ALUMNI
2015 • Issue 2

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ABOUT THE COVER | Mayo School of Graduate Medical Education’s Saranya Balasubramaniam, M.D. (I-1 ‘13, OPH ‘16), is a resident in ophthalmology — one of more than 270 training programs covering every medical and surgical specialty across all Mayo Clinic campuses. The school oversees the largest number of accredited programs in the United States.
A Letter from the Secretary-Treasurer

This issue of Mayo Clinic Alumni is chock-full of information, including the second of four special sections about the Alumni Association’s 100th anniversary. I’m humbled when I read about the goings-on at Mayo Clinic during World War II, the outstanding contributions to aviation medicine, the Kendall-Hench Nobel Prize and so much more. Mayo Clinic alumni truly do stand on the shoulders of giants. It makes me wonder what will be written about our generation 50 or 100 years from now. Perhaps it will include the accomplishments of young physicians and scientists such as our current Kendall and Balfour award recipients (page 28), whose impressive work is changing the face of medicine.

The Alumni Association continues with a full slate of activities designed to help you connect with other Mayo alumni. In the fall I attended the international Alumni Association meeting in Ireland, and I will be at the biennial meeting in Arizona in October. I go to alumni meetings with some idea of whom I’ll encounter, yet I’m consistently surprised by a new acquaintance or a reconnection. The Mayo brothers spoke often about the importance of alumni remaining in contact with each other and with Mayo Clinic. I encourage you to consider attending the biennial meeting in Arizona (page 12) or the just-announced international meeting in Whistler, British Columbia, Canada, in June 2016. And don’t forget our regional meetings, which occur around the country throughout the year, and alumni receptions that we host at more than 60 major specialty society meetings every year. These are announced regularly on our new website (alumniassociation.mayo.edu) and by email, so be sure that we have your current electronic address. Please use the website to update your contact information, to connect with friends old and new, and, of course, (I have to say this; I am, after all, your treasurer) to pay your dues. I look forward to seeing you soon!

Peter C. Amadio, M.D.
Secretary-Treasurer
Mayo Clinic Alumni Association
Lloyd A. and Barbara A. Amundson Professor of Orthopedics

Web-only stories • alumniassociation.mayo.edu

1. The first four Mayo graduates in the Mayo Foundation–University of Minnesota joint program to train specialists in 1917 (page 6) were Della Drips, M.D. (I 1924) (pictured at right), Dorothy Pettibone (CM 1917), Egerton Crispin, M.D. (I 1916), and Francis McMahon, M.D. (S 1917). Learn more about these education pioneers.

2. Gianrico Farrugia, M.D. (I ’91, GI ’94), a 26-year veteran and vice president of Mayo Clinic, is the new chief executive officer of Mayo Clinic in Florida (page 10). In 1990 he was featured in a Mayovox story about international visitors learning the Mayo way. Read about this then-second-year resident from Malta.
Testing ‘what we’ve done intuitively’ to make sure it’s correct

Jon Tilburt, M.D. (I ‘07), Division of General Internal Medicine and director of the Kern Scholars Program, says the program is a natural extension of Mayo Clinic’s patient-focused values for health care delivery. “The way we have structured care at Mayo Clinic has been done intuitively through the second half of the 20th century,” he says. “But health care is always subjected to rigorous testing, so in the 21st century we need to step back and test to make sure that what we’ve done intuitively...
is correct. We need this evidence to continue being a leader in high-quality care that influences others.”

Dr. Tilburt explains why evidence-informed health care requires more rigorous scrutiny than has been applied so far. “We must assess existing health care delivery systems, test different care models and apply the best practices to improve those systems,” he says. “To do this, we need a workforce of practicing clinicians within Mayo Clinic who have the necessary research skills, protected time and scholarly track record to undertake high-quality practice-based health services research that can improve the delivery of health care and influence the structure and quality of U.S. health care. We can and should lead in health services research.”

The Kern Scholars Program involves:

- Mentorship and guidance through the research process
- Personalized training in health services research (using the disciplines of social sciences) and grant writing (scholars apply for competitive extramural career development awards or federal project awards before completing the program)
- Frequent interaction with other scholars and faculty

Veronique Roger, M.D. (CV ’88, CV ’92), Division of Cardiovascular Diseases, medical director of the Mayo Clinic Center for the Science of Health Care Delivery and the Elizabeth C. Lane, Ph.D., and Nadine Zimmerman, Ph.D., Professor of Internal Medicine, says, “We are incredibly proud of our scholars. They are the future of our center. They share our common purpose in defining the care that our patients receive now and in the years to come.”

Mayo Clinic Alumni profiles several recent Kern Scholars and their projects.

In the Scholars Program I found enthusiastic faculty willing to mentor and peers to interact with. It became an academic home for me.”

—Nneka Comfere, M.D.

Studying deficits in communication that affect timeliness and accuracy of dermatology diagnoses

Nneka Comfere, M.D. (MMS ’01, I-1 ’02, DERM ’05, DPATH ’06), Department of Dermatology, was a Kern Scholar for three years, completing the program in June 2014. Her research focuses on communication between dermatologists and pathologists.

“Deficits in communication can lead to delays in diagnosis and affect diagnostic performance in terms of specificity, accuracy and speed,” says Dr. Comfere, a clinical dermatologist and dermatopathologist. “This can result in failure to meet patients’ expectations about timely biopsy results and unnecessary anxiety for them.”

Dr. Comfere says she has always had a passion for systems and care processes. “Prior to the Scholars Program, my research experience was limited to retrospective clinical studies,” she says. “In the Scholars Program I found enthusiastic faculty willing to mentor and peers to interact with. It became an academic home for me.”

Dr. Comfere says dermatology is underrepresented in health services research — focusing on how diseases present rather than care delivery. She conducted a large national survey of dermatopathologists to learn more about the information submitted to them by clinicians. She identified specific clinical information not provided in requisition forms and is exploring ways to affect processes at the point of care to improve accurate, timely diagnoses.

Dr. Comfere explains the current clinical process: “A clinician sees a patient and gets a biopsy. The biopsy goes to the pathologist, who generates a report based on information supplied by the clinician. The clinician gets the report, interprets it and makes a decision about how
best to treat the patient. A lot of miscommunication and misunderstanding can occur. I’m hopeful that through my investigations, I might get a better understanding of what the pathologist needs to render a meaningful report to the clinician, and what the pathologist needs from the clinician to interpret the skin biopsy specimens appropriately.

“I’m continuing my research outside of the program now. The Scholars Program experience taught me valuable foundational aspects of health services research. This work isn’t about pathogenesis or the natural history of disease. Instead we’re looking at outcomes of patients who receive care every day and the systems and structures that support their care. It’s worthwhile because we ensure that the right care is provided to the right patient at the right time.”

Investigating the cancer survivorship experience, affecting the standard of practice
Carrie Thompson, M.D. (I ’04, HEMO ’07), Division of Hematology, completed her two-year Kern Scholars Program a year ago. Her research focused on quality-of-life and long-term issues in survivors of hematologic cancers.

“Cancer survivors are a growing population in the United States and underrepresented in research,” says Dr. Thompson. “Health care delivery is an important part of our practice and needs to be part of our research. I wouldn’t have been able to accomplish the work I did without the Scholars Program.”

Dr. Thompson established a lymphoma survivorship clinic at Mayo Clinic in Rochester, studying the impact of cancer on patients after lymphoma treatment, advising them about signs of relapse and effects of cancer treatment, and providing screening recommendations. She is comparing outcomes in those who participated in the clinic with those who did not, as well as quality-of-life measures such as fear of recurrence and anxiety.

“Providing care for survivors is part of the cancer trajectory that was missing,” she says. “Patients appreciate the opportunity to review what they’ve been through, talk about the psychological effects, and learn about recommendations for ongoing health and wellness.”

Dr. Thompson found that patients cured from aggressive lymphoma were being over-tested during their follow-up care. As a result of her research, Mayo’s hematology practice has changed the number of follow-up scans it conducts. International guidelines also have changed due in part to her research.

“Lymphoma patients get anxious about fear of recurrence around the time they’re due for scans, and we expose them to unnecessary radiation,” she says. “If our standard of care isn’t improving outcomes and isn’t cost effective, we shouldn’t do it. I’m proud to have made an impact on lymphoma patients here and maybe around the world.”

Dr. Thompson says she has developed through the Kern Scholars Program. “The program is training junior faculty and fellows within Mayo Clinic to do health care delivery research,” she says. “I’ve grown from a junior investigator to one who asks her own questions and can become an independent investigator. I’m a more curious clinician now. I look at how we practice with a more critical eye.

“Mayo Clinic has always had an emphasis on excellent patient care and cutting-edge research that
moves medicine forward. The Scholars Program is a unique spin on that — educating physicians about how we deliver health care to patients and providing added value to already-excellent research. Focusing on improving and implementing best practices for the care of all patients is very patient centered, and patient-centered care is important at Mayo Clinic.”

Dr. Thompson is continuing her research with grant funding from a Mayo Clinic benefactor.

Examining how to safely de-escalate asthma medication use
Matt Rank, M.D. (AIM ’08, CLRSH ’09), Division of Allergy, Asthma and Clinical Immunology at Mayo Clinic in Arizona, spent three years as a Kern Scholar, finishing in 2014.

His research focused on asthma management, including how to step down from medications when asthma is under control. “For the last several decades, asthma research has focused on what to do when the disease is problematic,” he says. “What about when you’re doing well and can safely reduce your medication use?”

Dr. Rank’s mentor Nilay Shah, Ph.D. (HSR ’05), Health Services Research, Mayo Clinic in Rochester, showed Dr. Rank how to use databases to understand the risks, benefits and outcomes of reducing asthma medications.

“We demonstrated that safely reducing medication use reduces side effects and cost of care, and we outlined the risks involved,” says Dr. Rank. “As we continue the research, we plan to refine and validate prediction rules for patients and providers involved in reducing medications. Our goal is to provide a framework for de-escalating medications for patients with asthma that we hope can be translated for other chronic diseases.”

Dr. Rank received a grant from the Agency for Healthcare Research and Quality to continue his research.

“The Scholars Program has been a huge boost to my research career, helped me compete for external grants and provided me with close relationships with multiple mentors,” he says. “As a young faculty member, it would have taken me much longer to get there without the program. Mayo Clinic is investing in making our practice better — finding out what works and spreading it throughout the practice. We can deliver health care better.”

About the Mayo Clinic Kern Center for the Science of Health Care Delivery

The Mayo Clinic Kern Center for the Science of Health Care Delivery applies innovative science and data to evaluate the quality, safety and value of health care globally and improve real-world experiences for patients. Multidisciplinary teams focus on programs and themes, exploring the many facets of health care delivery, developing proven methodologies and driving improvements into practice.
MSGME 100

TRANSFORMING POSTGRADUATE MEDICAL EDUCATION
The reach of Mayo School of Graduate Medical Education (MSGME) is significant. The school oversees the largest number of accredited programs in the United States, with more than 270 training programs covering every medical and surgical specialty across all Mayo campuses.

As MSGME marks its centennial in 2015, Mayo Clinic Alumni reflects on a key time in Mayo Clinic’s history. Along with the University of Minnesota, Mayo Clinic played a significant role in the evolution of medical training.
Prescience
Prior to 1915 U.S. physicians could call themselves specialists without any training besides a medical degree.

Two years before the Flexner report on medical schools was undertaken in 1908, William J. Mayo, M.D., then president of the American Medical Association, said, “The profession owes it to itself to investigate … what the schools are actually doing and to make it known whether or not they fulfill their obligations to the student.”

Partnership
James Moore, M.D., chief of surgery at the University of Minnesota, communicated a strategy to Dr. Will in 1914: “The idea in brief is this, that instead of doing ordinary postgraduate work, which I believe does more harm than good, we as a University do real graduate work and offer a school for the education of specialists. This will do a great deal to forward your scheme at Rochester [a new three-year residency program to train specialists], and will have much to do with amalgamating your institution with the University. With your help we are already in a position to offer men courses in all of the recognized specialties.”

In 1915 Dr. Mayo and his brother, Charles H. Mayo, M.D., established the Mayo Foundation for Medical Education and Research, a new legal entity distinct from the clinic. Income from the practice was placed in a trust to fund stipends for residents who came to Mayo Clinic to study after medical school and internship.

Soon thereafter, Mayo Clinic partnered with the university to develop the first three-year university-based program to train graduate physicians in specialty practice. Applicants for the Mayo fellowship had to have graduated from medical school and completed an internship. Enrollees were expected to conduct research and publish papers. The first graduate degrees in Mayo’s programs were conferred in 1917 — to two women and two men.

Progress
Thanks to the efforts of the Minnesota institutions, postgraduate medical education began to focus on specialty training instead of continuing medical education courses. This change followed a more European method of physician education at a time when access to Europe for training was narrowing due to World War I.

“Prior to this, practitioners could easily claim they were ‘specialists.’ The Mayo brothers wanted to improve the standard for training specialists,” says Christopher Boes, M.D. (N’00), associate dean of MGSME Rochester campus and director of the Mayo Clinic Center for the History of Medicine. “Having a master’s degree or Ph.D. in clinical medicine or surgery was a brand new concept. Today, those degrees aren’t granted. Louis Wilson, M.D., the first head of MSGME, helped move the focus to board certification as demonstration of specialty competency.”

Problems
The affiliation for graduate medical education between the university and Mayo Clinic stirred controversy. In 1915 physicians from around the state protested the university’s arrangement with a “private business firm” (Mayo Clinic). In 1917 legislators introduced a bill in the state legislature to end the Mayo affiliation. Mayo countered by allowing its $1.5 million endowment of the
graduate medical school to be put under the immediate control of the university regents. Wording was added that after approximately 28 years, the net income could be spent for graduate medical and surgical investigation and research work to be carried on at or directed from the University of Minnesota in Minneapolis or other places (including Rochester).

During the legislative debate, educational reformers including William Welch, M.D., from Johns Hopkins wrote in support of the affiliation:

“The unequalled opportunity for graduate medical training and work accorded by the affiliation of the University of Minnesota with the Mayo Foundation has made your graduate school the envy of other institutions as well as a source of pride to the country.”

Adding to the challenges in the arrangement, each institution had different priorities — scientific investigation to create “productive scholars” and researchers for the university, and “high-grade apprenticeship” in the medical specialty residency model for Mayo Clinic. By the 1950s specialty board certification had replaced graduate degrees as the path to specialization.

The Rochester campus residency training program was renamed the Mayo Graduate School of Medicine in 1964 and the Mayo School of Graduate Medical Education in 2004. The joint programs morphed into specialty residencies and advanced fellowships, M.D./Ph.D. programs and graduate programs in sciences.

The affiliation ended in 1983 when Mayo became a degree-granting institution.

Postlude

“Although this affiliation didn’t survive, Mayo Clinic’s influence helped to ensure rigor in graduate medical education in America. Mayo’s residency program focused on patient care yet still emphasized clinical research,” says Dr. Boes. “Many are unaware of this significant period in our history and Minnesota’s role in specialty education reform.”

Mayo School of Graduate Medical Education today

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<tr>
<th>Steven Rose, M.D. (MMS ’81, I ’82, ANES ’84)</th>
<th>Darrell Pardi, M.D. (GI ’98, CTSA ’09) Associate Dean, Medicine–Pediatrics, Rochester campus</th>
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<td>Dean and Designated Institutional Official, Rochester campus</td>
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<td>Christopher Boes, M.D. (N ’00) Associate Dean, Medical and Laboratory Specialties, Rochester campus</td>
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<td>David Capobianco, M.D. (N ’91) Associate Dean, Florida campus</td>
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<td>Eric Dozois, M.D. (S ’00, CRS ’01) Associate Dean, Surgery and Surgery Specialties, Rochester campus</td>
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<td>Joseph Mikhail, M.D. (HEMO ’08) Associate Dean, Arizona campus</td>
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Go to mayoclinicproceedings.org and search for The Founding of Mayo School of Graduate Medical Education for more information.
New CEO in Florida
‘Palpable energy’ fuels Gianrico Farrugia, M.D.

Gianrico Farrugia, M.D. (I ’91, GI ’94), a vice president and 26-year veteran of Mayo Clinic, is the new chief executive officer of Mayo Clinic in Florida. Mayo Clinic Alumni spoke with him about the new position and his plans.

Why did you want to make the move to Mayo Clinic in Florida?
As director for the Center for Individualized Medicine, I had visited the Florida campus at least quarterly and gotten to know many people. I’ve become even more aware of the power of building strong teams at Mayo Clinic and how doing so can transform our patients’ lives. I didn’t want to pass up the opportunity to work with staff in Jacksonville.

In terms of timing, the research that I am so proud of is well positioned to progress in Rochester without my day-to-day involvement. This is possible because several former fellows in my laboratory have joined the Mayo Clinic staff and become successful in their own right.

Finally, my sons are seniors in high school and college, so it was a good time to move personally.

How did your predecessor in Florida, William Rupp, M.D. (ONCL ’08), help with the transition?
He has been gracious with his time and wealth of information. He made sure I understood the people, place and large opportunities ahead. One of the first things he told me was that I should spend a lot of my transition time just walking around and meeting people. I took his advice to heart and am very happy I did so. It has been extremely helpful. I met and learned from many and found out where all the stairs are in the various buildings.

What are your priorities?
Patients come to Mayo Clinic in Florida from all 50 states and more than 140 countries for our unique services in transplantation, neuroscience, oncology and other specialties. We’re already a destination medical center in our own right. My administrative partner, Christina Zorn, and I will work on expanding our ability to offer a destination medical center experience to all of our patients.

We will continue to look at ways to develop our research and education capabilities on campus and make sure we translate them into better outcomes for patients.

Dr. Rupp and his administrative partner, Bob Brigham, left a very strong culture of quality and safety, and we’re committed to continuing that culture.

What are you most excited about in your new position?
We have a very strong staff and beautiful facilities, and we offer outstanding value for our patients. The energy here is palpable. There’s a genuine desire to make sure that our patients have an outstanding experience.

Everybody who visits the Florida campus comments on how beautiful it is. Having the hospital connected to the outpatient buildings, with research labs and education programs on the same campus, is a luxury and very efficient. We’re committed to providing an outstanding experience for patients and their families, and it is exciting to be part of this effort.

Are you still director of the Center for Individualized Medicine (CIM)?
No. Keith Stewart, M.B., Ch.B. (HEMO ’05), Division of Hematology-Oncology, is the new medical director.

Being the director of the CIM has been one of the most fulfilling times of my life. It has been remarkable to see the promise of genomics translate to the practice of genomics for our patients. I will be excited to see the CIM continue to grow and will cheer it on every step of the way.

What will you miss about Rochester?
I was a resident, then a fellow, then a staff member at Mayo Clinic in Rochester. My sons were born and raised there. My wife and I were deeply embedded in the community. I have a rich network of friends and collaborators in Rochester whom I can call to get advice and get things done. I will miss that but plan on building that network in Florida. ◆
My administrative partner, Christina Zorn, and I will work on expanding our ability to offer a destination medical center experience to all of our patients.”

—Gianrico Farrugia, M.D.
The Mayo Clinic Alumni Association celebrates its 100th anniversary during its 69th Biennial Meeting in Arizona later this year. The Mayo Clinic Alumni Association Board and conference co-chairs Dawn Marie Davis, M.D. (PD ’03, DERM ’06), and Richard Zimmerman, M.D. (NS ’90), invite you to join them in Arizona to celebrate a century of shared ideals and experience.

THURSDAY, OCT. 15, 2015
- 6–7:30 p.m. Welcome reception
  Hosted by Department of Development–Alumni Philanthropy Program
  Westin Kierland Resort and Spa

FRIDAY, OCT. 16, 2015
- 8 a.m.–3 p.m. Scientific Program
  Juanita Kious Waugh Auditorium
  Mayo Clinic Education Center
- 6–11:30 p.m. President’s Gala
  6–6:45 p.m. Reception
  6:45 p.m. Dinner and program; dancing to follow
  – Awarding of Humanitarian and Professional Achievement Awards
  – Installation of incoming Alumni Association President, Susheela Bala, M.D. (PAIM ’87)
  Westin Kierland Resort and Spa

SATURDAY, OCT. 17, 2015
- Specialty programs and social activities
  Mayo Clinic facilities and Westin Kierland Resort and Spa

Sampling of speakers for Friday’s program
- David Ahlquist, M.D. (MMS ’77, I ’80, GI ’83), Gastroenterology and Hepatology, Carol M. Gatton Professor of Digestive Diseases Research honoring Peter Carryer, M.D., Mayo Clinic Rochester, Judd Plummer Lecturer
- Michael Crow, President, Arizona State University
- Wyatt Decker, M.D. (MMS ’90, I ’93), CEO, Mayo Clinic Arizona
- E. Rolland Dickson, M.D. (I ’64), Doctors Mayo Society Lifetime Achievement Lecturer
- Gianrico Farrugia, M.D. (I ’91, GI ’94), CEO, Mayo Clinic Florida
- Kenneth Nollet, M.D., Ph.D. (MMS ’93, BIOC ’93), Fukushima Medical University, Fukushima, Japan
- Steven Rose, M.D. (MMS ’81, I ’82, ANES ’84), Dean, Mayo School of Graduate Medical Education, Mayo Clinic Rochester
- Guillermo Ruiz-Argüelles, M.D. (HEM ’83), Clinica Ruiz, Puebla, Mexico
- Keith Stewart, M.B., Ch.B. (HEMO ’05), Carlson and Nelson Endowed Director, Center for Individualized Medicine, and Vasek and Anna Maria Polak Professor of Cancer Research

Conference hotel: Westin Kierland Resort and Spa, 6902 East Greenway Parkway, Scottsdale, Arizona, 85254

Online registration and additional details alumniassociation.mayo.edu/events
The Mayo Clinic Alumni Association marks its 100th anniversary in 2015. Each of the four issues of Mayo Clinic Alumni magazine in 2015 will include special content about the Alumni Association, one quarter-century at a time.

This issue focuses on the period from 1941 to 1965 when great change was underway at Mayo Clinic and in the world.
CARRYING THE TORCH

The deaths of Charles H. Mayo, M.D., and William J. Mayo, M.D., in 1939 signaled a new era — one that required Mayo Clinic physicians to carry the torch their leaders had handed to them. The next quarter-century was one of discovery and invention, sacrifice and courage, expansion and connection.

Wartime before U.S. entry

Before the United States entered World War II, Mayo Clinic was involved in research with military and aviation applications such as the effects of acceleration on the human body and the study of oxygen use at high altitudes. Several staff members served in advisory capacities to the National Research Council and other government agencies. Many staff members and residents held reserve commissions in the Army or Navy.

As the war continued staff members and residents were called to active duty. By 1940 approximately 25 percent of the physician staff was in active service. In areas including general surgery, neurologic surgery, roentgenology and anesthesia, half of the prewar staff was gone. Additionally, members of the staff and their assistants devoted considerable effort to preliminary examination of inductees at the induction station at Fort Snelling.

After the 1941 annual meeting of the Alumni Association, William Long, M.D. (I ’25), sent a letter to Donald Balfour, M.D. (S 1909), director of the Mayo Foundation for Medical Education and Research from 1937 to 1946. Dr. Long wrote:

*Just coming back to the Clinic is always a great stimulation and inspiration for me and I certainly appreciate all the advantages that my associations have given me. … I thought the scientific meetings this year were especially good. It is always so helpful for us who deal in cases in twos and threes to have the judgment of men who see similar problems in thirties and forties.*

Five weeks later, Pearl Harbor was attacked and the United States entered World War II. The following year Dr. Long became president of the Alumni Association. Generally this term was for only one year but, due to the war, he held the position for five years during which annual alumni meetings were suspended.
Wartime after U.S. entry

Entrance into the war resulted in a further depletion of staff and residents, accompanied by an increase in patient registrations. A 1943 report on the activities of Mayo Clinic during the first years of the war said:

Increase in registrations has taxed to capacity the hospital facilities, even with the addition of nearly 200 beds to Saint Marys Hospital made available in 1941. The total beds available in hospitals affiliated with the Clinic and Foundation now exceeds 1600. … It is the concern of all of us to see that the quality of medical care is not lowered, but at the same time it is necessary that this care be limited to essentials.

To compensate and meet patient needs, Mayo Clinic assigned greater responsibilities to senior assistants than would have been done in peacetime and hired personnel who had been physically disqualified for military service as temporary replacements. Nonmilitary research studies were stopped or temporarily deferred.

Beginning in 1942 Mayo Clinic offered training courses for officers assigned by the Surgeon General of the Army, Navy and Public Health Service. More than 800 officers participated in the courses.

In 1943 Dr. Balfour communicated to alumni about a decision reached in 1942 due to the national emergency:

The Board of Governors of the Alumni Association has decided that because of the war, the annual meeting will be omitted this year. However, it is hoped that alumni, whether in civilian practice or in service, will remember that they are welcome at any time they find it possible to return for a visit. Returning alumni may find some activities of the Clinic and Foundation in respect to the war of interest to them, particularly courses in various fields for medical officers assigned here by the Army and Navy.

It will perhaps be of interest to alumni that some 40 members of the Staff are in active service at present and some 150 fellows [residents] are on leave of absence for military service; and since the war began a total of some 225 fellows [residents] have joined the armed services.
### Postwar

When the war ended, Mayo Clinic physicians returned from military service along with hundreds of residents whose training had been interrupted. Back in Rochester the demand exceeded available housing. Mayo Clinic built three additions of 100 homes each — the “Homestead” in southeast, “Carroll” in northeast and prefabricated homes in southwest Rochester. Residents and staff physicians had opportunities to purchase homes in the first two developments. Prefabs — Quonset-shaped dwellings identical in size and shape and slightly varying in color — were reserved for rent by residents.

The waiting list for prefabs was long, with more than 100 names on it until after 1950. Prefabs were popular because of low rent and the friendly neighborhood atmosphere. Children who lived in them often ran into the wrong house because they looked so much alike.

### Back to normal

In 1947, after a five-year hiatus, the Alumni Association resumed its tradition of annual meetings with Dr. William Long of Fargo, North Dakota, presiding. He addressed 325 alumni and other visitors in Plummer Hall:

**The beginning of the war found the Foundation and Clinic prepared and ready to do its full part. …**

This great contribution has been recognized by an appreciation to the staff by the secretary of war for the part played in training of officers in the several special fields. …

The war years just past have been a time of high endeavor; great personal sacrifice and grief for many of us, and of enormous stress and strain for all. We mark the passing of this period of our lives, and at the same time realize tremendous problems still confront us in our national life and in our chosen field of medicine; let us face these with vigor and the determination to go forward steadily, to assume our share of responsibility for the advancement of the world’s work.

**1949** Mayo Clinic’s Philip Hench, M.D. (I ’25), used clinical observations to decide that rheumatoid arthritis was not primarily caused by infection but more likely was a metabolic disease.

**1949** Alumni Association dues increased from $2 to $3.

**1950** Mayo Clinic’s Edward Kendall, Ph.D. (BIOC 1914), and Philip Hench, M.D., along with Swiss chemist Tadeusz Reichstein, were awarded the Nobel Prize in Physiology or Medicine for the isolation and first clinical use of cortisone.
Alternating invitees

By 1949 the Alumni Association had 2,140 members, and Rochester had an acute shortage of hotel space. The Alumni Association responded by alternating invitees to the annual meetings — members who joined before 1942 and those who joined after 1942. This change endured for six years.

The 1953 annual meeting of the Alumni Association was held at the new Medical Sciences Building. Mayo Clinic communicated to members about changes on the campus:

You will notice certain physical changes about the Clinic and hospitals. Medical Sciences Building has been fully occupied for over a year now. Hospital services have been moved from the Kahler to the Colonial and St Marys Hospital. The addition to the Hotel Kahler is progressing rapidly. St. Marys Hospital has begun the project of replacing the old sections with a new modern wing. As to the progress on the new Clinic building, the top three floors are all but complete, and general medical sections are scheduled to move to these floors in October.

All invited again

In 1955 the Alumni Association returned to the full membership being invited to annual meetings, communicating:

This year, because of a continued expansion in hotels and motels, it has been possible to return to the former “everybody welcome” reunion pattern.

This resulted in the largest alumni meeting since before World War II, presided over by Shirley Lyons, M.D. (S ’24), of New Orleans, Louisiana.

The following year, James Priestley, M.D. (S ’33), vice chair of the Board of Governors, addressed assembled alumni:

Without doubt one of the most pleasant and interesting occasions of the entire year for those alumni who live in Rochester is the annual reunion of alumni of the Mayo Foundation. It is truly gratifying that so many return to Rochester for this meeting … The scientific and educational inspiration afforded by this meeting is equaled only by the pleasure of renewing friendships and reliving “the old days.”

1950 Construction began on the 10-story Mayo Building after a 10-year study. The decision was made to build when the study revealed that annually 25,000 to 50,000 persons were deterred from coming to Mayo Clinic by the waiting period, which ranged from a few days to two weeks.

1950 John Henderson, M.D. (OPH ’43), and Robert Holtenhorst, M.D. (OPH ’49), reported the first uses of systemic and topical cortisone in eye diseases for the first time anywhere.

1950 Leonard Kurland, M.D. (N ’53) (right), and Donald Mulder, M.D. (N ’50), published landmark research on the ALS-Parkinsonism-Dementia (KURU) complex on the island of Guam.

1950 On an average workday, the Mayo Clinic switchboard handled 21,000 calls — 6.5 million calls annually. The clinic had 1,100 telephones and 700 loudspeakers.
Scientific sessions at the 1956 meeting included panel discussions on metastatic carcinoma, diseases of the esophagus, peripheral vascular disease, and electrolyte imbalance and oliguria, and a progress report on intracardiac surgery. Miles Griffin, M.D. (S ’36, U ’37), of Piedmont, California, provided the presidential address, and Barry Wood, M.D., professor of microbiology and vice president in charge of medical facilities at Johns Hopkins University, the Judd-Plummer lecture.

Dr. Balfour addressed alumni who gathered in Rochester for the 1957 annual meeting:

*The annual meeting of the Alumni emphasizes again the debt the Mayo Clinic and Mayo Foundation owe to this Association, for each year as you return for reunion we are reminded of how splendidly you have lived up to the ideals and philosophy upon which the Mayo Foundation was established, and through this the Association has had a profound influence on medicine in the past half-century. The practice of medicine becomes increasingly complex, but basic principles in the care of the patient will never change.*

This meeting was presided over by George Rice, M.D. (S ’23), of Pueblo, Colorado, and the Judd-Plummer Memorial Lecturer was William Estes, M.D., chief surgeon emeritus of St. Luke’s Hospital in Bethlehem, Pennsylvania, and president-elect of the American College of Surgeons.

Victor Johnson, M.D. (PHYS ’47), director of the Mayo Foundation for Medical Education and Research from 1947 to 1966, also addressed attending alumni:

*Throughout the year between alumni meetings, the influence of former fellows [residents] is constantly apparent to us in Rochester. We are proud to indicate to visitors the widespread distribution of former fellows [residents] throughout the country, this hemisphere and the world. We are proud that our alumni contribute so materially to the high quality of medical care in so many areas.*

A 1958 survey by Mayo Clinic revealed that 40 percent of the more than 3,000 alumni held medical school faculty appointments in 73 medical schools in the United States, nine schools in Canada and schools in 27 countries abroad.

The Alumni Association annual meeting that year was presided over by James Weir, M.D. (I ’23), with Thomas Morton Durant, M.D., professor of clinical medicine at Temple University in Philadelphia, providing the Judd-Plummer Memorial Lecture — “Medical education: responsibilities and potentialities.”
THE ‘60s  A centennial and a semicentennial celebration

The 1962 Alumni Association annual meeting was presided over by W. Randolph Lovelace II, M.D. (S ‘41), of Albuquerque, New Mexico. Dr. Lovelace trained at Mayo Clinic and was head of a section of surgery from 1941 to 1946. He was an important figure in aviation research and was awarded the U.S. Army’s Distinguished Flying Cross for his experimental descent by parachute from an altitude of 40,200 feet during World War II. Dr. Lovelace and Walter Boothby, M.D. (I 1916), had received national recognition for contributing to the safety record of U.S. airlines in 1939, with the Robert J. Collier Trophy — aviation’s highest honor.

The 1964 annual meeting of the Alumni Association coincided with the Mayo Clinic Centennial and Semicentennial Celebration (commemoration of the births of Drs. Will and Charlie and semicentennial of the founding of the Mayo Foundation) and attracted more than 400 alumni.

The meeting included a symposium, “Man’s adaptation to his expanding environment,” with nonmedical, internationally known experts. The symposium was moderated by Laurence Gould, Antarctic explorer, president of the American Association of the Advancement of Science and president of Carleton College in Northfield, Minnesota. The symposium and resulting discussion were published in Mayo Clinic Proceedings (January 1964).

This quarter-century of the Alumni Association concluded with the 1965 annual meeting, which included a symposium on graduate medical education honoring Dr. Victor Johnson, who was set to retire as director of Mayo Graduate School of Medicine.

Edward Rosenow Jr., M.D. (I ‘40), presided over the meeting, at which the Judd-Plummer Memorial Lecturer was Robert Forbes Woodward, special advisor to the President of the United States for interoceanic canal negotiations. He spoke about “Medicine in foreign relations.”

The Rosenow family, including Edward Rosenow, M.D. (1915), and Edward Rosenow III, M.D. (I’ 65, THD ’65), is representative of the growing number of multigenerational alumni.

1954 Rochester Methodist Hospital, made up of the Colonial, Worrall and Worrall Annex, was formed.

1954 The 2 millionth unique patient — Mrs. Jerry Lee Salley of Liberal, Kansas — registered since the registration system was introduced in 1907 by Henry Plummer, M.D.

1955 With the encouragement from the American Medical Association and approval of the state medical association, Mayo Clinic participated in a television episode of “Medical Horizons” on ABC. Reaching between 6 and 9 million viewers, the program focused on Mayo Clinic’s heart-lung bypass procedure and emanated from Rochester.
WOMEN ON THE MAP

In 1973 Mayo Clinic announced that it was actively endeavoring to attract more women and minorities to its physician and paramedical staff. At that time women represented less than 3.2 percent of the physician staff. Women were not well represented from 1941 to 1965 but did have remarkable accomplishments.

Jane Hodgson, M.D. (OBG ’44), devoted her 50-year career to providing reproductive health care to women. She co-founded the Duluth Women’s Health Center. Her early research included pregnancy-testing methods. In 1952 Dr. Hodgson became a founding fellow of the American College of Obstetrics and Gynecology. She was a member of the board of directors of the Center for Reproductive Rights.

Dr. Hodgson participated in Project Hope, traveling around the world to provide medical care in underserved countries. She received the Margaret Sanger Award from the Planned Parenthood Federation of America in 1995 and the National Reproductive Health Award from the American Medical Women’s Association in 1994. She was one of the first physicians to be inducted into the International Women in Medicine Hall of Fame in 2001.

Born in Crookston, Minnesota, Dr. Hodgson received her undergraduate degree from Carleton College in Northfield, Minnesota, and her medical degree from the University of Minnesota Medical School. She completed her residency at Mayo Clinic, as did her husband, Frank Quattlebaum, M.D. (S '44).

1956 For the first time, Mayo Clinic patient registrations exceeded 150,000 for the year.

1956 The 1914 and 1928 buildings were renamed the Plummer Building.

1957 A prototype research nursing station — the first circular station in the country — was developed at Rochester Methodist Hospital.

1958 Mayo Clinic patient registrations reached a new high — 195,541 patients, an increase of more than 3,000 over the previous year and despite a recession. The biggest increase was in patients from the Rochester area.
Eva Gilbertson, M.D. (R-D ’46), was the first woman to complete the radiology residency program at Mayo Clinic — a pioneer in a field dominated by men. She was the first woman to open a radiology practice in Seattle, where she remained for more than 30 years. She was a founding member of the Pacific Northwest Radiological Society.

Dr. Gilbertson also provided volunteer medical care to native peoples in isolated hospitals in Alaska. She participated in continuing education opportunities at Mayo Clinic during her career, was a member of the Doctors Mayo Society and supported the Alumni Radiology Fund at Mayo Clinic. She also established the Eva L. Gilbertson Endowed Research Fund in Biomedical Imaging, which continues to sustain the excellence of biomedical imaging at Mayo Clinic.

Born near Maddock, North Dakota, Dr. Gilbertson attended the University of North Dakota and received her medical degree from Temple University in Philadelphia. She told Mayo Magazine in 2007 that she hoped her early efforts helped to pave the way for younger generations of women in medicine.

M. Elizabeth Mussey, M.D. (OBG ’46), joined the staff of Mayo Clinic in 1947 as an obstetrician/gynecologist. She was an associate professor and retired in 1974.

Dr. Mussey had a special interest in chemotherapy for gynecologic cancer, particularly the detection of early cancer of the cervix. She was involved in the development of the colposcopy technique and chemotherapy for ovarian malignancies. She was a fellow of the American College of Obstetricians and Gynecologists.

Dr. Mussey, from Rochester, Minnesota, received her undergraduate degree from Carleton College in Northfield, Minnesota, and a master’s degree and medical degree from the University of Minnesota. She was a resident at Gallinger Municipal Hospital in Washington, D.C., before coming to Mayo Clinic to complete her residency in obstetrics and gynecology.

1959 Growing numbers of patients with health insurance caused the Mayo Clinic business office to mechanize procedures with the IBM Accounting Machine 403.

1960 A major new housing development with 102 units for residents and their families was announced. It would replace the Graham Addition “Quonsets” and be known as Homestead Village.
Sarah Luse, M.D. (PATH ’54), was a neuropathologist who was one of the first to study the nervous system with the electron microscope. She made significant contributions to neuropathology, clinical neurology and neurosurgery.

Dr. Luse was considered an expert on ultramicroscopic changes in brain cells caused by cancer, viruses and drugs. In the mid-1950s she discovered that a particular kind of brain cell was damaged by multiple sclerosis — a breakthrough in the study of MS.

Dr. Luse was born in Emmetsburg, Iowa, and received an undergraduate degree from Rockford College in 1940. From 1940 to 1945 she was a technician in the laboratory of electroencephalography at Saint Marys Hospital at Mayo Clinic and was in charge of interpretation of electroencephalograms. She participated in electroshock therapy and studies in the electroencephalographic aspects of barometric pressures in aviation medicine. She taught physics to students in the Mayo Clinic School of Physical Therapy.

In 1945 she enrolled in the Western Reserve University School of Medicine in Cleveland and received her medical degree in 1949, and was a resident in pathology at Western Reserve University Institute of Pathology. She returned to Mayo Clinic in 1953 as a resident in pathology.

She went to the Washington University School of Medicine in St. Louis in 1954 to join the Department of Anatomy, where she was a professor of anatomy and pathology. In 1964 she became the first woman to be named to an administrative post at the School of Medicine (acting head, Department of Anatomy). In 1967 Dr. Luse accepted a faculty position at Columbia University College of Physicians and Surgeons in New York City, where she was a professor of anatomy.

Dr. Luse was a consultant to the Armed Forces Institute of Pathology and to several committees of the National Institutes of Health and National Multiple Sclerosis Society.
In the early 1960s Dr. Hartridge developed a technique of balanced anesthesia for cesarean section, which received widespread acceptance nationally and remained for some years the preferred anesthetic technique for that operation.

She was an officer and director of a laboratory of immunology in the Army’s Women’s Medical Specialist Corps from 1943 to 1946, and served in the Medical Corps of the U.S. Navy from 1951 to 1953.

Dr. Hartridge was a diplomate of the American Board of Anesthesiology and fellow of the American College of Anesthesiologists.

Born in Milwaukee, Wisconsin, Dr. Hartridge received her undergraduate degree from Milwaukee-Downer College and a master’s degree in public health from the University of Michigan in Ann Arbor. She received her medical degree from Woman’s Medical College of Philadelphia.

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She was an officer and director of a laboratory of immunology in the Army’s Women’s Medical Specialist Corps from 1943 to 1946, and served in the Medical Corps of the U.S. Navy from 1951 to 1953.

Dr. Hartridge was a diplomate of the American Board of Anesthesiology and fellow of the American College of Anesthesiologists.

Born in Milwaukee, Wisconsin, Dr. Hartridge received her undergraduate degree from Milwaukee-Downer College and a master’s degree in public health from the University of Michigan in Ann Arbor. She received her medical degree from Woman’s Medical College of Philadelphia.
All health care providers have digital identities — whether they like it or not, according to Farris Timimi, M.D. (CV ’97), Division of Cardiovascular Diseases and medical director, Mayo Clinic Center for Social Media. “If you don’t think about your digital identity and populate it, it will be populated by the crowd and may or may not accurately reflect you,” he says. “Absence of engagement lets the crowd define your identity.”

Dr. Timimi says that developing and maintaining a digital identity doesn’t have to be time consuming. “Initially you may have to put in a few hours,” he says. “But maintenance takes only 20 to 30 minutes a month. It’s time well spent.

“The third-most common online activity today among people 18 and older is seeking health care information, so the downstream impact of having a strong online presence can be significant. This involves being aware of what’s out there about you, being familiar with digital and social media tools, and monitoring your identity.”

Tools you need
The Mayo Clinic Center for Social Media provides online tools to help with this process:
• Go to network.socialmedia.mayoclinic.org.
• Click on “About Us” then “Join the Network.”
• Click on “register for a free Guest account.”
• Click on “Continuing Education” and “Learning Modules” in the drop-down menu. You’ll find online tutorials on subjects including:
  – Overview of social media tools
  – Personal branding in social media
  – Getting started with Twitter
  – Medical professionalism and social media
  – Managing the legal risks of social media

Steps to take
The Mayo Clinic Center for Social Media recommends physicians take steps such as these to build and monitor online identity:

1. Search for your name on Google. Sign up for a Google alert (google.com/alerts) to be notified when new information is added under your name. On an ongoing basis, review this information for any negative mentions, especially on the first page of search results. If you find any negative mentions, they are less impactful if they are not on the first page of search results.
2. Create or claim your public profile on physician network or review sites, such as Doximity.
   Most physicians in the United States already have Doximity profiles created from public records, and more than half of all physicians have claimed their profiles. You do not have to actively participate on Doximity on an ongoing basis.
   To claim your profile:
   • Search for your name at doximity.com.
   • Claim/verify your profile.
   • Add a photo.
   • Upload your CV.
   • Set privacy and notification preferences.
   Another benefit of claiming your profile is that U.S. News & World Report uses Doximity to survey physicians for its rankings of hospitals and residency programs, which gives you a chance to vote. Adding subspecialty expertise and interests to your profile raises your visibility for patients searching on the public-facing site and on U.S. News & World Report. If you build your Doximity profile up to an 80 percent fill rate, it will become a top search result under your name.

3. Create your own social networking accounts, especially LinkedIn and Twitter. These accounts allow you to link to preferred content, including your bio page at your organization.
   Dr. Timimi recommends Twitter as an easy entrée into social media.

4. Stay on top of your patient satisfaction results, particularly on the public websites Healthgrades, RateMDs and Vitals. The websites Angie’s List and Consumers’ Checkbook are behind a paywall but may still appear in a search.
   Seeing what patients say can help you identify areas where you excel and where you can improve.

5. Consider adding content such as YouTube videos and blogs on your organization’s website. Appropriate linking and tagging can help optimize these posts in search results.
   “This process is important and relatively simple and doesn’t require paying for reputation management services,” says Lee Aase, director, Mayo Clinic Center for Social Media. “If alumni engage in our Social Media Health Network, they can easily master the skills required to strengthen their digital profiles.”
   The Mayo Clinic Center for Social Media offers resources for alumni to assist with online reputation management. See the online guide, “12 Steps to Claiming and Completing Your Doximity Profile,” network.socialmedia.mayoclinic.org/mdreputation.

Reclaim your online identity
In the digital age, a search of an individual’s name can be revealing. One negative patient review can skew others’ points of view.
   If you find negative information about yourself online, you can take steps such as adding content (blogs, YouTube videos) that Google will see as relevant to a search for information about you.
   Consider seeking positive reviews from highly satisfied patients if you have concerns about a negative review on a particular rating site. Positive reviews will drive up your overall scores, and newer reviews may push down others on the page.
   Lee Aase, director, Mayo Clinic Center for Social Media, describes a pilot program undertaken with physicians in three divisions at Mayo Clinic.
   “The Google search found problematic search results for some individuals,” he says. “We implemented these steps and pushed negative reviews farther down on the search results page. The higher the information is on a search results page, the more impact it has in terms of affecting people’s decisions. We helped these physicians reclaim their online identity.”
Dr. Lalevic. “Later, his team expanded to include three other specialists who took care of him in and out of the country. I was engaged for all urgent matters. My room was always next to his, and I was in the first car behind his. I accompanied him as the only doctor on his famous hunting expeditions in India, Ethiopia and other countries. I traveled with him to emperors’ courts in India, Ethiopia and other countries. I traveled with him to emperors’ courts in

Upon completion of a fellowship in anesthesiology at Mayo School of Graduate Medical Education, Pregdrag Lalevic, M.D., Ph.D. (ANES ’56), was offered an assistant staff position at Mayo Clinic. However, he had to return to his native Belgrade, Yugoslavia. He has never returned to Mayo Clinic but has traveled the world in prestigious company.

Rooted at home, training generations of anesthesiologists

“There were no trained anesthesiologists in Yugoslavia in the early 1950s,” he says. “I had completed a one-year fellowship for the World Health Organization School of Anesthesiology in Copenhagen and a fellowship at Mayo Clinic, which gave me the highest qualifications in anesthesiology in all of Yugoslavia. I was the first fully trained anesthesiologist in Serbia and Yugoslavia.

“When I returned to Belgrade — the capital of Yugoslavia at the time, I started training the first group of anesthesiologists. By the time I retired as president of the Board of Anesthesiology Training Commission of Belgrade University School of Medicine in 1992, I had conducted more than 700 training exams in anesthesiology. More than 500 doctors from all over Yugoslavia were trained in anesthesiology at my clinic, under my supervision.”

Seeing the world, serving a president

The 1960s and 70s were especially busy years for Dr. Lalevic. In 1964, he was appointed to accompany the president of Yugoslavia, Josip Broz Tito, in his travels abroad — an arrangement that lasted for 16 years until the president’s death. President Tito was a founder of the global Non-Aligned Movement in 1961 along with Prime Minister Jawaharlal Nehru of India, President Gamal Abdel Nasser of Egypt and several others.

“Initially, I was the only physician directly responsible for the president’s health,” says Dr. Lalevic. “Later, his team expanded to include three other specialists who took care of him in and out of the country. I was engaged for all urgent matters. My room was always next to his, and I was in the first car behind his. I accompanied him as the only doctor on his famous hunting expeditions in India, Ethiopia and other countries. I traveled with him to emperors’ courts in

WHERE ARE THEY Now?

Pregdrag Lalevic, M.D., Ph.D., the first fully trained anesthesiologist in Serbia and Yugoslavia and physician to a president

26 MAYO CLINIC ALUMNI
Japan, Ethiopia and Persia, to Buckingham Palace in London and the White House. Over 16 years, I spent 24 months traveling with the president all over the world.”

Dr. Lalevic says he believes his affiliation with Mayo Clinic significantly contributed to his being called to serve the president. “I have no doubts that my training at Mayo Clinic had a huge influence on the decision to invite me for such a high responsibility and prestigious position,” he says. “I’m proud and honored for having such a unique opportunity to learn from some of the most skillful and respected doctors in the world who worked at Mayo Clinic at that time.”

During the final four months of President Tito’s life, Dr. Lalevic was the youngest member of his Medical Consilium, which consisted of seven of the most respected doctors from the entire country — cardiologists, a surgeon, a neurologist and an endocrinologist. “I was directly responsible for his care during the last 68 days of his life when he was on artificial ventilation,” says Dr. Lalevic. “It was a unique honor and privilege to serve my country by taking care of its leader but, at the same time, it was an enormous responsibility. I was deeply grateful for having the privilege to witness some of the most important moments in the recent history of my country and the world.”

Pregdrag Lalevic, M.D., Ph.D., received numerous medals during visits to countries around the world in his service to Yugoslavian President Josip Broz Tito.

Pregdrag Lalevic, M.D., Ph.D.

- Resides in Belgrade, Serbia
- Senior Advisor and Founder, Training Center for Cardiopulmonary Cerebral Resuscitation, Institute for Cardiovascular Surgery
- Professor of Surgery/Anesthesiology, Medical School – University of Belgrade (retired)
- Fellowship: Anesthesiology, Mayo School of Graduate Medical Education
- Fellowship: School of Anesthesiology, World Health Organization, Copenhagen, Denmark
- Training in Surgery/Anesthesiology: Military Medical Academy, Belgrade
- Medical School: University of Belgrade
Almudena Martinez-Fernandez, Ph.D. — Focused on fixing the heart

Almudena Martinez-Fernandez, Ph.D. (CV ’12, CV ’13), is the recipient of the 2015 Edward C. Kendall Mayo Clinic Alumni Association Award for Meritorious Research. Science has been her passion since childhood.

“I went straight from wanting to be a ballerina to wanting to be a scientist,” she says. “I’ve always wanted to learn more and come up with new questions to be answered.”

She grew up in León, Spain. Her mother is an anesthesiologist, and Dr. Martinez-Fernandez also was attracted to medicine. “I thought pharmacy school would give me a better entrance into research than medicine,” she says. “Medicine in my hometown area at that time was very clinical — not the basic research side.”

‘A challenging, beautiful organ’
She ventured into cardiovascular research because “the heart has something special for me,” she says. “It’s a challenging, beautiful organ to work with. You always need it, and it’s never resting. It’s a rather complex system. I’m interested in trying to fix it — not just patch it. With regenerative medicine, we can create what’s been lost to disease and start over.”

Dr. Martinez-Fernandez came to Mayo Clinic as a visiting graduate student in 2007 and then completed a fellowship in cardiac regenerative medicine.

Translational possibilities
“I always wanted to do research in a field that can translate to patients,” she says. “Mayo has strong scientific aspects and an impressive patient-oriented clinical practice. It’s a great place to be able to have both things and the resources to translate what you’re learning to patients.

“That’s what motivates me — the patients at the end of the process. I love knowing that one day we’ll be able to help someone with a horrible infarction get back on their feet.”

Roadmap of cardiac development
Dr. Martinez-Fernandez’s research focuses on finding the best stem cells to regenerate the heart. “A few years ago, a breakthrough discovery showed that adult differentiated cells can be manipulated in vitro to convert them to pluripotent stem cells (immature cells capable to giving rise to any kind of tissue in the body) through a process called nuclear reprogramming,” she says. “From that new state, large amounts of cardiac tissue could be obtained and potentially be used to replace lost cells in the heart.”

Over the last few years, Dr. Martinez-Fernandez and her colleagues have worked with these cells — called iPSC (induced pluripotent stem cells) — to try to optimize them for cardiac regeneration. “We’ve built a roadmap of cardiac development, mapping changes in gene expression,” she says. “Since differentiation of iPSC to cardiac cells follows the same steps as heart development, we can use our roadmap as a template to follow and modulate in vitro differentiation to determine what goes wrong in cardiac disease. We can try to reproduce the most useful parts of heart development to regenerate the heart when something has failed due to disease.”

‘Groundbreaking research findings’
Andre Terzic, M.D., Ph.D. (CV ’92), the Michael S. and Mary Sue Shannon Family Director, Mayo Clinic Center for Regenerative Medicine and Marriott Family Cardiovascular Research Professor, is Dr. Martinez-Fernandez’s mentor. “Almudena has original ideas,
unique technical skills and groundbreaking research findings that have profoundly contributed to the advancement of nuclear reprogramming and cardiac regeneration research at Mayo Clinic,” he says. “They also have established her as an expert in this competitive field and positioned Mayo Clinic at the vanguard of cardiac regenerative medicine.”

Timothy J. Nelson, M.D., Ph.D. (I ’08, CI ’10, CV ’10), General Internal Medicine and a force in regenerative medicine at Mayo Clinic, has worked with Dr. Martinez-Fernandez. “Almudena has been at the forefront of cardiac regeneration and will continue to drive the field forward with probing mechanistic insights and questions that are relevant to accelerating the translation of discoveries today into clinical practice of tomorrow,” he says. “Mayo Clinic has provided an ideal environment for Almudena, under the mentorship of Dr. Terzic, to systematically advance the field. This award will further facilitate a trajectory that is aligned with clinical translation founded on developmental cardiac biology.”

Dr. Martinez-Fernandez says she is humbled by the accolades. “It’s rewarding knowing that all of our effort in the lab will bring us closer to our final goal,” says Dr. Martinez-Fernandez. “Moving things a little bit is what I’m trying to accomplish so that it may help other researchers or change how they look at things.”

‘Science is worth it’

Dr. Martinez-Fernandez has recently changed her outlook. She and her husband, Santiago Reyes, Ph.D. (MPET ’10, CV ’13, CV ’14), Division of Cardiovascular Diseases at Mayo Clinic in Rochester, welcomed their first child earlier this year.

“Producing science and securing funding are time consuming, and now I have a new baby,” she says. “Some people don’t understand how hard research is — you get more bad results than good results. You have to be very self-motivated. Having awards such as the Kendall Award is important because it reminds you that science is worth it.”

Almudena Martinez-Fernandez, Ph.D.

Research Associate, Division of Cardiovascular Diseases, Mayo Clinic in Rochester

- Fellowship: Cardiac Regenerative Medicine, Mayo School of Graduate Medical Education
- Graduate: Ph.D., Cardiac Regenerative Medicine, University of Valladolid, Spain; master’s degree, Physiology, University of Salamanca, Spain
- Undergraduate: University of Salamanca

Almudena Martinez-Fernandez, Ph.D., pictured at age 6 or 7 in her native Spain, says she went straight from wanting to be a ballerina to wanting to be a scientist.
Robert McDonald, M.D., Ph.D. — Disproving a long-held belief, changing clinical practice

Robert McDonald, M.D., Ph.D. (MMS ’08, MPET ’08, I-1 ’09, CI ’11, R-D ’15, R-NEU ’16), says he was always interested in understanding how bodies work. “My father was a dentist, and I loved looking at his anatomy textbooks as a child. I became fascinated with the inner workings of the human body.”

Interest in science and medicine came early
His interest in science blossomed early. At age 14, he participated in the National Science Foundation’s Young Scholars program with conservation biologists at the Minnesota Zoo. He worked to help improve captive management of an endangered bird species. “These experiences taught me how hard work and asking the right questions could make a difference,” says Dr. McDonald.

He decided to pursue medicine while in high school in Bloomington, Minnesota. In college, he helped set up a tutoring service for University of Minnesota Masonic Children’s Hospital patients. “I discovered the human element of patient care and that medicine was more than just about curing disease,” says Dr. McDonald. “This experience focused my professional aspirations. I ultimately chose to study medicine at Mayo because of the patient-centric model of education, research and clinical practice.”

Found a perfect fit for dual interests
Dr. McDonald joined Mayo Clinic’s Medical Scientist Training Program. “It was a perfect fit for me, combining my clinical and scientific interests,” he says. His Ph.D. work with Jim Maher II, Ph.D. (BIOC ’95, dean, Mayo Graduate School), was in physical biochemistry and biophysics — studying how proteins help compact DNA into the nucleus of cells.

His clinical research interests are in applied informatics and comparative effectiveness research — using large patient datasets to answer clinical questions that are often unanswerable using traditional data sources. He applied those interests to the research that led to the Balfour Award. These findings led to changes in practice at Mayo Clinic and in radiology across the country.

Questioned dogma
Approximately half of all CT scan recipients receive iodinated contrast material, translating to more than 40 million doses annually in the United States. Since the 1950s there has been concern that iodinated contrast may be toxic to the kidneys, particularly among patients with impaired renal function. “Paradoxically, these patients are often also the most acutely ill and the most likely to benefit from contrast administration during their CT exam,” says Dr. McDonald.

“As a mentor, Dr. David Kallmes (R-D ’02) taught me the value in challenging medical dogma,” says Dr. McDonald. “Our research on the effects of contrast on renal function started because existing clinical evidence was flawed. I realized this was an ideal informatics project and that there was no better or larger resource to study this phenomenon than the Mayo Clinic electronic medical record.

“Evidence-based medicine gives us the tools to critically evaluate clinical literature and practice.”

Using these tools and his scientific training, Dr. McDonald determined that prior studies were improperly designed to study the causal relationship between contrast exposure and nephrotoxicity.

“It turns out that no one had performed a properly controlled study to answer this important clinical question, and we felt that such a study could help clarify the safety of these contrast agents,” he says.
Examined datasets and databases
Dr. McDonald’s retrospective study identified every patient who had a CT scan at Mayo Clinic in the last decade — more than 1 million scans. He compared the rates of kidney injury between patients who received contrast with those who did not. His findings revealed that intravenous contrast exposure was much safer than previously thought and not associated with higher rates of acute kidney injury, dialysis or death.

Dispelled long-held belief
“Our findings suggest that contrast-induced nephropathy is either extraordinarily rare or may not even exist at all,” says Dr. McDonald. “The risk of contrast nephropathy has been systematically inflated by poor research methodology of prior uncontrolled studies.” Dr. McDonald believes this is a case of misattribution. “CT scans are most often performed when patients are most acutely ill, and so it is no surprise that we might misattribute contrast as the offending agent when other causes of renal injury are present.”

Dr. McDonald’s research won the Radiological Society of North America’s 2013 Alexander R. Margulis Award for Scientific Excellence. The American College of Radiology is issuing clinical practice changes partially as a result of his research.

Dr. Kallmes says, “Bob’s efforts have called into question a concept that many people have taken for granted for decades and have generated great excitement throughout the radiology community. The high-level international recognition his work has received has never before been bestowed upon a trainee and underscores both the clinical significance of these findings and the phenomenal quality of Bob’s efforts as a physician-scientist.

“These findings have fundamentally changed clinical practice. Within Mayo we have increased the threshold of baseline creatinine for which we will administer contrast. Nationally this translates to millions of patients now being eligible to receive contrast who were previously denied due to fear of renal injury. Bob’s work has spurred academic and industry collaborations and NIH [National Institutes of Health] funding support. The research carried out by Bob and his colleagues is absolutely remarkable.”

Dr. McDonald says his efforts are all about what’s best for the patient. “Medical research plays a crucial role in patient care and can benefit millions of people,” he says. “Although our findings have shed new light on this clinical issue, further research is needed before we can say with absolute certainty that these agents are safe for every patient. Part of being a scientist is to always remain skeptical, even of your own work, to ensure research translates into the best possible patient care.”

Robert McDonald, M.D., Ph.D.
Fellow, Neuroradiology
Mayo School of Graduate Medical Education

- Fellowship: Neuroradiology, Mayo School of Graduate Medical Education
- Residency: Diagnostic Radiology and Clinician Investigator Training Program, Mayo School of Graduate Medical Education
- Medical School/Graduate: M.D.–Ph.D., Medical Scientist Training Program, Mayo Medical School/ Mayo Graduate School
- Undergraduate: University of Minnesota
patients feel toward this institution. I heard — and continue to hear — over and over again how grateful patients were for the unparalleled care they received. This was perhaps expected based on Mayo’s reputation, but I was even more impressed by the diligence and pride of each and every Mayo employee for dutifully carrying out their day’s work to deliver this very care.

How does Mayo Clinic influence your practice?
As a trainee, I feel that I am constantly reminded that the sky is the limit here. Mayo nurtures and encourages ideas from employees in all departments and at all levels of training. If a concept or hypothesis can contribute to patient care and medical knowledge, it is worth supporting.

In no small part, this experience has shaped my future goals and shown me that I would like to continue performing academic research and, one day, mentor trainees.

How do you contribute to the Mayo Clinic Alumni Association?
Having a trainee perspective is important.

Why did you decide to pursue medicine?
I decided to pursue medicine in college, around age 19. I was looking for a path that would provide me with the skills to help others, both here and abroad. From a young age, I enjoyed science. I also enjoyed engaging with people and developing meaningful relationships. I felt that medicine would provide me with the perfect balance of scientific challenge, intellectual stimulation and personal connection.

Why did you train at Mayo Clinic?
My parents [Susheela Bala, M.D. (PAIM ’87), and Kumar Bala, M.D. (GI ’87, HEPAT ’88)] completed their fellowship training at Mayo. Throughout my childhood, I heard stories about Mayo’s level of thoroughness, professional environment and dedication to helping people. I grew up watching my parents refer their patients here for care — sometimes for a checkup, other times for a third and final opinion. It was the health care center they trusted and, thus, the center I grew up trusting.

What was your initial impression of Mayo Clinic?
I was struck by the level of respect and loyalty that employees and
What do you do in your spare time?
I enjoy cooking, traveling and spending time with my husband, George [Saffouri, M.D., I ’15], who is in his final year of internal medicine residency.

What would people be surprised to know about you?
My parents trained here, and my mother was pregnant with me during her fellowship. Her friends from that time refer to me as “the Mayo baby.” I’m lucky to say that I was born at Methodist Hospital!

Scott Ross, D.O.
(PMR ’99, PAIN ’01)

Board Member
- Owner/Partner, Springs Rehabilitation, Colorado Springs, Colorado
- Medical Director Pain Management, Penrose-St. Francis Health Services
- Fellowship: Pain Management, Mayo School of Graduate Medical Education
- Residency: Physical Medicine and Rehabilitation, Mayo School of Graduate Medical Education
- Medical School: Kansas City University of Medicine and Biosciences, College of Osteopathic Medicine, Kansas City, Missouri
- Undergraduate: Park University, Parkville, Missouri
- Native of: Colorado Springs

Why did you train at Mayo Clinic?
The whole aura of Mayo Clinic — the history and long tradition of excellence in education, patient care and research — drew me to Rochester.

What was your initial impression of Mayo Clinic?
I expected it to be efficient and academically driven, but I was shocked at how friendly everyone was and how willing they were to share their knowledge. Very well-known attending physicians were approachable and warm. It was a collegial environment for a new resident, and it changed me. Now, when I have a medical student with me, I remember that example.

How does Mayo Clinic influence your practice?
Every time I see a patient, I remember that their needs are first and foremost. I try to make sure I embrace what I learned at Mayo Clinic — making sure I perform a thorough assessment, collaborate and include those in other disciplines when appropriate, and give the patient as much time as is needed. I have the Mayo brothers’ picture in my exam room. They remind me to take my time.

How do you contribute to the Mayo Clinic Alumni Association?
I’m inquisitive, supportive and thoughtful in decision-making, stewardship and guidance. I’m always willing to help and participate in board functions. I’ve hosted a couple of regional programs in Colorado Springs to engage fellow alumni.

What do you do in your spare time?
I spend time with my wife and daughters, including their athletic pursuits. I golf, ski and ride my horse. I’m on the board of several community nonprofit organizations.

What would people be surprised to know about you?
I have an interest in Russian literature. I collect watches. I became interested in watch collecting through one of my favorite mentors, Dr. Carl Chan (PMR ’85, S ’86).

Jerry Sayre, M.D.
(FM ’96)

Board Member,
Executive Committee
- Emeritus Physician, Departments of Family Medicine and Gynecology, Mayo Clinic in Florida
- Assistant Professor, Mayo Clinic College of Medicine
Why did you decide to pursue medicine?
Many physicians owe much if not all of our success to those physicians and educators who guided us in our early path into medicine. We can look back to our eighth-grade science teachers who opened our eyes to protozoans and to our college professors who challenged us to do and learn things we did not know. In medical school and residency, we had the opportunity to learn not only from our mentors but from our patients, who taught us about disease and about life.

How does Mayo Clinic influence your practice and teaching?
My tenure at Texas A&M medical school led me to Drs. Harvey Cassidy (FM ’92) and Leo Black (I ’65) at Mayo Clinic in Florida. At Mayo I learned that the needs of the patient do come first. It is a way of life, not just a motto on a slide.

I have had the joy of mentoring many of our residents to produce research projects resulting in international and national presentations and publications. The most recent and rewarding chapter of mentoring these young physicians has been as I meet them at national meetings and hear from them about their challenges and, occasionally, their appreciation for the time we spent together.

Burkhard Wippermann, M.D. (BIOM ’87)
Board Member
• Chief of Orthopaedics and Trauma, Helios Klinikum Hildesheim, Hildesheim, Germany; Professor
• Fellowship: Research Fellowship, Biomechanics, Mayo School of Graduate Medical Education

Why did you train at Mayo Clinic?
I received an award from the Rotary Foundation, and it was difficult at first to be admitted to an American medical school. My time at Mayo Medical School (Visiting Medical Clerkships) was sponsored by Peter Frohnert, M.D. (I ’66, NEPH ’68). Afterward, it appeared natural to apply for a research fellowship at Mayo Clinic.

What do you do in your spare time?
I play golf and am interested in sports cars.

What would people be surprised to know about you?
I drive a Harley-Davidson motorcycle.
Mayo Medical School recently received word that its expansion plan to establish branch campuses in Scottsdale, Arizona, and Jacksonville, Florida, has been endorsed by the Liaison Committee on Medical Education, the national accrediting body for medical education.

“This signifies an important step in our ability to deliver extraordinary medical education and diverse clinical experiences to our students across all campuses,” says Sherine Gabriel, M.D. (I ’86, RHEU ’88), former dean of Mayo Medical School. “Our goal is to transition Mayo Medical School to a national leader in transformative medical education. Not only are we training our students to be excellent physicians and scientists, but we also are equipping them with the tools to transform America’s ailing health care system.”

Fast facts about Mayo Medical School plans:
• The four-year campus at Mayo Clinic in Arizona is planned to open in 2017 with 50 students.
• A third- and fourth-year campus at Mayo Clinic in Florida is in development.
• Mayo Medical School is developing state-of-the-art online learning modules and working with Arizona State University (ASU) to incorporate the science of health care delivery across the medical school’s curriculum at each campus.
• Mayo Medical School students will be among the first in the nation to receive a certificate in the science of health care delivery. Students also will have the option to pursue a master’s degree in the science of health care delivery from ASU.
• Mayo Medical School is working with Mayo Clinic Health System to identify learning opportunities and clinical experiences in those health care sites.
• In 2013, Mayo Medical School was one of only 11 medical schools in the United States selected for the American Medical Association’s Accelerating Change in Medical Education initiative. This consortium of innovators is working with the AMA to pioneer and collectively accelerate cutting-edge changes in medical education.
Obituaries

Frank DeLand, M.D. (PATH ’56), died Feb. 27, 2015.


Marten Geitz, M.D. (OR ’65), died Nov. 29, 2014.


William O’Rourke, M.D. (ENT ’78), died March 29, 2015.


Irwin Schatz, M.D. (I ’61), died April 1, 2015.


Richard Wagoner, M.D. (I ’63), died April 26, 2015.

Complete obituaries and the Update section, with alumni and staff news, are available on the Mayo Clinic Alumni Association website, alumniassociation.mayo.edu/people/.
Mayo Clinic Alumni magazine is published quarterly and mailed free of charge to physicians, scientists and medical educators who studied and/or trained at Mayo Clinic, and to Mayo consulting staff. The magazine reports on Mayo Clinic alumni, staff and students, and informs readers about newsworthy activities throughout Mayo Clinic.

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Mayo Clinic is committed to creating and sustaining an environment that respects and supports diversity in staff and patient populations.
Plan to attend the Mayo Clinic Alumni Association 2016 International Meeting in Whistler, British Columbia, Canada. This will be the first time in more than 30 years that the international meeting has been held in North America.

Following the Mayo brothers’ tradition, this meeting combines focused learning on current topics in medicine and science with leisure time among like-minded colleagues and mentors, in settings that foster innovative thinking.

A 2010 Winter Olympics venue, Whistler has stunning year-round natural beauty. Activity abounds for all ages — from golf, hiking and mountain biking to spas, festivals and food from around the world.

Check the Alumni Association website for information about pre- and post-conference tours:
alumniassociation.mayo.edu