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In this episode, Taren Grom, Editor-in-Chief of PharmaVOICE Magazine, meets with Uma Sinha, PhD, Chief Scientific Officer, BridgeBio Pharma.

Taren: Uma, welcome to the PharmaVOICE WoW podcast program.

Uma: I'm so glad to have this opportunity to chat with you.

Taren: We're excited to dig in and get to know you a little bit better. Uma, you have been in the biotech/pharma space for about 30 years. Please share how you broke through and climbed the ladder to eventually become chief scientific officer at one of the fastest rising biotech companies. I'd love to hear about your journey.

Uma: My passion has always centered around the science. And I have to admit, I've been very, very privileged to pursue this. Very early on in my career, the opportunity to make drugs, which will be helpful to patients will make a difference to them, that has been a tremendous motivating factor.

Very early in my career, many, many years ago, I started in a company called COR Therapeutics. That company at that point, only had funding for six months, but I got to follow the science. And fast forward 13 years later, by the time COR was bought by Millennium, our small team had one approved drug and quite a few others which were already in the clinic and ready for the clinic. So that was an incredible learning opportunity.

Four years ago when I started at BridgeBio, once again, the company didn't have a lot of money, but the passion for helping patients with rare diseases in this orphan space, that was very much there. Neil Kumar who's BridgeBio's CEO was on this science-focused mission and that had tremendous appeal to me.

Taren: That's fantastic. Talk to me about leading a company that is being so innovative and is really raising the bar in terms of what it's doing in that biotech space.

Uma: BridgeBio is somewhat unconventional as far as small biotechs go. As you know, we're going after very well-described monogenic diseases. And this once again, I want to reiterate, has a tremendous appeal for a drug developer.

In some of my previous programs in other companies, there were very long timelines. You had to wait a decade plus to get the answer. Here, working in the orphan space, we get done so very fast, maybe in three to five years.

And the other big appeal of working at BridgeBio working with this incredibly science-focused team is that we let the science speak. And financing our market potential is not driving the decision here. In these genetic diseases, nature has already done the experiment. We're not basing this on mouse models alone. We know what the human phenotype is. So these are well-described diseases, and that's what keeps us going for the unmet medical need.

Taren: That's fascinating. I love that you described it as not – is that it's phenotype driven, not necessarily driven by the mouse model. So in your experience and you said that you're working at a quicker pace, what does that mean for leading these teams? And how is that pace adopted internally, if you're working at a three to five pace rather than a much longer timeline?

Uma: That's both the plus and the minus. Again, we focus on the technicality of the team and also on the speed where how we can do this right. So you have a group of scientists and physicians who have complementary skill sets, and we're trying to move this program forward multiple ones at a time. So to be able to stay with the program at different stages, initiation through development, candidate nomination, then getting into early clinical development, and then into the clinic. So it's almost like being able to parachute in and letting this engine function and stay incredibly motivated.

There's multiple shots on goal and very, very, focused; I cannot overemphasize the concept of how focused we are. And that's one of the main appeals. We can work in multiple subsidiaries with unrelated indications and we get to parachute into efficiently moving forward as the phase requires. The speeds are different when you're in preclinical versus when you're in early clinical or when you're in phase 3. So we make full use of that.

Taren: I love that – multiple shots on goal but with a focused approach. You talked about motivation, but what specifically motivates you and drives your passion for discovery and development of new medicines in this genetic space?

Uma: It's obviously the whole idea that we can make a difference in the lives of patients. There's the professional satisfaction, but there's also never forgetting how biotechnology made a difference in my personal life.

Many years ago, my mother was battling blood cancer, but through her own courage and through biotech drugs, she got to live long enough. You can imagine what a huge difference it made to our whole family. My nephew and niece, one of whom was not even born then, got to know my mother. And I never forget that these two were so pivotal in her fight against cancer and her treatment regimen. So that comes back to motivating, not just myself, but also junior team members who I'm trying to kind of mentor into getting into the mindset.

Taren: Thank you so much for sharing that very personal anecdote about your life and how you are motivated. And it seems that so many people in this space are motivated by these personal stories and it gives what you do such a purpose.

Uma: It really does.

Taren: You talked just a minute ago about BioBridge's focus and the tremendous advancements that are being made in terms of science and technology to address so many of the unmet medical needs. You personally had been part of the development of a number of treatments for hematological, cardiovascular, and inflammatory diseases, including I understand filing for 22 INDs, and that you are on track to hit 25 by the end of 2020.

I don't need to tell you what a rare and exceptional milestone this is in the industry. What is the secret to your success?

Uma: First and foremost, I've been very, very fortunate to be part of superb technical teams in small biotechs. So being able to stay with the program at different stages, that's only made possible by the supportive environment, where I've been able to work, and you get to learn from the failures, but a celebration of the shared success.

If I had to name one thing, it would be to be able to celebrate those shared successes, and these absolutely superb technical teams, that is the main engine of my success.

Taren: What are some of those qualities you look for in those team members that collaboratively and collectively are achieving such success?

Uma: May I give you a couple of examples from the recent BridgeBio sub?

Taren: Please.

Uma: So, as I told you at BridgeBio, we have this opportunity the way we work with multiple subsidiaries in unrelated indications. I'll tell you the Eidos Therapeutics story first. When the AG10 molecule, the lead molecule, came in as a preclinical academic program from Stanford, we were absolutely laser focused. We executed on all aspects for getting ready for the IND, the CMC, the toxicology, planning for the clinical program, and we got it into first-in-human phase 1 studies.

One thing which works in our favor and obviously helps the patients is the unmet need is there. So for AG10, the amyloidosis patients with cardiomyopathy, they're waiting. So the phase 2 enrolled in record time and very specific to the BridgeBio mindset, we kept up the pace. We do not slow down, and now phase 3 is ongoing.

Again, I don't want to overstate how these diseases are and the motivation of something which has the potential to be lifesaving medication to these patients who have the morbidity and mortality. That is what keeps BridgeBio going.

I will give you another more recent example. Just about a year ago now, we got involved with a neurology program in limb-girdle muscular dystrophy; again, a very small group of patients, but the unmet need because of how rapidly the disease progresses is tremendous. In just about a year, we rapidly progressed the development candidates. We groomed it into the clinic and now we're in phase 1. It can be the small patient populations, but the unmet need is just incredible.

Taren: Wow. That is, as I said before, that's really moving at a clip that most companies just don't work at. So how do you maintain that kind of balance between speed, safety, and looking at the shots on goals?

Uma: We already talked about the factors that this is not doing a diabetes trial or a cholesterol trial, so the durations are much shorter because this is an orphan disease case. What I have found to be very, very helpful, again, I've worked in small biotechs my entire professional career, is bringing people together by using the common matrix really works.

I have encountered failure; there have been quite a few over the 30 plus years, but always remembering that the team is in this together and will be stronger after the initial disappointment. That has always helped. When you have multiple people reminding each other that there's a light at the end of the tunnel and equally importantly, the patients are waiting, that keeps us focused.

Taren: Of course. You talked about some of your disappointments, but you've had so much success and one of those successes, in addition to the one you just described, is the treatment called Oxbryta.

Uma: Yeah, voxelotor.

Taren: And that became an approved treatment. When you see that drug reach the market, how does that make you feel? What does that mean to you?

Uma: I'm so glad you asked that question because that particular drug, it's really important on many, many levels. Voxelotor is indicated for patients who have sickle cell disease, so this was for multiple reasons, including socioeconomic neglected population.

So when we were working on the drug development, no one had come up with a new treatment for sickle cell in more than 30 years. Just think about it. How many other fields would say that in 30 years, not a single new drug reached the market?

In working with the patients, you meet the patients, you meet their mothers and their grandmothers, and you so want to make a difference. I'm a mother myself, so sort of fear and angst these moms and the grandmoms lived with, that was so hard to comprehend.

The fact that voxelotor is a new therapeutic modality for these patients, it's almost like a dream come true, not just the success of the drug development, but it being able to do something for this neglected population that nobody cared about before. So it's very personal.

Taren: That's amazing. Thank you so much. It gave me chills when you talked about the mothers and the grandmothers in those personal stories and in changing the trajectory of the life for so many patients.

Uma: One last thing on that, everybody – not just physicians and drug development researchers – everybody was aware of the societal healthcare burden of sickle cell disease, but it had been neglected for so long. It's good to see that the patients have options now.

Taren: Absolutely, and good options. That's the thing, it's a good option. To switch tacks just a little bit, I'd love to know from you as you've moved up the ladder and now are sitting in the C-suite, what is some advice you could provide to women who are looking to you as a role model? What are some of the steps they should think about taking if they want to achieve the type of success you've had?

Uma: It helps to focus on the science. Trying to be one of the boys doesn't really work in the long run. As one moves up the ranks, whether you're male or female and by virtue of how the gender distribution works in our industry, there are obviously a lot more men around, but the technical merits, it becomes an incredible asset as you move up the ranks because beyond one certain stage, not just execution, the strategy has to come from you.

And you see that in small biotechs. There are certain specializations like regulatory affairs or quality assurance, which have substantial representation of women, not just in execution, but they come up with the strategy, and that effectively steers the program.

So there are women in biotech already. It's just that the more technical specializations like a chief scientific officer or chief technical officer, those have very few women in strategy positions. But very fortunately, the field is starting to change, and I am so happy to see that in the younger generation which are coming up right after their PhD or right after their MD, they are focusing on the science and building momentum.

Taren: That's awesome. And talking about that next generation, how important is mentoring to you? How important is it to bring along that next generation?

Uma: It is very, very important. Many years ago earlier in my career, I got to mentor post docs and grad students at UCSF, which is a local university. And these were individuals, all of them women, who decided to not pursue traditional academic careers.

Fast forward this many years that I remember what a gratifying experience that was. And I've also learned from the mentors I have had, who have mentored me as I came up my career, that feeling that someone is looking out for you, not just teaching you and correcting your mistakes, but most importantly, rejoicing in your accomplishment, that's probably the best way to mentor somebody.

Now at BridgeBio, I'm getting to also informally mentor many of the non-drug developers who are coming up the rank, and that's also been very satisfying.

Taren: That's awesome. What does it mean to you for folks to think of you as a role model? Do you feel that you have a certain responsibility now to provide those paths and those lanes?

Uma: I absolutely do because unless somebody gets hired in a technical role and has the opportunity to rise through the ranks, there's absolutely no way to learn this field. Just academic degree doesn't train you in drug development. It's all hands-on learning. And I absolutely feel the responsibility that, not only do we need to hire the best technically qualified candidate, we should also be very cognizant of the racial and the gender distribution.

Taren: Yes, and that again, as we alluded to earlier, that there isn't equal opportunity yet, but women like you and others are striving to create a wider pool, so that there is greater diversity along the way, which then leads to better operations and as all the studies have shown that more diversity leads to more efficiency, to more innovation. Have you found that as well?

Uma: Absolutely, and I was going to tell you why. It means not just the technical background. What I do is obviously very technical, but how our life experiences teach us to solve problems. It's very different depending on how somebody grows up, what kind of resourcefulness they have had to have as they came up through the educational background. So the life experience and the strategic thinking is so very different depending on the diversity of the team.

Taren: Absolutely. Uma, now finally, because this is our Woman of the Week WoW podcast, can you single out an accomplishment or a moment in your career that either shaped your career or changed the trajectory of your career?

Uma: In terms of changing trajectory of my career, my PhD was in very, very pure type of theoretical field, but I discovered pathology as a postdoctoral worker. This was at the height of the HIV/AIDS crisis. So that was my first up-close ability to see what a difference medicine can make.

And then many years later, in working on new classes of anticoagulants, I got to meet patients again, just like the example I was talking about from sickle cell; you meet these elderly atrial fibrillation patients and they remind you of your grandma or your grandpa or your great uncle, and you want to do something about it.

If I had to think about like a single accomplishment, kind of like a wow moment, I knew bleeding was a tremendous problem in this patient population. And then during my days at Portola Pharmaceuticals, I had the incredible opportunity to be co-inventor of an agent, which reverses anticoagulation and stops bleeding in the elderly patients.

So to be able to conceptualize and successfully do this, I would definitely say that was a wow moment. And again, I want to reiterate, you get to meet the patients during the clinical trial and you feel like you have some kind of a personal stake in making sure they get the best options in medicine and treatment. Knowing that atrial fibrillation patients with bleeding will get help, I got a huge sense of accomplishment out of that.

Taren: That's amazing. Well, I personally want to wish you continued great success in all of the work you're doing to improve the lives of so many patients around the world. And kudos to you for all of the work that you're doing in these underserved patient populations.

It was a tremendous honor to get to speak with you today. And thank you so much for being part of our WoW podcast program.

Uma: Taren, I'm so glad I got this opportunity to discuss what we are doing for patients now. It's a shared mission that we all have. I love the opportunity to speak with you. Thank you so much.

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