Company: Precise Bio www.precise-bio.com
CEO: Aryeh Batt | Category: Bio Convergence
Session: *Restoring Vision: Where Biology Meets Engineering*

Executive Summary / Investment Rationale

Precise Bio is a bio-convergence company integrating cell biology, biomaterials science, and engineering disciplines—including physics, mechanics, electronics, and software—into a multidisciplinary platform designed to biofabricate living human tissues. Combined with regulatory, quality, and clinical capabilities, the platform enables scalable manufacturing of implantable tissues for clinical use.

The company is focused on ophthalmology, developing products that address significant unmet medical needs across markets with a total addressable value in the tens of billions of dollars. Precise recently achieved a major milestone as the first company to successfully transplant a functional 3D-bioprinted human cornea produced in a cGMP manufacturing environment. The technology addresses the global shortage of donor corneas affecting millions of patients worldwide.

To date, the company has raised more than $50 million and established collaborations with leading partners in ophthalmology. The management team brings experience across biotechnology, medical devices, engineering, and clinical development.

Core Technology

Precise has developed a proprietary 3D biofabrication platform combining advanced bioprinting, cellular biology, biomaterials, and precision engineering. The technology enables controlled fabrication of functional human tissues within a cGMP manufacturing environment.

The platform enables production of structurally and biologically functional tissues with reproducible quality, scalability, and potential for cryopreservation and distribution. While initially focused on corneal implants, the platform supports broader tissue-engineering applications.

Product Profile / Pipeline

Precise's lead program is a biofabricated corneal implant currently in a Phase I clinical study addressing the global shortage of donor corneal tissue. Additional ophthalmic tissues, including retina, are in preclinical development demonstrating safety and functionality in animal models.

Strategic collaborations include ZEISS and Miracles In Sight, one of the largest eye banks in the United States.

Key milestones include Phase I cornea results expected by the end of 2026, IND submission anticipated in 2027, BLA submission targeted for 2029, and a retina first-in-human study expected in Q1 2029.

Business Strategy

Precise plans to commercialize its ophthalmic products through partnerships with global ophthalmology and surgical technology companies to accelerate market adoption.

What's Next

Priorities include completion of the Phase I cornea study, preparation for U.S. Phase II/III trials, retina advancement toward first-in-human studies, expansion of cGMP manufacturing capacity, strengthening clinical and regulatory teams, securing additional financing, and expanding the platform into additional regenerative medicine applications through strategic collaborations.