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Interview

Driving impact through investments in life science and healthcare: An interview with GV (formerly Google Ventures) partner Krishna Yeshwant

Sanchay Gupta[a,*], Adam L. Beckman[a,b]

[a] Harvard Medical School, 25 Shattuck Street, Boston, MA 02115, USA
[b] Aledade Inc., Bethesda, MD, USA

In this interview, we spoke with Dr. Krishna Yeshwant. He is a General Partner at GV (formerly Google Ventures), where he focuses on life sciences. He is a physician, programmer, and entrepreneur who has been working with GV since its inception. Prior to Google, he helped start an electronic data interchange company and a network security company. He holds an MD from Harvard Medical School, an MBA from Harvard Business School, and a BS in Computer Science from Stanford University. He completed his residency at Brigham and Women's Hospital where he continues to practice. This interview was condensed and edited for clarity.

Sanchay Gupta (SG): Everyone says they are innovating something or disrupting something. How do you cut through the fluff and find companies that will actually push the edge of what's possible?

Krishna Yeshwant (KY): We are almost singularly focused on the caliber of the people.

Take the example of one CEO we have invested in. Every interaction I had with him prior was basically a conversation that turned into a fight. It took me a while to realize that's just how he reasons through things. And he is amazingly quick at getting to the root of an issue. Once there, it's a matter of, "You think this, and I think that, and now let's have those ideas interact and see what happens." It's not fighting; it's that he fundamentally wants to move the whole system forward and wants to debate the best way to do that.

We mentioned it earlier, but I also want to note that the nature of the mission is absolutely a prerequisite for us. Plenty of companies are trying to make quick money. But if somebody gets opportunistic cash and the opportunity evaporates, then everybody leaves the team and there's not a company. Every company has bumps in the road, but if there's a mission and the company is just a way to get to change something, then the team will push through.

That CEO I described is the sort of person we like to interact with. He has a clear goal, and the company is merely the vehicle for pursuing the goal. A warning sign is somebody who wants to start a company for the sake of starting a company. We want somebody who feels really driven, almost inexplicably pulled toward fixing something. One of my favorite questions is, "If you weren't doing this, what would you do?" If we hear, "I would just come back and try to do the same thing another way," we feel validated. Anything we can do to be supportive of that is what we're here for.

SG: Your background in medicine, computer science, and entrepreneurship lets you bring a unique perspective to investing in healthcare companies. Can you talk to us about the investment areas you are particularly excited about?

KY: We span most parts of healthcare. Many people would look at GV and not think of us as doing pure therapeutics, but that's a large portion of what we've been doing lately. Our diagnostics work has been positive recently as well. Medical devices is an area that I have gotten more interested in; however, this area is harder than gene editing or cell therapy because the financing environment is challenging.

In the service business, the question of our era is how you align payers and providers. We are very excited about trying to contribute to solving that problem. We continue to be interested in interoperability insofar as that would be a capability or a context or characteristic of the market that would unlock a lot of other innovation. Lastly, we have been focusing on clinical trials. The general concept of a learning health system is interesting because it connects biopharma and payer-provider in a unique way.

Adam Beckman (AB): Are there specific examples of companies you are looking at that are connecting clinical trials and learning health systems?

KY: The clearest example would be Flatiron Health. This is an oncology company that we helped start in New York that's been acquired by Roche. The underlying platform for the company is an electronic medical record (EMR) accessing a large portion of oncologists in the country. The data coming out of those EMRs is organized in a fashion that the company developed and can be used to help clinicians improve the way they treat diseases. You can also aggregate the data in a deidentified fashion and help pharma understand where drugs are being used and in what ways they are being used. (There is currently a lot of off-label use of drugs, especially in oncology.)

Once you help oncologists or pharmaceutical companies understand that, you can get into the most exciting arena of clinical trials: identifying patients. Patients receiving care at large academic centers in

* Corresponding author.
E-mail address: sanchay_gupta@hms.harvard.edu (S. Gupta).

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places like Boston, San Francisco, and New York have access to amazing clinical trials. But across the country, community oncologists and the patients they treat typically do not have access to these trials. That should not be the case.

We should enable clinical trials in communities across the country where 80% of the care is actually delivered, not in the academic medical centers. Pharmaceutical companies are also excited because today they accrue patients manually and slowly. They want this technology to speed that up.

It is always controversial as to how much one should involve pharmaceutical companies in these things. But to me, as you look across the system, the groups that understand these diseases the best are actually the pharmaceutical companies. Those are the groups that are on the hook for putting billions of dollars towards a clinical trial to understand whether a drug works in a very specific way. The subtleties of how a patient's natural history of disease occurs is at times invisible to clinicians. I think pharmaceutical companies are actually good partners to figure out how to organize what the ontology for understanding a disease really looks like.

SG: Many people, when they think about technology as it relates to therapeutics, are thinking about machine learning and AI in drug discovery target selection. What is your outlook on the future of this approach?

KY: That work is interesting and important. But remember, clinical trials are not sexy. The impact of reducing the cost and material requirements for clinical trials would be much more significant than bringing machine learning and AI to target discovery. Those domains are where we spend almost all the money in developing drugs.

When is the last time we have seen a large cardiology or endocrine clinical trial? These are public health diseases that cost our system the big dollars. And I wonder: What if we brought stuff that already works in other parts of the technology industry–not new types of science but just the same efficiencies that we have gained in other parts of the digital universe like being able to query across a set of digital records–to the clinical trial process? Could that dramatically decrease the cost of clinical trials and open up the sorts of diseases that we can finance against?

AB: In your day-to-day role, what is the balance between spending time thinking about new investments versus working with your CEOs to solve challenging problems?

KY: The core of our thesis is that you get exciting return on investment by laying out some profound vision and actually executing on it. Every day we are having that conversation about what mission would have a profound impact on an industry if it became reality.

One of the things I really miss from before I entered venture capital was actually doing stuff. Now I sign a lot of documents. The companies are actually doing stuff. They form the teams and do the day-to-day work to make those visions real.

That said, the exciting part of my role and venture is helping move a whole space forward. After we invest in a company, we realize that our initial hypothesis was naive; there's a more sophisticated way of looking at the problem. To move a whole space forward, it's usually the case that not one but multiple companies all need to succeed for the transformation to happen. We are not part of the daily reality but we can be part of the multiple companies that in aggregate advance a vision.

I also spend time providing companies with resources to deal with similar struggles. Companies all hit bumps. They go from 8 people to 50 people and everyone no longer knows each other. Here at GV, we have operational, design, engineering, recruiting, and marketing teams to help coach hundreds of companies through any challenge. We can usually quickly diagnose the problem and deploy the right resources.