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ARE YOU THINKING BIG ENOUGH?

2019 Honored Alumnus Tim Geistlinger (Biochemistry '94) invented the Beyond Burger, a plant-based meat, and is now working on plant-based dairy products. Previously he helped create cures for breast cancer, malaria and other diseases. Last fall he talked with students about the need for disruptive science and how to practice it.

ON ENVIRONMENTAL IMPACT

Our industrial dairy and beef production is really out of balance when you think about dynamic homeostasis. We're putting a lot of energy into the system and getting a lot of negative byproducts out, for example methane, which contributes more to global warming than CO₂ does.

At Perfect Day and Beyond Meat, we're not saying get rid of all cows. We want to find a way to supplement the protein supply chain of the world so we can decrease the need for animals without asking people to change their eating habits.

This will actually support small farmers who are using traditional farming and ranching methods. By producing the majority of dairy products through this carbon neutral — or in some cases carbon negative — microbial system, we'll probably help create a premium market for meat products that help re-establish environmental balance, like grass-fed beef.

ON DISRUPTION AND THINKING BIG

I love disruptive science, engineering and technology. I love working on meaningful things that people say will never work. It'll never work either because of a scientific principle or from a market perspective or whatever metric they have chosen to leverage in order to tear down the idea.

But if people are saying that it just might mean that nobody else is working on it. And this idea may present not only an opportunity for novel intellectual property, for claiming something as your own, but it also suggests that nobody is going to solve the problem without you.

"WE WANT TO FIND A WAY TO SUPPLEMENT THE PROTEIN SUPPLY CHAIN OF THE WORLD SO WE CAN DECREASE THE NEED FOR ANIMALS WITHOUT ASKING PEOPLE TO CHANGE THEIR EATING HABITS."

Everything that I've done, I've done because I felt nobody else was working on it, and the world needed it. There are so many opportunities for having a huge impact in the world in a way that nobody else is thinking about, or is scared to do, or doesn't know how to do. And that's where you guys are going to be required because my kids need you to be up here for them when they're in your chair.

ON CAL POLY

What's special about Cal Poly is that your classes are being taught by professors. Your professors care about you. They care about your future. Take advantage of that. Ask more. Explore opportunities with them.

When you ask them questions, what do your professors tell you? They don't just tell you the answer. They probably ask you a question back. That process of learning is incredibly valuable and will serve you well later on in life. It puts you in an open mindset that lets you look at things more constructively, and a lot of people don't have access to that type of thinking. //

Pictured: Tom Geistlinger (Biochemistry '94)