Capsida Biotherapeutics Inc. received $140 million in a Series A round of funding.

BIOTECH: AbbieVie, Westlake Bio invest in Capsida's Series A.

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Robert Cuddihy
CEO, Capsida Biotherapeutics

Capsida Biotherapeutics has emerged from stealth mode with a Series A investment and collaborative agreement together worth $140 million. The Newbury Park biotech firm secured funding from Versant Ventures and Westlake Village BioPartners worth $50 million, alongside a $90 million collaboration with Chicago-based pharma giant AbbVie.

Capsida focuses on creating gene therapies. Gene treatments have shown significant efficacy for rare diseases but have been hindered by inaccurate targeting and safety liabilities. Capsida's mission addresses these shortcomings and aims to produce precise, tissue-targeting gene therapies that can tackle a myriad of diseases – in contrast to most startups, which concentrate on a single disease.

Capsida's AAV, adeno-associated virus, engineering platform generates capsids – protein shells around a virus – optimized to target specific tissue, allowing for improved safety and effectiveness.

The AAV platform was made possible by neuroscientist Dr. Viviana Gradinaru from Caltech in Pasadena. It will be used to address central nervous system and non-central nervous system disorders.

"Capsida is poised to really lead a revolution in medicine where we can use these gene therapies to reach a whole mountain of diseases that heretofore were completely

untouchable by medical technology or therapies," said Dr. Robert Cuddihy, Capsida's chief executive.

Plenty of capital:

Capsida will develop gene therapies for three central nervous system disease targets under the $90 million collaboration with AbbVie. For the first and second targets, Capsida is eligible to receive $530 million in future development and commercial milestone payments, upon AbbVie exercising its option. Also, Capsida is eligible to receive single-digit royalty payments on product sales from AbbVie.

For the third disease target, upon AbbVie exercising its option, Capsida has the right to develop through human proof-of-concept. AbbVie would head late-stage development and commercialization. Following human-proof-of concept, both parties would engage in a 50-50 cost profit share with Capsida having the option to co-promote the drug in the U.S.

"(AbbVie is) bringing some real expertise in the cargo development that I really think is innovative and cutting edge," Cuddihy said.

AbbVie owns the world's bestselling drug Humira, which last year generated $19.8 billion in sales, according to S&P Global Market Intelligence.

One factor in Capsida's ability to attract capital is its executive roster. Cuddihy was previously the vice president of U.S. medical affairs for Amgen Inc. in Thousand Oaks and also worked for Johnson & Johnson.

"I do think we're quite unusual in that we've got this whole cohort of super experienced leadership," said Cuddihy. He lauded Capsida's Chief Manufacturing Officer Rayne Waller, who for more than 25 years worked in supply chain management and manufacturing for Amgen.

"Stealth mode" refers to a company that avoids publicity while furthering its research. In conjunction with its debut $140 million capitalization, Capsida announced that it will use the money to expand its 50-member team to 100 or more scientists by year's end. "Capsida is led by an outstanding team of executives and we are looking forward to growing the team to support our internal pipeline and the AbbVie collaboration," Dr. Beth Seidenberg, founding managing director at Westlake Village BioPartners and Capsida board member said in a statement. "Capsida is another example of the growing biotech hub in the greater Los Angeles area."

Solid bet:

Brent Reinke, an attorney at the firm Stradling Yocca Carlson and Rauth in Westlake Village and the founder of BioScience Alliance, said that as with most biotech companies, the biggest potential pitfall for Capsida is whether the R&D will prove successful and whether the therapies can get through clinical trials and FDA approval.

“The fact that Capsida has raised such a significant amount of early-stage financing definitely helps, for now, minimize the concern that a lack of funding will impede its R&D and drug development efforts,” Reinke wrote in an email.

Ahmed Enany, chief executive of the Southern California Biomedical Council in Los Angeles, echoed Reinke’s concerns. He said that as research moves to human trials, Capsida may find roadblocks that will need to be resolved by conducting more research and raising more money.

“These are the kind of uncertainties that Capsida is subject to, and any other new biotech company working in complicated areas, such as gene therapy, will confront,” Enany said.

Both Enany and Reinke expressed confidence in Capsida’s launch.

“They seem to be moving in the right direction – a lot of money, good founders, good people and a partnership with AbbVie,” said Enany.

“With Westlake Village BioPartners’ support and guidance in helping select top management personnel for Capsida, it would be a horse I would place money on to be successful,” said Reinke.

Versant Managing Director Clare Ozawa said the firm has a strong conviction that the AAV platform from Caltech has potential.

She expressed confidence in the “tremendous potential” of gene therapy and said that Capsida stands out in terms of rapid development within the field. Ozawa, who sits on the board, foresees Capsida filing for an IPO at some point in the near to mid future. Although business progression is a priority, producing life-saving therapies is at the forefront for Ozawa and her colleagues.

“The most important mission that we’re on is to develop what could be game changing therapies for patients with diseases that are incurable, intractable or can lead to early death,” she said.

As a doctor, Cuddihy has seen genetic disorders that cannot be properly treated, leaving children and their families to suffer.

“Yes, I want our company to be a commercial success. Yes, I want us to be a scientific success,” said Cuddihy. “But I’m very confident I’m going to look back in the decades to come and say, ‘I was part of that, and we actually benefited potentially millions of patients around the world.’”

Last week, Capsida announced a partnership with Swiss–American biotechnology company CRISPR Therapeutics to develop gene-edited therapies for amyotrophic lateral sclerosis and Friedreich’s ataxia.

CRISPR Therapeutics will manage research and development of the Friedreich's ataxia program, while Capsida will head research and development for the ALS program and conduct capsid engineering for both programs, according to a press release.
Both biotech companies will have the option to co-develop and co-commercialize the program that the other company leads. If the option is exercised, the companies would equally share research, development and commercialization costs and profits worldwide related to the collaboration product.

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