support and Advancement Award: "The Impact of Hot Flashes on Neurovascular	Post-doctoral Fellow

O'Shea, Mary (Molly)	2/2021 - Present Mayo Clinic Diversity Mentorship Program	Career development and Kidney Function". Funded by the Office of Research, Equity, Inclusion and Diversity.	Mayo Clinic Alix School of Medicine, 1st Year
Stevic, Una Mentee	6/2021 - 8/2021 Program: Mayo Nephrology & Urology Summer Undergraduate Research Fellows (nSURF; R25-DK101405). Regenerative Medicine Graduate School program sponsored. Project: Mesenchymal stem cell paracrine-mediated repair in diabetic kidney disease	nSURF. Manuscript (0). Abstract: Oral (3). Award (1): ASN Kidney STARS	Undergraduate student; St. Francis College, Brooklyn, NY
Summers, Jonathan Mentee	6/2021 - 8/2021 Program: Mayo Nephrology & Urology Summer Undergraduate Research Fellows (nSURF; R25-DK101405). Project: Uremic Toxin Effects on Macrophage Functionality and Phenotype	nSURF. Manuscript (0). Abstract: Oral (1).	Undergraduate student; Dominican University of California, San Rafael, CA
Smith, Anastasia	7/2021 - Present	Mesenchymal stem cell therapy - sex differences; Abstract (1)	Special Project Associate, Mayo Clinic Florida
Hurley, Caroline Mentee	8/2021 - 8/2022 Program: One-Year Undergraduate Biomedical Research Internship (U-BRI)	Laboratory experience (1), Manuscript (0). Abstract: Oral (0).	Undergraduate student; University of North Florida, Jacksonville, FL
Skaff, Caroline Mentee	8/2021 - 8/2022 Program: One-Year Undergraduate Biomedical Research Internship (U-BRI)	Laboratory experience (1), Manuscript (0). Abstract: Oral (0).	Undergraduate student; University of North Florida, Jacksonville, FL

E. Academic Career Development

NIH/NIDDK National Medical Association. Careers in Academic Medicine Seminar Travel Award recipient Dallas, Texas	01/2006
Department of Medicine Peer Mentoring Program Rochester, Minnesota	10/2009 - 10/2010
American Society of Nephrology Professional Development Seminar sponsored by Women in Nephrology, ASN Renal Week 2009 Competitive; Travel Award Recipient San Diego, California	11/2009
Association of American Medical Colleges Early Career Women Faculty Professional Development Seminar Competitive application review process. Only 150 selected. Washington, District of Columbia	07/2010 - 07/2010
Faculty Enhancement and Education Development (FEED) Program in Core Clinical Teaching	03/2012 - Present
Association of American Medical Colleges (AAMC) Faculty Career Development Seminar	09/2015 - 09/2015

committee regarding ongoing clinical, research, and quality efforts of the CKD group (practitioners, hypertension nurses, social workers, appointment staff, patient education).

Nephrology and Hypertension Research Committee

Member 2016 - Present

SMH Nephrology Consult Task Force 2009 - 2010

Member

Internal Medicine Residency Applicant Interviewer 2008 - Present

Interviewer

Mayo Physician Volunteer- Hurricane Katrina 2007

Physician
Operation Blessing Medical Recovery Week

William J von Liebig Transplant Center 2008 - 2020

Kidney/Pancreas Transplant Committee

Member 2008 - 2020

Recipient Review Committee

Member 2008 - 2020

Donor Review Committee

Mayo Clinic in Florida

Department of Internal Medicine, Division of Nephrology and Hypertension

Principal Investigator/Director, Translational and Regenerative Nephrology Research Laboratory 05/2020 - Present

Lead of (Hickson) research laboratory and team members

Florida Center for Regenerative Medicine Executive Committee

Member 2020 - Present

Provide oversight and input on the regenerative medicine activities on the Florida campus while maintaining alignment with the strategic vision created by the enterprise CRM-IMP executive committee and Mayo's overall strategic plan.

Florida Department of Medicine Executive Committee

Member 08/2020 - Present

Florida Department of Medicine, Research and Innovation

Interim Associate Chair 08/2020 - 02/01/2022

Research and Innovation for the Department of Medicine

Associate Chair 02/2021 - Present

Director of Research and Innovation for the Department of Medicine

Florida Executive Operations Team

Member 2021 - Present

Liaison 02/2021 - Present

FEOT Advanced Care at Home Liaison

Mayo Clinic Florida Committees

Chair, Search Committee, Rheumatology Division Chair 2021 - Present

Search Committee Chair for Rheumatology Division Chair, Department of Medicine, Mayo Florida

Mayo Clinic Florida Discovery Science Advisory Group

Member 2020 - Present

Transforming Transplant

Member 2020 - Present

Transforming Transplant Working Group 2: Restoring donated organs & enhancing transplant outcomes. Mayo Clinic and Carnegie Mellon University partnership.

Search Committee, Tissue Engineer 2021 - Present

Transforming Transplant search committee member for Tissue Engineer with

focus on organ replacement, organ preservation technologies.

12. Presentations Extramural

National or International

Invited

Cardiac Biomarkers as Predictors of Mortality in Chronic Kidney Disease 1st Annual Conference on Nephrology and Hypertension. Montego Bay, Jamaica	03/26/2009
Renal Replacement Therapy Decisions for the Elderly. CME Course Annual Update in Nephrology and Kidney/Pancreas Transplantation Course, Mayo Clinic. Minneapolis, Minnesota	10/03/2009
New Data in the Treatment of Hypertension CME Course Selected Topics in Internal Medicine 2010 Waikoloa, Hawaii	01/28/2010
Newly Elevated Creatinine in the Outpatient Clinic CME Course Selected Topics in Internal Medicine 2010 Waikoloa, Hawaii	01/29/2010
Chronic Renal Disease and Renal Transplantation Advancements in Medicine 2010 Conference Kingston, Jamaica	02/24/2010
Perioperative Nephrology Issues CME Course An Overview of Perioperative Medicine 2010: From Outpatient Preoperative Assessment to Inpatient Postoperative Care Rochester, Minnesota	03/26/2010
Clinical Pearls for Nephrology Internal Medicine 2010, American College of Physicians Toronto, Ontario, Canada	04/24/2010
Acute and Chronic Renal Failure 2010 Africa Partners Medical Kumasi, Ghana	09/2010
Chronic Renal Disease and Kidney Transplantation 2010 Africa Partners Medical Kumasi, Ghana	09/2010
Evaluation and Management of Acute Renal Failure 2010 Africa Partners Medical Kumasi, Ghana	09/2010
Renal Replacement Therapy (Hemodialysis, Peritoneal dialysis, Kidney transplantation) 2010 Africa Partners Medical Kumasi, Ghana	09/2010
Chronic Kidney Disease: Early Management 84th Annual Clinical Reviews Rochester, Minnesota	11/10/2010
Practical Management of Chronic Kidney Disease for the Internist Meet the Professore Lecture Series Internal Medicine 2011, American College of Physicians, Meet the Professor Lecture Series San Diego, California	04/08/2011
Nephrotic Syndrome	05/2011

Annual Hospital Medicine NP/PA CME Course
Rochester, Minnesota

Case-Based Inpatient Nephrology Internal Medicine 2013, American College of Physicians, Meet the Professor Lecture Series San Francisco, California	04/13/2013
Test Your Skills in Difficult Cases: Nephrology and Hypertension CME Course Pri-Med Midwest Annual Conference 2013 Rosemont, Illinois	10/18/2013
Inpatient Nephrology 2014 6th Annual Hospital Medicine for NP/PA CMD Course Rochester, Minnesota	05/14/2014
Nephrology - Acid-Base Cases Mayo Clinic Internal Medicine Board Review Rochester, Minnesota	06/2014
Nephrology - Fluid and Electrolytes Cases Mayo Clinic Internal Medicine Board Review Rochester, Minnesota	06/17/2014
Outcomes in Hospitalized Elderly Dialysis Patients 13th Annual Mayo Clinic Update in Nephrology and Kidney Transplantation Minneapolis, Minnesota	09/19/2014
Renal Replacement Therapy - Options and Considerations in the Elderly 7th Annual International Conference on Nephrology and Hypertension Montego Bay, Jamaica	01/2015
Nephrology - Acid-Base Cases Mayo Clinic Internal Medicine Board Review Rochester, Minnesota	06/04/2015
Nephrology - Fluid and Electrolytes Cases Mayo Clinic Internal Medicine Board Review Rochester, Minnesota	06/2015
Readmissions and Renal Recovery in Incident Dialysis Patients 14th Annual Mayo Clinic Update in Nephrology and Kidney Transplantation Minneapolis, MN	09/2015
Getting More Out of the UA Mayo Clinic 89th Annual Clinical Reviews Rochester, MN	10/2015
Getting More Out of the UA Mayo Clinic 89th Annual Clinical Reviews Rochester, MN	11/2015
Acid-Base 26th Annual Internal Medicine Board Review Rochester, Minnesota	06/09/2017
Electrolyte Cases 26th Annual Internal Medicine Board Review 2017 Rochester, Minnesota	06/2017
Acid-Base 27th Annual Internal Medicine Board Review 2018 Rochester, Minnesota	06/2018
Electrolyte Cases 27th Annual Internal Medicine Board Review 2018 Rochester, Minnesota	06/2018
Acid-Base	06/2019

28th Annual Internal Medicine Board Review 2019

Electrolyte Cases

06/2019

28th Internal Medicine Board Review 2019

Mayo Clinic

Effects of senolytics/senomorphics or their combinations on multiple disease outcomes in older patients

08/22/2019

NIA Workshop on Repurposing Drugs or Dietary Supplements for their Senolytic or Senomorphic effects: Considerations for clinical trials
Bethesda, MarylandConsidering indications for senolytics. Is there value in combining senolytics/senomorphics with disease-specific drugs/interventions?
Virtual Meeting - Paneled Presenters
NIA Cellular Senescence Think Tank#3

04/2020

Acid-Base

06/2020

29th Annual Internal Medicine Board Review 2020

Electrolyte Cases

06/2020

29th Internal Medicine Board Review 2020

Mayo Clinic

Replacement Organs: Who Will They Cure and Who Will Pay?
Virtual Meeting - Presentation and Panel Discussion Participant
2020 Virtual Meeting in the Millyard by Advanced Regenerative Manufacturing Institute (ARMI) / biofabUSA

10/20/2020

Advancing Clinical Translation of Mesenchymal Stromal Cell Therapy for Diabetic Kidney Disease

02/2021

Distinguished Lecturer. Approx. 120 attendees. Virtual.

Mayo PhD Interview Week, Mayo Clinic Graduate School of Biomedical Sciences, Clinical and Translational Science

The Promise of Stem Cells

02/2021

Keynote Lecture

Nephrology and Transplantation for the Clinician 2021: 19th Annual Update from Mayo Clinic - LIVESTREAM

The Potential of Cell-based Regenerative Therapy for Diabetic Kidney Disease

03/2021

Keynote Speaker

Kidney Disease Impact 2021 Conference. Kidneys Quest. Virtual Meeting.

Mesenchymal Stem Cell Therapy in Diabetic Nephropathy: From Bench to Bedside

04/2021

Virtual

Mayo Clinic Southeastern Clinical Update in Nephrology, Hypertension and Kidney Transplantation.

Acid-Base

06/2021

30th Annual Internal Medicine Board Review 2021

Electrolyte Cases

06/2021

30th Internal Medicine Board Review 2021

Mayo Clinic

Mesenchymal Stem Cells and Kidney Transplantation

07/2021

Virtual

NIDDK Technologies to Optimize Kidneys for Transplant Workshop

Biomarkers in Renal Medicine: The Nephrologist's Needs

09/2021

ISMRM Workshop on Kidney MRI Biomarkers: The Route to Clinical Adoption
Philadelphia**Oral**

Heavy Metal Migration in Yard Waste Compost as a Function of pH

1995

Oral Abstract Presentation

National Science Foundation- National Conference on Diversity in the Scientific and

Technological Workforce
Washington, District of Columbia

Abnormal Cardiac troponin (cTnT) Pre-Transplant Predicts Early Mortality after
Kidney Transplantation in High Risk Recipients

Oral Abstract Presentation

American Society of Nephrology, Renal Week
San Francisco, California

Survival of patients on the kidney transplant waitlist: Relationship with Cardiac
Troponin T (cTnT)

Oral Abstract Presentation
American Transplant Congress
Toronto, Ontario, Canada

Cardiac Troponin T in Renal Transplant Waiting List Candidates
Abstract Presentation

NIH-NIDDK, NMRI Poster Competition
Chicago, Illinois

Diabetic kidney disease (DKD) alters the transcriptome in adipose tissue-derived
mesenchymal stromal/stem cells (MSC)

Oral Abstract presentation
American Society of Nephrology Kidney Week 2017
New Orleans, LA

Poster

Hypertensive Renal Donors Have Improved Circadian Blood Pressure With
Antihypertensive Treatment

Abstract Presentation
American Transplant Congress
San Francisco, California

Cardiac Troponin (cTnT) Pre-Transplant Predicts Early Mortality after Kidney
Transplantation in High Risk Recipients

Abstract Presentation
Transplant Summit 2007
Chicago, Illinois

Blood Pressure Outcomes for Hypertensive Donors at Five Years

Abstract Presentation
American Society of Nephrology, Renal Week 2009
San Diego, California

Risk Factors for Hospitalization After Dialysis Start in a Nationwide Cohort Sample
of Young Adults

Mayo Clinic Delivery Science Summit
Rochester, Minnesota

Altered functional characteristics of adipose-derived mesenchymal stem/stromal
cells (MSC) in diabetic kidney disease (DKD)

Oral Abstract presentation
American Society of Nephrology Kidney Week 2017
New Orleans, LA

Regional

Invited

Renal Transplantation: Addressing Minority Issues
Wake Forest Internal Medicine Residency Grand Rounds
Winston Salem, North Carolina

Focal Segmental Glomerulosclerosis Recurrence in Renal Transplantation
Nephrology Grand Rounds, Mayo Clinic
Rochester, Minnesota

Chronic Kidney Disease: Where do we go from here?

Nephrology Grand Rounds, Mayo Clinic.
Rochester, Minnesota

Mayo Clinic Incident Hemodialysis Patients: A Review of Outcomes in the Early Dialysis Period Nephrology and Hypertension Grand Rounds Mayo Clinic Division of Nephrology Rochester, Minnesota	02/01/2011
Chronic Kidney Disease: Decreasing the Need for Hemodialysis through Better Management and Shared Decision Making Employee and Community Health Transforming Community Care Grand Rounds in Collaboration with the Department of Psychiatry and Psychology Rochester, Minnesota	08/26/2014
Mesenchymal Stem Cell Functionality and Vitality in CKD: Planning a Future for Cell-Based Therapy in CKD Nephrology/Hypertension Grand Rounds Rochester, MN	08/11/2015
Clinical Trials For Your Patients: Diabetic Kidney Disease and Beyond Mayo Clinic Nephrology and Hypertension Grand Rounds Rochester, Minnesota	10/18/2016
Mesenchymal Stem/Stromal Cell Studies in Patients with Diabetic Kidney Disease Diabetes Core Group Meeting, Mayo Clinic Rochester, Minnesota	11/2016
Troubles in the seed & soil: Mesenchymal stromal/stem cells in chronic kidney disease Center for Clinical and Translational Science (CCaTS) Grand Rounds Rochester, Minnesota	03/10/2017
Functional Characteristics of Mesenchymal Stromal/Stem Cells in Diabetic Chronic Kidney Disease 16th Satellite Healthcare Norman S. Coplon Extramural Grant Program Symposium Redwood City, California	04/29/2017
Functional Characteristics of Mesenchymal Stromal/Stem Cells in Diabetic Chronic Kidney Disease 17th Satellite Healthcare Norman S. Coplon Extramural Grant Program Symposium Redwood City, California	06/28/2017
Mesenchymal Stromal/Stem Cells (MSC) Research in Kidney Disease Mayo Nephrology Fellows' Conference Rochester, MN	11/07/2017
Regenerative Nephrology Regenerative Medicine and Surgery Selective (REGS5200) Graduate School Course Mayo Clinic; Rochester, Minnesota	04/24/2019
Considerations in Trial Design Implementation: Moving CAR-T Cells into the Clinic IMM RSTP 6865 "Regenerative T cell Immunology in the Treatment of Cancer"	05/2020
Women In Medicine Session - Panel A panel discussion on career advice for women in academic medicine 2020 Mayo Clinic Florida Women In Medicine Session Jacksonville, Florida	09/2020
Why is AMWA important? The need for Advocacy, Mentorship, and Community Virtual Meeting - Panel Discussion Participant AMWA Inaugural Meeting - Jacksonville, Florida Chapter Jacksonville, Florida	11/2020
Mesenchymal Stromal Cell Therapy for Diabetic Kidney Disease: Clinical Translation	01/2021

CTS PhD Student Conference

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Clinical and Translational Science Mayo Graduate School PhD Works in Progress
 Presentation
 Rochester, Minnesota

Tri-Site Physician Panel Second Look event for residents and fellows applying to Mayo programs at all sites. Nearly 300 attendees.	02/2021
2nd Look Event for Mayo Clinic School of Graduate Medical Education Jacksonville, Florida	
Introduction to Chronic Kidney Disease and Regenerative Therapies Virtual Hudson Valley Region-Federation of Jewish Men's Club's (HVR-FJMC). The Bart Bookman Community Education Program: "Understanding Kidney Disease: Prevention & Treatment Options."	03/2021
Mayo Translational and Regenerative Nephrology Laboratory Research Program Mayo-Carnegie Mellon University Transforming Transplant Workgroup Meeting Jacksonville, Florida	04/2021
Diabetic Kidney Disease: An Overview and Introduction to Regenerative, Cell-based Therapy National Medical Association 2021 Region IV Symposium (Virtual)	05/2021
Moving the Needle: Clinical Translation of Mesenchymal Stem Cell Therapy for Diabetic Kidney Disease Regenerative Sciences track speaker. Mayo Summer Student Seminar Series. Mayo Clinic Graduate School	07/2021
Regenerative Medicine at Mayo Clinic: Repairing the Kidneys Medical Grand Rounds; Mayo Clinic in Florida CME Jacksonville, Florida	07/2021
Mesenchymal Stem Cells for Kidney Transplantation and Diabetic Kidney Disease Transforming Transplant Workgroup; Mayo-Carnegie Mellon University Series Jacksonville, Florida	09/2021

Oral

Migration of Heavy Metals in Yard Waste Compost as a Function of pH American Chemical Society-Joint Southeast/Southwest Regional Meeting Memphis, Tennessee	1996
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Poster

Patient-derived Mesenchymal Stromal Cell Therapy in Diabetic Kidney Disease: A Phase I Study Poster Presentation 2019 Regenerative Medicine Minnesota Annual Celebration Rochester, Minnesota	06/2019
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13. Visiting Professorship

Challenges ahead: Mesenchymal stromal/stem cell therapy for chronic kidney disease Renal Grand Rounds, Emory University Atlanta, Georgia	02/27/2017 - 02/28/2017
Challenges ahead for autologous mesenchymal stromal/stem cell therapy in diabetic chronic kidney disease Medical Grand Rounds, University College Hospital, Galway Galway, Ireland	05/19/2017

14. Clinical Practice, Interests, and Accomplishments

Chronic Kidney Disease, Regenerative Nephrology, Hemodialysis, Kidney Transplantation, Inpatient Nephrology Management

15. Quality Initiatives

Quality Improvement Projects

Quality

16. Research Interests and Accomplishments

Overall Mission: Improve the lives of patients with kidney disease through innovative research. 1) Study of mesenchymal stem/stromal cell function, cellular senescence, and the therapeutic potential of novel interventions (regenerative medicine; senolytics) in individuals with diabetic kidney disease. 2) Study of patient-important outcomes including hospitalizations, 30-day readmissions, renal recovery, cardiovascular events, and premature death among patients requiring maintenance dialysis therapy and/or kidney transplantation.

17. Research Grants Awarded

Active Grants

Federal

Other Significant Contributor	Obesity-induced mesenchymal stem cell senescence. Funded by National Institute of Diabetes and Digestive and Kidney Diseases. (R01 DK 120292)	12/2018 - 11/2022
Program Director / Principal Investigator	Mesenchymal stem cell senescence in diabetic nephropathy (K23 05/2020 - 12/2022 Grant Transfer from MCR). Funded by National Institute of Diabetes and Digestive and Kidney Diseases. (K23 DK109134)	
Program Director / Principal Investigator	Renal repair effects of senolytic preconditioned mesenchymal stromal cells in diabetic kidney disease (Grant Transfer from MCR). Funded by National Institute of Diabetes and Digestive and Kidney Diseases. (R03 DK123492)	06/2020 - 03/2022

Federal sub award

Other Significant Contributor	Role of mitochondria-related micro-RNAs in obesity-induced human MSC dysfunction . Funded by Regenerative Medicine Minnesota. (RMM 091620 DS 004)	03/2021 - 02/2023
Program Director / Principal Investigator	Patient-derived mesenchymal stromal cell therapy in diabetic kidney disease: A Phase I Study. Funded by Regenerative Medicine Minnesota. (RMM 091718 CT 001)	03/2019 - 03/2022
Program Director / Principal Investigator	Comparing therapeutic potency of healthy and disease-derived human mesenchymal stromal cells in experimental diabetic nephropathy (Subaward with Augusta University) . Funded by National Institute of Diabetes and Digestive and Kidney Diseases. (DK115255)	05/2020 - 06/2021

Mayo Clinic

Principal Investigator	A Pilot Study of Allogeneic Mesenchymal Stem Cell Therapy in Patients with Chronic Kidney Disease. Funded by Center for Regenerative Medicine Florida	11/2020 - 11/2021
Principal Investigator	Safety and Repair Mechanisms of Allogeneic Mesenchymal Stem Cell Therapy in Diabetic Kidney Disease . Funded by Mayo Clinic Research Pipeline K2R Program Award 2021	01/2021 - 12/2021
Program Director / Principal Investigator	FRT 2021 : Novel Imaging in Chronic Kidney Disease. Funded by Comprehensive Focused Research Team	01/2021 - 12/2021
Principal Investigator	Mesenchymal Stem Cell Function and Senescence in Experimental and Human Diabetic Kidney Disease: Effects of Sex. Funded by Mayo Clinic Women's Health Research Center	03/2021 - 03/2022
Principal Investigator	Frailty and Macrophage Activation in CKD. Kern Scholar 2021 Shark Tank Research Award. Funded by Mayo Center for the Science of Healthcare Delivery. Funded by Mayo Clinic	09/2021 - 12/2021
Co-Investigator	Pulmonary Rehabilitation as a Novel Intervention to Treat Body Composition and Frailty in Patients with Chronic Kidney Disease.	09/2019 - 08/2022

Completed Grants**Federal**

Program Director / Principal Investigator	Mesenchymal stem cell senescence in diabetic nephropathy. Funded by National Institute of Diabetes and Digestive and Kidney Diseases. (K23 DK 109134)	07/2016 - 04/2020
Program Director / Principal Investigator	Renal repair effects of senolytic preconditioned mesenchymal stromal cells in diabetic kidney disease. Funded by National Institute of Diabetes and Digestive and Kidney Diseases. (R03 DK 123492)	04/2020 - 05/2020

Federal sub award

Program Director / Principal Investigator	Comparing therapeutic potency of healthy and disease-derived human mesenchymal stromal cells in experimental diabetic nephropathy. Funded by National Institute of Diabetes and Digestive and Kidney Diseases. (DK 115255)	11/2019 - 05/2020
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Foundation

Principal Investigator	Career Development Award. Funded by Mary Kathryn and Michael B. Panitch CD Award in Hypertension Research Honoring Gary Schwartz, M.D.	01/2009 - 01/2012
Program Director / Principal Investigator	Functional Characteristics of Mesenchymal Stromal/Stem Cells in Diabetic Chronic Kidney Disease. Funded by Satellite Healthcare	07/2015 - 06/2018

Mayo Clinic

Principal Investigator	Renal Recovery among incident hemodialysis patients. Funded by Faculty Resources Grant	03/2014 - 12/2014
Principal Investigator	Cardiac Troponin T as a predictor of ESRD and Death in Community Dwelling Hypertensives.. Funded by Mayo SGP - Small Grants Program <\$10K	06/2014 - 12/2015
Program Director / Principal Investigator	Patterns of Renal Failure, Recovery of Kidney Function and Hospitalizations in a 10 year Mayo Clinic Health System Mayo Clinic Rochester Incident ESRD Cohort Analysis, 2000-2010. Funded by Nephrology & Hypertension	07/2014 - 12/2014
Principal Investigator	Patient-important Outcomes and Healthcare Utilization among Incident Hemodialysis Patients. Funded by Center for the Science of Health Care Delivery	07/2014 - 12/2016
Principal Investigator	Stem Cells in Chronic Kidney Disease (CKD): Understanding functional characteristics of mesenchymal stem cells and endothelial progenitor cells in CKD. Funded by Nephrology/Hypertension Research Committee	03/2015 - 06/2017
Program Director / Principal Investigator	Mesenchymal stem cells in diabetic chronic kidney disease: an assessment of function and vitality. Funded by SGP - Small Grants Program <\$10K	03/2015 - 03/2017
Principal Investigator	Mesenchymal Stem Cell Senescence in Diabetic Nephropathy. Funded by Department of Medicine Research Career Development Award	07/2015 - 06/2016
Program Director / Principal Investigator	Factoring the Impact of Kidney Function on Mesenchymal Stem/Stromal Cell Function and Senescence in Diabetic Kidney Disease. Funded by SGP - Small Grants Program <\$10K	07/2017 - 07/2019
Program Director / Principal Investigator	Factoring the Impact of Kidney Function on Mesenchymal Stem/Stromal Cell Function and Senescence in Diabetic Kidney Disease. Funded by SGP - Small Grants Program <\$10K	06/2018 - 12/2019
Program Director /	Kidney tissue oxygenation in elderly diabetic kidney disease.	07/2018 - 12/2019

Principal Investigator	Funded by SGP - Small Grants Program <\$10K	
Program Director / Principal Investigator	Kern Scholar 2018 Shark Tank Research Award. Funded by Mayo Center for the Science of Healthcare Delivery	11/2018 - 12/2018
Principal Investigator	Senolytics, mesenchymal stromal cells, and renal repair in diabetic kidney disease. Funded by Mayo Clinic Research Pipeline K2R Program Award 2019	01/2019 - 12/2019
Principal Investigator	Kern Scholar 2019 Shark Tank Research Award. Funded by Mayo Center for the Science of Healthcare Delivery	11/2019 - 12/2019
Principal Investigator	Senolytics, mesenchymal stromal cells, and renal repair in diabetic kidney disease. Funded by Mayo Clinic Research Pipeline K2R Program Award 2020	01/2020 - 12/2020
Co-Investigator	Transitions of care for the elderly Hemodialysis patient. Funded by SGP - Small Grants Program <\$10K	05/2013 - 04/2015
Co-Program Director / Principal Investigator	Structural heart disease in incident hemodialysis patients. Funded by Faculty Resources Grant	12/2014 - 12/2015

18. Inventions, Commercialization and Offering

A. Patents

Patent Number Country Date Filed Date Issued

B. Other

19. Bibliography

Peer-reviewed Articles

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3. **Hickson LJ**, Cosio FG, El-Zoghby ZM, Gloor JM, Kremers WK, Stegall MD, Griffin MD, Jaffe AS. Survival of patients on the kidney transplant wait list: relationship to cardiac troponin T. *Am J Transplant*. 2008 Nov; 8 (11):2352-9. Epub 2008 Sep 10. PMID: 18785956 DOI: 10.1111/j.1600-6143.2008.02395.x
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6. **Hickson LJ**, Bundrick JB, Litin SC. Clinical pearls in nephrology. *Mayo Clin Proc*. 2010 Nov; 85 (11):1046-50 PMID: 21037047 PMCID: 2966369 DOI: 10.4065/mcp.2010.0442
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34. Gonzalez Suarez M, Ramar P, **Hickson L**, Chawla S, Thorsteinsdottir B. Outcomes of models of care in end stage renal disease: a systematic review American Journal Of Kidney Diseases. 2016 May; 67(5):A49. Epub 1900 Jan 01.
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36. **Hickson L**, Ramar P, Rosedahl JK, Shah ND, Thorsteinsdottir B, Jeffery M. Missed Dialysis Sessions Are Associated with Increased Rates of ED Visits, Resource-Intensive ED Visits, and Hospitalized Days AcademyHealth Research Meeting. 2016.
37. Saad A, Dietz AB, Herrmann S, **Hickson LJ**, Van AJ, Lerman LO, Textor SC. Adipose-Derived Mesenchymal Stem Cells (MSCs) from Human Atherosclerotic Renovascular Disease (RVD) Have Increased DNA Damage and Lower Angiogenesis as Compared with Normal Kidney Donors that Can be Modified by Hypoxia J Am Soc Nephrol. November 2016; 27:169A.
38. Kim SR, Zou X, Zhu XY, Tang H, Jordan KL, **Hickson LJ**, Tchkonia T, Kirkland JL, Lerman LO. Increased Cellular Senescence in the Murine Stenotic Kidney: Effect of Mesenchymal Stem Cells J Am Soc Nephrol. 2016; 27:705A.
39. Saad A, Herrmann S, Eirin A, **Hickson LJ**, McKusick MA, Dietz AB, Lerman LO, Textor SC, Glockner J, Van Wijnen AJ. Intraarterial Autologous Mesenchymal Stem Cells (MSC) Increase Renal Blood Flow and Preserve Kidney Function in Patients with Atherosclerotic Renovascular Disease (RVD) J Am Soc Nephrol-Poster presented at ASN Kidney Week, Chicago, IL. November 2016;
40. Vork DL, El-Zoghby Z, Albright RC, Herrmann S, Lapid M, Schneekloth TD, **Hickson LJ**. Young Adult Hemodialysis (HD) Patients: Antidepressant Use and Healthcare Utilization in the First Year JASN Abstract Supplement, Poster presentation at annual ASN meeting, Chicago, IL. 2016; 27:337A.
41. Kim SR, Jiang K, Ogrodnik MB, Tchkonia T, **Hickson LJ**, Kirkland JL, Lerman LO. Increased Renal Cellular Senescence in Murine Obesity: Effect of the Senolytic Drug Quercetin. MRFA and MFA Research Day. 2016;
42. **Hickson LJ**, Saad A, Eirin A, Kirkland JL, Tchkonia T, McKenzie T, Kellogg T, Rule AD, Jordan KL, Textor SC, Lerman LO. Altered functional characteristics of adipose-derived mesenchymal stem/stromal cells (MSC) in diabetic kidney disease (DKD) J Am Soc Nephrol Abstracts Issue. 2017; 28:288-289.
43. **Hickson LJ**, Eirin A, Saad A, Herrmann SM, Jordan KL, Textor SC, van Wijnen AJ, Lerman LO. Diabetic kidney disease (DKD) alters the transcriptome in adipose tissue-derived mesenchymal stromal/stem cells (MSC) J Am Soc Nephrol Abstracts Issue. 2017; 28:103-104.
44. Nargesi AA, **Hickson LJ**, Jordan KL, van AJ, Lerman LO, Eirin A. Metabolic syndrome induces transit peptide protein import into the mitochondria of porcine mesenchymal stem cells J Am Soc Nephrol Abstracts Issue. 2017; 28:443-444.
45. Farah WH, Habermann E, Johnson RL, Thorsteinsdottir B, Ubl DS, Yuan BJ, Rule AD, **Hickson LJ**. Outcomes following hip fracture repairs in dialysis-dependent patients – comparison to a matched cohort Annual Dialysis Conference, University of Missouri Division of Nephrology. 2017 Mar.
46. Schneekloth T, Stark A, Thusius N, Karpyak V, Hall-Flavin D, **Hickson L**. The cannabis controversy: case studies of cannabis use disorders in renal transplant candidates Journal Of Psychosomatic Research. 2017 Jun; 97:166-7.
47. D'Costa MR, Winkler NS, Milliner DS, Norby SM, **Hickson LJ**, Lieske JC. Systemic Oxalosis with Retinopathy Secondary to Vitamin C in a Patient on Peritoneal Dialysis J Am Soc Nephrol. 2017; 28:211.
48. Saad A, Herrmann S, **Hickson LJ**, Glockner J, Dietz AB, Lerman LO, Textor SC. Autologous Mesenchymal Stem Cells Decrease Blood Pressure and Kidney Injury in Human Renovascular Disease J Am Soc Nephrol-Oral presentation at ASN Kidney Week, New Orleans, LA..2017;
49. Dhondup T, Kittanamongkolchai W, Mehta RA, **Hickson LJ**, Enders FT, Lieske JC, Rule AD. Recurrent but not first-time symptomatic kidney stone formers are at higher risk for ESRD and death. J Am Soc Nephrol. 2017; 28:382A.
50. Aghajani A, **Hickson LJ**, Jordan, van AJ, Lerman LO, Eirin A. Metabolic syndrome induces transit peptide protein import into the mitochondria of porcine mesenchymal stem cells 2018 Mayo Clinic Young Investigators Research Symposium. 2018.
51. **Hickson LJ**, Eirin A, Conley SM, Saad A, Metha, Tang H, Woppard, Textor SC, Lerman LO. Suitable for autologous transplant? Mesenchymal stromal cell paracrine function in diabetic kidney disease J Am Soc Nephrol Abstracts Issue. 2018; 29:289.
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53. Abumoawad AM, Saad A, Ferguson Christopher, Herrmann SM, **Hickson LJ**, Misra S, Dietz AB, Lerman LO, Textor SC. Dose Related Effects of Intra-Renal Autologous Mesenchymal Stem/Stromal Cell Infusion on Renal Hemodynamics, Function, and Cytokine Signaling in Human Atherosclerotic Renovascular Disease American Society of Nephrology, San Diego, California. 2018.

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55. Thorsteinsdottir B, Shaw , Kevin, Hargraves , Ian, Albright RC Jr., **Hickson LJ**, Curtis , Susan, Beck , Annika, Amberg BM, Espinoza , Nataly, Wirtz CR, Zand L, Dahlen EM. Prognosis in Shared Decision Making for Advanced CKD: A Qualitative Study JASN/Poster Presentation at American Society of Nephrology, San Diego, California. 2018; Abstract no. SA-PO740.

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57. Ikeda SC, Johnson RL, **Hickson LJ**, Glasgow AE, Ubl DS, Yuan BJ, Habermann E. Influence of Anesthesia Type on Dialysis Dependent Hip Fracture Patients Midwest Anesthesia Residents Conference, Detroit, MI. 4/12/2019.

58. Conley SM, **Hickson LJ**, Tang H, Jordan KL, Abumoawad AM, Kim SR, Zhu XY, Tchkonia T, Kirkland JL, Lerman LO. Obesity induces mesenchymal stem cell senescence and dysfunction Journal Of Investigative Medicine. 2019 Jun; 67(5):925-6

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60. Isik , Bacik , Conley SM, Abumoawad AM, Zhu XY, Eirin A, **Hickson LJ**, van AJ, Textor SC, Lerman LO, Herrmann SM. Hypoxia Preconditioning Modifies Mesenchymal Stem Cells Senescences and Epigenetics Mechanisms in Experimental Atherosclerotic Renal Artery Stenosis J Am Soc Nephrol Abstracts Issue Accessed online at: http://www ASN-online.org/education_and_meetings/kidneyweek/archives. 2019.

61. **Hickson L**, Ramar P, Rosedahl JK, Shah ND, Jeffery M, Thorsteinsdottir B. Missed Dialysis Sessions Are Associated with Increased Rates of ED Visits, Resource-Intensive ED Visits, and Hospitalized Days AcademyHealth. 2021.

62. Briguori Carlo, Mavromatis Kreton, Huang Zhen, Mathew Roy, **Hickson Latonya**, Lau Wei Ling, Ye Zhiming, Mathew Anoop, Mahajan Sandeep, Wheeler David, Claes Kathleen, Chen Galen, Nolasco Fernando, Fleg Jerome, Sidhu Mandeep, Chertow Glenn, Hochman Judith, Maron David, Bangalore Sripal, Mediterranea Cardiocentro, NYU Grossman School of Medicine. Dialysis Initiation in Patients with Stable Ischemic Heart Disease and Severe Chronic Kidney Disease in the Ischemia-CKD Trial Journal of the American College of Cardiology. 2021.

63. Conley Sabena, Bian Xiaohui, Gowan Cody, Snow Zachary, Smith Anastasia, Lerman Lilach, Wolfram Joy, Zubair Abba, **Hickson LaTonya**. Systemic Delivery of Human Bone-Marrow Derived Extracellular Vesicles Ameliorates Kidney Injury and Inflammation in an Accelerated Diabetic Kidney Disease Mouse Model Cytotherapy. 2021.

64. Hemeyer CJ, Olsen Elsa, Fitzpatrick PM, **Hickson L**. Comparison of Hemodialysis Connectors Caps vs Antimicrobial Barrier Caps in Central Line-Associated Bloodstream Infection Rates for Hemodialysis Patients ERA-EDTA Journal. 2021.

Letters

1. **Hickson LJ**, Baddour LM, Sohail MR. In reply to 'impact of ESRD on infections of implantable cardiac rhythm devices'. Am J Kidney Dis 2015 Jan; 65 (1):169-70 Epub 2014 Oct 31 PMID:25523801 DOI:10.1053/j.ajkd.2014.10.011
2. **Hickson LJ**, Crowson CS, Gabriel SE, McCarthy JT, Matteson EL. In reply to 'reduced kidney function in rheumatoid arthritis: rheumatologists have a role'. Am J Kidney Dis 2015 Jan; 65 (1):171 Epub 2014 Oct 31 PMID:25523805 DOI:10.1053/j.ajkd.2014.10.010
3. **Hickson LJ**, Balls-Berry JE, Jaffe AS, Rule AD. Biomarkers Associated with Progression of Diabetic Kidney Disease: Do They Hold the Same Meaning for Blacks and Women? J Am Soc Nephrol 2018 Jun; 29 (6):1781 Epub 2018 Apr 20 PMID:29678999 DOI:10.1681/ASN.2017121249
4. el-Azhary RA, **Hickson L**, McBane RD. Calciphylaxis. N Engl J Med 2018 Jul 26; 379 (4):397-8 PMID:30048063 DOI:10.1056/NEJMc1807324

5. Izzy M, Angirekula M, Bentall A, Plevak M, Dierkhising R, Lerman LO, Tang H, **Hickson L**, Watt KD. Role of symmetric dimethylarginine in predicting future renal impairment in liver transplant recipients. *Transpl Int* 2020 Oct 17 [Epub ahead of print] PMID:33070373 DOI:10.1111/tri.13771

Stamp Vignettes

Thesis

Ask Mayo Expert Model

Ask Mayo Expert Topic

1. **Hickson LJ**. Anemia in chronic kidney disease Ask Mayo Expert.2009;
2. **Hickson LJ**. Renal replacement therapy intermittent Ask Mayo Expert.2009;
3. Norby SM, **Hickson LJ**. Glomerular Disease Ask Mayo Expert.2013;

Book Reviews

Scientific Reports

Miscellaneous

1. Rule AD, **Hickson LJ**. Chronic kidney disease: Automated eGFR reporting: good for the patient? *Nat Rev Nephrol*. 2009 Dec; 5(12):673-5.

Social Media Activity

Forthcoming

* Indicates that the primary author was a mentee of this author.

Narjust Duma, MD



Dr. Duma is originally from Venezuela, born of a Colombian mother and Dominican father. She completed her internal medicine residency in Rutgers New Jersey Medical School and fellowship at the Mayo Clinic in Rochester, Minnesota where she was the chief fellow from 2018 -2019.

She is the Associate Director of the Cancer Care Equity Program and a thoracic medical oncologist at the Dana-Farber Cancer Institute/Harvard Cancer Center.

Dr. Duma's clinical interests include targeted therapy for lung cancer and the care of women with lung cancer, including their unique aspects of cancer survivorship. She is the principal investigator of the Sexual Health Assessment in Women with Lung Cancer (SHAWL) Study, the largest study to date evaluating sexual dysfunction in women with lung cancer.

Apart from her clinical interests in lung cancer, she is also a leading and productive researcher in cancer health disparities, gender and racial discrimination in medical education and medicine. Dr. Duma is one of the co-founder of the Twitter community #LatinasInMedicine, now composed of over 6,500 members globally. She received many awards, including the 2018 Resident of the Year Award by the National Hispanic Medical Association, the Mayo Brothers Distinguished Fellowship award and the 2020 Rising Star award by the LEAD national conference for women in hematology and oncology.

In addition, Dr. Duma founded the Duma Lab in 2019. The laboratory focuses on lung cancer, social justice issues in medicine and medical education. The laboratory long-term goals are to create a welcoming environment for medical trainees from historically underrepresented groups in medicine while improving the care of vulnerable populations. Members of the Duma Lab are agents of change. Since its foundation, the Duma laboratory has received research funding from several national agencies, published over 15 studies and editorials, and presented research findings at national and international conferences, including the American Society of Clinical Oncology (ASCO) Annual Meeting and the World Conference of Lung Cancer.

Her work has been featured in various media outlets including The New York Times, STAT, Healio, Onclive, ASCO Post and Doximity.

Twitter: @NarjustDumaMD

Dr Halena Gazelka attended medical school at the University of Minnesota, then completed an anesthesiology residency and both pain and palliative medicine fellowships at the Mayo Clinic in Rochester, MN. She practices medical and interventional pain management, as well as palliative medicine. Dr Gazelka serves as the Medical Director for Public Affairs for the Mayo Enterprise. She has chaired the MC Opioid Stewardship Program since its inception in 2016, and is a national expert on the US opioid crisis and responses to it. She also chairs the Mayo Clinic Medication Diversion Subcommittee. Further, Dr Gazelka has served on the Mayo Ethics Subcommittee, teaches in the medical school and serves on multiple committees with national pain organizations, including the American Academy of Pain Medicine, where she is a board member and has chaired the Opioid Committee. She was appointed to the federal HHS Pain Management Task Force in 2018 by the Secretary of Health and Human Services, Mr Alex Azar. She testified on Pain Management and the Opioid Epidemic before the US Senate HELP committee, by invitation of Chair, Mr Lamar Alexander, in February 2019. She and colleagues at the Mayo Clinic teamed up with PBS to produce a documentary series called "The Opioid Fix", which has won numerous awards for its description of the opioid crisis and our response to it. She has a passion for understanding the opioid epidemic, finding solutions, and educating both the medical community and the lay public about it. She hosts a weekly podcast, Mayo Clinic Q and A, that is available on you tube.



Peter Gloviczki, MD, FACS.

Peter Gloviczki, MD, FACS, is Editor-in-Chief of the Journal of Vascular Surgery. He is the Joe M. and Ruth Roberts Emeritus Professor of Surgery, served as Chair, Division of Vascular and Endovascular Surgery (2000-2010) and Director of Gonda Vascular Center (2002-2010) at Mayo Clinic, Rochester, MN. His clinical practice included all areas of vascular surgery: arterial, venous and lymphatic. He has special interest in aortic, mesenteric, and reno-vascular surgery, critical limb ischemia, aneurysms, in venous reconstructions and endoscopic vein surgery, in vascular malformations, and in lymphatic and chylous disorders. While on staff at Mayo Clinic, he performed over 10,000 operations. He mentored 85 categorical vascular surgery fellows and 25 research fellows. He retired from clinical practice in 2016. He is Past President of Society for Vascular Surgery (SVS), American Venous Forum (AVF), International Union of Angiology, World Federation of Vascular Societies, Society for Clinical Vascular Surgery, among others. In 2021, he was elected president of the Frank J. Veith International Society. He is member of the American Surgical Association, Distinguished Fellow of the SVS, AVF, Honorary Member of 19 national and international societies. The National Library of Medicine lists his 473 peer-reviewed publications, he wrote over 250 book-chapters and editorials, edited eight textbooks, including four Editions of the Handbook of Venous and Lymphatic Disorders. He gave >700 presentations, has 23,825 citations (h-index: 83, Scopus). The University of Washington, Seattle, established the Peter Gloviczki Professorship in Venous and Lymphatic Disorders. His Alma Mater, the Semmelweis University awarded him the “Doctor Honoris Causa” degree, the “Semmelweis “Budapest” Award and invited him to the Board of Trustees of the University. Dr Gloviczki received the Officer’s Cross of the Order of Merit of the Republic of Hungary. His biography “Magic and Medicine” was published in 2021, by Semmelweis University. Dr Gloviczki lives with his wife, Monika Gloviczki, MD, PhD in Scottsdale, AZ.

Elizabeth G C Haglind MBBS, MD, MRCP, FACE
Email: ElizabethHaglind@endoclinic.net

Present Position

Endocrinologist

Endocrinology Clinic of Minneapolis, 7701, York Avenue, S, Edina, MN 55435
Tel: 9529277810; Fax: 9529276309

Adjunct faculty,

Bethel University PA School, 3900 Bethel Dr, St Paul, MN 55112

Qualifications:

- 2009 Certified Clinical Densitometry – ISCD certified
- 2009 American Board of Endocrinology – Board Certified
- 2007 American Board of Internal Medicine - Board Certified
- 2000 Membership of the Royal College of Physicians of UK (MRCP)
- 1995 Doctor of Medicine (MD)-Internal Medicine, Bangalore University, India.
- 1991 Bachelor of Medicine and Bachelor of Surgery (MBBS), Bangalore University, India

Education:

Medical School: M S Ramaiah Medical College, Bangalore, India 1985-1991

Residency: Air Force Hospital, Bangalore, India 1992-1995

MRCP : Royal Cornwall Hospital, Cornwall, UK 1999-2000

Endocrine Fellowship: University Hospital of Wales, Cardiff, UK 2001-2003

Internal Medicine Residency: Mayo Medical School, Rochester, MN 2004-2006

Endocrine Fellowship: Mayo Medical School, Rochester, MN 2007-2009

Licensure

Minnesota Board of Medical Practice: License No 49123

Awards & Honors:

- 2006 **Dr Donald Feist Award for Clinical Excellence**
Outstanding Resident Award – Mayo Clinic
- 1995 **Dr K S Shadaksharappa Gold Medal**
Distinction in MD Medicine – Bangalore University
- 1995 **Devaraj Urs and Krishnajammani Prize**
First Rank in MD Medicine – Bangalore University
- 1985-1988 **Distinctions** - Microbiology, Anatomy, Physiology, Biochemistry.

Professional Experience:

- 2009- 2014 **Endocrinologist**, Health East Downtown St Paul Clinic,
17 W Exchange St, Suite 500, St Paul, MN 55102

2006- 2007 **Associate Consultant**, Internal Medicine
Mayo Clinic, Rochester, MN
1996-1999 **Assistant Professor** – Internal Medicine
St Johns Medical College Hospital, Bangalore, India.

Scholarship:

2005 Mayo International Health Scholarship Recipient, 2004 – Served in Bangalore, India.

Publications:

- Kelly M Nakamura, **Haglind EG**, Jackie A Clowes, Sara Achenbach, Elizabeth Atkinson, L Joseph Melton III, Kurt A Kennel. Fracture Risk following bariatric surgery: a population-based study. *Osteoporosis International* 25(1):151-8, 2014 Jan.
- Bock G, **Chittilapilly E**, Basu R, Toffolo G, Cobelli C, Chandramouli V, Landau BR, Rizza RA. Contribution of hepatic and extrahepatic insulin resistance to the pathogenesis of impaired fasting glucose: role of increased rates of gluconeogenesis. *Diabetes* 56(6):1703-11, 2007 Jun.
- Bock G, Dalla Man C, Campioni M, **Chittilapilly E**, Basu R, Toffolo G, Cobelli C, Rizza R. Effects of non-glucose nutrients on insulin secretion and action in people with pre-diabetes. *Diabetes* 56:1113-9, 2007
- Bock G, **Chittilapilly E**, Basu R, Toffolo G, Cobelli C, Chandramouli V, Landau B, Rizza R: Contribution of Hepatic and Extra-hepatic Insulin resistance to the pathogenesis of Impaired Fasting Glucose: Role of increased rates of gluconeogenesis. *Diabetes* 56:1703-11, 2007
- Bock G, Dalla Man C, Campioni M, **Chittilapilly E**, Basu R, Toffolo G, Cobelli C, Rizza R. Pathogenesis of pre-diabetes: mechanisms of fasting and postprandial hyperglycemia in people with impaired fasting glucose and/or impaired glucose tolerance. *Diabetes* 55:3536-49, 2006
- Bock, G., Dalla Man, C, Campioni, M, **Chittilapilly, E**, Basu, R., Toffolo, G., Cobelli, C, Rizza, R: Pathogenesis of prediabetes: mechanisms of fasting and postprandial hyperglycemia in people with impaired fasting glucose and/or impaired glucose tolerance. *Diabetes* 55:3536-3549, 2006
- Basu R, Singh RJ, Basu A, **Chittilapilly EG**, Johnson MC, Toffolo G, Cobelli C, Rizza RA. Obesity and Type 2 Diabetes Do Not Alter Splanchnic Cortisol Production in Humans. *Journal of Clinical Endocrinology & Metabolism*. 2005; 90:3919-21.
- Basu R, Singh RJ, Basu A, **Chittilapilly EG**, Johnson CM, Toffolo G, Cobelli C, Rizza RA. Splanchnic Cortisol Production Occurs in Humans: Evidence for Conversion of Cortisone to Cortisol Via the 11-β Hydroxy Steroid Dehydrogenase (11-β HSD) Type 1 Pathway. *Diabetes* 2004; 53:2051-9.
- **E. George**, Prem Pais, Savitha D. Prehospital Issues in Acute Myocardial Infarction. *J Assoc Phys India* 2001; 49: 320-23
- **E. George**, Sally H, Savitha D, Prem Pais. Treatment of Acute Myocardial Infarction: Does the type of hospital make a difference? *Indian Heart Journal* 1999; 51(2):161-67.
- **E. George**. Management of Diabetic Emergencies. *Essentials of Emergency Medicine*, First Edition. MC Vasnaik. Jaypee publishers, New Delhi 1999

- Prem Pais, **E. George**. Smoking and ischemic heart disease: the Indian scenario; Coronary Artery Disease in Indians: A global perspective, Kamal Sethi; Dec 1998: 160-69.
- **E. George**. Practice Patterns in Acute Myocardial Infarction. **J Assoc Phys India** 1998; 46: 42.
- G.D Ravindran, **G Elizabeth**, C Ranju et al. Follow up of HIV positive patients and the occurrence of opportunistic infections. **J Assoc Phys India** 1999; 47:90
- GD Ravindran, **G Elizabeth**, P Pais et al Highly active anti-retroviral therapy – our experience. **J Assoc Phys India** 1999; 47:91.
- **E George**. Clinicopathological Study of Pleural Effusions – role of Adenosine Deaminase in pleural fluid: Thesis for Degree of Doctor of Medicine, Bangalore University, March 1995.

Presentations:

- ‘Glycemic Control outside the Cardiac intensive care’. Poster, ADA 2011, San Diego, June 2011
- ‘Fracture risk after bariatric surgery’ Oral, ENDO 2009 Washington DC, June 2009.
- ‘Hypocholesterolemia is independently associated with decreased survival in patients with primary myelofibrosis: an analysis of lipid profiles in 558 myeloproliferative patients.’ Presented at American Society of Hematology, Dec 2007, Atlanta, Georgia.
- ‘The role of Vagus nerve stimulation in weight loss’. Poster, ENDO 2007 Toronto, June 2007.
- The ability of non-glucose nutrients to modulate postprandial insulin and glucagon secretion is intact in people with pre-diabetes. Poster, EASD, Copenhagen, September 2006.
- ‘Does the pathogenesis of fasting and postprandial hyperglycemia differ in people with prediabetes?’ Poster, ADA Annual session, Washington DC, June 2006.
- ‘Practical Outcome of a Practice Based Learning and Improvement Curriculum: Reducing the Cost of Hospital Anti-emetic Therapy’. Oral, Ottawa conference, New York, May 2006.
- ‘Reducing the Cost of Hospital Anti-emetic Therapy – meeting ACGME, PBLI Curriculum at Mayo’. Oral, Mayo Medical Grand Rounds, March 2006.
- ‘Both Hepatic and Extrahepatic insulin resistance contribute to the pathogenesis of Impaired Fasting Glucose’. Poster, ADA Annual session, San Diego, June 2005.
- ‘Splanchnic cortisol production occurs in humans: evidence for tissue specific 11-β hydroxy steroid dehydrogenase (11β HSD) Type 1 activity’ – Poster, EASD, Germany, Sept 2004.
- ‘Amiodarone and Thyroid Dysfunction’ – Royal Gwent Hospital, March 2003, Newport.
- ‘Serum Thyroglobulin in Thyroid Cancer’. British Thyroid Association, Nov 2001 London.
- ‘Evaluation of Serum Thyroglobulin for Monitoring the Progress of Patients with Thyroid Cancer’. Welsh Endocrine and Diabetes Society Meeting, Nov 2001.
- ‘Practice Patterns in Acute Myocardial Infarction’ Joint Annual Conference of API & CSI, May 1997 Manipal, India.
- ‘Pre-hospital Issues in Acute Myocardial Infarction’. Poster at International Conference on Heart Health in Developing Countries, AIIMS New Delhi, Oct 1999.

Prior Research

- Jackie Clowes, Maria Clavell-Colazzo, **Elizabeth Haglind**, Elizabeth Atkinson, Joseph Melton, Kurt Kennel."Risk of Fracture after Bariatric Surgery: A Population Based Study'. Mayo IRB 1933-05
- **Haglind EGC**, Shin Cheolsu , Robert Ficalora, Adrian Vella. Metabolic effects of Vagal Nerve Stimulation. Mayo IRB 32-06

Invited Lectures

- How to negotiate and set up your clinical practice. Endo Society Annual conference 2013, 2014, 2015, 2016, 2017, 2018, 2019.
- Laboratory Evaluation of osteoporosis. Clinical Laboratory Collaborative Meeting, Prior Lake, MN April 24-26,2012.
- "How to write a dissertation". Workshop on "Research Methodology" for university postgraduate teachers, conducted by Rajiv Gandhi University at BLDEAS Medical College, Bijapur, India, Mar'99.
- "Essentials of synopsis writing". CME programme for medicine postgraduates at Bangalore Medical College, Bangalore, India, Oct '98.

Memberships

Endocrine Society
American College of Physicians
American Association of Clinical Endocrinologists
Mayo Alumni Association
Association of Physicians of India

BIOGRAPHICAL SKETCH

NAME: Hickson, LaTonya Justine

eRA COMMONS USER NAME: hickson

POSITION TITLE: Associate Professor of Medicine

EDUCATION/TRAINING (*Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.*)

INSTITUTION AND LOCATION	DEGREE (if applicable)	Completion Date MM/YYYY	FIELD OF STUDY
South Carolina State University, Orangeburg, SC	BS	05/1998	Biology
University of Louisville School of Medicine, Louisville, KY	MD	05/2002	Medicine
Wake Forest University Baptist Medical Center, Winston Salem, NC	Internship	06/2003	Medicine
Wake Forest University Baptist Medical Center, Winston Salem, NC	Residency	06/2005	Internal Medicine
Mayo Clinic School of Graduate Medical Education, Mayo Clinic College of Medicine and Science, Rochester, MN	Fellowship	06/2008	Nephrology

A. Personal Statement

I am passionate about improving the lives of patients with chronic kidney disease (CKD). As a practicing nephrologist and Division Chair, I have first-hand knowledge of the grave events that occur in this high morbidity and mortality population. My early publications examining resource utilization, survival, and renal recovery in individuals on maintenance dialysis therapy have helped strengthen practice improvement and allowed me to collaborate with colleagues in various specialties. However, to accomplish my goal of finding better treatment options for patients, I embarked on a new path, albeit complicated by health issues and recent institution transfer, with a translational research approach to offer renewed hope to individuals with diabetic kidney disease (**DKD**).

I am the director of the Translational and Regenerative Nephrology Laboratory at Mayo Clinic Florida. My previous and ongoing studies (NIDDK K23; R03; 2019 DiaComp Pilot & Feasibility-funded) examine mesenchymal stromal/stem cell (**MSC**) function *in vitro*, *ex vivo* and *in vivo*, and the safety (Phase I) of senolytic therapy in individuals with DKD. I currently serve as a sponsor and investigator for two Food and Drug Administration (FDA) Investigational New Drugs (IND) in ongoing clinical trials (NCT02848131; NCT03325322) testing the safety and early efficacy of senolytics—drugs which clear senescent cells. Finally, I am the IND sponsor and principal investigator of two *pilot* Phase I trials (NCT03840343; NCT04869761) applying autologous and allogeneic MSC for DKD. These are the only MSC trials for DKD in the U.S.A. These novel therapies hold immense potential to delay kidney failure, therein improving the lives of individuals burdened by kidney disease. We are committed to the success of these investigations.

1. **Hickson LJ**, et al. Diabetic kidney disease alters the transcriptome and function of human adipose-derived mesenchymal stromal cells but maintains immunomodulatory and paracrine activities important for renal repair. *Diabetes* 2021 Jul; 70(7): 1561-1574. PMID: 33858824
2. **Hickson LJ**, et al. A systematic review and meta-analysis of cell-based interventions in experimental diabetic kidney disease. *Stem Cells Translational Medicine*. 2021 Jun 9. PMID: 34106528
3. **Hickson LJ**, Langhi Prata LGP, Bobart SA, Evans TK, Giorgadze N, Tchkonia T, (abbrev) Kirkland. JLSenolytics decrease senescent cells in humans: Preliminary report from a clinical trial of Dasatinib plus Quercetin in individuals with diabetic kidney disease. *EBioMedicine*. 2019 Sep;47:446-456. PMCID: PMC6796530.
4. Bian X, Griffin TP, Zhu X, Islam MN, Conley SM, Eirin A, Tang H, O'Shea PM, Palmer AK, McCoy RG, Herrmann SM, Mehta RA, Woppard JR, Rule AD, Kirkland JL, Tchkonia T, Textor SC, Griffin MD, Lerman LO, **Hickson LJ**. Senescence marker activin A is increased in human diabetic kidney disease: association

with kidney function and potential implications for therapy. *BMJ Open Diabetes Research and Care* 2019;7:e000720. PMCID: PMC6936543.

B. Positions and Honors

Positions and Employment

2008-2011	Senior Associate Consultant, Division of Nephrology & Hypertension, Mayo, Rochester, MN
2008-2011	Instructor of Medicine, Mayo Clinic College of Medicine and Science, Rochester, MN
2008-2011	Medical Director, Wabasha Dialysis Unit, Mayo Clinic, Wabasha, MN
2008-2016	Co-Director, Chronic Kidney Disease Clinic, Mayo Clinic, Rochester, MN
2011-present	Consultant, Division of Nephrology & Hypertension, Mayo Clinic, Rochester, MN
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2012-2016	Physician, Northeast Dialysis Unit, Division of Nephrology and Hypertension, Rochester, MN
2018-present	Consultant (joint appointment), Division of Geriatric Medicine and Gerontology, Department of Internal Medicine, Mayo Clinic, Rochester, MN
2018-present	Associate Professor of Medicine, Mayo Clinic College of Medicine and Science, Rochester, MN
2018-present	Member, Regenerative Nephrology Research Unit, Mayo Clinic, Rochester, MN
2020-present	Division Chair, Nephrology and Hypertension, Mayo Clinic, Jacksonville, FL
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2020-present	Member, Center for Regenerative Medicine Executive Committee, Mayo, Jacksonville, FL
2020-present	Associate Chair, Research and Innovation, Department of Medicine, Mayo Clinic, Jacksonville, FL

Honors and Awards

2008	Outstanding Clinical Fellow Award, Mayo Clinic, Rochester, MN
2008	First Place, Poster Presentation Award Midwest Regional Conference, Chicago, IL - NIH/NIDDK National Minority Research Investigators
2011	Fellow, American Society of Nephrology
2011	Top Educator, Department of Internal Medicine, Mayo Clinic, Rochester, MN
2014	Health Care Delivery Scholar, Robert D. and Patricia E. Kern Center for the Science of Health Care Delivery, Rochester, MN
2014	Fellow, American College of Physicians
2015	Faculty Scholar Award, Department of Medicine, Mayo Clinic, Rochester, MN
2016	New Investigator Award, Department of Medicine, Mayo Clinic, Rochester, MN

Other Experience and Professional Memberships

1998-present	Member, American Medical Association (AMA)
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C. Contribution to Science

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Regenerative, cell-based therapy holds promise for altering DKD trajectory. While MSC are promising therapeutic treatments, the effectiveness of autologous (over allogeneic) cellular-based therapy for DKD may be limited from a “seed” and “soil” perspective. We described these challenges and opportunities for cell-based therapy in CKD. Our K23 studies compared, for the first time, human DKD-MSC function to that of age-matched controls and identified mostly preserved paracrine functionality but some deficiencies in cell function. To optimize an autologous MSC therapy approach, our ongoing Phase I trial is testing the safety and efficacy of senolytics, dasatanib and quercetin, to reduce senescent cell abundance, improve DKD and stem cell function. Our initial report revealed for the first time, that senolytics reduce senescent cell burden in humans. Moreover, senolytics improved stem cell proliferation capacity *in vitro*. Finally, we determined that activin A, a marker of senescence and pro-fibrotic kidney injury was increased in DKD subjects. These studies and others will inform additional trial design, preconditioning strategies, and endpoint assessment for MSC therapy in DKD.

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disease (ESRD). Our studies helped inform this misconception and establish the prognostic importance of troponin in ESRD both before and after kidney transplantation. With this evidence, the clinical practice was changed at Mayo Clinic through the development of a clinical risk score for risk-stratification of individuals at low and high risk for death within 1-year post-transplant, still used today during kidney transplant candidacy evaluations. The educational importance of this work and my study of recurrent focal segmental glomerulosclerosis have been highlighted in a quarterly issue of the Nephrology Self-Assessment Program (NephSAP), which is distributed by the American Society of Nephrology. Inspired by the success of our work in transplant, I then studied troponin in community-dwelling individuals with hypertension. We are the first group to describe the prognostic capacity of troponin to identify individuals at high risk for ESRD.

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4. Patient-important outcomes and healthcare utilization among incident hemodialysis patients

In addition to the contributions described above, the compilation of my incident hemodialysis research database continues to aid us in better understanding of outcomes in this cohort. With collaborators, we examined the prevalence of structural heart disease in incident dialysis patients and the association of these conditions with survival. Papers below were often highlighted by accompanying editorials discussing their impact on the field. We also examined the rate of and factors associated with renal recovery among incident dialysis patients. This work was prompted to help address challenges faced by nephrologists (at that time) given reimbursement restrictions for "Acute" versus "ESRD" incident dialysis outpatient treatments. Our work provided a resource to inform both patients and providers on the odds of renal recovery or non-recovery based on baseline kidney function and comorbidities at the time of dialysis initiation. In other studies, we characterized the association between depression and health care use in young patients and most recently described the end of life and withdrawal in maintenance dialysis patients.

- a. Chen JC, Thorsteinsdottir B, Vaughan LE, Feely MA, Albright RC, Onuigbo M, Norby SM, Gossett CL, D'Uscio MM, Williams AW, Dillon JJ, **Hickson LJ**. End of Life, Withdrawal, and Palliative Care Utilization among Patients Receiving Maintenance Hemodialysis Therapy. *Clinical journal of the American Society of Nephrology: CJASN*. 2018; 13(8):1172-1179. PMCID: PMC6086702.
- b. Vork DL, Schneekloth TD, Bartley AC, Vaughan LE, Lapid MI, Jowsey-Gregoire SG, El-Zoghby ZM, Herrmann SM, Tran CL, Albright RC, **Hickson LJ**. Younger Adults Initiating Hemodialysis: Antidepressant Use for Depression Associated With Higher Health Care Utilization. *Mayo Clin Proc*. 2018 Mar; 93 (3):321-332. PMCID: PMC5854145.
- c. **Hickson LJ**, Negrotto SM, Onuigbo M, Scott CG, Rule AD, Norby SM, Albright RC, Casey ET, Dillon JJ, Pellikka PA, Pislaru SV, Best PJ, Villarraga HR, Lin G, Williams AW, Nkomo VT. Echocardiography Criteria for Structural Heart Disease in Patients With End-Stage Renal Disease Initiating Hemodialysis. *J Am Coll Cardiol*. 2016; 67(10):1173-82. PMCID: PMC4788810.
- d. **Hickson LJ**, Chaudhary S, Williams AW, Dillon JJ, Norby SM, Gregoire JR, Albright RC Jr, McCarthy JT, Thorsteinsdottir B, Rule AD. Predictors of outpatient kidney function recovery among patients who initiate hemodialysis in the hospital. *Am J Kidney Dis*. 2015 Apr; 65(4):592-602. PMCID: PMC4630340.

Complete List of Published Work in MyBibliography:

<http://www.ncbi.nlm.nih.gov/sites/myncbi/1VUo9Up9fqCQH/bibliography/40263311/public/?sort=date&direction=ascending>

D. Additional Information: Research Support and/or Scholastic Performance

Ongoing Research Support

Internal

Hickson (PI)

03/01/2021 - 02/28/2022

Mesenchymal Stem Cell Function and Senescence in Experimental and Human Diabetic Kidney Disease: Effects of Sex.

The goal of this study is to optimize testing of the therapeutic potential of autologous MSC therapy for DKD and enrich our understanding of sex-associated differences related to aging.

K23 DK109134-05S1

Hickson (PI)

01/01/2021 - 04/30/2021

This is a research supplement to the K23 award described below.

Internal

Hickson (PI)

11/05/2020 - 11/01/2022

Pilot Study of Allogeneic Mesenchymal Stem Cell Therapy in Patients with Chronic Kidney Disease

The goal of this study is to assess the safety, feasibility, and early efficacy signals that relate to response to allogeneic adipose tissue-derived MSC in patients with CKD.

R03 DK123492-02S1

Hickson (PI)

05/01/2020 – 03/31/2022

Renal repair effects of senolytic preconditioned mesenchymal stromal cells in diabetic kidney disease

This is a research supplement to the R03 award with the intent to promote diversity in health-related research.

The goals of the study are in line with the original R03 award (see below).

Role: Principal Investigator; Mentor to Post-doctoral fellow Sabena Conley Ph.D.

R03 DK123492

Hickson (PI)

04/01/2020 – 03/31/2022

Renal repair effects of senolytic preconditioned mesenchymal stromal cells in diabetic kidney disease

The goal of this study is to assess the effect of senolytic preconditioning on mesenchymal stem cell repair functionality in diabetic kidney disease through *in vitro* and *in vivo* studies of a novel DKD animal model.

U24 DK115255; Subaward 32307-57

Hickson (PI)

11/01/2019 6/30/2021

Comparing therapeutic potency of health and disease-derived human mesenchymal stromal cells in experimental DKD

The goal of this study is to compare differences in the therapeutic effects derived from healthy and disease-host sources of stem cells. This will be tested using human cells in murine models of DKD.

RMM 091718

Hickson (PI)

03/01/2019-02/28/2021

Patient-derived Mesenchymal Stromal Cell Therapy in Diabetic Kidney Disease: A Phase I Study

The goal of this study is to assess the safety, tolerability, feasibility, and early efficacy signals that relate to response to intra-arterial kidney delivery of autologous adipose tissue-derived MSC in patients with DKD.

K23 DK109134

Hickson (PI)

07/01/2016 - 04/30/2021

Mesenchymal stem cell senescence in diabetic nephropathy.

The goal of this study is to examine cellular senescence in mesenchymal stromal/stem cells and the response to senolytic therapy in DKD.

Completed Research Support

Internal

Hickson (PI)

08/01/2017 - 08/01/2019

Factoring Impact of Kidney Function on Mesenchymal Stem/Stromal Cell Function and Senescence in DKD.

The goal of this study is to examine senescence and functional characteristics of mesenchymal stem cells in patients with different stages of DKD.

Foundation, Satellite Healthcare

Hickson (PI)

07/01/2015 - 06/30/2018

Normon S. Coplon Extramural Research Grant- Career Development Award

Functional characteristics of mesenchymal stromal/stem cells in diabetic chronic kidney disease.

The goal of this study was to examine the functional capacity and 'vitality' (apoptosis and senescence) as it relates to varying degrees of DKD.

Internal

Hickson (PI)

03/26/2015 - 03/25/2017

Mesenchymal stem cells in diabetic chronic kidney disease: an assessment of function and vitality.

The goal of this study was to generate preliminary data to examine the functional characteristics of mesenchymal stem cells in patients with DKD which may serve as a potential barrier to autologous stem cell transplantation for the indication of CKD.

BIOGRAPHICAL SKETCH

NAME: Hickson, LaTonya Justine

eRA COMMONS USER NAME: hickson

POSITION TITLE: Associate Professor of Medicine

EDUCATION/TRAINING (*Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.*)

INSTITUTION AND LOCATION	DEGREE (if applicable)	Completion Date MM/YYYY	FIELD OF STUDY
South Carolina State University, Orangeburg, SC	BS	05/1998	Biology
University of Louisville School of Medicine, Louisville, KY	MD	05/2002	Medicine
Wake Forest University Baptist Medical Center, Winston Salem, NC	Internship	06/2003	Medicine
Wake Forest University Baptist Medical Center, Winston Salem, NC	Residency	06/2005	Internal Medicine
Mayo Clinic School of Graduate Medical Education, Mayo Clinic College of Medicine and Science, Rochester, MN	Fellowship	06/2008	Nephrology

A. Personal Statement

I am passionate about improving the lives of patients with chronic kidney disease (CKD). As a practicing nephrologist and Division Chair, I have first-hand knowledge of the grave events that occur in this high morbidity and mortality population. My early publications examining resource utilization, survival, and renal recovery in individuals on maintenance dialysis therapy have helped strengthen practice improvement and allowed me to collaborate with colleagues in various specialties. However, to accomplish my goal of finding better treatment options for patients, I embarked on a new path, albeit complicated by health issues and recent institution transfer, with a translational research approach to offer renewed hope to individuals with diabetic kidney disease (**DKD**).

I am the director of the Translational and Regenerative Nephrology Laboratory at Mayo Clinic Florida. My previous and ongoing studies (NIDDK K23; R03; 2019 DiaComp Pilot & Feasibility-funded) examine mesenchymal stromal/stem cell (**MSC**) function *in vitro*, *ex vivo* and *in vivo*, and the safety (Phase I) of senolytic therapy in individuals with DKD. I currently serve as a sponsor and investigator for two Food and Drug Administration (FDA) Investigational New Drugs (IND) in ongoing clinical trials (NCT02848131; NCT03325322) testing the safety and early efficacy of senolytics—drugs which clear senescent cells. Finally, I am the IND sponsor and principal investigator of two *pilot* Phase I trials (NCT03840343; NCT04869761) applying autologous and allogeneic MSC for DKD. These are the only MSC trials for DKD in the U.S.A. These novel therapies hold immense potential to delay kidney failure, therein improving the lives of individuals burdened by kidney disease. We are committed to the success of these investigations.

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with kidney function and potential implications for therapy. *BMJ Open Diabetes Research and Care* 2019;7:e000720. PMCID: PMC6936543.

B. Positions and Honors

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2008-2011	Senior Associate Consultant, Division of Nephrology & Hypertension, Mayo, Rochester, MN
2008-2011	Instructor of Medicine, Mayo Clinic College of Medicine and Science, Rochester, MN
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- d. **Hickson LJ**, Gera M, Amer H, Iqbal CW, Moore TB, Milliner DS, Cosio FG, Larson TS, Stegall MD, Ishitani MB, Gloor JM, Griffin MD. Kidney transplantation for primary focal segmental glomerulosclerosis: outcomes and response to therapy for recurrence. *Transplantation*. 2009 Apr 27; 87(8):1232-9.

4. Patient-important outcomes and healthcare utilization among incident hemodialysis patients

In addition to the contributions described above, the compilation of my incident hemodialysis research database continues to aid us in better understanding of outcomes in this cohort. With collaborators, we examined the prevalence of structural heart disease in incident dialysis patients and the association of these conditions with survival. Papers below were often highlighted by accompanying editorials discussing their impact on the field. We also examined the rate of and factors associated with renal recovery among incident dialysis patients. This work was prompted to help address challenges faced by nephrologists (at that time) given reimbursement restrictions for "Acute" versus "ESRD" incident dialysis outpatient treatments. Our work provided a resource to inform both patients and providers on the odds of renal recovery or non-recovery based on baseline kidney function and comorbidities at the time of dialysis initiation. In other studies, we characterized the association between depression and health care use in young patients and most recently described the end of life and withdrawal in maintenance dialysis patients.

- a. Chen JC, Thorsteinsdottir B, Vaughan LE, Feely MA, Albright RC, Onuigbo M, Norby SM, Gossett CL, D'Uscio MM, Williams AW, Dillon JJ, **Hickson LJ**. End of Life, Withdrawal, and Palliative Care Utilization among Patients Receiving Maintenance Hemodialysis Therapy. *Clinical journal of the American Society of Nephrology: CJASN*. 2018; 13(8):1172-1179. PMCID: PMC6086702.
- b. Vork DL, Schneekloth TD, Bartley AC, Vaughan LE, Lapid MI, Jowsey-Gregoire SG, El-Zoghby ZM, Herrmann SM, Tran CL, Albright RC, **Hickson LJ**. Younger Adults Initiating Hemodialysis: Antidepressant Use for Depression Associated With Higher Health Care Utilization. *Mayo Clin Proc*. 2018 Mar; 93 (3):321-332. PMCID: PMC5854145.
- c. **Hickson LJ**, Negrotto SM, Onuigbo M, Scott CG, Rule AD, Norby SM, Albright RC, Casey ET, Dillon JJ, Pellikka PA, Pislaru SV, Best PJ, Villarraga HR, Lin G, Williams AW, Nkomo VT. Echocardiography Criteria for Structural Heart Disease in Patients With End-Stage Renal Disease Initiating Hemodialysis. *J Am Coll Cardiol*. 2016; 67(10):1173-82. PMCID: PMC4788810.
- d. **Hickson LJ**, Chaudhary S, Williams AW, Dillon JJ, Norby SM, Gregoire JR, Albright RC Jr, McCarthy JT, Thorsteinsdottir B, Rule AD. Predictors of outpatient kidney function recovery among patients who initiate hemodialysis in the hospital. *Am J Kidney Dis*. 2015 Apr; 65(4):592-602. PMCID: PMC4630340.

Complete List of Published Work in MyBibliography:

<http://www.ncbi.nlm.nih.gov/sites/myncbi/1VUo9Up9fqCQH/bibliography/40263311/public/?sort=date&direction=ascending>

D. Additional Information: Research Support and/or Scholastic Performance

Ongoing Research Support

Internal

Hickson (PI)

03/01/2021 - 02/28/2022

Mesenchymal Stem Cell Function and Senescence in Experimental and Human Diabetic Kidney Disease: Effects of Sex.

The goal of this study is to optimize testing of the therapeutic potential of autologous MSC therapy for DKD and enrich our understanding of sex-associated differences related to aging.

K23 DK109134-05S1

Hickson (PI)

01/01/2021 - 04/30/2021

This is a research supplement to the K23 award described below.

Internal

Hickson (PI)

11/05/2020 - 11/01/2022

Pilot Study of Allogeneic Mesenchymal Stem Cell Therapy in Patients with Chronic Kidney Disease

The goal of this study is to assess the safety, feasibility, and early efficacy signals that relate to response to allogeneic adipose tissue-derived MSC in patients with CKD.

R03 DK123492-02S1

Hickson (PI)

05/01/2020 – 03/31/2022

Renal repair effects of senolytic preconditioned mesenchymal stromal cells in diabetic kidney disease

This is a research supplement to the R03 award with the intent to promote diversity in health-related research.

The goals of the study are in line with the original R03 award (see below).

Role: Principal Investigator; Mentor to Post-doctoral fellow Sabena Conley Ph.D.

R03 DK123492

Hickson (PI)

04/01/2020 – 03/31/2022

Renal repair effects of senolytic preconditioned mesenchymal stromal cells in diabetic kidney disease

The goal of this study is to assess the effect of senolytic preconditioning on mesenchymal stem cell repair functionality in diabetic kidney disease through *in vitro* and *in vivo* studies of a novel DKD animal model.

U24 DK115255; Subaward 32307-57

Hickson (PI)

11/01/2019 6/30/2021

Comparing therapeutic potency of health and disease-derived human mesenchymal stromal cells in experimental DKD

The goal of this study is to compare differences in the therapeutic effects derived from healthy and disease-host sources of stem cells. This will be tested using human cells in murine models of DKD.

RMM 091718

Hickson (PI)

03/01/2019-02/28/2021

Patient-derived Mesenchymal Stromal Cell Therapy in Diabetic Kidney Disease: A Phase I Study

The goal of this study is to assess the safety, tolerability, feasibility, and early efficacy signals that relate to response to intra-arterial kidney delivery of autologous adipose tissue-derived MSC in patients with DKD.

K23 DK109134

Hickson (PI)

07/01/2016 - 04/30/2021

Mesenchymal stem cell senescence in diabetic nephropathy.

The goal of this study is to examine cellular senescence in mesenchymal stromal/stem cells and the response to senolytic therapy in DKD.

Completed Research Support

Internal

Hickson (PI)

08/01/2017 - 08/01/2019

Factoring Impact of Kidney Function on Mesenchymal Stem/Stromal Cell Function and Senescence in DKD.

The goal of this study is to examine senescence and functional characteristics of mesenchymal stem cells in patients with different stages of DKD.

Foundation, Satellite Healthcare

Hickson (PI)

07/01/2015 - 06/30/2018

Normon S. Coplon Extramural Research Grant- Career Development Award

Functional characteristics of mesenchymal stromal/stem cells in diabetic chronic kidney disease.

The goal of this study was to examine the functional capacity and 'vitality' (apoptosis and senescence) as it relates to varying degrees of DKD.

Internal

Hickson (PI)

03/26/2015 - 03/25/2017

Mesenchymal stem cells in diabetic chronic kidney disease: an assessment of function and vitality.

The goal of this study was to generate preliminary data to examine the functional characteristics of mesenchymal stem cells in patients with DKD which may serve as a potential barrier to autologous stem cell transplantation for the indication of CKD.

Joseph G. Mayo, III, M.D.

Biography

Dr. Joseph Graham Mayo, III is the great-grandson of Dr. Charles H. Mayo and great-nephew of Dr. William J. Mayo, whose seminal practices launched the Mayo Clinic in Rochester, Minnesota. He, his late brother, and two cousins are members of the fourth generation of physicians descending from the Mayo brothers. Dr. Mayo was the first member of the Mayo family to attend and graduate from the medical school bearing their name.

Dr. Mayo was born in St. Mary's Hospital and spent his childhood in Rochester, playing at Mayowood and visiting his grandparents, Dr. Chuck and Alice Mayo. As a child he attended parties at Mayowood and mingled with physicians, professors of medicine, preeminent surgeons, specialists from foreign countries, and international dignitaries. It may be said from birth, a career in medicine was predestined.

He attended the University of Minnesota where he earned two undergraduate degrees, Magna Cum Laude, in Biology and Philosophy. Dr. Mayo received his Doctor of Medicine degree in Rochester, and was a resident in Internal Medicine before becoming a resident in orthopedic surgery at the Mayo Clinic School of Graduate Medical Education in Rochester, Minnesota. Over the past thirty-one years, Dr. Mayo has practiced orthopedic surgery in Orange County, California.

Board certified orthopedic surgeon, Fellow of the American Academy of Orthopedic Surgeons. Diplomat of the American Board of Orthopedic Surgeons, past member of the board of the Mayo Alumni Association

Dr. Mayo and his wife, Susan, have been married for 38 years, and have two children who continue the practice of medicine as physician associates. When he is fully retired, Dr. Mayo and his wife will spend their time at their summer home at Mayowood and at their farm in North Kohala on the Big Island of Hawaii.

Curriculum Vitae

Practice:

2015 - present	Orthopedic Surgery, member of the St. Jude Heritage Medical Group St. Jude Hospital, Fullerton California Specialty: Total Hip and Knee Replacement Instrumental in making St. Jude Hospital a Nationally recognized center of excellence in orthopedic surgery
1995 - 2015	Orthopedic Surgery, private practice, Joseph G. Mayo, III, M.D., Inc. Placentia Linda Hospital, Placentia, California

	Practice of general orthopedic surgery and total joint replacement Instrumental in making Placentia-Linda Hospital a recognized center of excellence in orthopedic surgery Chairman of the Board of Governors, Placentia-Linda Hospital Chairman of the Department of Surgery, Placentia-Linda Hospital
1990 - 1995	Orthopedic surgical practice partner, Gordon E. Traub, M.D, Inc. Placentia, California Team Physician for the L.A. Salsa Professional Soccer Team
1985 -1989	Orthopedic Surgery Residency, Mayo Clinic School of Graduate Medical Education, Rochester, Minnesota Recipient of the Orthopedic Faculty Research Award, Mark B. Coventry Research Award Competition
1983 - 1985	Internal Medicine Residency, Mayo Clinic School of Graduate Medical Education, Rochester, Minnesota
1979 - 1983	Mayo Medical School, Rochester, Minnesota
1977 - 1979	B.S. Magna Cum Laude, Biology, University of Minnesota
1975 - 1977	B.A. Magna Cum Laude, Philosophy, University of Minnesota

BIOGRAPHICAL SKETCH

Provide the following information for the Senior/key personnel and other significant contributors.
Follow this format for each person. DO NOT EXCEED FIVE PAGES.

NAME: Hongfang Liu

eRA COMMONS USER NAME (credential, e.g., agency login): HONGFANGLIU

POSITION TITLE: Professor of Biomedical Informatics

EDUCATION/TRAINING (Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.)

INSTITUTION AND LOCATION	DEGREE (if applicable)	Completion Date MM/YYYY	FIELD OF STUDY
University of Science and Technology of China, Hefei, Anhui, P.R. China	BS	07/1994	Applied Mathematics and Statistics
University of Science and Technology of China, Hefei, Anhui, P.R. China	MS	07/1996	Applied Mathematics
Fordham University, New York, NY	MS	05/1998	Computer Science
City University of New York, New York, NY	PhD	10/2002	Biomedical Informatics

A. Personal Statement

I currently lead the Biomedical Informatics group at Mayo Clinic. My formal training was in biomedical and clinical Natural Language Processing (NLP) with twenty years' experience exploring both expert-based and statistical approaches for various NLP tasks. In addition, I have extensive collaborative research experience in ontology, software engineering, bioinformatics, and biomedical and basic science fields. I have published extensively with over 300 papers. My current research missions are to facilitate secondary use of Electronic Health Records (EHRs) for clinical and translational science research and health care delivery improvement through clinical NLP and to deliver open-source NLP for high-throughput phenotyping through community-wide collaborative projects.

I am very interested in bringing informatics solutions to solve real-world challenges faced by researchers. My research has translated to multiple institutional projects at Mayo Clinic for providing enterprise data and informatics infrastructure for clinical and translational research and practice. Nationally and internationally, I focus on the development of open source NLP solutions for text mining and secondary use of EHRs. I have led the community-wide project, Open Health Natural Language Processing (OHNLP; <http://www.ohnlp.org>), which promotes the release of open source NLP tools for clinical and translational research. The tools released by OHNLP include Apache cTAKES, MedEx, and MedTagger suites, etc. As a leader of AMIA NLP-WG, I organized a webinar series on the interoperability of clinical NLP systems in 2014 and AMIA NLP-WG pre-symposium since 2014.

In this proposal, I will

B. Positions, Scientific Appointments, and Honors**Positions and Employment**

2019-2021 Chair, Division of Digital Health Sciences, Mayo Clinic
 2015- Professor, Department of Artificial Intelligence and Informatics, Mayo Clinic
 2015-2019 Head of Section of Biomedical Informatics, Division of Biomedical Statistics and Informatics; Director of Biomedical Informatics, Center of Clinical and Translational Sciences, Mayo Clinic
 2011-2015 Associate Professor, Division of Biomedical Statistics and Informatics, Mayo Clinic
 2006-2011 Assistant Professor, Department of Biostatistics, Bioinformatics, and Biomathematics
 Georgetown University
 2005-2013 Visiting Scholar, Laboratory of Molecular Pharmacology, National Cancer Institute
 2003-2005 Assistant Professor, Information Systems, University of Maryland at Baltimore County
 1998-2003 Research Assistant/Senior Analyst, Biomedical Informatics, Columbia University
 1998-1998 Lecturer, Computer Science, Queens College of City University of New York

Honors

10/2019 Dr. Richard F. Emslander Professor in Biomedical Informatics
 10/2013 First Place in BioCreative IV Gene Ontology Annotation Challenge

09/2013	First Place in CLEF/eHEALTH Information Seeking from Online Material
09/2013	First Place in BioASQ Semantic Indexing and Question Answering
09/2013	Distinguish Paper Award from International Medical Informatics Conference (MedInfo)
09/2012	Distinguished Paper Award from IEEE Healthcare Informatics, Imaging, & Systems Biology (HISB)
11/2012	First Place in I2B2 NLP Challenge for Temporal Expression Extraction
08/2009	National Science Foundation CAREER Award
10/2002	Finalist, Student Paper Competition, American Medical Informatics Association (AMIA) Annual Symposium
10/2001	Best Theoretical Paper Nomination, American Medical Informatics Association (AMIA) Annual Symposium

Other Experience, Professional Memberships and Honors

2016-	Fellow, American College of Medical Informatics
2016-	Standing Member of NIH BDMA Study Section
2012-	Editorial board member of JBI
2014-	Ad Hoc Members for NIH BCHI and BLR Study Sections
Serving as program committee members for over ACM-BCB, BIBM, ICHI, ACL, or AMIA conferences.	

C. Contribution to Science

1. Secondary use of EMRs for clinical and translational research (2011-present)

I led the data normalization program in Mayo Strategic Health IT Advanced Research Projects (SHARP) Program Area 4 Consortium (SHARPn), the core technology base for SHARPn. SHARPn aims to enable the use of the electronic health record (EHR) for secondary purposes, such as quality measurement, comparative effectiveness research, translational research, high throughput phenotyping, and outcomes research. Clinical data in EHRs must be normalized to make practical and scalable the myriad of secondary use cases of EHR data. A unified data normalization framework based on big-data processing technology, which has been released open source, has been developed and can be used to implement pipelines for the generation of normalized EHR data from both structured and unstructured data sources.

- a. Wu ST, Kaggal VC, Dligach D, Masanz JJ, Chen P, Becker L, Chapman WW, Savova GK, **Liu H**, Chute CG. A common type system for clinical natural language processing. *J Biomed Semantics*. 2013;4(1):1. PMID: PMC3575354
- b. Oniki TA, Zhuo N, Beebe CE, **Liu H**, Coyle JF, Parker CG, Solbrig HR, Marchant K, Kaggal VC, Chute CG, Huff SM. Clinical element models in the SHARPn consortium. *J Am Med Inform Assoc*. 2016 Mar;23(2):248-56. PMID: PMC6283078
- c. Pathak J, Bailey KR, Beebe CE, Bethard S, Carrell DC, Chen PJ, Dligach D, Endle CM, Hart LA, Haug PJ, Huff SM, Kaggal VC, Li D, **Liu H**, Marchant K, Masanz J, Miller T, Oniki TA, Palmer M, Peterson KJ, Rea S, Savova GK, Stancl CR, Sohn S, Solbrig HR, Suesse DB, Tao C, Taylor DP, Westberg L, Wu S, Zhuo N, Chute CG. Normalization and standardization of electronic health records for high-throughput phenotyping: the SHARPn consortium. *J Am Med Inform Assoc*. 2013;20(e2):e341-8. PMID: PMC3861933

2. Developing clinical NLP applications and implementing them for clinical decision support and epidemiological/population health research (2011-present)

I have been leading Mayo Clinic's clinical NLP program since 2011 with the mission of providing development and support for the access of clinical information stored in unstructured text for research and practice. The Mayo NLP program has developed, released, and maintained a suite of open-source NLP systems including cTAKES, MedCoRef (a co-reference resolution tool), MedTime (a tool for recognizing time expressions in clinical text), MedTagger (a tool for machine learning-based named entity recognition), icTAKES (an integrated version of cTAKES for indexing clinical data warehouse), MedQA (a question answering system for information needs at point of care) and MedXN (a tool for extraction and normalization of clinical drugs). Some of those systems are among the top-ranked systems evaluated through NLP challenges such as I2B2 NLP or SHARE/CLEF. My group has demonstrated the utilities of NLP applications in clinical decision support and epidemiological/population health research with over 80 publications in the field.

- a. Sohn S, Wang Y, Wi CI, Krusemark EA, Ryu E, Ali MH, Juhn YJ, **Liu H**. Clinical documentation variations and NLP system portability: a case study in asthma birth cohorts across institutions. *J Am Med Inform Assoc*. 2017. PMCID: In Process
- b. Sohn S, Clark C, Halgrim SR, Murphy SP, Chute CG, **Liu H**. MedXN: an open source medication extraction and normalization tool for clinical text. *J Am Med Inform Assoc*. 2014;21(5):858-65. PMCID: PMC4147619
- c. Wagholarik KB, MacLaughlin KL, Henry MR, Greenes RA, Hankey RA, **Liu H**, Chaudhry R. Clinical decision support with automated text processing for cervical cancer screening. *J Am Med Inform Assoc*. 2012;19(5):833-9. PMCID: PMC3422840

3. Decision support for precision medicine through advanced healthcare analytics and advanced text mining (2013-present)

The promise of precision medicine is to enable medical practitioners to make better clinical decisions through incorporating patients' clinical, genetic and/or genomic information. The anticipation of precision medicine is to increase prevention and prediction of disease, enable earlier disease intervention, improve targeted therapies, reduce side effects, and therefore reduce healthcare costs with better patient outcomes. Rapid advances in technology and decreasing cost combined have brought precision medicine closer to the clinical practice. We identify two challenges when bringing precision medicine into practice: i) given medical history of a patient, how to efficiently retrieve a list of genetic tests to be recommended, and ii) given genetic or genomic information of a patient, how to retrieve their clinical implication information and summarize it for physicians and counselors? We are investigating clinical decision support and automated methods to mitigate the knowledge gap in delivering precision medicine.

- a. Jonnalagadda SR, Del Fiol G, Medlin R, Weir C, Fiszman M, Mostafa J, **Liu H**. Automatically extracting sentences from Medline citations to support clinicians' information needs. *J Am Med Inform Assoc*. 2013;20(5):995-1000. PMCID: PMC3756259
- b. Komandur RE, Wagholarik KB, Li D, Kocher JP, **Liu H**. Text mining Facilitates Database Curation - Extraction of Mutation-Disease Associations from Bio-Medical Literature. *BMC Bioinformatics*. 2015;16:185. PMCID: PMC4457984

4. Biomedical text mining (1998-present)

With the widespread use of computers in the biomedical domain, a vast, rich range of biomedical data, including coded data, as well as free-text data has been stored in digital format. Computer applications can interpret coded data automatically while free-text data pose challenges to system developers. To enable access to free text in the biomedical domain, natural language processing (NLP) systems have been developed that facilitate information retrieval (IR), information extraction (IE), and text mining on free text. However, all NLP systems require identification of terms (a term can be a single word or a multi-word phrase) in free text with entries in a lexical table. However, terms in free text can be ambiguous and may have multiple unrelated senses in the lexical table. Additionally, the lexical table can be incomprehensive where some terms or senses are not included in the table. My research in this area focuses on i) word sense disambiguation in the biomedical domain including the use of conceptual relatives in the Unified Medical Language Systems (UMLS) and machine learning to build word sense disambiguation systems, ii) sense inventory for gene/protein terms, and iii) constructing practical text mining applications for systems biology. My research outcome has been disseminated online. For example, BioThesaurus, a collection of gene/protein names for all protein records, as well as its web-based version, has been used extensively by biomedical and bioinformatics researchers with over one million hits over the past six years. Over 20 research teams (e.g., Merck or University of Colorado) have used BioThesaurus for building their text mining systems.

- a. **Liu H**, Johnson SB, Friedman C. Automatic resolution of ambiguous terms based on machine learning and conceptual relations in the UMLS. *J Am Med Inform Assoc*. 2002;9(6):621-36. PMCID: PMC349379.
- b. **Liu H**, Hu ZZ, Zhang J, Wu C. BioThesaurus: a web-based thesaurus of protein and gene names. *Bioinformatics*. 2006;22(1):103-5.
- c. **Liu H**, Hu ZZ, Torii M, Wu C, Friedman C. Quantitative assessment of dictionary-based protein named entity tagging. *J Am Med Inform Assoc*. 2006;13(5):497-507. PMCID: PMC1561801.

5. “-omics” data analysis and functional interpretation (2002 – present)

The recent advance of high throughput biomedical technologies has generated tremendous amount of data, and correct data analysis and functional interpretation is very challenging. Terms associated with “-omics” data include genomics, transcriptomics, proteomics, metabolics, and glyconomics et al. The correct analysis requires the ability to capture the updated knowledge in computer interpretable format and the ability to find needle in the hay. For “-omics” data analysis and functional interpretation, I have collaborated with basic scientists to develop tools for “-omics” data analysis /functional interpretation and to analyze “-omics” data and provide biomedical informatics expertise on various projects. The bioinformatics tools developed have been highly accessed and my work on NCI60 “-omics” panel was the highlight in the cover.

- a. Ryan MC, Zeeberg BR, Caplen NJ, Cleland JA, Kahn AB, **Liu H**, Weinstein JN. SpliceCenter: a suite of web-based bioinformatic applications for evaluating the impact of alternative splicing on RT-PCR, RNAi, microarray, and peptide-based studies. *BMC Bioinformatics*. 2008;9:313. PMCID: PMC2491637
- b. **Liu H**, D'Andrade P, Fulmer-Smentek S, Lorenzi P, Kohn KW, Weinstein JN, Pommier Y, Reinhold WC. mRNA and microRNA expression profiles of the NCI-60 integrated with drug activities. *Mol Cancer Ther*. 2010;9(5):1080-91. PMCID: PMC2879615
- c. Namiki T, Tanemura A, Valencia JC, Coelho SG, Passeron T, Kawaguchi M, Vieira WD, Ishikawa M, Nishijima W, Izumo T, Kaneko Y, Katayama I, Yamaguchi Y, Yin L, Polley EC, **Liu H**, Kawakami Y, Eishi Y, Takahashi E, Yokozeiki H, Hearing VJ. AMP kinase-related kinase NUAK2 affects tumor growth, migration, and clinical outcome of human melanoma. *Proc Natl Acad Sci U S A*. 2011;108(16):6597-602. PMCID: PMC3081019

Published Work in myNCBI (a partial list):

<http://www.ncbi.nlm.nih.gov/sites/myncbi/hongfang.liu.1/bibliography/41146262/public/?sort=date&direction=ascending>

BIOGRAPHICAL SKETCH

NAME: Maiers, Jessica Louise

ERA COMMONS USER NAME (credential, e.g., agency login): maiersjl

POSITION TITLE: Assistant Professor of Medicine

EDUCATION/TRAINING (*Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.*)

INSTITUTION AND LOCATION	DEGREE	Completion Date	FIELD OF STUDY
Wartburg College, Waverly IA, USA	B.A.	05/2008	Biochemistry
University of Iowa, Iowa City, IA, USA	Ph.D.	12/2013	Molecular and Cellular Biology
Mayo Clinic, Rochester, MN, UA		04/2018	Gastroenterology and Hepatology (Postdoctoral training)

A. Personal Statement

The long-term goal of my research is to understand the pathophysiological mechanisms of liver fibrosis, with the end goal of developing novel therapeutic strategies that promote fibrosis regression. Liver fibrosis is characterized by excessive extracellular matrix (ECM) deposition which leads to scarring and altered liver architecture. Hepatic Stellate cells (HSCs) are primarily responsible for ECM production and secretion. Targeting HSCs for apoptosis is an attractive therapeutic strategy but has yielded little success in the clinic. My lab is focused on understanding the mechanisms of fibrogenesis, including HSC activation, trafficking of matrix proteins, and how HSCs accommodate excess matrix production and secretion. We previously identified a critical role for the Endoplasmic Reticulum (ER) protein TANGO1 in facilitating procollagen I export from the ER and subsequent secretion. Building upon this work, we sought to elucidate other key mechanisms that regulate procollagen I trafficking and secretion using an siRNA screen. This screen revealed 9 genes that promoted procollagen I retention. Functional studies revealed a critical and targetable role for one of the top targets, the serine/threonine kinase TNK, in fibrogenesis both *in vitro* and *in vivo*. Currently projects in this space include investigating the other targets identified in the siRNA screen, as well as taking insight from Osteogenic genes. Genomics analysis revealed an association between the ER-localized ion channel TMEM38B and both osteogenesis and fibrogenesis. We are currently investigating the mechanisms through with TMEM38B drives fibrogenesis in HSCs, supported by an R03 grant awarded by the Illuminating the Druggable Genome program sponsored by the NIH.

The second theme of my research is understanding the role of ER stress in HSC activation and fibrogenesis. Excess protein production puts stress on the ER due to excess unfolded proteins that require processing. Maintaining ER function and integrity despite ER stress is crucial for secretory cell survival. A key pathway involved in accommodating ER stress is the Unfolded Protein Response (UPR). The UPR is crucial for accommodating the increased production and secretion of ECM proteins and implicated in fibrogenesis; however, the mechanisms underlying this role are unknown. Finally, if ER stress is unresolved, the UPR initiates pro-apoptotic signaling, which would be favorable for fibrosis regression. Thus, my research into the UPR and HSC activation has two major focuses: 1) understanding how the UPR transcriptionally regulates fibrogenesis and regulates ER integrity and turnover to facilitate fibrogenic protein secretion, and 2) identifying potential therapeutic targets to disrupt procollagen I processing within the ER and promote apoptosis of HSCs as an intervention for patients with liver fibrosis.

- 1 R03 TR003641-01 (PI: Maiers, JL)

NCATS

5/15/2021 - 5/14/2022

\$100,000 (DC)

Identifying targetable mechanisms of TMEM38B/TRIC-B in liver fibrosis

2. 1 K01 DK11291501A1 (PI: Maiers, JL) NIDDK
Regulation of Hepatic Fibrogenesis by TANGO1

3. Buchl, SC; Hanquier, Z; Haak, AJ; Thomason, YM; Huebert, RC; Shah, VH; and **Maiers JL** TNIK is a critical regulator of procollagen I trafficking and fibrogenesis in mice. Accepted. *Hepatology Communications*.

4. Xue F, Liu J, Buchl SC, Sun L, Shah VH, Malhi H, **Maiers JL**. Coordinated Signaling of Activating Transcription Factor 6 α and Inositol Requiring Enzyme 1 α Regulates Hepatic Stellate Cell-Mediated Fibrogenesis in Mice. *Am J Physiol Gastrointest Liver Physiol*. 2021 Mar 17. doi: 10.1152/ajpgi.00453.2020. Epub ahead of print. PMID: 33728997.

5. Liu, Z; Li, C; Kang, N; Malhi, H; Shah, VH; **Maiers, JL**. TGF β crosstalk with the Unfolded Protein Response is critical for Hepatic Stellate Cell activation. *Journal of Biological Chemistry*. 2019 Mar 1; 294(9):3137-3151. PMID: 30610118

B. Positions, Scientific Appointments, and Honors

Positions and Employment

04/21 – Present: Assistant Professor of Medicine, Indiana University School of Medicine, Indianapolis, IN

04/18 – 03/21: Associate Consultant, Gastroenterology and Hepatology Department, Mayo Clinic, Rochester, MN.

04/18 – 03/21: Assistant Professor of Medicine, Mayo Clinic College of Medicine, Mayo Clinic, Rochester, MN

06/19 – 03/21: Assistant Professor of Biochemistry and Molecular Biology, Mayo Clinic College of Medicine, Mayo Clinic, Rochester, MN

02/16 – 04/18: Instructor of Medicine, Mayo Clinic College of Medicine, Mayo Clinic, Rochester, MN

01/14 – 04/18: Postdoctoral Research Fellow, Gastroenterology and Hepatology Department, Mayo Clinic, Rochester, MN.

06/08 – 12/13: Ph.D candidate, Molecular and Cellular Biology Program, University of Iowa, Iowa City, IA.

06/07 – 07/07: Research Summer Intern, Department of Biochemistry, University of Iowa, Iowa City, IA.

09/05 – 04/07: Student Research Assistant, Department of Biochemistry, Wartburg College, Waverly, IA.

Membership on Committees:

2022 – 2024: Research Awards Committee, American Association for the Study of Liver Disease (AASLD)

2018 – Present: Communications Subcommittee, Liver Cell Biology in Hepatic Disease Special Interest Group AASLD

Professional Societies:

2021 – Present: Member, American Society for Investigative Pathology

2018 – Present: Member, Association for the Study of Biochemistry and Molecular Biology

2016 – Present: Member, American Association for the Study of Liver Disease

Service:

06/21 – 10/21: AdHoc Reviewer for NIH Study Section (KNOD)

04/19 – Present: Contributor to Hepatology Highlights (Brief Commentaries on original research articles published in Hepatology)

2014 – Present: Manuscript reviewer for Journal of Hepatology, EMBO Molecular Medicine, Journal of Clinical Investigation, Hepatology, EBioMedicine, PLoS One, Cell Proliferation, Digestive and Liver Disease, Scientific Reports, Cellular and Molecular Gastroenterology and Hepatology

01/12 – 12/13: Associate Editor, F1000

Honors:

2020: Young Investigator Travel Award – The Liver Meeting – AASLD

2020: AASLD Foundation Fellows Travel Award – Digestive Disease Week – AASLD

2019: Presidential Poster of Distinction/Young Investigator Travel Award – The Liver Meeting – AASLD

2018: Trainee Travel Award – Hepatic Fibrosis STC – AASLD

2016: Presidential Poster of Distinction/Young Investigator Travel Award – The Liver Meeting – AASLD

2016: Invited Speaker at American Liver Foundation Upper Midwest Fundraiser

2015 - 2016: American Liver Foundation Postdoctoral Research Fellowship

2/5/2018 – 12/31/2022
\$733,795 (DC)

2014 - 2017: T32 Training Grant Fellowship in Digestive Diseases (NIH DK007198)
2013: Lois Bigger Gehring Travel Award for Outstanding Poster
2012 - 2013: American Heart Association Predoctoral Fellowship
2011: Interdisciplinary Program in Molecular and Cellular Biology Travel Award for Outstanding Talk
2007 - Roy J. McElroy Fellowship for Undergraduate Research

Abstracts/Presentations:

Oral

The ER-resident ion channel TMEM38B drives fibrogenesis through promoting procollagen I secretion

The Understudied Druggable Proteome FASEB Scientific Research Conference
08/2021

UPR signaling pathways play distinct mechanisms in HSC activation and collagen I trafficking

The Endoplasmic Reticulum FASEB Scientific Research Conference.
Snowmass, CO. 06/2019

IRE1 α activation of c/EBP β is critical for HSC activation and is antagonized by Adefovir Divipoxil.

Hepatic Fibrosis Single Topic Conference (Sponsored by the American Association for the Study of Liver Disease). Dallas Fort Worth Airport, TX. 09/2018.

TANGO1 regulates Collagen I intracellular trafficking and secretion in Hepatic Stellate Cells

Digestive Disease Week, Washington, District of Columbia 05/2015

Invited

ERing on the Side of Fibrogenesis:

Metabolism and Islet Biology Seminar
Center for Diabetes and Metabolic Disease
Indiana University School of Medicine

Untangling the role of the Unfolded Protein Response in Hepatic Stellate Cells

Online Liver Biology Seminar. 4/30/20
Organized by Dr. Yasuko Iwakiri, Yale University

Mechanisms and Regulation of Liver Fibrogenesis.

Indiana Center for Liver Research Seminar Series
Indiana University School of Medicine, Indianapolis, IN. 2/5/2020

Mechanisms and Regulation of Liver Fibrogenesis.

Department of Regenerative Medicine and Cell Biology Seminar Series
Medical University of South Carolina, Charleston SC. 12/12/2019

The UPR Mediates Fibrogenesis through Regulating TANGO1, a Crucial Mediator of Procollagen I Secretion.

Midwest DDRCC Alliance Meeting
Cincinnati, Ohio 02/26/2017 - 02/28/2017

C. Contributions to Science:

Elucidated the mechanistic contribution of the Unfolded Protein Response to fibrogenesis in Hepatic Stellate Cells. Hepatic stellate cells produce and secrete vast amounts of matrix proteins during fibrogenesis. These proteins are translated into the ER where they must undergo proper folding and processing prior to secretion. Excess proteins in the ER lumen that require folding causes ER stress, which in turn activates the Unfolded Protein Response (UPR). The UPR promotes expression of chaperones and trafficking proteins, limits non-essential translation, and promotes degradation of misfolded proteins, all aimed at resolving ER stress. **My group showed that adaptive UPR signaling is critical for fibrogenesis.** The UPR sensor IRE1 α is critical for HSC activation and fibrogenesis *in vitro* through upregulation of trafficking proteins such as TANGO1, as well as initiating pro-fibrotic transcription through phosphorylation of the transcription factor c/EBP β . **This work served as a major part of Aim 2 of my funded K01 award.** As my research evolved, we also identified a critical role for a second ER stress sensor and UPR effector: ATF6 α . ATF6 α activity as a transcription factor is critical for HSC activation and fibrogenesis both *in vitro* and *in vivo*, and we are currently discerning the mechanisms that underlie ATF6 α regulation, as well as critical processed downstream of ATF6 α activity including ERphagy.

Understanding the transcriptional regulation of fibrogenesis downstream of ATF6 α and IRE1 α will be a major focus of my initial R01 grant application in February 2022.

- a. Xue F, Liu J, Buchl SC, Sun L, Shah VH, Malhi H, **Maiers JL**. Coordinated Signaling of Activating Transcription Factor 6 α and Inositol Requiring Enzyme 1 α Regulates Hepatic Stellate Cell-Mediated Fibrogenesis in Mice. *Am J Physiol Gastrointest Liver Physiol*. 2021 Mar 17. doi: 10.1152/ajpgi.00453.2020. Epub ahead of print. PMID: 33728997.
- b. Liu, Z; Li, C; Kang, N; Malhi, H; Shah, VH; **Maiers, JL**. TGF β crosstalk with the Unfolded Protein Response is critical for Hepatic Stellate Cell activation. *Journal of Biological Chemistry*. 2019 Mar 1; 294(9):3137-3151. PMID: 30610118
- c. **Maiers, JL** and Malhi, H. Endoplasmic Reticulum Stress in Metabolic Liver Diseases and Hepatic Fibrosis. *Semin Liver Dis*. 2019 Mar 25. PMID: 30912096
- d. **Maiers, JL**; Kostallari, E; Mushraf, M; Li, H; Yu, H; Hubert, RC; Cao, S; Malhi, H; Shah, VH. TANGO1 promotes fibrogenesis through dual mechanisms of collagen I secretion and ER stress. *Hepatology*. 2017 March. PMID: 28039913.

Provided mechanistic insight into procollagen trafficking in hepatic stellate cells during fibrogenesis. My postdoctoral fellowship with Dr. Shah began in January 2014. I was drawn to Dr. Shah's lab though his passion and excitement for liver research. His background as both clinician and investigator has provided me a unique environment to grow as a scientist. At Mayo Clinic, I used my developed biochemistry and cellular biology skills as well as new skills utilizing animal models and patient samples to the study cellular and molecular mechanisms of liver fibrosis. **During my postdoctoral studies, I identified a critical moderator of liver fibrosis: TANGO1. TANGO1 facilitates collagen I secretion from hepatic stellate cells, directly contributing to fibrogenesis and liver disease** which led to a first author publication, external funding from the American Liver Foundation, and internal funding from the Center for Cell Signaling in Gastroenterology and Hepatology and the Center for Biomedical Discovery at Mayo Clinic. **Importantly, my research led to a K01 Mentored Career Development Award from the NIDDK, through which I am building my independent research program.** Through my K01 award, my lab completed an siRNA screen to identify novel proteins involved in procollagen I trafficking. We identified 8 proteins whose knockout disrupted procollagen I intracellular trafficking. One of the top targets is TNIK (Traf2 and Nck Interacting Kinase) has shown promise for therapeutic targeting in liver fibrosis. We are currently elucidating the function of TNIK and other top targets in procollagen I trafficking and fibrogenesis, providing insight into targetable mechanisms that facilitate liver fibrosis.

- a. Buchl, SC; Hanquier, Z; Haak, AJ; Thomason, YM; Huebert, RC; Shah, VH; and **Maiers JL** TNIK is a critical regulator of procollagen I trafficking and fibrogenesis in mice. Accepted. *Hepatology Communications*.
- b. **Maiers, JL**; Kostallari, E; Mushraf, M; Li, H; Yu, H; Hubert, RC; Cao, S; Malhi, H; Shah, VH. TANGO1 promotes fibrogenesis through dual mechanisms of collagen I secretion and ER stress. *Hepatology*. 2017 March. PMID: 28039913.

Identified a functional link between tight junctions and adherens junctions in epithelial cells. I pursued post-graduate training at the University of Iowa in the Molecular and Cellular Biology Ph.D. program. At Iowa, I trained with Dr. Kris DeMali, studying the regulation of epithelial tight junctions. Tight junctions are critical for mediating tissue permeability by limiting the transport of ions, molecules, and even inflammatory cells across epithelial cell monolayers. Thus, the proper assembly and regulation of tight junctions is critical to understand. Immediately basal in location to tight junctions lay the adherens junctions. The assembly of adherens junctions is required for subsequent tight junction formation, but the mechanisms that link tight junctions to adherens junctions were not understood. I identified a critical interaction between the adherens junction protein α -catenin and the tight junction protein ZO-1 that is required for the assembly of epithelial tight junctions. In addition to being required for tight junction assembly, we identified a role for adherens junctions in transmitting force signals to tight junctions. This role is dependent on ZO-1 recruitment to cell-cell junctions by α -catenin in response to shear stress. **Together, the research completed during my Ph.D. training identified key mechanisms in the regulation of epithelial cell-cell junctions and provided me invaluable expertise in molecular and cellular biology that will aid me in my career as a scientist.**

- a. Campbell, HK; **Maiers, JL**; and DeMali, KA. Interplay Between Tight Junctions & Adherens Junctions. *Exp Cell Res*. 2017 March 31. Review. PMID: 28372972.

- b. **Maiers, JL.**, Peng, X., Fanning, AS., DeMali KA. ZO-1 Recruitment to α -Catenin: A Novel Mechanism for Coupling the Assembly of Tight Junctions to Adherens Junctions. *J. Cell Sci.* 2013 Sep 1; 126: 3904-3915. PMID: 23813953
- c. Peng, X., **Maiers, JL.**, Choudhury, D., Craig, SW., and DeMali, KA. Alpha-catenin uses a novel mechanism to activate vinculin. *J. Biol. Chem.* 2012: Mar 2; 287(10):7728-37. PMID: 22235119

Michael J. Maniaci, M.D. is the Enterprise Physician Lead for the Advanced Care at Home program as well as the current Medical Director of Mayo Clinic Hospital in Florida. His previous leadership positions include the Chair of the Division of Hospital Internal Medicine in Florida, the Associate Chair of Inpatient Practice for the Department of Medicine in Florida, the Associate Program Director for the Internal Medicine Residency Program, the Associate Medical Director of the Mayo Clinic Multidisciplinary Simulation Center , and the Medical Director of Patient Experience in Florida. He currently holds the academic rank of Associate Professor of Medicine in Mayo Clinic College of Medicine and Science.

He received his M.D. from Saint Louis University Medical School in 2003. He completed his residency training at the Mayo Graduate School of Medicine in 2006 and is boarded in Internal Medicine. He then completed a one-year Chief Residency program at the Mayo Graduate School of Medicine in 2007. Following this, he joined the Hospital Internal Medicine Practice at Mayo Clinic in Florida.

His outstanding efforts in teaching have been exemplified with numerous teaching awards including the Top Hospital Internal Medicine Teacher award given to him in 2009, 2011, 2012, and 2015. He also received the Internal Medicine Teacher the Year in 2012 and the Outstanding Educator Award from the Department of Internal Medicine in 2011.

He has a passion for innovation and technology in the medical field. He is recognized as leader in faculty development for the teaching of simulation medicine and has had several invited professorships to teach faculty development in simulation both in United States and throughout Asia. His current focus is developing the Advanced Care at Home program and the Care Hotel program, Mayo Clinic's first expansion into the virtual home hospital and surgical aftercare realm.

His bibliography lists 37 peer-reviewed original papers and articles of which he first author or mentoring author of 21.

Dr. Marshall is a benign (non-malignant) hematologist specializing in thrombosis and hemostasis, particularly disorders of thrombosis and hemostasis in women. She was an Associate Professor of Medicine in Hematology at the Mayo Clinic in Rochester, Minnesota and will shortly be transitioning to the University of Pennsylvania in Philadelphia, Pennsylvania where she will build a Women's Thrombosis and Hemostasis program. Dr. Marshall is also a medical educator with a focus on career development, leadership, and mentorship. She previously served as the Associate Program Director of the Hematology/Oncology Fellowship Program at Mayo Clinic and will be transitioning to Associate Program Director for the Benign Hematology Fellowship at University of Pennsylvania. Dr. Marshall has a particular interest in gender equity in medicine and leads several research projects and advocacy initiatives to advance career development opportunities for women in medicine and science. She is the Curriculum Chair for the American Medical Women's Association (AMWA) IGNITE Program and a member of the AMWA Infertility Task Force. Her advocacy efforts led to the formation of the ASH Women in Hematology working group – which she Co-Chairs - and she is leading research and advocacy efforts in fertility/infertility awareness, parental health, and gender equity for women in medicine nationwide.

ARIELA L. MARSHALL, MD

5223 Trident Lane SW
Rochester, MN 55902
Phone: (617) 894-7554
Email: ariela_marshall@gmail.com
Twitter: @AMarshallMD
LinkedIn: <https://www.linkedin.com/in/arielamarshallmd/>

CAREER SUMMARY AND GOALS

- Harvard-trained physician leader with over 10 years of experience in clinical practice, research, administrative leadership, and medical education
- Board-certified hematologist with clinical expertise in non-malignant hematology (coagulation medicine), particularly women's health issues in thrombosis and hemostasis
- Research interests include: coagulation, women's health, gender equity, and mentorship/career development

EDUCATION

2009: M.D. *cum laude*

Harvard Medical School, Boston, MA

2005: B.A. Biochemical Sciences, *magna cum laude*

Harvard University, Cambridge, MA

CLINICAL TRAINING

2012-2015: Fellowship in Hematology/Oncology

Dana-Farber Cancer Institute/Massachusetts General Hospital, Boston, MA

2009-2012: Internship and Residency in Internal Medicine

Hospital of the University of Pennsylvania, Philadelphia, PA

BOARD CERTIFICATION

American Board of Internal Medicine: Internal Medicine

American Board of Internal Medicine: Hematology

ACADEMIC APPOINTMENTS

2019 – Present Associate Professor of Medicine, Mayo Clinic

2017 – Present Assistant Professor of Laboratory Medicine and Pathology, Mayo Clinic

2015 – 2019 Assistant Professor of Medicine, Mayo Clinic

LEADERSHIP, EDUCATION, and ADVOCACY TRAINING

2019: Harvard Career Advancement and Leadership Skills for Women in Healthcare

- Professional development program offering evidence-based strategies and skills development for women in healthcare to succeed at high-level leadership positions

2019: Certificate in International Women's Health and Human Rights (Stanford online)

- Education focused on women's issues particularly in disadvantaged/impoverished communities

2016: American Society of Hematology (ASH) Advocacy Leadership Institute

- Competitive national training program in legislation and health policy along with in-person visits with congressional delegates to advocate for the needs of underserved patients

2014-2015: Harvard/Partners Health Care Clinical Process Improvement Leadership Program (CPIP)

- Immersive training program that engages healthcare teams in the use of process improvement and quality measurement tools to reduce variation in care and improve patient outcomes

LEADERSHIP APPOINTMENTS

2020-Present: Associate Program Director, Mayo Clinic Hematology/Oncology Fellowship

- Lead selection of applicants for interview/admission to the program; oversee fellow performance evaluations
- Guide fellows in career and leadership development
- Create innovative methods of educational delivery and develop/oversee core educational series for our hematology fellows
- Fellow graduates/mentees placed in positions of leadership in academic medicine, clinical/private practice and have secured significant research grant funding

2020-Present: Curriculum Chair, American Medical Women's Association (AMWA) IGNITE

- Oversee content for a variety of areas related to women in medicine (reproductive life planning, gender bias, resilience, financial planning, etc)
- Incorporate available and emerging education technologies ("EdTech") to present materials in an engaging, interactive manner
- Ensure topics and presentation materials adhere to curricular guidelines and brand standard

2020: Section Lead, Diversity and Inclusion (D&I), *Lancet Haematology*

- Recruited to this one-year inaugural position from an international pool of highly trained prospects
- Commission submissions regarding racial and gender equity in hematology with a focus on underserved populations and hematology practice in low-middle income countries
- Appointment to role has been received extremely well by the international medical community and has led to creation of such positions in other journals/medical societies

2019-Present: Associate Professor of Medicine, Division of Hematology, Mayo Clinic Rochester

- Expert in thrombosis/hemostasis, particularly conditions that affect women's health
- National/international speaker at hematologic conferences
- Leader in education and educational innovation within the Division of Hematology

2019-Present: Director, Student Wellness, Mayo Clinic Alix School of Medicine

- Develop and oversee efforts to promote optimal student well-being
- Chair the Student Life and Wellness Committee and lead programs including wellness grant funding, student-led wellness research projects, and academic support programs
- Improved student access to counselling and support during stressful periods of training

2019-Present: Co-Chair, Physician Wellness, Mayo Clinic Division of Hematology

- Interviewed majority of physicians in hematology and identified major sources of burnout
- Developed strategies to mitigate burnout and improve staff morale
- Advocated for change with division Chair and administration leadership
- Enacted multiple new interventions leading to improved staff flexibility, improved sense of autonomy, and decreased clerical burden

2017-Present: Vice Chair, Hematology Inpatient Practice, Mayo Clinic Rochester

- Responsible for clinical management/oversight and strategic growth of our Hematology inpatient practices
- Guide decisions regarding hospital admissions flow/triage, bed and other space management, clinical practice guidelines, development of new service lines, and educational/trainee oversight

2017-Present: Medical Director, Mayo Clinic Advanced Practice Provider Hematology Fellowship

- Created and currently manage one of the first fellowships in the country dedicated to advanced training in hematology
- Recruit, evaluate, and assess outcomes of fellows in the program
- Training has led to successful placement of graduates in advanced hematology nursing roles

EDUCATION AND ADVOCACY LEADERSHIP ACTIVITIES (CURRENT)

American Board of Internal Medicine (ABIM) Item-Writing Task Force

- Member of the hematology item-writing task force specializing in Coagulation medicine

American Medical Women's Association (AMWA) Advocacy and Policy Committee

- We aim to set national health care policy and influence legislation on women's health issues and advise stakeholders on legislation and policies at national/state level

American Medical Women's Association (AMWA) Gender Equity Task Force

- Create and disseminate educational materials, useful gender equity resources, and networking initiatives for women in medicine nationwide

American Society of Hematology (ASH) Medical Education Subcommittee

- Provide career development/mentorship connection opportunities and develop new educational tools/methods for hematologists-in-training including those from the United States and those from (often underserved) areas in Central/South America

American Society of Hematology (ASH) Medical Educators Institute (MEI) Faculty Member

- Provides formal instruction and career development for hematology faculty committed to careers in medical; offers a network of contacts for medical educators nationwide

American Society of Hematology (ASH) Recruitment and Retention Working Group

- Guide initiatives to enhance recruitment and retention of skilled trainees into hematology
- We research and publish education-focused projects in the peer-reviewed literature

American Society of Hematology (ASH) Women in Hematology Working Group

- Personally created the group through national advocacy efforts; currently Co-Chair
- We identify opportunities for enhancing career advancement of female hematologists including mentorship, committee participation/leadership, and receipt of awards
- Actively nominate deserving female hematologists for prestigious awards/grants

Minnesota Medical Association Policy Council

- Reviews and makes recommendations on health policy issues facing Minnesota physicians and patients; have personally led legislation efforts related to gender equity/parental health

EDUCATION AND ADVOCACY LEADERSHIP ACTIVITIES (PRIOR)

American Association of Medical Colleges (AAMC) Organization of Resident Representatives (ORR)

American Society of Clinical Oncology (ASCO) Career Development Subcommittee

American Society of Hematology (ASH) Committee on Training Programs Trainee Council

Dana-Farber/Brigham and Women's Medical Education Curriculum Development

Dana-Farber Cancer Institute Fellowship Education Committee

Doximity Fellows Program: Hematology Fellow

Harvard Medical School Committee on Curriculum Reform

Harvard Medical School Student Teaching Corps

Harvard Medical School Chapter of the American Medical Association

Hospital of the University of Pennsylvania Graduate Medical Education Committee

Hospital of the University of Pennsylvania Internal Medicine Residency Admissions Committee

Massachusetts General Hospital Graduate Medical Education Committee

Massachusetts Medical Society Medical Student Section Governing Council

GRANT FUNDING

1. Mayo Clinic GME Program Innovation Award

4/1/2019 – 3/31/2021

Project: “Parental Health in Fellowship Trainees: A multidisciplinary wellness initiative.”

Led a comprehensive review of existing parental health policies and resources from Mayo and conduct a Mayo fellowship-wide survey examining fellow knowledge of current policies and interest in additions/innovations to existing policies. We will next create standardized parental health guidelines (including length of leave and financial support for childbearing/birth as well as parental leave, policies for fertility treatments, a return-to-work policy for new parents with possible flexible scheduling accommodations, and breastfeeding policies).

Amount: \$11,500

2. Mayo Clinic Endowment for Education Research Award

1/1/2017–12/15/2017

Project: “Determinants of Hematology-Oncology Trainee’s Post-Fellowship Career Pathways with a Focus on Non-Malignant Hematology”

Survey-based educational study in which I identified factors involved in hematology-oncology fellows’ career choices, specifically those factors which influenced trainees to pursue (or not to pursue) a career in non-malignant hematology; research published in an international peer-reviewed journal.

Amount: \$10,000

3. Mayo Clinic Hematology Division Small Grant Award

1/1/2016-12/31/2016

Project: “Obstetric and Gynecologic Decision-Making and Outcomes in Patients with Antithrombin Deficiency: A Patient-Centered Clinical Research Project”

Conducted a survey to assess the reproductive experience (contraception methods, pregnancy outcomes, assisted reproduction use, menorrhagia) in women with antithrombin deficiency. Results published in an international peer-reviewed journal.

Amount: \$10,000

4. Mayo Clinic Innovation Award in Quality Improvement

1/1/2016-12/31/2016

Project: “Utilization, clinical appropriateness, and cost-effectiveness of endoscopic procedures in the initial workup of anemia”

Evaluated patients undergoing colonoscopy and/or endoscopy for workup of general anemia or iron deficiency anemia to assess rates of documentation of iron deficiency, blood counts, and/or positive fecal hemoglobin prior to the procedure. Presented at an international conference.

Amount: \$50,000

PUBLICATIONS

Original Peer-Reviewed Articles

1. **Marshall AL**, Elafros M, Duma NJ. Work patterns of Women Physicians during Vacation: A Cross-Sectional Study. *J Womens Health* 2021 [Online ahead of print]
2. **Marshall AL**, Halfdanarson TR, Alkhateeb H, Hobday T. Pilot study characterizing the hematology-oncology fellow job search process: Tools used and identification of potential new resources. *J Cancer Educ* 2021; 1-4.
3. **Marshall AL**, Halvorsen AJ, Kearns L et al. Disparities in Salary and Work-Life Integration in Internal Medicine Program Directors are Associated with Gender and Partner Employment Status. *Am J Med* 2021; 134(2): 285-21.
4. Smith CJ, Kluck LA, Ruan GJ, Ashrani AA, **Marshall AL** et al. Leukocytosis and Tobacco Use: An Observational Study of Asymptomatic Leukocytosis. *Am J Med* 2021; 134(1): 331-35.
5. Saliba AN, Zie Z, Higgins AS, Andrade-Gonzalez XA, Fuentes-Bayne HE, Hampel PJ, Kankeu Fonkoua LA, Childs DS, rakshit S, Bezerra ED, Kommalapati A, Lou Y, Rivera CE, Price KA, Chintanuntlawar A, Yan Y, Schwecke AJ, Block MS, Thanarajasingam U, Thanarajasingam G, Wolanskyu-Spinner AP, **Marshall AL** et al. Immune-related hematologic adverse events in the context of immune checkpoint inhibitor therapy. *Am J Hematol* 2021 [online ahead of print]
6. **Marshall AL**, Recht M, Sridharan M et al. A study of dedicated haemophilia carrier clinics in the United States: Prevalence, services offered and barriers to development. *Haemophilia* 2020; 26(5): e253-55.
7. **Marshall AL**, Dyrbye LN, Shanafelt T et al. Disparities in Burnout and Satisfaction with Work-Life Integration in U.S. Physicians by Gender and Practice Setting. *Acad Med* 2020; 95(9): 1435-43.
8. **Marshall AL**, Halfdanarson TR, Nowakowski GS et al. Holistic Review for Hematology-Oncology Fellowship Applicants: A New Paradigm? *Am J Hematol* 2020; Epub July 2020.
9. **Marshall AL**, Thompson CA, Cullen MW et al. Medical education interest, exposure, and career planning in subspecialty trainees. *Med Sci Educ* 2020; 30: 1011-14.
10. **Marshall AL**, Wolanskyj-Spinner A. COVID-19: Challenges and Opportunities for Educators and Generation Z Learners. *Mayo Clin Proc* 2020; 95(6): 1135-37.
11. **Marshall AL**, Aurora VM, Salles A. Physician Fertility: A Call to Action. *Acad Med* 2020; 95(5): 679-81.
12. **Marshall AL**, Dines V, Wahner Hendrickson A et al. Parental health in fellowship trainees: Fellows' satisfaction with current policies and interest in innovation. *Womens Health (Lond)* 2020; 16: 1745506520949417.
13. **Marshall AL**, Dversal RK, Murphy M et al. WOMENtorship: The #WomenInMedicine perspective. *Med Teach* 2020; 42(2): 228-30.
14. **Marshall AL**. Diversity and Inclusion in Haematology: The Case for Diversity. *Lancet Haematology* 2020; 7(10): E14.
15. **Marshall AL**, Durani U, Mikhael J. Women in academic medicine leadership: Correlation between sex of medical school deans and affiliated academic hospital system CEOs. *BMJ Leader* Online First 05 March 2020. doi: doi: 10.1136/leader-2019-000151
16. Mozzam S, Onstad L, O'Leary H, **Marshall AL** et al. Gender differences in question-asking at the 2019 American Society of Hematology Annual Meeting. *Blood Adv* 2020; 4(21): 5473-5479.
17. Riaz IB, Siddiqi R, Zahid U, Durani U, Fatima K, Sipra QR, Raina AI, Farooq MZ, Chamberlain AM, Wang Z, Go RS, **Marshall AL**, Khosa F. Gender Differences in Faculty Rank and Leadership Positions Among Hematologists and Oncologists in the United States. *JCO Oncol Pract* 2020; 16(6): e507-16.
18. McBane RD 2nd, Torres Roldan CV, Niven AS, Pruthi RK, Franco PM, Linderbaum JA, Casanegra AI, Oyen LJ, Houghton DE, **Marshall AL** et al. Anticoagulation in COVID-19: A Systematic Review, Meta-Analysis, and Rapid Guidance from Mayo Clinic. *Mayo Clin Proc* 2020; 95(11): 2467-86.
19. Riaz IB, **Marshall AL**, Badgett RG. In cancer-associated VTE, apixaban was noninferior to dalteparin for recurrence and did not increase major bleeding. *Ann Intern Med* 2020; 173(4):

20. Razonable RR, Pennington KM, Meehan AM, Wilson JW, Froemming AT, Bennett CE, **Marshall AL**, et al. A Collaborative Multidisciplinary Approach to the Management of Coronavirus Disease 2019 in the Hospital Setting. *Mayo Clin Proc* 2020; 95(7): 1467-81.
21. Bubik RJ, Barth DM, Hook C, Wolf RC, Muth JM, Mara K, Patnaik MS, Pruthi RK, **Marshall AL**, et al. Clinical outcomes of adults with hemophagocytic lymphohistiocytosis treated with the HLH-04 protocol: a retrospective analysis. *Leuk Lymphoma* 2020; 61(7): 1592-1600.
22. Hwa YL, Shelly JL, Zblewski DL, Spychalla MT, Udenberg DM, Cieslak KR, Nowakowski GS, Lacy MQ, **Marshall AL**. Mayo Clinic Hematology Fellowship for Advanced Practice Providers. *J Adv Pract Oncol* 2020; 11(4): 395-400.
23. Khodadadi RB, Ogden JR, **Marshall AL**. 91-year old man with upper extremity ecchymoses. *Mayo Clin Proc* 2020; 95(3): e23-29.
24. Azer SM, Eckerman AL, Rodriguez V, Nichols WL Jr, Ashrani AA, Hook CC, **Marshall AL**, Pruthi RK. Hemostatic prophylaxis and colonoscopy outcomes for patients with bleeding disorders: A retrospective cohort study and review of the literature. *Haemophilia* 2020; 26(2): 257-68.
25. Aiello G, Rinaldo L, **Marshall AL** et al. Incidence of hereditary thrombophilia in patients with cranial dural arteriovenous fistulae. *J Clin Neurosci* 2020; 73: 136-39.
26. Scheckel CJ, Yanardag Acik D, Ravindran A, **Marshall AL** et al. Hapticophagia: Tactile chew cravings in iron deficiency anemia. *Am J Hematol* 2020; 95(5): E107-108.
27. **Marshall AL**, Dasari H, Warner ND, et al. Self-Reported reproductive health experiences in women with von Willebrand disease: A qualitative interview-based study. *J Obstet Gynaecol* 2019; 39(2): 288-90.
28. **Marshall AL**, Gupta R, Grill D, et al. Identification of factors associated with Hematology-Oncology fellow academic success and career choice. *J Cancer Educ* 2019; 34(6): 1219-24.
29. **Marshall AL** and Wolanskyj-Spinner A. Importance of and Strategies for Achieving Gender Equity in Hematology. *Am J Hematol* 2019; 94(6): E174-175.
30. **Marshall AL**, Mann S, Wolanskyj-Spinner A. Digital storytelling for hematology education: Interactive thalassemia module for graduate millennial learners. *Am J Hematol* 2019; 94(2): E66-67.
31. Sharma D, Wallace N, Levinsohn EA, **Marshall AL** et al. Trends and factors affecting the US adult hematology workforce: a mixed methods study. *Blood Adv* 2019; 3(22): 3550-61.
32. Masselink LE, Erickson CE, Connell NT, De Castro LM, Dent GA, **Marshall AL**, et al. Associations between hematology/oncology fellows' training and mentorship experiences and hematology-only career plans. *Blood Adv* 2019; 3(21): 3278-86.
33. Duma N, Durani U, Woods CB, Kankeu Fonkoua LA, Cook JM, Wee C, Fuentes HE, Gonzalez-Velez M, Murphy MC, Jain S, **Marshall AL**, Graff SL, Knoll MA. Evaluating Unconscious Bias: Speaker Introductions at an International Oncology Conference. *J Clin Oncol* 2019; 37(36): 3538-45.
34. DeLoughery EP, Ravindran A, Ashrani AA, Begna KH, Hook CC, **Marshall AL** et al. Patterns and utility of vitamin B12 and folate testing in patients with isolated thrombocytopenia. *Ann Hematol* 2019; 98(8): 1993-94.
35. Hwa YL, **Marshall AL**, Shelly JL et al. Assessment of the need for a hematology-specific fellowship curriculum for advanced practice providers using a needs-based survey. *J Oncol Pract* 2019; 15(7): e593-99.
36. Maguire M, Fuh L, Goldstein JN, **Marshall AL** et al. Thromboembolic risk of 4-Factor Prothrombin Complex Concentrate versus Fresh Frozen Plasma for Urgent Warfarin Reversal in the Emergency Department. *West J Emerg Med* 2019; 20(4): 619-25.
37. Hsieh RW, Ravindran A, Hook CC, Begna KH, Ashrani AA, Pruthi RK, **Marshall AL** et al. Etiologies of extreme thrombocytosis: A contemporary series. *Mayo Clin Proc* 2019; 94(8): 1542-50.
38. Pophali PA, Bartley A, Kapoor P, Gonsalves WI, Ashrani AA, **Marshall AL**, et al. Prevalence and survival of smouldering Waldenstrom macroglobulinaemia in the United States. *Br J*

Haematol 2019; 184(6): 1014-17.

39. **Marshall AL**, Jenkins S, Oxentenko AS, et al. Internal medicine trainees' knowledge and confidence in using the American Society of Hematology Choosing Wisely guidelines in hemostasis, thrombosis, and non-malignant hematology. *PLoS One* 2018; 15(5): e0197414.
40. **Marshall AL**, Jenkins S, Mikhael J, Gitlin SD. Determinants of Hematology-Oncology Trainee's Post-Fellowship Career Pathways with a focus on Non-Malignant Hematology. *Blood Adv* 2018; 2(4): 361-69.
41. **Marshall AL**, Pruthi RK, Kreuter JD. Simulation-based Transfusion Education for Medical Students. *Transfus Med Rev* 2018; 32(2): 123-24.
42. Sridharan M, Fylling KA, Ashrani AA, Chen D, **Marshall AL** et al. Clinical and laboratory diagnosis of autoimmune factor V inhibitors: A single institutional experience. *Thromb Res* 2018; 171: 14-21.
43. Nalluru SS, Sridharan M, Go RS, Said S, **Marshall AL**. Shiga Toxin as a potential trigger of CFHR1 deletion-associated thrombotic microangiopathy. *Am J Med Sci* 2018; 356(5): 492-98.
44. Sengupta N, **Marshall AL**, Jones BA et al. Rebleeding vs Thromboembolism after hospitalization for gastrointestinal bleeding in patients on direct oral anticoagulants. *Clin Gastroenterol Hepatol* 2018; 16(12): 1893-1900.
45. Al-Samkari H, **Marshall AL**, Goodarzi K, Kuter DJ. Romiplostim for the management of perioperative thrombocytopenia. *Br J Haematol* 2018; 182(1): 106-113.
46. Ravindran A, Go RS, Reichard KK, **Marshall AL**. Evaluation of Thrombocytopenia in the Hematology Clinic: A case series from a large tertiary care center. *Blood Res* 2018; 53(2): 166-67.
47. Yeh AC, Khan M, Harlow J, Biswas A, Rumana M, Ferdous J, Ara T, Islam MM, Caron M, Barron AM, Moran J, Brezina M, Nazneen H, Kamruzzaman M, Saha A, **Marshall A** et al. Hematopoietic Stem-cell transplantation in resource-limited settings: establishing the first bone marrow transplant unit in Bangladesh. *J Glob Oncol* 2018; 4: 1-10hr.
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50. **Marshall AL**, Bartley AC, Ashrani AA, et al. Sex-based disparities in venous thromboembolism outcomes: a national inpatient sample (NIS)-based analysis. *Vasc Med* 2017; 22(2): 121-127.
51. Al-Samkari H, **Marshall AL**, Goodarzi K, Kuter DJ. The use of romiplostim in treating chemotherapy-induced thrombocytopenia in patients with solid tumors. *Haematologica* 2018; 103(4): e169-72.
52. Ravindran A, Sankaran J, Jacob EK, Kreuter JD, Hook CC, Gertz MA, Call TG, Pruthi RK, Litzow MR, Wolanskyj AP, Hogan WJ, Ashrani AA, Begna HK, **Marshall AL** et al. High prevalence of monoclonal gammopathy among patients with warm autoimmune hemolytic anemia. *Am J Hematol* 2017; 92(3): E164-E166.
53. Ravindran A, Gonsalves WI, Hashmi SK, Kapoor P, **Marshall AL**, et al. Estimating the annual volume of hematologic cancer cases per hematologist-oncologist in the United States: are we treating rare cancers too rarely? *Leuk Lymphoma* 2017; 58(1): 251-52.
54. **Marshall AL**, Zhang X, Lewis B, Go RS. Sex-based disparities in the use and results of gastrointestinal procedures for workup of anemia. *J Womens Health Issues Care* 2016; 5:6.
55. **Marshall AL**, Scarpone R, De Greef M, et al. Remissions after Long Term use of Romiplostim for Immune Thrombocytopenia. *Haematologica* 2016; 101(12):e476-78.
56. **Marshall AL**, Levine M, Howell M, et al. Dose-associated Pulmonary Complication Rates after Fresh Frozen Plasma Administration for Warfarin Reversal. *J Thromb Haemost* 2016; 14(2): 324-30.
57. **Marshall A**, Li A, Drucker A, and Dzik W. Aminocaproic acid use in hospitalized patients with hematological malignancy: a case series. *Hematol Oncol* 2016; 34(3): 147-53.

58. Go RS, Winters JL, Leung N, Murray DL, Willrich MA, Abraham RS, Amer H, Hogan WJ, **Marshall AL**, et al. Thrombotic Microangiopathy Care Pathway: A consensus statement for the Mayo Clinic Complement Alternative Pathway-Thrombotic Microangiopathy (CAP-TMA) Disease-Oriented Group. *Mayo Clin Proc* 2016; 91(9): 1189-211.

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62. **Marshall AL**, Campigotto F, Neuberg D, et al. Recurrence of venous thromboembolism in patients with cancer treated with warfarin. *Clin Appl Thromb Hemost* 2015; 21(7): 632-38.

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Abstracts

- Blitzer G et al. OCEAN (wOmen's Career choicEs About oNcology) Study: Motivations to pursue or not pursue academic oncology. Poster presentation at: American Society of Clinical Oncology Annual Meeting, June 2021 (VIRTUAL)

2. Sridharan M, Ashrani A, Chen D, **Marshall AL** et al. Evaluation of Soluble Fibrin Monomer Complex in patients with SARS-COV-2 COVID-19 infection. Poster presentation at: American Society of Hematology Annual Meeting, December 2020 (VIRTUAL)
3. Scheckel C, Pruthi R, **Marshall AL** et al. Thrombophilia Testing Practices: The Mayo Clinic Experience. Poster presentation at: American Society of Hematology Annual Meeting, December 2020 (VIRTUAL)
4. Velazquez Manana AI, Durani U, Reynolds R, Kumbamu A, Das DG, Murphy MC, Henry E, Lee AI, **Marshall AL**. The Impact of COVID-19 on Hematology-Oncology Fellowship Programs: Program Director Perspectives. Poster presentation at: American Society of Hematology Annual Meeting, December 2020 (VIRTUAL);
5. Durani U, Velazquez Manana AI, May J, Nelson M, Zheng Z, Gollapudi A, Alam ST, Reynolds, Thompson JC, Kumbamu A, Das DG, Murphy MC, Henry E, Lee AI, **Marshall AL** et al. Measuring the Impact of COVID-19 on Hematology-Oncology Trainees: A Quantitative and Qualitative Assessment. Poster presentation at: American Society of Hematology Annual Meeting, December 2020 (VIRTUAL)
6. Gonzalez Velez M, Duma N, Cabrera D, **Marshall AL** et al. Patterns of Twitter use among trainees in hematology-oncology related areas. Poster presentation at: American Society of Clinical Oncology Annual Meeting, 2020.
7. Lee AI, Masselink L, Bass E, Connell NT, **Marshall AL** et al. Mentorship Experiences among Second-Year U.S. Hematology/Oncology Fellows in the 2019 ASH Hematology/Oncology Fellows Survey. Poster presentation at: American Society of Hematology Annual Meeting, December 2019.
8. Riaz I, Siddiqi R, Zahid U, Durani U, Fatima K, Riaz Spira QUA, Raina A, Farooq MZ, Chamberlain AC, Wang Z, Go RS, Khosa F, **Marshall AL**. Sex Differences in Faculty Rank and Leadership Positions amongst Hematologists and Oncologists in United States: A Cross-Sectional Survey. Poster presentation at: American Society of Hematology Annual Meeting, December 2019.
9. Durani U, Duma N, Slostad JA, Wee CE, Kusne Y, Patel S, Bernabe C, Velazquez A, Woods CB, Murphy MM, Knoll M, Jain S, Graff SL, **Marshall AL**. What's in a Name? A Gender-Based Analysis of Speaker Introductions at the American Society of Hematology Annual Meeting. Poster presentation: American Society of Hematology Annual Meeting, December 2019.
10. **Marshall AL**, Dines V, Wahner Hendrickson A et al. Parental Health in Fellowship Trainees: An Assessment of Current Policies. Poster presentation at: American Association of Medical Colleges (AAMC) Annual Meeting 2019, Group on Women in Medicine and Science (GWIMS) Poster Session, November 2019.
11. **Marshall AL** and Wolanskyj-Spinner A. Advocacy for Women in Medicine at the Subspecialty level: The example of SHEmatology. Poster presentation at: GRIT for Women in Medicine: Growth, Resilience, Inspiration and Tenacity, September 2019.
12. Seidel-Miller K, Harris C, Oxentenko A, **Marshall AL** et al. Revolution by Resolution: How to Submit a Gender Equity Resolution. Poster presentation at: GRIT for Women in Medicine: Growth, Resilience, Inspiration and Tenacity, September 2019.
13. Duma N, Durani U, Woods CB, Kankeu Fonkoua LA, Cook J, Wee C, Fuentes HE, Gonzalez-Velez M, Murphy MC, Jain S, **Marshall AL**, Graff SL, Knoll M. Evaluating unconscious bias: Speaker introductions at an international oncology conference. ORAL presentation at: American Society of Clinical Oncology Annual Meeting, June 2019.
14. Hwa YL, **Marshall AL**, Shelly JL, et al. Development of a Hematology-Specific Fellowship Curriculum for Advanced Practice Providers Utilizing a Needs-Based Assessment. Poster presentation at: American Society of Hematology Annual Meeting, December 2018
15. Khodadadi RB, Slusser JP, Grill DE, Pruthi RK, **Marshall AL**. A Single-Institution Retrospective Study of Causes of Prolonged Prothrombin Time (PT) and Activated Partial Thromboplastin Time (aPTT) in the Outpatient Setting. Poster presentation at: American Society of Hematology Annual Meeting, December 2018
16. Fuentes-Bayne HE, Durani U, McBane RD, Pruthi RK, Ashrani AA, **Marshall AL**. Inpatient

outcomes and rates of venous thromboembolism and gastrointestinal hemorrhage in patients with gastric cancer: results from Nationwide Inpatient Sample database 2009-2014. Poster presentation at: American Society of Hematology Annual Meeting, December 2018

17. **Marshall AL**, Gupta R, Grill D, et al. Identification of factors associated with Hematology-Oncology fellow academic success and career choice. **Oral** presentation at Mayo Clinic-Karolinska Institutet 24th Annual Scientific Research Meeting, Rochester MN, September 2018
18. **Marshall AL**, Jenkins S, Oxentenko AS, et al. Internal medicine trainees' knowledge and confidence in using the American Society of Hematology Choosing Wisely guidelines in hemostasis, thrombosis, and non-malignant hematology. Poster presentation at: Thrombosis and Hemostasis Societies of North America (THSNA) Biannual Meeting, March 2018.
19. **Marshall AL**, Jenkins S, Mikhael J, Gitlin S. Determinants of Hematology-Oncology Trainee's Post-Fellowship Career Pathways with a Focus on Non-Malignant Hematology. Poster presentation at: American Society of Hematology Annual Meeting, December 2017.
20. **Marshall AL**, Durani J, Bartley A, et al. The impact of postpartum hemorrhage on hospital length of stay and inpatient mortality: A national inpatient sample (NIS)-based analysis. **ORAL presentation** at: Women's Health Issues in Thrombosis and Haemostasis, Barcelona, Spain, March 2017
21. **Marshall AL**, Perez Botero J, Crusan DJ, et al. Age-related risk of venous thromboembolism in women with antithrombin deficiency. Poster presentation at: Women's Health Issues in Thrombosis and Haemostasis, Barcelona, Spain March 2017
22. **Marshall AL**, Perez Botero J, Crusan DJ, et al. Venous thromboembolism risk in pregnant women with antithrombin deficiency. Poster presentation at: Women's Health Issues in Thrombosis and Haemostasis, Barcelona, Spain March 2017
23. **Marshall AL**, Perez Botero J, Heit JA, et al. The impact of antithrombin deficiency on women's reproductive health experiences and healthcare decision-making: A qualitative patient-oriented survey study. Poster presentation at: American Society of Hematology Annual Meeting, December 2016.
24. **Marshall AL**, Zhang X, Lewis B, et al. Characterizing the use of gastrointestinal procedures in the workup of anemia: Patterns of care and areas for improvement. Poster presentation at: American Society of Hematology Annual Meeting, December 2016.
25. Al-Samkari H, **Marshall AL**, et al. Romiplostim for treatment and prevention of chemotherapy-associated thrombocytopenia. Poster presentation at: American Society of Hematology Annual Meeting, December 2016.
26. Ravindran A, Sankaran J, Shi M, Jacob EK, Kreuter JD, Winters JL, Hook CC, Call TG, **Marshall AL**, et al. Characteristics and Outcome of direct antiglobulin test-negative hemolytic anemia: A case series. Poster presentation at: American Society of Hematology Annual Meeting, December 2016.
27. Zhang X, **Marshall AL**, Lewis B, et al. Predictive factors associated with positive endoscopic findings during evaluation for iron deficiency anemia. Poster presentation at: American College of Gastroenterology, October 2016.
28. Ravindran A, Go RS, Reichard KK, and **Marshall AL**. Utility of peripheral smear and bone marrow biopsy in the workup of thrombocytopenia: a case series. Poster presentation at: American Society of Clinical Pathology Conference, September 2016.
29. Ravindran A, Kyle RA, Sankaran J, Jacob EK, Kreuter JD, Hook CC, Gertz MA, Call TG, **Marshall AL**, et al. High prevalence of monoclonal gammopathy among patients with warm autoimmune hemolytic anemia. Poster presentation at: American Society of Clinical Pathology Conference, September 2016.
30. Ravindran A, Sankaran J, Jacob EK, Kreuter JD, Hook CC, Gertz MA, Call TG, **Marshall AL**, et al. Serologic findings and disease associations among adult patients with autoimmune hemolytic anemia: a contemporary series from a large tertiary care center. Poster presentation at: American Society of Clinical Pathology Conference, September 2016.
31. **Marshall AL**, Durani U, Ashrani A, et al. Sociodemographic characteristics of women with postpartum hemorrhage: A Nationwide Inpatient Sample (NIS)-based analysis. Poster

presentation at: International Society on Thrombosis and Haemostasis Scientific Subcommittee, May 2016.

32. **Marshall AL**, Guenther J, Chintakuntlawar A, et al. First venous thromboembolic episodes in women with antithrombin deficiency often associate with oral contraceptives or pregnancy. Poster presentation at: International Society on Thrombosis and Haemostasis Scientific Subcommittee, May 2016.
33. Ravindran A, Gonsalves WI, Hashmi SK, Kapoor P, **Marshall AL**, et al. Estimating the annual volume of hematologic cancer cases per hematologist-oncologist in the US: Are we treating rare cancers too rarely? Poster presentation at: American Society of Hematology Annual Meeting, December 2015
34. Levine M, **Marshall AL**, Howell ML, et al. Thromboembolism after emergency warfarin reversal with fresh frozen plasma. Poster presentation at: American College of Emergency Physicians (ACEP) Scientific Assembly, October 2015.
35. **Marshall AL**, Levine M, Howell ML, et al. Dose-related pulmonary complication rates after fresh frozen plasma administration for warfarin reversal. Poster presentation at: International Society on Thrombosis and Haemostasis Congress, June 2015.
36. **Marshall AL**, Goodarzi K, and Kuter D. Romiplostim in management of the thrombocytopenic surgical patient. Poster presentation at: American Society of Hematology Annual Meeting, November 2014.
37. **Marshall AL**, Li A, Drucker A, and Dzik W. Aminocaproic acid use in patients with hematologic malignancy: a case series. Poster presentation at: American Society of Hematology Annual Meeting, November 2014.
38. **Marshall AL**, Campigotto F et al. Rates of recurrent venous thromboembolism amongst oncology patients managed in a dedicated anticoagulation clinic not higher with warfarin compared to parenteral anticoagulants. Poster Presentation at: Thrombosis and Hemostasis Summit of North America, 2014
39. **Marshall AL**, Drucker A and Dzik W. Use of aminocaproic acid in patients with hematologic malignancy: A case series from the Massachusetts General Hospital. Poster Presentation at: Thrombosis and Hemostasis Summit of North America, 2014
40. **Marshall AL**, Ciosek SL, et al. Evaluation of genes associated with undescended testes as predictors of TGCT susceptibility. Poster presentation at: American Society of Clinical Oncology Annual Meeting, 2012.
41. **Marshall AL**, Heist RS, et al. TP53-binding protein 1 (TP53BP1) Polymorphism is associated with survival in limited stage small cell lung cancer. Poster presentation at: American Association for Cancer Research Annual Meeting, 2009.
42. Bradbury PA, **Marshall AL**; et al. Prognostic significance of nuclear excision (NER) and base excision (BER) DNA repair gene polymorphisms in esophageal cancer. Poster presentation at: American Society of Clinical Oncology Annual Meeting, 2007.
43. Liu, G. (co-first author); **Marshall, A. (co-first author)**; et al. Treatment outcomes of advanced esophageal cancer patients and polymorphisms of nucleotide and base excision repair pathway genes. Poster presentation at: American Association for Cancer Research Annual Meeting, 2006.
44. Liu, G. (co-first author); **Marshall, A. (co-first author)**; et al. *MMP-1* polymorphism predicts time-to-progression in bronchioloalveolar carcinoma. ORAL presentation at: American Association for Cancer Research Annual Meeting, 2005.

Book Chapter

Marshall AL, Connors JM. “Anemia in Pregnancy.” In: *Anemia: Pathophysiology, Diagnosis and Management*. Benz E, Berliner N, Schiffman F, eds. 2017 (online 4/2018).

INVITED LECTURES and EDUCATION SESSIONS: CLINICAL

National/International

1. "Von Willebrand Disease." Subject Matter Expert/Discussant for the American Society of Hematology (ASH) Board Review Series. 2021, July (VIRTUAL).
2. "Basics of Hematology and Thrombosis/Hemostasis." Visiting Professor lecture for Susquehanna University Honors Colloquium. 2021, February (VIRTUAL)
3. "What's New in the Management of Thrombosis." Invited lecture at Mayo Clinic Hematology and Oncology Reviews 2019. 2019, August. Amelia Island, Florida.
4. "Direct oral anticoagulants (DOACs) and Antiphospholipid Syndrome (APS) and Heparin-Induced Thrombocytopenia (HIT)." Invited lecture at Mayo Clinic Clinical and Laboratory Update in Thrombosis and Anticoagulation. 2018, November. Scottsdale, Arizona.
5. "Special considerations in anticoagulation of cancer patients." Invited lecture at Mayo Clinic Clinical and Laboratory Update in Thrombosis and Anticoagulation. 2018, November. Scottsdale, Arizona.
6. "Treatment of Cancer-Associated Venous Thromboembolism: Outcomes of Direct Oral Anticoagulants (DOACs)." Invited lecture at Mayo Clinic Clinical and Laboratory Update in Thrombosis and Anticoagulation. 2018, November. Scottsdale, Arizona
7. "Bleeding Disorders in Pregnancy." Invited lecture at Niguarda Hospital Medical Review: Focus on Obstetric and Liver Transplant. 2018, May. Milan, Italy.
8. "Hemostasis in Liver Transplant." Invited lecture at Niguarda Hospital Medical Review: Focus on Obstetric and Liver Transplant. 2018, May. Milan, Italy.
9. "Women's Health Issues: Bleeding and Thrombotic Disorders." Mayo Clinic Bleeding and Thrombosing Diseases Conference. 2017, September. Rochester, Minnesota
10. "Updates in the Management of Hemophilia." Mayo Clinic Bleeding and Thrombosing Diseases Conference. 2017, September. Rochester, Minnesota.
11. "Bleeding Disorders 2016." Clinical and Multidisciplinary Hematology and Oncology. 2017, January. Scottsdale, Arizona.
12. "Preoperative Bleeding Risk Assessment." Overview of Perioperative Medicine Conference. 2016, November. Napa, California.
13. "Common Hematology Issues in the Perioperative Period." Overview of Perioperative Medicine Conference. 2016, November. Napa, California.
14. "Updates in Thrombosis." Mayo Clinic Hematology/Oncology Reviews. 2016, July. Amelia Island, Florida.

Local/Regional

1. "Thrombotic Microangiopathy in Pregnancy." Mayo Vascular Teaching Conference. 2021, April (VIRTUAL).
2. "Coagulation and Thrombosis Review." 18th Annual Mayo Clinic Hematology Review. 2021, January (VIRTUAL).
3. "Thrombosis and Hemostasis." Hematology-Oncology Fellows Board Review. 2021, March (VIRTUAL).
4. "How I Treat Sickle Cell Anemia 2021." Hematology-Oncology Fellows Teaching Conference. 2021, February (VIRTUAL).
5. "Obstetrics and Hematology." Mayo Clinic Alix School of Medicine. 2020, November (VIRTUAL).
6. "How I Use the Direct Oral Anticoagulants." Hematology-Oncology Fellows Conference. 2020, November (VIRTUAL).
7. "Coagulopathy and COVID-19." Mayo Infectious Disease Grand Rounds. 2020, April (VIRTUAL).
8. "Testosterone Therapy and risk of VTE." Hematology Clinical Pathologic Conference. 2020, February. Rochester, Minnesota.
9. "Updates in Coagulation and Thrombosis." 17th Annual Mayo Clinic Hematology Review. 2020, January. Minneapolis, Minnesota.

10. "Pregnancy-related hematologic issues and hemoglobinopathies." Hematology-Oncology Fellows Board Review Series. 2020, January. Rochester, Minnesota.
11. "Perioperative Sickle Cell Management." Hematology Clinical Pathologic Conference. 2019, April. Rochester, Minnesota.
12. "How I treat Sickle Cell Anemia." Hematology-Oncology Fellows Conference. 2019, March. Rochester, Minnesota.
13. "How I use Direct Oral Anticoagulants in my practice." Hematology-Oncology Fellows Conference. 2019, March. Rochester, Minnesota.
14. "Updates in Coagulation and Thrombosis." 16th Annual Mayo Clinic Hematology Review. 2019, January. Minneapolis, Minnesota.
15. "Challenging Topics in Coagulation." Hematology Fellows Teaching Conference. 2018, December. Rochester, Minnesota.
16. "Hematologic Emergencies." Mayo Internal Medicine Residency Didactic. 2018, December. Rochester, Minnesota.
17. "Direct oral anticoagulant (DOAC) trials in cancer-associated venous thromboembolism." Mayo Clinic/BMS-Pfizer Cancer VTE Symposium. 2018, September. Rochester, Minnesota.
18. "Antiphospholipid Syndrome and Hypofibrinogenemia: A Cautious Balance." Vascular Medicine Conference, 2018 May. Rochester, Minnesota.
19. "Updates in Coagulation and Thrombosis." 15th Annual Mayo Clinic Hematology Review. 2018, January. Minneapolis, Minnesota.
20. "Hematologic Emergencies." Mayo Internal Medicine Residency Didactic. 2017, February. Rochester, Minnesota.
21. "Management of Disorders of Hemostasis and Thrombosis in Pregnancy." Maternal-Fetal Medicine Didactic Talk. 2016, July. Rochester, Minnesota.
22. "57-Year Old Male with Newly Diagnosed APML and Acute Onset Fevers and Hypoxia." Senior Resident Clinico-Pathologic Conference. 2012, April. Philadelphia, Pennsylvania.

INVITED LECTURES: EDUCATION/CAREER DEVELOPMENT

National/International

1. "Journal through Infertility." Massachusetts General Hospital (MGH) Women in Oncology Lecture Series. 2021, August (VIRTUAL).
2. "Graceful Self-Promotion." Resources, Advice, Insight, Support and Empowerment (RAISE) for Early-Career Women Faculty (ECHO) UT Health San Antonio Lecture Series. 2021, June (VIRTUAL).
3. "Physician Fertility: A Call to Action." Keynote Panel, American Medical Women's Association (AMWA) First Physician Fertility Summit. 2021, June (VIRTUAL).
4. "Breaking News! Disparities in Oncology Publications." Professional Development and Education Advances, American Society of Clinical Oncology (ASCO) Annual Meeting. 2021, June (VIRTUAL).
5. "Reproductive Life Planning." American Medical Women's Association (AMWA) IGNITE Lecture Series for women medical students/trainees. 2021, June (VIRTUAL).
6. "Matching to the United States as an International Medical Graduate." IMG Connect Lecture Series. 2021, April (VIRTUAL).
7. "Promotion as a Hematology Educator." American Society of Hematology (ASH) Medical Educators' Institute Lecture Series. 2021, April (VIRTUAL).
8. "Graceful Self-Promotion." Hemostasis Thrombosis Research Society Career Development Lecture Series. 2020, October (VIRTUAL).
9. "Gender Disparities in Medicine." Scripps Health **Grand Rounds**. 2020, October (VIRTUAL).
10. "Creating a Learning Environment that helps Women Thrive in Medicine." Accreditation Council for Graduate Medical Education (ACGME) Annual Meeting. 2020, February. San Diego, California.
11. "Career Development Session: Medical Education in Hematology." American Society of Hematology Annual Meeting. 2019, December. Orlando, Florida.

12. "Gender Disparities in Internal Medicine Program Director Salary, Career Development, and Work Life Integration." **Oral plenary presentation** at the Association of Program Directors in Internal Medicine (APDIM) Fall Meeting. 2019, October. Denver, Colorado.
13. "Trainee Career Development: Medical Education in Hematology." American Society of Hematology Annual Meeting. 2018, December. San Diego, California.
14. "The Millennial Learner: Bridging the 'Generation Gap.'" American Society of Clinical Oncology Program Director's Retreat Conference. 2018, October. Washington, DC.
15. "ASH Medical Educators Institute Spotlight." American Society of Hematology Annual Meeting. 2017, December. Atlanta, Georgia.

Local/Regional

1. "Graceful Self-Promotion." Invited Speaker, Mayo Clinic Hematopathology Department Meeting. 2021, September. (VIRTUAL).
2. "Infertility in Physicians." Mayo Fellows' Association Lecture Series. 2021, April (VIRTUAL).
3. "Saying 'No': Career Development Session." Hematology-Oncology Fellows' Teaching Conference. 2020, July (VIRTUAL)
4. "Finding a Job After Fellowship." Hematology-Oncology Fellows' Career Development Conference Series. 2020, May (VIRTUAL).
5. "MyStory: Physician Fertility." Mayo Clinic Alix School of Medicine MyStory Series. 2020, February. Rochester, Minnesota.
6. "10 Tips for Time Management, Efficiency, and Well-Being." Hematology Oncology Fellowship Career Development Lecture Series. 2019, October. Rochester, Minnesota.
7. "Addressing Bias in Medicine." Safe Harbor Professionalism Series for Medical Students. 2019, April. Rochester, Minnesota.
8. "Choosing your Career Path: A Career Development Talk for Fellows." Mayo Fellows Oncology CME Conference. 2019, March. Rochester, Minnesota.
9. "Career Development Strategies for Health Professionals: Building a successful and meaningful career at any level of experience." Nursing Teaching Conference. 2019, March. Rochester, Minnesota.
10. "Saying 'No' in Academics: A Career Development session for Internal Medicine Residents." Mayo Internal Medicine Resident Noon Conference. 2018, October. Rochester, Minnesota.
11. "When saying 'no' can be good for your career: A career advancement session for fellows." Hematology-Oncology Fellows' Teaching Conference, 2018 July. Rochester, Minnesota.

INNOVATIVE CONTRIBUTIONS – ONLINE/SOCIAL MEDIA

1. New York Times. Featured in the article "A Medical Career, at a Cost: Infertility." Published online 9/13/2021. Available at: <https://www.nytimes.com/2021/09/13/health/women-doctors-infertility.html>
2. Medicine Mentors Podcast: Invited Discussant on strategies for developing strong mentoring relationships (forthcoming, 2021)
3. American Society of Hematology (ASH) Hematopoiesis Newsletter. "The Blood Sisters Project." Discussion of mentorship and career development program for women trainees in hematology. Published online 8/18/2021. Available at: <https://www.hematology.org/education/trainees/fellows/trainee-news>
4. Oncology Times "Colleague Conversations: Women and Leadership in Hematology/Oncology." Interview with myself and Dr. Narjust Duma on gender equity and leadership in academic medicine. Published online 5/21/2021. Available at: https://journals.lww.com/oncology-times/Fulltext/2021/05201/Colleague_Conversations__Women__Leadership_in.4.aspx
5. Figure1 Op-Ed "Graceful Self-Promotion." Published online 5/4/2021. Available at: <https://bit.ly/3ndPQfu>
6. Houghton D and **Marshall AL**. "Assessing the Gravidity of Direct Oral Anticoagulants in Pregnancy." *The Hematologist* 2021; 18(2). <https://ashpublications.org/thehematologist/article/475182/Assessing-the-Gravidity-of-Direct-Oral>
7. ASCO Connection Blog "ZOOMing into 2021: Tips for Managing Videoconference Fatigue."

Released 1/7/2021. Available at: <https://connection.asco.org/blogs/zooming-2021-tips-managing-videoconference-fatigue>

- 8. The Prospective Doctor Podcast: Interviewee. Released online 10/29/2020.
- 9. ASH Clinical News Blog: "How I Teach: Navigating the COVID Classroom." Released 9/23/2020.
- 10. ASH "How I Teach: Professionalism." Released 6/2/2020. Available at: <https://www.ashclinicalnews.org/education/how-i-teach/teach-professionalism-ariela-marshall-md/>
- 11. Journal of Clinical Oncology Oncology Practice Podcast: Discussion on our recent publication "Gender Differences in Faculty Rank and Leadership Positions Among Hematologists and Oncologists in the United States." Released 5/29/2020. Available at: <http://joppodcast.ascou.libsynpro.com/gender-differences-in-faculty-rank-and-leadership-positions-among-hematologists-and-oncologists-in-the-united-states>
- 12. Mayo Clinic Laboratories "Lab Medicine Rounds" Podcast on diagnosis, workup, and management of COVID-associated coagulopathy. Released 5/6/2020. Available at: <https://share.transistor.fm/s/3c76aad6>
- 13. "My Infertility Journey as a Woman in Medicine." Original contribution to AM Rounds, the blog for Academic Medicine journal. Published 3/10/2020. Available at: <http://academicmedicineblog.org/my-infertility-journey-as-a-woman-in-medicine/>
- 14. "Doctors: Take a Sick Day." Original online publication on KevinMD Website. Published 2/8/2020. Available at: <https://www.kevinmd.com/blog/2020/02/doctors-take-a-sick-day.html>
- 15. Explore the Space Podcast "Physician Infertility." Broadcast: 1/3/2020. Available at: <https://www.explorethespaceshow.com/podcasting/ariela-marshall-on-physician-infertility/>
- 16. "Mentorship and Career Development at ASH 2019." Original OpMed on Doximity. Published 12/12/2019. Available at: <https://opmed.doximity.com/articles/mentorship-and-career-development-at-ash-2019>
- 17. "Being oversensitive to others' opinions can be harmful." Original online publication on KevinMD website. Published 10/9/2019. Available at: <https://www.kevinmd.com/blog/2019/10/being-oversensitive-to-others-opinions-can-be-harmful.html>
- 18. "A staunch advocate for Gender Equity in Medicine responds to the NYT." Original online publication in Doctors on Social Media. Published 8/28/2019. Accessible at: <https://doctoronsocialmedia.com/gender-equity-response-to-nyt>
- 19. "Female Physicians Reject 'Good Enough'." Contribution to article by Dr. M.Knoll, online publication in Forbes. Published 8/23/2019. Accessible at: <https://www.forbes.com/sites/miriamknoll/2019/08/23/female-physicians-reject-good-enough/#2366380263ca>
- 20. "Why hematology – thrombosis and hemostasis?" Original online publication in "SheMD" Why (specialty) career series. Published 5/19/2019. Accessible at: <https://www.shemd.org/post/why-hematology-thrombosis-hemostasis>
- 21. "ASH Medical Educators Institute Podcast with Drs Marc Kahn and Ariela Marshall." Original online Podcast in ASH "The Hematologist," aired 2/27/2019. Accessible at: https://soundcloud.com/ash_hematology/ash-medical-educators-institute-with-drs-marc-kahn-and-ariela-marshall
- 22. "SHEmatology and WOMANcology: Encouraging women to explore careers and leadership in hematology and oncology." Original online publication in ASH Clinical News, published 11/27/2018, Accessible at: <https://www.ashclinicalnews.org/perspectives/shematology-womancology-encouraging-women-explore-careers-leadership-hematology-oncology/>
- 23. "Finding a Niche or Digging a Rut?" Original online publication in Doximity Op-Med, published 11/27/2018, Accessible at: <https://opmed.doximity.com/articles/finding-a-niche-or-digging-a-rut>
- 24. "Mentorship in Medicine is Essential." Original online publication on InCrowd "Women in Medicine" Series, published 11/27/2018, Accessible at: <https://incrowdnow.com/blog/seventh-in-a-series-mentorship-in-medicine-is-essential/>

25. "Why academic medicine needs to value physician contributions to online platforms." Original online publication on KevinMD website, published 10/19/2018 and accessible at: <https://www.kevinmd.com/blog/2018/10/why-academic-medicine-needs-to-value-physician-contributions-to-online-platforms.html>
26. "A day in the life of a benign hematologist." Original Contribution. Published by American Society of Hematology (ASH) Trainee E-News, 2018, May.
27. "Hot Topic: Pregnancy-Related Venous Thromboembolism." Video recording available to national/international audiences on the Mayo Medical Laboratories website at: <https://news.mayomedicalaboratories.com/2017/07/17/pregnancy-related-venous-thromboembolism-hot-topic/>
28. "Direct Acting Oral Anticoagulant Dos and Don'ts." Video recording regarding clinical use of DOACs presented as a discussion with myself and Dr. McBane (Mayo Cardiology) available to national/international audiences on the Medscape website at: http://www.medscape.com/viewarticle/879896#vp_4
29. "Empathy in Clinical Care." Cowritten with Ilyana Romanovsky, Published online on Huffington Post 8/18/2014 https://www.huffingtonpost.com/ilyana-romanovsky/empathy-in-clinical-health_b_5684489.html
30. Founder, Facebook Group "Women in Academic Medicine Leadership"

MENTORSHIP

1. Al-Samkari, Hanny
 - a. Clinical and career development mentorship when he was an internal medicine resident and hematology-oncology fellow
 - b. Currently Instructor in Medicine, Division of Hematology at Massachusetts General Hospital
2. Anampa Guzman, Andrea
 - a. Career development mentorship (leadership, women in medicine) when she was a medical student
 - b. Co-developed American Society of Hematology "Blood Buddies" Mentorship program which won an ASH Award
 - c. She recently matched to Internal Medicine residency in the United States
3. Duma, Narjust
 - a. Career development mentorship (diversity/equity/inclusion in medicine, leadership development) when she was a hematology-oncology fellow at Mayo, with continued mentorship as she took on junior faculty position
 - b. Recently promoted to Assistant Professor and Associate Director of Cancer Equity at Dana-Farber Cancer Institute
4. Li, Ang
 - a. Clinical and research mentorship when he was an internal medicine resident at Massachusetts General Hospital
 - b. He subsequently completed clinical and research fellowships in hematology at the University of Washington
 - c. Currently an Assistant Professor of Medicine (practicing non-malignant hematology) at Baylor College of Medicine
5. Miller, Kevin
 - a. Career development (residency application process and choice) when he was a Mayo medical student
 - b. He is currently an internal medicine resident at Massachusetts General Hospital
6. Padrnos, Leslie
 - a. Clinical and research mentorship when she was an advanced hematology fellow in Coagulation at Mayo
 - b. Currently an Assistant Professor of Medicine with active clinical and research pursuits in non-malignant hematology at Mayo Clinic Arizona

7. Ravindran, Aishwarya
 - a. Research and career development mentorship when she was a research trainee in Hematology at Mayo Rochester
 - b. Currently a pathology resident at Mayo Rochester with intent to pursue career in hematopathology

HONORS AND AWARDS

2019	Mayo Clinic Graduate Medical Education (GME) Innovation Award
2018	Fellow, Mayo Clinic Academy of Educational Excellence
2017	Mayo Clinic Teacher of the Year Award in Hematology-Oncology
2017	Mayo Clinic Endowment for Education Research Award
2015	Mayo Clinic Department of Medicine Innovation Award in Quality Improvement
2013	Partners Center of Expertise Medical Education Travel Award
2009	Honors in a Special Field, <i>Cum Laude</i> (Medicine)
2009	Bemy Jelin '91 Prize (overall academic excellence with a career interest in oncology)
2005	Joseph Garrison Parker Prize for Outstanding Premedical Student
2002	John Harvard Scholarship for outstanding academic standing at Harvard College
2002	Detur Book Prize for outstanding academic standing at Harvard College

EDITORIAL POSITIONS

Section Editor, Diversity and Inclusion, *Lancet Haematology*

Member, International Advisory Board, *Lancet Haematology*

Standing peer reviewer (Panel of Reviewers) for *MedEd Publish*

Standing peer reviewer for *Journal of Graduate Medical Education*

Invited peer reviewer for multiple journals including:

1. Blood Cancer Journal
2. Chest
3. Clinical and Applied Thrombosis/Hemostasis
4. Hypertension in Pregnancy
5. International Journal of Emergency Medicine
6. JAMA Internal Medicine
7. Journal of Graduate Medical Education
8. Journal of Women's Health
9. Mayo Clinic Proceedings
10. PLoS ONE
11. Thrombosis Research
12. Transfusion Medicine Reviews

Curriculum Vitae

Stephen H. McKellar, MD, MSc.

PERSONAL INFORMATION

Date of Birth: March 25, 1974
Place of Birth: Salt Lake City, UT
Citizenship: United States of America
Work Address: Eccles Outpatient Center
5169 S Cottonwood Street, Suite 600
Salt Lake City, UT 84107
Intermountainheartinstitute.org
801.507.3600 office
801.227.6192 fax
Email Address: stephen.mckellar@mail.org
Additional Information: Married:
Angela Hatch McKellar
Children:
Joseph Russell
James Bradford
Stephen Hugh, Jr.
Caroline

PRESENT ACADEMIC RANK AND POSITION

Instructor of Surgery, Mayo Clinic College of Medicine	10/2008 – 6/2012
Assistant Professor of Surgery, University of Utah School of Medicine	7/2012 – 6/2018
Associate Professor of Surgery with tenure, University of Utah School of Medicine	7/2018 – 10/2020
Director, ECMO Services, University of Utah	2014 – 10/2020
Surgical Director, Lung Transplantation, University of Utah	2016 – 10/2020
Section Chief, Cardiothoracic Surgery, George E. Wahlen Department of Veterans Affairs Medical Center, Salt Lake City, Utah	2017 – 10/2020
Vice Chair of Professionalism, Department of Surgery. University of Utah School of Medicine, Salt Lake City, Utah	2018 – 10/2020
Staff surgeon, Intermountain Medical Center, Salt Lake City, Utah	11/2020 - present

EDUCATION

University of Utah, Salt Lake City, UT BA	8/1992 -6/1993 8/1995 -6/1999
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The George Washington University School of Medicine MD	8/1999 – 5/2003
Mayo Clinic, Rochester, MN Residency, Surgery	6/2003 – 6/2005
Mayo Clinic, Rochester, MN Clinician-Investigator Research Fellow	7/2005-6/2007
Mayo Clinic College of Medicine, Rochester, MN Clinical Research Training Program (CRTP) Mayo Graduate School of Medicine. MSC - Clinical Research	7/2005-6/2007
Mayo Clinic, Rochester, MN Residency, Fast-Track General and Cardiothoracic Surgery	6/2007-6/2012
University of Utah School of Medicine. Vice President Clinical and Translational (VPCAT) Research Scholar program.	2015-2016

Additional Education

Visiting Clinician – Thoracic Surgery, Lung Transplantation Medizinische Hochschule Hannover, Stefan Fischer, Andre Simon Hannover, Germany	9/2009
Visiting Clinician – Cardiovascular Surgery, Ventricular Assist Devices Hertz- und Diabeteszentrum, Michel Morshuis Bad Oeynhausen, Germany	9/2009
Mayo Perfusion Course Mayo Clinic, Rochester, MN	4/2011
Visiting Clinician – Thoracic Surgery, Ex Vivo Lung Perfusion Toronto General Hospital, Shaf Keshafjee Toronto, Canada	4/2012
AATS Leadership Academy San Francisco, CA	4/2012
JCTSE Residents as Educators Course San Francisco, CA	4/2012
JCTSE Educate the Educators Course Chapel Hill, NC	7/2013

BOARD CERTIFICATION

American Board of Surgery	2010-2021
American Board of Thoracic Surgery	2013-2023

SERVICE

Missionary – The Church of Jesus Christ of Latter-Day Saints, The Netherlands and Belgium	1993 - 1995
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LICENSURE/ CERTIFICATION

Utah	2012 – Present
Minnesota	2004 - Present
BLS, ACLS	2005 - Present

HONORS/AWARDS

Travel Fellowship Award – American Society for Artificial Internal Organs (ASAIO)	1998
Tauber Scholarship Award - The George Washington University School of Medicine	2001
Alpha Omega Alpha- The George Washington University School of Medicine- President	2003
Paul L. Dewitt Award - The George Washington University School of Medicine	2003
Kane-Kane-Dodek Society - The George Washington University School of Medicine	2003
MD Graduate with Distinction – The George Washington University School of Medicine	2003
Certificate of Excellence – Valvular Heart Disease: <i>New Strategies</i> The Heart Valve Society of America annual meeting, Las Vegas, NV. For outstanding basic science research poster presentation.	5/2006
Second Place– ACS Trauma Symposium, Minnesota Chapter of the American College of Surgeons fall conference, Deerwood, MN. Resident trauma competition on traumatic diaphragmatic injury.	9/2006
Best Basic Science Paper—Minnesota Surgical Society/Minnesota Chapter of the ACS fall meeting. Two Harbors, MN.	10/2007
Finalist- Vivien Thomas Young Investigator Award. American Heart Association Council on Cardiovascular Surgery and Anesthesia. American Heart Association Scientific Sessions, Orlando, FL.	11/2007
W. Deprez Inlow Research Award for best resident research paper. Resident Education Day, Department of Surgery, Mayo Clinic.	3/2008
Barbara Bush Distinguished Fellowship Award Mayo School of Graduate Medical Education	4/2008
Finalist- C. Walton Lillehei Residents Forum. American Association for Thoracic Surgery Annual Meeting. San Diego, CA.	5/2008
Kaare K. Nygard Travel Award for outstanding basic science research. Department of Surgery, Mayo Clinic Rochester, MN.	6/2008
Finalist- C. Walton Lillehei Residents Forum. American Association for Thoracic Surgery 90 th Annual Meeting. Toronto, ON, Canada.	5/2010
O.T. Clagett Travel Award Division of Cardiovascular Surgery, Mayo Clinic, Rochester, MN.	5/2011
Finalist- Clinical case presentation Thoratec Fellows Meeting, Pleasanton, CA	11/2011

C. Walton Lillehei and Earl Bakken Award
The Lillehei Surgical Society, Ft. Lauderdale, FL

1/2012

PREVIOUS PROFESSIONAL POSITIONS

Research Associate – Utah Artificial Heart Program & Research Laboratory, Salt Lake City, Utah	1995-1999
Research Associate – Divisions of Cardiothoracic Surgery and Cardiology, Johns Hopkins University School of Medicine	2000

PROFESSIONAL & COMMUNITY MEMBERSHIPS, SOCIETIES AND SERVICES

Professional Memberships

Cardiothoracic Surgery Network	2000 - Present
American College of Surgeons- Member FACS	2004 - Present 2014 - Present
Collegium Aesculapium	2005 - Present
Association for Academic Surgery- Candidate Member Member Membership Committee member Program Committee member Session moderator Publications Committee member	2005 - 2011 2012 - Present 2014 - 2016 2015 – 2017 2016 – 2019 2017 – 2019
Mayo Alumni Association	2006 - Present
American Heart Association- member Member Invited Peer Reviewer AHA Grants	2007 - 2008 2014 - present 2016 - present
Society of Thoracic Surgeons Candidate Member Member Council on Health Policy and Relationships Operating Board Member	2009 - 2012 2013 - Present 2011 - 2012
Western Thoracic Surgical Association Candidate Member Active Member	2014 - 2015 2015 - Present
International Society for Heart and Lung Transplantation Abstract Reviewer- Annual Meeting Session Co-Chair- Annual Meeting Session Moderator – Annual Meeting Faculty – ISHLT Master’s Academy	2009 – Present 2011 – 2014 2013 2014 2017

Thoracic Surgery Residency Association	
Executive Committee	
Member	2010 - 2012
Vice President	2011 - 2012
Utah Cardiac Recovery Symposium (UCARS)	
Session Co-Chair – Recovering the Right Ventricle	2014
Session Co-Chair – From pediatric to adult medicine: common	2015
Session Co-Chair – Right Ventricular Failure and Recovery	2017
Session Co-Chair – Mechanically Assisted Circulation and Recovery	2018
UNOS Region 5 Heart Review Board	2015
Society of University Surgeons	2018 - Present
Member	
American Association for Thoracic Surgery	2018 - Present
Member	
Thoracic Surgery Research Foundation	
Member – TSF Research Committee	2019 - 2020

Journal Review & Editorial Activities

Journal of Surgical Research	
Member - Editorial Board	2016 – 2020
Guest reviewer	2013 – 2015
Cardiothoracic Surgery Network (CTSNet)	2008 - 2010
Member – residents section editorial board	
Cardiothoracic Surgery Network (CTSNet)	2000 - 2007
Editor CTSNotes	
Journal of Thoracic and Cardiovascular Surgery	2007 – Present
Guest reviewer	
Member – Editorial Board	2018 – Present
Journal of Cardiac Surgery	2007 - 2009
Guest reviewer	
Journal of Heart Valve Disease	2008 - 2012
Guest reviewer	
Surgery	2009 – 2012
Guest reviewer	2016 – 2020
Human Genetics	2011 - 2012
Guest reviewer	
American Journal of Cardiology	2011 - 2012
Guest reviewer	
British Medical Journal Open	2011 - 2012
Guest reviewer	
Journal of Thoracic Disease	2014 – 2015
Guest reviewer	
Heart Rhythm Case Reports	2015 – 2020

Guest reviewer	
Clinical Transplantation	2017 - 2020
Guest reviewer	

EDUCATIONAL ACTIVITIES

Curriculum and Course Development

Clinical Research Training Program (CRTP) Curriculum Committee- Student member. Statistical coursework for Mayo Graduate School	2006-2007
Advanced Cardiovascular Live Support- Course content development, Acute coronary syndrome and stroke. Gold Cross, Rochester, MN.	2007
Cardiovascular & Thoracic Surgery Core Curriculum Review, SLC, UT. Course content development www.corereview.org	2007, 2021
Simulation in Cardiothoracic Surgery – Thoracic Surgery residency program, University of Utah, SLC, UT. Director and curriculum development. Funded through University Teaching Committee Grant (PI)	2012 - 2015
Cardiothoracic Surgery Case Conference – Thoracic Surgery residency program, University of Utah, SLC, UT. Conference director for weekly case conferences	2012 - 2015

Teaching Activities

Cutaneous Melanoma	3/2004
General Surgery Conference Rochester, MN	
The Role of MRI in Breast Cancer	9/2004
General Surgery Conference Rochester, MN	
Instructor, Advanced Cardiac Life Support (ACLS) Gold Cross, Rochester, MN	2004- 2010
Instructor, Mayo Medical Student Surgical Skills Laboratory	2006-2008
Instructor, Mayo General Surgery Residency Surgical Anatomy Laboratory Topic: surgical anatomy of the thorax	4/2006
Agonal Blunt Trauma	8/2008
Joint Trauma Conference Rochester, MN	
Treatment of Superior Mesenteric Artery Aneurysms	2/2010
Grand Rounds – Gonda Vascular Center Rochester, MN	
Endovascular Stenting of Thoracic Abdominal Aneurysms in Marfan Syndrome	3/2010
Grand Rounds – Gonda Vascular Center Rochester, MN	

Surgical Management of Mycobacterial Pulmonary Infections Division of Thoracic Surgery Rochester, MN	6/2011
Conducting Clinical Research Divisions of Thoracic and Cardiovascular Surgery Rochester, MN	11/2011
Hypertrophic Obstructive Cardiomyopathy Cardiology Grand Rounds – University of Utah School of Medicine Salt Lake City, UT	12/2012
Update in Lung Transplantation CVICU Rounds – University of Utah Medical Center	11/2013
Portable ECMO CVICU Rounds – University of Utah Medical Center	2/2015
Early and late right ventricular failure – from prediction to management. ISHLT Master's Academy, San Diego, CA.	4/2017
Advances in surgical mitral valve repair and replacement. Cardiovascular Grand Rounds Intermountain Health Care	2/2021

INSTITUTIONAL RESPONSIBILITIES

Assistant Program Director, University of Utah Thoracic Surgery residency program. University of Utah School of Medicine	2012 - 2015
U-SERG Surgical Simulation working group, Member, University of Utah School of Medicine, Department of Surgery	2012 - 2020
Course Director, University of Utah School of Medicine Medical School Clerkship	2012 - 2020
Right heart failure interest group, co-director, University of Utah School of Medicine.	2014 - 2020
Director ECMO services, University of Utah.	2015 - 2020
Surgical Director, Lung Transplantation, University of Utah.	2016 - 2020
Section Chief, Cardiothoracic Surgery, George E. Wahlen Department of Veterans Affairs Medical Center, Salt Lake City Utah	2017 – 2020
Vice Chair of Professionalism, Department of Surgery, University of Utah	2018 – 2020
Systemwide lead mitral valve surgeon Intermountain Medical Center and Health Care	2020 - present

TRAINEES

Research

Nathan R. Nelson. Laboratory summer student, University of Utah. Summer 2013
Currently a medical student at Des Moines University College of Osteopathic Medicine.

Megan S. Bowen, MD. Research resident/postdoctoral student, University of Utah. 2014 - 2016
Currently a Critical Care fellow at University of Utah.

Casey Briggs. Laboratory summer student, University of Utah. Currently a medical student at Virginia Commonwealth University. Summer 2014, 2016 Fall 2018

Peter Sundwall. Medical Student Research Program, University of Utah, (NIH/NHLBI- sponsored institutional grant). Currently a Family Medicine Resident in Idaho.	Summer 2015
Tae-Soo Kang, MD. International visiting research fellow, University of Utah, (Dankook University College of Medicine- sponsor). Currently faculty at Dankook University College of Medicine.	2015 – 2016
Jason Winward. Medical Student Research Program, University of Utah, (NIH/NHLBI- sponsored institutional grant).	Summer 2016
James Cardinal. Medical Student Research Program, University of Utah, (NIH/NHLBI- sponsored institutional grant).	Summer 2016
Samuel Orchard. Laboratory summer student, University of Utah. Currently a medical student, University of Utah School of Medicine.	Summer 2017 Fall 2018
Natalie Wall. Currently a medical student, University of Utah School of Medicine.	2018 -- 2019
Ahmad Cluntun, PhD. Postdoctoral research fellow. University of Utah School of Medicine.	2018 – 2020
Sandra Lettlova, PhD. Postdoctoral research fellow. University of Utah School of Medicine.	2019 – 2020
Xuejing Yu, MD. Postdoctoral research fellow. University of Utah, School of Medicine.	2019 – 2020

Clinical

James Fenton, MD. Thoracic Surgery, University of Utah.	2012 - 2014
Deborah Tabachnick, MD. Thoracic Surgery, University of Utah.	2014 - 2016
Kimball Knacksted, DO. Thoracic Surgery, University of Utah.	2015 – 2017
Vikas Sharma, MD. Thoracic Surgery, University of Utah.	2015 – 2017
Zach Deboard, MD. Thoracic Surgery, University of Utah.	2016 - 2018
Carrie Spangler, MD. Thoracic Surgery, University of Utah.	2016 - 2018
Travis Wilder, MD. Thoracic Surgery, University of Utah.	2017 – 2019
Andrew Maloney, MD. Thoracic Surgery, University of Utah.	2017 – 2019
Rosemarie Serrone, MD. Thoracic Surgery, University of Utah.	2018 -- 2020
Kenneth Howell, MD. Thoracic Surgery, University of Utah.	2018 -- 2020
Ashley Morgan MD. Thoracic Surgery, University of Utah	2019 – 2021
Dimitrios Koudoumas, MD. Thoracic Surgery, University of Utah	2019 - 2021

PRESENTATIONS

National and International

Improved Hemostasis, Renal Function and Mortality in TCI LVAD Patients Receiving Aminocaproic Acid. American Society for Artificial Internal Organs Atlanta, GA.	5/1997
Impact of HLA-Alloimmunization in Mechanical Bridge-to-Transplantation. American Society for Artificial Internal Organs New York City, NY	4/1998

Low incidence of Percutaneous Lead- Related Infections with a Unique Immobilizing Binder. American Society for Artificial Internal Organs San Diego, CA	6/1999
Recovery of Ventricular Function Following HeartMate Ventricular Assist (LVAD) Support. American Society for Artificial Internal Organs San Diego, CA.	6/1999
Intermediate-Term Outcomes of Posterior-Pericardial Bypass of Aortic Coarctation American Heart Association Dallas, TX	11/2005
Genetic Heterogeneity of Bicuspid Aortic Valve Disease Heart Valve Society of America Valvular Heart Disease: New Strategies Las Vegas, NV	5/2006
A model of heterotopic aortic valve replacement for study of thromboembolism prophylaxis in mechanical valve prostheses. Academic Surgical Congress, Phoenix, AZ	2/2007
Novel NOTCH1 mutations in patients with bicuspid aortic valve disease and thoracic aortic aneurysms. Valves in the Heart of the Big Apple: Evaluation and Management of Valvular Heart Diseases 2007, New York, NY.	4/2007
Identification of a novel susceptibility locus at 9q21 for familial bicuspid aortic valve disease. Vivien Thomas Young Investigator Competition American Heart Association, Orlando, FL	11/2007
TGFB2 Mutations in Non-Syndromal Thoracic Aortic Aneurysms. Academic Surgical Congress, Huntington Beach, CA.	2/2008
Short and Long-Term Efficacy of Aspirin and Clopidogrel for Thromboprophylaxis of Mechanical Heart Valves; An <i>In Vivo</i> Study in Swine. C. Walton Lillehei Resident Forum American Association for Thoracic Surgery, San Diego, CA	5/2008
Are Antiplatelet Agents Sufficient for Thromboprophylaxis of Mechanical Heart Valves? Mayo Clinic Priestly Society Annual Meeting, Napa Valley, CA	10/2008
What is the long-term risk of aortic events following aortic valve replacement for bicuspid aortic valve? Academic Surgical Congress, San Antonio, TX.	2/2010
Laparoscopic reoperation for refractory dysphagia following initial laparoscopic Nissen fundoplication. General Thoracic Surgery Club, Carlsbad, CA.	3/2010
Dabigatran is effective for thromboprophylaxis of mechanical heart valves. C. Walton Lillehei Resident Forum American Associate for Thoracic Surgery, Toronto, Ontario, Canada	5/2010
Evolution of general surgical problems in patients with left ventricular assist devices. American College of Surgeons, San Francisco, CA.	10/2011
LVAD implant in patient with heart failure and preserved systolic function. Thoratec Fellows Conference, Pleasanton, CA	11/2011

Durability of aortic valve repair in patients with continuous-flow left ventricular assist devices. American Association for Thoracic Surgery, San Francisco, CA.	4/2012
An animal model of chronic, pressure-overload right ventricular failure to study cardiac failure and recovery. Academic Surgical Congress, San Diego, CA.	2/2014
Cardiothoracic surgical backup for transvenous pacemaker and defibrillator lead extraction. Advanced Mechanical Lead Extraction Techniques. Salt Lake City, UT.	3/2014
Lung transplantation following coronary artery bypass grafting; is it still a contraindication? International Society for Heart and Lung Transplantation. Nice, France. Lung	4/2015
Recovering the failing right ventricle: insights from preclinical experimental studies. Utah Cardiac Recovery Symposium (UCARS)	1/2016
Early and late right ventricular failure – from prediction to management. ISHLT Master's Academy, San Diego, CA.	4/2017
Clinical Factors and Biology in Cardiac Recovery. 10 th Annual Brano Heart Failure Forum, Prague, Czech Republic	9/2017
A Shock team approach to cardiogenic shock. 11 th Annual Brano Heart Failure Forum, Zagreb, Croatia	9/2018
Rationale for randomized clinical trials for cardiogenic shock Utah Cardiac Recovery Symposium (UCARS)	1/2019
Surgical treatment of chronic heart failure. Sichuan Academy of Sciences, Sichuan People's Provincial Hospital	4/2019
Identifying clinical and biological turning points to justify early short-term MCS. Utah Cardiac Recovery Symposium (UCARS)	1/2020
VADs and other strategies of myocardial recovery. AATS Mechanical Support for the Heart and Lung, Houston, TX	2/2020

Regional

Concomitant Breast Surgery Minnesota Surgical Society Minneapolis, MN	4/2004
Treating Mediastinitis with Sternal Rewiring and Mediastinal Irrigation Minnesota Surgical Society Brainerd, MN	10/2005
Traumatic Diaphragmatic Rupture Minnesota Surgical Society and MN Chapter of the ACS Deerwood, MN	9/2006

Short and Long-Term Efficacy of Antiplatelet Therapy for Mechanical Heart Valve Thromboprophylaxis. 10/2007

Minnesota Surgical Society and MN Chapter of the ACS
Two Harbors, MN

Long-term Risk and Predictors of Aortic Events Following Aortic Valve Replacement in Patients with Bicuspid Aortic Valves 10/2008
Minnesota Surgical Society and MN Chapter of the ACS
Alexandria, MN

Local

NOTCH1 Mutations in Patients with Bicuspid Aortic Valve and Thoracic Aortic Aneurysm. 9/2006

12th Annual Balfour Surgical Research Symposium.
Rochester, MN

A Model of Heterotopic Aortic Valve Replacement for Studying Thromboembolism Prophylaxis in Mechanical Valve Prostheses. 9/2006
12th Annual Balfour Surgical Research Symposium.
Rochester, MN

Are Antiplatelet Agents Adequate Thromboprophylaxis for Mechanical Heart Valves? An *in vivo* Study in Swine. 9/2007
13th Annual Balfour Surgical Research Symposium.
Rochester, MN

Comparison of coronary revascularization procedures in octogenarians: a systematic review and meta-analysis. 10/2008
14th Annual Balfour Surgical Research Symposium.
Rochester, MN

VISITING PROFESSORSHIPS

Sichuan Academy of Medical Sciences, Sichuan Provincial People's Hospital 4/2019
Chengdu, China

RESEARCH INTERESTS

Mitral valve disease
Concomitant valve and arrhythmia surgery
Adult cardiac surgery
Best treatment practices for mitral valve disease
Randomized clinical trials in cardiac surgery

RESEARCH GRANTS AWARDED

Previous

Principal Metabolic flux analysis and right ventricular remodeling. 2016 - 2018

Investigator	Thoracic Surgery Foundation for Research and Education; \$80,000.	
Principal Investigator	Inhibition of fatty acid oxidation to prevent right ventricular failure and promote right ventricular recovery American Association for Thoracic Surgery Graham Foundation; \$100,000.	2015 – 2018
Principal Investigator	Genomic and metabolomic analysis of energy metabolism in right heart failure and recovery American College of Surgeons Faculty Research Fellowship; \$80,000.	2015 – 2017
Completed		
Principal Investigator	Light Scattering Detection of Micro-emboli in a Cardiopulmonary Bypass System.	01/1996-12/1996
Co-Investigator	Controlling Device Related infections; an <i>In Vivo</i> Study (James W. Long MD, PhD -- PI). American Heart Assoc. Western States Affiliate; Grant-in-Aid.	07/1998 - 07/1999
Co-Investigator	Ximelagatran as Thromboprophylaxis for Mechanical Valves- an Orthotopic Porcine Model (Hartzell V. Schaff MD – PI). Astra-Zeneca, Inc.	2005-2006
Principal- Investigator	Genetic Basis for Bicuspid Aortic Valve and Ascending Aortic Aneurysm. (Thoralf M. Sundt, III MD - Mentor). Loan Repayment Program. National Institutes of Health	2005-2007
Co- Investigator	Comparative Evaluation of Heterotopic and Orthotopic Porcine Models for Mechanical Heart Valve Thromboprophylaxis. (Hartzell V. Schaff, MD – PI). Astra-Zeneca Inc.	2006-2007
Co- Investigator	Genetic Heterogeneity of Bicuspid Aortic Valve Disease (Thoralf M. Sundt, III MD -- P-I). Department of Surgery Mayo Clinic Rochester.	2006-2007
Co- Investigator	Clopidogrel and Aspirin for Mechanical Heart Valve Thromboprophylaxis. (Hartzell V. Schaff MD—P-I). St. Jude Medical.	2006-2007
Co-Investigator	Evaluation of Mitroflow Valve Prepared with Duranol, a GLP Roll-in Study. (Hartzell V. Schaff, MD – PI). The Sorin Group.	2006-2007
Co- Principal Investigator	Dabigatran for Mechanical Heart Valve Thromboprophylaxis- a porcine <i>in vivo</i> study (with Hartzell V. Schaff MD). Boehringer-Ingelheim, Inc.	2008-2009
Co-Investigator	Quantitative Coronary Flow Analysis After an Apicoaortic Valved Graft Implantation Cardios, Inc.	2009 - 2010
Co- Principal Investigator	Rivaroxaban for thromboprophylaxis of mechanical heart valves (with Hartzell V. Schaff, MD). Bayer, Inc.	2011- 2012

Surgical Principal Investigator INOVATE-HF vagal nerve stimulator clinical trial (NCT01303718)

2014-2015

BIBLIOGRAPHY

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REFERENCES:

Available upon request.

Curriculum Vitae and Bibliography

Alyx B Porter Umphrey, MD, FAAN

Personal Information

Place of Birth: Scottsdale, AZ
Citizenship: United States of America
Work Address: Mayo Clinic
5777 East Mayo Boulevard
Phoenix, AZ 85054
Email Address: porter.alyx@mayo.edu

Present Academic Rank and Position

Consultant (Joint Appointment) - Division of Hematology/Oncology, Department of Internal Medicine, Mayo Clinic, Phoenix, Arizona	2011 - Present
Consultant - Department of Neurology, Mayo Clinic, Phoenix, Arizona	07/2011 - Present
Consultant (Joint Appointment) - Department of Neurologic Surgery, Mayo Clinic, Phoenix, Arizona	2017 - Present
Associate Professor of Neurology - Mayo Clinic College of Medicine and Science	02/2020 - Present

Education

Spelman College, Atlanta, Georgia - BA, English, Minor in Biochemistry	1995 - 1999
Temple University School of Medicine, Philadelphia, Pennsylvania - MD	1999 - 2003
Preliminary Internal Medicine, Programs in Rochester, Mayo School of Continuing Medical Education, Mayo Clinic College of Medicine, Rochester, Minnesota - Internship, Internal Medicine	2003 - 2004
Neurology, Programs in Rochester, Mayo School of Graduate Medical Education, Rochester, Minnesota - Residency, Neurology	2004 - 2007
Neurology, Programs in Rochester, Mayo School of Graduate Medical Education, Rochester, Minnesota - Fellow, Neuro-Oncology	2007 - 2008

Additional Education

One Year Study Abroad University of Sussex, Brighton, United Kingdom	1997 - 1998
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Certification

Board Certifications

American Board of Psychiatry and Neurology (ABPN)	
Neurology	2009 - 2019
United Council for Neurologic Subspecialties (UCNS)	
Neuro-oncology	2013 - 2023
United States Medical Licensing Examination (USMLE)	
Step I	2001 - Present
Step II	2002 - Present
Step III	2004 - Present

Licensure

Minnesota	(Medical)	2004 - 2007
Arizona	(Medical)	2004 - Present

Florida	(Medical)	2006 - 2007
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Honors and Awards

Community Service Award - Temple University School of Medicine	2001
Recognized for leadership in education regarding HIV prevention in the Greater Philadelphia community.	
Matthew T. Moore Prize in Neurology - Temple University School of Medicine	2003
Commended for outstanding performance in a neurology rotation.	
Mayo International Health Program Scholarship - Mayo Clinic College of Medicine and Science	2006
Led a six week medical mission in Kenya at Maua Methodist Hospital providing care in a developing country.	
Minority Scholars Award - American Neurological Association	2006
Selected to attend the annual meeting of this prestigious association and to present a poster.	
Henry W. Woltman Award - Department of Neurology, Mayo Medical School, Mayo Clinic College of Medicine	2007
Received the most prestigious award for neurology residents, the highest honor which recognized contributions in medical education, research, patient care and other factors.	
Palatucci Advocacy and Leadership Program - American Academy of Neurology	2007
Selected to participate in this highly competitive, in depth leadership immersion experience that focused on lobbying, skilled advocacy, media relations and grassroots organizing.	
Excellence in Clinical Investigation Award - Cancer Clinical Research Unit, Comprehensive Cancer Center, Mayo Clinic Cancer Center - Arizona, Mayo Clinic, Scottsdale, Arizona	2011
Recognized for excellence in leading several clinical trials.	
Physician Representative - Service Excellence Day, Mayo Clinic Arizona, Mayo Clinic	06/2013
Selected to speak on behalf of physician staff on service excellence and fostering the Mayo mission.	
Alyx B. Porter Umphrey MD Scholarships 2017 - Spelman College	2017
Inaugural Award 2017 provides a renewable award for a student at Spelman College. Created this scholarship to ensure educational opportunities for women of color pursuing academic excellence and interested in a career in medicine.	
Diversity Leadership Program - American Academy of Neurology	2018
One of only 10 physicians selected through a national competition to participate in a rigorous 9 month leadership development program. Collaborated on the development of key strategic recommendations regarding inclusion to the board of directors of the American Academy of Neurology. Selected by peer cohort to present recommendations to this internal board.	
Health Careers Program Distinguished Alumnae Award - Spelman College	04/2018
Received an award for continuing to inspire the careers of undergraduate students.	
Phoenix Rising Outstanding Alumnae Award - Spelman College	07/2018
Recognized for outstanding service to Spelman College.	
2020 Dean's Recognition Award for Diversity and Inclusion - Mayo Clinic Alix School of Medicine, Mayo Clinic College of Medicine, Department of Education Administration	05/2020
2020 Top Provider Recognition Award - Office of Mayo Clinic Experience, Mayo Clinic Arizona, Mayo Clinic	05/2020

2020 Anne B. Young Diversity Scholar Award - Massachusetts General Hospital	06/2020
2020 Women in NeuroOncology Mid-Career Exemplary Physician Award - Society for Neuro-Oncology	10/2020
Stanley Gore Lectureship in Neuro-Oncology - NorthShore University Health System	11/2020
Healthcare Hero Philanthropic Champion - Phoenix Business Journal	2020

Previous Professional Positions and Major Appointments

Senior Associate Consultant (Joint Appointment) - Division of Hematology/Oncology, Department of Internal Medicine, Mayo Clinic, Phoenix, Arizona	2008 - 2011
Senior Associate Consultant - Department of Neurology, Mayo Clinic, Phoenix, Arizona	07/2008 - 07/2011
Instructor of Neurology - Mayo Clinic College of Medicine and Science	08/2008 - 09/2009
Assistant Professor of Neurology - Mayo Clinic College of Medicine and Science	10/2009 - 01/2020

Service

Community Memberships and Services

American Academy of Neurology	
Neurology on the Hill	
Lobbyist	2007
Delta Sigma Theta	
Honorary Chairman	04/2019 - Present
Phoenix Metro Chapter	
Alumna	2013 - Present
Feed My Starving Children	
Volunteer	2012 - Present
Medical Mission	
Maua Hospital, Kenya, South Africa	
Member	02/2007
Rochester Better Chance	
Board of Directors	
Member	2006 - 2008

Professional Memberships and Societies

Professional Memberships and Services

American Academy of Neurology	
Junior Member	2004 - Present
Elected Fellow	08/2018 - Present
2018 Annual Meeting	
Neuro-Oncology Abstracts	
Reviewer	2017
AAN.com	
Advisory Board Member	2007 - Present
Pipeline Subcommittee	
Appointed Member	01/2019 - 04/2021
American Brain Foundation	
Board Member	02/2021 - Present

American Medical Association		
Member	2003 - Present	
American Society of Clinical Oncology		
Member	2007 - Present	
National Medical Association		
Junior Member	2006 - 2008	
Arizona Chapter		
Member	2008 - Present	
Society for Neuro-Oncology		
Junior Member	2006 - Present	
Women in Neuro-Oncology		
Founder and Co-Chair	07/2018 - Present	
Syneos Health		
Data Safety Monitoring Board		
Member	2018 - 2020	
Health Glioblastoma Studies		
Consultant	2018 - Present	

Journal Responsibilities

Journal Editorial Responsibilities

Clinical Briefings		
Editor	07/2010 - 08/2010	
Clinical Neurology News		
Editorial Advisory Board	06/2010	

Journal Other Responsibilities

Neuro-Oncology Practice		
Reviewer	2015 - Present	

Education Interests and Accomplishments

Curriculum and Course Development

Implemented multidisciplinary Neuro-Oncology Tumor Board	2008 - Present	
Chair of monthly conference		
Mayo Clinic Arizona		
Development of MCSGME Pipeline Program with Spelman/Morehouse	2017 - Present	
Mayo Clinic School of Graduate Medical Education		
Phoenix, Arizona		
Development of monthly Neuro Oncology Resident Case Conference	2017 - Present	
Mayo Clinic Arizona		
Development of Cultural Humility course and Communication Amidst Difference course	2017 - Present	
First year medical students		
Mayo Clinic Arizona		

Teaching

Conducted Lumbar Puncture Training for Internal Medicine New Resident Orientation	06/2006	
Mayo Clinic Rochester		
Rochester, Minnesota		
Invited to be the Resident Educator for the Mayo Medical School Neuroscience Course	2007	
Mayo Clinic Rochester		
Rochester, Minnesota		

Neuro-Onc 101 Neurology resident basic summer lecture series Mayo Clinic Arizona Phoenix, Arizona	07/24/2008
Neurologic Consequences of Cancer Treatment Neurology resident advanced lecture series Mayo Clinic Arizona Phoenix, Arizona	03/04/2009
Primary Brain Tumors Neurology resident advanced lecture series Mayo Clinic Arizona Phoenix, Arizona	03/06/2009
Treatment of Secondary Brain Tumors Neurology resident advanced lecture series Mayo Clinic Arizona Phoenix, Arizona	03/11/2009
Update on Glioma Management Heme/Onc Grand Rounds Mayo Clinic Arizona Phoenix, Arizona	05/21/2009
Update on Glioma Management Neuroscience Conference Mayo Clinic Arizona Phoenix, Arizona	07/22/2009
Current Management of Malignant Glioma Internal Medicine Grand Rounds Mayo Clinic Arizona Phoenix, Arizona	01/29/2010
Neurology Case Conference Mayo Medical School Scottsdale, Arizona	05/27/2010
CNS Manifestations of Hematologic Malignancies Neuroscience Conference Mayo Clinic in Arizona Phoenix, Arizona	07/13/2011
Primary CNS Lymphoma and Spectrum Disorders Hematology Oncology Grand Rounds Mayo Clinic in Arizona Phoenix, Arizona	07/21/2011
Diagnosis and Management of Glioblastoma Multiforme Webinar Mayo Clinic Phoenix, Arizona	08/13/2015
Neuro-Oncology 101 Heme/Onc Fellows Academic Half Day Mayo Clinic Arizona Phoenix, Arizona	11/2015
Neurology Academic Half Day Neurology Residency Mayo Clinic Phoenix, Arizona	2016 - Present
CNS Malignancies Palliative Medicine Grand Rounds Mayo Clinic Scottsdale/Phoenix, Arizona	08/16/2016

Communication in Healthcare	2017 - 2020
Faculty - Teaching 5-6 courses per year for Mayo staff	
Mayo Clinic School of Graduate Medical Education	
Phoenix, Arizona	
Cultural Humility	07/2017 - Present
Mayo Medical School - Block 1	
Mayo Clinic Alix School of Medicine	
Phoenix, Arizona	
Communication Amidst Difference	11/2017 - Present
Mayo Clinic Alix School of Medicine - Block 5	
Phoenix, Arizona	
Unconscious Bias	12/13/2017
Mayo Clinic School of Graduate Medical Education Faculty Development	
Mayo Clinic	
Phoenix, Arizona	
Unconscious Bias	11/06/2018
Palliative Medicine Grand Rounds	
Mayo Clinic	
Phoenix, Arizona	
Miles to Go Before I Sleep: From Challenges to Opportunities, Addressing Diversity in Medicine	08/31/2020
Neurology Grand Rounds (Invited)	
Mayo Clinic Rochester (Virtual)	
Rochester, Minnesota	
Miles to Go Before I Sleep: From Challenges to Opportunities, Addressing Diversity in Medicine	09/21/2020
Dr. Michele Halyard Lecture Series (Invited)	
Mayo Clinic Graduate School Student Life and Wellness Committee	
Phoenix, Arizona	
Miles to Go Before I Sleep: From Challenges to Opportunities, Addressing Diversity in Medicine	09/24/2020
Cancer Center Grand Rounds (Invited)	
Mayo Clinic (Virtual)	
Phoenix, Arizona	
Miles to Go Before I Sleep: From Challenges to Opportunities, Addressing Diversity in Medicine	09/25/2020
Neurosurgery Grand Rounds (Invited)	
Mayo Clinic (Virtual)	
Phoenix, Arizona	

Mentorship

Starling, Amaal (Resident)	07/2008 - 06/2012
Description:	
Current Status: Consultant in Headache Medicine, Department of Neurology, Mayo Clinic Arizona	
Outcome: Muenter Award Recipient for Excellence in Neurology	
Scanlon, Maura (Fellow)	07/2016 - Present
Description:	
Current Status: Senior Associate Consultant, Division of Pain Medicine, Department of Anesthesiology, Mayo Clinic Arizona	
Outcome: Ultimately Dr. Scanlon chose to relocate to Minnesota to be closer to family.	

Valencia-Sanchez, Cristina (Neurology Resident) 07/2016 - Present

Description:

Current Status: Neurology Residency, Mayo Clinic Arizona

Outcome: 03/2018 - Outstanding Resident Presentation Award at the Young Investigator Symposium in Rochester for Fitness to Drive in Patients with Brain Metastasis Trial. 4/28/19 - Manuscript accepted for publication in NeuroOncology Practice. 7/8/19 - Muenter Award recipient.

Sharma, Akanksha (Fellow)

07/2017 - 06/2019

Description:

Current Status: Palliative Medicine fellow

Outcome: See bibliography for manuscripts. Accepted into the SNO Young Investigators Forum 2019. Grand Rounds Presentations for Heme/Onc and Neurology May 2019.

Kendall, Jamila (Medical Student)

04/2018 - Present

Description:

Current Status: Resident at Kessler Institute

Outcome: Accepted into residency at Kessler Institute for Rehabilitation, New Jersey

Mensah, Terrence (Undergraduate Student)

08/2018 - Present

Description:

Current Status: Attending Harvard July 2019

Outcome: Multiple medical school admissions

Fortin Ensign, Shannon (Ph.D.)

07/2019 - Present

Description:

Current Status: Hematology/Oncology fellow

Outcome: Research mentorship

Academic Career Development

Effective Verbal Feedback

08/2018

Faculty Development

Mayo Clinic

Phoenix, Arizona

Take 5: Microaggressions

10/2019

Faculty Development

Mayo Clinic

Scottsdale, Arizona

Take 5: Creating Effective Written Evaluations

11/2019

Faculty Development

Mayo Clinic

Phoenix, Arizona

Bias in Healthcare

02/2020

Neuroscience Grand Rounds

Mayo Clinic

Phoenix, Arizona

Educational Activities

Coauthor of bestselling resources for patients and families coping with brain tumors. *Navigating Life with a Brain Tumor*, published by Oxford Press in 2013, is one of the few tools available for empowering patients and their loved ones. It offers the guidance and education required to face the challenges this illness brings. The book has sold almost 6000 copies in the United States and abroad. It continues to garner attention on Amazon. The second edition will be published in 2019.

Founding member and Co-Chair of Women in NeuroOncology (WiN). Collaborated with other women neuro-oncologists to create a community of physicians and scientists from various areas of practice. Recognized the need to give voice to women in neuro oncology. This subcommittee of the Society of NeuroOncology is responsible for providing substantive opportunities for networking, career enhancement, research and innovations for its members.

I serve as the vice Chair of the Mayo Clinic Arizona Diversity Subcommittee. In this role I am able to translate my deep commitment to equity and inclusion into action for the institution. Further service includes my role as Director of Undergraduate Pipeline Programs. This work is critical in getting students of diverse backgrounds interested in careers in medicine and exposure to Mayo Clinic. It allows me to serve the institution and the community by building awareness to this important field. My commitment to equity and inclusion is further evidenced by my work as course director for the Mayo Medical School Cultural Humility course and Communication Amidst Difference.

Institutional/Departmental Administrative Responsibilities, Committee Memberships and Other Activities

Mayo Clinic

Department of Education Administration	
Mayo Clinic College of Medicine	
Mayo School of Graduate Medical Education	
Mayo Fellows Association	
Member	2003 - Present
Neurology Representative	2005 - 2006
Mayo Clinic Board of Governors	
Executive Operations Team	
Clinical Practice Committee	
Outpatient Practice Subcommittee	
Member	01/2021 - Present
Mayo Clinic Cancer Center	
Committee Member	2010 - 2012
Central Nervous System Disease Group	
Co-Chair	12/2018 - Present
Neuro-Oncology Program	
Associate Member	03/2013 - Present

Mayo Clinic in Rochester

Department of Neurology	
Curriculum Committee	
Resident Representative	2005 - 2007

Mayo Clinic in Arizona

Department of Neurology	
Clinical Practice Committee	
Member	2017 - Present
Division of Neurooncology	
Creator	2008
Inaugural Division Chief	2008 - 2017
CNS Tumor Board	
Director	2008 - 2017
Neuro Onc DWG	
Chair	2008 - 2017
Education Committee	
Member	2008 - 2011
Neuro-Oncology Discipline Oriented Group (DOG)	
Chair	2008 - Present
Neuroscience Discipline Oriented Group (DOG)	
Member	2008 - 2012

Mayo Clinic Arizona Committees

Diversity Committee	
Member	2017 - Present
Vice Chair	05/2018 - Present
Executive Operations Team - Arizona	
Member	01/2021 - Present
Clinical Practice Committee - Arizona	
Member	01/2021 - Present
Vice Chair	01/2021 - Present
Outpatient Practice Subcommittee - Arizona	
Chair	01/2021 - Present
Professionalism Subcommittee	
Member	2017 - 2020
Personnel Committee	
Diversity Subcommittee	
Member	2010 - Present
Vice Chair	05/2018 - Present
Mayo Clinic Cancer Center	
Mayo Clinic Cancer Center - Arizona	
Patient Engagement Committee	
Member	2017 - Present
Mayo Clinic in Arizona	
Department of Education Services	
Mayo Clinic College of Medicine and Science	
Mayo Medical School - Arizona	
Undergraduate Pipeline Program (UPS)	
Director	2017 - Present
William Worrall Mayo Scholar	
Mentor	2017 - Present

Presentations Extramural**National or International****Invited**

Neuro-Oncology Update	07/2010
Mayo Clinic Review Course	
San Diego, California	
Neuro-Oncology Update	07/2011
Mayo Clinic Review Course	
Orlando, Florida	
Neuro-Oncology Pearls and Pitfalls	07/2012
Mayo Clinic Neurology Review Course	
Chicago, Illinois	
Update on Glioma Management	07/2013
Mayo Clinic Neurology Review Course	
Santa Barbara, California	
Quality of Life in Patients with Glioma	09/2013
Annual Barrow NeuroOncology Symposium	
Scottsdale, Arizona	

Treatment of Brain and Spinal Cord Metastases Mayo Clinic Clinical Neurology Review Orlando, Florida	10/2014
Update in Neuro-Oncology Mayo Clinic Neurology Review Course Chicago, Illinois	07/2015
Approach to Glioblastoma in the Elderly Annual Barrow NeuroOncology Symposium Phoenix, Arizona	02/2016
Update in Neuro-Oncology Mayo Clinic Neurology Review Course Kona, Hawaii	07/2016
Update in Neuro-Oncology Mayo Clinic Neurology Review Course San Juan, Puerto Rico	07/2017
Course Co-Director 1st Annual Mayo Clinic Advances & Innovations in Complex Neuroscience Patient Care: Brain & Spine Sedona, Arizona	11/2017
Biologic and Clinical Discoveries in Neuro-Oncology Co-Chair (Scientific Session) American Academy of Neurology Annual Meeting Los Angeles, California	04/2018
Update in Neuro-Oncology Mayo Clinic Neurology Review Course Chicago, Illinois	07/2018
Leveraging AAN Resources to Help Departments Enhance and Advance Careers of Underrepresented Neurologists American Academy of Neurology Headquarters (Presentation on behalf of the Diversity Leadership Program) Minneapolis, Minnesota	09/2018
Update in NeuroOncology Women Neurologists Group Conference Scottsdale, Arizona	02/2019
Course Co-Director 2nd Annual Mayo Clinic Advances & Innovations in Complex Neuroscience Patient Care: Brain & Spine Sedona, Arizona	03/2019
A Call to Action for Neuro-Oncology Society for Neuro Oncology Phoenix, Arizona	11/2019
Lunchtime Session: Overcoming Bias in Neuro-Oncology: A Call to Action for Everyone LT & Ed Session Chair Society for Neuro Oncology Phoenix, Arizona	11/2019
Developing Diverse Leaders and Talent Pipelines Mayo Clinic Rochester Department of Business Development Rochester, Minnesota	12/2019

Miles to Go Before I Sleep: From Challenges to Opportunities, Addressing Diversity in Medicine Women Neurologists Group (WNG) CME Session	12/14/2020
Diversity in Clinical Cancer Care: Does it Matter? Course Development/Invited Presentation Society for NeuroOncology, Women and Diversity Committee Webinar (Virtual)	02/12/2021
#ilooklikeaneuroonc American Academy of Neurology Annual Meeting Virtual Conference	04/2021
History of Neurology: The Development of Neurologic Subspecialties American Academy of Neurology Annual Meeting Virtual Conference	04/2021
Ask a Neurooncologist: Questions You Were Afraid to Ask Session: Education Programming: Post-Symposium Basics and Essentials of Neurooncology 2 American Society of Neuroradiology Virtual Conference	05/2021
Improving Patient Access Through Community Neuro-Oncology American Society of Clinical Oncology Virtual Conference	06/2021
Oral	
The Frequency of Specific Chromosomal Abnormalities in PNCSL Differs from Systemic DLBCL Suggesting a Different Pathogenesis United States and Canadian Academy of Pathology 2007 Annual Meeting San Diego, California	03/2007
Primary Central Nervous System Lymphoma Can be Diagnosed with Concurrent Corticosteroid Usage Pan-Pacific Lymphoma Conference Maui, Hawaii	06/2007
Neurologic Complications of Systemic Malignancies and Their Treatments Neurology Review Course San Diego, California	07/08/2010
Neuro-Oncology for the Practicing Neurologist Mayo Clinic Clinical Neurology Review Course Chicago, Illinois	07/17/2015
Systemic Treatment of High Grade Glioma Mayo Clinic, Heme/Onc Review Course Paradise Valley, Arizona	01/30/2016
Neuro-Oncology Update Practical Neurology Course Kona, Hawaii	07/01/2016
Medical Management of Brain Metastases 1st Annual Mayo Clinic Advances and Innovations in Complex Neuroscience Patient Care: Brain and Spine Sedona, Arizona	11/04/2017
Screening for Brain Metastases 1st Annual Mayo Clinic Advances and Innovations in Complex Neuroscience Patient Care: Brain and Spine Sedona, Arizona	11/04/2017

Neurologic Complications of Lung Cancer
 Mayo Clinic Cancer Center Thoracic Oncology Update: State-of-the-Art
 Evaluation and Management of Thoracic Cancers
 Phoenix, Arizona

11/10/2017

Update in the Treatment of Glioma
 Mayo Clinic Hematology Oncology Review
 Phoenix, Arizona

02/2019

A Phase III randomized, double-blind placebo controlled study of armodafinil (nuvigil®) to reduce cancer-related fatigue in patients with high grade glioma (Alliance A221101)
 American Society of Clinical Oncology Annual Meeting (virtual)

05/2020

Poster

Compulsive Urination Presenting as Frontotemporal Dementia
 American Academy of Neurology Meeting
 San Diego, California

04/2006

Primary Central Nervous System Lymphoma Can be Diagnosed with Concurrent
 Corticosteroid Usage
 American Neurological Association Meeting
 Chicago, Illinois

10/2006

Primary Central Nervous System Lymphoma Can be Diagnosed with Concurrent
 Corticosteroid Usage
 Society of Neuro-Oncology
 Orlando, Florida

11/2006

Spinal Astrocytoma Presenting as Idiopathic Intracranial Hypertension
 Society of Neuro-Oncology
 Orlando, Florida

11/2006

Atypical Intracerebral Hemorrhage
 4th World Congress on Controversies in Neurology
 Barcelona, Spain

10/28/2010 -

10/31/2010

Brain Metastases from Gynecologic Cancers
 Society for Neuro-Oncology, 15th Annual Scientific Meeting
 Montreal, Quebec, Canada

11/18/2010 -

11/21/2010

Intramedullary Spinal Cord Lymphoma: Clinical Presentation, Neuroimaging,
 Diagnosis, and Outcome
 American Academy of Neurology
 Honolulu, Hawaii

04/12/2011

Status Epilepticus in Patients with Glioma: Association with Tumor Progression or
 Transformation
 American Academy of Neurology
 Honolulu, Hawaii

04/12/2011

Socioeconomic Status Modified the Impact of Race/Ethnicity on Glioblastoma
 Prognosis
 Society for Neuro-Oncology Meeting
 Miami, Florida

11/2014

Glioblastoma After West Nile Virus Neuroinvasive Disease
 Spritzer S, Grill M, Leis A, Porter A
 Society for Neuro-Oncology
 San Antonio, Texas

11/2015

Simulating Patterns of Recurrence Following Ischemia
 Society for NeuroOncology Annual Meeting
 Scottsdale, Arizona

11/2016

Towards Therapeutic Optimism - Increasing Radiation Therapy Utilization in Patients with Glioblastoma	11/2016
Society for NeuroOncology Meeting	
Scottsdale, Arizona	
Discrimination of Clinically Impactful Treatment Response in Recurrent Glioblastoma Patients Receiving Bevacizumab Treatment	11/2017
Society for NeuroOncology	
San Francisco, California	
Extent of Glioblastoma Invasion Predicts Overall Survival Following Upfront Radiotherapy Concurrent with Temozolomide	11/2017
Society for NeuroOncology	
San Francisco, California	
Identifying Early Indicators of Immunotherapeutic Response: CAR T-Cell Therapy	11/2017
Society for NeuroOncology	
San Francisco, California	
Role of Pre-Treatment Tumor Dynamics and Imaging Response in Discriminating Glioblastoma Survival Following Gamma Knife	11/2017
Society for NeuroOncology	
San Francisco, California	
Clinical Evaluation of Fitness to Drive in Patients with Brain Metastases	04/2018
American Academy of Neurology 70th Annual Meeting	
Los Angeles, California	
Radiation Necrosis after SRS for Intracranial Metastases from Lung Cancer: A Retrospective Review	04/2019
European Society for Radiotherapy & Oncology	
Milan, Italy	
Multifocal Cerebral Infarction and Status Epilepticus as a Result of 3-bromopyruvate Toxicity for Treatment of Ocular Melanoma	05/2019
American Academy of Neurology	
Philadelphia, Pennsylvania	
Does the Location Matter? Characterization of the Anatomic Locations, Molecular Profiles, and Clinical Features of Gliomas	11/2019
Society for Neuro Oncology	
Phoenix, Arizona	
Evaluating the Days Gained Response Metric in Clinical Trials using Bevacizumab Plus Additional Agents for Recurrent Glioblastoma	11/2019
Society for Neuro Oncology	
Phoenix, Arizona	
Impact of Tumor Location on Image-derived Volume, Proliferation Rate and Growth Velocity in Glioblastoma Patients	11/2019
Society for Neuro Oncology	
Phoenix, Arizona	
Sex Differences in Contrast-Enhancing Gliomas at Presentation	11/2019
Society for Neuro Oncology	
Phoenix, Arizona	
Uncertainty Quantification in Radiomics	11/2019
Society for Neuro Oncology	
Phoenix, Arizona	

A Pilot Study to Assess the Integration of a Unique PROQOL Tool and Early Palliative Care Intervention in the Care of High Grade Glioma Patients and Their Caregivers Society for Neuro Oncology Phoenix, Arizona	11/2019
Evaluating Radiation Necrosis in Patients with Intracranial Metastases from Melanoma Society for Neuro Oncology Phoenix, Arizona	11/2019
Longitudinal Perception of Prognosis of Patients with High Grade Glioma Compared to Their Caregivers and Clinicians Society for Neuro Oncology Phoenix, Arizona	11/2019
Predicting Seizure in Glioma Patients Using a Random Forest Classifier Trained on Sex-Specific and Mixed Cohorts Society for Neuro Oncology Phoenix, Arizona	11/2019
Surveying Bias in Neuro-Oncology and Society of Neuro Oncology (SNO) Members: Gender and Beyond Society for Neuro Oncology Phoenix, Arizona	11/2019
Regional	
Invited	
Navigating Life with a Brain Tumor Barrow Neurological Institute, Neuro-Oncology Symposium Scottsdale, Arizona	09/2013
Panelist - Discussing Unconscious Bias 2018 Mayo Clinic Quality Symposium - Intersections of Quality and Health Care Disparities Phoenix, Arizona	03/2018
Miles to Go Before I Sleep: From Challenges to Opportunities, Addressing Diversity in Medicine Anne B. Young MD Diversity Scholar Presentation Massachusetts General Hospital Neurology Grand Rounds (Virtual) Boston, Massachusetts	07/29/2020
Miles to Go Before I Sleep: From Challenges to Opportunities, Addressing Diversity in Medicine Neurology Grand Rounds University of Minnesota (Virtual) Minneapolis, Minnesota	08/28/2020
Miles to Go Before I Sleep: From Challenges to Opportunities, Addressing Diversity in Medicine Neurology Grand Rounds University of Texas Southwestern (Virtual) Dallas, Texas	09/09/2020
Miles to Go Before I Sleep: From Challenges to Opportunities, Addressing Diversity in Medicine Pennsylvania Neurological Society Virtual, Pennsylvania	10/17/2020

Miles to Go Before I Sleep: From Challenges to Opportunities, Addressing Diversity in Medicine Neurology Grand Rounds Duke University (Virtual) Durham, North Carolina	11/04/2020
How We Make Them Feel: Quality of Life in High Grade Glioma Neurology Grand Rounds (Virtual) - Stanley Gore Lectureship NorthShore University Health System Chicago, Illinois	11/10/2020
Miles to Go Before I Sleep: From Challenges to Opportunities, Addressing Diversity in Medicine New York State Medical Society Virtual, New York	11/15/2020
Miles to Go Before I Sleep: From Challenges to Opportunities, Addressing Diversity in Medicine Hartford HealthCare Neuroscience Grand Rounds Hartford, Connecticut	01/14/2021
Miles to Go Before I Sleep: From Challenges to Opportunities, Addressing Diversity in Medicine Thomas Jefferson University Neurology Grand Rounds (Virtual) Philadelphia, Pennsylvania	02/19/2021
Health Disparities Among Cancer Patients Virtual Conference American Society of Clinical Oncology (ASCO) Direct Highlights Las Vegas, Nevada	06/2021

Oral

Glioblastoma in the Elderly Barrow Neuro-Oncology Symposium Phoenix, Arizona	02/24/2016
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Poster

Clinical Evaluation of Fitness to Drive in Patients with Brain Metastases Mayo Clinic Young Investigators Research Symposium Rochester, Minnesota	03/2018
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Visiting Professorship

Visiting Professorships

Visiting Professorship Thomas Jefferson University Medical Center - Department of Neurology	02/19/2021
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Clinical Practice, Interests, and Accomplishments

Clinical Activities: I was recruited to Mayo Clinic in 2008 with the charge of building our neuro oncology program. With my arrival, I was able to coordinate care of neuro-oncologic patients, specifically patients with tumors of the brain and spine, both benign and malignant as well as providing a coordinated home for patients with neurologic complications from their systemic cancers and or treatment. I began our multidisciplinary tumor board and created a monthly neuro oncology case conference for resident education. I served as site PI on multiple clinical trials and developed my own nationally enrolling trial regarding quality of life for patients with high grade glioma, an effort that raised national attention to Mayo Clinic in Arizona and care for brain tumor patients. I have served as content expert for 7 Ask Mayo Expert neuro oncologic topics and have contributed to the revamping of our mayoclinic.org website to be more patient friendly.

Research Interests and Accomplishments

My clinical research interests are focused on improving the quality of life of patients who have been impacted with brain cancers includes identifying improved treatment options, reducing fatigue, maintaining independence and autonomy, and improving access of utilization of known resources among others. On a National level, I am the PI of largest neuro-cognitive study to evaluate stimulant medication to abrogate cognitive fatigue in brain tumor patients (Alliance study # A221101 projected to complete accrual in December 2018). I am PI of a local MCA trial looking at Fitness to Drive in Patients with Brain Metastases that completed enrollment earlier this year. Under my mentorship, Dr. Valencia Sanchez was awarded outstanding presentation at the Mayo Clinic Young Investigators Research Symposium earlier this year. The manuscript is pending with anticipated submission in November 2018. Enrollment is ongoing on an additional trial which I have initiated, a local Pilot study of early integration of palliative care using the BEACON PROQOL (a novel quality of life survey system) in patients with high grade glioma and their caregivers. In addition to the protocols mentioned, I am also PI on several retrospective studies aimed at furthering our understanding of the spectrum of radiographic and clinical changes that occur in patients with brain metastases treated with stereotactic radiosurgery with various primary malignancies as well as patients with glioma treated with proton therapy. These studies are critical to the work we do and may have practice changing implications regarding how we counsel in regards to risk and how we proceed when concerned about disease progression.

My translational work has been as clinical collaborator for the Precision Neurotherapeutics Laboratory, run by Drs. Kristin Swanson and Bernard Bendok. I am working with Dr. Swanson in her mathematical neuro-oncology (MNO) lab to validate a novel MNO-developed response metric, known as "Days Gained", in patients with glioblastoma multiforme (GBM) from Mayo Clinic in Arizona and beyond. Furthering our understanding into which patients respond to therapy, the period of their response, and the extent of their response will be essential to push our field toward individualized, precision medicine. Days Gained was previously validated for prognosis of progression-free and overall survival in GBM patients receiving standard-of-care treatment. In our current project, we are testing this metric across a variety of clinical settings under the hypothesis that Days Gained will provide an early and accurate prediction of treatment success (or failure) in this challenging population of patients. The larger project is an enterprise wide collaboration also involving Arizona State University that is funded primarily through the Ivy Foundation and supplemented by intramural Marley Funds.

Research Grants Awarded

Active Grants

Federal

Program Director / Principal Investigator	MCA / Porter / A071102 (14-009102 CIRB), A Phase II/III Randomized Trial of Veliparib or Placebo in Combination with Adjuvant Temozolomide in Newly Diagnosed Glioblastoma with MGMT Promoter Hypermethylation. Funded by National Cancer Institute	01/2016 - 12/2023
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Federal sub award

Program Director / Principal Investigator	202003050: (MCA) Safety and efficacy study of INCMGA00012 and epacadostat in combination with radiation and bevacizumab in patients with recurrent gliomas. Funded by Incyte. (202003050)	05/2021 - 04/2024
Co-Investigator	Multi-site Validation and Application of a Consensus DSC MRI protocol. Funded by National Cancer Institute. (CA221938)	02/2018 - 01/2022
Co-Investigator	Multi-parametric Perfusion MRI for Therapy Response Assessment in Brain Cancer. Funded by National Institutes of Health. (UG3CA247606.)	07/2020 - 06/2025
Neurologist	MIT/Mayo Physical Sciences Center for Drug Distribution and Efficacy in Brain Tumors. Funded by National Cancer Institute. (CA210180)	08/2016 - 07/2021

Completed Grants

Foundation

Co-Investigator	The Mathematical NeuroOncology Program: Towards Precision Neurotherapeutics. Funded by The Ben and Catherine Ivy Foundation	10/2016 - 10/2020
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Industry

Program Director / Principal Investigator	MCA 15-009401 ICT-107-301 (STING): A Phase III randomized, double-blind, controlled study of ICT-107 with maintenance temozolomide (TMZ) in newly diagnosed glioblastoma following resection and concomitant TMZ chemoradiotherapy. Funded by ImmuCell. (ICT-107-301)	05/2017 - 04/2022
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Mayo Clinic

Program Director / Principal Investigator	13-003091 - Pilot study: APOE e4 carrier status and development of cognitive impairment in patients receiving adjuvant chemotherapy. Funded by Discretionary Funds	09/2013 - 09/2014
Program Director / Principal Investigator	17-000970: Clinical evaluation of fitness to drive in patients with brain metastases. Funded by Discretionary Funds	04/2017 - 03/2018
Program Director / Principal Investigator	2017 AZ Opportunity Fund - Clinical evaluation of fitness to drive in patients with brain metastases. Funded by MEGA Program - MCA Internal Funds. (2017AZ Opportunity Fund)	08/2017 - 12/2017
Program Director / Principal Investigator	Marley Fall 2017 The Mathematical NeuroOncology Program: Towards Precision Neurotherapeutics. Funded by Development - Gifts from benefactors	01/2018 - 12/2018
Program Director / Principal Investigator	17-011342 Pilot study of early integration of palliative care using the BEACON PROQOL in patients with high grade glioma and their caregivers . Funded by To Be Named. (TN004260)	02/2018 - 01/2019
Program Director / Principal Investigator	16-002965/ Small Grant Application for – MC1572, Phase II study of pembrolizumab (MK-3475) in combination with standard therapy for newly diagnosed glioblastoma. Funded by SGP - Small Grants Program <\$10K	12/2019 - 11/2020

Other

Neuro-Oncology at Mayo Clinic Arizona: Collaboration and Continuity of Care Featured in Neurosciences Update, Vol 7, No 1	2010
Mayo International Health Program Featured in the Mayo Alumni Magazine	06/2010
Brain Tumor Awareness Month Medical Edge Radio Program	05/2013
Improving Survival in Patients with High Grade Glioma Quality Improvement Project Mayo Clinic Arizona Phoenix, Arizona	08/2014
Mayo Clinic Cancer Center Featured in Forefront Magazine Vol 5, Page 24	2015

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Ask Mayo Expert Topic

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2. **Porter AB**, Uhm JH, Parney IF, Vora SA. Brain metastases with known primary malignancy. AskMayoExpert. (POCID cnt-20118863).2016;
3. Uhm JH, Johnson DR, **Porter AB**. Low-grade glioma (adult). AskMayoExpert.2016 Feb 12;
4. **Porter AB**, Zahasky KM. Imaging, diagnosis and management of intracranial lesions; highly suspicious for brain metastasis (adult). AskMayoExpert.2017 Jul 31;
5. **Porter AB**, Zahasky KM, Rhodes DJ. Intracranial lesions highly suspicious for brain metastasis: imaging, diagnosis, and management (adult). AskMayoExpert.2018 Jan 09;

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1. * Sharma A, Edwin M, Sloan J, **Porter AB**. Early intervention with BEACON Pro-QOL and palliative care in patients with high grade glioma. (in progress) 2018

2. **Porter AB**, Kohli S, Jaeckle K, Sloan J, Brown P. A221101 A Phase III Randomized, Double-blind Placebo Controlled Study of Armodafinil (Nuvigil™) to Reduce Cancer-Related Fatigue in Patients with High Grade Glioma. (in preparation). 2019 2018
3. * Sharma A, Hu L, Sio T, Ashman J, Vora A, **Porter AB**. Cystic degeneration is part of the post radiation treatment change seen in patients treated with protons with glioma. Practical Radiation Oncology (submitted 2018 Nov 28)

* Indicates that the primary author was a mentee of this author.

CURRICULUM VITAE

Jessica Monique Silva-Fisher, PhD



DATE PREPARED: 09/015/2021

CITIZENSHIP: USA

ADDRESS AND TELEPHONE NUMBERS:

Washington University School of Medicine
9940A Office Wohl Clinic
9940 Lab Wohl Clinic
425 S. Euclid Avenue
St. Louis, MO 63110
(314) 273-4216

HOME

3264 Gravois Road
St. Claire, MO 63077
(210) 639-0647

PRESENT POSITION:

07/2020 - present Instructor of Medicine, Investigator track, Division of Oncology, Section of Stem Cell Biology, Washington University

EDUCATION:

Undergraduate

2002 - 2005 Bachelor of Science, Biology, St. Mary's University, San Antonio, Texas
2000 - 2002 Certificate 2+2 program, Biology, San Antonio College, San Antonio, Texas

Graduate

2006 - 2011 Doctor of Philosophy, Biomedical Sciences, Mayo Clinic College of Medicine and Science, Rochester, MN

ACADEMIC POSITIONS:

08/2002 - 06/2006 Research Assistant, University of Texas Health Science Center in San Antonio, San Antonio, Texas

08/2007 - 05/2011	<u>Manager</u> , Mayo Clinic Diversity in Education Blog, Mayo Clinic College of Medicine, Rochester, MN
06/2011 - 05/2014	<u>Senior Staff Scientist</u> , McDonnell Genome Institute at Washington University School of Medicine, St. Louis, MO
05/2014 - 02/2019	<u>Postdoctoral Associate</u> , Washington University School of Medicine, St. Louis, MO
02/2019 - 07/2020	<u>Instructor</u> , Department of Internal Medicine, Division of Oncology, Section of Stem Cell Biology, Washington University

UNIVERSITY AND HOSPITAL APPOINTMENTS AND COMMITTEES:

01/2016 - 02/2020	<u>Co-Chair</u> , Department of Medicine Trainee Inclusion and Cultural Awareness Task Force, Washington University School of Medicine, St. Louis, MO
11/2019 - present	<u>Associate Member</u> , Siteman Cancer Center, St. Louis, MO
02/2020 - present	<u>Co-Director</u> , Mentorship to Enhance Diversity in Academia (MEDA) Program, Washington University School of Medicine, St. Louis, MO
12/2020- present	<u>General Membership</u> , Division of Biology and Biomedical Sciences, Washington University School of Medicine, St. Louis, MO
10/2020-present	<u>Wohl Clinic 9th floor Seminar leader</u> , Washington University School of Medicine, St. Louis, MO
05/2021- present	<u>Planning Committee</u> , Mayo Clinic College of Medicine, Women Physicians and Scientists Society Program
08/2021- present	<u>Faculty Advisory Board</u> , Diversity in Cancer Research High School Initiative, WUSTL Cancer Research Club, Washington University, St. Louis, MO

HONORS AND AWARDS:

2004	Mayo Clinic Summer Undergraduate Research Fellowship
2004	Mayo Clinic Initiative to Maximize Student Diversity Fellowship
2006	Certificate of Recognition Award from the Mayor and City Council San Antonio
2007	Student Representative for Biochemistry and Molecular Biology Mayo Clinic
2008	AACR Minority Scholars in Cancer Research Award
2009	AACR Minority Scholars in Cancer Research Award
2009	Cambridge Who's Who Award among Executives, Professionals, and Entrepreneurs Award
2010	National Institute of Health National Graduate Student Research Festival Award
2015	AACR Get-Your-Rear-In-Gear (GYRIG) Scholar-In-Training-Award
2015	Keystone Symposia Future of Science Fund Scholarship
2015	NCI Ruth L. Kirschstein National Research Service Award Institutional Research Training Grant
2020	Washington University School of Medicine Faculty Diversity Scholar Award

PROFESSIONAL SOCIETIES AND ORGANIZATIONS:

2000 - present	American Association of Cancer Research (AACR)
2000 - present	AACR Women in Cancer Research
2000 - present	AACR Minorities in Cancer Research
2014 - 2018	NGS Leaders
2014- 2019	Washington University Postdoctoral Association
2014 - 2019	National Postdoctoral Association
2016 - 2019	Trainee Inclusion and Cultural Awareness Task Force in Department of Medicine
2016 - present	Academic Women's Network
2016 - present	The Forum for Women in Internal Medicine
2019 - present	Siteman Cancer Center
2019 - present	RNA Society
2021- present	RNA Society Mentoring Program (Mentor)
2021- present	Mayo Clinic College of Medicine Alumni Committee

MAJOR INVITED PROFESSORSHIPS AND LECTURESHIPS:

1. *Long ncRNAs and their association with cancer*, Xgen Congress and Expo, March 5-7, 2012, San Diego, CA
2. *Cancer, HPV, and the HPV vaccine*, Epidemiology lecture, January 1, 2012 and January 1, 2013, Washington University Graduate School, St. Louis
3. *Basics in Cancer Biology and Cancer-associated mRNAs (small and long RNAs)*, Topics in Bioinformatics, McDonnell Genome Institute, St. Louis
3. *Long non-coding RNAs importance and mechanisms in cancer metastasis*, Advocating Translational Genetics Genomics Conference, February 27, 2016, Harris-Stowe State University, St. Louis, MO
4. *Discovery of Late Stage Breast Cancer Estrogen Receptor bound lncRNAs*, Breast Cancer Research Program Seminar, March 9, 2017, Siteman Cancer Center, St. Louis, MO
5. *Identification and functional analysis of long non-coding RNAs associated with metastatic colorectal cancer*, Graduate Association of Latinx, Native American, and Caribbean Students (GALNACS) Showcase Seminar, October 14, 2019, Washington University School of Medicine, St. Louis, MO
6. *Transcriptome sequencing of patient samples reveals long non-coding RNAs that induce metastatic disease*, Cedar-Sinai Cancer Grand Rounds, December 6, 2019, Cedar-Sinai, Los Angeles, CA
7. *Identification of long non-coding RNA:protein interactions and functions in metastatic cancer*, University of Kansas, January 26, 2020, Lawrence, KS
8. *Understanding the mechanisms of metastatic long non-coding RNAs for future use as novel therapeutic targets*, University of Iowa, January 30, 2020, Iowa City, IA
9. *RAMS11 and metastatic colon cancer*, Molecular Biology Bio 105, Dr. Mitch McVey course (100 students, 10 international), Tufts University, School of Arts and Sciences, December 16, 2020, Medford, MA

INVITED TALKS:

1. *Unique Issues Faced by Researchers from Underrepresented Backgrounds in Conducting Research and in Pursuing Independent Research*, PRIDE CVD-CGE Program, Washington University School of Medicine, July 28, 2020, St. Louis, MO

2. *Family, Academia, and Diversity and inclusion in STEM*, The Petri Dish Podcast, Washington University School of Medicine, August 14, 2020, St. Louis, MO
3. *Education, Career path, and challenges of being in Academia*, MARC U-Star program, Washington University in St. Louis, November 2, 2020, St. Louis, MO
4. *“Identification of long non-coding RNAs as biomarkers for multiple myeloma progression.”*, Lightning talk presented by Sydney Anderson (OGR Extensive Program student), 2021 NHGRI Research Training and Career Development Virtual Annual Meeting, UCLA, April 20, 2021, CA
5. *“Insights of a Cancer Researcher’s journey to studying RNAs”*, Siteman Cancer Center’s Summer Program, Siteman Cancer Center Washington University, July 28, 2021
6. *“Multiple myeloma progression lncRNAs and RNAs with poor response to ASCT 3-drug regimen”* Saint Louis University, Department of Bioinformatics and Computational Science, August 24, 2021

HIGHLIGHTED IN MEDIA:

1. Mayo Clinic Alumni New Chapter Series, Silva-Fisher Bibliography and Story, <https://alumniassociation.mayo.edu/featured-alumni/jessica-silva-fisher-ph-d/>, October 2020
2. Jessica Silva-Fisher, Lathiena Manning Nervo, Theodore Addo, Amaliris Guerra, Marquis Walker, Sabrice Guerrier, Lakeya McGill, Dominique Brooks, Josiane Joseph, Justine Johnson, Francis Ayombil, Kamsi Odinamadu, *Voices on Diversity: Multiple Paths to Becoming a Scientist*, Molecular Cell, Volume 80, Issue 5, 2020, Pages 752-757, ISSN 1097-2765

DIVERSITY AND INCLUSION:

1. 2017- present Mentorship to Enhance Diversity in Academia (MEDA) program creation and development for under-represented trainees (graduate students, post-docs, and clinical fellows) in Department of Medicine., 2017-present
2. 12/2020-01/2020 Intersections Science Symposium, Selection Committee, Yale University and Washington University (Dr. Sheree Wilson, Associate Vice Chancellor Diversity and Inclusion)

STATUS OF RESEARCH AND RESEARCH RELATED OUTPUT ONGOING DURING COVID-19 PANDEMIC:

Support submitted

12/04/2020 Proteona Grant, Single cell multi-omics grant for Multiple Myeloma for processing and data analysis of sequencing project focused on PRC1-RNA binding- Runner up (40% off service)

04/23/2021 Advanced Cell Diagnostics, Spatial Genomics Grant Fully Funded Project (Discounts offered)

05/28/2021 Longer Life Foundation Developmental Research Award 2021

COVID-19 RELATED VOLUNTEERING

1. 01/05/2020 Clerical Assistant, scheduled second dose appointments and assisted with data entry (8 hours), BJC Health Clinic, EPNEC auditorium, St. Louis, MO

RESEARCH SUPPORT:

Active

1. NIH/NCI Transition Career Development Award to Promote Diversity (K22) CA241329
Title: Understanding the regulatory role and therapeutic potential of long non-coding RNAs in metastatic colorectal cancer
Duration: 07/01/2020-08/2023
PI: Jessica Silva-Fisher
2. Faculty Diversity Award
Washington University School of Medicine Office of Faculty Affairs
Duration: 07/01/2020-07/2023

Complete

1. NCI Ruth L. Kirschstein National Research Service Award Institutional Research Training Grant (T32) CA113275
Title: Understanding the role of polycomb associated long non-coding RNAs in metastatic colon cancer
Duration: 1/1/14-12/31/16
PI: Lee Ratner
2. NIH/NCI Research Supplement to Promote Diversity (R01) CA203995
Title: The role of polycomb associate long non-coding RNAs in lung cancer metastasis
Duration: 07/01/2018-06/30/2020
PI: Christopher Maher

PATENTS:

Fields, R., Maher, C., Silva-Fisher, J. (2021) *Methods and Compositions for Modulating LncRNAs and Methods of Treatment Based on LncRNA Expression* (U.S. Patent No. 17,158,845). U.S. Patent and Trademark Office.

REVIEWED ARTICLES:

06/28/2021 ATF4 contributes to 5-Flourouracil chemoresistance in colorectal cancer by promoting autophagy via mircoRNA-145/HDAC4/p53 axis Zhao, et. al 2021, *Cell Death Discovery*

TEACHING TITLE AND RESPONSIBILITES:

8/2011 – 12/2011 Lecturer, Lecture development and co-teach (Stan Braude, PhD) Human Biology for the Humanist Course 303A, Washington University School, St. Louis, MO

6/2012 – 5/2017 Instructor, Develop and lead Graduate School Preparation, Opportunities in Genomic Research program, The McDonnell Genome Institute, St. Louis, MO

08/2013 – 12/2013 Adjunct Professor, Organize and lead Microbiology Laboratory BIO316L L3, Maryville University, St. Louis, MO

TRINEES / MENTEE RECORD:

Alison Nelson – High School Student, Mayo Clinic College of Medicine, (2005)

Yicheng Lin - High School Student, Mayo Clinic College of Medicine, (2006)

Victoria McPeak - High School Student, Mayo Clinic College of Medicine, (2006)

Brian Butterfield - Mayo High School Student Mentorship, Mayo Clinic College of Medicine, (2007)

Jay R. Pritchett - Mayo Clinic Summer Medical Undergraduate Research Fellowship program, Mayo Clinic College of Medicine, (2008)

Meredith L. Halling- Mayo Clinic Summer Medical Undergraduate Research Fellowship program, Mayo Clinic College of Medicine, (2009-2010)

Michael Berres- Mayo Clinic Summer Medical Undergraduate Research Fellowship program, Mayo Clinic College of Medicine, (2010-2011)

Cynthia Tang - Opportunities in Genomics Program Scholar, McDonnell Genome Institute (2017 – 2018)

Gejae Jeffers – Opportunities in Genomics Program Scholar, McDonnell Genome Institute (2018 – 2020)

Sydney Anderson - Opportunities in Genomics Program Scholar, McDonnell Genome Institute, (01/2021 – 06/2021)

Laura White – RNA Society Mentor, University of Colorado School of Medicine (2021 – present)

Ezhil Chendamarai – Mentoring for career development, Washington University, Washington University, (2021 – present)

Katelyn Bagwill – Bioinformatic Research Summer Internship, Saint Louis University (2021 – present)

Kalid Mohammed – Washington University Undergraduate mentoring and career development, Washington University, (2021 – present)

PUBLICATIONS:

1. deGraffenreid LA, Friedrichs WE, Fulcher L, Fernandes G, **Silva JM**, Peralba JM, Hidalgo M: Eicosapentaenoic acid restores tamoxifen sensitivity in breast cancer cells with high Akt activity. *Annals of oncology : official journal of the European Society for Medical Oncology* 2003, 14(7):1051-1056. Pubmed Central PMID: 12853346
2. deGraffenreid LA, Chandrasekar B, Friedrichs WE, Donzis E, **Silva J**, Hidalgo M, Freeman JW, Weiss GR: NF-kappa B inhibition markedly enhances sensitivity of resistant breast cancer tumor cells to tamoxifen. *Annals of oncology : official journal of the European Society for Medical Oncology* 2004, 15(6):885-890. Pubmed Central PMID: 15151944
3. deGraffenreid LA, Friedrichs WE, Russell DH, Donzis EJ, Middleton AK, **Silva JM**, Roth RA, Hidalgo M: Inhibition of mTOR activity restores tamoxifen response in breast cancer cells with aberrant Akt Activity. *Clin Cancer Res* 2004, 10(23):8059-8067. Pubmed Central PMID: 15585641
4. **Silva J**, Cavazos DA, Donzis E, Friedrichs WE, Marciniak R, deGraffenreid LA: Akt-induced tamoxifen resistance is associated with altered FKHR regulation. *Cancer investigation* 2007, 25(7):569-573. Pubmed Central PMID: 17952739
5. **Silva JM**, Perez DS, Pritchett JR, Halling ML, Tang H, Smith DI: Identification of long stress-induced non-coding transcripts that have altered expression in cancer. *Genomics* 2010, 95(6):355-362. Pubmed Central PMID: 20214974

6. **Silva Jessica M** and Smith David I. (2011) Long non-coding RNAs and Cancer in Kevin V. Morris (Eds), *Long Non-coding RNAs: Regulation of Gene Expression and Drivers of Natural Selection*, (Chapter 9) The Scripps Research Institute, La Jolla, California, Caister Academic Press

7. **Silva JM**, Boczek NJ, Berres MW, Ma X, Smith DI: LSINCT5 is over expressed in breast and ovarian cancer and affects cellular proliferation. *RNA Biol* 2011, 8(3):496-505. Pubmed Central PMID: 21532345

8. White NM, Cabanski CR, **Silva-Fisher JM**, Dang HX, Govindan R, Maher CA: Transcriptome sequencing reveals altered long intergenic non-coding RNAs in lung cancer. *Genome Biol* 2014, 15(8):429.4156652. Pubmed Central PMID: 25116943

9. Cabanski CR, White NM, Dang HX, **Silva-Fisher JM**, Rauck CE, Cicka D, Maher CA: Pan-cancer transcriptome analysis reveals long noncoding RNAs with conserved function. *RNA Biol* 2015, 12(6):628-642.4615893. Pubmed Central PMID: 5864709

10. **Silva-Fisher, J.M.**, Dang, H.X., White, N.M. , Strand, M.S., Krasnik, B.A., Rozycki, Jeffers, G.L., Grossman, J.G, Highkin, M.K., Tang, C, Cabanski C.R., Eteleeb, A., Mudd, J., Goedegebuure, S.P, Luo, J., Mardis, E.R., Wilson, R.K., Ley, T.J., Lockhart, A.C., Fields, R.C., Maher, C.A. Long non-coding RNA RAMS11 promotes metastatic colorectal cancer progression. *Nature Commun* 11, 2156 (2020). Pubmed Central PMID: 32358485

11. **Silva-Fisher J**, Nervo LM, Addo T, Guerra A, Walker M, Guerrier S, McGill L, Brooks D, Joseph J, Johnson J, Ayombil F, Odinammadu K. Voices on Diversity: Multiple Paths to Becoming a Scientist. *Mol Cell*. 2020 Dec 3;80(5):752-757. doi: 10.1016/j.molcel.2020.11.021. PubMed PMID: 33275884.

12. McGill L, Manning Nervo L, Guerrier S, Guerra A, Joseph J, **Silva-Fisher J**, Addo T, Walker M, Odinammadu K. Voices on Diversity: Overcoming Barriers to Pursuing a Career in Science. *Mol Cell*. 2020 Dec 17;80(6):929-932. doi: 10.1016/j.molcel.2020.11.050. PubMed PMID: 33338406.

13. **Silva-Fisher J**, Guerrier S, Nervo LM, Guerra A, McGill L, Brooks D, Joseph J, Walker M, Ayombil F, Odinammadu K. Voices on Diversity: Combating Racial Inequality to Increase Diversity. *Mol Cell*. 2021 Jan 7;81(1):1-5. doi: 10.1016/j.molcel.2020.12.022. PubMed PMID: 33417852.

14. McGill L, Brooks D, Joseph J, **Silva-Fisher J**, Guerrier S, Addo T, Guerra A, Walker M, Johnson J, Ayombil F, Odinammadu K. Voices on Diversity: Creating a Sense of Belonging. *Mol Cell*. 2021 Jan 21;81(2):213-217. doi: 10.1016/j.molcel.2020.12.045. PubMed PMID: 33482088

15. Joseph J, Johnson J, Ayombil F, **Silva-Fisher J**, Guerrier S, Nervo LM, Addo T, McGill L, Brooks D. Voices on diversity: recruiting underrepresented scientists. *Mol Cell*. 2021 Feb 4;81(3):414-417. doi: 10.1016/j.molcel.2021.01.017. PubMed PMID: 33545055.

16. Guerra A, Nervo LM, Addo T, Walker M, McGill L, Joseph J, Johnson J, **Silva-Fisher J**. Voices on diversity: confronting racial bias. *Mol Cell*. 2021 Feb 18;81(4):639-641. doi: 10.1016/j.molcel.2021.01.026. PubMed PMID: 33606970.

17. Nervo LM, Ayombil F, Addo T, Guerra A, Walker M, McGill L, Joseph J, **Silva-Fisher J**. Voices on diversity: support systems that work. *Mol Cell*. 2021 Mar 4;81(5):885-888. doi: 10.1016/j.molcel.2021.01.027. PubMed PMID: 33667376

18. Eteleeb A, Tang C, Rozcki E, Dang H, White N, Reis-Filho J, Ellis M, Mardis E, and Maher C*, **Silva-Fisher J***, LINC00355 regulates p27^{KIP} expression by binding to MENIN to induce proliferation in late-stage relapse breast cancer. *Under Review to npj Breast Cancer*, Aug 2021

19. Alexander Miller, Sydney Anderson, Prasanth Thunuguntla, Lijun Yao, Julia Wang, Li Ding, John DiPersio, and **Jessica Silva-Fisher**. *m6A modified NEAT1 lncRNA binds to CBX4 to promote Multiple Myeloma progression. Manuscript under preparation for submission to Molecular Cell 2021*

ABSTRACTS:

1. **Silva, J.M.**, Friedrichs, W.E., and deGraffenreid, L.A., Inhibition of the PI3 kinase Pathway restores Tamoxifen-induced apoptosis in Breast Cells with Hyperactive Akt Activity. In: 12th Annual Symposium on Cancer Research in San Antonio. July 2002.
2. **Silva, J.M.**, Cavazos, D., Friedrichs, W.E., Marciniak, R, and deGraffenreid, L.A. Akt-Induced Tamoxifen Resistance in Breast Cancer is due in Part to Altered FKHR Localization. In: UT Health Science Center at San Antonio Department of Medicine 6th Annual Research Day. May 2003.
3. Friedrichs WE, Fernandes G, Macias R, **Silva J**, Li X and deGraffenreid LA. A Diet Rich in Omega-3 Fatty Acids Restores Therapeutic Response to Akt-Induced Resistant Breast Cancer. In: AICR/WCRF International Research Conference on Food, Nutrition, and Cancer. Washington, D.C., July 15-16, 2004.
4. Friedrichs WE, Fernandes G, Macias R, **Silva J**, Li X and deGraffenreid LA. A Diet Rich in Omega-3 Fatty Acids Enhances Tamoxifen Response in Akt-Induced Resistant Breast Cancer In: 27th Annual San Antonio Breast Cancer Symposium, San Antonio, TX, 2004.
5. Nielson A, **Silva, J.M.**, and deGraffenreid, L.A, Suppression of the ASK/JNK Pathway in Akt-Induced Tamoxifen Resistance. UT Health Science Center at San Antonio Department of Medicine, 8th Annual Research Day. May 2005.
6. **J M Silva**, A Nielsen, W Friedrichs, M Beeram, and L deGraffenreid,. A Novel Role for the ASK/JNK Pathway in Mediating Akt-Induced Endocrine Therapy Resistance. In: Symposium on Advances, Cancer Prevention and Therapy. South Padre Island, TX. October 28-29, 2005
7. **J M Silva**, Y Lin, A Nielsen, W Friedrichs, M Beeram and L deGraffenreid. RAD001 Relieves Akt-Induced Suppression of the ASK/JNK Pathway in Resistant Breast Cancer Cells. In: American Association for Cancer Research (AACR), 97th Annual Meeting. Washington, D.C. April 2006
8. **J M Silva**, K Patel, M Beeram, D Russell, R Tekmal, and L deGraffenreid. Preclinical Data Suggesting the Use of RAD001 for the Treatment of Hormone-Resistant Breast Cancer. In: UT Health Science Center at San Antonio Department of Medicine 9th Annual Research Day. May 2006.
9. **Jessica M Silva**, Milinda Esquivel, Elissa Donzis, York Lin, William E Friedrichs, Muralidhar Beeram, Rajeshwar Rao Tekmal, and Linda A deGraffenreid. mTOR Suppression of the ASK/JNK Pathway in Breast Cancer Cells Results in Decreased Sensitivity to Endocrine Therapy. In: 28th San Antonio Breast Cancer Symposium, San Antonio, TX. December 2006
10. **Jessica M. Silva**, Damon Perez, David Smith. A new class of novel long highly conserved Non-Coding Transcripts (hcNCTs) are altered in cancer. In: American Association for Cancer Research (AACR), 99th Annual Meeting. San Diego, CA, March 2008
11. **Jessica Silva**, Jay Pritchett, Meridith Halling, Damon Perez, David I. Smith. Long NNK-induced non-coding transcripts have altered expression in breast cancer cells. In: American Association for Cancer Research (AACR), 100th Annual Meeting. Denver, CO, April 2009

12. **Jessica Silva**, Jay Pritchett, Meridith Halling, Damon Perez, Xinghong Ma, David I. Smith. Characterizations of long NNK-induced non-coding transcripts have altered expression in cancer cells. In: American Association for Cancer Research (AACR), 101st Annual Meeting. Washington D.C, April 2010

13. Jasreet Hundal, Todd Wylie, Vincent Magrini, Jason Walker, Maria Trissal, Sean D McGrath, **Jessica Silva**, Giridharan Ramsingh, Todd A Fehniger, Daniel Link, Timothy J Ley, Richard K Wilson, and Elaine R Mardis. Automated Profiling of Small RNA Molecules in Acute Myeloid Leukemia Using High-Throughput Next Generation Sequencing. In: 2012 Advances in Genome Biology and Technology (AGBT), Marco Island, Florida, February 15-18, 2012

14. Maria Trissal, David Spencer, **Jessica Silva**, et. al Daniel Link, Dysregulation of the Imprinted DLK1-DIO3 Locus in Promyelocytic Leukemia, In: The American Society of Hematology, November 2012

15. Maria Trissal, **Jessica Silva**, todd Wylie, et. al Daniel Link, Dysregulation and Recurrent Mutation of miRNA-142 In *De Novo* AML, In: The American Society of Hematology, Novemeber 2013

16. **J Silva-Fisher**, H Dang, J Grossman, N White, C Cabanski, S Goedegebuure, T Fleming, E Pittman, R Fulton, M Strand, C Lockhart, T Ley, R Wilson, R Fields, C Maher, Transcriptome analysis of matched patient samples reveals regulatory colorectal associated metastatic long non-coding RNAs, In: 2015 Keystone Symposia Conference, Long Noncoding RNAs: From Evolution to Function, Keystone, CO March 2015

17. White NM, Cabanski CR, **Silva-Fisher JM**, Ha DX, Govindan R, Maher CA. Identification of long cancer associated lncRNAs (LCALS). In: 2015 Keystone Symposia Conference, Long Noncoding RNAs: From Evolution to Function, Keystone, CO March 2015

18. **J Silva-Fisher**, H Dang, J Grossman, N White, C Cabanski, S Goedegebuure, T Fleming, E Pittman, R Fulton, M Strand, C Lockhart, T Ley, R Wilson, R Fields, C Maher, Metastatic colorectal cancer associated long non-coding RNAs identified by transcriptome sequencing of matched primary and metastatic patient tissues, In: 2015 AACR Annual Conference, Philadelphia, PA April 2015

19. **Jessica M. Silva-Fisher**, Abdallah M. Eteleeb, Torsten O. Nielsen, Charles M. Perou, Jorge S. Reis-Filho, Mathew J. Ellis, Elaine R. Mardis, and Christopher A. Maher. Identification of Estrogen Receptor Alpha 1 bound lncRNAs in aggressive breast cancer, In: 2016 AACR Annual Conference, New Orleans, LA April 2016

20. **Jessica M. Silva-Fisher**, Abdallah M. Eteleeb, Torsten O. Nielsen, Charles M. Perou, Jorge S. Reis-Filho, Mathew J. Ellis, Elaine R. Mardis, and Christopher A. Maher. Identification of Late Stage Breast Cancer Estrogen Receptor Alpha 1 bound lncRNAs, In: Siteman Cancer Center Breast Cancer Research Forum, St. Louis, MO May 2016 and Keystone Symposia on Molecular and Cellular Biology, Noncoding RNAs: From Disease to Targeted Therapeutics. Banff, Canada Feb 2017

21. **Jessica M. Silva-Fisher**, Abdallah M. Eteleeb, Torsten O. Nielsen, Charles M. Perou, Jorge S. Reis-Filho, Mathew J. Ellis, Elaine R. Mardis, and Christopher A. Maher. Discovery and Characterization of Late-Stage Breast Cancer Estrogen Receptor 1 bound lncRNAs. In: 2017 AACR Annual Conference, Washington D.C. April 2017

22. Sydney Anderson, Lijun Yao, Prasanth Thunuguntla, Julia Wang, Li Ding, and **Jessica Silva-Fisher**. Identification of long non-coding RNAs as biomarkers for multiple myeloma progression. In: 2021 NHGRI Research Training and Career Development Annual Meeting, Virtual Meeting (Lighting talk awarded) UCLA David Geffen School of Medicine, April 2021

23. Sydney Anderson, Prasanth Thunuguntla, Lijun Yao, Li Ding, and **Jessica Silva-Fisher**. Identification and characterization of Multiple Myeloma associated long non-coding RNAs (*MMals*) using single cell sequencing and their potential roles in multiple myeloma drug resistance. In: RNA Society 2021, Virtual Meeting, May 2021

24. **Silva-Fisher, J.M.**, Dang, H.X, White, N.M., Strand,M.S., Krasnick, B.A., Rozycki, E.B., Jeffers, G.G, Grossman, J.G., Highkin,M.K., Tang, C., Cabanski, C.R., Eteleeb.A., Mudd, J., Goedegebuure,S.P., Luo, J., Mardis, E.R., Wilson, R.K, Ley, T.J., Lockhart, A.C., Fields, R.C., Maher, C.A, Long non-coding RNA *RAMS11*:Chromobox 4 protein interaction promotes metastatic colorectal cancer progression. In: 2021 Professional Development Workshop and Mentored Mock Review (PDW & MMR), Virtual Meeting, July 2021

Bio

Dr. Smith completed her residency training in Internal Medicine at Mayo Clinic Florida before pursuing a Specialized Women's Health Fellowship at the Cleveland Clinic in Cleveland Ohio. She is a North American Menopause Society certified Menopause Practitioner. Dr. Smith is now back at Mayo Florida where she sees women for a variety of concerns related to menopause, sexual health and more.

Dr. Melanie Swift is Assistant Professor of Medicine in the Division of Preventive, Occupational and Aerospace Medicine at the Mayo Clinic in Rochester, MN. She is the Medical Director of the Mayo Clinic Physician Health Center and Associate Medical Director of Occupational Health Services in Rochester.

Dr. Swift is a national leader in the field of Medical Center Occupational Health and is an authority on vaccination, infectious exposure management and other programs for health care personnel. Dr. Swift has served on vaccine advisory boards at the state and national level, and since October 2020 she has co-chaired Mayo Clinic's COVID Vaccine Program.

Curriculum Vitae
Yvonne Baerga-Varela, MD FACS

1. PERSONAL INFORMATION

Birth: February 13, 1964
Citizenship: USA
Languages: English, Spanish
Contact: ybv@mac.com; yvonne.baerga-varela@va.gov
787-233-2202

2. ACADEMIC RANK AND POSITION

Veterans Administration Caribbean Healthcare System, San Juan PR

2008 to present Staff Physician

Surgical Critical Care and General Surgery
Surgical Service
VA Medical Center, 10 Casia St., San Juan PR 00921

University of Puerto Rico School of Medicine, San Juan PR

Department of Surgery

2009 to present Assistant Professor of Surgery Ad-Honorem

Mayo Graduate School of Medicine, Rochester MN

1996 to 2007 Assistant Professor of Surgery

1994 to 1996 Instructor in Surgery

Department of Surgery, Mayo Clinic & Foundation, Rochester MN

1998 to 2007 Consultant

Division of Trauma, Critical Care and General Surgery
Division of Gastroenterological and General Surgery
Mayo Clinic, 200 First Street SW, Rochester MN 55905

1994 to 1998 Senior Associate Consultant

2001-2003 Associate Program Director, General Surgery Residency

3. EDUCATION

6/10/84 B.S., University of Puerto Rico
 Rio Piedras, Puerto Rico
 GPA: 4.0 Magna Cum Laude

6/5/87 M.D., University of Puerto Rico Medical School

Rio Piedras, Puerto Rico
Ranking: Number 1 in class of 145

6/27/87-6/26/92	General Surgery Residency Mayo Graduate School of Medicine Rochester, MN
6/27/92-6/25/93	Surgical Critical Care Fellowship Mayo Graduate School of Medicine Rochester, MN
6/26/93-6/24/94	Vascular Surgery Fellowship Mayo Graduate School of Medicine Rochester, MN

4. BOARD CERTIFICATIONS

7/1/88 - present	Diplomate, National Board of Medical Examiners
3/24/93 - 7/1/2003	Diplomate, American Board of Surgery (Certificate # 38183)
10/19/01 - 7/1/2013	Recertification, American Board of Surgery
11/26/12 - 7/1/2023	Recertification, American Board of Surgery
10/21/94 - 7/1/2005	Added Qualifications in Surgical Critical Care American Board of Surgery (Certificate #1339)
10/29/03 - 7/1/2015	Recertification
11/26/13 – 7/1/2025	Recertification
5/6/96 - 7/1/2006	Added Qualifications in General Vascular Surgery American Board of Surgery (Certificate #100636)

5. OTHER CERTIFICATIONS

1992-1996	Advanced Trauma Life Support
1993-2009	Advanced Trauma Life Support Instructor
2008-2021; 1993-1995	Basic Life Support Healthcare Provider
2008-2021; 1993-1995	Advanced Cardiac Life Support Provider
1997-2007	Fundamentals of Critical Care Support Instructor
2009-present	Physical Aptitude (Lic#3967-000566), Spinning instructor
2020-present	Pilates Instructor Training, Lolita San Miguel Legacy Student

6. MEDICAL LICENSURE

July 5, 1988- present

Minnesota Board of Medical Examiners
(Certificate # 31738)

September 30, 2008 – present

Puerto Rico Board of Medical Examiners
License # 17372 Medicine and Surgery

Certificates of Specialty in:
Surgery, Surgical Critical Care and Vascular Surgery

7. HONORS / AWARDS

1984 Chancellor's Award for Academic Excellence, University of Puerto Rico

1981-1986 Dean's List, University of Puerto Rico

1987 Lange Medical Publications Award (Outstanding Achievement in Medical School) University of Puerto Rico School of Medicine

1987 Janet M. Glasgow Memorial Award (Graduating first in Medical School Class), American Medical Women's Association

1993 Critical Care Academic Clinician Award, Mayo Graduate School of Medicine

2000 Recipient of Clinician Educator Award, Mayo Clinic
(Grant awarded by the Mayo Rochester Education Committee for the project "Trauma Education for Mayo Medical Students"; this was the first award given to a member of the Department of Surgery)

Excellence in Teaching Recognition Award– Mayo Medical School

1994, 1995, 1998, 1999-2000, 2001-2002, 2002-2003, 2004-2005

April 18, 2018 Certificate of Pride in Public Service, Department of Veterans Affairs

October 24, 2018 Certificate of Commitment in Recognition of working diligently to serve Veterans with VA's Mission- awarded by VA Quality Management Service Manager

March 19, 2021 Service Pin Certificate -Recognition for over 10year Dedication, contribution and commitment to Veterans Administration Organization- -awarded Executive Director Carlos Escobar-VA Caribbean Healthcare System

8. PROFESSIONAL MEMBERSHIPS AND SOCIETIES

American College of Surgeons (ACS)

1997-present Fellow, American College of Surgeons (ACS)

1994-2007 ACS Minnesota Chapter District #2 Member

2004-2007 Member, Minnesota Committee on Applicants District #2

2009-present American College of Surgeons Puerto Rico Chapter Member

Program Chair

February 2009-February 2010

60th Meeting February 25-27, 2010

La Concha Resort, San Juan PR

President ACS Puerto Rico Chapter

February 2013-February 2014

ACS PR Chapter selected as Star Chapter for achievements in the ACS Leadership Meeting April 2014

ACS PRC Chapter News -August 2014 *Bulletin ACS*

Volume 99, No.8; p. 76-77

Council Member ACS PR Chapter

February 2009-2010

February 2013 to February 2017

Female Surgeon Representative ACS PR Chapter

February 2015 to 2017

2018 -present Board of Governor Member, American College of Surgeons

Governor for ACS Puerto Rico Chapter

(Nov 8, 2018-2019; 2019-2022)

ACS Board of Governors Best Practices Workgroup- Appointed

February 20, 2019 to present

1985-present Alpha Omega Alpha Medical Honor Society

1992-present Mayo Alumni Association

1994-present Priestley Society, Councilor 2000-2003

1995-present Society of Critical Care Medicine

1997-2007 Minnesota Surgical Society
Board of Directors 2002-2004

1999-2007 Association of Women Surgeons

1999-2007 Society for Surgery of the Alimentary Tract

1999-2003 Association for Surgical Education

2000-2008 Western Trauma Association

2008-present Colegio de Medicos-Cirujanos de Puerto Rico

Curriculum Vitae
Yvonne Baerga-Varela, MD FACS

1. PERSONAL INFORMATION

Birth: February 13, 1964
Citizenship: USA
Languages: English, Spanish
Contact: ybv@mac.com; yvonne.baerga-varela@va.gov
787-233-2202

2. ACADEMIC RANK AND POSITION

Veterans Administration Caribbean Healthcare System, San Juan PR

2008 to present Staff Physician

Surgical Critical Care and General Surgery
Surgical Service
VA Medical Center, 10 Casia St., San Juan PR 00921

University of Puerto Rico School of Medicine, San Juan PR

Department of Surgery

2009 to present Assistant Professor of Surgery Ad-Honorem

Mayo Graduate School of Medicine, Rochester MN

1996 to 2007 Assistant Professor of Surgery

1994 to 1996 Instructor in Surgery

Department of Surgery, Mayo Clinic & Foundation, Rochester MN

1998 to 2007 Consultant

Division of Trauma, Critical Care and General Surgery
Division of Gastroenterological and General Surgery
Mayo Clinic, 200 First Street SW, Rochester MN 55905

1994 to 1998 Senior Associate Consultant

2001-2003 Associate Program Director, General Surgery Residency

3. EDUCATION

6/10/84 B.S., University of Puerto Rico
Rio Piedras, Puerto Rico
GPA: 4.0 Magna Cum Laude

6/5/87 M.D., University of Puerto Rico Medical School

Rio Piedras, Puerto Rico
Ranking: Number 1 in class of 145

6/27/87-6/26/92	General Surgery Residency Mayo Graduate School of Medicine Rochester, MN
6/27/92-6/25/93	Surgical Critical Care Fellowship Mayo Graduate School of Medicine Rochester, MN
6/26/93-6/24/94	Vascular Surgery Fellowship Mayo Graduate School of Medicine Rochester, MN

4. BOARD CERTIFICATIONS

7/1/88 - present	Diplomate, National Board of Medical Examiners
3/24/93 - 7/1/2003	Diplomate, American Board of Surgery (Certificate # 38183)
10/19/01 - 7/1/2013	Recertification, American Board of Surgery
11/26/12 - 7/1/2023	Recertification, American Board of Surgery
10/21/94 - 7/1/2005	Added Qualifications in Surgical Critical Care American Board of Surgery (Certificate #1339)
10/29/03 - 7/1/2015	Recertification
11/26/13 – 7/1/2025	Recertification
5/6/96 - 7/1/2006	Added Qualifications in General Vascular Surgery American Board of Surgery (Certificate #100636)

5. OTHER CERTIFICATIONS

1992-1996	Advanced Trauma Life Support
1993-2009	Advanced Trauma Life Support Instructor
2008-2021; 1993-1995	Basic Life Support Healthcare Provider
2008-2021; 1993-1995	Advanced Cardiac Life Support Provider
1997-2007	Fundamentals of Critical Care Support Instructor
2009-present	Physical Aptitude (Lic#3967-000566), Spinning instructor
2020-present	Pilates Instructor Training, Lolita San Miguel Legacy Student

6. MEDICAL LICENSURE

July 5, 1988- present

Minnesota Board of Medical Examiners
(Certificate # 31738)

September 30, 2008 – present

Puerto Rico Board of Medical Examiners
License # 17372 Medicine and Surgery

Certificates of Specialty in:
Surgery, Surgical Critical Care and Vascular Surgery

7. HONORS / AWARDS

1984 Chancellor's Award for Academic Excellence, University of Puerto Rico

1981-1986 Dean's List, University of Puerto Rico

1987 Lange Medical Publications Award (Outstanding Achievement in Medical School) University of Puerto Rico School of Medicine

1987 Janet M. Glasgow Memorial Award (Graduating first in Medical School Class), American Medical Women's Association

1993 Critical Care Academic Clinician Award, Mayo Graduate School of Medicine

2000 Recipient of Clinician Educator Award, Mayo Clinic
(Grant awarded by the Mayo Rochester Education Committee for the project "Trauma Education for Mayo Medical Students"; this was the first award given to a member of the Department of Surgery)

Excellence in Teaching Recognition Award– Mayo Medical School

1994, 1995, 1998, 1999-2000, 2001-2002, 2002-2003, 2004-2005

April 18, 2018 Certificate of Pride in Public Service, Department of Veterans Affairs

October 24, 2018 Certificate of Commitment in Recognition of working diligently to serve Veterans with VA's Mission- awarded by VA Quality Management Service Manager

March 19, 2021 Service Pin Certificate -Recognition for over 10year Dedication, contribution and commitment to Veterans Administration Organization- -awarded Executive Director Carlos Escobar-VA Caribbean Healthcare System

8. PROFESSIONAL MEMBERSHIPS AND SOCIETIES

American College of Surgeons (ACS)

1997-present Fellow, American College of Surgeons (ACS)

1994-2007 ACS Minnesota Chapter District #2 Member

2004-2007 Member, Minnesota Committee on Applicants District #2

2009-present American College of Surgeons Puerto Rico Chapter Member

Program Chair

February 2009-February 2010

60th Meeting February 25-27, 2010

La Concha Resort, San Juan PR

President ACS Puerto Rico Chapter

February 2013-February 2014

ACS PR Chapter selected as Star Chapter for achievements in the ACS Leadership Meeting April 2014

ACS PRC Chapter News -August 2014 *Bulletin ACS*

Volume 99, No.8; p. 76-77

Council Member ACS PR Chapter

February 2009-2010

February 2013 to February 2017

Female Surgeon Representative ACS PR Chapter

February 2015 to 2017

2018 -present Board of Governor Member, American College of Surgeons

Governor for ACS Puerto Rico Chapter

(Nov 8, 2018-2019; 2019-2022)

ACS Board of Governors Best Practices Workgroup- Appointed

February 20, 2019 to present

1985-present Alpha Omega Alpha Medical Honor Society

1992-present Mayo Alumni Association

1994-present Priestley Society, Councilor 2000-2003

1995-present Society of Critical Care Medicine

1997-2007 Minnesota Surgical Society
Board of Directors 2002-2004

1999-2007 Association of Women Surgeons

1999-2007 Society for Surgery of the Alimentary Tract

1999-2003 Association for Surgical Education

2000-2008 Western Trauma Association

2008-present Colegio de Medicos-Cirujanos de Puerto Rico

Dr. Scott Zietlow was appointed to the Mayo Clinic staff in 1989 and is a graduate of the Mayo Graduate School of Medicine where he completed a residency in General Surgery. He is the past chair of the Division of Trauma, Critical Care and General Surgery within the Department of Surgery. Dr. Zietlow holds board certifications in both surgery and surgical critical care and is a member of numerous surgery, trauma and prehospital care associations promoting high quality patient care. He is Professor of Surgery, Mayo Clinic College of Medicine and Science

Dr. Zietlow has been the medical director for Mayo Clinic Medical Transport since 1992 and currently serves as Chair of the Mayo Clinic Ambulance Board of Directors and the Mayo Clinic Ambulance Administrative Committee.

Kathrin LaFaver, MD, FAAN
Neurologist, Saratoga Hospital Medical Group
6 Care Ln, Saratoga Springs, NY, 12866
Email: kathrin.lafaver@gmail.com, Phone: 518-693-4629

EDUCATION

10/1998-11/2005 M.D., Albert-Ludwigs Universität, Freiburg, Germany
09/2005 Doctoral thesis (summa cum laude): "Synaptopodin expression during postnatal development of the hippocampus", Institute of Neuroanatomy, Albert-Ludwigs Universität, Freiburg, Germany
01/2006-06/2006 Psychiatry training, Freiburg University Hospital, Freiburg, Germany
07/2006-06/2007 Internship, Mayo Clinic, Rochester, MN
07/2007-06/2010 Neurology Residency, Mayo Clinic, Rochester, MN
07/2010-06/2011 Movement Disorder Fellowship, Beth Israel Deaconess Medical Center, Boston, MA (Program Director: Dr. Daniel Tarsy)
07/2011-06/2013 Clinical Research Fellowship, Human Motor Control Section, National Institute of Neurological Disorders and Stroke (NINDS), Bethesda, MD (Mentor: Dr. Mark Hallett)

ACADEMIC APPOINTMENTS/WORK EXPERIENCE

08/2013-06/2019 Assistant Professor, Department of Neurology, University of Louisville, Louisville, KY
08/2015-07/2019 Raymond Lee Lebby Endowed Professor in Parkinson's Disease Research, University of Louisville, Louisville, KY
08/2015-07/2019 Director, Parkinson's and Movement Disorders Clinic, University of Louisville Physicians, Louisville, KY
07/2019-07/2019 Associate Professor, Department of Neurology, University of Louisville, Louisville, KY
08/2019-07/2021 Associate Professor, Department of Neurology, Northwestern University, Chicago, IL
08/2021- Neurologist, Saratoga Hospital Medical Group, Saratoga Springs, NY

CERTIFICATIONS

03/2006 Educational Commission for Foreign Medical Graduates (ECFMG ID #06713150)
09/2010 American Board of Psychiatry and Neurology (ABPN)
12/2020 American Board of Psychiatry and Neurology (ABPN), Recertification

SPECIALTY/SUBSPECIALTY

Neurology, subspecialty movement disorders

MEDICAL LICENSURES

11/2005	German Chamber of Physicians (inactive)
07/2006	Minnesota State License (inactive)
04/2010	Massachusetts State License (inactive)
06/2013	Kentucky State License (inactive)
06/2019	Illinois State License (active; #036.149902)
04/2021	New York State License (active; #309925)

PROFESSIONAL MEMBERSHIPS AND ACTIVITIES

2008-	American Academy of Neurology
2009-	International Parkinson and Movement Disorder Society
2010-	Mayo Clinic Alumni Association
2013-2019	Huntington Study Group
2014-	Parkinson Study Group
2014-2019	Kentucky Commonwealth Neurologic Society
10/15-	Women Neurologists Group: I serve as administrator for WNG, a social media group of >3,500 women neurologists
09/16-04/17	Member, American Academy of Neurology Gender Disparity Task Force
07/17-06/21	Chair, Functional Movement Disorders (FMD) Study Group, International Parkinson and Movement Disorder Society
08/17-06/21	Medical Advisory Board, FND Hope International
08/19-	Founding Member and Member of the Board of Directors, Functional Neurological Disorder Society
03/21-	American College of Lifestyle Medicine

HONORS AND AWARDS

06/2011	International Parkinson and Movement Disorder Society travel award
06/2012	International Parkinson and Movement Disorder Society travel award
09/2016	Parkinson's Study Group travel award
04/2017	Finalist, Health Care Hero Award, Louisville Business First
06/2017	Nominee, MediStar Award for Innovation in Healthcare in Kentucky
06/2017	AAMC Leadership Seminar for Early Career Women in Academic Medicine (EWIM), Stevenson, WA
08/2017-07/2018	University of Louisville Leadership and Innovation in Academic Medicine (LIAM) course; selected for initial cohort
10/2017	Awarded Fellowship status by the American Academy of Neurology
01/2018	Parkinson's Foundation Community Grant for "Improving Care for Underserved Patients with Parkinson's Disease in Kentucky"
03/2019	Parkinson's Foundation Community Grant for "Improving Quality of life in Caregivers of Patients with Parkinson's Disease and Related Disorders"
07/2019	PALF (Palatucci Advocacy Leadership Forum) Graduate, American Academy of Neurology, San Diego, CA
03/2020	Selected as Mayo Clinic Visiting Professor in Neurology (Residents' Choice)
04/2020	Selected as a Johns Hopkins Virtual Visiting Professor in Neurology

PUBLICATIONS**Peer-reviewed journal articles** (orcid.org/0000-0001-5416-894X)

1. Deller T, Haas CA, **Deissenrieder K**, Del Turco D, Coulin C, Gebhardt C, Drakew A, Schwarz K, Mundel P, Frotscher M. *Laminar distribution of synaptopodin in normal and reeler mouse brain depends on the position of spine-bearing neurons*. J Comp Neurol 2002;453:33-44.
2. **Czarnecki K**, Haas CA, Bas Orth C, Deller T and Frotscher M. *Postnatal development of synaptopodin expression in the rodent hippocampus*. J Comp Neurol 2005;490:133-44.
3. **Czarnecki K**, Kumar N and Josephs KA. *Parkinsonism and tardive antecollis in frontotemporal dementia – increased sensitivity to newer antipsychotics?* Eur J Neurol 2008;15:199-201.
4. **Czarnecki K**, Duffy JR, Nehl CR, Cross SA, Molano JR, Jack CR Jr, Shiung MM, Josephs KA and Boeve BF. *Very early semantic dementia with progressive temporal lobe atrophy: an 8-year longitudinal study*. Arch Neurol 2008; 65(12):1659-63.
5. Saghir MK, **Czarnecki K**, Duggirala MK. *A 68-year-old woman with confusion*. Mayo Clin Proc 2009; 84(8):737-40.
6. Kloesel B, **Czarnecki K**, Muir JJ, Keller AS. *Sequelae of a left-sided parietal stroke: posterior alien hand syndrome*. Neurocase 2010;16(6):488-93.
7. **Czarnecki K**, Jones DT, Burnett MS, Mullan B, Matsumoto JY. *SPECT perfusion patterns distinguish psychogenic from essential tremor*. Parkinsonism Relat Disord 2011;17(5):328-32.
8. **Czarnecki K**, Thompson JM, Seime R, Geda YE, Duffy JR, Ahlskog JE. *Functional movement disorders: Successful treatment with a physical therapy rehabilitation approach*. Parkinsonism Relat Disord 2012;18(3):247-51.
9. **Czarnecki K**, Hallett M. *Functional (psychogenic) movement disorders*. Current Opinion in Neurology 2012;25(4):507-12.
10. Kulkarni O, **LaFaver K**, Papavassiliou E, Tarsy D, Shih LC. *Thalamic and subthalamic deep brain stimulation for parkinsonian tremor: are two circuits involved?* Mov Disord. 2013;28(4):554-5.
11. Kranick SM, Moore JW, Yusuf N, Martinez VT, **LaFaver K**, Edwards MJ, Mehta AR, Collins P, Harrison NA, Haggard P, Hallett M, Voon V. *Action-effect binding is decreased in motor conversion disorder: Implications for sense of agency*. Mov Disord. 2013;28(8):1110-6.
12. Shih LC, **LaFaver K**, Lim C, Papavassiliou E, Tarsy D. *Loss of benefit in VIM thalamic deep brain stimulation (DBS) for essential tremor (ET): how prevalent is it?* Parkinsonism Relat Disord. 2013;19(7):676-9.
13. Kulkarni O, **LaFaver K**, Tarsy D. *The "floating door sign" in Parkinson's disease*. Parkinsonism Relat Disord. 2013;19(9):825-6.
14. Maurer CW, **LaFaver K**, Ameli R, Toledo R, Hallett M. *A biological measure of stress in patients with functional movement disorders*. Parkinsonism Relat Disord. 2015;21(9):1072-5.
15. Bonda C, Sharma P, **LaFaver K**. *Clinical Reasoning: A 28-year-old woman with lower extremity spasticity and microcytic anemia*. Neurology. 2015;85(2):e11-4.

16. Maurer CW, Liu VD, **LaFaver K**, Ameli R, Wu T, Toledo R, Epstein SA, Hallett M. *Impaired resting vagal tone in patients with functional movement disorders*. *Parkinsonism Relat Disord*. 2016;30:18-22.
17. Epstein SA, Maurer CW, **LaFaver K**, Ameli R, Sinclair S, Hallett M. *Insights into Chronic Functional Movement Disorders: The Value of Qualitative Psychiatric Interviews*. *Psychosomatics*. 2016;57(6):566-575
18. Huntington Study Group. *Effect of Deutetrabenazine on Chorea Among Patients With Huntington Disease: A Randomized Clinical Trial*. *JAMA*. 2016;316(1):40-50.
19. Maurer CW, **LaFaver K**, Ameli R, Epstein R, Hallett M, Horovitz SG. *Impaired self-agency in functional movement disorders: A resting-state fMRI study*. *Neurology*. 2016;87(6):564-70.
20. **LaFaver K**, Espay AJ. *Diagnosis and Treatment of Functional (Psychogenic) Parkinsonism*. *Semin Neurol*. 2017;37(2):228-232.
21. Ekanayake V, Kranick S, **LaFaver K**, Naz A, Frank Webb A, LaFrance WC, Hallett M, Voon V. *Personality traits in psychogenic nonepileptic seizures (PNES) and psychogenic movement disorder (PMD): Neuroticism and perfectionism*. *J Psychosom Res*. 2017;97:23-29.
22. Knoop CD, Kadish R, Hager K, Park MC, Loprinzi PD, **LaFaver K***. *Bridging the Gaps in Patient Education for DBS Surgery in Parkinson's Disease*. *Parkinsons Dis*. 2017;9360354.
23. Jacob AE, Smith CA, Jablonski ME, Roach AR, Paper KM, Kaelin DL, Stetz-Thurmond D, **LaFaver K***. Multidisciplinary clinic for functional movement disorders (FMD): 1-year experience from a single centre. *J Neurol Neurosurg Psychiatry*. 2018 Sep;89(9):1011-1012.
24. Wissel BD, Dwivedi AK, Merola A, Chin D, Jacob C, Duker AP, Baughan JE, Lovera L, **LaFaver K***, Levy A, Lang AE, Morgante F, Nirenberg MJ, Stephen C, Sharma N, Romagnolo A, Lopiano L, Balint B, Yu XX, Bhatia KP, Espay AJ. *Functional neurological disorders in Parkinson disease*. *J Neurol Neurosurg Psychiatry*. 2018. Jun;89(6):566-571.
25. Jacob AE, Kaelin DL, Roach AR, Ziegler CH, **LaFaver K***. *Motor Retraining (MoRe) for Functional Movement Disorders: Outcomes From a 1-Week Multidisciplinary Rehabilitation Program*. *PM&R*. 2018. Nov;10(11):1164-1172.
26. Espay AJ, Aybek S, Carson A, Edwards MJ, Goldstein LH, Hallett M, **LaFaver K**, LaFrance WC Jr, Lang AE, Nicholson T, Nielsen G, Reuber M, Voon V, Stone J, Morgante F. *Current Concepts in Diagnosis and Treatment of Functional Neurological Disorders*. *JAMA Neurol*. 2018. Sep 1;75(9):1132-1141
27. **LaFaver K**, Miyasaki JM, Keran CM, Rheaume C, Gulya L, Levin KH, Jones EC, Schwarz HB, Molano JR, Hessler A, Singhal D, Shanafelt TD, Sloan JA, Novotny PJ, Cascino TL, Busis NA. *Age and sex differences in burnout, career satisfaction, and well-being in US neurologists*. *Neurology*. 2018. Nov 13;91(20):e1928-e1941
28. Maurer CW, **LaFaver K**, Limachia GS, Capitan G, Ameli R, Sinclair S, Epstein SA, Hallett M, Horovitz SG. *Gray matter differences in patients with functional movement disorders*. *Neurology*. 2018. Nov 13;91(20):e1870-e1879.
29. Leon-Sarmiento FE, Bayona-Prieto J, Leon-Ariza JS, Leon-Ariza DS, Jacob AE, **LaFaver K**, Doty RL. *Smell status in functional movement disorders: New clues for diagnosis and*

underlying mechanisms. Clin Neurol Neurosurg. 2019 Jan 2;177:68-72. doi: 10.1016/j.clineuro.2018.12.017.

30. Moore LR, Ziegler C, Hessler A, Singhal D, LaFaver K*. *Burnout and Career Satisfaction in Women Neurologists in the United States.* J Womens Health. 2019 Apr;28(4):515-525.
31. Cumberland DM, Sawning S, Church-Nally M, Shaw MA, Branch E, LaFaver K*. *Experiential Learning: Transforming Theory into Practice through the Parkinson's Disease Buddy Program.* Teaching and Learning in Medicine. 2019. Aug-Sep 31(4):453-465.
32. Vizcarra JA, Hacker S, Lopez-Castellanos R, Ryes L, Laub HN, Marsili L, Dwivedi AK, LaFaver K, Espay AJ. *Internal versus External Frame of Reference in Functional Movement Disorders.* J Neuropsychiatry Clin Neurosci. 2020. Winter;32(1):67-72
33. Van Wouwe, NC, Mohanty, D, Lingaiah, A, Wylie, SA, LaFaver K*. *Impaired action control in patients with functional movement disorders.* J Neuropsychiatry Clin Neurosci. 2020. Winter;32(1):73-78.
34. Nicholson TR, Carson A, Edwards MJ, Goldstein LH, Hallett M, Mildon B, Nielsen G, Nicholson C, Perez DL, Pick S, Stone J; and the FND-COM (Functional Neurological Disorders Core Outcome Measures) Group. *Outcome Measures for Functional Neurological Disorder: A Review of the Theoretical Complexities.* J Neuropsychiatry Clin Neurosci. 2020. Winter;32(1):33-42.
35. Kletenik I, Sillau SH, Attaripour Isfahani S, LaFaver K, Hallett M, Berman BD. *Gender as Risk Factor for Functional Movement Disorders: The Role of Sexual Abuse.* Movement Disorders Clinical Practice. 2019. Dec 13;7(2):177-181.
36. Pick S, Anderson DG, Asadi-Pooya AA, Aybek S, Baslet G, Bloem BR, Bradley-Westguard A, Brown RJ, Carson AJ, Chalder T, Damianova M, David AS, Edwards MJ, Epstein SA, Espay AJ, Garcin B, Goldstein LH, Hallett M, Jankovic J, Joyce EM, Kanaan RA, Keynejad RC, Kozlowska K, LaFaver K, LaFrance WC Jr, Lang AE, Lehn A, Lidstone S, Maurer CW, Mildon B, Morgante F, Myers L, Nicholson C, Nielsen G, Perez DL, Popkirov S, Reuber M, Rommelfanger KS, Schwingenshuh P, Serranova T, Shotbolt P, Stebbins GT, Stone J, Tijssen MA, Tinazzi M, Nicholson TR. *Outcome measurement in functional neurological disorder: a systematic review and recommendations.* J Neurol Neurosurg Psychiatry. 2020 Jun;91(6):638-649.
37. LaFaver K, Lang AE, Stone J, Morgante F, Edwards M, Lidstone S, Maurer CW, Hallett M, Dwivedi AK, Espay AJ. *Opinions and Clinical Practices Related to Diagnosing and Managing Functional (Psychogenic) Movement Disorders: Changes in the Last Decade.* Eur J Neurol. 2020 Jun;27(6):975-984.
38. Lingaiah A, Mohanty D, Marchbank J, Jacob AE, Castellanos RL, Holiday V, Espay AJ, LaFaver K*. *Improving anxiety in Parkinson's disease: A cautionary tale about mobile health technologies.* Parkinsonism Relat Disord. 2020 Mar 17;73:50-51.
39. LaFaver K*. *Treatment of Functional Movement Disorders.* Neurol Clin. 2020. May;38(2):469-480.
40. Sharma A, Maxwell CR, Farmer J, Greene-Chandos D, LaFaver K, Benamer K. *Initial Experiences of US Neurologists in Practice During the COVID-19 Pandemic via Survey.* Neurology. 2020. Aug 4;95(5):215-220.

41. Faul L, Knight LK, Espay AJ, Depue BE, LaFaver K. *Neural activity in functional movement disorders after inpatient rehabilitation*. Psychiatry Res Neuroimaging. 2020. Sep 30;303:11112. Epub ahead of print.
42. LaFaver K*, LaFrance WC, Price ME, Rosen PB, Rapaport M. *Treatment of Functional Neurological Disorder: Current State, Future Directions, and a Research Agenda*. CNS Spectr. 2020. Dec 7:1-23.
43. Gupta A, LaFaver K, Duque KR, Lingaiah A, Meriwether KV, Gaskins J, Gomes J, Espay AJ, Mahajan A.J. *Pelvic Floor Health in Women with Parkinson's Disease*. Parkinsons Dis. 2021 Feb 11. doi: 10.3233/JPD-202491.

EDUCATIONAL ACTIVITIES (selected, last 5 years)

Invited Lectures (International)

1. *Inpatient Treatment of Functional Movement Disorders*. Presentation at the 3rd International Conference on Functional (Psychogenic) Movement Disorders, Edinburgh, Scotland, 09/17.
2. *Psychogenic Movement Disorders – Video Rounds*. Co-Presentation with Dr. Jon Stone at the International Congress of Parkinson's Disease and Movement Disorders, Hong Kong, 10/18.
3. *Treatment choices in Functional Movement Disorders: Established and novel treatments*. CME Presentation at the International Congress of Parkinson's Disease and Movement Disorders, Nice, France, 09/19.

Invited Lectures (National)

1. *Functional Movement Disorders: Updates on Diagnosis and Treatment*. Neurology Grand Rounds Presentation, Drexel University, Philadelphia, PA, 12/16.
2. *Functional Movement Disorders Therapies*. CME Presentation at the 44th Annual Meeting of the Southern Clinical Neurological Society, Riviera Beach, FL, 01/17.
3. *Inpatient Treatment of Functional Movement Disorders*. CME Presentation at the 69th American Academy of Neurology Annual Meeting, Boston, MA, 04/17.
4. *Inpatient therapeutic strategies for functional movement disorders and Treatment of functional movement disorders*. CME Presentations at the 70th American Academy of Neurology Annual Meeting, Los Angeles, CA, 04/18.
5. *Women in Neurology: Using Social Media to build your community*. Experiential Learning Stage, 70th Annual Meeting of the American Academy of Neurology, Los Angeles, CA, 04/18.
6. *Functional Movement Disorders: Insights from the motor retraining (MoRe) program*. Neurology Grand Rounds Presentation, University of Texas Southwest Medical Center, Dallas, TX, 05/18.
7. *Functional Movement Disorders: Insights from the motor retraining (MoRe) program*. Neurology Grand Rounds Presentation, Swedish Neuroscience Institute, Seattle Science Foundation, Seattle, WA, 12/18.
8. *Current Concepts in Diagnosis and Treatment of Functional Movement Disorders*. Neuroscience Grand Rounds Presentation, University of Vermont, Burlington, VT, 02/19.
9. *Treatment of Functional Movement Disorders*. CME Presentation at the 71th American Academy of Neurology Annual Meeting, Philadelphia, PA, 05/19.
10. *Multidisciplinary Treatment of Functional Neurologic Disorders*. CME Presentation at the 71th American Academy of Neurology Annual Meeting, Philadelphia, PA, 05/19.

11. *Women in Neurology: Thriving Through Challenges*. Experiential Learning Stage, 71th Annual Meeting of the American Academy of Neurology, Philadelphia, PA, 05/19.
12. *Current Concepts in Diagnosis and Treatment of Functional Movement Disorders*. Neurology Grand Rounds Presentation, University of Alabama, Birmingham, AL, 10/19.
13. *Multidisciplinary Rehabilitation for Functional Movement Disorders*. CME Presentation at the 96th American Congress of Rehabilitation Medicine, Chicago, IL, 11/19.
14. *Understanding Functional Movement Disorder: From Hysteria to Corticolimbic Circuits*. Neurology Grand Rounds Presentation, Mayo Clinic, Rochester, MN, 04/20.
15. *Functional Movement Disorders*. Invited Virtual Visiting Professor at The Johns Hopkins University School of Medicine, Department of Neurology. The Johns Hopkins Virtual Patient Rounds in Neurology School of Medicine Course: The JH Neurology Chats, 05/20.
16. *Understanding Functional Movement Disorder: From Hysteria to Corticolimbic Circuits*. Neurology Grand Rounds Presentation, University of Wisconsin, Madison, WI, 06/20.
17. *Updates in Diagnosis and Treatment of Functional Movement Disorders*. Neurology Grand Rounds Presentation, Boston University, Boston, MA, 10/20.
18. *Updates in Diagnosis and Treatment of Functional Movement Disorders*. Neurology Grand Rounds Presentation, Augusta University, Augusta, GA, 10/20.
19. *Updates in Diagnosis and Treatment of Functional Movement Disorders*. Invited CME lecture for the annual meeting of the Pennsylvania State Neurological Society, 10/20.
20. *Updates in Diagnosis and Treatment of Functional Movement Disorders*. Invited CME lecture for the annual meeting of the New York State Neurological Society, Albany, NY, 11/20.
21. *Introduction to Functional Movement Disorders*. Invited talk for the University of Texas Southwestern FMD Symposium, Dallas, TX, 12/20.
22. *Updates in Diagnosis and Treatment of Functional Movement Disorders*. Neurology Grand Rounds Presentation, Jefferson University, Philadelphia, PA, 01/21.
23. *Updates in Diagnosis and Treatment of Functional Movement Disorders*. Neurology Grand Rounds Presentation, Virginia Commonwealth University, Richmond, VA, 02/21.
24. *Functional Neurological Disorders: A Pragmatic Approach*. CME Presentation at the first virtual American Academy of Neurology Annual Meeting, 04/21.
25. *Updates in Diagnosis and Treatment of Functional Movement Disorders*. Neurology Grand Rounds Presentation, Mount Sinai Health System, NY, 04/21.
26. *Updates in Diagnosis and Treatment of Functional Movement Disorders*. Neurology Grand Rounds Presentation, Spectrum Health, Grand Rapids, MI, 06/21.

Invited Lectures (Regional/Local)

1. *Exercise for Parkinson's Disease*. Presentation for the Department of Physical Medicine and Rehabilitation, University of Louisville, Louisville, KY, 03/15.
2. *New treatment options for Parkinson's Disease*. Lecture for the Department of Geriatrics, University of Louisville, Louisville, KY, 04/15.
3. *The gut-brain connection in Parkinson's disease: What do we know and where do we go from here?* Neurology Grand Rounds Presentation, University of Kentucky, Lexington, KY, 06/15.
4. *Immunotherapy in Huntington's Disease and other Neurodegenerative Disorders – can we slow down disease progression?* Neurology Grand Rounds Presentation, University of Louisville, Louisville, KY, 09/15.

5. *Motor Retraining (MoRe) for treatment of Functional Movement Disorders.* Presentation for physical and occupational therapists, Frazier Rehab Institute, Louisville, KY, 03/16.
6. *Case Studies from the Movement Disorders Clinic.* Lecture for the Department of Geriatrics, University of Louisville, Louisville, KY, 04/16.
7. *Unmet Needs in Parkinson's Disease – A Patients' and Caregivers' Perspective.* Neurology Grand Rounds Presentation, University of Louisville, Louisville, KY, 04/16.
8. *Advances in Diagnosis and Management of Parkinson's Disease.* CME Lecture for "Advances in Neurology" Course, University of Louisville, Louisville, KY, 05/16.
9. *Spiders, snakes and dead people - Update on psychosis in Parkinson's disease.* Neurology Grand Rounds Presentation, University of Louisville, Louisville, KY, 10/16.
10. *Update on Hallucinations and Psychosis in Parkinson's disease.* Internal Medicine Grand Rounds Presentation, University of Louisville, Louisville, KY, 01/17.
11. *Hyperkinetic Movement Disorders: Case Studies.* Video Rounds Presentation at the University of Cincinnati, Cincinnati, OH, 07/17.
12. *Functional Movement Disorders: From Hysteria to Brain Communication Disorder.* Neurology Grand Rounds Presentation, University of Louisville, Louisville, KY, 10/17.
13. *Volitional control of movement - insights from neurologic disorders of will.* Invited Lecture at the 28th Annual Neuroscience Day, Society for Neuroscience, Louisville Chapter, Louisville, KY, 04/18.
14. *Updates on Parkinson's Disease and other Movement Disorders.* Advanced Practice Provider Grand Rounds Presentation, Northwestern Medical Group, Chicago, IL, 11/19.
15. *Functional Movement Disorders (FMD): Updates on Evaluation and Management.* Presentation at the 2019 Northwestern Medicine CME course on "New Frontiers in the Diagnosis and Management of Movement Disorders", Chicago, IL, 11/19.
16. *Functional Movement Disorders – Updates on diagnosis and management.* Internal Medicine Grand Rounds Presentation, West Suburban Medical Center, Chicago, IL, 12/19.
17. *Functional Movement Disorders: Current Concepts in Diagnosis and Management.* Neurology Grand Rounds Presentation, Northwestern University, Chicago, IL, 12/19.
18. *Diagnosis and Treatment of Functional Neurological Disorders.* Medicine Grand Rounds Presentation, Aurora St. Luke's Medical Center, Milwaukee, WI, 01/20.
19. *Functional Movement Disorders – Updates on Diagnosis and Management.* Neurology Grand Rounds Presentation, University of Illinois College of Medicine, Chicago, IL, 02/20.
20. *Diagnosis and Treatment of Functional Movement Disorders (FMD).* Live Webinar Presentation for Allied Health Professionals, Shirley Ryan Ability Lab, Chicago, IL, 02/20.
21. *Functional Movement Disorders – Updates on diagnosis and management.* Internal Medicine Grand Rounds Presentation, Centegra Healthcare System, Chicago, IL, 05/20.
22. *Updates in Diagnosis and Treatment of Functional Movement Disorder (FMD).* Neuroscience Grand Rounds Presentation, NorthShore University Health System, Chicago, IL, 06/20.
23. *Functional Movement Disorder and Functional Seizures – Are they the same disorder?* CME lecture for the annual Epilepsy Symposium by Northwestern University, Chicago, IL, 05/21.

Course Directorships for Healthcare Professionals

1. *A Clinician's Guide to Parkinson's Disease and other Movement Disorders*. Co-Director and Presenter, 2-day CME course at the University of Cincinnati Neurosciene Institute, Cincinnati, OH, 10/14.
2. *Bluegrass Regional Movement Disorders Meeting*. Director and Presenter, 2-day CME course at the University of Louisville, Louisville, KY, 10/16.
3. *Bluegrass Regional Movement Disorders Meeting*. Co-Director and Presenter, 2-day CME course at the University of Kentucky, Lexington, KY, 10/17.
4. *WNG-CME*. Organization of a monthly CME series on social media for the Women Neurologists Group, a professional networking group of >3,300 women neurologists. CME activities include interviews of experts in neurology on subspecialist topics and professional development, sponsored by the American Physician Institute, 07/2018-07/2020.
5. *Current Practice in Diagnosis and Treatment of Parkinson's Disease for the Primary Care Provider*. Course Director and Presenter of a three part CME webinar series, sponsored by the Parkinson's Foundation. University of Louisville, KY, 09/18.
6. *WNG Neurology Updates*. Course Director of a 2.5 day CME conference centered around the MOC pilot program for the Women Neurologists Group in Scottsdale, AZ, 02/19.
7. *Motor Retraining (MoRe) for Functional Movement Disorders: A Multidisciplinary Treatment Approach*. Course Director and presenter for an 8 hour CME/CE course for physicians, physical and occupational therapists, psychologists, nurses and social workers. University of Louisville, KY, 03/19.
8. *Functional Movement Disorders: Diagnosis and Treatment*. Two-day course given virtually for the University of Applied Sciences and Arts of Southern Switzerland for rehabilitation students, 03/21.

Courses/Lectures for Residents (selected)

1. *Diagnosis and Treatment of Movement Disorders*. Lecture series for neurology residents, University of Louisville, Louisville, KY. Eight lectures per academic year from 2013-2019..
2. Botulinum toxin injection training course for neurology residents. Department of Neurology, University of Louisville, Louisville, KY. Annual half-day course from 2014-2019.
3. *Movement disorders 101*. Annual lecture for residents in the Department of Physical Medicine and Rehabilitation, University of Louisville, Louisville, KY, from 2013-2019.
4. *Movement Disorder Video Rounds*. Monthly lecture series for neurology residents teaching phenomenology of Movement Disorders, University of Louisville, Louisville, KY, 07/14-06/15.
5. *Tics and Tourette's disease*. Lecture for neurology residents, Northwestern Medical, Chicago, IL, 03/20 and 03/21.
6. *Functional Movement Disorders*. Lecture for neurology residents, Northwestern Medical, Chicago, IL, 06/21.

Courses/Lectures for Medical Students (selected)

1. *Clinical correlations in Movement Disorders*. Annual lecture for first year medical students, University of Louisville Medical School, Louisville, KY, 2013-2017.
2. *Introduction to Movement Disorders*. Lecture for second year medical students, University of Louisville Medical School, Louisville, KY, 03/14 and 03/15.

3. *The PD Buddy Program.* Course Development of a community service outreach program for first year medical students and patients with Parkinson's disease at University of Louisville Medical School in collaboration with the Parkinson Support Center of Kentuckiana and the University of Louisville College of Education and Human Development. Course Director and presenter of eight lectures per academic year from 2015-2019.

Presentations for the General Public (selected, last 5 years)

1. *New therapies for Parkinson's disease.* Director and Presenter, University of Louisville Physicians Parkinson's Disease Spring Symposium, Louisville, KY, 06/15.
2. *HD Research Update: A Time of Promise and Hope.* Director and Presenter, University of Louisville Physicians Huntington's Disease Patient Education Day, Louisville, KY, 10/15.
3. *Emerging Therapies for Parkinson's Disease: What's on the Horizon?* Presentation at the 10th Annual Parkinson Support Center of Kentucky "Live Well" Symposium, Louisville, KY, 10/15.
4. *Parkinson's – One Disease or Several Diseases?* Director and Presenter, 1st Bill Collins Symposium for Parkinson's Disease, University of Louisville, Louisville, KY, 05/16.
5. *Updates on diagnosis and management of psychosis in Parkinson's disease.* Director and Presenter, 2nd Bill Collins Symposium for Parkinson's Disease, University of Louisville, Louisville, KY, 04/17.
6. *Parkinson Care for Everyone – the UofL Moves! Initiative.* Director and Presenter, "Knock Out PD", a Parkinson's disease education event by University of Louisville Physicians in collaboration with the National Parkinson's Foundation, Muhammad Ali Center, Louisville, KY, 06/17.
7. *HD Research Update.* Director and Presenter, University of Louisville Physicians 2nd Huntington's Disease Patient Education Day, Louisville, KY, 11/17.
8. *Diagnosis and Treatment of Parkinson's Disease.* Three-part lecture series at the Family Health Center, Portland Clinic, Louisville, KY, 02-06/17. Supported by a community outreach grant by the Parkinson's Foundation.
9. *Precision Medicine in Parkinson's Disease.* Director and Presenter, 3rd Bill Collins Symposium for Parkinson's Disease, University of Louisville, Louisville, KY, 03/18.
10. *Diagnosis and Treatment of Parkinson's Disease: Updates from the 70th Meeting of the American Academy of Neurology.* Presentation in the Bill Collins Parkinson's Resource Center, Louisville, KY, 05/18.
11. *Research Updates in Huntington's Disease.* Presentation at the 2018 Kentucky HDSA Family Conference, Louisville, KY, 11/18.
12. *Myths and Misconceptions about Parkinson's Disease - Time to Clear the Fog.* Presentation in the Bill Collins Parkinson's Resource Center, Louisville, KY, 11/18.
13. *Management of Parkinson's Disease – Your Questions Answered.* Director and Presenter, 4nd Bill Collins Symposium for Parkinson's Disease, University of Louisville, Louisville, KY, 03/19.
14. *Parkinson's Research Updates from the 71th Meeting of the American Academy of Neurology.* Presentation in the Bill Collins Parkinson's Resource Center, Louisville, KY, 05/19.
15. *Addressing Fatigue in Parkinson's Disease.* Presentation at the 2019 Northwestern Medicine Parkinson's Disease Patient and Family Symposium. Chicago, IL, 10/19.
16. *Myths and Misconceptions in Parkinson's Disease.* Presentation for the Northwestern Medicine Parkinson's Disease Support Group. Chicago, IL, 02/20.

17. *Functional Neurologic Disorders: Sharing Progress and Hope.* Live Webinar for patients and family members affected by FND, Shirley Ryan AbilityLab, 04/20.
18. *Living Life Amidst Uncertainty and Change.* Invited Presentation for the Parkinson's Foundation "Take Time Thursdays" (live webinar), Chicago, IL, 05/20.

Media Appearances/Interviews

1. *Research trials in Huntington's Disease.* TV interview for WHAS-11 "Live at Noon", Louisville, KY, 06/14.
2. *Depression and Parkinson's disease.* Radio interview with Jerry Bloom for 84 WHAS, Louisville, KY, 08/14.
3. *Early Warning Signs of Parkinson's Disease.* TV interview for "Great Day Live" on WHAS-11, Louisville, KY, 05/15.
4. *Teaching through clinical cases: A disorder of unusual movements.* Podcast interview for "Brainwaves", 11/17. (<https://brainwavesaudio.libsyn.com/85-teaching-through-clinical-cases-a-disorder-of-unusual-movements>)
5. *Caring for the Caregiver.* TV interview for WHAS-11 "Live at Noon", Louisville, KY, 02/19.
6. *Was It an Invisible Attack on U.S. Diplomats, or Something Stranger?* Interviewed for a New York Times Magazine article by Dan Hurley, published on May 15, 2019 (<https://www.nytimes.com/interactive/2019/05/15/magazine/diplomat-disorder.html>)
7. *Therapeutic Options for Patients with Functional Movement Disorders.* Podcast interview for "Better Edge", Northwestern Medicine, Chicago, IL, 02/20. (<https://physicianpodcasts.nm.org/?segitem=41608>)
8. *A Disorder of Mind and Brain.* Interviewed for a Scientific American article by Diana Kwon, published in November 2020. (doi:10.1038/scientificamerican1120-58)

Dr. Shannon Laughlin-Tommaso is a consultant and chair of the Division of Gynecology, Department of Obstetrics and Gynecology at Mayo Clinic in Rochester. She is a minimally invasive gynecologic surgeon focusing on surgical treatments for uterine fibroids and abnormal uterine bleeding. Dr. Laughlin serves as associate dean for the Office of Education Diversity, Equity and Inclusion (OEDEI) in Mayo Clinic College of Medicine and Science. She directs curriculum development on diversity & inclusion, health equity, and anti-racism for the Mayo Clinic College of Medicine and Science. As medical director of OEDEI, she also oversees the pathway programs which create opportunities to learn about healthcare careers for students from kindergarten through graduate school, who have traditionally been underrepresented in medicine and science.

Kristin S. Vickers, Ph.D., is a Professor of Psychology with specialty board certification in Clinical Health Psychology at Mayo Clinic Rochester. She is Co-Chair of Education for the Department of Psychiatry and Psychology, Program Director for the Medical Psychology Fellowship Program, and Director of the Mayo Clinic Patient Education Research Program. In these roles, Dr. Vickers approaches education and health by first considering the individual's values, life experiences, and personal learning and changing style. Her clinical work is in the primary care setting, where she provides brief evidence-based psychotherapy within an integrated behavioral health model of care. Dr. Vickers has been recognized at Mayo Clinic with awards for teaching, distinguished service and distinguished clinical care.