How I Started My Career in Cardiology
A Conversation with Dr. Joseph Loscalzo
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Joseph Loscalzo, MD, PhD

For this installment of this feature, Dr. Kiran Musunuru, member of the Young Clinicians & Investigators Committee of the Council on Clinical Cardiology, sat down with Joseph Loscalzo, MD, PhD, at Brigham and Women’s Hospital to discuss his perspective on starting a career as an academic cardiologist and a basic science researcher.

Dr. Loscalzo is the Hersey Professor of the Theory and Practice of Medicine at Harvard Medical School, chairman of the Department of Medicine and physician-in-chief at Brigham and Women’s Hospital in Boston, Mass. He is also a senior editor of Harrison’s Principles of Internal Medicine, a member of the Advisory Council of the National Heart, Lung, and Blood Institute, and editor-in-chief of the journal Circulation. He has been the recipient of numerous awards, including the AHA Distinguished Scientist Award in 2004.

KM: When did you decide on a career in cardiology, and what influenced your decision?

JL: I had a clue that I wanted to work in cardiology when I was a student at University of Pennsylvania — although I didn’t make the firm decision until my junior residency here [at Brigham and Women’s Hospital]. At Penn, I did my PhD thesis in a biochemistry laboratory, working on skeletal muscle. I studied changes in the tertiary structure of thin filament proteins during various phases of the contractile cycle. So I always had an interest in muscle. And that research experience was complemented clinically during medical school by my exposure to Joe Perloff, who then was the chief of cardiology at Penn. He was (and still is) just a spectacular teacher. What I found most enlightening in watching him review a case was his clarity of thinking, the logic with which he approached questions and problems, his incredible scholarship—both within medicine as well as beyond medicine, and the rigor with which he addressed issues. During a cardiology elective as a student, we would rotate in our rounds with Dr. Perloff at Children’s Hospital or the Hospital of the University of Pennsylvania. The fellows would present only a fragment of the case to him, showing him an electrocardiogram, or a ventriculogram, or a bit of history, or a description of a murmur, and he would invariably reconstruct the case quite elegantly. Since that time, he has been a role model to me as a clinician.

I found the logic of the exercise of dissecting a cardiovascular case very gratifying, and after starting my training here [at Brigham and Women’s Hospital], was even more convinced of the correctness of that career direction for me. I ultimately chose to become a cardiologist. I did so mostly thinking about disease. It wasn't until de Wood's observations in 1980 that the importance of thrombosis in coronary disease. It wasn’t until de Wood’s observations in 1980 that the importance of thrombosis in coronary syndromes was widely appreciated. Up until that time, progressive stenosis was the rule, with vasospasm on top of a fixed stenosis believed to precipitate acute infarction—although if you read the earliest textbooks of cardiology in this country (from the 1940s) you will note that acute myocardial infarction is described as acute coronary thrombosis.

It was a little risky for someone at this early a stage of his career to choose to...
work in an area that didn’t necessarily have clear relevance to mainstream cardiology. With the publication of de Wood's paper, and the development of fibrinolysis as a potential therapeutic strategy using the newly synthesized recombinant tissue plasminogen activator, the field of thrombosis as it relates to vascular disease expanded considerably in relevance to the discipline. For someone of my training and interests, there was a place in mainstream cardiology after all.

**KM:** How would you advise a fellow-in-training to go about finding a good mentor?

**JL:** I think there are three or four qualities that are important in seeking a good mentor. It is important to know whom the potential mentor has trained and explore with former trainees what it was like to work with that mentor, what they learned from him or her, what the strengths and weaknesses of the relationship were, and how the relationship that he or she had with trainees evolved over time—because mentors grow as well. I am not the same kind of mentor now as I was as a newly minted assistant professor, I can assure you. So that’s one key feature.

The second is what kind of vision does the mentor have, which will be important for what you hope to achieve in the relationship. There are some mentors from whom you might like to learn because they have a whole new way of thinking about things or a whole new series of technologies that you need to learn. This is a very nuts-and-bolts kind of mentoring relationship—it is also the easiest one with which to deal. There is another kind of relationship that is probably more important for someone who has a bit of research experience: identifying a mentor who has a vision. In rich academic environments such as Boston, there are always people around who can help you figure out how to do a certain experiment or how to utilize a new technology to your advantage. So it’s really a forest vs. trees question—everybody is an arborist, but those people who are real foresters are harder to come by. It is important to have a mentor who has a clear sense of where the field is going and in which direction you should apply your attention and efforts.

The third quality, which links to the first quality, is making sure the mentor is someone who will advocate for you. I don’t just mean writing letters for you or helping you write grants, but someone who will introduce you personally to people who work in the field so they will learn to associate a name with a face and learn about what you are doing, thereby providing you access to a pool of intellects in a discipline. This is a very important element in the mentoring relationship.

**KM:** How have you managed to balance administrative responsibilities, clinical duties, continuing an active research career, and serving as editor of a major medical journal, and how would you advise people starting their careers to work towards achieving that kind of balance?

**JL:** There are probably three or four key answers to that question. One is that you have to be very organized. If you wish to pursue this kind of multifaceted professional life, having this varied a career and a disorganized phenotype are completely incompatible.

Second — and this is not in order of importance — you have to surround yourself with bright people who are not afraid to tell you what they think, but who have a similar set of academic values as you do. These individuals can then represent your views well if they are serving in some surrogate capacity for you — as a vice chair of a department or an associate laboratory director, for example. This is a really important point. There are people who take these kinds of jobs who never are able to let go, to divert attention and control to other colleagues. If you are a micromanager, you will, therefore, also fail at handling a multifaceted career — you have to trust people to represent you well, and you have to pick people well who can do so.

Another key to juggling all these different kinds of jobs is that you have to make decisions efficiently and effectively, but you also need to know how important it sometimes is to let time pass. Making too rapid a decision can be equally problematic as making a decision too slowly. Discerning the difference takes time and practice; it is much like triaging patients in the emergency department. Not everyone’s emergency is truly an emergency, but it takes time, judgment and experience to figure that out.

I think a final key to doing these kinds of jobs well is a desire to “propagate the species.” You should want to help cultivate the careers of people who think like you do, have the values you have, have the vision you have, but ultimately do so better than you do.

**KM:** If you had to give one piece of advice to a fellow-in-training who is thinking about a career as an investigator in cardiology, what would you say?

**JL:** Be tenacious, be committed and don’t be discouraged.
New Early Career Web Portal Debuts on AHA Web Site
Kiran Musunuru, MD, PhD

The Young Clinicians & Investigators Committee of the Clinical Cardiology Council, in collaboration with early career committees of other Councils, has been hard at work in putting together a new Early Career Web Portal devoted to the needs of all fellows-in-training and early career members of the American Heart Association.

The Web Portal, which debuted on the AHA Web site earlier this year and can be directly accessed at americanheart.org/earlycareer, centralizes all the various Web-based resources available for early career members from each of the Councils. Resources are grouped into three sections: Career, Education and Membership.

The Career section comprises a wealth of information related to career choice, job advice, choosing a research mentor, making the fellow-to-faculty transition, applying for research funding, presenting talks at conferences, and competitions for Young Investigator Awards and travel awards from the various Councils. Information on all of the research grants offered annually by the AHA is available, as well as links to non-AHA grant opportunities specifically aimed at individuals at the fellow-in-training and early career levels. An ongoing series of interviews with senior investigator/mentors in cardiology is posted here as well. Supporting the cardiovascular research enterprise for generations to come — by helping today’s young investigators successfully navigate the difficult transition from trainee to independent researcher — is a major priority for the AHA and the Clinical Cardiology Council, particularly in the present-day economic circumstances.

The Education section has didactic resources that draw on the expertise of the AHA membership. Here one can access the AHA Learning Library, clinical guidelines, slidesets on various topics in cardiology, a primer on biostatistics, and presentations from past events such as the annual How to Become a Cardiovascular Investigator symposium (co-sponsored by the Clinical Cardiology Council and the ACC) and the Early Career/Fellow-in-Training Event at the AHA Scientific Sessions.

The future of the AHA depends on recruiting new blood into the organization and encouraging the lifelong involvement of young members. By offering information on how to become involved in AHA activities and the many benefits of membership, the Membership section provides an opportunity to encourage fellows-in-training and early career individuals to become members of the AHA and the various Councils.

Future plans for the Web Portal include posting of videos of presentations from the Young Investigator Award competitions of past AHA conferences and the annual Early Career/Fellow-in-Training Event, as well as social networking opportunities for young AHA members.

Many thanks to the AHA staff who meticulously combed the AHA Web site and Council pages for relevant materials, as well as to the members of the early career committees who have contributed items to the Web Portal!

If you have suggestions for additional resources that should be added to the Web Portal, please notify Kiran Musunuru at kiranmusunuru@gmail.com or Kelly Peasley at kelly.peasley@heart.org. We welcome your contributions!

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