



## Replay Launches with \$55 Million Seed to Reprogram Biology by Writing and Delivering Big DNA

July 25, 2022

- KKR and OMX Ventures lead \$55 million seed funding round
- Replay's genomic medicine toolkit encompasses a portfolio of disruptive platform technologies to write and deliver big DNA, including a high payload capacity HSV delivery platform, a hypoinmunogenic cell therapy platform, and a proprietary genome writing platform
- Company is led and supported by a world-class team of academics, entrepreneurs, and industry experts
- Innovative hub-and-spoke business model separates technology development from product development, leveraging Replay's technologies within discrete product companies
- Five product companies have been incorporated to date

**San Diego, California and London, UK, 25 July 2022** – Replay, a genome writing company reprogramming biology by writing and delivering big DNA, today announced its launch with \$55 million in seed financing. The round was led by KKR and OMX Ventures, with additional participation from ARTIS Ventures and Lansdowne Partners, SALT, DeciBio Ventures, and Axial.

Replay's portfolio of next-generation genomic medicine technologies aims to solve the key challenges currently limiting clinical progress, including the need for increased payload capacity and off-the-shelf cell therapies that substantially reduce cost of goods, improve production speed, volume and consistency, and expand the potential for genome engineering.

Replay's genomic medicine toolkit comprises several synergistic technology platforms, including:

- synHSV™ - a high payload capacity HSV vector able to deliver up to 30x the payload of AAV. synHSV™ facilitates the delivery of large genes, genomic genes, multiple genes, and multiple transcriptional activators and repressors, thereby extending the reach of genomic medicine and opening up the possibility of polygenic therapy
- uCell™ - a universal, renewable, off-the-shelf, genomically rewritten, hypoinmunogenic iPS cell source for regenerative medicine and cell therapy
- DropSynth™ - a genome writing platform enabling rapid, efficient, and low-cost synthesis of libraries of synthetic genes and big DNA
- LASR™ - an evolutionary inference algorithm platform for rewriting proteins to optimize functionality

Replay's innovative corporate structure separates technology development from therapeutic product development within disease area-specific product companies. Each product company is co-founded by seasoned entrepreneurs in conjunction with global thought leaders in each therapeutic area. To date, Replay has established four synHSV™ gene therapy product companies, aimed at bringing big DNA therapies to monogenic diseases affecting the skin, eye, brain and muscle, and an enzyme writing product company using LASR™ and DropSynth™ to optimize enzyme functionality.

Replay was co-founded by Dr. Adrian Woolfson BM BCh PhD, formerly Executive Vice President and Head of Research and Development at Sangamo Therapeutics, Chief Medical Officer at Nouscom, Global Clinical Leader of Early and Late Stage Immuno-Oncology/Hematology at Pfizer and Global

Medical Lead in Oncology at Bristol Myers Squibb; Lachlan MacKinnon, a member of the founding team at Oxford Science Enterprises (formerly OSI) and founding investor in Base Genomics, ONI and OMass Therapeutics; Professor David Knipe PhD, Higgins Professor of Microbiology and Head, Program in Virology, Harvard Medical School; and Professor Ron Weiss PhD, one of the pioneers of synthetic biology and Professor of Biological Engineering at Massachusetts Institute of Technology (MIT).

**Adrian Woolfson, Executive Chairman, President, and Co-founder of Replay, commented:** "Genomic medicine has the potential to transform the future of clinical therapeutics. Over my three decades of experience working in clinical medicine, academia, and the biopharmaceutical industry, it has become clear that we require a more robust and comprehensive toolkit of molecular genetic platform technologies to solve biology's most complex problems and realize its full therapeutic potential. In Replay we have assembled a world-class team of entrepreneurs, subject matter experts, and cutting-edge genomic medicine and synthetic biology technologies into a coherent structure that will enable us to address medicine's greatest challenges, including solid tumors and polygenic diseases."

**Lachlan MacKinnon, Chief Executive Officer, and Co-founder of Replay, added:** "Technology and product development have different talent requirements, timelines, costs and cultures. By separating technology development from product development, we have generated a model to accommodate these differences. Our ability to write and deliver big DNA has the potential to disrupt

many areas of genomic medicine. We have the right team, corporate structure, portfolio of technology platforms, and financial backing to build an enduring company that shapes the future of the industry.”

**Kugan Sathiyandarajah, Managing Director at KKR and Board Member at Replay, said:** “Replay’s mission is to create a world-leading company that develops and owns the tools to reprogram biology by writing and delivering big DNA; we believe these capabilities will unlock the largest untapped opportunity in medicine. Replay has tremendous entrepreneurial experience within the Company, as well as a team of seasoned industry players to guide the development of the platform technologies and product companies to bring new treatments to patients.”

**Nick Haft, Managing Director at OMX Ventures and Board Observer at Replay, added:** “Replay has assembled an impressive portfolio of step-change technologies to propel the field of genomic medicine forward. We are excited to support these technologies, Replay’s creative business model and the excellent team of entrepreneurs and investors that brings it all together.”

**Errik Anderson, CEO of Alloy Therapeutics and Independent Board Member at Replay, stated:** “Substantial technological advances in biotechnology often create opportunities for new business models. I am very excited to partner with Replay’s ambitious founders and investors who have devised a new structure around the significant opportunity space afforded by synHSV™, uCell™, and Replay’s related genomic medicine and synthetic biology technologies.”

Alongside a highly experienced management team and board, which includes serial entrepreneur Errik Anderson, Replay is supported by a distinguished team of entrepreneurs and international experts including product company co-founders: Professor Joe Glorioso PhD, inventor of Replay’s synHSV™ technology and Senior Advisor for Gene Therapy Programs at Replay, Co-founder of Oncorus, and Professor of Microbiology and Molecular Genetics at the University of Pittsburgh; Mark Blumenkranz, MD, MMS, the HJ Smead Professor of Ophthalmology, Emeritus, at the Stanford School of Medicine, Co-Director of the Stanford Ophthalmology Innovation Program, and former Chairman of the Board and Co-founder of Adverum Biotechnologies; Professor Howard Federoff MD PhD, Co-Founder of Brain Neurotherapy Bio, and former CEO of Aspen Neuroscience and Brooklyn Immunotherapeutics; and

Professor David Schaffer PhD, Professor of Chemical and Biomolecular Engineering, Bioengineering and Neuroscience at University of California, Berkeley, and Co-founder of 4D Molecular Therapeutics.

KKR is investing in Replay through KKR Health Care Strategic Growth Fund II, a \$4.0 billion fund focused on investing in high-growth health care companies.

## About Replay

Replay is a genome writing company, which aims to define the future of genomic medicine through reprogramming biology by writing and delivering big DNA. The Company has assembled a toolkit of disruptive platform technologies – including a high payload capacity HSV platform, a hypoimmunogenic platform, and a genome writing platform – to address the scientific challenges currently limiting clinical progress and preventing genomic medicine from realising its full potential. The Company’s hub-and-spoke business model separates technology development within Replay from therapeutic development in product companies, which leverage the technology platforms. For example, Replay’s synHSV™ technology, a high payload capacity HSV vector capable of delivering up to 30 times the payload of AAV, is utilized by Replay’s four gene therapy product companies, bringing big DNA treatments to diseases affecting the skin, eye, brain, and muscle. The Company has, additionally, established an enzyme writing product company engaging its evolutionary inference machine learning and genome writing technology to optimize functionality. Replay is led by a world-class team of academics, entrepreneurs and industry experts.

The Company has raised \$55 million in seed financing and is supported by an international syndicate of investors that includes KKR, OMX Ventures, ARTIS Ventures, and Lansdowne Partners.

Replay is headquartered in San Diego, CA and London, UK. For further information please visit [www.replay.bio](http://www.replay.bio) and follow us on [LinkedIn](#) and [Twitter](#).

## About KKR

KKR is a leading global investment firm that offers alternative asset management as well as capital markets and insurance solutions. KKR aims to generate attractive investment returns by following a patient and disciplined investment approach, employing world-class people, and supporting growth in its portfolio companies and communities. KKR sponsors investment funds that invest in private equity, credit and real assets and has strategic partners that manage hedge funds. KKR’s insurance subsidiaries offer retirement, life and reinsurance products under the management of Global Atlantic Financial Group. References to KKR’s investments may include the activities of its sponsored funds and insurance subsidiaries. For additional information about KKR & Co. Inc. (NYSE: KKR), please visit KKR’s website at [www.kkr.com](http://www.kkr.com) and on [Twitter](#).

## About OMX Ventures

OMX Ventures is an early stage, tech-bio focused venture capital fund – a force multiplier for scientists and innovators pushing the boundaries of what’s possible in biology and beyond. Visit OMX Venture’s website at [OMX.VC](https://www.omx.vc) and follow us on [LinkedIn](#) and [Twitter](#)

**Contacts:**

**Replay**

Dr. Adrian Woolfson or Lachlan MacKinnon [info@replay.bio](mailto:info@replay.bio)

**Consilium Strategic Communications – Media relations**

Amber Fennell/Tracy Cheung/Jessica Hodgson [replay@consilium-comms.com](mailto:replay@consilium-comms.com)

**KKR**

Alastair Elwen / Sophia Johnston Finsbury Glover  
Hering

[KKR-LON@fgh.com](mailto:KKR-LON@fgh.com)

+44 20 7251 3801