Bonus: Let's Innovate

Nerdin' About Podcast Transcript, Season 2 Bonus Episode 1

Michael
Hey everyone, Space Michael here and this week the new Nerdin' About episode, the last one of Season Two with Marco Pasqua is going to be delayed one more week, so we thought we'd still drop something in your feed to listen to. You may have heard me talk about my other podcast that I host for the British Columbia Science Fair Foundation called Let's Innovate! So, we're putting in the first episode of that podcast that I recorded in Oct 2020 where I talked to a teenager from Cranbrook, BC Braxton Chan on his innovation that won him the Youth Innovation Showcase award for his age category. The podcast is a short conversational dive where I talk to youth, sometimes innovation leaders in the community that mentor youth, and I try to tap into where their passion and inspiration come from. If you like it, please subscribe leave a review, just like you should with Nerdin' About, and we'll be back next week with our final episode of the season. Enjoy!

Michael
Hey, everyone, and welcome to Let's Innovate, the podcast where we uncover the passion behind great ideas. I'm your host, Michael Unger, and I'm super excited to be part of this project. In my day job, I'm the Program Coordinator at the HR MacMillan Space Centre. I'm also the host of another podcast called Nerdin' About and I'm part of a science communication team called SciCATs, where we train future science communicators. So, in all that I do, I have conversations with scientists, communicators, artists, and in this podcast, we're going to be having conversations with and about the youth that will be our science and technology leaders of tomorrow. So today we have one of those youth that presented his idea at the Youth Innovation Showcase back in June of this year (2020), and here was his pitch.

Braxton
My name is Braxton Chan. I'm 16 and live in Cranbrook BC each year. 10,000 Canadians are affected by osteochondral defects (OCD). Presently, there's no adequate treatment for this disorder. In my innovation I transplanted fibrocartilage into a joint with OCD after seven weeks the transplant went through, gross pathology, materials testing, and histological examination, these tests prove that the fibrocartilage could withstand a load of a normal joint as well as adhere into the defective area. My results prove that fibrocartilage can be the first adequate treatment for OCD.

Michael
Braxton developed a novel surgical procedure to treat osteochondral defects in particle joints using fibrocartilage transplantation. Braxton speaks to us from Cranbrook BC. Hey Braxton, how's it going?

Braxton
Good. How are you?

Michael
I'm not doing too bad. So first of all, Braxton. I love your pitch. But I do have to point out that I was not a judge for your pitch, even though I was hosting the session. But I did give you some personal points for the bow tie that you wore during your pitch during the virtual session. I really appreciated that.

Braxton
I'm a bow tie guy. I always wear them whenever I can.

Michael
Oh, really? When did you start wearing bow ties?

Braxton
Ah, just whenever I had something formal, everyone's wearing a tie. I just kind of gravitated toward bow ties.

Michael
That's great. Yeah, as people saw, I was also rocking the bow tie. So, I felt a kinship there with you Braxton, great work. So, tell me about this project, this really cool novel procedure that you came up with. What made you want to put this forward as part of your youth innovation showcase presentation?

Braxton
Yeah, I've been working for this project for at least a year, by the time that showcase happened. I just wanted to get it out as much as I can, have as much exposure as I can get it. I first thought of it two years ago, and I've been building up on the idea ever since.

Michael
So was it an idea that you had personally that you thought, "Eventually I would like to develop this on my own I'm not too sure where I might use this, but I'm going to try to develop it a bit more."? And then when the Youth Innovation Showcase opportunity came up, you were like, "Oh, yeah, that's where I want to go with it?"

Braxton
Yes, for sure. I did some research on some past projects dealing with disability in the joints, and I happened to stumble upon osteochondral defects. I found it was a little problem, but no adequate treatment for it. So, I wanted to see if I can come up with my own. So, I always do this regional science fair here in Cranbrook. I've been doing it since like kindergarten. So, I wanted to do that project for that science fair, and when COVID hit I had so much time. I saw this science fair; I think I got an email about it. So, I'm like, oh, well, I already have this project. Might as well go pitch it again.

Michael
So, I'm a little curious Braxton because you know, when I was growing up, I wasn't hanging around many hospitals, and probably didn't have much knowledge of some of the procedures they were doing, let alone the procedures that they weren't doing, which is where this innovation comes from. So how did you come to know that there would be a need for something like this? Were you just hanging out in hospitals, and some doctors came up to you and were like, "Hey, you know what we really need? This."

Braxton
I had some projects dealing with arthritis, which is another disorder of the joints. And I did happen to just basically stumble upon osteochondral defects. Luckily enough, my Dad is a doctor at the hospital here. So, I approached him and asked him about osteochondral defects, and was like, "Hey, what's up with this? What are the treatments for it? And is there any way I can help?"

Michael
Yeah, that's really interesting. So of course, your Dad is that natural connection to the hospital world. So, tell us about your Dad. What is what kind of a doctor is your Dad?

Braxton
He's an orthopedic surgeon. He does a lot of back, hands, and a bunch of different fun surgeries that really interest me. So, I'm always asking him about different stuff about what he does.

Michael
So, from a young age, is this something that you've always been interested in, in seeing the kind of work that he does? Like, have you ever gone into the hospital to watch him work?

Braxton
I've never gone into the hospital to watch him work, but I've always been in the hospital environment. So sometimes I would go after school or something, to get a ride home and go in the hospital and talk to the different doctors as well. It just always fascinated me helping people and there's just so many different things that people don't know about, different surgeries, different disorders, and all of that. It just always fascinated me.

Michael
That's a really interesting perspective. I think even right now, in this pandemic a lot of people are feeling afraid of hospitals, and you're talking about an experience where you find it to be an inspiring place of not only innovation and ideas, but these innovation ideas are helping people. I find that really interesting that you have a unique perspective that you see the hospital as an exciting place for you.

Braxton
Yes, it's, I love it. I perform a lot of my different projects there. Like for this one, I was able to go into a place to actually work with human cartilage, human like parts. I think the hospital is such a great place. There's just so many opportunities there.

Michael
What was the creation process like for you? So how did you take the innovation from an idea to a viable pitch or prototype? Could you maybe walk us through that process?

Braxton
Yeah, so it first started off with an idea, I knew I had to work with different human parts. So, the cartilage as well as a fiber cartilage. So, it started off with a lot of paperwork for ethics, to get these joints to perform this experiment on. So, I started with months and months of paperwork, to get the ethics committee to approve me, so I could potentially work on a human. So then once that was approved, my Dad did operations on these patients who had total knee or total hip replacements, these joints were being discarded anyways. So, through that ethics committee, I was able to perform my experiment on them. So then with that, I just did my experiment, waited long enough, got my results and put it into a project.

Michael
Awesome. And how did the Youth Innovation Showcase help along with that process?

Braxton
I never thought of my project in a way to pitch it to people. That it could actually make money. So, it made me think about that in a completely different way, which was just so terrific.

Michael
Yeah, you know, I think that's a really big thing, because science communication is now becoming a bigger part of people's curriculum when they're taking science. You almost get a head start here, because you came up with the idea, and then you already had to start thinking, "Okay, how am I going to explain this idea? How am I going to talk about it in a very simple, concise way?", and get people on board with their project, which you succeeded with. Tell us a bit about how you how you developed your pitch. Did you practice it? Talk us through your process there.

Braxton
So, before this innovation showcase, I went through at least three different science fairs before that. So, I've had a lot of practice talking about my project, and all of that. So, before the showcase, I just kind of made the pitch in a certain time period. Just practiced it a bunch. So, I had it basically memorized, and just did the pitch.

Michael
Yeah, you know, I found it really fascinating, you know, with all of the participants that pitched you had a really wonderful demeanor, you were really calm, and your ideas came out really confidently, and I was really impressed with that.

Braxton
Thank you so much. Yeah, it means a lot. It was it was so much fun presenting. It was strange behind the screen, for sure. Yeah, it was still so much fun.

Michael
Yeah. So where do you see this idea now that you've pitched it to the Youth Innovation Showcase. Are you going to continue to develop it? Are you going to have this as your side project? Because obviously, you do need to focus on school, you can't just be inventing all of these things. What are your hopes and dreams for this innovation?

Braxton
So, for this project the first step is completed, I've had all the samples, I've done everything I could with them. Now I still have samples up at the hospital. So, I'm going to reperform this experiment over a year's time. So, for the first experiment, I transplanted the fibrocartilage, then looked at the results within five or seven weeks. So now I'm going to look at the transplant over a year's time. So, to see how that has affected it at all. So that's basically the next step for it when the hospital opens up, so I could go in and actually be there. It's not like someone else that has to have clearance to go in and do my own experiment. Hopefully, that opens up.

Michael
Let's touch on that. Because COVID is affecting all aspects of life right now. So, tell us about your experience. Obviously, a hospital is a hotbed of lots of things that are happening right now. But for you personally, like how has this changed your schooling and even as it pertains to this particular project, but how have you been feeling over this past year?

Braxton
It's been very interesting, going online a lot, dealing a lot with anything on the computer, Zoom calls, just anything. So, it's been affecting I guess my eyesight basically. Just looking at the computer all the time. School for now has turned into a quarter system. So before, I would have four classes per semester, and only two semesters, but now I have four different quarters, and then only two classes a day, and it's going by very, very quickly. So, I'm in the same class three hours a day, and it's just been going by really, really fast since they have just a small little time period to do it.

Michael
Do you feel that you've learned anything along the way, this process? Obviously, we were all in the same boat at the beginning, all learning, but now, we're having to prepare now for maybe another year. Have you made any discoveries on how you're going to deal with this?

Braxton
The best thing is, for me is trying to stay active, sitting down on the computer, you don't go outside, you're not hanging out with friends as much, or going out to public places. So, for me, it's really to stay active. If I have homework, or a zoom call, after or before it, I'll go play different sports, and try to get outside as much as I can.

Michael
Yeah, great. What's your sport?

Braxton
My big sport is soccer. Yeah, that's what I've been playing a lot. So, it's been weird with COVID, you can't touch each other. So yeah, that's been kind of interesting, but it's still so much fun.

Michael
Yeah, absolutely. And for anyone else that's going to be entering the Youth Innovation Showcase this next year. What advice would you give if you were to be a mentor for one of the next youths that's going to enter in the showcase? What would you tell them?

Braxton
My big thing would be to enjoy it, and don't stress so much about winning. I say enjoy, don't rush through it. Don't stress too much. Just have fun with your project. Because you're the pro with your project. No one else has done it before. So, just relax with that and enjoy it as much as you can.

Michael
Awesome. Great advice Braxton. Well, thank you so much for joining us today on the Youth Innovation Showcase podcast. The podcast, which we're going to be releasing episodes periodically as we get closer to the actual showcase. Thank you so much for listening. You can like and subscribe, you can share with your friends, and send us a message as well. We'd love to hear from you. That's all for this week's episode. We'll see you next time, until then, let's innovate!

Transcribed in part by otter.ai