**Bits and Bytes Help Streamline Bench to Bedside with Andy Mehrotra**

# **Transcript**

Narrator

Unipr is an AI based cloud program and portfolio management platform that helps life science companies save time and resources. Companies such as n-Lorem use Unipr to raise R&D productivity and accelerate products to patients. Last year, Unipr helped life science companies save their teams from 320,000 hours of busy work of making hundreds of slides and spreadsheets, and juggling thousands of emails, giving teams more time to achieve their goals.

Stan

Hello everyone and welcome to the n-Lorem podcast series. Today, our special guest is Andy Mehrotra. I hope we're not set correctly Andy. Andy is the founder and CEO of Unipr, one of the many organizations with which we collaborate, and Andy's organization is helping us do a much better job with our patients. So, welcome Andy.

Andy

Thank you, Stan. It's a pleasure to be with you today.

Stan

Well, it's good to reconnect. I know, Andy, that you grew up in India and in a, I guess we call you a pharmaceutical company brat as this is. Why don't you tell everyone about what your dad did, and how all that influenced you on your migration to where you are today?

Andy

Thank you, Stan. So, my dad was a pharmaceutical entrepreneur. He worked from work, and he started his own business. And my mother is a practitioner of homeopathic medicine and a teacher of yoga. So, growing up we had medicine and patient stories around the dinner table, and we in fact had more physicians than relatives around, as you know, the Indian celebrations can be big, and we did have them big. But a lot of them from the community and the pharmaceutical and the medical community. So, the values of helping others and keeping others before self was something that I grew up with. And when I was growing up as a teen, I mean, I was visiting manufacturing facilities, so products like tablets and capsules and parenterals being made, and research facilities and heard from dad’s friends in hospitals who were leading KOLs, and the conversations they had. So, I grew up in this environment. So, when I was in college going age, I picked pharmacy, or medicine because I thought I could help a lot more people with the medicines that I hopefully brought to market. So that's really where I got started, and then carried the bag as a pharmaceutical sales rep. That was my first job, and then grew up in roles in sales and marketing, and then product management and ultimately the turning point in my career was Abbott. Abbott, I joined in 2006 and for the next four years I was helping the launch of Humira in international markets that Humira, as you know had already been launched by that time in the US and in Canada. And my focus was to launch Humira, or have the teams launch Humira for about 6 indications in 54 countries, from Germany to Japan. So, it was a large region. And that was my journey into the industry.

Stan

And that must have been a very exciting time too, because Humira is a wonderful product, and has made a big difference in the lives of many, many patients, and that kind of territory, that's a lot of responsibility, and a lot of languages I suppose. Were you ever home?

Andy

I was home but not as much as I would like to be, and my daughters grew up rapidly. I was 60 to 80 percent on a plane. I was travelling at a large region. but I have no regrets. I learned a lot. I really experienced the different cultures meeting people, the challenges our core competitors were Enbrel and Remicade. Yes, but every market was different, had different indications, had different challenges, and we had to address that together. So, a lot of learning happened. So, look back at those times; I miss family, but I gained perspective.

Stan

And then in the midst of what obviously was a successful career, you took time out and ended up at MIT. How did that happen?

Andy

So, I always wanted to come to the US because for the pharmaceutical industry, US is the center of the universe, right? And if I wanted to be in this industry, I wanted to grow up here. So, one of my colleagues had graduated for a program at HST, which was for pharmaceutical executives to learn how to start new biotech companies and what Harvard and MIT were doing in collaboration, introducing them, pairing up APIs with researchers and saying is there something in their lab that you can take to market and that was the whole idea. So, I applied and got in, and got lucky. Now it was a small program. Only seven students that year, and I was the only international student, so it was, I just got lucky, Stan. And I moved bag and baggage with my family and to Boston, and I spent the next almost several years there.

Stan

Did you get used to the cold there compared to where you lived In India? I think it would have been tough.

Andy

Very tough. I was coming from Sydney, and I remember the first winter. I didn't know what happened. I had never walked in like 3-4 feet of snow just to get to the station to catch the train to MIT to Central Square. But it was hard. So, I mean, now that I'm here and in sunny California like you, I do miss it. It's funny.

Stan

Hello, Washington. Boston is a great town, but not the weather. And then you migrated then from thinking about starting a sort of biotech company to more how to help biotech companies and pharmaceutical companies manage what they do in a better way, I guess is the best way to think about that right?

Andy

Absolutely right. That was my goal. But the kind of offers I was getting, and my colleagues were trying to pull me back into the game of commercializing products and launches and I just kept thinking if that's the need then what is the universe trying to tell me? And I saw people around me were highly qualified, they were MDs and PhDs who were doing exactly what I was doing. And I thought I have got a unique skill set. Not only do you understand drug development from research to commercialization, I also understand the technology that powers it and have built systems at Abbott that brings people together. So, I said maybe that's my angle into the industry, and that's why I decided to start a software company, AI machine learning based on my experiences to speed up the process of right from the lab all the way, like we say, bench to the bedside, the processes along the way to help many companies bring the drugs to market.

Stan

Yeah, sounds very interesting. And out of that, then grew Unipr, which is the company you founded. So, can you in simple terms describe what you do for companies like Ionis and the larger pharmaceutical companies as well as for n-Lorem?

Andy

Certainly. So, if you think about it, the journey of a drug right from research to the time it gets filing, the IND or NDA, and launching it, commercializing it, it's actually a series of projects that come together, and all those projects are intertwined, and one leads from another and with the information that we are compiling about the drug is what gets submitted to the regulatory bodies, which allows them to approve it. It's a very complicated process and before Unipr, what we saw that companies use several tools like Microsoft Project that I used, Planview and Smartsheet and several, OnePager, there's so many great products out there, but they're just not designed for drug development, and they do not have the capabilities that are needed today. The AI machine learning, which you can learn from past programs to say what can we do better in the next program? So, if your single drug has got multiple indications, what can we learn from other indications to help the future indications? What can we learn from one country's launch to improve the next country's launch. All of these learnings and the insights, how do we put them together? And that's what our system does. So Unipr is a platform with about 300 tools in it, and project program portfolio management, and then it is written on a fantastic background of AI machine learning algorithms that connect all of those things. And then we also connect with the tools that companies already have, so we could work in parallel, which we call it top stack, or we could work full stack, so Ionis is full stack, n-Lorem is full stack. Other companies that you're working with like AstraZeneca and IT Sanku and Baxter, they're also stack, but some of the customers are top stack, where we work alongside the other technologies that companies already have.

Stan

Yeah, I think that many people don't understand how many moving parts that have to be put together and connected in a human network to develop even a medicine for a single patient, to say nothing of medicines for millions and millions of patients, and finding ways to do that more efficiently is a critical step. And clearly many companies think that you have a better mousetrap than existed before. And I know that you've been involved in n-Lorem and you're a contributor to n-Lorem. I thought probably the next topic is we should focus on your role at n-Lorem and why you're involved with n-Lorem and what you see us able to do together.

Andy

So, n-Lorem is a phenomenal company, I mean, and I say it to your face, but that's what I really believe. And I saw the idea, it reminded me of my thesis that I've submitted, and my thesis was focused on personalized medicines and the advent of biomarkers and how I thought that medicine should become more and more personalized, because I believe all of us are not just different on the surface on the outside, we're also different on the inside. And so, the medicines that can be tailored to a particular patient, not just the broader stroke of a disease like they say, could be highly efficacious, produce much better outcome for patients then it would by treating everybody with the same one standard regiment. And at n-Lorem, I saw at least I know other companies have gone into rare diseases, and I think this is the next step forward in personalizing the medicines. To say every individual patient has got something unique, and I know if we are focusing n-Lorem focusing on nano-rare patients right now, but I think that's the tip of the iceberg. And as we expand this thinking, treating patients as n of one, which is n-Lorems core thing, I think this is going to spread, and this is going to become really vital. And Unipr has three core focus areas. One is how can we increase the probability of success for the drug programs, and the programs are successful and less fail than that takes care of the total cost of a pipeline. That's number one. Number two is how can we reduce the operational costs for running clinical trials or studies or what have you so that the cost of bringing a drug to market becomes lower. And then the third other than that, making sure that the cycle time when the drug is moving from one development step to another, how can we shorten that so the drugs can move faster and one of your goals at n-Lorem is to, after patient acceptance, take the journey from discovery to delivery in 15 to 18 months. That's phenomenal. And so, I wanted to be a part of that because I thought this company would value R&D productivity. This company is going to value operational excellence, so if I even have to donate my services, it's totally worth it because I would be part of something unique which is happening for the first time on the planet. So, that's really why I decided to join hands with n-Lorem.

Stan

Well, we very much appreciate it. And we obviously agree with you that in order to do what we do, takes a new technology that I led the invention of, and of course, the collaboration with the regulatory agencies to provide the guidance that allow us to move as fast as we do. And so, we do believe it's a great new model. And as we progressed, I believe what we learn will ramify across all diseases, and I hope make a fundamental change in the way we think about health and disease altogether. While we think about names of diseases, the names of diseases, we think about are archaic. They were invented centuries ago to describe what a patient looks like when they're sick. Millions of molecular steps have taken place between health and that manifestation of disease, and our job is to understand that better as we learn from these patients. And I think the Unipr system is going to help us do that more efficiently and also mind the data in a better way. And so again, a tremendous benefit to us to have you as a partner.

Andy

Yeah, and Stan, to doing amazing, amazing things. I mean, I have in my entire career, I have never once seen an operation, an organization, large or small or any size where 20 people manage 70 drug programs, 35 of those in development and five, four IMDB's in a month or two weeks. So, Stan, four INDs in two weeks and then you tell people by the way, this company has 20 people and one project manager, so when they go in Unipr, your project manager sees all seventy programs nicely stacked by priority, by whatever way they wanted, By modality, I mean different things. And she is able to manage that. That is unheard of. I mean, you know, filing an IND takes so much effort, mow many people and several, sometimes more than one project manager, and one IND? That's what I've seen the best ratio, but one to four, or one project manager for 70 programs, that's unheard of, doesn't happen.

Stan

Yeah, our INDs are somewhat smaller, but they're still 1200-1400 pages. So, if we calculate it per pages per person, it's really quite remarkable, and we're very proud of that, but we're even prouder of the fact that we're treating patients that before n-Lorem had no hope of ever being treated, and we're doing it for free for life. And again, I think your contributions along with other contributions from our other partners to make all that possible, we couldn't do it by ourselves. Yes, we are now up to about 20 people, but we have an enormous group of people who are endeavoring to help us along the way, and we very much appreciate the fact that you've joined in that effort with us. Anything else that I haven't asked you that you'd like to talk about before we conclude our conversation today?

Andy

Yeah, I think it's important for people to understand how n-Lorem is attempting this massive transformation in medicine simply with the help of philanthropic contributions, and the help of the generosity of your partners. And that is a key thing, because in the pharmaceutical industry, we are blessed that we are able to price our products the way the market would bear and raise prices when we think we need to raise prices. And we're treating a lot of patients in generalized medicines we can ignore sometimes operational efficiency or R&D productivity. because there's so much success, multi-billion-dollar drugs that don't make it doesn't matter. But for your company every program matters because you are working with meager dollars that have been donated generously by your contributors, and being frugal, being minimalist, being efficient is extremely important, and so I think we are getting a tremendous view that what technology could actually deliver to a company where technology matters, and that I think is a great satisfaction as an inventor, as a founder, as creator of the technology. When you see a product helping others making real benefit and ultimately helping patients, it's very soul satisfying.

Stan

I couldn't agree with you more. I think the beauty of n-Lorem is that we are a tangible expression of doing good. And every case is a patient. Every patient comes with a family that's desperately hoping for something better for their family member, and to be able to meet the needs of some of those patients and families is a privilege. And I think we are very pleased to share that privilege with you and your colleagues at Unipr and thank you very much for the opportunity to learn more about you and Unipr and our collaboration and share that with our listeners. So, thanks, Andy. Thanks for joining us and we'll be talking again soon. Those of you listening to him on podcast.

Andy

Thank you, Stan. I really appreciate your time and thank you for the opportunity.

Stan

Thank you.

Narrator

n-Lorem is a nonprofit committed to discovering and providing personalized, experimental treatments for free, for life to patients with genetic diseases that affect 1 to 30 patients worldwide referred to by n-Lorem as nano-rare. Many of these patients progress and die without ever achieving a diagnosis. This is where n-Lorem comes in. They do the impossible by providing hope, and for those that they can help free lifetime treatment. For more information about n-Lorem or today's episode, visit nlorem.org. Any questions can be sent into podcasts@nlorem.org. Search n-Lorem on Twitter, Instagram, YouTube, LinkedIn, and Facebook to connect with us. Please rate and review the podcast on Apple, Spotify, or wherever you listen. This truly helps us climb the charts and allows others to find the show. This podcast is hosted by Dr. Stan Crooke. Our videographer is Jon Magnusson of Mighty One Productions, our producers are Jon Magnusson and Kira Dineen of DNA today. Thank you for listening.