

Interview with Kathryn Lande

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Q. State your name and affiliation.

A. I'm Kathryn Lande. I work in the Leslie Biophysics Lab in the Rutherford Physics Building on McGill campus and I'm also the president of the McGill Biology Student Union.

Q. It sounds like you work in a Biophysics lab?

A. Yup

Q. It sounds like you actually are involved, or at least very keen on, research. Can you describe some of the research you've been doing?

A. Yeah, so the Leslie Lab is part of the Physics department and most of the people who work there are physicists and being in a Biophysics lab, there's a big component of molecular biology, so I'm one of the few people there who's like a pure biologist, so what I'm doing right now is I'm working on my Honour's Thesis and what I'm hoping to do is I'm hoping to find a way to put fluorescent labels on plasmid DNA without altering the sequence of the plasmid DNA and to add those fluorescent labels only at specific locations. I came up with a potential protocol with how to do it, so right now I'm workshopping that protocol and hopefully it will work, but in science you never know if things are going to work.

Q. Do you have a kind of feeling, though, that it might? I mean, you have to.

A. Yeah, I'm hopeful because I based it off of existing, similar techniques that are very reliable and popularly used, so there's a lot of precedent for what I'm doing and I think it's going to take a while to make it actually work but I think it's just going to be an issue of optimization rather than "does this work" or "does it not work."

Q. You talk like a scientist – do you consider yourself a scientist?

A. I do consider myself a scientist. I've been working in research since I was in high school. I got my first research job when I was 17 and it was at a virology lab at the Smithsonian Zoo and then I've been doing research on and off ever since, so yeah.

Q. Was that what you always wanted to be? Did you start this kind of vision when you were little? Did you have a path?

A. Yeah, I think when I was really, really little I wanted to be an artist but that was because I was three and I really liked my crayons but by the time I was 10, I knew I wanted to be a biologist.

Q. Was there a turning point? Was there something that made that decision really clear?

A. I got a gift one Christmas from I don't remember who, but it was like this set of flashcards about human anatomy and I was like 9 years old or something – 9 or 10 – and I was just sitting there with these flashcards, quizzing myself about human anatomy and I was so into it. And I would make my dad, who was a doctor, do it with me and if I got a question right and he got one wrong, I was so excited.

Q. That's great.

A. Yeah.

Q. Has your path been straightforward or were you mentored? Was it clear? Is it easy for someone your age to be a scientist – a young woman?

A. I'm not sure if my gender makes it more difficult at this stage in my career, at least. I know there are more women in biology right now, at my level, than there are men. And I think, just at my level, I've gotten some advantages, even, for being female. I know that that job I got at the zoo, they were specifically looking for female candidates over male candidates, which was very, very nice, obviously, and I think there is a push, at least in biology right now, and I've noticed a higher women over men, which is really nice, but I think going forward, I will face some challenges. You know, there's the whole "glass ceiling" thing, it gets worse and worse with each stage, the master's degree, there's fewer women than there were at the undergrad, and at the PhD, there's fewer women than there were at the masters, and at the professor level, there's even fewer women, you know?

Q. And you think about that? It's always there?

A. Yeah, it is always there. I'm fairly confident that I'm going to push through whatever challenges I have to face in the future, be they related to my gender or not, but who knows? Maybe I'm just young and naïve.

Q. How old are you?

A. I'm 20.

Q. Do you actually sit down and map your forward path? Do you have a 5-year plan, or?

A. No. I'm fairly spontaneous when it comes to things like this. I have a general sense of what I want to do, like I've always known I've wanted to go into research and coming into my undergrad, I knew I would probably want to pursue a Master's degree, rather than go to med-school, or something like this, but an idea of where or what specifically I want to study, what lab I would want to do it in – I don't plan my life out meticulously like that. I kind of – when I see an opportunity that speaks to me, I take it.

Q. Do you think mentoring is going to be important in your future as a woman in science?

A. I think so. I like to think that I've always been more of a mentor than a mentee. I have, even since high school, I have a lot of younger female friends who often come to me for, not so much career advice, but just like general life advice that sometimes also is career advice.

Q. Yeah.

A. Yeah. And I like the idea of going into academic research, because I think the teaching aspect of science is equally as, or more important, than the research aspect of science, in a lot of ways – especially now, a lot of people could use a better scientific education.

Q. You've noticed that at all levels? From high school through to college?

A. Yeah, I just kind of mean in society, in general. I think there's a lot of ways that people's baseline scientific education has failed them, not so much in Canada but in the United States more so. You see a lot of people who think vaccinations are bad, people who don't believe in climate change, people who protest GMOs without knowing anything about them, and I know that's more of an intricate issue than the first 2 I mentioned but there's a lot of irrational dislike of science right now, I find, which I found really ironic because I watched that solar eclipse on the lower field of McGill just this past week and there were like a thousand people there, all looking at the solar eclipse. And the whole time I was sitting there, wondering, "How many of these people aren't going to vaccinate their children?"

Q. Oh were you?

A. Yeah.

Q. So you seem very positive, Kathryn, and you've told us some of the stories about you actually already being more of a mentor than a mentee, so it seems like people look to you already for leadership and guidance and it seems like you're very balanced, socially, intellectually, and very grounded. Are there any difficulties you can tell us – share with us – about your life so far as a young woman in science. Was there anything that happened – any failures, any things that didn't work out as expected?

A. Well, I guess one... like the only true hardship that sticks out in my mind when I think specifically about being a young woman in science was I had a class one time and the TA for this class was the kind of misogynistic where even the male students could tell he was misogynistic.

Q. Oh!

A. Yeah... So I was not a big fan of that class, probably because of this TA, but I had – I was sitting next to 2 of my friends, one of them was a female and the other one was a male, and our male friend would ask a question about the course material and the TA would come over and

he would give him a really thorough answer, really helpful answer, and he'd be like so nice about it, and then 5 minute later, me and my female lab partner would ask a very intellectually similar question pertaining to the course material and he would come over and he would either give us a 10 second, very curt response, or he would not even answer the question and kind of just make fun of us for being stupid... yeah, so...

Q. I'm glad to hear that only happened once?

A. Yeah, it only happened once.

Q. Anything younger people could look out for? Any pitfalls that you would, you know, just, I don't know, tips?

A. Yeah, I think if I could go back to that situation with the horrible TA, I would've reported him sooner. It took me until the end of the semester to report him, and McGill was pretty good about it, I noticed. I reported him after the lab one week and then like the next week, I noticed he was just like not making eye-contact with me and he seemed really ashamed, so yeah, hopefully that solved the issue as much as that issue can really be solved.

Q. Do you think it's hard to have a balanced life as a scientist and a woman?

A. Yeah, I mean, I'm still an undergrad, so the real brunt of the difficulty to balance life as a scientist and a woman hasn't really come yet, you know. I think everyone is busy in their undergrad and during your undergrad, everyone understands when you can't make time for them, for any reason – your family, or your significant other. But, I don't know, 10 years from now, if I am considering having a family, that can be very difficult, and I think that's a problem that all professional women face.

Q. What do you find difficult now?

A. I don't really have any difficulties now, honestly. I kind of thrive off of always being busy, yeah, it's how I like to live. If I had a million dollars and I had to use it to get women and other diverse groups into science, I think the best way to spend it would be early childhood education, because I think early in your life, you figure out what you like, and that comes back later on. I know for me, I only realized I that wanted to be a biologist when I was 11 – 10 or 11, but I had always really liked the outdoors, I had always really liked animals, I had always really liked nature in general, and that was because I had really positive experiences with it as a child, so I think if I had a million dollars I would use it to create really positive experiences for women and other diverse groups of people about science, nature, engineering, technology, stuff like that – experiences that they wouldn't get otherwise.