Dr. Tiffani Lash
Behind the Mask

June 2, 2021

GB: Good afternoon. Today is June 2, 2021. My name is Gabrielle Barr, and I'm the archivist with the Office of NIH History and Stetten Museum, and today I have the pleasure of speaking with Dr. Tiffani Bailey Lash. Dr. Lash is the program director of the Division of Health Informatics Technologies at the National Institute of Biomedical Imaging and Bioengineering. She's also the program director for NIH's Rapid Acceleration of Diagnostic Technology (RAD-X TECH) and Advanced Technology Platforms (RAD-X ATP) initiatives, NIH Technology Accelerator Challenge, and the NIBIB Point of Care Technologies Research Network, and today she will be focusing on her work with the RAD-X program. So thank you very much for being with me.

TL: Thank you Gabby.

GB: To begin, what does the Rapid Acceleration of Diagnostic Technology Program focus on, and how is it differentiated from the other RAD-X initiatives?

TL: Well actually RAD-X TECH was the first RAD-X initiative from NIH. RAD-X TECH began through a program that NIBIB has supported for a while called the Point of Care Technology Research Network or POCTRN. POCTRN is actually a network that's made up of several centers. They have different focus areas such as STDs [sexually transmitted diseases]; they have focused on technologies that are appropriate for heart, lung, and blood. In the past, we've supported cancer care technologies and primary care.

Once the pandemic began, my colleague, Todd Merchak and I, we thought about how we can utilize the strengths that we've seen in these centers even though there's not a center that is specifically for COVID-19. We were able to utilize the strengths of those centers, including our coordinating center, to see what we could do to support the nation. We worked with the different centers to come up with a proposal. It was actually called SHIFT at the time. The proposal was share with our NIBIB Director Bruce Tromberg and the rest was history..

Being able to support technologies that have a quick turn-around of results and are accurate was something that I haven't seen at this speed before at NIH. A lot of times, we stop at the research level and kind of let the market take itself. The commercialization side is generally not our lane, but because we were in an emergency situation, we were able to work directly with the FDA, directly with the CDC, on weekly calls to help make the system work like it should. If there's a technology they can support the nation in and help you, we wanted to make sure we got that out the door. It was checkpoints along every step of the way, and now we're proud to say that we have supported, I believe, the number now is 40, of the COVID diagnostic tests that are out now.

GB: That's great. That's wonderful. How long does the evaluation process tend to take for a given product?

TL: I would say it could take maybe about three to four weeks for evaluation and leadership approval.

GB: That's relatively fast. B: Are there ever products that you table, so you don't say "yes" or "no", but you go back to those who submitted and say, "With these suggestion you could maybe submit again?"

TL: Yes, there were. There may be a technology that came through the pipeline but they needed more time to meet their milestones past a December 2020 deadline. We recognized such technologies by supporting through a redirect program.

GB: That's great. Do you all give advice to these redirects or guidance to these redirects as much as you give to those who you select to be funded?

TL: Yes, we provide intellectual and financial support.

GB: Right. Did you have a strong relationship with these other federal agencies before the pandemic, or is this largely the result of the pandemic?

TL: We work together with federal agencies but the pandemic caused us to really work together because, especially with the FDA, as they issue the clearances. We needed to get FDA approval for our technologies to even see the light of day. So to help with that, they work with us along the way.

GB: What has been the breakdown of submissions that you have seen that are sort of brand-new ideas versus those that are already pretty well developed?

TL: Ah well, that's the interesting thing about point of care technologies. It may not necessarily be a brand-new idea, but it's utilizing a technology for something, making it faster; more cost efficient. etc. Lateral flow assays have been around—a simple pregnancy test is an example.

GB: That's interesting. How does NIH through RAD-X help with the commercialization of these products, and how do you help foster the relationships between finalists and engineers and manufacturers that bring it to market?

TL: We have a development team that supports commercialization. .

GB: I didn't realize it was submitted then. That was so soon.

TL: If not April, I mean the first group of technologies that we supported. You know it's… it's just amazing to literally see. It's what you, I mean me, as a program director, what I would love to see is these technologies that we are supporting in research to be able to go and see them on the shelves and be ready for the American public.

GB: Do you ever do that? When you know they're being released, go to CVS or Walgreens to see if they're out yet?

TL: Yeah, yeah. It feels really good; you know, it really feels good. I actually have one of those tests here by my desk. It's so… it's just… it's just really nice to see the hard work of us, hundreds of people you know, and the companies especially, to get it to the market.

GB: Yeah. Can you briefly introduce the RAD-X ATP program that you're also in charge of?

TL: Yes. RAD-X ATP and RAD-X TECH were actually on the same trajectory except for ATP, if you look at the funnel, they are advanced. They're more advanced along the technology pipeline. We wanted to have a streamlined way along the funnel. They may have to skip a few steps because they're ready, and so that's the difference between RAD-X TECH and RAD-X ATP, but now that we have had a year under our belt, we've merged both RAD-X TECH and ATP.

GB: Oh, okay. So how often does your team meet with the various stakeholders?

TL: I have never met so much in my life! We have a daily scrum every day at 8:30 AM, and other daily meetings that can y go into the evening hours. It's been like that for about a year now, but you do what you need to do to get these technologies out the door.

GB: How do you think that your educational and professional background prepared you for this role? You [already spoke about the fact that you] did a lot of stuff with point of care technologies, but I saw you also have a background in intellectual property and business and science.

TL: It's really interesting how things kind of come full circle. For my Ph.D. work, it was done in physical chemistry and biomolecular engineering. My thesis was on surface tension and how droplets or liquids move along the surface. So if you think about it, a lateral flow assay literally is the movement of some type of liquid, be it blood, saliva or other things, and so I would have never thought that from something I finished in 2007, would be something that has come back around in a mighty way.

GB: That's very interesting. What are some opportunities for you both personally and professionally that have come from your work with COVID?

TL: I would say one thing that I'm very excited about, of course you certainly want this pandemic to end, but what is amazing is the excitement and creativity amongst American scientists and engineers. This is a very good time for point of care technologies; we want to get these technologies in homes and empower people to take control of their health.

GB: Yes. This is a thought-provoking question that's on the same lines. How do you think that the model of RAD-X can be adapted to solve other medical challenges facing society?

TL: So again I would like to see the RAD-X model being used for all types of areas where a point of care diagnostic is needed.

GB: Do you think a program like RAD-X can survive after the pandemic?

TL: I definitely do. This has set a paradigm for how to support technologies like this. As the program director for point of care technologies at NIBIB, sometimes time is of the essence, we don't have the time to do a two-year to five-year grant; we want the technology out in two years. So hopefully this provides another mechanism or way of supporting our researchers.

GB: Yes. Is there anything else that you would like to share as a person who works at NIH but also as a person who's living through this pandemic?

TL: I really think the RAD-X initiative shows NIH and federal agencies working together at its best. There was a very clear goal to get these technologies to the public, have them sensitive specific with regards to testing, and we were able to do that and so this is certainly, well, one for the books.

GB: That's really good. You and your team should feel very, very proud, and I hope that everyone has continued success and continued safety.

TL: Thank you. Thank you so much.