

Aequanimitas



A twice-yearly newsletter for current and former Johns Hopkins Medicine housestaff and friends

Fall 2016

Physician-Scientist Pathway Leader to Inspire Discovery

One Saturday during his Johns Hopkins Osler internal medicine training, Franco D'Alessio met Landon King, the pulmonary and critical care physician on call. The second-year resident asked King if he had any suggestions about how to spend his upcoming elective rotations.

D'Alessio, who attended medical school in Peru, mentioned that he was wavering between a career in clinical care or academia. "Landon invited me to try science to see if I liked it," he recalls.

King worked in the same lab as Nobel Prize-winning scientist Peter Agre, who studies aquaporin water channels. "It turned out to be very inspiring," says D'Alessio—and transformative.

After completing his Osler residency in 2004, D'Alessio joined the pulmonary and critical care fellowship program and spent the next four years doing research, often toiling 10 to 12 hours a day in the lab and publishing papers. Today, D'Alessio studies acute lung inflammation and has helped discover cells critical in repairing lung damage. But he also sees patients. In other words, he is a physician-scientist.

Now, thanks to a special new pathway, trainees who want to follow that career track will have an easier time finding the right mentors during their residency. Recognizing a national shortage of physician-scientists, Osler Medical Training Program Director Sanjay Desai, Department of Medicine Director Mark Anderson and others have helped to create a new physician-scientist pathway. They've tapped Robert Brodsky, director of the Division of Hematology, to lead it.

In his new role, Brodsky, who joined the faculty in 1997, aims to actively recruit and match trainees with mentors across disciplines. He will also seek ways to fast-track training, e.g., by carving out more lab time during the third year of residency.

Brodsky's research focuses on bone marrow failure,

↑ Advancing Cures

↑ R01 Grants
Publishing Studies

↑ Mentor Matchup
More Lab Time

↑ **NEW**
Physician-Scientist
Pathway

Though Robert Brodsky initially struggled with the slow pace of lab research, he says those hours of exploration "opened up new ways to understand disease." He hopes to ignite the same kind of enthusiasm in Osler residents for the path of the physician-scientist.

the complement system (proteins in the blood that enhance antibody response) and hemolytic anemia. He and his colleagues performed the first successful half-matched bone marrow transplant for a patient with sickle cell disease. This approach is now widely used to cure select patients with sickle

(Continued on page 2)

Sanjay's Section

The landscape of health care is changing—actually, transforming—our country. Some changes are exciting, such as the growing reach of high-tech resources to resource-limited settings. Other new approaches are noble but bring considerable uncertainty, including the emergence of quality measurements and value-based delivery and payment models. And some are discouraging, such as the diminishing numbers of trainees and junior faculty members pursuing careers in science.

To prepare our residents for these new realities, we launched the Pathways Program last year. Its goal is to provide sophisticated, immersive training in specific realms, including global health and patient safety and quality. This year, we have launched the physician-scientist pathway.

As we developed this program, we recognized the need for expert guidance in shaping the best experiences for residents in these pathways. We realized that one of the greatest assets we are privileged to have for this guidance is our community of expert, successful and dedicated alumni. To formalize this process, we created the Osler Advisory Board.

The board comprises 12 alumni from across the country who together bring diverse and expert insights to help create the best possible training experiences. In the same way a board advises a university, these Osler-trained physicians advise us on how best to achieve our goals. We are fortunate to have Mario Molina, CEO of Molina Healthcare and Thayer intern in 1985, to serve as chair of the board.

Year after year, we are deeply humbled and honored to have such a dedicated community of leaders join our alumni base. We are developing new and more effective ways to connect with each of you to keep you informed of our efforts and to seek your advice. We know that the only way we can fulfill our highest aspiration of developing the leaders who will shape the future of medicine is with your guidance and support. For that, we are most grateful.

Sanjay Desai, director
Osler Medical Training Program



Physician-Scientist Pathway (from page 1)

cell disease.

“Rob brings tremendous passion, experience and leadership to this role,” says Desai. “His own discovery of science during clinical training and his dedication and mentorship of countless trainees give him unique insight into how to build this program and nurture the thrill of discovery.”

Broadly defined, physician-scientists have earned an M.D.—alone or combined with other advanced degrees—and devote a substantial percentage of their time to biomedical research, including basic science and translational projects.

But the number of physicians who choose this career path is shrinking. Barriers to aspiring physician-scientists include major cuts in NIH funding, difficulties understanding grant applications, lower compensation as compared with clinical care, lack of diversity and poor work/life balance. The average age a physician-scientist receives his or her first independent research grant is 45. As a result, many who start out on this road opt out.

Yet most of the transformative advances in medicine come from physician-scientists, says Brodsky. He cites 2016 Lasker Award winners—Johns Hopkins geneticist Gregg Semenza and William Kaelin (Osler, 1983, and former ACS)—as examples. “It’s imperative that Johns Hopkins continues to lead in this area.”

“The Osler residency and Johns Hopkins are built on the promise of

“I was lucky to have been invited to work in a lab. But we need to identify more people to take advantage of such opportunities.”




—Franco D'Alessio
Johns Hopkins pulmonologist and physician-scientist

scientific advances in medicine,” says Anderson, “and we believe we should lead in strengthening this critical pipeline. It’s a good time to consider how to reconfigure the program so our trainees don’t waste any time finding mentors to nurture that interest. We want these trainees to remain here as fellows and/or faculty members.”

Establishing a physician-scientist pathway leader in the Department of Medicine is part of universitywide efforts to inspire independent research careers and mentorships in academic medicine.

For D'Alessio, this is welcome news. He hopes some new residents will be directed to his lab to help him study treatments. “My goal is to turn on cells to manipulate the lung system to repair damage and save lives,” says D'Alessio. “It will take years, and there are lots of challenges, but it’s also exciting.” ■

 Watch Robert Brodsky discuss the half-matched bone marrow treatment he developed: bit.ly/robbrodskyscldbmt

The Fraught Journey to Physician-Scientist

Rachel Damico arrived at the Johns Hopkins University School of Medicine in 2000, armed with an M.D./Ph.D. from the University of Pennsylvania and eager to advance her research in pulmonary hypertension, a type of high blood pressure that affects the lungs’ arteries. She worked long hours in the lab and published scores of articles. Still, it took five years for Damico to receive her first independent National Institutes of Health grant. By then, she was 45 and the mother of an 11-year-old daughter.

“The wait for a first grant can be so demoralizing,” says Damico, noting that she’s seen people change careers because of it. As a woman, Damico is among an underrepresented segment in the physician-scientist workforce. One reason is that those who enter an M.D./Ph.D. program (or an M.D. program with additional research training) must commit to at least seven years of graduate-level education. For women who want to have children, this can prove challenging in terms of the work/life balance.

Though Damico wishes the physician-scientist pathway at Johns Hopkins had come sooner, she applauds the new structure. “Having some kind of track system should help differentiate paths and nurture trainees,” she says, “rather than just being fortunate to have found a good mentor, as I was.”



Rachel Damico
says her passion for science helped her to persevere.

Beyond the Dome

Katrina Armstrong, chair of medicine and physician-in-chief, Department of Medicine, Massachusetts General Hospital

On a winter day in 1987, after wrapping up an interview at the Johns Hopkins University School of Medicine, Yale University undergrad Katrina Armstrong headed outside to catch a taxi to the train station. But with a blizzard underway, none were to be found. Suddenly, a car pulled up alongside her. The driver—who had just interviewed her—insisted on taking her to the station. A few days later, Armstrong received a package with the gloves she'd left behind in his car, along with a handwritten note.

That experience, recalls Armstrong, convinced her that Johns Hopkins is a place that fosters good will—and clinched her decision to accept a spot in the medical school. Four years later, the Alabama native matched in the Osler residency program and married her med school classmate Tom Randall, now a gynecologic oncologist in Boston. From 1995 to 1996, she served as Longcope assistant chief of staff, and made enduring friendships.

From the outset, Armstrong embraced academia and research. In 1996, she joined the University of Pennsylvania as a physician-scientist fellow in the Division of General Internal Medicine. She became a faculty member there in 1998 and was appointed chief of the division in 2008.

A world-renowned investigator in medical decision-making, quality of care, and cancer prevention and outcomes, Armstrong also served as associate director of the Abramson Cancer Center and co-director of the Robert Wood Johnson Clinical Scholars Program at Penn. In addition, she led the Penn Center for Innovation in Personalized Breast Cancer Screening.

In 2013, Armstrong was appointed chair of medicine and physician-in-chief at Massachusetts General Hospital. In 2014, she was elected to the Institute of Medicine. Armstrong and her husband live in Boston and have three children, ages 21, 18 and 15.

How has your Osler training experience influenced your career?

When I recruit house staff, I often tell them that their residency experiences will be the most formative of their lives. The Osler program certainly set the compass for who I am professionally. Learning how to be a great doctor brings so many lessons that are critical for leadership in academic medicine. Maybe most importantly, how really listening can help you walk in someone else's shoes and make a better plan of care. I learned early on that sometimes as a resident, that just means putting on your white coat, walking into the room and doing the best you can. Even if you don't have all the skills, you're all the patient has at that moment.

What stands out about your time in the residency training program?

Having David Hellmann as my program director: He is an incredible role model for the importance of the human part of patient interactions. The time I spent

working on the HIV inpatient service had a big impact also. Back then, the AIDS epidemic was devastating East Baltimore, but I worked with a team that inspired both meaning and joy—even humor. Increasingly, my leadership role involves enabling others to succeed, and I remember how many great mentors from the Osler service have been there for me every step of the way.

Your first day on the job at MGH was April 15, 2013—the same day as the Boston Marathon attacks. How did that tragedy affect you, especially with regard to your new role?

It enabled me to see MGH come together in an extraordinary way to respond to the need of the community—a remarkable performance, with each person doing anything they could, such as clearing the emergency room to make it possible for the bombing victims to receive the best possible care. Given what that response meant to the Boston community, it was



With all the new developments in medicine, says Katrina Armstrong, “we have an opportunity to give trainees a new slate to think about how to do things differently.”

so much better to have participated in the event than to have come after it.

What do you see as the most important skills to develop in new trainees?

As time goes on, we're understanding biology in a completely new way, using new tools and the internet. We have the opportunity to teach trainees new skills, but teaching them how to listen to patients will always be a mainstay.

What are some of your greatest challenges?

I'd say it boils down to recognizing what I don't know—including a whole new set of acronyms!—and trying to get real information about how to support faculty members and trainees to make a difference.

What do you love about your job?

Getting to work with young people at all stages on new ways to have an impact, and helping some of the most dedicated and talented people in the world pursue their dreams—all of which revolve around improving health care and reducing suffering. I also love working with some of the best leaders in academic medicine. Together we're taking on big challenges: bridging medical care and discovery, creating new models of care delivery, and transforming the diversity of the medical system and workforce. ■



NATIONAL HONORS: Doximity, a professional networking tool for physicians and health care professionals—aided by *U.S. News and World Report*—has ranked the Osler residency #1 in the country for internal medicine programs. **Learn more:** bit.ly/doximityresidencyrankings

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Visit bit.ly/osleralum.

PHOTO BY SHERIE FORNOFF



MEET THE NEW ASSISTANT CHIEFS OF STAFF:
From left, Shady Nakhla, Thayer; Cathy Handy, Barker;
Sarath Raju, Janeway; Catherine Simpson, Longcope

Support the Osler Fund for Scholarship

By investing in the future of our young doctors, we continue the legacy of William Osler to prepare and inspire the next generation of leaders. Your contribution makes it possible for current residents to enhance their training and provides educational opportunities that might not otherwise be possible.

If you are interested in supporting our housestaff, contact Carly Frank at 410-955-9893 or cfrank23@jhmi.edu. Thank you for your continued support. To make a gift online, please visit our website at bit.ly/oslerfundforscholarship.

Class Notes

Department of Medicine Annual Awards 2016

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| Part-Time Faculty Member
Eric Seifter | American College of Physicians Award
Lindsey Phillips |
| Full-Time Faculty Member
Reza Manesh | Frank L. Coulson Jr. Award
John Miller and Ben Oldfield |
| Ambulatory Preceptor Award
Charles Locke | Norman and Mary Stewart Memorial Award
Shannon Walker |
| Fellow Award
Alan Tieu | Norman Anderson, M.D. Memorial Award (as voted by faculty and nursing)
Sandy Zaeh |
| Basic Student Teaching Award—Intern
Karlo Perica | Priya Palagummi Memorial Award
Erin Parry |
| Basic Student Teaching Award—Senior Resident
Hussein Rahim | Daniel Baker Award (as voted by faculty and nursing)
Brett Wanamaker |
| Alpha Omega Alpha Honor Medical Society
Ben Nacev | |

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in Baltimore

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