



DIVE BRIEF

Roche bets on Ionis RNA medicines with neuroscience deal

The Swiss drugmaker is restocking its pipeline as the pace of drug development in Alzheimer's and Huntington's disease picks up.

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A Roche logo is seen on the side of a building Courtesy of Roche

Dive Brief:

- Roche is deepening its commitment to neuroscience, agreeing to a licensing deal with Ionis to develop two preclinical RNA medicines for Alzheimer's and Huntington's diseases, Ionis said Wednesday.
- Per deal terms, Roche is paying \$60 million upfront for rights to the undisclosed drugs, and will assume responsibility for developing them once they are ready for human trials. Ionis could receive further payments if clinical, regulatory and commercial milestones for the drugs are met.
- Roche has invested heavily in Alzheimer's drug development, advancing two antibody therapies into Phase 3 testing only to find they didn't slow disease progression. The Swiss drugmaker has fallen behind rivals Eisai, Biogen and Eli Lilly, which have benefited from recent clinical development successes.

Dive Insight:

Roche and Ionis have worked together for years. The two are currently collaborating on tominersen, a type of drug called an antisense oligonucleotide that blocks the expression of a protein mutated in Huntington's disease. That drug is in a Phase 2 trial measuring biologic signs of disease as well as patient function.

They also have partnered on an antisense drug Roche is testing in kidney disease and Ionis is studying as a treatment for an age-related eye disorder.

In Alzheimer's, Roche was among the early innovators to develop antibody drugs capable of blocking a protein called amyloid that accumulates in the brains of people with the disease. Roche hit clinical setbacks, as did Lilly, Biogen and Eisai.

Now, however, Eisai's Biogen-partnered drug Leqembi is approved in the U.S. and Lilly's donanemab is under Food and Drug Administration review.

Roche hasn't fully ended its anti-amyloid drug work yet, continuing tests of one called crenezumab in people who have an inherited form of Alzheimer's. It's also still studying a formulation of the twice-failed drug gantenerumab that's designed to better reach into the brain.

Other mid-stage assets include two antibody drugs that target another protein implicated in Alzheimer's disease, called tau. The company recently disclosed Phase 1 data from a drug targeting another protein known as gamma secretase that's related to amyloid buildup.

Huntington's disease has proven nearly as difficult as Alzheimer's to treat, with approved medicines so far only able to reduce involuntary movements. Ionis and Roche are among several

companies seeking to help patients by blocking mutant proteins, although their drug tominersen has had setbacks, too.

The Ionis deal signals Roche wants to keep stocking its pipeline with new approaches for treating Alzheimer's and Huntington's. Ionis demonstrated that it can successfully develop a drug for a degenerative neurological disorder when Biogen gained FDA approval for Qalsody, an Ionis-invented treatment for amyotrophic lateral sclerosis.