Timmerman Report

A-Alpha Bio Raises $22.4M to Further Build SynBio and AI Drug Discovery Platform

By Luke Timmerman, July 25, 2023

Not long ago, it would have been easy to imagine investors throwing money at entrepreneurs from a big-time academic center who can use words like “synthetic biology” and “machine learning” and “drug discovery” in the same sentence.

But Seattle-based A-Alpha Bio, a spinout from the University of Washington’s highly regarded Institute for Protein Design, isn’t getting carried away. It’s more about making steady progress.

The company has put together a series of partnerships that provide external validation and reduce cash burn – things of value in a tough financing environment for young companies. The careful management approach has allowed it to make some key hires while continuing to pressure-test and improve its platform. Now, A-Alpha is announcing today it has secured a $22.4 million Series A financing extension that brings its total funding to $51 million since inception in 2018.

David Younger, co-founder and CEO, A-Alpha Bio

“Given where the market is, we knew we wanted to keep this as a smaller round,” said David Younger, co-founder and CEO. “We don’t want to go through a rapid expansion now and find ourselves where we’ve overgrown our britches and the market isn’t ready for another fundraising.”

Existing investor Perceptive Xontogeny Ventures led the round and was joined by Madrona Venture Group and other existing investors. Breakout Ventures participated as a new investor.

The plan was to raise $15-20 million in the Series A extension, and for most of the capital to come from insiders, Younger said. That modest requirement for investment capital allowed Younger and co-founder Randolph Lopez to spend more time on internal operations and on striking partnerships with companies that include Bristol Myers Squibb, Kymera Therapeutics, Gilead Sciences, as well as Lawrence Livermore Laboratory and the Bill & Melinda Gates Foundation.

Chris Garabedian, CEO of Xontogeny, said the partnerships and the management team were important factors when it came time to re-invest. He also wrote that A-Alpha stood out among discovery tool companies he and his team have evaluated:

> "Their approach to high-throughput screening of protein-protein interactions was an area that we did not see would be easily commoditized (like many tools we’ve evaluated for investment). The information that is garnered from these screens can provide important information on favorable interactions, additive/synergistic combinations, screening out for toxic/unfavorable interactions, and potential new discoveries (e.g., novel pairs for molecular glues). Many companies we’ve evaluated in the ‘tools’ space were either not critical information to drive successful drug discovery and early development (i.e., a nice-to-have, but not a need-to-have) or they were tools that were more easily reproduced and less competitive."

Matt McIlwain, a partner with Madrona Venture Group and board member of A-Alpha, also pointed to the partnerships and the management team. “They have done an incredible job executing on building quality pharma partnerships, delivering on both the wet and dry lab fronts that drive their programs, and hiring a world-class and complementary team,” McIlwain said.

A-Alpha has a high-volume synthetic biology platform which it uses to make protein constructs that are the basis for evaluating protein-protein interactions. Those interactions are then analyzed with machine learning. The company uses fast-dividing yeast cells as the basis for its platform.

A-Alpha's teams have generated enough data to analyze 440 million protein-protein interactions, Younger said. The company has grown to 45 employees, and will add a few more, growing into the "low 50s" by year-end, he said.

The company hasn't yet introduced a drug candidate into clinical trials for itself or its partners. Last month, A-Alpha agreed to collaborate with Gilead to help discover long-acting biologics against HIV and its many variants (TR coverage). That builds off previous work on making biologics with broad neutralizing capability against the SARS-CoV-2 virus. (Geekwire coverage).

Other work for partners has concentrated on molecular glue therapies that can bind with E3 ubiquitin ligases and a target of interest for oncology or neurological diseases, and on antigen-antibody interactions. Younger also emphasized internal work on cytokine therapies that can be optimized to bind with high affinity to a target, while "de-tuning" signaling to similar structures on healthy cells, Younger said.

Within 6-9 months, the company anticipates having in vivo animal data for what could be a lead therapeutic program, Younger said. He declined to comment when asked when the company expects to bring its first program into clinical trials, or how long the corporate runway extends with its current cash reserves.