Title
“A New Path for OSU Pharmacy”

Date
September 7, 2015

Location
Collaborative Life Sciences Building, Portland, Oregon.

Summary
In the interview, McGregor discusses her upbringing as the daughter of Indian immigrants, the roots of her early interest in science, and her decision to attend Oregon State University. From there, she shares her memories of her early impressions of the university, her extracurricular involvement in the OSU Marching Band and Residence Hall Association, and her academic progression both as a Microbiology major and in pursuit of her second bachelor's degree in International Studies. She likewise describes the year that she spent studying abroad in Germany and reflects upon her involvement in the University Honors College during its earliest years. Her discussion of her undergraduate experience is rounded out with the sharing of further details of her honors thesis, campus climate in the late 1990s, and her engagement with Corvallis while a student.

From there, McGregor turns her attention to her doctoral candidacy, commenting on the work that she conducted while in the Epidemiology program at the University of Maryland - Baltimore; noting the adjustments required by her location to Baltimore from Oregon; reflecting on her earliest experiences with teaching; and providing an overview of her post-doctoral year at the Center for Disease Control and Prevention.

The remainder of the session is devoted to McGregor's years as a faculty member in the OSU College of Pharmacy. In this, she describes the circumstances by which she returned to her alma mater and began settling in as a new faculty member. McGregor then outlines the major themes of her research program, including the improvement of antibiotic utilization to optimize patient care; the imperative to limit the spread of antibiotic resistance; and further study of patient care during transitions between healthcare settings. She also discusses her level of concern about the future of antibiotic resistance.

As the interview nears its conclusion, McGregor shares her perspective on the growth of the health sciences campus on Portland's South Waterfront, and speaks to the ways in which the Collaborative Life Sciences Building and the Portland location have impacted her work as well as learning opportunities for OSU Pharmacy students. The session winds up with McGregor's memories of being on the tenure track; notes on balancing work and family; and thoughts on the forward progression of the College of Pharmacy and, more broadly, OSU itself.

Interviewee
Jessina McGregor

Interviewer
Chris Petersen

Website
http://scarc.library.oregonstate.edu/oh150/mcgregor/
Transcript

Chris Petersen: Okay, today is September 7th, 2016 and we are in Portland at the Collaborative Life Sciences Building on the South Waterfront. And we are with Jessina McGregor, who is a faculty member in the OSU College of Pharmacy and also an alum of OSU, and we will talk to her a good deal about her experiences as a student and as a faculty member with Oregon State. But I'd like to begin by developing a bit of a biographical sketch of your life prior to OSU, so I'll start by asking you where you were born.

Jessina McGregor: Milwaukie, Oregon.

CP: And is that where you were raised?

JM: Gladstone, Oregon. Very close by.

CP: Can you tell me a bit about your family background?

JM: So my family is from India. My parents moved here, well my dad moved here first in the '60s and he had already had a physics degree from India, but then he got an engineering degree from the University of Portland. And he went back and married my mom; it was an arranged marriage, which, an arranged marriage in the slightly more modern sense where they do have some choice, but they got married and then she had to wait about a year for visa reasons before she could come and join him here.

CP: Can you tell me a bit about your parents' experience as immigrants?

JM: Back then, there wasn't this good degree transfer. So my mom had been studying botany but her education wasn't transferrable here. My dad's physics degree wasn't really transferable which is why he got the engineering degree as well. I think they were some of our first family to come over; one of my dad's nephews – my dad is the youngest of nine, so a lot of my dad's nephews I call "uncle" because they're as old as my dad or older – so one of his nephews, who I call uncle, moved over at the same time, so we had a little cohort of our family that was sort of developing in the area.

My family is from Kerala, which is a part of India which is actually predominantly Catholic. And there were some other Indians in the Oregon area as well but there wasn't as many of us from that area where we're not practicing Hinduism, we're practicing Catholicism. And that religion change also means a lot of cultural differences within India. When I was younger we tried to connect with some of the other Indian groups and we did with some people, but because of the religious differences, that led to a lot of other cultural differences. We ended up more hanging out with cousins and family that grew up in this area too. So the cohort kind of grew.

I had one younger brother. Three of my dad's nephews ended up moving to the area. They all married and had kids here and I had all their cousins that I grew up with at that time. And there were some other close family friends that ended up moving here too, so we had quite the large group of family that grew up by there, in the Portland area.

CP: The Catholicism piece is interesting. Were there components of what Americans would typically associate with Indian culture that were important to your household growing up? Food or...?

JM: I grew up eating Indian food, which actually, when I did start going to OSU and had to eat dining hall food, that was a little bit of a difference. I wasn't used to American steamed and boiled things with just salt. We ate Indian food predominantly. It wasn't until high school really that I think that we started eating, at home, more other foods. My dad grew up relatively poor so he ate a lot of rice as a child, but that just led him to like rice a lot as an adult, so we just had to have rice with every meal. I think culturally, that as people learned more about India locally, they learned more about the Hindu parts of India. I think it's a little bit that they had to learn that not all of India is like that though. Obviously, the majority is Hindu.

CP: What was Gladstone like growing up?

JM: I tell my daughter this too because she complains that nobody looks like her at her school, but the only other Indian person for the vast majority of my education in school was my brother. It was pretty white. As we got into high school,
there was a little bit more diversity but for the large portion of time that I went to school it was not very diverse. We brought the diversity.

CP: What do you remember being interested in growing up?

JM: Different things at different stages, I suppose. For the longest time I wanted to be a veterinarian actually. I was always interested in animals. And even when I started at OSU, I started out wanting to go to veterinary school, but that just sort of evolved over time as I got there. I think probably from middle school on I had a strong interest in science.

[0:05:13]

CP: Was the entre to that through this interest from being a veterinarian? Or did that come from other angles as well?

JM: I'm not sure that one necessarily fed the other, but they were both just parallel interests. I liked animals, but of course didn't have a lot of pets. We had hamsters and we ended up having a cat later on, but I had an interest in it. And then the science, I'm not sure, I guess my mom had a little bit of science background; my dad had the engineering background and science background. I think it was just sort of what I grew up with.

CP: So to the extent that you had scientific mentors as a girl, it was your parents probably?

JM: Yeah, I think to a large part. I remember my dad teaching me long division and things like that early, exposing me to that kind of thing. I don't know if you've had any experience with engineers, but engineers like to draw diagrams and explain things, so I definitely had that growing up. Ask my dad a question about something and there was a drawing that goes with it.

CP: What was school like for you?

JM: High school or...?

CP: Before college.

JM: It was fine. Gladstone was a pretty small school district, so you knew most of the people that were in your cohort. I guess it was fine. I had a pleasant experience, I suppose. Nothing traumatic or anything. I had several groups of close friends, some of which I'm still in contact with. A few that I'm very close with still, so that's nice. Some of them, one in particular who lives close by, has children about the same age as my kids, so it's nice. In high school I did band and languages.

CP: Do I assume correctly you were a good student?

JM: Yeah, that's important to Indians too. It's not really acceptable in Indian culture to not be a good student.

CP: So there was probably an expectation of going to college from an early age?

JM: Yeah. I don't know that that was ever a choice. Not that it was ever that I was told I have to, but it was sort of, you just grew up knowing that's where you're going.

CP: So my understanding is that you arrived at OSU in '96, is that correct?

JM: Yes.

CP: How did you choose Oregon State?

JM: I applied to several schools. Now it's hard to remember every one that I applied to – places that had science programs. I got a scholarship at OSU and some other places too, and my parents strongly suggested I go someplace that had a scholarship and I wouldn't have to take out loans because, knowing that I was planning on doing more education after, that that was going to be the good financial choice. Which at the time, I argued with them because there were other
places I wanted to go as well, but it ended up being the right decision. Not only did I not have to take out student loans for undergrad, but I also met my husband at OSU, so a good decision.

CP: What do you remember about your early impression of the university and of Corvallis?

JM: I think it was called START, or I'm not sure if it was called something else then, but the early orientation program. When I came down then, the Honors College was new and I met Joe Hendricks who was at the time the dean of the Honors College when I came down for the START program. And they were still at that point trying to recruit students into the Honors College because they hadn't had as much applicants and as much attention drawn to the program at that point. So I met him at that point in time and applied to the Honors College then, and I remember Joe joking and being very lively and talking about the Honors College program.

I also did marching band my first year at OSU, which isn't just an activity, it's almost like a lifestyle. You spend so much time practicing, you're with that cohort of people for the entire fall. You have to come in early and start practicing because football season starts before school starts. And so you spend a lot of time with that cohort. You're up early in the morning practicing, you travel with them. For the first part of my OSU career I was pretty much tied to these friends and this cohort of band people because that was what I was doing all the time.

CP: What instrument did you play?

JM: Flute.

CP: Can you tell me more? Were there memorable experiences from that year in the marching band? It was a football team that wasn't very good.

JM: Yeah, I had played flute in high school, so I had done pep band and played in band before and I was used to not always having a very good team. But it was fun. It was engaging. You know, coming from Gladstone, it was a much larger band and I'd never done marching band before where we had to do formations and there was choreography and you had to not only memorize your music but memorize your steps. I remember that year, that September was particularly hot and going out on then Parker Field, being in your uniform out there, it was deathly hot and trying to march out there and play your music and do everything. But by sections, like the flutes and the drums, everybody was very close knit. It was nice when you're coming into college at first to have this close knit group that you get to bond with right away and have these friends that you get right away.

CP: Tell me a bit about your academic progression at Oregon State. You mentioned an interest in vet med, did you start out in that program?

JM: Yeah, so I started out in a biology major with the pre-vet option. I don't know if that's the same way it's organized now, but at least then, pre-vet was an option, kind of like pre-med. So I started out on that path but I think that... I feel like nowadays people have a broader understanding. At that point in time, I did not know how many different science majors there were that I could actually pick from. You know about biology, so that's kind of where I started at. I have cousins now that are already interested in neuroscience and different things, things that when I was in high school I didn't know you could pick all those different choices as a major. So I came in in biology and for most science majors the first year is pretty much the same anyway.

But as I kind of got to OSU and learned about the different major options and took different courses, I bounced around in the sciences a little bit. I then changed to biochemistry/biophysics and I learned more about veterinary school and the veterinary programs and things. I was not interested in large animal medicine, which is what OSU's veterinary science program is focused on. And for what I was advised at the time, it's incredibly hard to get into a veterinary school in another state if you're in a state with a veterinary program. There's fewer vet schools than med schools, and so veterinary schools are pretty competitive to get into, and to get into an out of state program when you have your own state program is apparently hard. And so I kind of saw the writing on the wall that if I was going to go to OSU I'd probably be focused on large animal medicine, which is not what I wanted to do. I wanted to do small animal medicine or research.
And so I actually first switched to pre-med, and then I ended up dropping pre-med and just focusing on the research side. I'm not exactly sure how and when things lined up, but I switched from biochemistry/biophysics. I stayed in that degree for a couple of years, and then I studied abroad in Germany and I was doing an international degree at the same time, and when I came back I decided to switch my degree to microbiology.

**CP:** Were there professors that made an impact on you?

**JM:** Definitely once I got to microbiology. Once I got to microbiology and I was at that point where I was sort of an upperclassman and I then started working more closely with faculty, there was more involvement. I worked in Stephen Giovannoni's lab to do my undergraduate thesis work, so that definitely had a huge impact with sort of my first real experience with research. Not only just the research I did, but how a team works together and how a lab works and sort of the world of funding and publications and all the ancillary pieces. I think when you're new, you think of research and you think of the research question and the excitement, but you don't think of all the infrastructure about it, so that was a good introduction to that.

The microbiology program, I know, has changed a little bit in the structure of the department since I was there, but it was nice in that it was a smaller degree program, there wasn't as many students, so a good chunk of the students who were enrolled in the program worked in labs and kind of knew each other. You knew the faculty, the upper-division courses were relatively small, so we had lots of one-on-one time with faculty, which was great.

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**CP:** A name that comes up with some frequency, at least for pre-med majors, is Kevin Ahern. Did you have a class with him?

**JM:** I did have classes with him when I was in biochemistry. I think I had him for a little period of time as my adviser as well. He is very supportive and energetic and engaging, him and his wife actually. They're both heavily involved in the Honors College as well, so I still see them from time to time through Honors College events. They're great. I think also, it's nice to see women role models in science too. I had a course with Janine Trempy who is obviously still at OSU and I always felt very engaged by her courses as well.

**CP:** What prompted you to pursue the international studies degree at the same time?

**JM:** So I had studied German in high school and when I came to OSU I continued on taking German coursework. I enjoyed doing other languages. I had always kind of hoped that I would have time to do more than just German, but you know science coursework takes up a lot of time and then it's hard to learn other ones at the same time. But I wanted to do more German.

There was the option of either doing a German major or a German minor, and then there was this option of the international degree program. I knew I wanted to study aboard; I didn't have that opportunity as a high school student. And I knew I was already doing a thesis for the Honors College and so that wasn't a roadblock, because I was already doing a thesis and they said I could fulfill, meet the requirements with a single thesis project, and not two. So it seemed like a good fit at the time. Andrea Herling, who, at the time, was directing that program, was also a really positive, motivating, energetic force.

**CP:** Can you tell me about your study abroad experience?

**JM:** There's a Baden-Württemberg exchange program; I don't know if it still exists or not. Baden-Württemberg is a state in southwest Germany. OSU, along with other Oregon state programs, had an exchange program and you would go over there and you would spend the first month in Tübingen and all the students would spend that first month there doing more language intensive work. And then you'd go off to different cities and different universities. I went to Freiburg and spent the rest of the year in Freiburg in Germany. I took both classes that were for exchange students, German culture classes, as well as classes with German students that were science classes and things.

And then I actually got to take some other language classes. I took a Latin class and an Italian class, just for fun. It was enjoyable. I lived in a housing facility that was for students and it had Germans as well as it had – I was the only
American – but it had a Korean, it had Italian, it had Swiss, just a lot of variety. It was a lot of fun to get to, not just learn about German culture but also to learn about those other cultures as well. We would have nights where everybody would take turns cooking dinners from whatever you ate at home, share your humble cuisine with everyone else.

CP: This was an entire year?

JM: Mmm-hmm.

CP: Wow. What was it like to come back?

JM: My spelling got way worse. [laughs] And it's stayed that way. I feel like when you learn another language you learn to spell in another language and then it doesn't transfer back to English. And my spelling has never been the same. It was good coming back. It wasn't my first time going abroad, I'd been to India before to visit family. It was my first time going abroad to a more developed country. It's one thing coming back, having been gone. Either you miss some time with your friends and your cohort and you're in a different place now. It took me five years to finish my undergraduate degree at OSU because I was gone for a year and was doing two degree programs. So you're just a little bit offset from everyone else when you come back.

CP: Tell me about the Honors College. You were a member of the second cohort in the history of the Honors College.

JM: The Honors College was a huge part of my undergraduate experience. I took all my science coursework, whenever possible, through the Honors College. I hung out in the SLUG, the computer lab that was in the basement of Stag, a lot. I met my husband through the Honors College. A lot of my close friends I still see today, through the Honors College as well. It was a huge part of both my academic and social life at OSU. We had lots of social activities and things like camping trips and rafting trips and Sunriver trips.

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CP: It was a fairly humble operation back then.

JM: Yeah, it was. It was a small group, but then you got to know more people, everyone just kind of hung out on the couches and studied and did things together. It was maybe a bit more low-key, I think, than it is today. They have now moved into their new building at OSU, and we had the reunion last year and my husband and a close friend of ours were two of the people that helped organize the reunion. When we were there, we went in with Kevin Stoller and we went and toured the building and it is an entirely different world. Before, we were in the basement of Stag and had these old ragged hand-me-down couches and these old computers and there was probably asbestos in the ceilings. And now they are, they've got lots of windows and new computers and great views and these really exciting new classroom spaces.

CP: Yeah, it was basically one office and one classroom back then too.

JM: Yeah.

CP: What was your thesis project? You've referred to it in a couple of different ways. What did you do?

JM: In Dr. Giovannoni’s lab they were doing a lot of work with deep-sea oligotrophs, so organisms that live in low-nutrient environments. They'd sample off the Oregon Coast, they'd take samples of ocean water and they'd go to different places around the world looking for these oligotrophs. The work I was doing was trying to, basically, discover a new organism, which sounds very exciting but is a lot of work for maybe a little bit of reward, right? We were trying to isolate out a strain of organism that we thought might have been a newer organism; didn't have as much luck with that but it was still interesting to learn all of the techniques and to go through the process.

And to fulfill the part for the international degree program, part of my thesis was also exploring what's the process of discovering and being able to name and identify a new organism and the history behind having done that. So part of my thesis was writing up the procedures we went through trying to isolate this new organism and part of it was the history of identifying and naming the bacterial species.
CP: Something that we're trying to do with this project with the alumni we speak to is try to capture a sense of the culture and the standing of the university while they were there. You were there in the shadow of Measure 5 when the university was at something of a down point. What do you remember about OSU from that time period?

JM: I guess, you know, when you're in it and you're enjoying yourself, it's hard to say anything negative. Having probably, the enrollment numbers were probably half of what they are now, it was staggeringly different. Coming from a small school, it still felt large to me, and I think had it been larger it would have been easier to get lost. I think having the small microbiology group and the small Honors College group really helped me to still feel like I had a home and like I had a place to develop. I never felt like I lacked anything because OSU was in that spot in its history. I think I still had ample opportunities to grow and develop and to socialize.

CP: Did you have a job at OSU?

JM: I never worked off campus but I had different positions that were sort of leadership jobs. I think I worked in SLUG at the front desk at some point, like I think many Honors College students did. But I also, I was involved in, what do they call it now? The leadership group for the dorms basically, the Residence Hall Association leadership group. And so in my sophomore year I was one of two vice presidents for the Residence Hall Association, which wasn't a normal paid job, but it did pay for my room and board, which is a huge chunk of money. But that involved doing planning and activities and things for the residence hall groups. And then after that, I did some paid lab work and eventually transitioned to just doing the lab work for thesis credit.

CP: Did you have a strong experience in Corvallis at all? Did you get off campus and experience the town much?

JM: I met my husband-to-be my freshman year. My neighbor in the dorms had known him previously, so I met him pretty early on, maybe even before the first day of classes. I was running for office in the dorms and I met him when my whole floor of people was trying to make posters for me. And then after, I spent some time with him, and then when marching band got out I was able to spend time with other people who weren't in band and I started hanging out with him more. We were friends for about a year and then started dating. But he was from Corvallis. And so, from that point on, I got off campus quite a bit because he was from Corvallis.

CP: Was there anything that struck you about the town? Any particular hang outs?

JM: We really liked Woodstock's and Suds & Suds. My name is on the wall up there. They have this little system where if you drink all the beers they have on tap you get your name on the wall. A couple of friends of mine, a few of us, and the guys thought they were going to get their names on the wall first. But the girls decided we would sneak out in the evenings and go over there and drink so we could get through our list and get our names on the wall before our now spouses. Our names are above their names. [laughs]

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CP: Well, you finished up in 2001. At that point, had you established a sense of what you wanted to do?

JM: My Ph.D. is in epidemiology, which is something that, of course, in high school I had no clue even existed or knew what it was. But through my microbiology coursework, I got exposed to epidemiology. It probably wasn't until my last two years at OSU that I had found my interest there, and then I applied for a graduate program. I knew I wanted to do more education. I first wanted to do veterinary school, then med, and then I thought I wanted to do research, but I was trying to figure out what I wanted to do and then I discovered epidemiology. It was appealing because I still had the interest in infectious diseases through microbiology.

Epidemiology offers a way to still do research in microbiology and in infectious diseases without necessarily doing lab work myself, which was appealing because, after having done that for undergrad, I realized that I had to be there over Christmas break and if something goes wrong, you have to start multi-day experiments over again. So I'd kind of seen that and I'd talked to different people about how that works as a faculty member and they told me, you know, once you get your own research group established then it's not you always there, it's the people who work for you. But still, there was something appealing about epidemiology, and as I got into it more, I realized I could still study infectious diseases without doing wet-lab work, and that's sort of the path I ended up taking.
CP: You did your graduate studies in a very different place from Corvallis – Baltimore, Maryland at the University of Maryland-Baltimore. Tell me about the transition there.

JM: So that was interesting. I always liked traveling and going different places, so just moving itself wasn't necessarily a barrier to me. It was kind of exciting to see a different place. And I don't know that I necessarily knew what I was getting myself into; I don't know that I knew that much about Baltimore. I spent more time researching the institution, University of Maryland, than I did the city itself. My dad was a little bit nervous about me moving to Baltimore. He'd been travelling there for work in the D.C. area, so he kind of knew about the crime statistics of the area. It's a culture shock; it's very different from Oregon. But it grows on you. Baltimore's a great place to live. It's not as much of a tourist place, but it's a great place to live. It wasn't where I wanted to raise kids though.

CP: Tell me about your work there and your progression as a Ph.D. student.

JM: I did my Ph.D. program in epidemiology, which is part of the School of Medicine there, and did my Ph.D. under Anthony Harris in the Department of Epidemiology. I pretty much went straight through, working on things with him. All of my research there was, again, this epidemiologic work using electronic health record data that does not involve wet lab research. Early on in my Ph.D. program, I did some rotations and did some lab work with some other faculty members as well, but all of my own research there and my collaborative research with other people was about healthcare associated infections, multi-drug resistant organisms, and all healthcare associated infections.

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CP: It was mostly data analysis?

JM: Yeah. I think, put simply, we utilized electronic health record data from the health care system to look at patient risk vectors for acquiring certain infections, for acquiring drug resistant infections. We look at then patient outcomes, look for risk factors for mortality, if you have those certain infection risk factors, for having successful treatment courses. Things that ultimately we can use to improve healthcare. And so we are doing analysis of existing data, but it's all geared towards answering questions that will ultimately improve healthcare.

CP: Did you do any teaching?

JM: A little bit, yeah. That's part of the program requirements, so I did some lecturing on statistics in epidemiology.

CP: Was that something that came fairly naturally to you?

JM: I think as a child I was probably shy and did not like to talk in front of groups. And then at some point, I'm not sure what happened, I think in high school I became a drum major, and I don't know if you know what that is, but we basically stand in front of the band and you're the one leading it, for pep band and things like that, you're directing the band. Which basically involved me yelling at a bunch of kids all the time, because you have to kind of get high schoolers to pay attention to you and to start. I was younger than a lot of them when I was doing it and I think that kind of got me over the public speaking/being in front of people piece of it. I also did other activities in high school that involved public speaking and I think that prepped me for that part. The teaching part, I think, is a continuous development of how to do it well, but I feel like at least I'd had enough experience standing in front of people talking that I wasn't as nervous about that part as much about just figuring out how to get the content across.

CP: And you were married at this point?

JM: Yes, we got married before we moved out to Maryland.

CP: What career path did your husband follow?

JM: So he studied engineering, mechanical engineering, at OSU and he did the MECOP program so he also was on the five-year track, as well as I did. So we both got married actually after four years at OSU, and then were married and together during our fifth year at OSU. And then after we graduated from OSU, we went to India with my parents so that after we got married he could meet all the extended family. And then we came back from India and it was maybe a few
days later we got in the car with all our stuff and drove across the country and moved to Baltimore. So it was quite the cultural summer.

**CP:** A pretty portable degree, I'm gathering, mechanical engineering.

**JM:** Yeah, and part of the reason we ended up in Baltimore is I'd applied to degree programs in a few different places and he got a job with Northrop Grumman in Baltimore, which is a lot of defense contract work and things. And they paid for our relocation expenses; paid for us to help move our stuff over. We drove across country with a lot of the stuff, but they paid for us to get our stuff moved too. We had to make the decision jointly.

**CP:** You had a research experience at the Center for Disease Control and Prevention at this time. Can you tell me about that?

**JM:** Yeah, that was actually part of my post-doc. So after I graduated from my Ph.D. program, I did a one-year post-doc that was kind of split between spending my time at Maryland and spending time in Atlanta at the CDC. Rather than uproot my husband for a one or two-year post-doc, he stayed in Baltimore and I spent time in Atlanta and got that experience. I started a project there looking at methicillin-resistant staph aureus rates in children and actually, using data from New York, and then continued that project and finished it up when I was at Maryland, when I went back from there. That was a great experience. I'd had this exposure of the healthcare system, the medical system, working in a school of medicine affiliated with a hospital. That was a different exposure, being with a public health agency and seeing how it operates on the federal level. The perspectives that they take are very different and seeing how that ties together was very interesting. **CP:** Strikes me as being a very interesting place for an epidemiologist.

**JM:** Yes! It is an interesting place. And it's sort of a mix, because they have civilian workers and then they have people who are Public Health Service officials and so they wear their uniforms. That was actually right after Hurricane Katrina that I was down there, and so a lot of them who were in the Public Health Service were being deployed to go down and help with Hurricane Katrina and, you know, these are people who are CDC researchers, they're specialists in what they do, but they also have medical degrees or dental degrees or nursing degrees. It's that other side that's being utilized for Hurricane Katrina. It's not necessarily their high-level expertise in disease transmission. But when they need help, they need help, and they're sent to help.

[0:35:28]

**CP:** Well you came back to OSU. Were you ever expecting that?

**JM:** I don't know that I was expecting OSU directly. We wanted to come back to the area. My husband actually got OSU season football tickets a year before we were ready to leave Maryland. He was just keeping his fingers crossed that we'd be close enough that he could use them. And I started applying for jobs in Oregon and Washington and California, just kind of hoping we come back west and be closer to family and somewhere where we could start our family.

I didn't even know that the College of Pharmacy now had this Portland campus. I'm not sure, it didn't really exist in the same form when I was at OSU myself. It'd kind of grown since I was gone, along with a lot of stuff in Portland. I didn't know it was even a job opportunity. Location-wise, I was looking at OHSU and had talked to some people that I saw at professional meetings and circulated my CV a little bit. And through that route, it sort of came to their attention when they were about to post the job position, so I was made aware of the opening.

**CP:** And you've always been in Portland, correct?

**JM:** Yes.

**CP:** Where were you located before this building was built?

**JM:** Right before this building we were in the Center for Health and Healing, which is just a little bit down the street, right at the base of the tram. And before that, we were in Gates Hall up on the hill.
CP: So obviously a very strong connection to OHSU the whole way through.

JM: Yes. And my research, a lot of it, utilizes healthcare data from OHSU, so there's strong ties and a lot of collaborators. I like Corvallis but it wouldn't be a feasible place for the research that I do for me to conduct it there. The infrastructure just isn't there with the healthcare system.

CP: What were the duties of your initial position?

JM: Not too different from what I do now in the terms that it's always been very research intensive with a small amount, a relatively small, amount of teaching and some committee work with the department and college and things. So I'm part of the Department of Pharmacy Practice here and when I first started they had a couple of lab-based researchers and were sort of trying to start this core of epidemiology/healthcare outcomes research folks here. There was one other statistician here when I started. And then I was sort of the new first add-on, so my role was really sort of development of the research program. That was the primary reason I was brought on.

CP: Tell me about settling in. You were still quite young when you were hired here.

JM: I think I had really excellent mentors when I was a Ph.D. student. Anthony Harris was an excellent mentor, not just in teaching me about research, but teaching me about how to be a mentor myself. He was always looking for self-improvement and that kind of always led me to look for self-improvement. And he was really good at networking and all those pieces too, along with other mentors too; Eli Perencevich and Mary-Claire Roghmann, Doug Bradham, they all were a very nurturing place to be mentored.

So when I came here, my first thing to do was to meet people, so I spent a lot of time just getting on everybody's calendars and meeting them, seeing what they were doing, seeing where I could fit in. I had my own research interests, but I was also always pragmatic. So kind of figuring where my research interests are but where are there data here? Where are there opportunities for research to be done? What are the healthcare issues here that tie in with my interests? How could I leverage what the needs are here and what the infrastructure is here to meet my own research interests?

CP: Was there a start-up package in terms of funding your laboratory?

JM: There was. At the time, I think compared to what they had been giving, it was pretty sizable for a pharmacy practice person as opposed to a lab-based person, though now it's not. That's sort of the way things go; these things always sort of escalate over time. But there was. And I initially used more of that to sort of set up just the basic software package needs that I had and travel needs for something project stuff and access to data. And then once I started getting my own funding is when I started hiring. I didn't want to hire until I had a stream of income so I could continue to support people rather than just have a few months of salary for them.

[0:40:28]

CP: Well, let's talk about your research. Just looking at the website that you have for your research group, I have four categories that I've split out, probably pretty simplistically. But the first thing that I have on my list is the improvement of antibiotic utilization to optimize patient care.

JM: Infectious diseases and antibiotic use is maybe a little bit different than other medication utilization areas, because you're treating an infection, something that's caused by another living organism, something that can actually adapt and change in response to the treatment that you're giving. And what that means is that when we give an antibiotic, we're not only trying to get rid of the infection and cure the symptoms that the patient has, but we're also influencing the greater population of those bacteria and applying selective pressure for them to develop resistance. So we have to balance this need to treat the patient with their individual cure rates and treatment rates versus the population level risk of developing emergent resistance, which then goes back to that individual later. It's a little bit more complicated to think about it when you're treating a patient with an infection, you have to think not only about the individual but about the greater population as well.

CP: That segues, or perhaps overlaps, with the next bullet here, limit the spread of antibiotic resistance.
JM: Yeah, I mean, everything is pretty much tied in. So right now, we have an R01 project funded by AHRQ, the Agency for Healthcare Research and Quality, and we're trying to improve antibiotic prescribing for uncomplicated urinary tract infections in primary care settings. There are a few medications that are recommended for first-line treatment for these urinary tract infections and, over time, we've started to use more and more of the more aggressive treatment choice, the second-line choices. They're broader spectrum so they can target a larger range of bacteria, a larger range of resistant bacteria, but they also then provide more selective pressure for resistance. And our research is focused on trying to use the narrower spectrum antibiotics, the more targeted antibiotics, whenever possible, and trying to limit the use of those broader spectrum antibiotics whenever possible.

The guidelines right now have a weakly evidence-based statement in them that says that if your local prevalence of resistance to one of the drugs exceeds 20%, that you should switch to this other more aggressive treatment option. Our stance is that that is, one, not very strongly rooted in evidence, and two, doesn't maybe utilize the level of sophistication that we can apply with statistical techniques and other testing techniques. So we're trying to develop a prediction role model that would help us distinguish which individual patients are at risk of having resistant infection, and which ones are at low risk of having resistant infection, so that rather than change our treatment choice for all the patients based on one population level statistic, we can create more individually tailored decisions.

CP: Is this work still primarily data-based versus lab-based?

JM: It is primarily data-based, but it's also clinic-based. So we have taken historical data from a network of primary care clinics across the U.S. to start the process of building that, and then we're working with a few partner clinics in Oregon, and we're actually trying to engage one clinic in California as well, to do some prospective work with them as well. So no lab time for me, but we partner with healthcare settings and healthcare clinics to work with them.

CP: Quality of patient care during transitions between healthcare settings?

JM: That's one of our previous grants. It was focused on healthcare associated urinary tract infections. And healthcare associated infections in general are obviously an adverse outcome of receiving medical care. When you come into the hospital, there's the unfortunate reality that you're exposed to other people and other things, and there's a chance that you could acquire an infection. Infection prevention teams in the hospital, their job is to try to minimize that risk for patients, and part of the research that we do is to support that effort, to support the reduction of those acquired infections.

One of the previous grants that we had was looking at your risk of acquiring a urinary tract infection while you're in the hospital that doesn't actually show up until after you get discharged. So right now, a lot of the surveillance that we do for healthcare associated infections stops once discharge happens. But what happens when you acquire an infection is that the bacteria enters your body and generally has some state of colonization before it actually causes infection, meaning that there's some asymptomatic phase before it causes symptoms. So you may acquire the organism when you're in the hospital but you don't become symptomatic and have the infection show up until after you get discharged. That's still an organism that you may have acquired while in the hospital and is attributed to your hospital stay. And the reason that's important is because those organisms that you acquire when you're in the hospital tend to be more resistant to medications than the organisms you acquire out in the community or just have inherently as part of your normal flora.

So our project was trying to do some initial estimates of urinary tract infections that may have been acquired during a hospitalization event but actually didn't become symptomatic until after discharge. Trying to get, again, that transition point where you're transitioning back to outpatient life, community life, there's still some of that infection risk. That's probably one example of the area, but I also collaborate with other people here – J.J. Furuno in the department here, who actually went to graduate school in Maryland and I helped recruit him here after I came here. He does some work that I collaborate with him on transitions of care between hospitals and long-term care facilities and hospice, and managing patients' medication changes through those life events and transitions.

CP: Antibiotic resistance is a topic that pops up in the mainstream with some frequency. What is your level of concern about the future of antibiotic resistance?
JM: I mean, I have a lot of concerns, that's what I put my research efforts into. I think that the media does a lot of fearmongering without a lot of education and there's a lot of fear about, not just resistance, but about germs. They do all these special investigative reports where they swab the gym equipment or they swab the escalator, elevators, where they find things growing. What they don't tell you is that there's bacteria everywhere. Just because they find it doesn't mean that you have any increased risk of getting an infection or getting sick from it. So they put that information out there and they talk about antibiotic resistant infections too, which is really important for the public to be aware of, but they don't go forward to talk about the messaging of how an individual's use of the antibiotic actually contributes to that population of antibiotic resistant infections.

You know, taking our antibiotics appropriately for the full duration that we're supposed to take it for, taking it as directed by your provided, not sharing the antibiotics, those things go a long way to preventing resistance from developing, and those messages don't seem to be shared in the media along with the scary stories about antibiotic resistant infections. And the stories are scary because some of those infections don't have very many treatment options anymore. But that should be used to raise the public discourse level and the public level of education around using these medications and not just at an individual level. There's farm use of antibiotics; I think in Oregon probably there's a little bit more awareness of that because we're pretty hyper-aware, I think, of what we eat. But that doesn't translate nationally.

CP: When preparing for this interview, I came across a newsletter from the College of Pharmacy in which it was noted that you were the first Pharmacy principal investigator to receive an NIH R-level grant. Can you tell us what that means and why it's important?

JM: Well first of all, let me just correct, I'm not the very first person. In the other departments of pharmaceutical sciences there are many faculty members who have gotten NIH R-level grants and I don't want to take away from their accomplishments. The pharmacy practice department, the department that I'm in, has more recently developed its research program, as I mentioned before. I actually have had now two R-level grants from AHRQ, which is not NIH, but it's the sister agency that studies more healthcare level, like healthcare systems and healthcare improvement type projects. And so the project that I mentioned, studying antibiotic prescribing for urinary tract infections in the primary care setting, that project was funded by them as well as the project I mentioned about the healthcare associated infections after discharge; that was the other one that was also funded by them.

[0:50:08]

CP: Let's talk about this building. The groundbreaking was in 2011. Do you have memories of the run-up to the building's construction and the discussions among the faculty of what it might mean?

JM: We were just down the street in the other building, Center for Health and Healing, when this building was being constructed, and we got to see early sketches of what the building was going to look like. We got to tour the development site, which is always interesting to me because I walked on these premises when it was just the scaffolding and things and some of the early frame of the building, and it's hard for me to gain the perspective that it's actually the same building - to think this is the same building that I walked on before - because it looks so different when it's just pieces. And when we toured the building, they also had sketches and diagrams of what they envisioned the whole South Waterfront area to look like, what they thought was going to be built and everything.

And this whole area has just changed so amazingly much since we came in because, when we first moved in at the Center for Health and Healing down the street, the tram hadn't even actually been opened yet, so if we wanted to go up the hill we had to take a little shuttle bus up the hill. And then the tram opened and then more and more condo buildings and apartment buildings opened and more restaurants opened. Now OHSU has this big new building here with most of the major healthcare academic programs being in this building. The Tilikum Bridge is open – I mean this was all a Superfund site, there was nothing here before. For someone who came from this area, it's just an insane amount of development and growth. It's completely different than what it was before. There was nothing here before except for industry. I mean, Zidell, the barge building company, is still there but everything else is just amazingly different.

CP: And as one who drove here today and negotiated the parking situation, I can attest that it's changing at this very moment.
JM: Yeah.

CP: So the building opened in 2014. I'd be interesting in knowing what features of this place have been important to you.

JM: Well, I think having the different academic programs here have been important on my teaching hat side of things. I have an elective course that I teach that's on antibiotics and public health. There is, at the health department here in Oregon, there is a program that's funded by the CDC that supports educating the public and healthcare providers about appropriate antibiotic utilization. And I've worked with them for a number of years, and a while ago we had started an elective course, and when we moved into this building we partnered with the physician's assistant program as well. And now I teach that course as an interdisciplinary program for all OHSU students, which is something we're able to do now that we're all here together. And it was kind of prohibitive to do when we were in the other buildings, so that's nice. Our pharmacy students get to take courses with other healthcare disciplines and get to interact more with other healthcare disciplines, which is good. In order for them to work functionally well in healthcare settings, they need to understand the scope of practice for each of the other disciplines. And understanding how their training looks and meeting them early on and understanding what experiences they've had is, I think, very important to that process.

CP: One question I'm interested to ask you – you are, I'm pretty sure, the youngest faculty member we've interviewed for this project. We've interviewed a lot of them. You've been tenured for a while but I have not asked anybody to talk about the process of getting tenure because most of them had done it twenty-five years ago.

JM: So long ago.

CP: Can you talk a bit about what that's like, to be on the tenure track?

JM: Stressful. OSU has, I think, what is more of a traditional tenure track program, which not a lot of institutions, at least that I work with or collaborate with, have that anymore. And so it's an up or out system, which means that after about six years you put your dossier in, which is a description of the body of work that you've completed to date, and it goes out for review to your peers in the external world, the world outside of OSU, the research world. And those reviews come back and are reviewed again by your internal peers and summarized and ultimately judged whether you are worthy or not to get tenure at the highest levels at OSU. But if you aren't given tenure, you have to leave within a year. And unfortunately, when I first came here, two people before me did not successfully get tenure. One person stopped before he went through the whole process and left, and the other person did not get tenure. And I have seen other people since not get tenure, so it's not a rubber stamp, it's not a guarantee. And I felt like I probably had a pretty good case, but not having seen any successes since I had been here was not a very – in my department at least – was not a very heartwarming thing.

So I had a good fear about going through the process. It was stressful. I'm a hyper-organized, list-making sort of person, so I had on my board how much time I had, how many grant cycle submissions could I do before the tenure cycle was up, what publications could I try to push out before I had to submit my dossier. I do the research because I like the research, but that was a very hard, fast, targeted goal. If I was going to stay in and keep doing this research, I had to get tenure. Otherwise I'd be moving again.

CP: Did this period of your life coincide with starting and raising a family?

JM: So, in my practical, pragmatic side, I didn't have my first daughter until I got my first grant. So I had my first daughter then, and then I waited to have my second daughter; I actually just had her this January. So I have a six-and-a-half-year gap between my kids, and that's in part because of the career I chose. It's the reality of academia. When you talk to other people and they hear that I had a six-and-a-half-year gap between kids they're like "oh wow, that's strange." Then you talk to other academics and they're like "oh yeah, my kids are six years, my kids are ten years apart." There's choices and balances that you have to make if you're going to go with academia.

CP: So another thing I'm interested in learning more about – third-year pharmacy students at OSU study in Portland. What is it about Portland? What are the opportunities that are afforded to them by being here?
JM: I think a lot of that is the healthcare system. And so by coming up and being at OHSU they have the exposure to the healthcare system and not only the experts at OHSU's healthcare systems but the other healthcare systems in the Portland area. So because Portland has multiple healthcare systems, there's a greater community of pharmacy experts here that provide lectures to our students and also provide experiential experiences to our students as well. So they are able to benefit from that. They're able to benefit from interacting with other healthcare discipline programs up at OHSU. So they get to do interprofessional experiences that are across OHSU with the medicine programs, nursing programs, dental programs, etc. They have a few of those throughout the year that they participate in.

I think it's seeing the healthcare environment, and that's what they're going into. We try to have our students be exposed to a breadth of healthcare opportunities, from the community pharmacy to the hospital in-patient setting to other specialty healthcare settings, because you don't know what you're going to do unless you see all the choices. They're trained to be able to provide care in those settings.

CP: OHSU keeps coming up over and over again; the connection there is obviously extremely strong.

JM: Well yes, and our Pharm.D program is actually jointly conferred by both institutions, OSU and OHSU.

CP: Okay. I guess on a similar note; I'm interested in what it's like for the Portland faculty here to be part of a Corvallis-based college. Is maintaining that connection with Corvallis and the faculty there - what is that dynamic like?

JM: It's interesting and I think it's changed since I've been here, I think because the faculty base here has gotten bigger and bigger. I think when we were smaller, you kind of feel like you're the underdog part of the college a little bit. Communication is a little bit difficult, but we've had really good infrastructure with doing video-conferencing and things. Everyone is friendly and engaging on an individual level, but it's one thing to kind of engage people on an individual level versus sort of to be a part of a system on a larger level. I think that there's certain things that we're not able to be a part of on a leadership level because we're not on the right campus. But I think that we have other opportunities that we have available to us because we're on this campus.

CP: Well, a few concluding questions. The first is just your thoughts on the progression of the College of Pharmacy during the time you've been here and where you see it heading.

[1:00:02.5]

JM: Well, I don't know if where I see it heading is the same place as where the leadership sees it heading, but I think the growth has been amazing. Coming into this building, having the students have more modern facilities, having the students have access to some of the simulation resources that are available in this building and having the interprofessional activities available to them; I know when I first came in, we didn't really have that much interprofessional opportunities for the students but now, both on the Corvallis campus and here, there are interprofessional opportunities for the students to be exposed to. I think the students have gotten to be exposed to more research because our research bases just keep growing and growing. I think it's exciting that some of the pharmaceutical sciences faculty are now also located in Portland, so both departments have split campuses, not just our department. And I look forward to that growing as well and having the base in Portland develop and the research base in Portland continue to grow and develop.

I think on my group's side of things, the healthcare outcomes and epidemiology side of things, our group has been growing and I'm optimistic that it'll continue to grow in faculty numbers. And I'm hopeful that we'll eventually be able to support our own graduate program. Right now, the Pharmaceutical Sciences department has a graduate program at OHSU, and part of the School of Public Health there that has a graduate program, and so I mentor students in the epidemiology program there. But in the long run, it would be great to have a pharmacoepidemiology graduate program here within our college and be able to support that once we have enough faculty and resources to do that.

CP: On a broader level, as one who has been associated with the university for twenty years, your thoughts on change at OSU and where you see it standing right now.

JM: Boy, I mean, it's grown a lot. I think that there's areas where the growth is more obvious and there's areas where the growth is less obvious, but I think that because of the national economy and how things have changed, there's different needs now for people getting their education. People are trying to get retrained for different professions or trying to get
exposed to new professions. I think that OSU has expanded a lot of what it offers online and I think that's probably going to continue to grow: what it offers online and what it offers at satellite campuses. I think its presence across Oregon is growing and I think finding ways to reach more Oregonians is critically important. But also finding ways to offer different types of educational offerings to those Oregonians that are not able to be in Corvallis is important as well, while still maintaining that quality of transition, because there's a lot of online programs out there, but I think that having a reputable organization behind it carries a lot of weight when you look at people who have come out with online degrees.

But I think also, having OSU able to grow its Portland presence is important. One thing that we've maybe been a little behind on is marketing our Portland presence, and U of O's maybe gotten a little ahead of us with that piece. But I think if we can market our Portland presence, that it's important to market ourselves nationally as well.

CP: Yeah, it seems to be a major point of emphasis right now on a lot of different fronts.

JM: Yeah. I think we have somewhat of a national reputation in certain fields in certain areas but not to this extent that U of O has. Having lived in different places and travelled and things, more people know about U of O than they know about OSU, despite the fact that we have extremely strong science and engineering programs, etc. We just haven't found a way to capitalize on our experiences, our expertise, into that marketing realm.

CP: Well, my last question is just what you hope to see for yourself in the future, your ambitions coming up.

JM: I hope to have a nice, continuous, steady stream of funding, as any researcher would. But I'm looking forward to seeing my program develop and grow. I've been able to start to take more and more trainees; I'd like to have continuous funding so I can have those trainees, but I like having people from different disciplines that work together, so I like the collaborative environment. I have other faculty that I collaborate with, which is wonderful. But now I also have a Pharmacy fellow working with me, so that's someone who's a pharmacist and has completed post-graduate clinical training and is now doing research training. And I also have graduate level epidemiology students, and I have another medical fellow that's working with us as well. Having these people from diverse backgrounds, who are all interested in research, working together, helps them all grow and it helps our research program to see different perspectives in the questions we're asking. And so I'm hoping that continues to grow and develop and become sustainable over time so that we continue to have those trans-disciplinary interactions in research.

CP: Well Jessina, thank you very much for this. I appreciate you sharing your perspective on what is a bold and exciting new path forward for the College of Pharmacy, and I wish you the best of luck going forward.

JM: Thank you.

[1:05:53]