

THE ECONOMIC CLUB

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Signature Event

David A. Ricks

David A. Ricks
Chair and Chief Executive Officer
Eli Lilly and Company

Interviewer
David M. Rubenstein,
Chairman,
The Economic Club of Washington, D.C.

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DAVID M. RUBENSTEIN: So, our special guest is David Ricks, who since 2017 has been the CEO and chairman of Eli Lilly, which is now the most valuable pharmaceutical company in the entire world. And a company, as I mentioned earlier, that has had its market capitalization increase by about 860% since he became CEO, and the stock price is up a little bit more than 1,000%. So pretty good.

DAVID A. RICKS: We've been working hard, yeah. [Laughter.]

MR. RUBENSTEIN: So, let's talk about the phenomenon that's changed the world, to some extent, which is the anti-obesity drug. Now, to make sure everybody's on the same page length, what is the name of your anti-obesity drug?

MR. RICKS: OK, so the name is Zepbound. The active ingredient is called tirzepatide.

MR. RUBENSTEIN: Yeah. OK. So, by the way, who comes up with these names? Where do you get these names? [Laughter.]

MR. RICKS: Right, yeah. Not me, David. Not me. No, it's more complicated than we want to talk about here, but we can't have names that are similar to each other because doctors make prescribing errors. We can't have names that make claims about what the drug does. And we can't have names that only work in English. So, we end up with these strange-sounding names.

MR. RUBENSTEIN: OK.

MR. RICKS: Yeah.

MR. RUBENSTEIN: So, as I understand it, a number of years ago – you can tell us how many – somebody was working on a diabetes-related drug. And that drug ultimately got to be – [audio break] – FDA, but – [audio break] – that actually helps you – [audio break]. When was that discovered? And was that ever the intention when the drug was being developed?

MR. RICKS: Yeah, pretty early on. So, we launched the first GLP-1 medication in the world in 2005. It was called exenatide. It was a twice daily injection, and it was indicated for people with diabetes. Like a lot of things in medicine, there's, like, iterative steps of improvement that occurred, but that was the first effort. On the cover of our – the next year, our annual report, is a woman who was using the drug. And she said my diabetes is under control, and I noticed I'm losing a little weight. Actually, it was 2006. It's the cover of our annual report. But we had to improve the medicines to really make them effective for weight loss.

One big improvement was to make them weekly. That's a convenience benefit, but even more important the action of the medicine flatter, meaning more consistent through the day and night. When we had it twice a day there were ups and downs. And one effect of GLP-1 medications is they cause nausea and other GI distress. That's a function of the up and down in your system. So, when we made it weekly, it was flatter and we could dose higher to see more weight loss. So that was sort of an accidental breakthrough of trying to make a more convenient form.

MR. RUBENSTEIN: OK. So now there's another company that is sort of in the same business, Novo Nordisk.

MR. RICKS: Yes.

MR. RUBENSTEIN: Which is in Denmark. And they have a similar product. And they have a product that does the same thing. One is for obesity – anti-obesity and one is for diabetes. And is there really any difference between the two of your –

MR. RICKS: Drugs?

MR. RUBENSTEIN: In terms of the drugs?

MR. RICKS: There are. There's no difference really between the name – the drug that's named for diabetes versus named for obesity for either company. We do that for insurance reasons we could talk about. But tirzepatide is the latest version. It has two modes of action. And, by the way, we're having a conversation about weight loss medications right after you just ate lunch. [Laughter.] And I know that that may cause some anxiety. But right now, because you just ate lunch, your GI tract is communicating with the rest of your body. It's communicating with hormones or proteins and telling it that you've been fed, and you need to absorb nutrients and other things that are essential to life, because food is essential to life.

What we're doing is boosting some of those signals with these medications. They're boosting the signal that you're full, boosting the signal that you no longer want to eat more, and boosting signals that you should absorb nutrients that you've consumed. And so, ours does that with two different hormones, one called GLP-1 another, a new one, called GIP. Ozempic, or semaglutide, just uses GLP-1.

MR. RUBENSTEIN: But what the drug does is, what, it tells your body you're full when you're maybe not as full as you used to be?

MR. RICKS: Yeah, so – well, so it tells your body you're full. And it does that to the brain, a sense of satiety. Probably, we've learned over time, our sense of fullness becomes conditional. So as people eat more habitually, that signal kicks in later and later. And that's a cause and consequence of obesity. It does other things too. It actually makes your stomach fuller because it slows gastric motility. So, it slows down your nutrients, which seems counterintuitive but when you eat, when our ancestors were alive 10,000 years ago, meals were rare. And you wanted to absorb all the nutrients out of it. So that signal said, absorb the nutrients.

MR. RUBENSTEIN: All right. I don't want to confuse people, but there are four different names that people should know for these drugs. Now you have an anti-obesity drug which is called, what?

MR. RICKS: Zepbound

MR. RUBENSTEIN: Zepbound. And then you have a diabetes drug which is called?

MR. RICKS: Mounjaro. Same medicine, different name.

MR. RUBENSTEIN: Different names. And then Novo Nordisk has two drugs. Their names are?

MR. RICKS: Ozempic and Wegovy. Both are semaglutide, same medicine, two different names.

MR. RUBENSTEIN: But the confusing thing is Ozempic is like – it's, like, a generic name. People say, I'm on Ozempic. Ozempic is not the anti-obesity drug. It's the diabetes drug. So why is it – why don't people get the right names? [Laughter.]

MR. RICKS: I don't – should we blame the media? I don't know.

MR. RUBENSTEIN: I don't know. I'm curious. [Laughter.]

MR. RICKS: It was the first drug that had been used off label for obesity. And it – again, it was a flat once a week. And people discovered, if I just give – take more than prescribed, I can lose more weight. And then Novo did a study, credit to them, that showed clinically that people lose clinically meaningful weight. On their medicine you lose, you know, 13 to 15 percent of your body weight. On ours, you lose, you know, 20 to 26 percent.

MR. RUBENSTEIN: Well, let me go through that again, because there was a study that just came out a couple days ago, I think, that said one on one, comparing the two, your drug, anti-obesity drug, loses weight more rapidly for people than the other product. Is that right?

MR. RICKS: More rapidly and more. So, 47 percent more. So, after a year and a half, roughly, people on our drug lost 17 more pounds than on Wegovy.

MR. RUBENSTEIN: All right. Why do people need to lose so much weight in this country? Our country has, if I got it right, 75 percent of the people are overweight and 42 percent are obese. When did that happen? When we went to no-fat food? Or when did all of a sudden we become so obese?

MR. RICKS: Yeah. If you look at the epidemiology charts, it really seems to have started in the '60s, growth in overweight and obesity in the country, and really accelerated in the '80s and '90s. So, what are the reasons? How we live certainly is one of them. And energy expenditure has to be part of the story. What we eat, though, is probably a more important reason. Not just the quantity, which has risen modestly through that period of time, but actually what's in our food has changed. And I think that's also attributed to this.

MR. RUBENSTEIN: All right. So back to the drug. When you realized it could lose weight did you get the FDA to say, yes, it can be prescribed for losing weight? Or it's still you can't get that prescribed for you?

MR. RICKS: No, no. As of last year, we – Zepbound launched. It's for weight loss for people who have high body weight.

MR. RUBENSTEIN: OK. And do insurance companies reimburse people for the cost of these drugs?

MR. RICKS: Some do. More should. [Laughter.] So as of today, the federal government actually has a prohibition on reimbursing any of these drugs, which is a problem, I think. Although the Biden administration just has advanced rulemaking to change that. That's good news and we hope the next administration will continue that process. Seventeen states in their Medicaid program have decided to step outside of that federal rule and reimburse them anyway. So California just started, for instance, Massachusetts, other states. And then about 60 percent of employers have some form of reimbursement.

MR. RUBENSTEIN: So if losing weight makes you healthier, why would people who care about insurance reimbursement – Medicare and other things – not insist on paying for this, because it would make you healthier and therefore you don't have other diseases you have – they have to reimburse you for?

MR. RICKS: I think in four or five years we'll look back and say, yeah, that's what should have happened. And it's silly that we don't pay for what is already known to be a primary contributor to poor health, which is excess body weight. But, you know, people have different motives and incentives. As you know, we reenroll in commercial insurance every year. So, unfortunately, I don't think insurance companies have your best interests at heart. Maybe that's tough to say, but they really think about it in one-year increments.

And the benefits surely will play out over a longer period of time. Maybe your employer has a stronger interest in your long-term health. That's probably why many have stepped forward. And then evidence. Our job is to make the evidence – produce the evidence that we're not just having people lose weight, but losing weight with our medicine causes improved health. And we have many studies out this year that are demonstrating that.

MR. RUBENSTEIN: So, to take this medicine you have to inject yourself, more or less.

MR. RICKS: Correct, yeah.

MR. RUBENSTEIN: Well, why not just go to a pill?

MR. RICKS: Oh, great idea, David. [Laughter.] We're working on that. The injection – you have to inject because it's a protein. And if we orally take proteins your body thinks it's food and it breaks up proteins. So, you cannot really take these drugs orally. You have to bypass the GI tract, even though it's affecting it, and go right to the bloodstream. But we are working on a pill. We'll have some data, actually, as early as next year for – it's a GLP-1 only. It's a single-acting. It's not going to be as good as tirzepatide or Zepbound. It'll be about as good as Ozempic, we hope. And this would be a once-daily pill. That'll be a fantastic innovation.

MR. RUBENSTEIN: So, when you have drugs that are very, very popular, that you often have people that make counterfeit or copycat drugs. We see them on television all the time, advertised that way. What about for this? Do you have to worry about counterfeit drugs coming in that are trying to say the same thing?

MR. RICKS: It's a terrible problem right now, actually, because I think consumers don't really know the dangers or the difference. Today the FDA and the government has allowed this to sort of grow. And of course, a weight loss medication that's effective would be a popular thing for people to go around the health care system and seek treatment on their own. But the data we have is that 80 percent of these medicines are coming out of China from unapproved and unregulated sources. We recently, with Borders and Customs, seized a big batch that was shipped in dog food. People then reformulate them and sell them locally in med spas and other outfits. But you really don't know what's in that vial. We buy them and test them. We find bacteria, plant material, viruses, fungus. You do not want to be using these.

MR. RUBENSTEIN: Right. But these counterfeit drugs are not – they're cheaper. They're cheaper because they don't have the same ingredients, I assume. But how much more expensive are your drugs than the counterfeit ones? In other words, if somebody wants to use your product, Zepbound, how much does it cost a month?

MR. RICKS: You can buy Zepbound direct from Lilly for \$399 for the starter dose.

MR. RUBENSTEIN: \$3.99?

MR. RICKS: No. [Laughter.] This is a valuable innovation, David. Three hundred and ninety-nine – [laughter] – \$399 a month, which is about \$100 a week. And I know that's a sacrifice for many. But that's without insurance. With insurance, most people pay \$25 a month. So that's the importance of insurance. That's why we buy insurance, to shield us from our health costs. The online ones, you know, are as cheap as \$100. But these are companies that want all the benefits of being a drug company, but bear none of the responsibilities.

MR. RUBENSTEIN: But you – for example, you have this under patent for how many years? In other words, our system is you have a drug you have 20 years –

MR. RICKS: From invention, yeah.

MR. RUBENSTEIN: From invention. So how many more years do you have before it goes generic?

MR. RICKS: Should be until mid-2030s, yeah. So, another 10-11 years.

MR. RUBENSTEIN: OK. And is this the most popular drug that Eli Lilly has ever had?

MR. RICKS: Should be by the end of the year, yeah.

MR. RUBENSTEIN: OK.

MR. RICKS: We'll break that record, and go beyond probably, yeah.

MR. RUBENSTEIN: Right. Some people say that if you go on this drug, you have side effects that are not completely desirable. Is that true?

MR. RICKS: So yeah, there's two things. All drugs that work have side effects, and sometimes untoward effects. And we have to warn against both of those. That's why we do controlled studies and measure them carefully. Many people have mild to moderate GI distress when they start. That's why we titrate. We start at a low dose, we recommend a low dose and go up slowly. Almost everybody stays on the drug and goes through that and, by the third or fourth month, really don't have any effects anymore of that at all. There are a few people where we don't have data, or we are cautious. One is women who could become pregnant. Neither of the medications have information about that. And then there's a condition called pancreatitis, which is sort of an inflamed pancreas. We worry about that with these drugs. So, if you've had a history of that, don't use them.

MR. RUBENSTEIN: All right. Let's suppose you take the drug and say, I've lost weight. I'm very happy with my body now. I'm going to get off the drug. Some people say that there are – it's very difficult to not regain the weight.

MR. RICKS: That's right. And science tells us that there's a reason for that. Some people do maintain the weight reduction or stay in that range. They have to change a lot about how they live, burn more energy, eat different foods. So, we can all try that. I think we should all try that, actually. But some people cannot. And there's a recent paper in Nature that actually told us why, which is that once you have become obese your fat cells learn that that's their new state. And they defend that state. And so, they're actually wanting more energy. And that sends signals to your brain, and so forth. So, once we as adults gain weight and have that on for a while, it's very, very difficult to reset your thermostat, if you would, or to reset that level. So, for now we do recommend, if they can't – people cannot maintain weight loss off the drug, to go back on the drugs and use them chronically.

MR. RUBENSTEIN: OK. So, we do put fluoride in the water now, or at least for the time being. What about putting this in the water and just solve all the problems? [Laughter.]

MR. RICKS: Well, we couldn't – we shouldn't put it in the water. People should use it under the guidance of their doctors. [Laughter.] But we should have broad coverage, just like we think it would be crazy if we didn't have anti-hypertensive medications available to all adults in America, or anti-diabetes medications. Obesity causes 236 adult diseases. And we know it's a precursor for these things. Why not try to prevent it? We have a stigma in our country, and in many other countries, that this is sort of some personal failing. But many of us – we're here because our ancestors conserved energy very effectively. That's how they survive famines and floods and so forth. So, we're predetermined to want to keep weight on by our genetic background. And we, in a world of plenty, of abundance, we need to probably have some medical help sometimes.

MR. RUBENSTEIN: So, what about over the counter? Why can't this just be an over-the-counter drug, you can just go buy it like an aspirin or something?

MR. RICKS: Yeah, I think that we'll try to work on that through time. The oral pill we have is a great candidate for that, because that's much easier to dispense in that kind of pharmacy setting. And we'll need to get more evidence that it's broadly safe. Here you don't have the doctor supervision piece, so we would want to make sure, particularly develop data in pregnant women and other settings, to make sure that that could be safely done. But we would have an interest in expanding access for this medication and reducing the price.

MR. RUBENSTEIN: So how many times a day do you get asked about this drug?

MR. RICKS: Today?

MR. RUBENSTEIN: Every hour on the hour?

MR. RICKS: Oh, yeah. [Laughter.] Many, yeah. Dozens, yeah. And it's a pleasure to talk about it because it's such a breakthrough that can change our country.

MR. RUBENSTEIN: But nobody really expected that to happen. As you point out, sometimes things happen unexpectedly. So, let's talk about some other things for a while. Let's talk about Eli Lilly itself. When was this company started?

MR. RICKS: Yeah, 1876. So started by a colonel, Eli Lilly, who served in the Civil War. He was a pharmacist by training, led an infantry and artillery company, and was a prisoner of war in Alabama, actually. And he saw firsthand the atrocities of medical care in the Civil War. You may know, I know you're a student of history, that more people died after injury than from their injury, due to medical care. And at the time, this was an era of snake oil salesmen, medicine wasn't very advanced. But what we thought of medicine often was, back to the counterfeiting discussion, you know, made-up things, harmful ingredients.

So, he started a company with a pledge to say, everything that's in this is on the label. If it's in there, you know about it, transparency. And that then evolved into a company that embraced the scientific method and began to really adopt the methods that the modern industry has, which is then taking natural products – which is what most medicines were in 1876 – and refining them into what we think of as a medicine now. So, think willow bark into aspirin, or pancreases of cows into insulin. That's what the company really was built on.

MR. RUBENSTEIN: So how long did he live after he started the company?

MR. RICKS: About 25 years. And he handed the keys to his son, J.K. Lilly, who handed the keys to his two sons, also named Eli and J.K. That's a little odd. But for three generations, it was a family-run business, yeah.

MR. RUBENSTEIN: And the family is not an owner now?

MR. RICKS: Not – well, so the legacy wealth of the family is our largest shareholder, the Lilly Endowment. So that's a –

MR. RUBENSTEIN: The Lilly Endowment is now probably the biggest foundation the United States, with about \$80 billion of assets under management, right?

MR. RICKS: Yeah, exactly. Yeah. And they have one asset, essentially, which is our stock.

MR. RUBENSTEIN: OK. And they're your biggest shareholder.

MR. RICKS: Yeah.

MR. RUBENSTEIN: So, OK. So, when Eli Lilly evolved over the years, and into the 20th century, what were its big products?

MR. RICKS: Yeah, so insulin really was the birth of the modern company. And this was obviously a terrible condition, type-1 diabetes, and a breakthrough. And we were a part of commercializing that around the world. Invented the manufacturing method and created that business. That was followed by, actually, penicillin. So, during World War II, Lilly was commissioned as one of the manufacturers for antibiotics for the Army. And we from there then iterated for 40 years antibiotics, including still some that are used today like vancomycin, which is the last line of defense for the worst infections. Prozac we're famous for, which really brought modern psychiatry into the fold. And, of course, now Mounjaro and Zepbound.

MR. RUBENSTEIN: And what about the future? You're work – what are the human problems you're working on in the future? Alzheimer's, I assume, is one of them.

MR. RICKS: Absolutely, yeah. So, we think about our company – of course, we use scientific methods to create medicines to solve tough problems. We're not really interested in niche problems. We think we're here because we're a big company to do hard problems that are scalable. That's sort of what makes our business work, but also has the most human impact. So we select diseases that are common and tough.

So, you mentioned Alzheimer's. Neurodegenerative conditions are the most frightening conditions most people think about – Parkinson's, ALS, Alzheimer's. And the science – we've been investing there for 30 years. We just launched our first medicine. And so now we're getting revenue, after 30 years on that project. [Laughs.] And we're working on a prevention study for that same medicine, which could really transform Alzheimer's. We think other neurodegenerative conditions, like Parkinson's, ALS, etc., are becoming more tractable with science. And you'll see us invest heavily in that area going forward. Pain, chronic pain, another area we're very interested in.

MR. RUBENSTEIN: So, let's talk about the company today. How many employees do you have?

MR. RICKS: Forty-four thousand.

MR. RUBENSTEIN: And you're headquartered in Indianapolis?

MR. RICKS: Yes, correct.

MR. RUBENSTEIN: And where do you manufacture your drugs? Are they mostly in the U.S., or mostly overseas?

MR. RICKS: Mostly in the U.S., although a large majority in Europe as well. So those are our two big bases for production. And in the U.S., we're building lots of plants right now, mostly to support Zepbound and Mounjaro, but spreading our footprint.

MR. RUBENSTEIN: So, when did – your stock went up, as I said, about 10 times. I mean, when did you all realize this is so transformative that you're going to become the most valuable pharmaceutical company in the world, by a factor of four or five times?

MR. RICKS: You know, as you know from running companies, David, it's hard to know exactly what the scale of something is. But I will – the story of tirzepatide, or Zepbound, for me is this. In 2016 I was named as the incoming CEO. In that fall, one of our scientists in the diabetes group called me about some early results they were receiving from a Singaporean site we had that was doing a phase one study with tirzepatide, the ingredient in Zepbound. And we had to stop the study, because people were losing too much weight to stay in it. And at first this was seen as, like, an alarming thing. But of course, we began to process that as, wait a minute, this could be something very special.

So, we sped to the next stage of development, phase two, where you try to show safety and efficacy in a bigger study. And I remember, in kind of a moment, I was showing my daughter around at colleges. We were at Cal Berkeley, standing outside the Lawrence Hall of Science. And I got a phone call. And the team just got off the plane, got the results, and showed that people were losing over 20 percent body weight in a longer study. That was in April of '18. We disclosed those results later that year. And you could probably argue a lot of the run up in Lilly was just execution from that moment forward, because we had a pretty big study with some great results. We didn't know it would be this much, but we knew it was special.

MR. RUBENSTEIN: But you decided when you were overseeing this that we should continue this.

MR. RICKS: We started building factories. We invested \$5 to \$6 billion in a phase three program. Yeah, we moved our chips.

MR. RUBENSTEIN: Well, if I had been – if I had been in your job, I would have taken credit for all of this. So, did you take the credit for this? Or you're the person responsible for this happening, or not? [Laughter.]

MR. RICKS: I mean, of course, as a CEO you have a role in all this. But it would be way overstating the role if I took credit. You know, first of all, we're an old company, and people

have worked there for 30 years on this problem. So, the credit goes to the scientists to begin with. Secondly, we have a lot of incumbent capabilities. Like, how do you take a protein like GLP-1, which in the natural body lasts only a few seconds, and make it into a week-long injection? So that's a pharmacology exercise that's difficult. And we have people who can do that. And we have people who do the clinical trials and everything else, to see the opportunity and go for it. We have people who make it every day, 24/7, who run our factories. So, it's a giant team sport. Just like the legacy of our success on my watch will go beyond my tenure, I'm inheriting some of that from my predecessor.

MR. RUBENSTEIN: So, is there a scientist – one scientist that somebody can point to as the person who is responsible for this revolution?

MR. RICKS: Well, so there's four scientists at Lilly who invented this drug. And we celebrate them. By the way, three are immigrants to this country. That's an interesting conversation. And they live in Indianapolis. And so, it's sometimes pointed out that the most valuable biotech company in the world is based in Indiana. And that's a surprising fact to people. But people come from all over the world that work at our site to create amazing medicines.

MR. RUBENSTEIN: So, the way the pharmaceutical industry works, as I understand it, is you look at lots of potential problems that need to be solved, you work with scientists to come up with a drug and so forth, you test them. What is the typical period of time between you say we're going to solve a problem with finding a drug and then you actually get something to the market? How long does that typically take?

MR. RICKS: So, your better case scenario would be eight to 12 years. As I mentioned in Alzheimer's, we actually spent 34 years before we launched a drug. So, this is a long, long cycle time.

MR. RUBENSTEIN: OK, eight to 12. But how many drugs do you work on that just you say it's not going to work, and you just move forward with other ones? Is it a 90 percent failure rate and 10 percent success rate?

MR. RICKS: So, it's about 100 to one from idea to market. So, for every hundred ideas, you might get one product. It's about 10 to one from starting clinical studies. So, you have about a 90 percent failure rate from phase one forward.

MR. RUBENSTEIN: So, some people say that drug companies don't really produce that many drugs anymore. They're more marketing organizations. That they go out and find smaller companies that are producing these drugs and then they buy them up. Is that where you get most of your new drugs from? Or you develop it internally yourself?

MR. RICKS: We're maybe a bit of an exception. We're about two-thirds internal. But even that statement, you know, what is the development? So, is it the drug's origin? Or is it the studies and the expertise added along the way? So, we do buy small companies. We also collaborate with them. We take what they worked on, and we carry it forward. Is that external? I don't think so. I think we added a lot of value there too. But we have a big scientific base.

Lilly employs almost 4,000 Ph.D.s. Just for reference, Harvard employs, like, 2,000. So, we have a huge scientific base to create new medicines. It's a big part of our strategy.

MR. RUBENSTEIN: And in the pharmaceutical world, the image is not always so wonderful with the public. I'm sure you're aware of this, that people say pharmaceutical companies, drug companies they will call them, charge too much and so forth. How do you respond to the idea that drug companies are charging too much? And very often people in the United States say I'm going across the border to Canada to get the same drug for a lower price.

MR. RICKS: Yeah. Thank you for asking that. You know, obviously it's something we want to change and fix, because what we think we do is pretty valuable. First problem is an artifact of history and how health care insurance evolved in this country. People are largely shielded from surgery costs and hospital costs. About 3% of those total costs in our country are paid out of pocket by consumers. But for medicines, it's closer to 20%. So, people think the medicines are a larger part of the health bill because they're exposed to more of that versus services. That's, again, a historic thing. We advocate for better insurance coverage, lower out-of-pocket costs for medications.

The second thing is – you know, vis-à-vis foreign countries, it is true our prices are lower in those places. We would like to correct that as well. I mean, our idea is that, basically, the cost of a medicine is the cost of the R&D to produce it more so than the manufacturing. Obviously, manufacturing cost is similar everywhere. And right now, there is an imbalance in who covers that R&D cost. We should seek to correct that. But the answer isn't just lower U.S. to Canada's pricing. We wouldn't have a pharmaceutical industry if we did that. They don't pay for any of the R&D costs. We have to raise developed countries what they pay, and we can lower the U.S. I think that's a policy argument we'll hear about soon with the new administration and, you know, we're happy to engage in. But we need to do both at the same time.

MR. RUBENSTEIN: OK. So today the pharmaceutical industry is most concerned about what in Washington? You're in Washington, I assume, for a meeting of the Business Roundtable,¹ among other things.

MR. RICKS: Yeah, later today.

MR. RUBENSTEIN: But what are you most concerned about? Are you concerned about the new administration coming into power? Have you met with President-elect Trump to talk about your issues? Have you met with members of Congress to talk about your issues? What are your big issues you care about in Washington?

MR. RICKS: Well, we have general issues for American business, like tax reform, which is a big topic, going to be for next year, and the regulatory situation, which I think has evolved for us in our industry in a negative way in the last four years. So those are hot topics at a general sense. Health care is always a topic, and so then our role in it, and medicine affordability is a key area.

¹ Business Roundtable is an association of more than 200 chief executive officers of leading companies in the United States, representing every sector of the U.S. economy.

You know, but I think my experience, having done this for eight years, is there's often more common ground than you'd think just reading the newspapers.

I think everyone would like the U.S. to have a strong biopharma industry that invents amazing medicines like Zepbound and makes them here, like Lilly does. But at the same time, we want our things to be cheap and accessible to all. OK, that's hard to solve for all those things. But we can make progress. Like, one example is we were known for the insulin pricing challenges we had. And insulin was overpriced in the U.S., according to the critics. And we were able to bring that price down. Why? By compressing, basically, the middlemen, and what they get, and then working with Medicare to cap the cost of insulin, which we supported at \$35 a month. I think there are solutions, and by engaging we can find them. And we're happy to do that with the new administration or the current one on any of these problems.

MR. RUBENSTEIN: Have you met with – have you met with anybody in the new administration yet?

MR. RICKS: Yeah. I think it was reported last week we had a dinner down in Florida. Yeah.

MR. RUBENSTEIN: How was that like? Like, did they serve fattening food? Or they don't do that with you? [Laughter.]

MR. RICKS: Probably shouldn't say too much about it. [Laughter.] But it was all you can imagine, and a little bit more, yeah. [Laughter, applause.]

MR. RUBENSTEIN: Well, let's talk about your own background. Where were you born?

MR. RICKS: Yeah. I was born in Bloomington, Indiana. So, Hoosier by birth. But my dad was a grad student at IU at the time, and we quickly left and moved to California. My mom was from California. And I grew up in the Bay Area. And then followed in their footsteps and went to Purdue University, back in Indiana. So, I'm sort of like a bad penny, keep returning to that state.

MR. RUBENSTEIN: So, at the Kennedy Center this weekend we honored the Grateful Dead. You don't look like you're a person who's a Grateful Dead-type person.

MR. RICKS: No. [Laughter.]

MR. RUBENSTEIN: So, you were – you were in the Bay Area, but you didn't get caught up in the Grateful Dead, right?

MR. RICKS: I was a little younger than that era.

MR. RUBENSTEIN: OK.

MR. RICKS: And I left, yeah, maybe in time to escape that fate. [Laughs.]

MR. RUBENSTEIN: All right. So, you went back to college where your father had gone to school.

MR. RICKS: Yeah, and my mother, yeah.

MR. RUBENSTEIN: OK, Purdue.

MR. RICKS: Yeah.

MR. RUBENSTEIN: And what did you study there?

MR. RICKS: So, I started studying business and engineering. Ended up with a degree in industrial management, which combines those two. And then went to work for IBM in New York, which I joined it was – the stock was at an all-time high. When I left it was at an all-time low. They had a tough time in the early '90s.

MR. RUBENSTEIN: Well, you fixed that – turned it around.

MR. RICKS: Yeah, maybe, yeah, yeah.

MR. RUBENSTEIN: So – all right, so you went to join Eli Lilly in what year?

MR. RICKS: So, I left IBM to follow my girlfriend, who's now my wife, who was going to medical school at Indiana University. So again, back to Indiana. And I needed something to do there. So, I decided to enroll in their MBA program, and I got an MBA. Of course, medicine is a four-year degree, MBA is two, so I still needed something to do in Indiana. So, I joined Lilly.

MR. RUBENSTEIN: Really? OK. [Laughter.] And when you joined, what did you – what was your position at the beginning?

MR. RICKS: Yeah, I was in the department that looked at M&A transactions, in the finance and business development group. Which is a great introduction to the industry.

MR. RUBENSTEIN: And did you ever say, I'm going to be the CEO someday, or something like that?

MR. RICKS: Not then. I actually really was thinking, I'll be here for two years and then we'll be off to Chicago or San Francisco and do something different. But I fell in love with the company. I mean, it's an amazing place. It's a very humanistic culture, but yet very rigorous and scientific. So, it's demanding, smart people, but people are nice to each other. It's the Midwest. And I fell in love with the mission, which is – what could be better than making medicine for people?

And I had an experience, actually, a few years in, which if I could share. I worked on a medicine to collaborate and bring into the company for diabetes. And right as I was leaving that job my mother was diagnosed with diabetes. And she was put on that medicine. And so, you

know, the – sort of the point of what we do just became super salient for me. And I said, this is not a bad way to spend my time. And I said to my wife, let's stay here in Indiana. And she said, really? [Laughter.] And we ended up staying, yeah, and raised our family.

MR. RUBENSTEIN: When did you realize that you were on a track to be the CEO? Was it five years before?

MR. RICKS: Oh, much later. Well, so I worked in that job. And then I had some jobs running markets. I ran our Canadian business, and I went to China for two-and-a-half years, and ran our Chinese business. And I was suddenly called back from China by the CEO, who was a new CEO. And he said, you need to come run our U.S. business. And I said, yeah, I'm happy to do that at some point, but we were really in the middle of a growth phase there. We weren't done with the agenda I had set out, and he had agreed to. I said, John, don't you want me to finish the job? He said, you need to come back. And I think that was the point where I was sort of being cultivated for big – something bigger, yeah.

MR. RUBENSTEIN: So, did you beat some other person to get the job, or?

MR. RICKS: No? I mean, it's – we've mostly hired people from within the company. There were other candidates, I'm sure, when my predecessor retired. And the board considered me. And I was lucky enough to get it.

MR. RUBENSTEIN: OK. So, you now have three children?

MR. RICKS: Yeah, for a while I've had three children, yeah. [Laughter.] Yes. They're young adults now. OK. Yeah.

MR. RUBENSTEIN: All right. But are any of them interested in weight reduction programs or things like that? Or not really? [Laughter.]

MR. RICKS: Well, so my son is – he's an AI consultant, so not so much. My daughter is actually getting a master's in cell biology and interested in med school. So, she's thinking about medicine and medical science. And we talk a lot about the weight loss drugs. And my youngest son is a geology student at Purdue. So, we'll see what he does.

MR. RUBENSTEIN: And so, what do you do for relaxation, and to stay in shape? You're not on one of these drugs, I think, because you look very fit and exercise a lot, I assume?

MR. RICKS: Thank you, yeah. I'm not, but I would never hesitate to be on one if I needed it. [Laughter.] But the best medicine is prevention. And so, you know, paying attention to exercise is something I've always cared about. It's a way I reduce stress, too. So, I love running. And now I don't run anymore, but I do other things. I like hiking. I love back country skiing, and the outdoors. I play golf. Being outside is where I find both fitness and peace. But then, you know, also, I think it's important to watch what you eat. I think particularly – I've turned 50 seven years ago. And we really needed to change what we eat. That's what my wife and I decided. So, we did. And it's, I think, been helpful to keep my same body weight.

MR. RUBENSTEIN: Well, what do you eat? What do you eat?

MR. RICKS: Things we recognize as food, yeah. [Laughter.] So basically, things that haven't been through factories and are, you know, you recognize that a farmer might grow.

MR. RUBENSTEIN: So, you've had an astounding success at Eli Lilly. Suppose a president of the United States said you should be the secretary of HHS, or something like that. What would you say?

MR. RICKS: I'm busy right now. [Laughter.] I've never actually thought about that. I saw that on your question list. You served in the government. Maybe I could get some advice.

MR. RUBENSTEIN: No, I don't think you need advice for me, because we didn't do too well. [Laughter.] But all right, so you're happy where you're – and you're still young.

MR. RICKS: Yeah, there's a lot to do. And, you know, the company, as you pointed out graciously, is really doing well. But, you know, we really have a strong desire to do even more. And we're just at the beginning of this weight loss story. You know, right now there's 6 or 7 million Americans who are taking these medicines. There are 110 million with obesity. And we need to build more plants and develop more data, get better insurance coverage. And then there's the whole world to cover.

It's projected in five years, there'll be a billion people on the planet who have obesity. And it's going to become a much bigger problem in the developing world than it ever has been in America, partly because the rate of growth of obesity in India and China is much faster than we experienced, and populations that are non-Caucasians, particularly South Asians, appear to be much more susceptible to chronic disease at lower weights. So, we have a lot of work to do to make the biggest impact we can.

MR. RUBENSTEIN: Yeah, the greatest obesity in the world is actually in those countries in the South Pacific. Like, number one in the world, I think, is American Samoa.

MR. RICKS: Islands, yeah. That's right, yeah.

MR. RUBENSTEIN: So today, where do you want to take your company now? You can't find any drug that's going to be more successful than the one you have. Is this you're just going to keep promoting this drug? Is that your biggest thing? Or there's no other drug you can – I can imagine it would be anything comparable to this.

MR. RICKS: Well, we can imagine that. [Laughter.] And so, we're trying to. First of all, within the obesity metabolic health space, I think there's two things I'm very excited about. One is we have tirzepatide, Mounjaro, Zepbound on the market. We have 11 other pipeline projects aimed at the same problem, but in different ways. So, we have a triple-acting medicine that's in phase three for those that have even higher body weight, or more severe health problems. We have the oral project. Nine others beyond that. We think this is going to be a very large segment

with many different types of medicines for different conditions and different situations people might find themselves in. We're going to exploit that fully.

The second thing is, we've talked a lot about, like, cardiovascular health, diabetes, these conditions that one thinks about with being overweight. But these medicines, we think – and we aim to prove – can be useful for other things we don't think about connected to weight. These are often called anti-hedonics. So, they are reducing that desire cycle. So next year, you'll see Lilly start large studies in alcohol abuse, in nicotine use, even in drug abuse. We'll also begin studies in anti-inflammatory conditions because you don't think of that with weight, but actually there is a – quite a strong signal in anti-inflammatory. And then beyond that, David, we need to make important medicines for the long haul. We're an old company. We plan to be here another 150 years-plus. And I mentioned my excitement about brain health. I think that's really the next frontier to make a big difference.

MR. RUBENSTEIN: So have you ever thought about eating a lot, gaining weight, and then going on one of your drugs so you can actually experience it, because you don't use it because you don't – you're so thin.

MR. RICKS: I'd like to avoid that, but it might happen. And I wouldn't hesitate to use them, yeah. [Laughter.]

MR. RUBENSTEIN: So, I think yesterday you announced a \$15 billion stock buyback. Many people criticize stock buybacks. And they say you should use your money to invest in your products, and so forth. How do you respond to that?

MR. RICKS: Yeah, I don't understand that argument, really. A stock buyback is a way to – essentially, by buying your own shares, you give the people who already own your shares the opportunity to sell at a higher price and get a return on their investment. I don't know why that's bad. But I would also point out, in our current situation, we're spending almost more than anyone in the world on R&D already. We'll spend \$11.5 billion dollars this year on research and development. By the way, the country of Germany spends about \$8.5 billion on all of its medical R&D. That's their NIH equivalent. So we're at the nation-state scale on R&D. We have announced investments of \$23 billion in new capital in the United States for factories. We can't go faster. There's no more vendors to build plants faster than we're building right now. So, returning some of the rewards that investors deserve for taking risk on the company seems like a reasonable thing to do.

MR. RUBENSTEIN: So, you meet members of Congress when you're in town, I assume. How do you find that experience? Uplifting, or?

MR. RICKS: That wasn't the word I was going to use. [Laughter.] Yeah. Look, at an individual level we all love our congressmen. And I think at an individual level they seem quite smart and rational people. Collectively, they don't seem to be able to act very rationally. But we're going to try to convince them to do so. I think there's a lot we can do. You know, it's a complicated world right now for global businesses like ours. There's a lot we could do that

would make a pretty big difference, and it seems relatively easy to us. So, we'll work with them to do that.

MR. RUBENSTEIN: Now, I assume you're very popular in Indiana because your company is very popular and you're a very nice person, and so forth. Have you ever thought of running for office yourself?

MR. RICKS: Again, I have not considered public service at this point. I'm busy doing what I'm interested in. And we've been lucky in Indiana. We have a – you know, it's a right-leaning state, but we've had very commonsense leadership. We've enjoyed a good relationship there. So that hasn't come up. No one's tried to recruit me. Yeah.

MR. RUBENSTEIN: OK. So, let me ask you finally, on the drug that everybody's talking about, is it difficult to get a doctor to prescribe that? Or if you do go into a doctor, you say you want it, the doctor automatically gives it to you? Or does he have to examine you and say you're a little overweight?

MR. RICKS: They'll have to examine you. But it's a both/and. Right now, our market studies are when people ask for either our drug or Novo's, about eight out of 10 times they get it. It's a very consumer-driven thing, and most doctors aren't resistant to it. When we launched Zepbound, you know, we just started advertising. That's an unusual thing. Usually, you go out of the gates, you try to raise awareness. But there was so much online buzz and virality to this we didn't really have to. Half the doctors writing the medicine in the United States right now, our medicine, we've never spoken to. So usually we have, like, salesmen who go out, sell to people, talk to them.

MR. RUBENSTEIN: The free samples – you don't have to give free samples.

MR. RICKS: We haven't done any free samples. And half of them we haven't even spoken to yet. We need to speak to them to educate them on risk and benefits, but they're just spontaneously writing because consumers are asking them for it. It's a unique medicine, yeah.

MR. RUBENSTEIN: Wow. So, has there ever been a drug anywhere in the United States that's as popular as this particular drug is, sweeping the world and the country? Is anything like this you've seen before?

MR. RICKS: I don't think so. I think both ours and our competitor's drugs will easily be the largest selling drugs in the U.S. next year. And for good reason, I'd say. Obviously, people, when they begin taking them, almost immediately feel better and they want to stay on them. We do lots of clinical trials. And often people – we randomize to placebo, so they don't know if they're on the drug or not. And the people on the drug often drop out of the study at a higher rate because you feel about the same when you're on most chronic medications. Maybe you have some side effects, but you don't notice your health improving. On these, you notice your health improving immediately. People have a scale in their bathroom. They step on it every day. They love losing weight.

Physicians like it because the baseline of medical care is diet and exercise. So, when people aren't successful, it's frustrating. Here, they can feel successful because people who are chronically overweight, or even quite obese, can lose a lot of weight. I had a letter this weekend I got from a lady who lived in Kansas. She's 45 years old. She weighed 420 pounds. And she sent me the letter because yesterday she weighed 188. And she's been on our drug for two years. And she was unsure if she was going to live to be 50. And now she's sure she is. So, this is a – imagine that at the nation scale. We could change the trajectory of health care in the country with our invention.

MR. RUBENSTEIN: Well, in that particular example, for example, if somebody goes from 400-plus pounds down, their body organs must have been weakened by having that large weight for a long time. So even if they lose the weight, they're still not going to be as healthy as if they had never been obese, right?

MR. RICKS: Well, we don't know that, actually. I think the body's proven to be pretty resilient. Obviously, she'll need to keep the weight off. She'll need to exercise and eat well and take good care of her health. But this particular person, for instance, had diabetes and no longer has clinical diabetes. It's not detectable. So actually, her health is improving as she's losing the weight already.

MR. RUBENSTEIN: Well, it's a great American success story. And I congratulate you on pulling this off. And I hope you'll continue to find other drugs that are going to be as successful as this. And I can – you know, I could use a couple of them myself, Alzheimer's or whatever else I might need in the future. [Laughter.] But thank you very much for being here. And thanks for the great story.

MR. RICKS: Thanks, David. Appreciate it. [Applause.]



David A. Ricks
Chair and Chief Executive Officer
Eli Lilly and Company

Dave Ricks is chair and chief executive officer of Eli Lilly and Company. A Lilly veteran for more than 25 years, with experience in marketing, sales, drug development and international operations, Dave became CEO in January 2017 and was elected chair of the company's board of directors effective June 2017.

A global biopharmaceutical leader, Lilly has been pioneering life-changing discoveries for nearly 150 years -- and today the company's medicines help more than 51 million people across the globe. Harnessing the power of biotechnology, chemistry and genetic medicine, Lilly scientists are urgently advancing new discoveries to solve some of the world's most significant

health challenges – including diabetes, obesity, Alzheimer’s disease, cancer and debilitating autoimmune diseases. Under Dave’s leadership, Lilly has delivered record R&D output and business results, positioning the company for strong growth and expanded impact on human health around the world.

Dave joined Lilly in 1996 as a business development associate and held several management roles in U.S. marketing and sales before moving into international leadership positions. He led Lilly’s operations as general manager in Canada and China – one of the world’s fastest-growing emerging markets – and then returned as president of Lilly USA, the company’s largest affiliate. In 2012, Dave was promoted to president of Lilly Bio-Medicines, then the company’s largest business unit, overseeing drug development and commercial operations in neuroscience, pain and immunology.

Dave earned a Bachelor of Science degree from Purdue University in 1990 and a Master of Business Administration degree from Indiana University in 1996. Recently, Dave was awarded an honorary doctorate degree in Pharmaceutical Management from Purdue.

Dave serves on the board of directors for Adobe and Business Roundtable. In addition, he is a member of the board and former board chair of Pharmaceutical Research and Manufacturers of America. Dave is a member of the International Federation of Pharmaceutical Manufacturers & Association’s CEO Steering Committee, The Business Council and the U.S. Patent and Trademark Office’s Council for Inclusive Innovation.

Closer to home, Dave is heavily engaged in the development and well-being of Central Indiana and serves on the executive committee and board of Central Indiana Corporate Partnership.