WE ARE ETH – Episode 40

With Oriana Kraft, ETH Alumna and Founder of Fem Technology

[Listen to Podcast](#)

[00:00:00] Oriana Kraft: They think part of the reason Queen Victoria might have had so many children was that she might have had endometriosis. And so then they think that having those hormones meant that she was relieved of these debilitating menstrual cramps whilst she was pregnant, which is why she liked to get pregnant. But then it perpetuates a bad narrative as well of them recommending people who have endometriosis that that's a therapeutic option. Just get pregnant. Obviously not.

[00:00:26] **Susan Kish:** In this episode, I'm talking with Oriana Kraft, graduate of the ETH medical program and founder of Fem Technology, which is focused on the gender data health gap. This is the We Are ETH podcast, and I'm Susan Kish, your host. Oriana, good morning, good afternoon. Where are you joining us from today?

[00:00:50] **Oriana Kraft:** Um, good morning. I'm joining you from London.

[00:00:53] **Susan Kish:** London. Oh, great. Wait, tell me London at this time. This is early March. It must be full of daffodils and flowers everywhere.

[00:01:02] **Oriana Kraft:** It's raining so badly. I slipped on an escalator yesterday. It's not great. Yeah. Yeah.

[00:01:08] **Susan Kish:** Understood. And do you live in London or are you just visiting?

[00:01:11] **Oriana Kraft:** Um, I, I live in London for the moment, but I'm actually thinking about making a move to New York. Uh, but yeah, London at this time.

[00:01:18] **Susan Kish:** New York is the center of the universe outside of Zurich, of course. Fem Technology and FemTech are relatively recent terms. Do you think most people understand when you say FemTech, what is it?

[00:01:31] **Oriana Kraft:** I think people like to think that they know, and you still get people thinking it's fintech, so financial services, or just women in tech. So I always like ask as a first question, do you know what FemTech is? And then the problem is people are just usually very confident. They're like, yes, of course. And then 10 minutes into the conversation, they're like, wait, what are we talking about?

But more people know, definitely more people know than when I started the summit.

[00:01:51] **Susan Kish:** So, Oriana, as you said, FemTech seems to have different definitions, but can you define what exactly is FemTech?

[00:02:00] **Oriana Kraft:** Yeah, and I think part of the problem is that it has so many different definitions. My definition won't be applicable for everybody, but for me, it's just really solutions that focus on enhancing the female experience of care. So that's everything from diagnostic tools to therapies. Yeah. And cause I think people tend to define it rather narrowly as sort of reproductive health solutions and they're often digital health solutions.

And I really like that. To define it expansively. So it's not only reproductive health. It's also sort of autoimmune conditions, cardiovascular conditions, and it's not only digital solutions. It's also things like organs on a chip, um, that allow us to sort of replicate, uh, the female reproductive tract because like part of the problem that we have, for example, for a disease like endometriosis is that mice, they don't menstruate in the same way.

So it's quite hard to study endometriosis as a disease, but if you could sort of replicate the environment in a cell or like on a chip, you'd have other opportunities and avenues to explore. And yeah, like, like I mentioned, there, there are lots of different types of FemTech solutions. So it's everything from like a CBD tampon to alleviate menstrual cramps to an app to sort of track what are the triggers for autoimmune conditions to see if you can sort of at least improve the lifestyle factors or environmental factors that might be triggering it to abroad to collect digital biomarkers for cardiovascular disease.

Because like I mentioned, men and women, Uh, cardiovascular disease manifests differently, but we don't have a lot of those biomarkers for women. Um, so yeah.

[00:03:26] **Susan Kish:** So some of the anecdotes that you describe really as a woman who's gone through the health care system resonated. I still remember in college. Going to a physician on campus, I went to Harvard as an undergraduate, and complaining about these debilitating cramps that just would wipe me out. And he basically said, if you had a baby, then they'd reduce.

[00:03:47] **Oriana Kraft:** I, yeah, I think that's actually, that, that was something that I learned in medical school, which I was shocked about, that they think part of the reason Queen Victoria might have had so many children was that she might have had endometriosis, and so then they think that having those hormones meant that

she was relieved of these debilitating menstrual cramps while she was pregnant, which is why she liked to get pregnant.

But then it perpetuates a bad narrative as well of them recommending people who have endometriosis, which you may or may not have had, that that's a therapeutic option. Just get pregnant. I mean, obviously not. Yeah.

[00:04:17] **Susan Kish:** Exactly. Not when you're 20 years old. No, that wasn't going to be an option. One of the things I read about on your site was something called the FemTech Guide. Can you talk to us about that?

[00:04:26] **Oriana Kraft:** Yeah. Basically it comes from this notion that women's health is quite expansive and a lot of the ways employers are approaching women's health is quite reactive. And not proactive so everybody is in adopting fertility benefits now because that's very in vogue or everybody's adopting...

[00:04:41] **Susan Kish:** Unless you're in Alabama.

[00:04:43] **Oriana Kraft:** Depending on where you are, right?

But so it's it's very reactive in terms of like what is everybody else doing? What is everybody talking about? It's not reflective of the actual needs of the employee population and this notion that really, healthcare is not one size fits all. So, the idea with FemTech Guide is to aggregate cutting edge solutions in women's health, whether that's research, best practices, or actual solutions, kind of like the ones I mentioned, like a CBD tampon for period pain, and connect it to women on the basis of their condition.

And this is, and it's for employers to offer, because off the back of that, they get those insights. So they start to understand where are my employees facing obstacles to getting a diagnosis? Where are they facing obstacles to accessing care? What solutions are they actually engaging with? And also what is the prevalence of these conditions, right?

So part of the challenge is that employers are very reticent sometimes to adopt these solutions because they don't want all these points solutions and...

[00:05:33] **Susan Kish:** what's a point solution? What does that mean?

[00:05:36] **Oriana Kraft:** It's like a solution that basically would only tackle or be applicable to a specific type of employee. So like a woman with endometriosis, they wouldn't, even though it's shown that women with endometriosis lose on average 10. 8 hours of work weekly. Yeah, actually, 10. 8 hours of work weekly, of which 6. 4 hours were lost due to presenteism and 4. 4 hours per week lost to absenteeism. Um, but basically it has a huge impact, both in terms of productivity cost and economic cost. And, but they don't want to adopt a solution like that because, the amount of people it would be applicable to in their mind is so small, but they don't,

they're not seeing, okay, what are the actual needs of my employee population, which is different, right?

You know, there's a lot of workforces that don't have 50/50 representation women to men or have a younger workforce, have an older workforce, right? Um, so what are the actual needs? What is the actual prevalence? And then what is the actual like cost and burden of this condition, right? Not just what is, what is this one size fits all approach I can take, but what do people actually need and what will actually have an impact.

[00:06:34] **Susan Kish:** Tell us the story of how you came to focus on this question, because it sounds like you were reading a textbook and got annoyed at some data health gaps, but tell us the story in your words.

[00:06:46] **Oriana Kraft:** Yeah. So, I mean, I studied medicine at ETH actually in gynecology class was the first time that I learned about endometriosis or PCOS, which impact 10 percent of the female population respectively. And the first thing that bothered me was that if I was impacted by those conditions, the only way to learn about them was in medical school, which most people don't have access.

And then the second thing was this, this program at ETH is very much focused on sort of designing the future of medicine, which is what drew me to it, right? You have a little bit of programming or a little bit of mechanical engineering. Um, and you know, the very startup focused, but when it came to women's health, it was just kind of like, this is the status quo.

You have horrible debilitating periods if you have endometriosis, the diagnostic methods aren't that effective. There's no real solutions that exist moving on. And then I was like, wait, what? This is, this is something that impacts 10 percent of the population, but, and we're just like not going to address it.

And then the, the deeper I went into the topic, the more I understood things like endometriosis and diabetes impact the same amount of people, but we spent four weeks on diabetes and 45 minutes on endometriosis. And there's like 200 Dollars of research funding that go into diabetes for every 1 Dollar for endometriosis.

And that just, that didn't sit right with me, especially since I was drawn to studying medicine because I wanted to improve the patient experience. And then, yeah, we had this opportunity to do a translational research project at the end of our bachelors.

[00:08:06] **Susan Kish:** What is translational research? What does that mean?

[00:08:09] **Oriana Kraft:** So it's basically going from bench to bedside, taking scientific concepts and like trying to, yeah, improve the patient experience. And what the most projects that were suggested were a lot of like working in labs. I don't like working in labs. And so, yeah, I asked my professor if I could organize a conference,

uh, bringing together like researchers, startups, um, clinicians to provide a 360 degree perspective, yeah, on innovation in women's health and it's um, sort of snowballed and, and grown from there.

[00:08:37] **Susan Kish:** Fantastic. So it started from a problem that you saw and the realization you could actually probably do something about it.

[00:08:44] **Oriana Kraft:** I don't even know if I at first thought I could do something about it. I just wanted to learn about it. And we weren't learning about it in class. There was just no time allocated to it. And so I got the chance to learn from sort of experts in the field. Like I had the founder of gender medicine speak at my conference, like the pioneers of like Clue, which was the, who coined the term FemTech at my first conference.

I just, like, I wanted to talk to these people.

[00:09:07] **Susan Kish:** I love this idea that you wanted to pull all these different people together, exchange the perspectives, really get a three, as you said, a 360 degree view of the problem. Tell us about that first conference.

[00:09:16] **Oriana Kraft:** Yeah, I think it wasn't even that I thought I could do something about it. Initially, I just really wanted to learn from these people that, that we're doing something about it. And I got really lucky, I think, cause it was Corona and the pandemic. And so

[00:09:29] **Susan Kish:** Was it was a zoom conference.

[00:09:31] **Oriana Kraft:** Yeah, yeah, yeah, because it was COVID. It was full COVID.

So I think that was part of it, right, was timing. Three years ago, people were not talking about this. And so the people that were so desperate and so hungry to have anything they could connect around. And then it was also COVID. So people were just willing to say yes to, I think, random, strange things. So I had, I had these, like, really influential people speak at the first conference. And then I also had 700 people attend virtually from 36 countries. Um, which I think just for this weird bachelor's thesis was, was pretty cool. Yeah.

[00:10:04] **Susan Kish:** That's extremely cool. And was the ETH, how was the ETH engaged?

[00:10:09] **Oriana Kraft:** Well, so it was called, the first conference was called the ETH Zurich FemTech Summit, and it was under the guise of my bachelor's thesis. That was about the extent of involvement. It was just that I was allowed to do this instead of working in a lab. So it was more that I had free time to, to pursue it.

Yeah, and then I reached out to lots of associations and actually at the, in the, on the Polyterrasse, it was advertised and there were like some ads on the buses. Yeah,

[00:10:33] **Susan Kish:** Oh, that's very cool. That's very cool. So having had a remarkably successful first time conference, and it probably did help to have the ETH Zurich name on it that first time. What did you decide to do, or how did you decide to take that initiative forward?

[00:10:50] **Oriana Kraft:** And no, for sure it did help and then they also helped with kind of sending it out to the fellow medical students and stuff and, and getting traction that way. Where, how did I decide to develop it? You mean, I think the thing...

[00:11:02] **Susan Kish:** Because you could have just done it that once, which was what your bachelor's thesis was about, and then pursued the, um, improving the patient experience, which had been your original motivation. But it sounds like you decided you had something there and needed to take it forward, and I, I just was interested in learning out why and in which directions.

[00:11:21] **Oriana Kraft:** Yeah, so at first I didn't want to continue it because it was so much work. I didn't understand how much work it would be. But then

[00:11:28] **Susan Kish:** These really are a lot of work.

[00:11:29] **Oriana Kraft:** Yeah, I mean, I had no idea it was the first time I'd ever done anything like that. I kept getting emails basically and LinkedIn requests and people asking me when I was going to do the next one or that they would like to help support me.

And I was like, I mean, I don't get what people are not getting. There's no second edition. But I think for me it was that I wanted to sort of enter into improving the patient experience from the startup dimension. And then this just was such an interesting field and it was a field that was applicable to me as a woman.

Like I, I grew up in Switzerland, right? And my dad was a doctor. And I went to medical school. So the quality of care that I always experienced, I always assumed that I was sort of an equal citizen when it comes to health care and that I was only going to ever have the best experience possible. And then being introduced to these sort of shocking statistics and like disparities that slowly became clear that that wasn't the case.

And then I think it just kind of gave me a kick in the butt that I kind of felt Hey, I want access to equal care. I need to do something about it. Um, so it initially started as organizing a second edition of the summit, uh, where we had, I think, 1, 500 people attend. Yeah. From over 60 countries and sort of like unicorns in the FemTech space.

And that was the start of sort of our collaboration with Roche as well. And then it also extended into a university series where we did sort of events at Harvard business school, at ETH, at Imperial, uh, you know, At King's College, at Morantix's AI campus in Berlin. And then, then there was a third edition of the summit, which we hosted at Roche, which was an invite only event with 150 innovators in women's health from across the globe to tackle collective pain points.

Um, so things like AI in the gender data health gap, ESG alignment for women's health, women centric cancer care, uh, redesigning healthcare with women in mind, and we've actually had some pretty impressive outcomes out of that. So, like, the redesigning healthcare with women in mind pledge. And that got adopted at the World Economic Forum as part of their, one of only two things that they have as an official platform on women's health.

Actually talking about that pledge was the first time women's health was on the center stage at the World Economic Forum, which is, yeah, which is quite cool. And the Women's Center Cancer Care two weeks ago was presented at the U. S. Chamber of Commerce.

[00:13:42] **Susan Kish:** Very cool. Let's talk about Roche because it sounds like they did some really interesting research. How did you start working with Roche? And what's the role of a big pharma giant like that in a field like this?

[00:13:55] **Oriana Kraft:** So it was actually two folds, um, because Roche is a big organization. Maybe I'll start with the ETH connection because they happen simultaneously. McKinsey had just published a report on the gender data health gap. And, uh, somebody working at the ETH Entrepreneurs Club who had just started interning for Roche, uh, discovered this report and was like, oh, this is really untapped need.

So then he Googled FemTech and then he came across the ETH Zurich FemTech Summit. And so then he just added me on LinkedIn and I'll, I wish, and normally I don't accept people who don't like submit a request, but then I was like, okay, he seems like he went to the same school as me. Probably I know him. So I accepted him.

And then he was like, hey, I'd love to talk to you. And then that's like how they were doing sort of, he was working for the innovation team and who had started looking into women's health and that was a parallel. And then another one was I had met the women's health lead, uh, at Roche at a conference And I had actually cold reached out to her.

I didn't really understand what Roche did or anything, but I was like hey, I'm doing this conference, you should come. And then it's just now, now I'm like quite well integrated and embedded into that ecosystem. But it was very random. I think it was just like a willingness and an openness. They're really committed to closing the gap.

I think it's just hard because there's a lot of like basic translational research that's missing in women's health. But the fact that they're making such public statements about women's health and really committed to exploring the different areas where they can make a difference sends sort of like a powerful statement.

to the ecosystem and also more widely because it makes people think if they're doing something about it, maybe there are opportunities there. We should be looking more into it. And, um, it also in terms of like venture capital funding, it makes VCs think, okay, there's exit potential because there's a big pharma giant that is, uh, interested in the field.

[00:15:36] **Susan Kish:** That's a great point. ETH medical program. Have you talked with them about looking at their curriculum or I think there was a great statistic that in all of the textbooks, something like 38 percent or 36 percent are identifiable gender images are women. You know, there were some amazing stats about the classic curriculum at a medical school on these topics.

What do you think an ETH could do about it?

[00:15:59] **Oriana Kraft:** I think definitely ETH could be a pioneer in the space. Maybe they are, maybe they have revamped it since. I don't, I don't know. I'm not, I'm not going to, to school there anymore. But in the same way that they've placed an importance and said, hey, you guys need to be learning Python, you need to be learning R, you need to be learning, you need to be taking mechanical engineering courses because this is the future.

They could say, sex specific care is the future, and I think it is the future if we're talking about precision medicine. Sex is a precision medicine factor, right? Um, so I think in terms of prioritizing the agenda, um, and integrating it into each organ system.

[00:16:34] **Susan Kish:** What does that mean? I don't know what you mean when you say each organ system.

[00:16:37] **Oriana Kraft:** Yeah, so there's sex differences in every single cell in the human body, which means that the way women and men present is completely different, which also means the diagnostic tools we should use are different. Um, so one example of that is cardiovascular disease. The diagnostic tools that are used can sometimes say that women are not having a heart attack when they in fact are, just because like, one example is the cardiac troponin levels would be lower in women than in men, so the, the the diagnostic cutoff and threshold would say women are not having a heart attack when they in fact are because it's based on the male body.

Um, and that's a very, that's a very specific example, but even like more, more broadly and wider the way women and men present just like the typical symptoms are different. And that goes across each organ system in the human body. So also in terms of diabetes in terms of lung cancer, but that's not integrated.

They just present these symptoms or these diagnostic tools or therapeutic options as if it's one size fits all. When, what that really means is we're basing it off of like white male bodies.

[00:17:36] **Susan Kish:** Mentioned that you were starting a new startup in this, and some of the stats that I read gave me the sense that there are some significant opportunities for growth and for, for companies within the FemTech field. I read something about getting as much as 60 billion market by 2027. I think you quoted that. What are the opportunities for this?

[00:17:57] **Oriana Kraft:** They're tremendous. It's literally, it's an untapped market. Because I think, Um, what people have traditionally defined as women's health up until now has been things like period trackers, right? Which is, as I've just outlined, it goes across the whole organ system and people are exploring it in different ways, right?

In terms of workplaces, in terms of research opportunities. The growth, yeah, I think the growth potential, I actually really love this quote from the Amazon CTO where he said he thought that FemTech could allow healthcare to like leapfrog to do it right from the outset. I think it could be sort of usher in a new era of precision medicine.

And because Transcribed Women's health is, is at ground zero. There's so much fundamental information that we're lacking, but, and it's, this awareness and this attention of that fact is happening at the same time as these incredible tools are being developed, right? AI or organs on a chip. So we could probably, I feel like if we're, um, focused and motivated enough, sort of design women's health right from the get go, yeah, build it

[00:18:56] **Susan Kish:** And do it on a compressed timeframe?

[00:18:58] **Oriana Kraft:** Ideally, but...

[00:19:00] **Susan Kish:** Well, given, um, the acceleration that some of the AI is showing in other fields of research. That seems feasible. look hesitant. You have a question mark.

[00:19:12] **Oriana Kraft:** Think people, it's just, there's, it's been quite well studied, right? That there are AI can. introduce sort of like biased outputs. So one example was UCL did a study. The NHS used an AI tool for liver cancer detection and the rate of, uh, you know, missed cases was like double for women as it was to men.

Um, I think another example is a sort of, I talked briefly about sort of women centric cancer care, and that's because there's an example where there was a large scale cancer center, uh, doing brachytherapy and they compared the amount. of women and men that were asked in patient reported outcomes about their sexual function following sort of radiotherapy and 89 percent of men were asked versus I think it was 0 percent of women.

Um, and so then if you train an AI model on that and you don't understand that there's this missingness of data, it could think we don't need to ask women. About their sexual function following brachytherapy when that's obviously not the case, right? So yeah, I think it just depends if we're really thinking about it, and I'm not sure that we are Yeah,

[00:20:18] **Susan Kish:** You, you're involved with something called the Women at the table, a Geneva based organization, and they put out a really interesting report last fall. Can you talk a little bit about the findings from that report?

[00:20:29] **Oriana Kraft:** So the AI and gender data health gap report that was a sort of an outcome of the FemTechnology Summit We did with Roche because we did a workshop on AI and the gender data health gap and there Yeah, it was just sort of going into detail about how these data gaps exist at every echelon of the healthcare industry, from clinicians to researchers to patients to startups, and how that impacts care, how that impacts delivery modalities, and how now with AI being adopted, I think there's something like 90 percent of U. S. healthcare systems already have plans to integrate AI into sort of existing clinical workflows. If we're not thinking about these data gaps. It's just going to perpetuate these existing biases. It's going to entrench them, right?

[00:21:12] **Susan Kish:** It seems you have an identity in medicine, you have an identity as an entrepreneur, and you also have an identity sort of as a data scientist. How did ETH prepare you for what you are doing now, or what you hope to do?

[00:21:23] **Oriana Kraft:** And well, allowing me to do the summit, definitely.

[00:21:26] **Susan Kish:** It gave you the freedom to pursue that, yeah?

[00:21:29] **Oriana Kraft:** I think also, just more, which is why I chose ETH as a school originally, that I was exposed to people doing sort of computer science and different degrees, and there's a lot more of a startup culture. So I think less so in medicine, it's also a new degree program, but being able to, you know, um, meet people in computer science and mechanical engineering who were keen on doing startups and keen on solving problems and had much, much more of this bias to action.

That definitely. Yeah. And I, and I think, you know, ETH is supportive of its alumni, right? Like the ETH AI center had let me do a panel at Davos on the gender data health gap and that's an incredible opportunity. Right. So yeah.

[00:22:08] **Susan Kish:** Oriana, thank you. That was a great conversation. I learned a lot. And, um, I'm wishing you the best in terms of whatever comes next on, um, Fem Technology and your mysterious startup. So I'm going to ask a couple questions just to close this out. When you were growing up, what did you want to be when you were an adult?

[00:22:26] **Oriana Kraft:** I wanted to be a writer.

[00:22:28] **Susan Kish:** A writer. What kind of writer?

[00:22:30] **Oriana Kraft:** Fantasy. So I did write. In high school, actually, I went to school in Geneva, and they have this thing called extramuros, and if you have high enough grades, you can just finish school in February and come back in September and do whatever you want. In the coming months, obviously, it has to be an approved project, and so I wrote two novels during that time. Yeah.

[00:22:45] **Susan Kish:** Certainly romanticy is quite the genre these days, so that was a great area of study. What are you learning about today? What are you curious about today?

[00:22:55] **Oriana Kraft:** I think the intersection of science and art. I don't know. I'm curious about lots of things, but I always really loved sort of Wired and how they made like complex scientific topics really accessible through sort of art and storytelling. Um, and in general, I think art sort of holds up a, like a mirror to society and science shapes society.

And so I think sort of more actively incorporating the two would be really powerful. So always on the lookout for great resources for that.

[00:23:23] **Susan Kish:** Very cool. What are the books that you're reading right now?

[00:23:27] **Oriana Kraft:** I don't read as much as I used to, which is unfortunate. I think, like, my favorite fan, favorite fantasy novels are, like, Circe by Madeline Miller, which is a retelling.

[00:23:35] **Susan Kish:** That was great.

[00:23:36] **Oriana Kraft:** Yeah, and Pachinko is really great. Yeah, I don't know, I read some Oprah recently, which was nice. I don't know, a lot of... I just turned 25, so a lot of, I think, like, quarter life stuff.

The defining decade that you should be doing when you're in your 20s. I don't know.

[00:23:52] **Susan Kish:** Anything's on that list what you should do in your 20s?

[00:23:55] **Oriana Kraft:** I think it, I didn't really like it because it was a little bit, yeah, it's time to get your act together. Um, what you do now defines the rest of your life and yeah, well, so that was kind of the tone of the book and I was like, yeah, but also, I don't know. Yeah.

[00:24:10] **Susan Kish:** Don't believe that one. When you're in Zurich, what's your favorite place to go? Is it at the ETH? Someplace else? A coffee shop?

[00:24:17] **Oriana Kraft:** So I live, uh, Kleine Freiheit, which is, uh, just next to the Polyterrasse. So like, I used to live in an apartment, literally a two minute walk from the Polyterrasse. And there's this little, little cute island in the middle, right next to the Polyterrasse that serves falafels and like hummus and dips.

And they have like ski, ski gondolas there. It's like my favorite place. And then otherwise there's this coffee shop that I'm addicted to that I'm blanking on the name. Yeah, I'm blanking on the name, but yeah.

[00:24:44] **Susan Kish:** If you remember it, just send it to us in a, in an email. Well, listen, Oriana, thank you. That was a great conversation. Really appreciated your time.

[00:24:52] **Oriana Kraft:** No, of course. Thank you for having me. Thank you for having me.

[00:24:55] **Susan Kish:** Delighted. I'm Susan Kish, host of the We Are ETH series, telling the story of the alumni and friends of the ETH Zurich, the Swiss Federal Institute of Technology.

ETH regularly ranks amongst the world's top. Top institutions and universities in the world with cutting edge research, science, and people. The people who were there, the people who are there, and the people who will be there. Please subscribe to this podcast on whatever platform you listen, and give us a good rating on Spotify, Apple, or YouTube if you enjoyed today's conversation.

I'd like to thank our producers at Ellie Media and the ETH alumni, and thank you, our listeners, for joining us.

Links to topics mentioned in the episode:

- [Circe by Madeline Miller](#)

- [Pachinko (TV series)](#)

- [FemTechnology Summit](#)