Left to Right: **Sarah Boyce** (Avidity Biosciences), **Fabian Gerlinghaus** (Cellares), **Alec Ford** (Karius), **Terrie Curran** (Phathom Pharmaceuticals), **Chris Gibson** (Recursion Pharmaceuticals), **Helmy Eltoukhy** (Guardant Health), **Jo Varshney** (VeriSIM Life), **John A. Scarlett** (Geron), **Julie Ross** (Advanced Clinical), **Kendalle Burlin O'Connell** (MassBio), **Mike Exton** (Lexicon Pharmaceuticals), **Martin Tolar** (Alzheon), **Neil Warma** (Mongoose Bio), **Jonathan Brennan-Badal** (Opentrons), **Patrick Mooney** (SpyGlass Pharma), **Paula Brown Stafford** (Allucent), **Colleen Cutcliffe** (Pendulum Therapeutics), **Ken Mariash** (Sinaptica Therapeutics).

JPM Week
2025 Edition

Vital Signs

Future of Healthcare

By Dr. Adil Ali

The Westin St. Francis in San Francisco has endured earthquakes, pampered presidents, and even facilitated early meetings of the United Nations in 1945. And for the last 42 years, this grand old hotel has hosted an annual event of truly global significance. The J.P. Morgan Healthcare Conference, colloquially known as JPM Week, is where big bucks and big pharma meet ambitious biotech CEOs.

Many in the industry see it as a State of the Union for healthcare—and the time to make big bets on winners and losers for the year ahead. In 2024, GLP-1 agonists dominated the conversation. In 2025, what will be the next big thing in healthcare? Ahead of JPM Week 2025 (Jan. 13–16), the Onyx Newsroom team interviewed CEOs from around the world. Here is our compilation of the top talking points.

These are the healthcare leaders to follow in 2025, and we explain what they're working on. From the Pacific to the Atlantic, scientists, entrepreneurs, a Grammy award winner, and Alphabet's health-tech boss, who first found fame as a gamer—the brightest stars in healthcare. Want to know what they've got planned for the year ahead? You can read every interview with Onyx in full at onyxnewsroom.com.

Left to Right: **Gaurav Shah** (Rocket Pharmaceuticals), **Richard Adcock** (ImmunityBio), **Tom Lin** (Belite Bio), **Stephen Gillett** (Verily), **Shankar Musunuri** (Ocugen), **Rick Modi** (Affinia Therapeutics), **Ron Cooper** (enGene), **Bhaskar Sambasivan** (Saama), **Adrian Gottschalk** (Foghorn Therapeutics), **Tamer Mohamed** (Aspect Biosystems), **Warner Biddle** (Kyverna Therapeutics), **Peter DeYoung** (Piramal Pharma), **Jasbir Seehra** (Keros Therapeutics), **David Horn** (Seer), **Charles Conroy** (Nucleus RadioPharma), **Sarah Kennedy** (Calocurb), **Thijs Spoor** (Perspective Therapeutics), **Laurent Fischer** (Adverum Biotechnologies).

Rare Diseases

The FDA classifies a rare disease as one that affects fewer than 200,000 Americans. "There is nothing approved—literally nothing—for people living with myotonic dystrophy today," says Sarah Boyce, CEO of **Avidity Biosciences**, headquartered in San Diego.

Avidity is pioneering a novel approach using antibody-oligonucleotide conjugates (AOCs) to guide siRNA (small interfering RNA) molecules directly to affected muscle cells. The challenge is transportation: siRNA typically struggles to reach muscle tissue, where it can halt the production of toxins. Avidity's tech has potential in many disease areas, and it has secured strategic partnerships with Bristol Myers Squibb (BMS) and Eli Lilly; the $2.3 billion deal with BMS is in precision cardiology, targeting genetic heart conditions, while its collaboration with Lilly is in immunology. Avidity's stock, listed as RNA on Nasdaq, gained 800% in less than a year. Even around the $5 billion market cap, there's potential for further growth.

In New Jersey, **Rocket Pharmaceuticals** is working on gene therapies (directly altering or repairing genes within a patient's cells). Not many companies are led by a Grammy award-winning singer-songwriter, but Dr. Gaurav Shah finds room for both science and music in his life. In 2022, he and his wife won a Grammy for Best Children's Album with *A Colorful World*. Rocket is at the tail end of two promising trials for rare, fatal childhood diseases. Both have been designated as orphan drugs by the FDA. "We're expecting FDA approval for LAD-I. It's a way for us to get our manufacturing, supply chain, and commercial capabilities geared up and ready for bigger programs—like Fanconi anemia, which we also anticipate approval for next year." says Shah.

Gene therapies work by hitching a ride on vectors like adeno-associated viruses (AAVs). On the outskirts of Boston, **Affinia Therapeutics**—the secret darling of Vertex Pharmaceuticals, the youngest of the big pharma companies—is developing a next-generation AAV platform aimed at overcoming the limitations of current delivery systems. "I'm not talking about a 10% or 20% improvement. We're seeing orders of magnitude better delivery in terms of the amount of protein or RNA [the capsids] can express," says CEO Rick Modi.

Also near Boston, Dr. Jasbir Seehra at **Keros Therapeutics** is targeting the TGF-beta signaling pathway, a vital biological communication network that directs how cells grow, specialize, and function. Seehra already holds 100 U.S. patents, including two for FDA-approved drugs. The company's lead asset, KER-050, is being developed for the treatment of rare blood cancers like myelodysplastic syndrome (MDS) and myelofibrosis (MF). "We may consider partnering some of our assets, if and when they've been sufficiently de-risked and are attractive to larger pharma companies with the resources to bring them to market," says Seehra. Luspatercept, owned by BMS and branded as REBLOZYL®, is a TGF-beta therapy for MDS-related anemia on its way to blockbuster status, and has been raking in hundreds of millions of dollars a year—and Keros has a chance to compete.

Kendalle Burlin O'Connell

CEO, MassBio

Why stay in MA?

We have over 1,000 biotech companies in Massachusetts. We have 120 academic institutions. We have world-class hospitals conducting over 6,000 clinical trials. Our 2030 Strategic Plan is our roadmap to maintain and extend Massachusetts' leadership in the life sciences. The four impact pillars are

Innovation & Business: Supporting the growth and scaling of biotech companies.

Economic Development: Ensuring the industry continues to contribute significantly to the state's economy.

Policy: Advocating for policies that support the industry.

Patients: The core of everything we do, improving patient lives.

Sarah Boyce

CEO, Avidity Biosciences

We've set out to achieve two goals: to revolutionize the delivery of RNA and profoundly transform lives. As the first company to demonstrate successful targeted delivery of RNA to muscle, we're leading a new era of RNA therapies to bring meaningful change to patients, families, and communities worldwide.

Read the full interview with Onyx

Stephen Gillett

CEO, Verily

Today, there's no operating system for healthcare data - it's fragmented, not comprehensive and not interoperable. This is the problem we're solving at Verily. We've built a platform to transform and unify data to advance precision health that has the rigor, governance, auditability, interoperability and security needed in the healthcare industry.

Read the full interview with Onyx

Geron is operating in the same rare blood cancer space, but with a very different approach. In June 2024, Geron received FDA approval for RYTELO®, which gradually shortens a patient's telomeres—protective caps on chromosomes—until cancer cells can no longer divide and grow. "Our big idea was that you can kill cancer cells by targeting and inhibiting an enzyme that maintains telomeres, called telomerase, to prevent the uncontrolled growth of blood cancer cells," says CEO Dr. John Scarlett. After 30 years of work, Geron is now commercializing, making the company one to watch in 2025.

New Faces

Warner Biddle is CEO of **Kyverna Therapeutics**, which is reworking CAR T-cell therapy for autoimmune diseases and launched one of the biggest biotech IPOs this year. "What's exciting is what we've learned from earlier CAR T constructs. Our lead candidate product, KYV-101, was specifically designed for deep B-cell depletion and an improved safety profile," says Biddle, who was previously at Kite Pharma.

Paula Brown Stafford is CEO of **Allucent**, a new clinical research organization, formed from a merger two years ago, that is focused on biotechs. "These small and midsized biotechs really hold much of the life sciences industry's intellectual property, but they often lack the large teams needed to take a product through phases 1, 2, and 3," Stafford explains.

Mike Exton is the new CEO of **Lexicon Pharmaceuticals**. "Despite being a small company, we've achieved two FDA-approved medicines," says Exton, who has been brought in to lead them to commercial success. Lexicon's sotagliflozin already has limited approval as an insulin adjunct, but discussions with the FDA for an expanded label continue. All three CEOs bring huge experience to new challenges.

Health Tech

Verily is Alphabet's life sciences vehicle, headed by CEO Stephen Gillett. Verily is making long bets on big projects that are focused on building an operating system for all kinds of healthcare data. Speaking from his new base in Dallas, Gillett radiates cautious optimism. "What Amazon did for critical internet infrastructure, we've done for health-tech," he says. Verily's platform helps power the NIH's All of Us public-health research program. The company, which publishes regional pathogen data online (e.g., SARS-CoV-2, Norovirus) from wastewater sites across the U.S., is about to start analyzing wastewater in Wales.

Verily's first chronic disease management software offering was Onduo, which is morphing into Lightpath. "Within Lightpath, we're expanding the capabilities of Onduo to now address multiple chronic conditions, including type 1 diabetes, obesity, and hypertension," says Gillett. "It's coming out in early 2026. There are Fortune 500 companies that you would recognize as our customers." Outside work, Gillett is a well-known gamer, a passion that runs in the family. "I have eight children, and the kids are gamers—all of them," he says. "When they turn 9 years old—it used to be 8, but we upped it to 9—they get to join me in the clan."

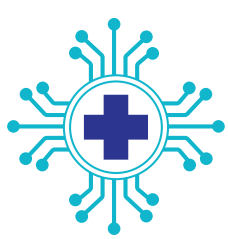
Another tech giant, Nvidia, has put its biggest-ever external investment—$50 million—into **Recursion Pharmaceuticals**. CEO Chris Gibson is proud of Recursion's AI drug discovery platform. "Almost all of the data that we use comes from our own laboratories—data generation doing real experiments in human biology," he says. "The AI side of things will be commoditized eventually, and the winners will be those who have the strongest data moat in life sciences ... we have over 50 petabytes of proprietary data. It's entirely proprietary to us and to our partners to train our models." This summer, Recursion absorbed U.K.-based Exscientia in a $688 million deal.

Most data that biotechs generate comes via human hands working in the lab or with patients. In the near future, the majority of the lab work will likely give way to robotics, and **Opentrons** is early in the market. During the pandemic, around 40 Opentrons Flex robots provided the majority of COVID-19 testing for New York City—testing 15 million people and bringing costs down by up to 80%. Flex robots are designed to handle all the basic protocols of routine lab work from end to end, and top-tier investors like Khosla and SoftBank have piled in. "If you configure the Flex with a 96-channel [pipette], you can be doing 10x the throughput relative to what an individual can do in the same timeframe," says Opentrons CEO Jonathan Brennan-Badal.

Amid the surge of companies embracing AI, **Saama** has created Clinical-LM, a bespoke foundational large language model (LLM) using troves of clinical data. "We are working on over 700 clinical trials across all the different phases, covering almost 115 therapeutic areas," explains CEO Bhaskar Sambasivan.

As the industry finds more drug targets, how do we identify those therapies most likely to succeed? Dr. Jo Varshney, CEO of **VeriSIM Life**, believes the answer lies in solving the problem of translatability from animal trials and digital models to humans, and making predictions based on limited data about whether a drug will succeed. "We deliver what you could call a 'credit score.' Our Translational Index tells you the likelihood of clinical success," she says. VeriSIM Life's BIOiSIM platform uses a combination of AI and pure systems biology, and the company recently partnered with Mayo Clinic.

AI could lead to annual healthcare savings of



$200 - 360 billion

Source: National Buereau of Economic Research

Turn health data into precision actions

The Verily data platform is purpose-built for healthcare to help researchers and care providers deliver more personal, precise, AI-driven experiences and workflows.

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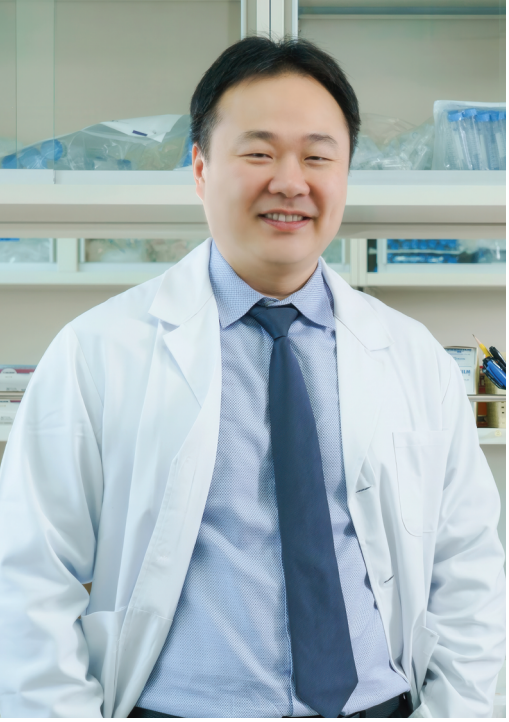

Let there Belite BIO

"Like managing cholesterol with statins—by controlling an essential substance within safe limits, you can prevent long-term damage."

If left untreated, Stargardt disease and Geographic Atrophy (late stage dry AMD) almost always lead to vision loss and blindness. A groundbreaking oral treatment in the last stage of clinical trials offers new hope. Dr. Tom Lin tells us more.

Why did you found Belite Bio?
I'm trained in multidisciplinary medicine and since my PhD I've been particularly interested in neurodegenerative diseases. The central nervous system (CNS) is incredibly complex, and we still don't fully understand many of the underlying causes of the diseases rooted there.

Working on my MBA at Columbia Business School, I came across an emerging drug candidate being developed at the medical school. This eventually became known as Tinlarebant, and to be honest getting the rights wasn't easy.

There was interest from various Big Pharma companies, but being a student at Columbia University gave me an advantage. I made a business case to the university and Belite Bio was born. The name comes from the Bible: "Let there be light."

What's so special about Tinlarebant, how does it work?
The eye is a highly metabolically active organ. Vitamin A, which is continually used for regenerating visual chromophore, can also fuel the formation of toxic vitamin A byproducts, called bisretinoids. Bisretinoids have been observed in patients with dry age-related macular degeneration (AMD) and Stargardt disease (STGD1). In STGD1 patients, mutations in a key vitamin A processing enzyme within the retina (ABCA4) leads to an accelerated formation of bisretinoids and early loss of vision. Bisretinoids are also found in the eyes of healthy elderly subjects, however, the concentrations are very low. In patients with AMD and STGD1, these toxins are found in exceedingly high amounts and are believed to cause photoreceptor cell death leading to progressive loss of vision.

Tinlarebant targets a protein called retinol-binding protein 4 (RBP4). RBP4 is the sole carrier protein for delivery of vitamin A from the liver to the eye. By limiting the amount of RBP4 in the bloodstream, tinlarebant reduces the amount of vitamin A delivered to the eye, leading to reduced bisretinoid accumulation. Through various studies, we've found that RBP4 can be reduced to a significant extent without compromising normal vision function.

The conventional treatment for retinal diseases is an eye injection. Could a pill replace an injection?
Definitely. If you look at the current landscape of ophthalmology treatments, particularly for AMD, the standard of care usually involves regular intraocular injections—injections directly into the eye (and there is no treatment available for Stargardt disease). But most people don't want a needle in their eye, right?

While these therapies represent a significant scientific step forward and have heightened hope among patients and ophthalmologists alike, injections have significant downsides, including invasiveness and discomfort. There are risks too: infection, inflammation, retinal detachment, and over the long term patients may find it hard to comply due to the treatment burden.

Stargardt disease and Geographic Atrophy progress over years, and thus frequent injections aren't practical or sustainable. Oral therapies, on the other hand, provide a much more patient-friendly solution. Patients can take a pill daily, without the need for frequent clinic visits for invasive procedures.

Stargardt Disease

The most common inherited macular dystrophy

1 in 10,000

30K U.S.

146K China

Advanced AMD

AMD patient population is expected to grow from 196M in 2020 to 288M in 2040

20M U.S.

196M Global

Phase 3 trials of Tinlarebant are ongoing, and Tinlarebant is not FDA approved. See the latest research at belitebio.com. Read the full interview at onyxnewsroom.com.

Dr. Shankar Musunuri

Chairman, CEO & Co-Founder, Ocugen

We use modifier genes - master gene regulators - to reset the functional network of the retina, not just the defective gene. Our one-time gene therapy has the potential to slow down disease progression or restore vision in patients with RP, dry AMD and Stargardt disease.

Read the full interview with Onyx

2M NEW CANCER CASES estimated in the U.S. in 2024

Source: American Cancer Society

A Cure in Sight

It's predicted there will be almost 300 million cases of age-related macular degeneration (AMD) worldwide by 2040, including 20 million in the U.S. The FDA's approval of the pegcetacoplan injection from Apellis last year really opened up the market, bringing in $275 million in 2023, and it's a multibillion-dollar space that we think is about to become pretty lively.

Dr. Tom Lin, CEO of **Belite Bio**, explains his company's clinical strategy: "Stargardt is a smaller market but has a clearer mechanism, allowing us to establish proof of concept, accelerate clinical trials, expedite regulatory pathways, and build a foundation for pursuing AMD, which is a much larger market." If Belite gets it right, its pill could bring in billions in the long run.

Five gene therapies received FDA approval this year, and it's expected to be a hot topic at JPM Week (Jan. 13–16, 2025). In the ophthalmology gene therapy space, **Ocugen** also has Stargardt disease in its sights (currently in phase 1/2), and it may receive FDA approval as early as next year for retinitis pigmentosa (now in Phase 3).

Ocugen uses modifier genes, which target entire networks rather than individual defective genes. "The cost of gene therapies can reach millions of dollars per patient. Our goal is developing cost-effective treatments that can be accessible globally," says CEO Dr. Shankar Musunuri.

Adverum Biotechnologies also provides gene therapy. "One of our first patients, treated over five years ago, had received over 109 injections over 10 years ... five years later, he's injection-free with stable vision," says CEO Dr. Laurent Fischer. His company uses a vectorized therapeutic protein that teaches the eye to continually produce and dispense doses of aflibercept, without the need for regular injections.

Finally, **SpyGlass Pharma** is conducting clinical trials for a drug delivery device inside the eye, implanted during routine cataract surgery, which continuously releases small doses of a drug over time, eliminating the need for daily eye drops. "We've figured out a way to combine long-term drug delivery with a drug that we know works, so those patients have three years of medicine on board to manage their disease," explains CEO Patrick Mooney.

Cancer

Early cancer diagnosis is crucial, so there's huge interest in a new test that could pick up hundreds of types before symptoms occur. Four years ago, **Guardant Health** received FDA approval for Guardant360 CDx, the first-ever blood diagnostic for cancer. This May, Guardant got the first FDA approval for a colorectal cancer blood diagnostic. "Early colorectal cancer detection was the clearest path to an FDA approval," says CEO Helmy Eltoukhy. Medicare is on board, lung cancer patients in the U.K. will receive the test for free through their public health system, and Guardant is looking to widen the scope even beyond cancer. "We've gone beyond genomics to epigenomics. So cardiovascular disease, Alzheimer's—all these things don't change the genome, but they change the epigenome," Eltoukhy says.

Machine-learning algorithms do best with as many biomarkers as possible, and **Seer** is at the cutting edge of proteomics analysis. "PrognomIQ is our spin-out," says CFO David Horn. "They set out to do a multi-omics study for early cancer detection, specifically lung cancer in high-risk populations ... the most prominent markers driving their classifier were the unbiased proteomics markers they discovered using our technology." However, "Over 50% of all cancer deaths are related to infections," says Alec Ford, CEO of **Karius**, which is testing for infections in immunocompromised patients to help physicians intervene faster. Even in patients who've undergone chemotherapy, "An infection promotes both an immune response and an inflammatory response," he says. "These biological processes attack the invading organism and break it down, releasing degraded DNA fragments into the bloodstream." The Karius Test® uses these fragments to identify the infection, rapidly testing for thousands of pathogens in one blood draw.

In the treatment field, **ImmunityBio** distinguished itself this year with its combination therapy for bladder cancer, ANKTIVA®, which recently won FDA approval. A spate of approvals for lung, colorectal, and ovarian cancer could follow. It's a mix of old and new. Traditionally, the Bacillus Calmette-Guérin (BCG) vaccine, an immune stimulant developed over a century ago for tuberculosis, has been used in bladder cancer treatment to trigger a strong immune response. "The healthcare provider reconstitutes BCG and then mixes in ANKTIVA®," explains CEO Richard Adcock. "It adds about

Richard Adcock

CEO, ImmunityBio

In April the FDA approved ANKTIVA® for BCG-unresponsive non-muscle invasive bladder cancer CIS - for us, that's just the start. It's incredibly rewarding to see patients benefiting. We're actively working on therapies for lung cancer, colon cancer, Lynch syndrome and HIV. The stakes are incredibly high.

Read the full interview with Onyx

30 seconds to the procedure, so there's minimal disruption to the existing clinical workflow. It activates natural killer cells, stimulates both CD8-positive killer T cells and CD4-positive helper T cells, and, crucially, it induces memory T cells. It trains the immune system to recognize and attack cancer cells if they reappear."

In the same field, **enGene** is in the clinic with nonviral gene therapies for bladder cancer. "We've demonstrated that we can traverse mucosal layers, which are present in various parts of the body, like the lungs, gastrointestinal tract, and more; even in our early data, we have complete response rates over 70%," says CEO Ron Cooper.

Spun out of the MD Anderson Cancer Center, **Mongoose Bio** is one of our pre-clinical biotechs to watch. "We believe we have solved two fundamental challenges in cancer treatment: the lack of novel targets, and preventing T-cell exhaustion. We've secured a $10.6 million award from a major cancer research fund based in Texas, and are pursuing additional funding," says CEO Neil Warma.

Radiopharmaceutical maker **Perspective Therapeutics** utilizes its proprietary theranostics to visualize and directly target tumor sites, sparing healthy tissues. "Lead-212 delivers a hard, fast punch to the tumor, causing double-strand DNA breaks that cancer cells can't repair. This makes it highly effective against aggressive tumors." says CEO Thijs Spoor.

Radioactive decay can swiftly ruin radiopharmaceuticals. **Nucleus RadioPharma** is focused on manufacturing at scale, and getting drugs to hospitals fast. "Our immediate focus is getting our Rochester [Minn.] facility up and running—a strategic choice for us because of its proximity to the Mayo Clinic," says CEO Charles Conroy. "We're also building two new facilities, each around 50,000 square feet. Our sites are designed to be isotope-agnostic."

The first FDA approval for cell therapy was way back in 2017, for KYMRIAH® from Novartis. More cell therapy approvals have followed, all for blood cancers. Such treatment is expensive because it's labor-intensive. Fabian Gerlinghaus, CEO of **Cellares**, explains: "Teams of highly trained scientists spend weeks in very expensive cleanrooms executing processes entirely by hand, using benchtop equipment. Each benchtop instrument typically handles one unit operation for one patient at a time, and in between, you're stuck with about 50 manual processing steps." The company's Cell Shuttle entirely automates the creation of individual cell therapies, doing it not for just one patient, but for 16 at a time.

Cellares has deals with five of the eight big pharma companies in cell therapy, including a $380 million deal with BMS to build Cell Shuttle sites on every continent. For patients receiving cell therapy in a few years' time, there's a good chance their cells will have passed through a Cell Shuttle on their way back to them. For Gerlingaus, it's a matter of principle "Patients are dying on waitlists! About 20% of patients die while waiting for cell therapies. The Cell Shuttle reduces required facility size by about 90%, and labor by about 90%. To put it into context, the throughput we're building across the current network under construction is between 80,000 to 380,000 doses per year, depending on the process length. If you tried to achieve this with manual methods, you'd need 20 facilities the size of multiple football fields and over 7,000 employees. We can achieve this with two facilities and around 700 employees. Our technology makes it possible that patients don't die on the waitlist."

Terrie Curran

CEO, Phathom Pharmaceuticals

After decades with no major innovation in GERD treatment, Phathom is resurrecting this dormant space with the introduction of VOQUEZNA®— bringing the power of a new class of acid suppression treatment to a very prevalent disease with high unmet need.

Read the full interview with Onyx

Fast Forward

Former Presidents Bill Clinton and Barack Obama, and millions more Americans, suffer from gastroesophageal reflux disease, also known as GERD. Conventional proton pump inhibitor drugs have changed little in 30 years. "At **Phathom Pharmaceuticals**, we're focused on transforming treatment options. Our first-in-class, best-in-class potassium competitive acid blocker, marketed as VOQUEZNA® [vonoprazan], represents a significant breakthrough in the U.S.," says CEO Terrie Curran. In July, Phathom received FDA approval for non-erosive esophagitis, giving it access to the largest segment of the market. 2025 will be the first full year of launch, and vonoprazan could soon become a staple in many American medicine cabinets.

An even larger market is weight loss. Astonishingly, one in eight adults in the U.S. have tried GLP-1 agonist injectables such as Ozempic and Mounjaro. But most people prefer a pill to a jab. **Pendulum Therapeutics** and **Calocurb** are both pioneering oral options for gut health and weight management that adopt a more natural approach. In the U.S., products sold as "health foods" avoid the FDA drug approval process, although they still have to satisfy the FDA regarding any claims made.

As Pendulum CEO Dr. Colleen Cutcliffe explains, "Our flagship product is Pendulum Glucose Control. As a medical food, you can run clinical trials just like you would for a drug, but at a fraction of the cost." Calocurb, based in New Zealand, offers a plant-based appetite suppressant derived from hops, and has announced that it is preparing for "our fourth, and largest, human trial in 2025."

Clinical trial rules changed in June this year, when the FDA released new guidance on diversity. CROs will assume much of the burden of making the regulations work. "We can no longer just enroll any patient into a trial," says Julie Ross, CEO of **Advanced Clinical**. "We must ensure the participant demographics align with those of the disease, so that when the trial is complete, the data is truly representative. It's the right thing to do."

Japanese pharma is established in the U.S. market, and Indian companies are now making headway. **Piramal Pharma** is a contract development and manufacturing organization that is meeting a lot of the new demand for GLP-1-related products. CEO Peter DeYoung tells us, "By combining our Eastern and Western capabilities in drug substance and drug product, last fiscal year clients trusted us with their programs and we achieved 19% year-on-year growth, and this year, we've seen 18% growth in the first quarter."

In 2023 and 2024, respectively, Eisai and Lilly won FDA approvals for breakthrough therapeutics in the treatment of Alzheimer's. With a global market worth an estimated trillion dollars a year, who else is going to capture a share? **Sinaptica Therapeutics** uses its technology to map the brain to find where problems lie, before stimulating those areas in a noninvasive way. "We're able to 'ping' the brain with single pulses, and then 'listen' with 64 channel EEG, which tells us which networks we've just 'lit up,'" says CEO Ken Mariash. "This mapping allows us to accurately target the therapy to the DMN [default mode network]. If we can slow the progression and give patients additional years of quality life, that's the best outcome we can hope for right now."

Becoming the first company to produce an oral treatment for Alzheimer's is the target for **Alzheon**. CEO Martin Tolar tells us, "Neurodegeneration is caused by proteins that get trapped in the brain. Currently approved antibody treatments need to be infused, which is costly and requires substantial infrastructure. ALZ-801 is an oral drug with a favorable safety profile. It has the potential to be used pre-symptomatically, before significant brain damage." Pending approval, ALZ-801 could reach patients as early as next year.

Worth watching are two companies with strategic collaborations with big pharma. **Foghorn Therapeutics**, in collaboration with Lilly, has been targeting the chromatin regulatory system for DNA. "If this system malfunctions, it's like an architect making mistakes in a building plan—it causes chaos," explains CEO Adrian Gottschalk. "In cancer, this leads to uncontrolled cell growth and proliferation ... we've built a platform that allows us to systematically interrogate this biology."

Vancouver-based **Aspect Biosystems** has landed a $2.6 billion deal with Novo Nordisk. The company's big idea is a new class of cellular medicines designed to replace, repair, or supplement biological body functions that have been lost. "Novo Nordisk is contributing their stem cell experience and capabilities, while Aspect is bringing our full-stack tissue therapeutic platform and expertise," says Aspect CEO Tamer Mohamed.

So, what's the prognosis for life sciences in 2025? As Terrie Curran, CEO of Phathom, puts it, "The industry is cyclical, and the last few years have been tough, especially for smaller companies." But cycles turn around: although the sentiment from the CEOs was mixed, there is quiet optimism that serious investment is coming back in 2025. The acid test will be JPM Week: if investor sentiment is positive, then the biotech winter of the last few years could be over. Let's see.

815 **FDA approved drugs this millenium**