



Orna Therapeutics Launches with over \$100M Raised to Develop a New Class of Fully Engineered Circular RNA Therapies

Synthetic circular RNA (oRNA) combines nature-driven insights with rational design to produce a bold new class of RNA therapeutics

Therapeutic potential across a broad range of diseases including cancer, autoimmune, and genetic disorders

Cambridge, Mass., February 24, 2021 – Orna Therapeutics, a biotechnology company dedicated to designing and delivering a new class of fully engineered circular RNA therapeutics (oRNAs), today announced the completion of its \$80 million Series A financing. Founded on groundbreaking research from the Massachusetts Institute of Technology (MIT) and built by MPM Capital, Orna utilizes elegant molecular design and delivery technologies to overcome the limitations of linear mRNA therapeutics and unlock RNA’s full therapeutic potential to treat a wide range of diseases including cancer, autoimmune, and genetic disorders. Led by Thomas M. Barnes, Ph.D., as Chief Executive Officer, Orna’s team of skilled scientists, molecular engineers, and industry veterans leverage their broadly applicable oRNA platform to dramatically change and improve current approaches to treatment with the potential to make a difference in the lives of patients. The financing was co-led by MPM Capital, Taiho Ventures, and F2 Ventures, with participation from leading strategic investors: Kite, a Gilead Company, Bristol Myers Squibb, Astellas Venture Management, Novartis Institutes for Biomedical Research, and the PAGS Group.

Orna’s engineered circular RNAs have several key advantages, including superior protein expression, simpler and more cost-effective manufacturing, and improved delivery. Unlike other RNA therapies, oRNA does not require the addition of cap or tail structures and does not require the use of modified nucleotides to address innate immune responses. In addition, oRNAs are designed to drive unparalleled protein production while resisting degradation inside the body.

“Our elegant solution to the circular RNA engineering problem has allowed us to reveal that oRNA is simply the better format for long coding RNA,” said Dr. Barnes. “Furthermore, our initial combination of oRNAs with technology to deliver them to immune cells has paved the way to create groundbreaking new therapies to fundamentally change the way we treat cancer and autoimmune diseases.”



The company was founded by (Robert) Alex Wesselhoeft, Ph.D., Raffaella Squilloni, M.B.A. and Professor Dan Anderson, Ph.D. (MIT), and was seeded and incubated by MPM Capital, with Shinichiro Fuse, Ph.D. serving as the interim CEO, and Brian Goodman, Ph.D. as head of Business Development. “We believe that oRNA is the future, and Orna has built the right team to execute on this vision,” said Ansbert Gadicke, M.D., co-founder and Managing Director, MPM Capital, Board Chair of Orna Therapeutics. “Orna’s elegant and meticulously calculated approach has the potential to forever change the field of mRNA therapeutics.”

The potential applications of Orna’s technology are far reaching. In particular, Orna believes it can apply its oRNA technology to potentially address the limitations of current immunotherapies by delivering chimeric antigen receptors (CARs) directly to patient’s immune cells within the body (*in situ* CAR therapy). The Series A financing will enable Orna to bring its initial programs to IND enablement, while continuing to advance its robust platform and build the capabilities to support Orna’s mission in its new office and laboratory space located in Cambridge, Massachusetts. Orna is supported by an experienced and seasoned Board of Directors and scientific advisors, including:

- Daniel Anderson, Ph.D., Professor, MIT
- Sakae Asanuma, CFA, MBA, President, Taiho Ventures
- Thomas M. Barnes, Ph.D., CEO, Orna Therapeutics
- Shinichiro Fuse, Ph.D., Managing Director, MPM Capital
- Ansbert Gadicke, M.D. (chair), co-founder and Managing Director, MPM Capital
- Morana Jovan-Embricos, Managing Partner, F2 Ventures
- Francesco Marincola, M.D., SVP and Global Head of Cell Therapy Research of Kite

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About Orna Therapeutics

Orna Therapeutics is a biotechnology company dedicated to designing and delivering a new class of fully engineered circular RNA (oRNA) therapeutics with the potential to change the way we treat disease. Orna’s proprietary platform combines novel technology to create oRNAs that



drive protein expression with validated and unique delivery solutions. oRNA has many advantages over traditional mRNA approaches, including simplified production, improved formulatability, and superior protein expression – making it a highly disruptive, new class of RNA therapeutics with vast potential to change patient’s lives. To learn more visit:

www.ornatx.com and follow Orna Therapeutics on [Twitter](#) and [LinkedIn](#).

About MPM Capital

MPM Capital is a healthcare investment firm with over two decades of experience founding and investing in life-sciences companies that seek to translate scientific innovations into cures for major diseases. With its experienced and dedicated team of investment professionals, entrepreneurs, and advisors, MPM strives to power novel medical breakthroughs that transform patients' lives. For more information visit www.mpmcapital.com.

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