bYoRNA raises €1.5M to revolutionize mRNA manufacturing

bYoRNA raises €1.5M to advance yeast-based therapeutic mRNA, enabling longer, more efficient and affordable RNA for oncology, vaccines & gene therapy.

BORDEAUX, NOUVELLE AQUITAINE, FRANCE, September 8, 2025 /EINPresswire.com/ -- bYoRNA raises €1.5M to revolutionize mRNA manufacturing.

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>
> *Cécile Tharaud, Founding Partner of POLYTECHNIQUE VENTURES*

- The French biotech company bYoRNA is democratizing access to new therapeutic and vaccine strategies based on messenger RNA (mRNA), with a focus on oncology, infectious diseases and gene therapy.
- The startup helps design RNA molecules and then ensures their bioproduction in industrial fermenters.
- Thanks to this fundraising, the startup will finalize its testing phases on long RNAs and deploy its first commercial agreements.

In Bordeaux, September 8, 2025 - bYoRNA, a biotech company specializing in the production of therapeutic mRNA, announces a €1.5M pre-seed funding round led by POLYTECHNIQUE VENTURES, alongside IRDI CAPITAL and biotech business angels. This round will complete the development of its innovative in vivo fermentation mRNA production platform, based on patented technology using yeast cells.

Founded in 2022 in Bordeaux and composed of a team of 10 scientists, bYoRNA is the result of a meeting between three complementary founders combining scientific, industrial and entrepreneurial expertise: Dr. Chantal Pichon, mRNA researcher at Inserm and invited professor at Charité Berlin, the patent inventor, Dr. Thierry Ziegler (CTO), former bioproduction executive at Merck-Serono and Sanofi, and Pascal Viguié (CEO), a high tech entrepreneur and graduated from the University of Oxford and Columbia Business School.

PIONEERING TECHNOLOGY FOR A NEW ERA OF MESSENGER RNA
Since the COVID-19 pandemic, mRNA has established itself as a leading therapeutic tool. But today, almost all mRNAs are produced in vitro by enzymatic synthesis, a method that is both expensive and technically limited because it produces mRNAs of uneven quality, with

immunogenicity and final protein integrity (“frameshifting”) issues, and hardly allows the synthesis of long molecules. These barriers currently limit the use of mRNA in human and animal therapeutics.

To overcome these hurdles, bYoRNA offers a major technological breakthrough enabling the synthesis of any mRNA molecule via bioproduction. mRNA —an intermediate molecule between DNA, which carries genetic code, and the encoded protein—is unstable in living environments, as it is destined to be degraded once its messenger role is fulfilled. Producing it in vivo by fermentation like other biologicals is therefore a complex challenge. This is why to date therapeutic mRNA has been produced in vitro and not by fermentation.

The technology developed by bYoRNA makes it possible to overcome this obstacle. It is based on the in vivo synthesis of therapeutic RNAs in yeast cells, capable of producing long, naturally optimized RNAs, and helps to protect and concentrate these molecules during production through endogenous protein complexes. The mRNAs are then purified using established pharmaceutical bioproduction methods.

Ultimately, the startup produces RNA that is, when needed, longer, more stable, naturally matured (thus less immunogenic), purer, and up to 100 times cheaper than RNA produced by conventional methods. This innovation opens up new opportunities in gene therapy, regenerative medicine, and personalized vaccines, particularly for rare diseases, infectious diseases, and cancer.

A DEEPTECH STARTUP WITH STRONG INDUSTRIAL AMBITIONS
Thanks to this fundraising, the company will finalize the development of its molecular design and bioproduction platforms, and validate its first therapeutic and vaccine applications through targeted collaborations. The company will rapidly establish partnerships with academic and industrial laboratories in human and animal health to demonstrate the robustness, efficiency, and competitiveness of its technology.

bYoRNA has already secured its first strategic partnership with TRON, a German institute founded by the creators of BioNTech, recognized for its advances in personalized immunotherapy.

"Thanks to bYoRNA, we are moving from expensive, fragile, and hard-to-produce mRNA to a robust, economical, and scalable technology. It’s a real paradigm shift. We are paving the way for a new generation of RNA treatments, now accessible on a large scale. This funding will allow us to take a strategic technological step, with first industrial validations as early as 2027," says Pascal Viguié, CEO and co-founder of bYoRNA.

"The RNA molecule has enormous therapeutic potential, limited only by production challenges. The bYoRNA team combines first-class expertise in RNA molecules and their production, extensive experience in pharmaceutical bioproduction, and proven entrepreneurial know-

how—enough to meet the challenge!" comments Cécile Tharaud, Founding Partner of Polytechnique Ventures.

ABOUT bYoRNA
bYoRNA is a French biotechnology company founded in 2022, specializing in the production of therapeutic RNA. Thanks to a breakthrough technology based on yeast cells, our platform allows the production of longer, less immunogenic messenger RNAs (mRNAs) at a lower cost. This innovation opens up new perspectives for gene therapy and cancer treatment. The company was co-founded by Pascal Viguié, a high-tech entrepreneur, Thierry Ziegler, a former executive at SANOFI and MERCK, and Chantal Pichon, the researcher behind the patent. Jeff Coller, director of the mRNA department at Johns Hopkins University, is a scientific advisor, and bYoRNA has a strategic partnership with TRON, the German mRNA research institute founded by the creators of BioNTech. To find out more, visit our website.

ABOUT POLYTECHNIQUE VENTURES
Polytechnique Ventures is École Polytechnique's venture capital fund dedicated to the entrepreneurial ecosystem. Funded by Alumni, it supports and finances deep tech start-ups from École Polytechnique, whether they are founded by alumni, incubated at the School or from its laboratories. Find us on our website or on Linkedin.

ABOUT IRDI CAPITAL INVESTISSEMENT
With €550 million in assets under management in 14 funds, including 2 evergreen funds, IRDI Capital Investissement partners with nearly 200 companies in a wide range of sectors. IRDI Capital Investissement has been the leading asset management company in the South-West of France for 40 years. Based in Toulouse, Montpellier and Bordeaux, the company provides equity support to regional companies at all stages of their development (seed, venture capital, development capital/transmission and takeover). IRDI Capital Investissement carried out this operation via its IRDINOV3 fund, dedicated to deeptech themes and supported by the National Seed Fund 2 (FNA2). To learn more about IRDI Private Equity: irdi.fr and follow the news: LinkedIn, Twitter. For more information, visit https://www.irdi.fr/.

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