



Genentech takes up a deal to make 'molecular glue' drugs

Through a collaboration with Orionis Biosciences, the Roche subsidiary is eyeing targeted protein degradation medicines for cancer and neurodegenerative conditions.

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A sign is displayed in front of the Genentech headquarters July 14, 2008 in South San Francisco, California. Justin Sullivan via Getty Images

“Molecular glues” — so named for their ability to forcibly pull together two proteins that wouldn’t otherwise interact with each other — have come a long way since they were discovered around three decades ago.

Initially, the function of these molecules was uncovered somewhat by chance. But scientists in recent years have intentionally designed them into a class of medicines, also called targeted protein degraders, to destroy disease-causing proteins.

A potential new way to attack targets once thought undruggable, molecular glues have become the focus of a number of collaborations between smaller biotechnology companies and larger pharmaceutical firms, including Sanofi and Astellas. A cohort of startups, such as Arvinas and Magnet Biomedicine, are also dedicated to this field of research.

Roche-owned Genentech is the latest to invest in the space. In a deal announced Wednesday, Genentech will pay drugmaker Orionis Biosciences \$47 million upfront in a research collaboration

to find new medicines to treat cancer and neurodegenerative conditions.

“Molecular glue degraders are an exciting modality to target disease-related proteins that have proven challenging with more traditional treatment modalities,” James Sabry, the global head of Roche Pharma Partnering, said in a statement.

Protein degraders have emerged as a competitive area of drug research over the last decade. Many of these would-be therapies take advantage of the proteasome, which functions like the body's garbage disposal system for unnecessary or damaged proteins. In effect, these treatments are meant to tag a disease-causing protein for destruction by the proteasome.

Orionis, headquartered in Boston with research facilities in Ghent, Belgium, has a handful of preclinical cancer drug programs in its pipeline. The company claims its technology allows for a “unique” approach to discovering small-molecule molecular glues that work against hard-to-drug disease targets.

Under the new agreement, Orionis will discover and optimize the experimental medicines for targets selected by Genentech. Later-stage preclinical studies, clinical trials and commercialization would fall to Genentech.

The multiyear deal also offers \$2 billion worth of so-called “biobucks,” or future payments contingent on hitting certain development and commercialization milestones.

Genentech's deal with Orionis is not its first foray into targeted protein degradation. The company announced a collaboration in 2022 with China-based Jemincare to develop an experimental protein degrader for a target linked to prostate cancer.

It's also the second deal this week from the Roche subsidiary, which poured \$40 million into a collaboration with PeptiDream, a Japanese drugmaker working on radiopharmaceuticals.

Editor's note: This story has been updated to clarify Orionis' headquarters.