



Forging New Paths

Dr. Ryan Rhome is an assistant professor of radiation oncology with a passion for promoting mentorship and data-driven, patient-centric medical decision making. He brings with him an extensive research background in liver, gastrointestinal, breast, and brain and spinal cord tumors.

BY CHRISTINA HUANG

Christina Huang: Thank you for taking the time to sit down with us for this Insight Spotlight Interview. To get us started, please tell us a little about your educational background and your career thus far.

Ryan Rhome: Well, I went to college at the University of Georgia, in the south, and then I entered the MD-PhD program at the Medical University of South Carolina, where I did my PhD in biochemistry and graduated in 2012. Then I went to residency at Mount Sinai in New York City and graduated in 2017. I have been at Indiana University since then.

H: Can you tell me what guided you towards academic medicine?

R: When I was in college, I was fortunate enough to find a very proactive advisor who paired me with a senior geneticist. I worked in her lab starting late in my sophomore year. Her goal for students in her lab was to have a longitudinal experience throughout their college years. I was able to stay in the same lab with the same project. Prior to that, I was just considering clinical medicine alone, but with such an early and positive research experience, I became interested in the hybrid MD-PhD programs to marry the two. With any situation where you have research built into the curriculum or the training, you tend to gravitate towards more academic centers for employment, places that have not just the will but the substrate to do that research.

H: Do you have any advice for medical students on how to get started with research?

R: Yeah, that's a great question and can be quite a diverse and complicated answer. I would say that one way that seems very obvious is to talk to talk to upper classmen—always a good idea in general—for networking and understanding experiences. You can find out about different types of research experiences, ones that are more positive and ones that didn't work out the way they wanted. During your first couple years of medical school, often your lecturers researchers themselves and often will try relate some of their research to what you are learning in the classroom. If you find something interesting, usually they are very happy to have someone stay after class and talk about their research. Sometimes you can do a tour or a rotation in their lab just to see how it feels. Try to get as many types of research experiences as you can and even if it's just on a rotational basis, you can find what clicks with you and what your skillset is best suited for.

H: You make a good point about asking lecturers about their research. In the first two years of medical school, we hardly get any clinical exposure, so it's hard to know what we're interested in. What advice would you give to medical students about picking a specialty?

R: This is obviously a very hot topic in medicine. Everyone's trying to do this from day one. I would say that the first thing is to keep an open mind—seeing the subjects that you come across as potential careers for you. I think that dropping in on interest groups, even if you don't become a part of the group, is really helpful. In the end, your third year of medical school is where you see the reality, and there are definitely things that you can find yourself interested in on paper that may not translate to that reality. And also, it goes the other way. Things in practice can seem a lot more interesting than your experience in a lecture hall.

Just try not to discount anything.

Also, make connections with people who are a few years ahead of you in class and pick their brains about their experiences. That was one advantage of being in the MD-PhD program, since my original classmates went on to their third and fourth years, then residency before I even got to that point. I was able to ask about their experiences in the hospital and on the residency trail. It's fine to take time to make these decisions. It's even fine to take extra time. If you need to take an extra year, as long as you make it useful and productive, it can be helpful. That year on the timeline of your career is going to be a blip. Don't be afraid to do that kind of thing.

H: How did you get started in mentorship and what would you say to medical students about how to find the right mentor?

R: I wanted to model my mentorship ethos after the people who mentored me. My college advisor was the first person that really guided me down a path. They were really careful to attune their recommendations and experiences to me. So just get to know the person. Get to know what they like, what they're strong in, what that person's really interested in doing, and where they really want to guide their own careers. The best productive relationship between a mentor and a mentee is something that's mutually beneficial. I could give a particular project to anybody and would get variable results on both sides because it just might not be a good fit. But if you really get to know that person, either in clinic or working with them in a lab setting, that's a really good way to have a personalized experience because one size does not fit all. Also, have the willingness to—I don't want to say be wrong—but to go down a path that won't be right for you. It's important to take introspective stock of what your experience was and what you want out of the next one. Each time, you learn a little bit more and finally you get to where you fit. That's how I did it as a mentee, so I try to keep that side in mind as a mentor. It's an evolving process.

H: You mentioned not being afraid of going down the wrong path. Can you give me an example of when you thought you were going to do something and then completed changed your mind?

R: Yeah, I do. My PhD is in biochemistry. The things I was most interested in my first two years of medical school, on paper, were oncology and infectious disease. I picked a lab that was a largely an infectious disease lab that was in an oncology focused department. During that time, I did some clinical shadowing and I found out that the infectious disease side was not that good of a fit for my personality but oncology was. The focus of my PhD thesis is more infectious disease. That's not the way I took my career, and it's not the way that I took my current research. That was a little bit of a divergent pathway, but the fundamentals of both the basic lab work and research were still there.

I think people are just so afraid of it being right and perfect from the start. I understand that, and obviously in an ideal situation you would not waste a second of your time doing anything else. Some of my favorite experiences in medical school were things I didn't think I would like but have still been extremely valuable. For example, I still use lessons I learned from my psychiatry rotation when I'm counseling patients. There are still things to learn from the fields you are not going to go into.

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