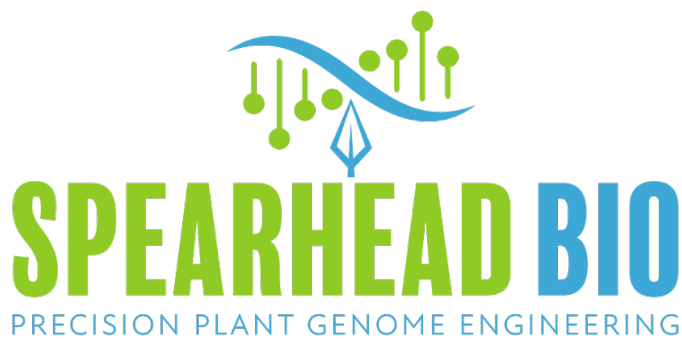




Danforth Startup raises \$1.62M to accelerate next-generation crop breeding

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Danforth Center spinout secures oversubscribed seed funding to scale TAHITI technology across more agricultural crops



Spearhead Bio, a startup spun out of the Donald Danforth Plant Science Center, has raised \$1.62 million in an oversubscribed seed SAFE round to accelerate the development and commercial deployment of its patented TAHITI genome engineering technology.

Founded in 2024 by Danforth Center Principal Investigator Dr Keith Slotkin, Spearhead Bio is developing TAHITI as a platform for large-scale DNA replacement using CRISPR across agricultural crops. The company says the technology is designed to support both GMO and non-GMO gene replacement, potentially expanding the range of crop traits that can be engineered.

The funding round was led by BioGenerator Ventures and Danforth Technology Company (DTC), with participation from QRM Capital, Grit Road Partners, St. Louis County Port Authority Helix Fund, SDH Capital and other investors.

The latest financing follows an initial 2024 SAFE round that the company says helped demonstrate TAHITI's functionality across multiple crops. Spearhead Bio now plans to use the new capital to expand the number of crops being engineered with the technology and deepen partnerships with agricultural industry players.

"Our initial 2024 SAFE round enabled us to prove that TAHITI works in multiple crops, and we now know that industry sees the immediate value," said Dr Slotkin. "This second round gives us the runway to demonstrate how TAHITI saves our partners years of development time and millions of dollars in crop improvement."

At the heart of Spearhead Bio's proposition is the ability to move large DNA cargo with greater precision and efficiency. CEO Mike Bielski said this capability could change how genome engineering is applied in agriculture.

“TAHITI will fundamentally change genome engineering in agriculture. By enabling the precise and efficient movement of large DNA cargo, it provides a transformative new platform for developing both GMO and non-GMO crops,” Bielski said.

The company's development has been closely tied to the Danforth Center's research ecosystem. TAHITI emerged from Dr Slotkin's research and was described in a 2024 publication in Nature. The underlying research was supported by multiple National Science Foundation grants, while Spearhead Bio also secured a competitive Small Business Technology Transfer (STTR) grant in 2025.

The company has subsequently built a broad intellectual property portfolio around the technology and signed multiple industry licences, providing a commercial pathway beyond the laboratory.

Spearhead Bio is the third spinout established by DTC, the wholly owned subsidiary of the Danforth Center responsible for helping create and invest in startups based on intellectual property developed by the centre's scientists.

It is part of the Danforth Center Startup Initiative, which aims to move plant-science innovations from research into commercial applications. The initiative supports early-stage companies working in areas linked to food security and environmental sustainability through entrepreneurship support, business development and early-stage capital.

Other companies to emerge from the initiative include Metablify, Peptide Bio, Agrela Ecosystems and RNAissance Ag.

The financing also underscores the Danforth Center's broader effort to build St. Louis as a hub for agricultural technology innovation. “The Danforth Center is doubling down on our commitment to growing St. Louis as a global center for agtech innovation,” said Danforth Center President Giles Oldroyd. “Spearhead Bio's oversubscribed raise shows investors agree: the science coming out of the Danforth Center is market-leading, and this region is the right place to build it.”

With the new capital, Spearhead Bio plans to broaden its crop portfolio and increase the number of agricultural species being engineered using TAHITI. The company also expects to expand collaborations with industry partners developing new crop-improvement technologies. Early applications are already extending beyond conventional major crops. Dr Nigel Taylor's laboratory at the Danforth Center has reported early success using TAHITI in cassava, an important food-security crop in Africa.

Spearhead Bio's strategy centres on turning a genome-engineering capability into a platform that can be deployed across multiple crops. If the technology performs at scale as intended, its commercial value will depend not only on the underlying engineering capability but also on how quickly it can be adapted across crop species and integrated into breeding programmes.