Stanford eCorner

Going All-In on Infectious Diseases

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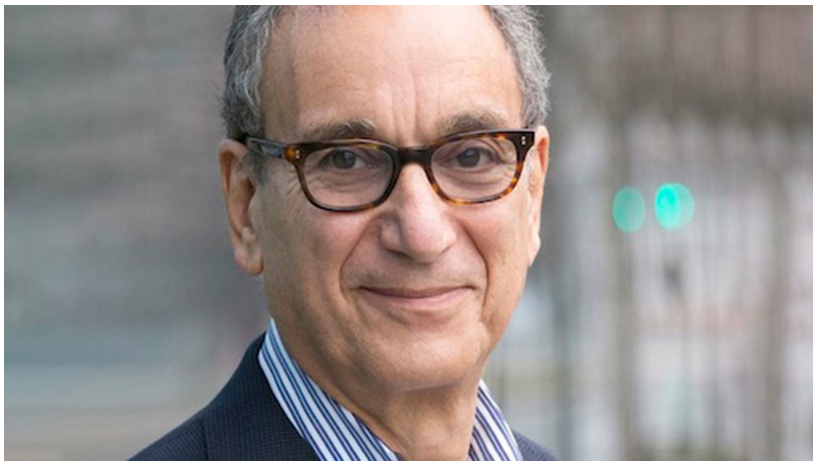
14-10-2020

URL: https://ecorner.stanford.edu/in-brief/going-all-in-on-infectious-diseases/

Vir Biotechnology president and CEO George Scangos explains why many companies struggle to build a sustainable business model around fighting infectious diseases, particularly when it comes to developing antibiotics. However, he adds, certain therapies for viral diseases are currently more financially viable. Dr. Scangos explores why Vir decided to go "all-in" on infectious diseases, how they built a company around that mission, and how the arrival of COVID-19 impacted the young company's trajectory.



Transcript

- Where it focused on infectious diseases, 00:00:06,640 and, you know to start a company focused on infectious diseases, is certainly counter, to the prevailing views of the industry.. Much of the pharma industry has either reduced their efforts in infectious disease, or gotten out completely, just shuttered it.. The mantra was you can't make money in an infectious diseases.. And really that's because of antibiotics.. And you know, probably read we desperately need new antibiotics, to treat resistant bacteria.. The reason we need them so much and nobody's working on them, is you really can't make money.. That if you succeed, and make a new antibiotic, it is reserved for last line use.. Because physicians are appropriately concerned that overusing, it will result in the development of resistance to that one too.. So they wanna save it, for when it's truly needed.. And so it's a low volume product..

And because of the way the antibiotics are prescribed and treated, the price is kept.. So it's a low priced product, and it's an acute product.. You take it for a few days or couple weeks, and then you're done.. And the next time you get sick there's no brand loyalty.. You don't come back to that one.. You take whatever you get prescribed for your next month.. And so all of those things combined to make antibiotics a terrible business model.. And there were biotech companies, that made very good antibiotics that went bankrupt.. Even though they had approved drugs.. And so on the other hand, Gilead, you know, in the Bay area has, you know, has tens of billions of dollars of revenue treating viral diseases, treating HIV, Hepatitis C..

Hepatitis C is also acute.. You know, you take their drug for a short period of time.. You're cured of hepatitis C.. The irrational part is the healthcare system is willing to pay $30,000 to redule hepatitis C but they're not willing to pay $4,000 to redule antibiotic resistant bacteria that will kill you.. So it's not , but it's the way the healthcare system is.. So, but because so many of the companies had backed out, we saw a need.. A huge infectious disease problems you know, antibiotic resistant bacteria, flu, you know, tens of thousand people die from flu every year, hepatitis B which, you know, infects to almost 300 million people around the world.. TB infects, a couple billion people around the world.. So that the huge public health need and, for the right indications, also a tremendous amount of money to be made, if we were to be successful.. So we went all in, on infectious diseases..

Our goal was to be the Biotech Company focused on infectious diseases, and be able to compete head to head with whatever large companies were still in the running.. We raised a lot of money.. We raised almost $600 million initially.. And you know, - That it's unusual.. 00:03:35,380 I think, you know, maybe the audience as an appreciation and that's an enormous war chest.. - That is, 00:03:39,730 it's an order of magnitude, more than most startups get.. You know, most startups these days, a little more maybe it's a 100 million, but it was 50 or 60 million.. There's still a lot of money right? The idea was to go make some acquisitions, sign some deals, hire in a really good company group of people and become go forward really aggressively, roll up other assets in the biotech industry that were underfunded, under exploited, and become the leading Biotech Company in infectious diseases.. So it was pretty aggressive plan, and we're on our way.. We had really interesting program..

We have really interesting programs and flu and Hepatitis B.. We have a program with the Gates Foundation to make a vaccine for HIV and TB.. And so we're doing interesting things.. And then COVID came.. And so, we had some assets, and some ways to approach COVID.. And, you know, I remember it was January 5th, when our our Chief Scientific Officer, a guy

named Skip Virgin came to me and said, this is the big one.. This is gonna be a huge impact and we should work on this.. And so we started really early, and pretty aggressively.. And for a company like ours, you know we made some big debts, cause we're not a huge company.. Didn't want to stop the other programs..

We had to add this two of them, which means we had to staff up, hire more people, spend more money.. We're bringing forward antibodies, which now fortunately look like they're gonna work.. But we had to make hundreds of millions of dollars of commitments, for manufacturing contracts in the future.. And those are taker pay, right? So you pay for them whether or not your product succeeds and you need them or not.. And so that's a huge almost existential gamble for a company like ours.. I mean, I know we wouldn't have made it if we thought it was truly existential, but it was close.. And so, you know, now we've been focused on, on a COVID as well as those other two.. And obviously COVID is getting all the attention these days...