



Supporting Startups in Shaping the Future of Healthcare

Speaker 1:

This is a podcast by Lumina, the perfect space to innovate, collaborate, and grow in health, science, and tech.

Rebecca Griffin (host):

Eloise Keefe, welcome to HealthTech Talks.

Eloise Keefe:

Thank you. Thank you very much for having me here. It's a real pleasure.

Rebecca Griffin (host):

Eloise, you've had an impressive career in chemistry, largely in the sugar industry. And after many years as a researcher for the sugar industry, you became the commercial business manager for the Institute for Glycomics at Griffith university. And more recently, you've taken on the role of mentor for the HealthTech Accelerator Program, LuminaX. I'd like to start our conversation today, though, by talking about chemistry. You started chemistry and forensics at university. What is it about chemistry that attracted you to the field?

Eloise Keefe:

I think my love of chemistry really started in high school. I had a phenomenal science teacher who then became my chemistry teacher and he really taught us about how chemistry played into the broader world. He'd give us these impossible challenges, and he just made science and chemistry really fun. Also is the CSI era. So that probably played into it a bit as well. I loved the science of policing and what it could do. So I think those cool bits of chemistry really drove me in this direction. And it was a toss-up actually between doing chemistry or architecture. Two completely different fields, but went with the chemistry option and haven't looked back.

Rebecca Griffin (host):

I love how you say that the teacher made it fun because it's so important. It can really change someone's perspective on science, can't it? It can be fun.

Eloise Keefe:

Yeah. Because people often see chemistry as hard, or any sciences as hard. Chemistry, maths, biology. But when you're interested in it, the hardness sort of pales into insignificance. It just becomes something that you want to work on that you're keen to work on and you've got a cool problem to solve instead of a hard problem to solve.

Rebecca Griffin (host):



And you've since worked as a researcher across a number of industries, but largely in particular sugar. What did your sugar research involved?

Eloise Keefe:

Yeah, so I was really lucky working in a researcher in the sugar industry. I worked for an industry owned research organization and I had the opportunity there to work across a really broad range of topics and applications. And so my primary area or my pet area was in developing analytical tools that could take their incredible capability of an analytical chemistry lab, which requires highly skilled individuals, millions of dollars of equipment and apply that same measurement capability out in the field.

Eloise Keefe:

So taking it to a sugarcane mill and providing that analysis in real time. So that's another aspect that was a big focus of these devices that I would develop. And at some of the testing that they would use to control a sugar cane factory might take three days to give the feedback that the miller needed.

Eloise Keefe:

So when they're using that information to control a factory, if takes three days a lot happens in that time. They're running 24/7. But with these devices that I would develop, I could give them a result in one minute. So they could take a sample, get an enhancer and then make an action or take five samples and then make an action, which makes their decision making capabilities a lot more data driven.

Eloise Keefe:

And I will say that some of the millers they've been doing it their whole lives and they could look at it a sample of sugar and tell you to within one decimal point, what the sugar content of the sugar is, as crazy as that sounds, but having that measurement capability was an added layer.

Rebecca Griffin (host):

And Louise, we talked about why you got into chemistry, but was there a particular reason that you got into sugar?

Eloise Keefe:

It's an interesting question. Initially, it was simply because I was offered a masters program that was industry driven and that was a really valuable option to me. But actually I have quite an interesting family history associated with the sugar industry. And my grandfather grew up and spent a lot of time in North Queensland. It was actually the local dentist, but if you've spent any time in North Queensland, you know how important the sugar cane industry is and how prevalent it is and how everyone knows everyone.

Eloise Keefe:



So it was a nice fit from that perspective. And then once I started working in the industry, gosh, it is just full of wonderful people doing great things and it's like a big family. So I stayed there much longer than I really planned to, but I had a really great time.

Rebecca Griffin (host):

Five or so years ago, Eloise, you became the commercial business manager for the Institute for Glycomics at Griffith University. For those of us who don't know, what is glycomics and what does the institute do?

Eloise Keefe:

So glycomics is really also about the study of sugars, the sugars in the body. So less the sugars on your donut or the sugars that you eat that most people think about in the context of sugars of the body. And it's definitely not glaucoma relating to diseases of the eye, but rather there's sugars that coat every single cell in our body. So every cell is decorated with this fuzz of carbohydrates that perform really important role in our body in allowing cells to communicate with each other.

Eloise Keefe:

So in healthy cells, your blood cell might communicate with the cell on the wall of your artery. In disease states, pathogens and cancers can exploit these communication mechanisms to perhaps invade cells or exit cells that maybe we don't want them to. So glycomics or the Institute for Glycomics looks at the study of sugars in healthy and disease states. And we focus on developing diagnostics, vaccines, and therapeutics to treat and prevent or detect infectious diseases, cancers, and neurodegenerative diseases.

Rebecca Griffin (host):

So your career has largely been centered around sugar, but in different settings.

Eloise Keefe:

Absolutely. Yeah. It's been a nice link.

Rebecca Griffin (host):

But you've also gone from more that research side of sugar into the commercial business manager side of it.

Eloise Keefe:

That's right.

Rebecca Griffin (host):

Was there a link there in the work that you used to do?

Eloise Keefe:

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Yeah, there is. There's a link across both actually. So when I was working as a researcher in the sugar cane industry, I had a collaborative program running with Professor Mark von Itzstein, who was the director of the Institute for Glycomics. And I worked very closely with Dr. Chris Davis, who's the general manager of the Institute for Glycomics. And in that project, we worked both on the science and the business side of the program.

Eloise Keefe:

There's a lot of contracts and IEP matters and things like that, that reporting that go into doing a scientific program that a lot of people don't think about. So working in an industry owned organization, I, as the research lead was responsible for all of those aspects. And I guess through that affiliation, Dr. Chris Davis saw a lot of that capability that I had, and so offered me a position to come over to the Institute for Glycomics to focus on some of those business aspects and grow my development in that area, which was a really exciting proposition and not one that I had anticipated at that time.

Eloise Keefe:

But doing research is really hard. Doing research and doing all of the enabling activities for research is even more challenging. And at a time where I feel like I wasn't being able to give really good value back to my stakeholders, I thought it was a good time to focus on one aspect and support the researchers to deliver great science. So I took the plunge and I changed industries. Very steep learning curve. The sugars that we eat are very different to the sugars growing in our bodies. But I work with a great team of people who have been very patient in teaching me their incredible science and explain it to me like I'm five. It's my usual comment.

Eloise Keefe:

I knew enough to be dangerous. So I would ask a lot of silly questions, but I'm really thankful that the researchers and the team at the Institute have trusted me to help support them in their commercial activities.

Rebecca Griffin (host):

So what does your role involve now?

Eloise Keefe:

Yeah, so I am really around to enable the commercialization or the technology transfer of the research that happens at the Institute for Glycomics that primarily focuses on deal making. So partnering institute technologies with pharma or biotech companies to take the research from the extent of our ability. So often preclinical or phase one developed assets and pass it over to a company that can take it through the clinical development and then out to market. That's often comprises things like IP management, technology, packaging, deal negotiation, contract management, post-deal management.

Eloise Keefe:

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So once we get a project off the ground, making sure that everyone is on track and we are delivering outcomes to our industry partner, because that's really critical to success. And then also supporting some of the researchers to guide some of their early stage research towards a commercial outcome and creating that commercially focused environment, which Mark and Chris have certainly founded the institute or Mark has founded the institute on, and Chris helps to create is making sure that everyone from our honors students right through to Mark having that commercial focus and getting our drugs outdoor and onto market to where the patients can use them.

Rebecca Griffin (host):

Which leads me into our next question, which is you've become a mentor for LuminaX, which is the HealthTech Accelerator Program here at Lumina in cohort on the Gold Coast. So what is your focus area as a mentor for the program?

Eloise Keefe:

Yeah. So I'm predominantly providing support in the farmer and biotech side of things of biomed tech and looking at IP management. So intellectual property, which is basically protecting those ideas of the mind that we build companies around and then also partnering with different stakeholders. So whether that be how companies can partner more effectively with universities or partner with other contract research organizations and things that maybe they should think about in doing that to make sure that they can maintain their IP and their commercial position so that they have a product that they fully own and that's unencumbered that they can take forward.

Eloise Keefe:

And then also looking at internationalization. So at the institute, we do a lot of work with companies locally, yes, but also overseas. And we work in an industry that requires global collaboration. Australia is a great ecosystem and we have excellent early stage research, but we are a small market at the end of the day. So we need to rely on our international colleagues. So as a university, we partner with international providers all the time.

Eloise Keefe:

How can we help support some of our smaller companies to access some of those markets and teach them some of the things that we've learned along the way so that they don't necessarily make the same mistakes that we do or can avoid some of the mistakes that we saw, pitfalls that we saw and were able to avoid in different ways.

Rebecca Griffin (host):

Going back to you saying about IP, I think that could be quite daunting I imagine to someone starting out. So to have your experience and knowledge in that space must take away so much of that unknown for people.

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Eloise Keefe:

Yeah, I hope so. IP is one of those areas that a lot of scientists or researchers, they don't want to know about it, so they kind of ignore it. I understand that it's pretty complex. Attorney speak can be challenging to interpret. And to be honest, for most of the scientists, it's a boring bit. And I say that with absolute love to our IP specialists who are amazing people in my opinion, but it is often one of those underserved areas for people just because there's not such a strong interest in it.

Rebecca Griffin (host):

But so important.

Eloise Keefe:

So important. Critical. Absolutely critical to success. And I think that when people devote a little bit of extra time to it, they realize that they can secure much more extensive positions than they could have imagined and can create much better market positions for themselves as a result of that.

Rebecca Griffin (host):

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Rebecca Griffin (host):

And Louise, how are we going in Australia in terms of HealthTech startups? Are we progressive with good variety?

Eloise Keefe:

Yeah, I think so. I mean, as I mentioned before, Australia is excellent at early stage research and perhaps struggles a little bit with the commercialization piece that the finding ways to take that incredible early stage research and bring it out to market. I think it's changing. I think we're improving for sure. Australia tends to have a little bit of a low risk appetite. So I think we can definitely learn from our international colleagues from the US, from Europe, where they are willing to take some risks and step out. But I think as we continue to focus on growing this ecosystem, that will absolutely continue to improve.

Rebecca Griffin (host):

And Eloise, what support do HealthTech startups need to take an idea through to market?

Eloise Keefe:

I think that this is a very broad answer. I think that one of the most important things that HealthTech startups or biomed tech startups need to succeed is a really good ecosystem, an entrepreneurial ecosystem. And I think that following on from the last question, that's something that we are working to build here in Australia, but is critical. You need an environment where you can go and ask the other guy down the road what happened for him. And an environment where researchers can see someone else is

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doing that and they go, "Oh, hang on. That's just a normal person. They're not that much more special than I am. I can do that." Success breeds success. And in this space, success doesn't mean necessarily a unicorn company. It means starting the company and doing something. So I think that that's a really important aspect.

Eloise Keefe:

I think access to capital is a really important part. And that's also something that we're very aware of in Australia. Capital is hard to come by. Capital is expensive through venture capital firms and things like that. We have some excellent firms in Australia and they provide incredible support often.

Eloise Keefe:

Brandon Capital is a good example where they not only provide funds, but they provide excellent support systems to make sure those companies are a success. And I think that's a really important part too. We have accelerators and things like that in Australia that also work to provide that support perhaps where it's not attached to the capital that comes in. So I think expertise is really important. And I think also a key part is not necessarily limiting that expertise to Australia or to your local environment, given how young our industry is here. So it's great to have good local contacts, but I think we need to learn from our international colleagues. So having access to people that have those international networks that they can introduce you to is really valuable.

Rebecca Griffin (host):

What do you believe are the key factors needed to commercialize the innovations from startups?

Eloise Keefe:

I think, again, network is a really important one. Strong leadership. So companies need great CEOs, great boards, great scientific offices, these people to shepherd those technologies and they need to be fully committed.

Eloise Keefe:

Every day, wake up, thinking about what they're doing to get this company off the ground and successful. I think that's really important. And of course they need the appropriate financial opportunities to do that as well because unfortunately money is always the key. It's the way that the world turns. So I think that those are all important aspects from the company side. But prior to that, we also need really good research to feed those companies. And that also needs really good funding, really strong leadership, really good networks, and all of those same things to make sure that we can continue to feed the pipeline of entrepreneurship and technology development, and getting the great basic research that we do in Australia out to the people who need it.

Rebecca Griffin (host):

We're talking today from Lumina, which is the Gold Coast's health and knowledge precinct. How is the Lumina development helping the growth and sustainability of the health industry?

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Eloise Keefe:

I think Lumina is a really great initiative and is doing a lot to help the biomed tech industry. I think it's the incredible vision that the state government has is the key piece there. And I'm really grateful that they've maintained that vision to pull together a precinct that's dedicated to health and knowledge and filling that. They're really committed to filling the precinct with people that contribute to that vision. And I think that that's only possible because they've maintained such great engagement with their stakeholders being the universities, the hospitals, and the local government.

Eloise Keefe:

Every one of those stakeholders is committed to that vision and it's allowing us to create that ecosystem. I mentioned the networks are such a critical part. And it's these ecosystems that help you to build those networks in the first instance in your local environment, but also every single player in that network has their international networks and you can tap into.

Eloise Keefe:

So I think that Lumina is setting a really great example for what a precinct can be. And I had hoped to think that in five or 10 years, we can put a little flag up and say, "Yes, this was a big [inaudible 00:16:58] of success and this model works." That's one of the good things about being in an emerging space in Australia in entrepreneurship and in biomed tech and things like that is that we do have an opportunity to do things a little bit different.

Eloise Keefe:

And we need to because Australia is a little bit different. We're a bit more distributed. We don't have the density in population. We don't necessarily have the big cash, but we are focusing a lot more on [inaudible 00:17:25] capability these days and so we have the opportunity to build things there. So I really like what's happening here at Lumina and I'm really pleased to be a part of it.

Rebecca Griffin (host):

So talking about the precinct, what type of companies would you like to see collocate here?

Eloise Keefe:

Yeah. Oh, what a good question. I would love ultimately to see a branch of a large pharma company, an international pharma company based here. I would love to see startups, of course, as we would expect. And particularly startups coming out of the hospitals and from the universities. I think that would be fantastic. I would also love to see international biotech companies coming here. It's both startup, but also medium size or slightly more developed by tech companies because, again, it's about bringing diversity of expertise to build that network and the ecosystem.

Eloise Keefe:

I think that there's real opportunity for that because of the incentives that the state and federal governments have towards doing research in Australia, the R&D tax incentive, excellent clinical trials

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opportunities, things like that. So I think at a very basic level, having those three tiers of company available to us, both domestic and international would be fantastic to see in the precinct. As far as types of companies, a real mix across the biomed tech spectrum would be excellent.

Eloise Keefe:

So pharma, biotech, and also med tech companies. So device companies, digital health, things like that. And then you'll get that really good pollination of ideas across different industries and you'll have start building really excellent collaborative networks between the hospitals to universities and then the companies that are based in the precinct. And also a clinical trials provider so that they can bring all of that together as an enabling capability.

Rebecca Griffin (host):

It's tough to start a company, let alone create a product at the same time. What advice would you have for a health tech startup?

Eloise Keefe:

If you have an idea, get in there and do it. Every entrepreneur that you speak to bangs that same drum is you've just got to do it. Use your networks, take advice, change your story as you need to, but just start something. It won't be perfect before you start. Get your MVP, your minimum viable product and go.

Rebecca Griffin (host):

And finally, Eloise, way back at the beginning of your career, you were a library assistant.

Eloise Keefe:

I was.

Rebecca Griffin (host):

Is reading a favorite pastime of yours and outside of chemistry, what would be your favorite genre?

Eloise Keefe:

It is. I've spent a lot of time reading throughout my life. Working as a library assistant was a great job, by the way. I love reading about social issues in the context of memoirs. Actually, I mostly read non-fiction, but I'll never say no to a good detective novel. So yeah, a little bit all over the place. I'll read anything if it's a good book, really.

Rebecca Griffin (host):

And now you're probably reading a little bit of children's fiction as well.

Eloise Keefe:

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I am. I definitely am. Where is the green sheep on high rotation?

Rebecca Griffin (host):

Eloise, it's been wonderful talking with you. Thank you so much for your time.

Eloise Keefe:

My pleasure. Thanks very much for having me.

Rebecca Griffin (host):

To learn more about Lumina and how we work with health tech startups, visit luminagoldcoast.com.au. And don't forget to sign up to receive your Lumina opportunities packed today.