Episode Title: Biotech's Emergence in the EU and Globally -- A Conversation with Dr. Claire Skentelbery

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Lynn L. Bergeson (LLB): Hello, and welcome to All Things Chemical, a podcast produced by Bergeson & Campbell, P.C. (B&C®), a Washington, D.C., law firm focusing on chemical law, litigation, and business matters. I'm Lynn Bergeson.

This week, I sat down with Dr. Claire Skentelbery, Director General of EuropaBio, the European Association for Bioindustries. Many of you may know Claire from her prior role as Director General of the Nanotechnology Industries Association (NIA), where she energized that Brussels-based trade association to new and exciting heights. Claire has brought her considerable scientific, science policy, and trade association management skills to EuropaBio at an exciting time, as biotechnology is widely recognized to be a pivotal component of the European Union's (EU) commitment to sustainability. We cover a lot of territory in our conversation and discuss evolving perceptions of biotechnology in the EU, how biotechnology is advancing the EU's commitment to sustainability and circularity, and what's next for biotechnology advocacy in the EU. Now here is my conversation with Dr. Claire Skentelbery.

Claire, I'm so glad to be able to catch up with you today. I'm thrilled that you accepted the invitation to join us in the studio and engage in a conversation.

Claire Skentelbery (CS): Oh, that's really kind, and it was great to hear from you because we work in different sectors now, but many of the core elements of them are exactly the same.

LLB: That's exactly right. For the benefit of our listeners, maybe you can tell us a little bit about yourself. It's clear to me, knowing you for as long as I have, that you have a passion for science and business and seem to have found your calling in managing trade associations that are committed to scientific endeavors. Tell us a little bit about yourself.

CS: Yes. It's an interesting pathway, but as ever, you set off with one intention and end up somewhere completely different. I started off with a degree in agriculture and a Ph.D. in biochemistry and fell sideways into, really, scientific communication. And as part of that, I

started to work in an emerging biotech cluster in the UK (United Kingdom), in Cambridge, working with lots of small companies. And that was really the beginning of the commercial biotech boom in Europe, way back in the day.

And it was amazing to see really talented scientists and really talented businesspeople turning brilliant science into something that could be developed all the way through to a product or a patient, because it was primarily in health care at that point in time. We had -- the Human Genome Project was producing loads of outputs, and there were lots of small companies starting off the back of our advancing understanding of genomes. And so that really got me excited in that the science is always going to be amazing because no non-brilliant science progresses further, but it was what you then do with that science. And looking at the small companies was amazing, the passion and the expertise that people brought to it, and that I could then help them go further by helping them network, making them more visible, enabling them to be in the right place at the right time with the other people that they needed to speak to. And that really got me -- got me very active within scientific associations.

I set up my first association with a brilliant group of people, I think all the way back in 2003, called the Council of European BioRegions (CEBR), which was a network of biotech clusters across Europe. That really taught me so much about how you grow and facilitate science and business interactions across different countries, across different sectors, different types of people. And you find where your own value is there.

That sort of led me to move from the UK to Belgium, into Brussels, and I took on more and more science and trade associations because I discovered that I really enjoyed facilitating genius-level people and helping them do something that they probably wouldn't be able to achieve on their own. And that really, after ten years of doing this, I just woke up and realized that actually I'm an association manager, rather than anything else, which kind of allowed me to --

LLB: **--** just woke up and discovered that!

CS: Yes, it was like, "Oh, this is actually what I do!"

LLB: Aha!

CS: When I speak to kids at schools and stuff like that, when they go, "Yes, I want to be this" or "I want to be that," it's like, "Well, just see where it takes you. See what you like. And one day you'll probably realize that you've actually been doing the thing that you were destined to do for some time but hadn't realized." That's been a really interesting, diverse pathway and one that is enjoyable every day because it brings science challenges, business challenges, human relationships challenges. You have to make everything work around the science for the science to work.

LLB: Oh, absolutely. And I guess that's what joins our respective pathways somewhat. Our legal practice here focuses on commercializing innovative technologies, nano, bio, syn bio, and so forth. But what makes you so unique and I think just extraordinary, Claire, is you've integrated managing people, issues, emerging technologies, and you do so just so brilliantly. That's what makes you special.

CS: That is extremely kind of you to say.

LLB: It is extremely accurate, Claire. I think you've already answered my next question because you and I worked together when you were Director General of the Nanotechnology Industries Association (NIA). Since then, we've been deeply engaged in commercializing and recognizing the U.S. Environmental Protection Agency (EPA) and the U.S. Food and Drug Administration (FDA) in the EU's regulation of nanomaterials, but it sounds like your move from nano to bio is really kind of a return home for you. Yes?

CS: Yes, I think so, because I always worked in biotechnology across different sectors. But the opportunity to run the NIA was one I couldn't pass up. It was a really amazing experience, and it taught me a lot as well about essentially what may be not scientifically emerging, but an emerging commercial presence for something, because many of the issues and the pathways and the challenges that they have between nano and biotech are exactly the same. And in a lot of ways, biotech had trod the path a long time ago that nano was trying to tread now. Regulatory structures are changing around nano, with changes in [the EU's Registration, Evaluation, and Authorization of Chemicals (REACH) regulation. There was the public perception issues around nanomaterials, and a lot of those had, in fact, been done several decades ago or experienced several decades ago in biotechnology.

A lot of the understanding and learning was that -- not that people were going to be surprised by pushback or resistance. It's useful to understand a pathway that an enabling technology has to take. And that's not just the brilliance of the technology, because, like I said, it's always brilliant. It's foreseeing where barriers will arise that have got nothing to do with technology itself, but with how it is perceived, how it changes business models. And biotech had been doing this for several decades, and nano was just sort of leading into this pathway now. So, yes, it was really amazing to work in nanomaterials. And that then enabled me -- the added experience there enabled me -- to move back into biotech and a role in an association like EuropaBio, which is bigger and has been around for 26 years and is like the granddaddy of biotech associations in Europe, because that by itself brought a new level of activities that we needed to achieve that I couldn't have done without my experience in the NIA.

LLB: You raise a lot of very interesting points that I think when we were more engaged in nano issues in 2008, 2009, and years thereafter, we often look to lessons learned from the biotech experience. And it sounds like you have done so as well, that there were mistakes made, to some extent, and lessons learned in rolling out innovative, edgy technologies like nano, here in the United States and also in Europe and globally. Do you see that your job has changed significantly, or has the public been acclimated, as it were, to evolving technologies as a matter of routine, like technologies are always going to involve? But maybe have we gotten better at educating and demystifying technologies, or are we making the same mistakes over and over again? What's your view?

CS: I think things are different now because I think when you go all the way back to when biotech was first emerging as a technology -- and again with nanomaterials as well -- it was pitched as a technology advance, rather than a societal pull. It was a technology push rather than a society pull. And I think with recent -- when you look at where we are now, we have had COVID, we have climate change really, really showing you what it does to your food and your supply chains. We have the Russian invasion of Ukraine. People can suddenly see where extreme stresses are in the comfortable framework in which they live. So when the stuff is not on the shelf and you understand that it's stuck somewhere really far away because of a supply chain break, or it's [that] you can't grow the plant that you wanted to anymore because the -- now the climate, it doesn't allow you to do that. You can see the

manifestation of what happens to your food supply, your energy supply, your consumables supply.

I think that is where -- we are now in a slightly better position to go, "By using these technologies, we can overcome this." And I think that's where we're seeing more public engagement and understanding. And it's -- we can present a more evidence-based narrative for how it helps people access materials, have access to sustainable and safe food supply. It's interesting that all of it -- COVID, Ukraine, and climate change -- now give us the examples where we say, actually, this technology is the solution to this. It's not just a nice to have, it's a must have. And people are looking at it differently then.

LLB: Right. Do you feel the same way with regard to governmental agencies that are required to review, approve, or acknowledge in some way potential risk posed from emerging technologies? And non-governmental organizations (NGO), are they as receptive as the public seems to be warming to technologies that offer solutions to these problems? Or is there still some pushback in the EU in those camps?

CS: Those kind of organizations? A really broad spread. You've got increased recognition that your very specific aspects of technology are actually the most -- the best way to fill a gap, because just -- and Europe is learning that you can't fix something by simply taking something out of the equation. It has to be replaced by something else. You can't reduce pesticide use and expect your plant quality to be the same as it was before. You have to replace that or compensate for it a different way. And I think with the strain you have on energy now, we have access to fertilizers, access to all the inputs that made, say, food supply, for example, be secure and consistent. You can't just take bits out and expect it to function the same. I think increasingly, some NGOs are more understanding that these types of technology are the right ones for the circumstances that we have now, but will always be rightfully challenged to show that they are safe. But I think there's more of a willingness to hear the information that comes out of science and industry about this.

LLB: Claire, let's pivot now to talk about your constituents. EuropaBio seems to represent two main aspects of the biotech industry: industrial biotechnology and health-care biotechnology. Maybe you can tell us a little bit about the applications of both of those and also tell us how you divide your time -- equally, or is it episodic, or how do you allocate your considerable energies in both of those biotechnology sectors?

CS: Fortunately, we have a team full of really good experts and team players, so I don't have to allocate my activities 100 percent of the time to either of them. But essentially the structure of EuropaBio is we work in two main sector councils, so we have health-care biotechnology, and we have industrial biotechnology. But of course, neither of those are as simple as they look.

Our Healthcare Biotechnology Council, that brings together members -- companies in particular -- of all shapes and sizes, from early-stage health-care startups through to sort of global multinationals, who are working very much into perhaps selling gene therapies, for example. We really focused on the biotechnology aspect of biopharma. We're not a small-molecule association. And really a lot of the challenges and priorities around that are ensuring that a very different type of technology is actually able to progress through to patients and through to health-care systems, because this -- it doesn't function in the same way as previous small-molecule therapeutics. It's a very different type of technology if you're looking at cell and gene therapy, and it has a different regulatory pathway, different patient access, certainly different costs. Because you're looking at -- it's an emerging

technology in terms of its market presence, but it behaves in a very different way than having a sort of lifelong course of a particular type of medication that could be a relatively low cost over 25 years.

You've got costs stacked up front, and then the sort of curative and disease-modifying nature of those types of technologies means that you then have much lower costs down the line. It's about -- it's not only the science of this development -- it's also how very long-standing preexisting health-care structures and health-care procurement processes deal with such a different model of health care. And these types of applications in health care can go much further than existing unmet needs. We're able to look much further into rare diseases, for example. And that brings its own challenges, because it's not only the science and regulatory pathway and the access to patients; it's the fact that there are so few people in this particular category for this type of therapeutic. It's about how you really supercharge your ability to work across borders, to bring data together, because that's an additional layer than having a sort of high-incidence use of that therapeutic. So that's really interesting from a health-care perspective.

And on the industrial biotech side, we have a council dedicated to industrial biotech, and that is not a destination sector. That is multiple sectors where industrial biotechnology can be used, and increasingly so, because as we really enter the era of sort of a biobased revolution, you can look at previously petrochemical-driven processes and they can be replaced by bio-driven, biomanufacturing, and bioprocessing, which brings a huge economy of resources put in, allows you to create complex, detailed outputs that were not possible before, through a sort of fossil fuel- or petrochemical-derived process.

It's a manufacturing revolution in many ways. And that happens in food, materials, fuels, crop protection. There's so many different applications, and our member companies there really come from all sectors. So that's a multi-sectoral technology, as opposed to the health care, which goes into health-care applications. It's incredibly broad, and they're both growing in different ways and at different scales.

LLB: No, that's super helpful. And I took a look at your very, very, I think, clear and helpful web page, and I saw a fair number of explicit goals for the organization. Maybe you can help our listeners understand what they are and what exactly you are doing to achieve them.

CS: Yes, it's always a good question, because we sit -- we are a biotechnology association. We represent the development of biotechnology within industrial development and applications. So again, as I said, we work across sectors, while really our overall overarching goal is to ensure that the innovation pipeline is broad and it keeps flowing for biotechnology. Disruptive technologies from the really deep research base that Europe has can always be moved into a pipeline, and that doesn't happen on its own or by the strength of the science on its own.

I've always said, since the beginning of my career, you don't have a product until somebody pays you for it. You don't have a therapeutic until it impacts a patient. It doesn't matter how great science is, unless it can progress, you don't have a product. What we try to do in EuropaBio is ensure that the legislative framework enables the flow of technologies and that the regulatory framework is very closely bound up with that. You have to be able to move a technology to its intended destination with sufficient clarity and certainty that you can persuade people to fund -- invest a significant amount of money to help you get it there. It's about taking in the amazing technology push that comes right at the beginning and enabling a framework of incentives, legislation, and regulations that enable a significant market pull,

so that you can bring really complex technologies that really defy regulatory development at the moment through to a target patient group, for example. And that takes partners across all of -- there are stakeholders *everywhere* in the landscape for this. And you talk with the regulators themselves. Within Europe, you're talking to policymakers at national and European level as well. There are multiple people that need to align to enable this to happen, and that's really what we try to do in EuropaBio.

LLB: Well, it's an excellent segue to my next question. EuropaBio's primary focus seems to be in Europe, with the EU and countries located in the continent. But it also seems, based on your explanation and some of the references I saw on your website, to represent members in trans-Atlantic and worldwide forums. Question for you: Are you active in the United States? And if so, do you advocate and collaborate with foreign partners as a matter of routine? I would think, yes, based on your explanation, but please, please help us out.

CS: Yes. Absolutely. I mean, biotechnology is not a national or a regional activity. It's *always* global. What happens in Europe impacts what happens in the United States; what happens in the United States impacts Europe. So yes, our members are primarily here because obviously they want to operate in Europe, and the EU is the sort of core of that. But all the countries around it, such as the UK, Switzerland, Norway, who are not direct EU members, are still closely bound with the pathway for EuropaBio. We represent members from all of those countries directly. We have a lot of non-European members as well, but they tend to be active in Europe, which is why they're part of EuropaBio. We have a lot of U.S. biopharma and industrial biotech company members, but they are part of us because they are active in Europe.

LLB: I see.

CS: But that said, we work very closely with the International Council of Biotechnology Associations, the ICBA, and we are actually Vice-Chair of that platform at the moment. And that is a global coalition of national biotechnology associations. And within that, we look very specifically at activities at global level that impact the development of biotechnology. You know, the perfect example right now for that is the [World Trade Organization (WTO) Agreement on Trade-Related Aspects of Intellectual Property Rights] (TRIPS) waiver, because that's been underway, that's been rolling on linked to COVID vaccines, and it's now rolling further to be considered for diagnostics and therapeutics. And this is something that surpasses either U.S. activities or European activities. This is global impact for biotechnology.

We champion things like [intellectual property] IP at all levels because it all is inherent to the value of a biotechnology process and its investability to reach where it needs to go. We're very passionate about the role that IP plays in enabling biotechnology to get where it's going. We work with a bio organization in the United States, which is brilliant because they're very active in the ICBA. But I think together with them we can also act as a hub for more global applications as well, because there's so much to learn between the two territories as well, between the EU and the United States, they really influence very significantly what happens globally. I think it's a huge responsibility of both territories to make sure that they pull more in line, whether that's aligning language, aligning where they need to get to. I think it's really important because we can also both learn from each other.

LLB: Absolutely. In that regard, I'm sure you in Europe -- you're a Brussels-based organization -- and here in the United States really saw as a triumph President Biden's executive order (EO) on advancing biotechnology and biomanufacturing innovation, modernizing regulation

under the coordinated framework. Here in the United States, a coordinated framework has long been the subject of scrutiny and some confusion. It was updated most recently a number of years ago, but in reading this EO, it's pretty clear that the Biden Administration is of the view that work remains to be done. It can be -- regulatory burdens can be streamlined all the more. It can be demystified by just being clearer in terms of how innovators can commercialize their products. How is the EO viewed in your neck of the woods, Claire?

CS: From my own personal perspective, it was excellent, for lots of different reasons, some of them very selfish. It's often extremely difficult with an enabling technology like biotech that is then fragmented across different sectors. It's very difficult to tell a story about what it does because you immediately go into complex sector-specific discussions. The term "biomanufacturing" is an extremely good one because it applies everywhere. You can look at it all -- processes, products. This is all part of biomanufacture, and it's across all sectors. So whether it's the production of a novel vaccine, or the production of an alternative protein, or adoption of an alternative solvent source, it's much more easy to explain what it is when you look at it through the lens of biomanufacture.

And the EO from the White House as well, it allows Europe to slightly put into context what it needs to do because -- the United States didn't do this because it's simply the right thing to do. The United States did this because the world as a whole is changing, and different areas of the world will embrace this technology and make it an economic priority, which means that this is a competitive journey. It's not just something that you get to the destination when the science is right. We need to do it quickly, and we need to do it comprehensively. And we need to do it so that we are competitive. Because as you will know also in the United States, if you don't reach a competitive level quickly, you will be outcompeted by somewhere else. It's really important that we look at biomanufacturing from a holistic perspective because there are things across biomanufacturing that need to be accelerated and scaled up right now. It is not a hobby. It's a competitive transition the whole world is undergoing. That has impacts for legislation, regulation, skills development, market access, investment, and those cannot be effectively managed through individual agencies, both in the United States and in the EU.

The EU is particularly complex, and it can often be very slow. When I read the EO, I was really happy because it allowed me to say, "Look, Europe, this is what we -- how do we set ourselves comprehensively on this pathway as well?" We have many of the factions already in place. It's already happening. But what we need to do is look at this as a whole rather than a collection of lots of individual agencies, each pulling in slightly different directions. And it's also -- the use of the terminology around biomanufacturing is excellent because people have an image in their head. When you talk about manufacturing, it's buildings; it's employment; it's skills development; it's product; it's economic development. It means that you can take a discussion to a region of Europe and say, "You already do biomanufacturing. It's this."

Or you can take it to a region where you can say, "You already have a high number of skilled engineers in this sector. But as we know the economic times are changing, we can use those skills toward a new sector." It's a way of bringing people along with you without having to fragment the discussion into lots of very, very sector-specific conversations.

LLB: We here in the United States are also very excited about this EO. I noticed in reviewing it in preparation for this conversation, Claire, that there's a relatively short timeframe for stakeholders to engage with -- at least here in the United States, the FDA, the [U.S.

Department of Agriculture] (USDA), EPA. Does EuropaBio intend to engage in that conversation? Because I think the EO requires that there be some sort of opportunity to engage between now and March 2023, which is a very compressed timeframe, especially given the time of year that it includes, the end of year and so forth. Are you guys planning on participating in that?

CS: Absolutely. Because we comment on things from a global perspective anyway, because, as you say, no man is an island.

LLB: Hardly. Especially not in technology.

CS: That's exactly it. We will absolutely get involved, and I was quite excited to see those kind of timescales because they are difficult timescales. They are really zooming!

LLB: Yes, they're very aggressive.

CS: I think it will be intriguing to see how they can be managed with such short timescales and what lessons Europe can also take from that. Because obviously Europe also follows things through on legislative cycles, so we need to keep momentum going at all times so it doesn't peak and trough alongside legislative cycles. We need to make sure that the framework for biomanufacturing to do its thing economically is constant and not linked to whether something is active or not. I will be really interested to learn how the United States does this, how it brings hugely different agencies together, where they find the common sticking points or the common working points. Because this is all things that different areas of the world can learn from.

LLB: Yes. Agreed. Let me ask you a question I know some of our listeners might be puzzled about, and that relates to biotech and food applications. You've already alluded to this, Claire, but just to drive the point home. My perception is that the EU has long been very, very cautious about biotech and food, in that your members and your organizations are engaged in multiple sectors -- energy, health care, food applications. I'm guessing it's fair to say that given some of the social and technological imperatives that we all see today, that that cautiousness might be relenting a little bit, certainly in the energy and health-care application. But is it as much in the food, biotech food applications, or is there still some hesitation there that you and your members struggle to address?

CS: Oh, for sure. I mean, the advent of GM [genetically modified] plants in Europe came about when I was at the end of my Ph.D. in plant biochemistry. And I remember the very day I opened the newspaper and saw the headlines and realized that the ground has shifted fundamentally for Europe. It was such a disappointing occasion, and it marked sort of failures in lots of different ways to basically roll this out well and bring people along with you. And it changed Europe fundamentally with regard to how it looks at biotechnology in plants in particular.

We are seeing the ground shift now in terms of food, although it's still highly, highly precautionary. And I think that when you look at climate change, we've had some very significant droughts in Europe in the last few summers, as I know the United States has had as well. And we had a really significant drought this year. Last year, there were huge floods with loss of life, as well as complete destruction of crops. This year as well, we have, of course, the supply chain disruption from the Russian invasion of Ukraine.

People are looking again at what Europe needs to do. And one of the positions I always take here is that we need to be a consumer of our own technologies, not a purchaser of others'. I think that also hits home to people as well. We are going through a legislative review process now for GM legislation, particularly within -- specifically within plants at the moment, so I'm really hoping that we're going to see a more evolved and modern legislation for Europe, for plants.

I want very soon after that for it to be extended and applied into other forms of food products, to enable us to use fermentation and microbiology, particularly in contained use for large-scale production of food ingredients that we already take for granted but are not necessarily sustainable under current food production systems, or with the sustainability that we need in terms of managing climate change and the green transition. A lot of changes could be made in process for food production. It doesn't change the food at the end. It just makes it much more sustainable and much more predictable, and of course, protects biodiversity and other external factors as well.

I think people are starting to change in Europe because they're seeing the supply chain gaps that come, and they're seeing that agriculture is changing fundamentally in Europe with climate change. If we want to continue growing crops in particular ways, that's going to need changes to how we do it and what we do. It cannot just be more of the same because those days are now gone. I think we're seeing an increased recognition of this, particularly as GM crops have been around for decades and decades now, and they're used increasingly around the world. I'm very hopeful that Europe will be able to make this transition. It will always be precautionary, but I think it also needs to recognize that a lot of the amazing research that it originated here needs to be applied into our own food production pathways.

LLB: I appreciate you mentioning the fact that GM is under review in the EU for plants and legislatively you are engaged. Is any of that information listed on your website for our listeners?

CS: Yes. We do have some of that information at a relatively high level on the web page, so that's always accessible, but we would always encourage people to come and be part of our open meetings, perhaps part of Biotech Week; that's our annual conference around industrial biotech and bioeconomy. We are very happy to welcome people into the work and the understanding that we do in Europe, because it's not just the technology that you can learn about and develop with us. It's also the legislative pathways that are being followed in Europe at the moment.

LLB: Absolutely. Well, last question, Claire. And that is, what's next for the biotechnology industry and biotechnology advocacy generally? I know that you are constantly looking at new, innovative applications, but take us a couple of years down the road. What's coming up?

CS: There are big things at the moment on the landscape in Europe that are game changers. On the health-care side, we've got the pharmaceutical legislative review, which is a huge body of work, has been a long time coming, and is going to take a little while longer. But that is going to fundamentally shape what innovation and patient access looks like, probably for the next 15, 20 years, once it finally comes out the other end. So that is an ongoing process that affects every aspect of medicine development. And in EuropaBio, we are really pushing to ensure that cutting-edge, disruptive technologies, the increased -- the ongoing developments, the scale-up of cell and gene therapies -- it continues to be able to be built off Europe's amazing research base.

Europe has been falling behind in terms of the number of applications brought through the regulatory process. We need to make sure that our amazing research is finding its way through to patients. The pharmaceutical legislative review, and alongside it, the sort of all for medicinal products review as well -- they're really important pieces of landmark legislation. So that is ongoing now.

On the industrial biotech side, it's all about GM legislation, and it's all about looking at a lot of the supporting features of that, looking at taxonomy, for example, because that will define so clearly what is investable and what is not, and how we can have ways to recognize the advances in sustainability and other benefits that come through industrial biotechnology, because they have to. A lot of things now, as we have our green transition, they are replacing very long-standing, very low-cost petrochemical-derived processes. And there needs to be a way to ensure that disruptive technologies can *afford* to come to fruition, and recognizing the cost of traditional production methods beyond just what it costs you to buy, because we've all seen the cost in terms of pollution, loss of biodiversity, climate change. These are costs that essentially subsidize the final product that you buy. And we need a real cost of what a product is, and its environmental impact is an integral part of the cost of that product. So that's what we're really trying to do as well, is to make sure that the overall value and cost of a technology is recognized and seen, because that opens the door to these very disruptive technologies being able to become commercially competitive and sustainable.

So that's -- we're in a really interesting sort of -- Europe is in a very interesting time of transition now, and there's a lot of people all pulling to advance it across all sorts of different stakeholders, our member companies, ourselves, the European Commission, countries across Europe. We're all pulling in the same direction. And what we need to do is make sure that we create legislative pathways that are coherent and help incentivize innovation.

If I was going to look ahead, I'm very keen on biomanufacturing, as lots of people will know, and I want to raise the conversation as well, to say, "Look at all these amazing different technology areas!" I want biomanufacturing to be recognized at the highest possible level across multiple sectors, if the value that it has, not only toward Europe's green and digital transitions, but also toward its value as an economic generator, because it's a significant economic generator already. It's a platform for skills development. It's a transitional technology for commercial purposes. I really want to see it recognized and supported as such, rather than tucked away into lots of different sectors and fragmented.

LLB: Totally brilliant, Claire. I leave our conversations energized, enthusiastic, and hopeful. You are such an able advocate and communicator for your client. This has just been excellent. And it does sound like a very exciting, hopeful time in Europe and, with luck, around the world, right?

CS: Absolutely. And I'm so -- I consider myself extremely lucky to work in sectors such as biotechnology, because to channel my Star Trek fandom, it is a frontier technology. And it will always be a frontier technology. We are looking at -- it is always showing us where we could go next, and whether it works or whether it doesn't, it's always for amazing reasons.

I think it has an inspiring impact on people, and the people in the sector, regardless of where they are in it, all understand the huge power that it brings and that it's already manifesting. We want more of that, to help it be -- help the world be healthy, sustainable, competitive, and it has the capability to do that. We as people all over the world need to make the

pathway through which it is delivered. It's never boring. It's often extremely exciting, for both right and wrong reasons, but it's something to always aspire toward. I know that when I worked with you in the nano area, it was much the same kind of energy. It's very inspirational to work with people such as yourself, because we know where we're trying to push these technologies to next.

LLB: Well, Claire, thank you so much for spending some time with us today. I know how extraordinarily busy you are, with your big conference coming up, but this has been great fun, very educational, and just thanks for all that you do to make the world a better place.

CS: Again, those are very, very kind words. I just -- I think I probably just facilitate other people to make the world a better place, and that's a role I'm happy to play. And there's lots of inspirational people to work with.

LLB: Indeed. Thanks again.

CS: Great to talk to you, Lynn, and thank you very, very much for the invitation for today.

LLB: My pleasure.

My thanks again to Dr. Claire Skentelbery for speaking with me today about biotechnology advocacy in the EU.

All Things Chemical is produced by Jackson Bierfeldt of Bierfeldt Audio LLC.