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Frontier Medicines launches with \$67 million in funding

The company plans to use chemoproteomics on ‘undruggable’ cancer targets

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Frontier Medicines, a biotech firm working on “undruggable” proteins associated with cancer, has emerged with \$67 million in series A funding.

The funding, from investors such as Deerfield Management and Droia Oncology Ventures, will help grow the R&D arm of the South San Francisco company to at least 20 employees by the end of 2019, says cofounder and CEO Chris Varma. The firm is looking for chemists, cell biologists, and computational scientists, among others, Varma says.



Frontier’s technology is based mostly on the [research of](#) Daniel Nomura, a chemical biologist at the University of California, Berkeley, who studies chemoproteomics—the chemical interrogation of proteins. Nomura works on proteins that have no obvious place for a small molecule to dock, making development of drugs a challenge. Instead, these hard-to-drug proteins, which Varma says are some 90% of the human proteome, form temporary pockets that could serve as binding sites.

From Nomura’s work, Frontier has developed a database of these transient binding sites, Varma says. At such sites, he explains, proteins involved in cancer can be covalently modified by small molecules that either inhibit their function or tag them for degradation.

Frontier’s preclinical work includes animal and cell culture testing, but Varma won’t discuss specific drug targets or cancers that it is working on. He says its targets include transcription factors—proteins that control the expression of different genes.

“One of the great things about our platform is that a lot of the key insights happen up front,” Varma says about Frontier’s approach. “After that, it’s very classical small-molecule drug development.” Frontier, which formed quietly last October, is not the only company using chemoproteomics in drug discovery. Vividion Therapeutics launched in 2017 with a similar goal of creating drugs that target recalcitrant proteins. Vividion is based on research led by Ben Cravatt, a chemical biologist at Scripps Research in California. Nomura was a postdoctoral fellow in Cravatt’s lab.

Before the launch of Frontier, Nomura helped found a partnership between UC Berkeley and Novartis called [the Novartis-Berkeley Center for Proteomics & Chemistry Technologies](#). It was created, in part, to find temporary binding spots in proteins. A few months after the formation of the partnership, Novartis told C&EN that it was working on its own version of Nomura’s technology to use in-house.

Varma says Novartis is not associated with Frontier, though Frontier is seeking industry partners to speed the development of its pipeline.