# Audio file

[Impossible Foods Pat Brown.mp3](https://1drv.ms/u/s!AMhVeraEIITCz2A)

# [Transcript](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:00:00 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Hey, it's guy here. And before we start the show, I wanted to let you know about a short, anonymous survey that you can take to let us know what shows and podcasts you're listening to. If you wanna help, you can go to npr.org/podcast survey. It won't take up too much of your time, and this is a great way to support your favorite shows. That's npr.org slash.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:00:21 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Podcast survey and then.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:00:23](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Thanks.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:00:26 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[We had half the company basically was to some extent going out to a soybean farms for you know a better part.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:00:33 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Of the year.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:00:34 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[And it was, in retrospect, a bad idea. But this is the kind of thing you have to do. You have to be not afraid to.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:00:44 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[You know, try things that may fail. Yeah, I can tell you for certain. We are going to have more expensive failures in the future. And if we're afraid, well, we shouldn't be trying to do this.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:01:04 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[From NPR, it's how I built this a show about innovators, entrepreneurs, idealists and the stories behind the movements they built.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:01:16 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[I'm Guy Raz, and on the show today, how Pat Brown's mission to slow climate change led him to launch Impossible foods and to invent a plant based burger that tastes and even bleeds like beef.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:01:33 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Along the 101 freeway in San Francisco are tons of billboards that advertise startups that can deliver cannabis to your home faster. Their ads for enterprise software to help you manage projects, and even a company that has robots to prepare your made to order pizza. That company, by the way, raised.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:01:52 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[$375 million before it went bust and recently yet another media company was launched, one that raised more than a billion dollars with the goal of bringing US 10 minute video clips. Now I have no problem with any of these businesses and I wish them well.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:02:10 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[But every once in a while when I'm strolling through San Francisco, I think about how much brain power in the tech sector is spent on scaling lifestyle and productivity products, and how little is spent trying to solve world scale problems. Now there are a few notable exceptions, of course. Say what you will about his quirky personality, but.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:02:30 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Elon Musk is 100% committed to ending human dependency on fossil fuels, and he's trying to do it at scale. Another exception is my guest today.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:02:41 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Pat Brown, when Pat set out to start a business, he didn't just want to solve a problem he had or make a better, more efficient product. He literally wanted to change the world for most of his career, Pat was a biochemist at Stanford. He was even involved in ground breaking genetic research. But around 15 years ago.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:03:01 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[He heard a statistic that floored him worldwide, agriculture and forestry, and particularly livestock production, is responsible for more greenhouse gas.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:03:11 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Options. Then all the emissions from transportation, all the emissions.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:03:15 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Cars, planes, ships and trucks combined. Our love of beef and poultry and lamb and pork is one of the biggest drivers of climate change in the world and I am as guilty as you are because I eat those things too. Anyway. All of this got pet thinking. Could there be a way to stop producing meat from animals?](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:03:36 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[A way to make meat that would taste as good as animal meat but require considerably less water, land and waste. And he knew from his biochemistry background that in theory it was possible that you could do it from plants. So when Pat set out to make meat from plants, he wanted to make beef that beef lovers.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:03:56 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Would love beef that looked and smelled and even bled like beef, even though it didn't come.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:04:02 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[From a cow. In short, he wanted to make plant meat that was indistinguishable from animal meat, with the hope that if more animal meat lovers could come to love plant meat, greenhouse gas emissions would go way down. And the story of how Pat built Wood came to be known as the Impossible burger is amazing, and not just for how he and his team figured out the science of it all.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:04:25 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[But also because when Pat set out to do this, he was almost 60 years old and he walked away from an incredibly successful career to take a huge risk. And now just a few.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:04:37 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Later, the Impossible burger is in fast food restaurants across the country, and Pat's company, Impossible Foods, has been valued at $4 billion now. These days, during the lockdown, like so many of us, Pat is not going into the office.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:04:54 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[I'm sitting in a room that was originally with my three kids, shared a bedroom and most recently was my youngest son, Isaacs room.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:05:04 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Which I've usurped as my office.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:05:08 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[And that's where you're running impossible foods out of right now.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:05:10 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Pretty much, yeah.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:05:12 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Later in the episode, we're going to hear a bit more about how the pandemic has affected Patsy business, but let's start at the beginning. When he was growing up, which kind of happened all over the.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:05:22 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Place.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:05:22 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[My dad worked for the CIA. I didn't realize that until I was quite a bit older and his job sent him to various overseas posts. So we lived in Paris for four years.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:05:36 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[That's where I started school and then came back to the States and then he was sent to Taipei.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:05:44 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Was he a spy or was he more of a sort of a desk?](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:05:48 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[I mean, he was an intelligence officer. I guess you could say and was gathering intelligence on mainland.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:05:57 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[And and ran various operations, but he never did any, you know, sketchy, bad business. So he is as sweet as most altruistic guy who's, like, the opposite of what you if you have this notion of, you know, the CIA and spies being very sinister and unethical characters.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:06:07](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Yeah.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:06:15 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Yeah.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:06:17 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[There's that opposite of that.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:06:20 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[So when when you were a kid, what did you think?](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:06:22 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Your dad did.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:06:23 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Well, I it's it's embarrassing in a way. I mean, he would just say, you know, when I asked him what he did, you say, well, you know, I work for the government and I thought, OK, that makes sense. Works for the government. I only found out what his real job was when one of my good buddies somehow mentioned that his dad worked for the CIA. And I thought, well, that's kind of weird.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:06:43 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Because he he works for my dad anyway.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:06:48 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[And you have a pretty big family, right?](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:06:51 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Six siblings. Yeah, pretty big.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:06:52 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Wow, I have to assume this is the answer is yes. Were you a pretty good student as a as a kid?](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:06:59 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[I was actually not a pretty good student actually was when we came back to the states, I felt like I'd just been sent back a grade and I just became very disengaged because I I thought it was kind of like, why am I wasting my time? And I was a chronic cutter of classes. And I mean, when I was in Taiwan, we.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:07:02 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Wow.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:07:19 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[My classes were in a, A, a three story building that had this kind of concrete, cool work on the on the one side of the building. So one thing I would sometimes do would be just randomly walk out of class and go climb on this.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:07:34 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[It was like a climbing wall. In retrospect, I just feel like it's amazing they didn't kick me.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:07:40 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Out. But you must have been a good enough student because you went you you would go on to the University of Chicago, which is a pretty hard school to get into.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:07:49 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Well, I mean, first of all, a lot of people don't realize back in the day. I think getting into college was much less compared.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:07:58 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[But I had good sats, so I think that that made-up for my grades to some extent. But yeah, I mean, I was just lucky that I grew up at a time where you could be a less dedicated student and still get into a good college.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:08:14 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[When you got to the University of Chicago, was it clear to you that science was going to be the thing that you would do in life? Was that already just a given as far as you were concerned?](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:08:25 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[I think I was kind of open to a lot of things when I was in college, but I tended to gravitate to.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:08:32 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Hard science and math. I mean, there was a period of time when I thought I actually might. I loved math. I loved sort of higher level math classes in college, but I felt like I wanted to do something that made the world better, and I didn't think it would be as satisfying for me in this, in the sense of.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:08:52 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Like I was contributing something. I'm.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:08:55 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Curious about something that that happened when you were in college or like, right as you graduated from college, which was you you ate your.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:09:04 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Last Burger, I guess you became a a vegetarian in 1976, which was kind of a hippie thing to do in 19. I mean, you were 21, like it was not that common.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:09:08](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Mm-hmm. Yeah.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:09:15 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[It was not a hippie thing. I mean, so really what it came down to was a nontrivial fraction of kids at some point in their lives.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:09:25 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Try to become vegetarian. Try to stop eating meat primarily because of discomfort with the ethics of it.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:09:33 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[And in my family, that was true pretty much. Most of my siblings and myself.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:09:38 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[And there was a time when we all sort of in concert, decided to stop eating meat. You know, I felt like if if I don't need meat to be completely healthy and well nourished, then I'm only eating it for aesthetic reasons. There's no physiological reason why I need to do this.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:10:00 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Purely the aesthetics, and I felt like that was, I just couldn't justify the killing and making animals miserable for my pleasure. Basically, as opposed to for my sustenance.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:10:12 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[And I think that was kind of the way my siblings and my parents felt about it, that that was. That was why we all just like bam, like a square wave, decided to stop eating meat well.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:10:23 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[So but when you made this decision, you you had no idea that one day you would be involved in food or food production, your you, you.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:10:32 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Get your bachelors.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:10:33 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Degree in chemistry. And then you jump into a PhD program in Biochemistry. Also at the University of Chicago. So presumably you're thinking, all right, I'm going to.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:10:42 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[I'm going to do like my life is going to be about, you know, working in the lab and.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:10:46 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[And pursuing scientific research.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:10:49 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Yeah. I mean, the direction I was going was, so I was in the PhD program and I wanted to go into research to help people by basically understanding human biology and human diseases and and the PhD.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:11:06 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[That was kind of related to that, but was also just I love the idea of discovering things for the first time.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:11:13 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Yeah.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:11:14 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[So you you did your MD PhD and you actually did a residency in Pediatrics during that time, right? But from what I understand, you didn't go into Pediatrics, you you eventually landed at Stanford and you went into into basic research, I think in fact, I think one of the first things you worked on was.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:11:19](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Mm-hmm.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:11:29 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Was the AIDS virus is. Is that right?](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:11:31 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Yeah, exactly. It was timely and important and it was the reason one of the main reasons I felt like I had to go into biomedical research is that as opposed to saying clinical medicine is that if you're a clinician, you keep coming up against problems that you don't know how to solve. And it's just incredibly upsetting.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:11:52 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[You know when you're taking care of a sick.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:11:53 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Kid.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:11:55 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[And you just don't know how to help them. And so I felt like that's.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:12:00 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Much higher leverage if you can.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:12:03 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Working really hard, important medical problems and find solutions, you.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:12:08 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Yeah. So so Pat, basically from from what I've read, I mean you had this incredible trajectory and you you eventually became a young tenured Professor, Stanford.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:12:19 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[You created a.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:12:20 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Lab. You worked on something called the DNA microarray, which is so complex and could be its own podcast episode itself. We won't be able to go into it now, but, I mean, we worked on all this ground breaking research that that helped with things like ovarian cancer detection to gut microbiome and all these incredible things. I mean, this must have just been.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:12:40 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[A dream life for a scientist like you, right?](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:12:42 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Yeah, I mean, it was the job I would have created for myself if if I'd been able to completely write the specs for.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:12:50 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Job. You know, you get the the joy of discovering things, you if you get new idea you can, you know, immediately start working on it. I had great colleagues, great students. It was I used to say this all the time it was my dream job.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:13:07 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[All right, so you and and I should mention you also Co founder of the Public Library of Science, which is now one of the biggest.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:13:13 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Open source scientific journals out there, which caused a lot of, I mean, but we actually should talk about this for a moment, because when you co-founded this, you create a lot of friction because the academic publishing world is a for profit industry and they don't want everyone having access to their papers unless they pay for it. You.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:13:33 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Basically created this new.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:13:36 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Model and had a lot of people saying, hey, what are you, pat, what are you doing here in academic and what are?](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:13:41 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[You what are you wasting your time with publishing for?](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:13:42 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Publishing for. Well, I mean that's the way that I saw my job or you know my purpose, I guess.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:13:49 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[It wasn't defined in terms of some particular scientific problem I was working on. You know, it's if you see something that you can have a positive impact on. I was in the very fortunate position that I could do it and it was kind of like understood to be part of my job. In that case, I realized that to most of the world.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:14:09 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[If you know if a parent gets.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:14:12 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Sick and they want to read the rest. Current medical literature on the subject, as many people do. I mean many people who are not physicians when they have a family member who has a medical problem, they'll go and and try to eat it. Well, you can't. You have to pay, you know, 30 to 50 bucks to read a crappy.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:14:32 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Paper.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:14:32 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Right. Because especially back then?](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:14:34 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Like in the early 2000s, many medical journals were behind paywalls.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:14:39 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Yeah, exactly. That infuriated me. And the reason that the Public Library of science, the the reason that I and and my Co conspirator, my guys and and my former postdoc mentor Harold Varmus.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:14:55 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Founded it was basically as much as anything else, to throw a wrench into the business model of scientific publishing because it was so perverse and antisocial, and we felt that if we create a vehicle where scientists could publish free to everyone in the world, scientists would flock to it and it would pull the rug out from under these.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:15:16 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Conventional publishers, and it did to a considerable extent, although the job still hasn't done. Unfortunate.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:15:22 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[I mean you you you create this academic journal, by the way, you you had to find funding for it. I mean this is this is an entrepreneurial venture. You were a tenured science professor at Stanford and you weren't doing this to make money. This was going to be a nonprofit, right?](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:15:39 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[That was a an open science, an open, open source, and right people could anyone could have access to it. And this was a must have been pain. It was a lot of work.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:15:43](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Silence.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:15:48 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[To to get.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:15:49 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Off the ground. Yeah, it was. It was a lot of work. But, I mean, I was so motivated, like, a lot of those things, if you're doing something because you want to do it, it doesn't feel like work.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:15:58 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Yeah, I think that was in 2001 when you found it, found it at the public, co-founded the Public Library Science and.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:16:04 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[How just just.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:16:06 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[By you know, the sense of scale. How big is it today? Because it's there's tons.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:16:07 Speaker 3](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Good.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:16:10 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Of.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:16:10 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Like plus POS one and there's a bunch.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:16:13 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Like PLS medicine, right? I mean how big is it?](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:16:16 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Robin, when that journal was launched within a couple of years, it was by far the highest volume scientific journal and history in terms of publication volume. But the thing I learned was I believed it would be super successful. And the lesson I learned is, which is something, I repeat all the time that.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:16:37 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Impossible foods you have to bet on your own success if you expect an intense something to be super successful even when it's not, you have to make that investment.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:16:49 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[That you're betting on your your growth, it's just for impossible foods. The the analogy is if we believe we're going to be as successful as we intended and and and do believe we have to make huge investments in production capacity a couple of years in advance that are predicated on the idea that our value.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:17:09 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[It will be 10 times greater, you know, in a year and a half.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:17:13 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Yeah.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:17:14 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Which is, you know, I think a lot of companies would regard that as kind of a risky bet. And since our our mission requires us to.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:17:22 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[On average, double in volume every year for the next 15 years, we're going to have to be making that big bet on our success again, again, again. And that's something that you know, like a lot of businesses would say, well, let's go more slowly, but we'll never achieve our mission.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:17:42 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[If we don't go for it, and so, you know, the lesson again is bet on your own success.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:17:48 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[OK so here you are. It's the early 2000s. You have this incredibly impressive career that you forged and you could have continued doing that kind of research and teaching and.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:17:58 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Crashing and and then around I guess 2008. You took a sabbatical, which turned into a a kind of a detour. Can you tell me what, like, what was the thinking behind that?](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:18:09 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[So I had decided that for my sabbatical that I was going to try to identify the most important problem in the.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:18:19 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Build that I could contribute to solving and it could have been anything but, but I was pretty confident that it was going to be something about avoiding environmental catastrophes basically. And and I was looking at a variety of different things relatively early on I.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:18:38 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Was looking at.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:18:39 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[You know what's the state of research in making more efficient solar energy devices and stuff like that? But relatively quickly, I would say, within a month or so, I had zeroed in on.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:18:51 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[What is unquestionably the most important and urgent problem the world is facing right now, and that is the catastrophic environmental impact of our use of animals in the food system.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:19:05 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[And how did you, by the way, how did you know about that? I mean, lots of people know about it, but not everyone knows about it. How did you come to that understanding that that?](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:19:16 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Agriculture, particularly raising livestock, was so damaging to the.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:19:21 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Environment. I'm kind of embarrassed that I wasn't more aware of it ahead of ahead of this. I just I was basically reading about environmental problems and what are the contributing factors and so forth. I became aware of the.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:19:37 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Greenhouse gas emissions from the livestock industry, which are which are huge, they're greater than all forms of power transportation.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:19:47 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Mind and because of its huge land footprint, it is responsible for a catastrophic meltdown in global biodiversity. And the other thing that relates to land footprint.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:20:03 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Is if you could snap your fingers and make that industry go away, which I would do in a heartbeat if I could.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:20:09 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[The recovery of biomass.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:20:12 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Trees and shrubs and grasses and so forth, whose growth is suppressed by American culture, would immediately start pulling carbon out of the atmosphere because the the ultimate carbon capture technology is photosynth.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:20:29 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[That's the opportunity cost of using all that land for animal agriculture. So the bottom line is there's nothing even comes close in terms of its destructive impact on the environment.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:20:43 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[So you're thinking, alright, if I can figure out if I can focus on this thing. Livestock production?](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:20:49 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[And I can figure out. I don't know maybe how to think about solving this problem. Then we can really push the needle, right? That could actually.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:20:57 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Potentially make a difference is that where your mind was in in 2008, two.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:21:01 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[1009 oh, absolutely. So that was the. That was the obvious thing to do. And then the question is, how do you do it? And I organize a National Research Council workshop to just look at what, how the world might be affected if if we could.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:21:17 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Switched to an entirely plant based diet.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:21:19 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Figuring that if we got a bunch of very objective people who had no conflict of interest to just look objectively the day the the answer would be so overwhelming that it's better for for the economy, it's better for the environment, better for food security and so forth.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:21:36 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[It will convince people to change their ways.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:21:38 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[It might convince people to change their ways, but then I realized that actually, no, nobody, nobody. I don't want to sound cynical, but none of those kinds of, you know, all the facts in the world. Don't move the needle on on public policy. And so I realize that now what you have to do.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:21:55 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Is something more subversive and the other thing that I think is kind of a no brainer, but I'll just say it is that you're not going to, you're not going to be able to persuade people by education or or nagging to choose their diet significantly to significantly reduce meat consumption or consumption of animal products.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:22:14 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Look at how well people follow nutrition recommended.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:22:17 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Nations for their own health as opposed to just the good of the world. They they don't. And China about 3 years ago asked its citizens to reduce their meat and dairy consumption by half. And what happened? Absolutely nothing. So the bottom line is that doesn't work. Public policy doesn't work.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:22:33](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Right.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:22:38 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Education doesn't work when you go to an environmental conference where every single person knows how problematic this is, they're all having steak for dinner.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:22:47 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[So.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:22:48 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[You need a more subversive solution and the subversive solution is create products that compete successfully in the marketplace against the products that are produced by animal farming. And if you can do that, effectively eliminate the economic incentive.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:23:08 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[For this ridiculous industry.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:23:11 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[You can solve the problem.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:23:12 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Quickly. So I guess what fairly quickly you came to the conclusion that that you basically wanted to make meat but not from animals you wanted to you basically you you accept the fact that many people still want to eat meat, they're going to eat meat, it's going to be hard to get them to stop eating meat, so.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:23:31 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Why just give them meat, but don't make it for animals? That was your conclusion.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:23:35 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[It was exactly the conclusion, and here's an interesting fact about meat consumers pretty much around the world and and all across.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:23:44 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[To us, they don't actually like the fact that it's made from the corpses of animals. That is not part of value proposition of meat to pretty much anyone. They love it because they love the, you know, special kind of deliciousness they get from it. They like the, you know, high protein and iron and familiarity and convenience and so forth.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:24:05 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[They like it in spite of the way it's made, and it stands to reason why would anyone actually feel like, you know what I particularly like about this product isn't someone that taste good, it's that it's made from a corpse of a, you know, cow that had a miserable life.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:24:21 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Nobody wants that. So that basically means that it just comes down to a simple thing. Give meat lovers the things they do love about meat, which is that they're very particular kind of sensory experience. And the sensory pleasures, the nutritional value, protein and iron, primarily of the micronutrients.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:24:40 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[And convenience and affordability and do that.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:24:43 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Let me ask this question. Given your background in biochemistry, you must have thought in your mind because if if you asked me right and I'm not a scientist obviously. But if if I thought, you know, I really want to solve this.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:24:55 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[I wouldn't have been able to say, you know, I think we can make meat from plants cause I wouldn't know that. But did you know that it was theoretically possible to to do this? Did you already know that in 2000?](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:25:08 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[9.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:25:09 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[I can't say I knew it in the sense that there was incontrovertible evidence, but, but I would say with very high confidence I I believed it was doable because really what it comes down to is the components that are in meat, you know, the amino acids, the other small molecules, lipids.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:25:13 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[You had a hunch.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:25:29 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Many of the proteins are extremely conserved. They're found in plants as well as animals.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:25:34 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[And so forth. It seemed to me that if we could understand what were the salient characteristics of that kind of molecular composition salient in the sense of the deliciousness aspect, that there's no reason why we couldn't find sources from plants.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:25:54 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[The ingredients that we could assemble into something that from a sensory perspective was essentially indistinguishable.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:26:01 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[The animal product, basically meat made from plants. It's it's just like, you know, a a camera is a camera, whether it's using film or digital imaging. So that was all just thinking. But I just felt like, OK, of course this is doable. It's hard, that's for sure. It's going to be really, really hard. And the hard part.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:26:02 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Yeah.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:26:21 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Is figuring out the deliciousness part of it the rest?](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:26:24 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Is easy, but I want. I want just kind of gut check for a SEC because you are at this point.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:26:32 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[A tenured professor, you've a lifetime job, right? You're almost 60. I don't believe you were independently wealthy and you decided to between 2009 and 2011 to actually launched this company. But surely there were people were saying pen, I don't know. Are you sure you want?](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:26:51 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[To do course.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:26:51 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Of.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:26:52 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Yeah.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:26:52 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Yeah. I mean, a lot of people thought it was a.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:26:54 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Little wacky, but I believed it was.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:26:56 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Doable, you know.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:26:57 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Ohh like to be a scientist.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:27:02 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[You almost have to be insanely optimistic.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:27:05 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Because you know, if you're doing science that matters.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:27:09 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[You're doing experiments that you don't know will work, but you have to be an inherently insanely optimistic person. So I was sure we'd figure out a.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:27:17 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Way to make it work? I mean, did your colleagues at you know in the in the biochemistry department at Stanford?](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:27:25 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Any of them say.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:27:26](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Pat.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:27:27 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[You're this distinguished academic like you want to be a businessman. Really. Did, and even say that to.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:27:33 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[You there is. There was a bit of that. I mean, I looked at business and and I feel like, you know business is really important and it's not like it's some inferior thing to be doing, except that I just felt like going into business.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:27:47 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[For the sake going to business, I would hate it. Yes, it's it would just be insanely boring. And so I never had the slightest interest.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:27:50](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Yeah.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:27:57 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[In that.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:27:58 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[I didn't think of it all as, oh, I'm going into the business world.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:28:02 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Is that the only way to solve this problem involves competing in the marketplace and that requires starting a for profit business and everybody expected me to come back very quickly. And in fact, you know, when I first started, I thought, well, maybe I'll just kick this into gear.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:28:23 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[And then I'll just go back to my Stanford job. But what I realized very quickly is no, this is not a hobby. I have to be all in.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:28:33 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[When we come back in just a moment, how Pat and the team of scientists spent a year looking for the molecule that could turn a plant burger into an impossible burger, and how that eventual discovery turned into an expensive failure that burned through a year of cash. Stay with us. I'm Guy Raz, and you're listening to how I built this.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:28:53 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[NPR.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:29:04 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

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[00:29:24 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

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[00:29:37 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

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[00:29:44 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Thanks also to stand for small and American Express stand for small.com is your one stop shop for resources, offers and tools to help your small business get back to business.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:29:56 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Does it stand for small.com?](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:30:02 Speaker 3](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[We're spending more time at home than ever before, so now is a great time to finally adopt A dog, right?](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:30:09 Speaker 4](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Socialization is going to be harder, cause socialization and social distancing are definitely at.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:30:14 Speaker 3](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Odds. So before you decide to adopt A canine companion during quarantine, listen and subscribe to NPR's life kit.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:30:29 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Hey, welcome back to how I built this from NPR. I'm Guy Raz. So it's around 2011, and Pat Brown will soon be walking away from a 10 year job at Stanford to create meat from plants. But before he can even begin to find the ingredients and do the hard science to create an impossible.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:30:48 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Burger.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:30:49 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Pat has to raise.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:30:50 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[A ton of money, and so he starts just down the road from Stanford with a well known investor named Vinod Khosla.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:30:59 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[You went to Vinod Khosla and you pitched him. What, like you had a deck like a pitch deck with slides and and. And what did the? What was your what? Give your give me your elevator pitch did.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:31:09 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[You have an elevator pitch. No, it was. No. The funny thing was, it was extremely amateurish, OK, from a business perspective because.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:31:18 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Basically it was like a mostly a lecture about how incredibly disruptive the you know, animal based food industry is.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:31:29 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[And then practically, my last slide was, oh, by the way, this is a 1.5 at the time trillion dollar global market. You know, in retrospect, that could probably have been my first and only slide, but I buried the lead. Yeah.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:31:46 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[So you you raised the money.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:31:49 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[You raised some money from from Khosla.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:31:51 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[To launch a company that would kind of reimagine a way of of producing meat. And by the way, how did you come?](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:32:00 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Up with the name Impossible foods.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:32:01 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[So when I started the company 1st, we just had a placeholder name B 2.0 and then we when we decided we're going to, you know launch a product we found like OK Now we need a name that actually works as a brand name and we engaged naming company as an advisor.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:32:18 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[There and we were, they told us by far the most difficult clients they ever had because they were, they would give us 20 names and we say those all suck. Those are terrible. And then in the fourth round, one of the names they had was impossible. And as soon as I saw that one, I felt like, OK, we're done.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:32:38 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[It's perfect because we wanted something that was, you know, memorable that actually looked good in type. That was a an impactful word, a word that gives a little bit of an emotional response and that capture.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:32:53](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Hmm.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:32:55 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Some of the challenger spirit of the company and a lot of our investors thought it was a bad name, he said. Wow possible. That's such a negative.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:33:04 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Name so when.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:33:06 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[You first sort of launched this thing you've got. It's 2011. How how roughly, how much money did you have do?](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:33:12 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[You remember.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:33:13 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[We had $9 million.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:33:15 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Well, OK. So you had $9 million?](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:33:18 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[And who do you? Who do you recruit to help you? You wanna you. You have this hunch. Pretty strong hunch that you can basically replicate animal meat from plants. And we're not talking about like, a tofu burger. You're you're literally talking about a completely new kind of meat.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:33:38 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[That is, yeah.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:33:38 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[It only works. It will \*\*\*\*\*\*\*\* meat lovers.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:33:42 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Love it, right?](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:33:43 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Prefer it. Prefer it to what comes.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:33:46 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[The cow, because otherwise we're not going to outcompete the incumbent industry.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:33:51 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[So how do you recruit?](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:33:53 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[A team, I mean, you've got some money and a runway. Now you've got probably a runway of who knows, maybe a year at least before you have to raise more money and just to be clear, and this is not a knock on you, I think this is actually a great compliment cause you're a science, you're.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:34:06 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[A scientist, but obviously.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:34:08 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[You showed some entrepreneurial spark throughout your career at Stanford.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:34:12 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[You did not have a business background, so.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:34:14 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[You're.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:34:15 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[You had to start to.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:34:16 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Build a business. Who did? How did you find the people to help you out?](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:34:20 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Yeah, for I mean, I literally was.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:34:22 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Is, you know, I I would say the large majority of people in the in the in the US probably have more business savvy than I had when I started this company. Seriously, seriously. In fact, you know, my wife manages all our finances. Thank God she does. So we needed someone who actually.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:34:42 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Knew what they were doing because there's obviously a lot of a lot of expert management required to to run a business, even when that's that's not making money. So the very first person I hired was a guy who had just was about to graduate from Stanford Business School, very sharp Guy.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:35:01 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[He had grown up on a dairy farm and had actually worked as an engineer at General Mills, so I knew something about the food business. He understood the problem we were trying to solve, and he had an MBA and he and he was and he was a very smart guy. So yeah, so that was taken care of. And then the rest was pretty much all scientists.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:35:03](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Huh.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:35:12 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[And the NBA.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:35:22 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[And we were hiring people.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:35:25 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Basically, who had a \*\*\*\*\*\*\*\* basic science background sort of molecular biology, biochemistry, biophysics, and they went to work basically studying meat in molecular terms, the same way they would study, you know, a disease or something like that.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:35:41 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[So you and all these scientists were going after this idea that you could make meat without animals, right? So what did you do like? Well, where did you start to look?](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:35:51 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Well, before I founded the company, I had an idea.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:35:56 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[That particular molecule in meat, myoglobin, which is a heme protein, and it's what makes meat red.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:36:05 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Myoglobin is what it's called.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:36:06 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Myoglobin, it's it's very, it's closely related to hemoglobin. It's a heme protein and heme is what carries oxygen in your blood. That's what makes your blood red.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:36:07 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[OK.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:36:15 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[And hence the heme molecule is found in in all animals.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:36:19 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Not only all animals, but in pretty much all plants and bacteria and fungi and every form of life, it is pretty much a basic building block of life.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:36:26](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Oh wow.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:36:28 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[It's a building block of life.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:36:33 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[So him is a very obvious aspect of meat because it's what makes meat red or pink. OK, see. But there's another aspect of him, which is it's one of the most potent catalysts in nature. And when you think about meat, when you cook meat something.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:36:40 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[OK, yeah. If you get the color right, OK.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:36:53 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Really dramatic happens. That doesn't happen when you cook broccoli, and that is it transforms.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:37:00 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[You know if.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:37:01 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[You.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:37:01 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Cook broccoli or or a veggie burger. Yeah, it gets warmer. It might get mushy or nothing magical happens when you cook.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:37:04 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Get soft.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:37:07](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Yeah.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:37:09 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[What you'll get in the cooking process, this real, absolute explosion of aroma that's, you know, this meat that in the law firm has minimal or maybe a slight bloody odor and taste suddenly becomes potently flavorful and generates this, this explosion of aroma and.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:37:28 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Yeah.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:37:29 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[I knew that there's a molecule in.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:37:32 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[In legumes, the root nodules contain a lot of molecule called leg hemoglobin. That's a heat protein. It's actually very similar to myoglobin.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:37:41 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[And so you're saying that that legumes like like peas or or or soybeans have these these root nodules and and inside them there's something called what's called again.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:37:52 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[So for sidelines, it's called silicon.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:37:54 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Woman and I suspected. So there's one obvious thing that that he does, which is it gives the meat its red color. But what I suspected was it had a role in the flavor because he was such a good catalyst. So anyway, I did some calculations and concluded that there is.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:38:14 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[As much heat in the root nodules of the US soybean crop as there is in all the meat consumed in the.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:38:20 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[US.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:38:21 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[And if you could isolate it, if you can get it.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:38:23 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Then you've got the the Holy Grail here. That was the thinking.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:38:26 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Yeah, yeah. We harvested part of the soybean plant that nobody really cares about. Therefore, we felt like we could get practically for free and get this molecule that what was going to be important for, for me anyway. So when I had raised the money, one of the first projects, we start.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:38:44 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Was figuring out how to isolate like hemoglobin from soy root nodules.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:38:49 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Can I just ask you a stupid question, so forgive me. You're literally pulling out the the root nodules, right? Physically, it's. It's a it's a something that you hold or touch and then you've got to extract the leg. Hemoglobin. That's the idea from from these tiny little nodules on the roots of a of a of a plant.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:39:00 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Extract this.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:39:02 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[From it.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:39:05 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Serving plant. Yeah, it was a cockamamie idea.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:39:09 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Is that how come this was so complicated?](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:39:11 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Well, it's. Let's let's put it this way, it's totally doable, but the problem was that it was just a very difficult scaling problem. First of all these root nodules.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:39:23 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[You know these little tiny balls they're mixed in with their soil. You have to separate them out. You have to get rid of all the other stuff to get pure enough like hemoglobin. That's food safe. And all this sort of stuff. It just all those, all those.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:39:25 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Hmm.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:39:36 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[You could not scale that.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:39:38 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Exactly. It's it's totally doable. It's just not scalable in any practical way.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:39:43 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Yeah, it's like trying to pick leaves off of off time. Have you ever done that little time leaves. It's a lot.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:39:49 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Of that's a very good analogy in terms of that the seeming simplicity and the actual challenge of of doing it at scale. So it was in retrospect.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:39:49 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Work.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:39:50 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Low payoff.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:39:59 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Correct.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:40:00 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[A bad idea, which I'm 100% responsible for.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:40:04 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Bad idea because.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:40:04 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[You have to burn through a lot of cash to.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:40:06 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Figure that out.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:40:07 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[We had half the company basically was to some extent involved in this going out to soybean farms for you know the better part.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:40:15 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Of a year.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:40:16 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Wow.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:40:17 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[But this is the kind of thing you.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:40:19 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Have to do.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:40:21 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[When you're working on an unsolved problem where you don't know the what's the solution is, you have to be not afraid to, you know, try things that may fail and accept that as part of the job. My feeling is this is not the last expensive failure we're going to have in our history.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:40:41 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[By a long shot, you know as of today.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:40:44 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[We're going to, I can tell you for certain. We are going to have more expensive failures in the future as we try to figure out, you know, how to achieve our mission. But you know, the point is we don't have a map to to where we're going. It means we have to explore, we have to try things that.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:41:04 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[We don't know for sure. We'll work and some of them won't work. And if we're afraid to do that, then you know, well, we shouldn't be scientists. And we shouldn't be trying to do this. And I'm proud of it because that's the way we have to be.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:41:15 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Right.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:41:19 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Yes.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:41:21 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[So OK, so you spent a year basically on this idea that didn't work, which I'm sure was was hard, but but then I guess, I mean, you discovered a a way to essentially grow the the like hemoglobin by right by putting it in yeast.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:41:40 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Putting it into the E cell, yeah.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:41:41 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[And then by doing that you can make it at scale. You can basically.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:41:45 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Have lots of it.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:41:45 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Yeah. And basically, you just grow giant from winter tanks full of the yeast.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:41:52 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[And bake, open the yeast cells and extract the low hemoglobin and it's it's very scalable. The economics work well.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:41:58 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[So you you basically from from what I understand like this is around 20/12/2013 that you really kind of start to produce this stuff at scale, but that's not the impossible burger. You can't just go into those vats of yeast and grab a handful out and form a Patty and grill it. That's that is not you're you're still far far away from.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:42:18](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[No.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:42:20 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[The actual like impossible meat at this point.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:42:23 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Right. Well, that certainly wasn't sufficient. This was not like a sequence of things. So we were.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:42:27 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[We were working on scaling up the hemp protein at the same time. They're working on figuring out the texture and the the rest of the flavor, chemistry and so forth.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:42:31 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Right.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:42:36 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[OK. So Pat, even before you launched, even before you had a product, people were clearly paying attention because Google reportedly heard what you were doing and offered to buy your company. Then they reportedly offered like 2 or $300 million, just an astounding amount of money.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:42:55 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Which which you turned down.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:42:58 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Yeah. So we've never confirmed that.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:43:00 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[I I I got you. But you're not gonna confirm or deny it. But let me let me just ask you this question. Why would you have turned that down?](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:43:09 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Well.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:43:10 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[You know, I think Google is a great company and the people there are lots of super smart people there. This company, Impossible Foods, has a very simple, highly specific mission that we are completely 100%.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:43:28 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[You know, focused on achieving nobody else has that level of focus and commitment, no matter how smart they are.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:43:38 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[And the mission is to get people to stop beating.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:43:40 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Animal meat.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:43:40 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[The mission is to eliminate the need for animals as a food technology and by doing so to save the planet from an environmental catastrophe. Nobody cares as much about it as I do, and my colleague.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:43:53 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[To do and I don't want to put the mission at risk by by putting it in the hands of someone who's not as committed to it as we are. That's really what comes down to.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:44:03 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[So you forge ahead and you continue to kind of iterate and work on this product until you got something pretty workable, not just workable. Good. Good enough to actually put out, put out into the world in 2016. The the burger, the impossible burger was launched and you guys sort of formed a partnership.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:44:24 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[With David Chang, the famous chef in New York of Momofuku, tell me why? Why you guys decided to do that instead of like, you know, ship it to all the stores. You decide we're going to start with this one place. How did that? What was the thinking behind that?](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:44:36](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Had.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:44:38 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[I think it was something that was pretty obvious under these circumstances. So we've been in contact with a number of chefs that we would give samples of our product to just to get feedback because you know, again The thing is we were not interested in launching a.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:44:54 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[A burger, if. If it didn't satisfy a very \*\*\*\*\*\*\*\* meat lover, it wasn't going to move the needle on our mission. So we were setting a high bar for ourselves, so we were giving samples to chefs to get their feedback and had been doing that for.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:45:10 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Quite some time.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:45:11 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[And my CFO at the time current CFO too.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:45:15 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[David Lee belonged to some Queen American organization that Dave Cheng also belonged to, and he was going to that event in New York, and he brought a sample in case he could see Dave Chang to have them test it out. So he brought it to Dave Chang's kitchen rest.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:45:26 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Oh wow. Wow.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:45:29 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Grant and he cooked it on his stove and then just like, immediately started tweeting like my mind and. And the point is that Dave Chang is exactly the kind of person we want to launch with, because the main value we would get from launching our product.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:45:39 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Blown.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:45:50 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[At the time when we had very limited production capacity, you know the amount of money we could bring in from sales was was irrelevant, OK?](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:45:56](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Yeah.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:45:58 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[The only the.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:45:59 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Value of the sale to us is awareness and brand building and the single most important message that we need to deliver to consumers who who never heard of us is delicious. Meat doesn't have to come from animals and Dave Chang.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:46:16 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Yeah.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:46:18 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Is such a \*\*\*\*\*\*\*\* meat guy that he once banished all vegetarian items from his menu on principle. OK, and there's no more sincere and valuable endorsement.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:46:25 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Yeah.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:46:33 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Then to put our product on the menu for a chef to put it on the menu. Because every and when a chef puts a dish on the menu, they're putting their livelihood and their reputation on the.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:46:44](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Hmm.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:46:45 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Line.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:46:46 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[For the the subsequent restaurants relaunching initially, again they're not high volume, but they were.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:46:53 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[High credibility restaurants because they were run by uncompromising chefs who are known primarily for their meat.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:47:01 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Yeah, you were going to like high end restaurants in, in, in, like York and San Francisco and LA.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:47:06 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Right. And the thing about she.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:47:08 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Is that what they want? Is something new, something challenging? And the thing that's different about our product than any plant based product is that it has the magic of meat that that only a chef can see and there's never been a plant based product because of the theme primarily that.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:47:28 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Does the magical thing that meat does when you cook it, which is it transforms completely. You can tune the flavor profile by.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:47:37 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Whether you cook it, you know where or well done and stuff like that. And I think for a chef having the creative possibilities that that opens up just makes it exciting for them. So I think.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:47:49 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[That's part of.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:47:49 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Why we were so fortunate to be able to work with these great chefs is that it was something new for them to put their artistic skills to use on.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:47:52](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Yeah.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:47:59 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Pat I.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:48:00 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[I want I I want to talk to you. I know that obviously a lot of what you do is proprietary and patented and secret, but I'm curious like.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:48:08 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[How do you as?](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:48:10 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[You kind of improved it and got it to where it is today.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:48:13 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[How do you? Is it spices? Is it is it like? I don't know, is it is it different like ingredients? How do you how do you? Is that how you get that taste?](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:48:24 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[No, it's it's, it's not spices at all. I mean and it's actually the ingredients are are relatively few, I mean it's.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:48:32 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[The flavor is almost entirely from simple small molecules like amino acids, vitamins.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:48:38 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Various things that you can find in vegetables, animals, whatever. Same simple, you know, ubiquitous biomolecules plus theme as a catalyst and that's most of what's behind the flavor. We don't put spices in, there's no like meat flavorants in there.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:48:46](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Yeah.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:48:59 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[It's pretty straightforward, it's it's the the way that we approached the problem was we basically asked the question, how does how does meat do it? How does meat from a cow produce that flavor? Because if meat from a cow can produce that flavor with the biomolecules that that it contains, which we knew at the time.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:49:20 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Were extremely similar in composition to the things that are found in plant.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:49:26 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Cells, if we can figure out how meat does it, then we don't have to fake the flavors we can build in the exact same flavor chemistry into our product so that it does the same thing and it it literally creates the flavor in real time when you cook it in the raffle arm, which you can, you can actually eat it well, which I wouldn't recommend for the conversion.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:49:42](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Yeah.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:49:47 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[The flavor is completely different from the cooked version, and that's unlike any plant drive food before and it tastes bloody because human human gives it a bloody taste, yeah.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:49:55 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[So weird. Yeah, that's my question.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:49:59 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Like you have not eaten the beef burger since 1976.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:50:04 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[And I've talked to a lot of people who are full on vegans and they're freaked out by impossible burgers because they taste so much like beef. Do you eat them? Do you eat impossible burgers?](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:50:15 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[I mean I've, let's say, outgrown my craving for for meat a long time ago. But I do like impossible burgers. In fact, my sister, who's been vegetarian as long as I have, can't bring herself to eat 1.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:50:30 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Cause into this too meaty, too beefy.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:50:32 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Right, yeah.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:50:33 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Exactly. It's just it's just it.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:50:35 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[It even though she knows.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:50:37 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Of course, everything that's in is nothing from the animal. It's it's just like a visceral thing. People have very visceral reactions that are it's it's it's not your frontal lobe, you know, calling the shots.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:50:48 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[And and I just mentioned, Pat, that that last just last year you you upgraded the recipe for the burger.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:50:55 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[And you began rolling it out at grocery stores and then at Burger King, which introduced the Impossible Whopper that people in crazy.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:51:04 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[More and then Applebee's and White Castle and and all these other chains started selling it. And people loved it. I mean, I think even even like Glenn Beck, you know, people like, who are like you, you would imagine, would go after vegetarians or like, like they. They loved it.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:51:19 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Right.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:51:20 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Here, here is here is hello. Did you see that video? Yeah. Ohh, it's hilarious. Yeah.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:51:24 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Yeah, Glenn Beck's like, this is, I think this is great.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:51:28 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[I can't tell the difference and you went from like just, you know, David Chang and a couple of restaurants in 2016 to now it's they're everywhere like 7000 Burger King locations, right and possible. And and there were there were shortages people waiting in line. They can get them. So how do you how much do you have to produce of this stuff to meet demand now?](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:51:48 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Unfortunately, that's one of those numbers I think I'm not supposed to talk about, but I can just tell you lots, many millions of pounds.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:51:52](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Yeah.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:51:55 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Are you able to meet?](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:51:56 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Demand well the as a you know, a big part of our fundraising is that it's exactly this betting on our side.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:52:04 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Yes, we we have to be building capacity.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:52:05 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Right.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:52:08 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[On the premise that the demand will be, you know, many fold greater than current sales and have to keep doing that to stay ahead of the demand, what happened a year and a half?](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:52:20 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Ago was.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:52:21 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[We were, you know, planning on building capacity, but we weren't prepared for this surge in demand that happened over a very short period of time.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:52:30 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[It happened so fast that then we, you know, basically we were playing catch up because you know this is this is a problem of.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:52:38 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Being in a business that produces stuff, you know you it's a big investment to build capacity. It takes time and you're guessing you're doing something that's never been done before, where there's no road map and we have to say, OK, what's demand going to be in two years?](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:52:54 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Yeah, as you started to get more popular and people started to say, hey, this is great, you then came.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:53:02 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[All kinds of pushback, OK, let me talk about some of the pushback. And you know what, I'm and you know, you know, I'm going. You get people saying, look, this is unhealthy. It's full of sodium. It's full of saturated fat. This is, you know, it's it's full of a bunch of, you know, GMO stuff. Then you had the meat industry saying, you can't call this burgers.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:53:22 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Other states in the US where I think you can't call it unless it comes from an animal.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:53:28 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[You can't call it a burger and you know other groups saying, you know, you know you're this is frankenfood or lab grow all this stuff when you hear people say, hey, you know this isn't healthy, what do you say?](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:53:38 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Sure.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:53:42 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[I would say from a health and nutrition standpoint.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:53:46 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[We have been extremely deliberate and conscientious to make a product that we believe is substantially better for the consumer than what it replaces.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:53:57 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[And it has the same protein bioavailability, the same bioavailable iron. People make a big deal about the fact that the sodium content is higher. But you could say yeah, and the same content of a pair is higher than a Peach, but the fact is that the sodium content in.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:54:17 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[The four ounce impossible burger is, I think, 1/6 of the sodium allowance in a sodium restricted diet. OK, so this is not a kale salad, it's a burger.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:54:31](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Hmm.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:54:32 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[And it's targeted at someone who would otherwise be buying the animal version. We want to make it the healthiest, most nutritious product we can possibly make.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:54:36 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Yeah.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:54:41](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Right.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:54:43 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[And still have it be a burger, OK.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:54:46 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[If you want a kale salad, please go buy a kale salad. If you want a burger, you're better off buying our burger than the car version.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:54:56 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[When you hear about these states that are proposing to prohibit companies like yours from using the word meat.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:55:04 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[In their packaging, I mean, what happens if you can't call it a burger in like?](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:55:10 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Or some state. What are you going to do?](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:55:11 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Well, first of all, I think that there is most most of the bills have been proposed to restrict our labeling, have not passed in the state legislature and those that have like I'd say that the the smart money is that they're not going to pass constitutional tests but.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:55:31 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Even in the hypothetical case where someone tells us we can't call it meat, well.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:55:36 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Whatever the point is that consumers will figure out what it is, and we'll we'll call it whatever we need to call it. Ohh.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:55:43 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Do you think they've threatened the beef associations? Did they feel threatened by?](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:55:46 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Incredibly threatened by us incredibly.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:55:48 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[You're still tiny compared to them, but you're just tiny, tiny, tiny.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:55:51 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[It's because it's because they know this is coming and it's just a matter of time when we get the economies of scale that they have and when we've, you know, expanded our suite of products and so forth.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:56:05 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[That it's going to be game over for that and I think that's why even from before we had our first product. I know from a direct source that a representative of that industry actually reached out to a lobbyist and basically said to to, you know, ask that, ask the lobbyist to.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:56:25 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[To get Congress or the USDA to to shut us down.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:56:29 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Wow. That means you've arrived, Pat.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:56:31 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Yeah. I mean, they're fighting a weird guard action and they're on the wrong side of his.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:56:36 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[3.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:56:37 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Pat, I'm wondering you've you've now raised over a billion dollars at this point, which?](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:56:45 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Save a lot.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:56:46 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Of money to do this and you've attracted investment from people like Bill Gates and celebrities and athletes and tons of different venture firms. But why is it so expensive?](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:56:58 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Like is it? Is it just like all the equipment you need and and all the sorts of labs and the resources and the materials like why is it so expensive? Why does it cost so much?](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:57:06 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[I would say a large fraction of the expense. So you know we have an R&D team that's probably 120 people really just as good a group of scientists as in any company.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:57:17 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Pretty much ever in history, but the work they do isn't insanely expensive, but.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:57:25 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[We have to.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:57:25 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Scale up production of a physical product that you know we saw on the scale of 10s of millions of pounds a year.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:57:35 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[We had to build a supply chain for our hemp protein.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:57:39 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[And and those things are relatively expensive, there's, you know, just the the capital investment in building a manufacturing facility and all that capacity and that's a big part of it is that and The thing is that you have to invest ahead of growth and and you know betting on your success.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:57:43 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Right.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:58:00 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Basically, so if we're going to increase our volume by several fold this year and several fold the next year where we need to be building capacity right now, that's like 10X what we're.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:58:13 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Selling it's very different from if we were building an app or something like that where you know it's it's it's just you're just paying for coders basically.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:58:23 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Right. Right. Fair. Fairpoint. Yeah, Pat, obviously, you know, we have to talk about everything that's going on right now in the world with with the effects of the pandemic and the economy. And I mean.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:58:37 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Is it? Has it affected your business?](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:58:41 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Well, definitely we have to operate differently. I mean, I think you know the, the workspace, our workspace is deliberately designed.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:58:50 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[To be effectively one large space where people are in visual contact with a lot of their colleagues. It's very it's very interactive environment, so it's quite compromising to the to a lot of the things that are important to us and of course our R&D labs, the, the ability to do actual wet.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:59:11 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Have work you can't do because even though it's essential to the future of the planet, it's not immediately essential to day-to-day life for us to be operating. So we're we're so there and operations basically, you know that people are still getting work done, planning experiments, analyzing data and stuff like that, but it's compromised manufacturing.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:59:28](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Yeah.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:59:32 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Yeah, it's complicated.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:59:34 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Pat, I want to go back to something we talked about a little earlier, which was when you turned down that giant offer from Google to buy your company because had you said yes to to that offer, you would have been an extremely wealthy person right now. And, you know, I think that every entrepreneur I've interviewed has said.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[00:59:55 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[You know, they don't care about money and and for the most part, I believe most of them. But I I actually really, really don't think you care about money at all.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[01:00:05 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[I mean, I I'm not motivated. I mean, first of all, I live in a nice place, same place I lived in for 30 next years. I have enough money to, you know, take care of my needs and so forth. And if I didn't, I'd probably be spending a lot of my time thinking about money. And where do I get it so for it.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[01:00:14 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Yeah.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[01:00:25 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[The situation I'm in right now is not going to be improved a bit by.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[01:00:30 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Buy more money. OK, so it's.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[01:00:32 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[If you become super rich, if you become a billionaire trying to.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[01:00:32 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Just.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[01:00:34 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[It would probably make my life worse. Yeah, I'm going to tell you I'm serious. I'm serious cause I know a lot of people who are super rich. And I would say by and large, they're not as happy as I am. The kids are much more likely to be miserable than my kids are. It sounds like such a stupid thing, but once you have your basic needs met, I think more money.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[01:00:35 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Change your.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[01:00:54 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Adds very little value, and if you're trading if you're talking about something that's as incredibly valuable and motivating to me as the mission of this company and so forth and so important to the world, of course, I wouldn't trade that for.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[01:01:08 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Money.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[01:01:10 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Pat, when you think about it, right, I mean, if you didn't ever do impossible foods and you were honored after your retirement at Stanford and they would talk about the research you did in genetics and and all the breakthroughs that led to and and Co founding this academic journal and you know, but but you went on to do this thing after you left Stanford. I mean, you left that safe.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[01:01:31 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Comfortable job. I mean, you started this business. It's.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[01:01:35 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Has now reported to to be valued at $4 billion and and I know as you said, that's not your motivation. But I mean it is a fact. It is, it's a value of $4 billion. And I mean when you think about all of the things that got you to this point, you know and the risk you took by leaving and you know do doing this and all that happened before.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[01:01:55 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[I mean, do you think that your success is because of your intelligence and and how hard you worked or do you?](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[01:02:00 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Think.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[01:02:01 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[You know more of it has to do with luck.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[01:02:04 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[I think.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[01:02:04 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[The most important thing is actually like there are a lot.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[01:02:07 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Of people.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[01:02:09 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Who are a smarter, smarter than me? And in terms of the kind of problem solving skills we're entirely capable of doing this. So what what I think is important that I contributed is the initiative and the determination to do it.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[01:02:28 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[It's basically the critical thing that I provided was that.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[01:02:34 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[I looked at this problem, I saw that nobody was seriously taking it on and I basically decided I'm going to take responsibility for solving this problem, not because I was exceptionally capable of solving it, but basically because I decided to do it.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[01:02:54 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[I think that's the most important thing and I feel like it's the one thing that that keeps a lot of valuable things from happening is.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[01:03:01 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[People feel like you know someone else must be. This is someone else's job to solve. You know? Why would I be the person to do this? I'm so UN quote.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[01:03:11 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Qualified, you know, cause I was unqualified. Well, the answer is someone's got to do it. And I feel like a lot of good things would happen if people were more willing to just say I'm going to take responsibility to solve this problem. And so I think that's the the, the main attribute that enabled me to.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[01:03:31 Speaker 2](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[To take this on.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[01:03:34 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[That's Pat Brown, founder of Impossible foods. In addition to plant based beef, the company has also recently rolled out plant based pork. The challenge still to overcome making a nice juicy plant based steak. But Pat says, quote, there's no question we're going to.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[01:03:52 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Get there.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[01:03:55 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[And thanks so much for listening to the show this week. You can subscribe wherever.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[01:03:59 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[You get your.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[01:03:59 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Podcasts. You can also write to us at hiit@npr.org and if you want to send a tweet, it's at how I built this, or at Guy Raz. This episode was produced by Rachel Faulkner with music composed by Ramtin Erebuni. Thanks also to Candace Lim. Julia Carney.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[01:04:03](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Lord.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[01:04:15 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Eva Grant and Jeff Rogers. I'm Guy Raz. And you've been.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[01:04:18 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[Listening to how I built this.](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[01:04:22 Speaker 1](https://1drv.ms/u/s!AMhVeraEIITCz2A)

[This is NPR.](https://1drv.ms/u/s!AMhVeraEIITCz2A)