



THE \$1 TRILLION GLP-1 REVOLUTION WITH ROD WONG

“This is the first innovation in healthcare, not just drugs, but all of healthcare, to create somewhere a little bit north of \$1 trillion in value. That sounds like a big number, right? So let's contextualize that,” says Rod Wong, Managing Partner, and Chief Investment Officer of RTW Investments, LP.



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The \$1 Trillion GLP-1 Revolution with Rod Wong

Stephanie Sirota: Welcome to the RTW podcast. I'm your guest host, [Stephanie Sirota](#). I'm a Partner and Chief Business Officer leading the Strategic Partnerships team at RTW Investments.

Today, I'm speaking with [Rod Wong](#), our founder, Managing Partner and Chief Investment Officer. Here we are today talking about one of our favorite topics: GLPs and obesity. Let me just start with a very, very basic question, but why are GLP-1s so important?

Understanding the importance of GLP-1s

Rod Wong: GLPs have been around for a while. GLP started in diabetes with Byetta, and then there has basically been iterative innovation over the last 20 years that finally moved it from diabetes now into obesity.

It's the most common disease in Western society. I think it's over 100 million Americans. It is highly linked to three of the top ten causes of death: cardiovascular disease, number one. Stroke and diabetes are on the list. It's also strongly associated with other diseases in the top ten: cancer, dementia, kidney disease.

And I think the very good news is that we've started getting outcome studies from some of the GLPs. You're basically seeing improvements north of 20%, as high as 30%, depending on the disease.

Improvements in heart failure, in kidney disease—we've had positive outcome studies in osteoarthritis, in fatty liver, and in sleep apnea. People's quality of life improves.

“It is probably the most significant medical advance in terms of the sheer numbers of impact that we've seen in a couple of decades.”

Stephanie Sirota: Now, do you think we're seeing some of these better vitals, better stats on these patients who've been taking them because of the actual small molecule that they're taking? Or is it because of the weight loss?

Rod Wong: The actual weight loss must be a huge component of that. But there are other things that are emerging that clearly are major contributors as well, for example, the impact of GLPs on inflammation.

Stephanie Sirota: Are you seeing differences that some might be better to target inflammation, some might be better to target other specific conditions?

Rod Wong: We're still pretty early days, but when you are moving to the next generation of GLP, what a lot of people are focused on are adding additional mechanisms, hitting multiple things at one time.

GLPs in the cycle of obesity drug development

Stephanie Sirota: Let's talk about where we are in the current cycle of obesity drug development.

Rod Wong: You're super, super early. Right now, the best GLPs are, of course, from Eli Lilly and Novo.

Each one has a key active ingredient that they build products around.

So with Lilly, it's tirzepatide; they have the brand names Mounjaro for type 2 diabetes, and Zepbound for obesity.

With Novo, it's semaglutide, and there it's Ozempic and Wegovy. They're doing about \$40 billion in sales right now as a run rate. But two-thirds of that is from diabetes. You have this duopoly between Lilly and Novo.

That's going to last through at least the end of 2025. And they are, as you know, just weekly injectables.

Then in '26-'27, you're probably going to get your first oral. You're going to get a couple new mechanisms in there, hopefully amylin, glucagon.

Then in '28 through the end of the decade, you're going to get drugs that give you more weight loss but are still injectables, and a smattering of additional mechanisms.

So, obesity is just getting started.

Stephanie Sirota: How are patients going to know which one they should be taking? Or do you see patients rotating from one generation drug to the next generation? Is it going to be determined based on who their doctor is?

Rod Wong: If you think about the products that we have, as great as they are, the stats say that half of patients come off of them within six months.

Stephanie Sirota: Because they've achieved the weight loss desired or because—

Rod Wong: So the rate of nausea, vomiting, diarrhea is just too high right now. There are a lot of ways in which you can improve these products.

Of course, there'll be people that prefer pills. Some of the novel mechanisms like amylin, for example, we're hearing it described as your urge to eat doesn't decrease, but you're satisfied after eating less. There'll be room for lots of different medications. People will naturally prefer different things.

Stephanie Sirota: Now, it makes sense that when you need to lose weight, you're on a drug. What happens when you've reached your ideal weight? Are these intended to be lifelong drugs, or is it intended for a shorter period of time?

Rod Wong: Everyone will have different goals. And I think people are managing it in ways that you would expect.

Maybe you want to maintain, as opposed to lose more, and so, you work with your doctor to find a new dose that works for that.

Big picture, a very large proportion of people want to permanently be at a lower number.

When all these access barriers have declined a lot, I think it'll be like other medications that have these meaningful health benefits, that you should have significant proportions of people on these things for relatively long periods of time.

Public and private company interest in obesity drugs

Stephanie Sirota: Sounds like there's a lot more happening in the private space. But maybe talk about what you're seeing, how many public companies are there that are interesting? And what are the private companies looking like?

Rod Wong: If you look at where we are today, there's only about ten publicly traded biotech companies that are focused on obesity. Given that this is the largest opportunity and unmet need in the history of the drug industry, that is a very small number.

What you should definitely see is that go from ten to maybe 30 biotech companies. That's obviously an opportunity in the public space, but that is a major opportunity in the private space. So we're focused on both of those areas.

Stephanie Sirota: Do you think that we'll end up with that duopoly with everyone else being integrated into one of those two companies?

Rod Wong: Yeah.

Stephanie Sirota: Or do you see others emerging that can be stand-alone, substantially large, successful companies that are anchored in obesity?

Rod Wong: It'll definitely be more than two companies. If you look at the 20 largest global drug companies, over a third of them are now chasing obesity.

Will you have small companies grow up and self-commercialize and be able to get some reasonable market share in the disease?

For sure that will be the case. The bar is high to say try to compete head-to-head with an Eli Lilly.

“But there are many other paths a smaller company can take. You could develop it in a niche indication that's been so far ignored where weight loss would have a significant benefit.”

You could develop specifically for people with sleep apnea, or arthritis.

Or you can simply just be the first with a product that is meaningfully differentiated. So, if you're the biotech with the first amylin, you're going to be successful even if you're not Eli Lilly.

Cost benefits of GLP-1s and their impact on the healthcare system

Stephanie Sirota: Let's talk about sort of the cost-benefits of GLP-1s, and how can they reduce the pressure on the overall system.

Rod Wong: The U.S. has this very complicated system where you have list prices, but the actual price is often a significant discount from that list price.

Obesity is one of these areas where there are very big discounts. The U.S. net price now is probably somewhere in the \$4,000 to \$5,000 per year range.

Stephanie Sirota: And that's assuming though you have some insurance coverage.

Rod Wong: Correct. There's a bunch of different ways to look at cost-effectiveness. There is a cost-effectiveness framework called ICR.

ICR is one of the most biased against placing high value on innovation. By ICR's analysis GLPs are cost-effective at \$7,500 to \$10,000 per year. So even on an ICR framework where everything is biased against you, it is cost-effective. The hugest weakness of ICR is that it doesn't take into account that there's forced genericization for drugs at the end of the life cycle.

So, it assumes that something's going to be at a branded price forever. There have been analyses that estimate when GLPs are broadly adopted that you'd see a decrease in about \$50 billion in food, right?

Stephanie Sirota: We've started to see some of that on the topline revenues from certain stores.

Rod Wong: People estimate at peak that maybe GLPs will do \$100 to \$150 billion in annual sales when they're branded. Then you would get a third to half of that back through just a decrease in food, right?

There's been studies on consumer willingness to pay, and the range depending on income is anywhere from \$500 a year to up to where the net price is now about \$4,000 a year for people with higher incomes.

This is the only industry in the world where you have forced substitution by generics after patent expiries. Ozempic is going to go generic in the not-too-distant future. That's not factored into any of these analyses.

Stephanie Sirota: So the higher income people who are willing to pay are often some of the ones who are not in that obese category. Any thoughts on kind of the expansiveness and the appeal that the GLP-1s have? And should those people be taking it? Are they taking away some of the capacity that should be shared with the broader population?

Rod Wong: There are benefits that are not health outcome related, right.

People like how it feels, how it looks. If you compare to other drug classes when those drugs are broadly available, you see two thirds of people roughly on those drugs who have the underlying condition. Ten, 15 years from now you could see an even higher proportion of people with obesity and type 2 diabetes on GLPs.

Stephanie Sirota: Because of the increased awareness and attention around weight, can the GLPs actually inspire us to be a healthier population in the years to come?

Rod Wong: Obesity has been an extraordinarily challenging disease. We're just at the very beginning of an educational process. Now that we have innovations that are super effective, and that can make a big dent, we need to say, "Hey, just like high cholesterol, this is something that you want to treat." And that will take time.

Stephanie Sirota: That's so great to shift the blame and the shame for having the wrong habits.

Rod Wong: We gotta take the stigma away from that—

Stephanie Sirota: Away from it.

Rod Wong: And the acceptance of, "Oh, that's just my lot in life." Well, it shouldn't be. You can treat it.

The value of GLP-1s in the investor space

Stephanie Sirota: Let's talk about how the value of the GLP-1 market falls into the investor space.

How big is this going to be?

Rod Wong: This is the first innovation in all of healthcare to create somewhere a little bit north of \$1 trillion in value. That sounds like a big number, right? So, let's contextualize that.

Stephanie Sirota: Walk us through how we get to that number.

Rod Wong: Just over \$40 billion, people are projecting significant growth. Consensus is somewhere around a tripling to \$125 billion, let's call it. Is this innovation worth a trillion dollars?

So, let's put that in context. Tesla is roughly a trillion dollars today. They are a very small proportion of car sales. You have Apple, you have NVIDIA, you have Microsoft. Those are all north of \$3 trillion in value. You have Amazon and Google around \$2 trillion, and you have Facebook at \$1.5 trillion.

Notice some of these huge tech companies are based on very old products which continue to drive a major chunk of their value today. But they are still charging more today than when they introduced the product.

The drug industry is super unique. It is the only industry in America that is forced to give up all their revenues on average after 14 years. Just like blood pressure drugs and cholesterol drugs, so will GLPs be in the future.

We are on an innovation treadmill where you have to reinvent yourself every ten to 15 years. That's not required of any other innovative industry where you can stack innovations. Ten years from now, Eli Lilly and Novo, if they want to stay at \$1 trillion in value they have to replace their entire business.

Stephanie Sirota: So this is a huge topic. We often talk about what it costs to make a drug and why we do pay what we pay. And then, it's free for future, subsequent generations.

Rod Wong: That's right. 80% of all prescriptions in America are generics.

Stephanie Sirota: Which is the highest uptake country for generics.

Anecdotally, I was in London and heard from a friend over there who is getting her GLP-1 prescription from New York.

GLP-1s in the international market

Stephanie Sirota: Let's talk about what are other countries spending on GLP-1s.

Rod Wong: Other countries are paying less for GLPs, and many other medications. People most often like to bring up different European countries as the benchmark for America.

It is absolutely true, they are spending less on innovative medicines in general. And this has been a trend over the last decade. Earlier in my career pricing in Europe was pretty comparable to the U.S.

That's not true anymore. So today, drug companies will typically prioritize America first.

Germany is then close behind that, because they are still willing to pay. What used to be many of the other European countries, has now shifted to Japan.

China is paying much more for innovation than they used to. And even certain Latin American and Middle Eastern countries. When you don't pay top dollar for innovation there are consequences to access, and timing of that access.

Especially for something like GLPs, when you do have these manufacturing constraints where people have to make choices for who's going to get the drug first. So, I think your anecdote just brings it home.

The U.K. is a perfect example. They've had extra challenges compared to other European countries because of Brexit, right. Economic growth hasn't been great. When you're in that situation, you're going to invest less in healthcare for your people.

Stephanie Sirota: Which is such a shame. And this is something that, you know, we work on. As you know, we have a presence in the U.K. and we have people on the ground there. And we have, you know, deep ties to a lot of extraordinary scientific minds.

But I've also gotten involved in, some of the more governmental and regulatory bodies that are thinking about, "How do we improve the conditions to bring more capital here?"

Rod Wong: Yeah. If you have prosperity then these very challenging questions of how do you allocate your resources and how do you split that prosperity pie is much less challenging.

Stephanie Sirota: Let's talk about all of the wonderful value that we think the GLP-1s are going to create. How does that get redeployed? Where does that money go?

Rod Wong: You have a trillion now for obesity. That's roughly a third of the large multinational pharmas. We're guesstimating a roughly 30% increase in industry cash flow because of GLPs. That's the biggest absolute dollar increase that we've ever seen. \$50 billion plus per year in new cash flow. And the question is, where is that going to go? A decent chunk will go into iterative innovation.

There's still significant unmet need to be filled. That's at least three waves of incremental innovation until you have a menu of obesity products that can fulfill everyone's ideal.

Stephanie Sirota: That alone should bode very well for the sector more broadly, because certainly acquisitions and the money that comes out of those cash flows are used for much needed stabilization of the sector. And that's \$100 to \$150 billion of money that comes into the space.

If that could grow by another \$50 billion, that would be—

Rod Wong: It's huge.

With a third of the pharmas now going after obesity half of them are doing it by acquisition or licensing.

So that's how some of that cash flow is going to be deployed. Small companies, private companies will benefit. Another chunk of that capital will go into diversification.

There's a never-ending list of diseases that have significant unmet needs. And some of that capital will go towards that, which will be a great boost for the space.

“We're in this golden age of innovation in drug development.”



The number two killer after cardiovascular disease is still cancer. Immunology has been a major area where we've seen tremendous progress.

The expansion of large companies into GLP-1

Stephanie Sirota: Several big companies are actually expanding into the GLP-1, the obesity and metabolic space. Do you expect to see those guys emerge as legitimate players?

Rod Wong: I definitely do. Amgen is a good example. They're trying to enter the market with something that decreases the frequency of injection to a month. Roche and Pfizer have been chasing a pill.

That will be great for patients' choice and preference.

Stephanie Sirota: And what does that do for the compounding pharmacies? Is this their moment in the sun and they should take advantage of it?

Rod Wong: The trend in general has been higher quality standards in the U.S. from the regulators. The idea that you would allow a nonapproved, non-inspected manufacturer sell directly to consumers for a disease that people are not dying tomorrow, it is a dangerous thing.

There is such a strong unmet need and demand from patients. But once those supply issues are resolved, compounders are going to go away.

Stephanie Sirota: So what happens in eight years when Ozempic goes off patent?

Rod Wong: Whatever product goes generic, that would rapidly lose market share. That's where you have substitution when you pick up your drugs at the pharmacy. So, 80%, 90% of volume disappears basically within one to two months.

Other products that haven't gone generic, so let's say your Mounjaro or Zepbound, those would typically keep the market share that they have at that time. The growth might slow a little bit.

It depends on how differentiated that branded product is. When Ozempic does go to generic, you would expect you would have pills on the market.

Then you'd have other injectable options, some that are more potent, some that are more convenient. Manufacturing is really difficult because these are peptides.

And peptides are expensive to make, and the investment to build out the manufacturing plants are really, really large dollar numbers.

Maybe the price doesn't drop as much because you have to invest tens of billions of dollars to make these manufacturing facilities.

Some products get to the point where you have really, really safe, really convenient drugs like allergy medications.

So if you had a pill that was like that, you could also actually shift to an over-the-counter market. Then oftentimes brands can protect more of the business at a lower price point.

Thoughts on recent investments and the potential of Kailera Therapeutics

Stephanie Sirota: How much time are you spending personally looking at all the data? How much time is your team committing to, following all the companies out there?

Rod Wong: It's going to remain the number one opportunity until that unmet need is filled, which is going to take over a decade and multiple waves of innovation. So, if you start from that, then we need to be on top of this.

Stephanie Sirota: You're dedicating resources, a lot of manpower and hours spent.

Why don't you talk about some of the investments that you made, and what are you most excited about?

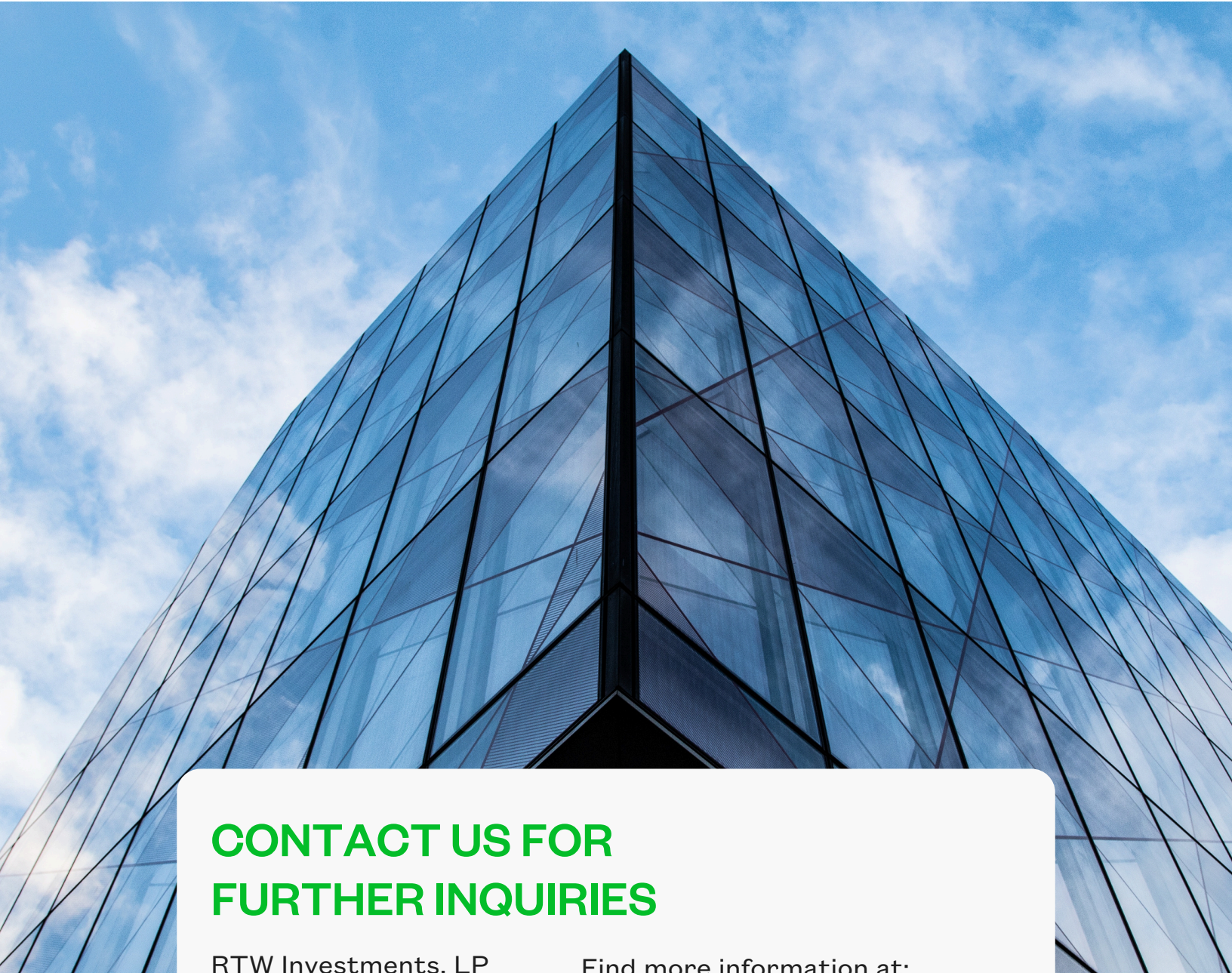
Rod Wong: There needs to be more promising private companies that can become those next promising public companies. It makes sense that a significant amount of the opportunity would be to invest in private companies or create private companies.

Kailera is really an example of that. This is a company where we have in-licensed products in development. And the initial clinical data looks very promising.

They look like they could have a shot to be a best-in-class injectable GLP. And they also have a small molecule in the portfolio. You don't have to wait five years for it to be ready to be a public company.

It could be ready very soon, because the data suggests that it has competitive products. That's just the first of these company creations for us in the space. So, stay tuned.

Stephanie Sirota: Can't wait. Thanks, Rod.



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