MONTREAL & CAMBRIDGE, Mass.--(BUSINESS WIRE)--Repare Therapeutics Inc. today announced a US$68 million Series A financing to advance its platform and pipeline of novel medicines that target genetically defined weaknesses of cancers. Founding investor Versant Ventures co-led the round with MPM Capital. They were also joined by other syndicate investors including Fonds de solidarité FTQ, Celgene Switzerland, an affiliate of Celgene Corporation, and BDC Capital’s Healthcare Venture Fund.

With this financing, Repare emerges from Versant’s Discovery Engines after an 18-month stealth period during which the company advanced its leading CRISPR-enabled synthetic lethality drug discovery platform, identified several promising oncology targets and moved multiple programs into preclinical development. Founders Daniel Durocher, Ph.D., Agnel Sfeir, Ph.D., and Frank Sicheti, Ph.D., and their respective institutions, played instrumental roles in the company’s formation and growth in partnership with Versant.

“Versant’s commitment to and confidence in Repare’s distinct science has enabled the company to build the team, operations and initial programs away from the spotlight,” said Repare CEO Lloyd M. Segal. “With the added leadership of MPM and this syndicate, we are financed to achieve our goal of testing our multiple new, precision oncology therapeutics in a clinical setting.”

The core concept of synthetic lethality is that while a tumor can tolerate individual defects in its DNA, there exist combinations of defects that lead to the malignancy’s destruction. The recent approvals of several PARP inhibitors provide clear proof-of-principle for the approach of inducing synthetic lethality. Repare and its founders have developed large-scale and novel methods for discovering additional drug targets that, when inhibited, may induce synthetic lethality. New drugs directed at these targets hold promise to improve cancer treatment both as single therapies and in combination with existing drugs and treatments.

In addition to Segal, a Versant Entrepreneur-in-Residence, Repare’s seasoned management team also includes R&D Head Michael Zinda, Ph.D., who built and led AstraZeneca plc’s Oncology iMed Bioscience group in Boston; and VP of Discovery Cameron Black, Ph.D., an accomplished 18-year leader of Merck Frosst’s medicinal chemistry efforts. Repare has a 20-member team based in Montreal and Boston. To further guide this important investment both Jerel Davis, Ph.D., managing director at Versant, and Todd Foley, managing director at MPM Capital, will join Repare’s board of directors.

“The fields of synthetic lethality and DNA repair have a rich, 20-year history and are poised to deliver impactful new cancer treatments,” said Davis. “We are impressed by the speed and precision with which Repare, in collaboration with its founders and scientific advisors, generated impressive insights and multiple novel targets.”
Repare’s first disclosed program targets DNA-directed DNA polymerase theta (PoI/Q), a central component of a pathway that repairs double-strand breaks in cancer cells. NYU School of Medicine has licensed to Repare exclusive rights to drug discovery work targeting PoI/Q, developed by Dr. Sfeir with the support of NYU Office of Therapeutics Alliances (OTA). This unique polymerase is highly expressed in ovarian, breast and a number of other cancers. In parallel, Repare is progressing several additional programs, with an aim to put its first compound in the clinic in 2019.

“We evaluated nearly every opportunity in the synthetic lethality space and have complete conviction that Repare, its founders and its SAB members represent the leaders in the field,” said Foley. “MPM is dedicated to investing in and building companies that seek to find cures for cancer and save lives and we look forward to the advancement of Repare’s programs and the development of these meaningful medicines.”

Repare’s founders and scientific advisors are leaders in synthetic lethality and tumor repair machinery research. In addition to Dr. Sfeir from the Department of Cell Biology and the Skirball Institute of Biomolecular Medicine at NYU Langone Medical Center and Drs. Durocher and Sicheri from Toronto’s Lunenfeld-Tanenbaum Research Institute, Repare has assembled a world-class scientific advisory board, including:

- Samuel Aparicio, Ph.D., chair of the Breast Cancer Program at BC Cancer Agency and professor of pathology and laboratory medicine at UBC, Vancouver.
- Jim Carmichael, M.D. FRCP, lead of the Protein Homeostasis Thematic Center of Excellence at Celgene Corporation. He previously was U.K. regional director of medical science at AstraZeneca plc following its acquisition of KuDOS, where he was CMO and responsible for clinical development of olaparib.
- Ronny Drapkin, M.D., Ph.D., director of the Penn Ovarian Cancer Research Center and director of gynecologic cancer research at the Basser Center for BRCA at the University of Pennsylvania.
- Laurie Glimcher, M.D., president and CEO of the Dana-Farber Cancer Institute, Richard and Susan Smith Professor of Medicine at Harvard Medical School.
- Mark Pegram, M.D., director of the breast cancer oncology program at Stanford Women’s Cancer Center and co-director of Stanford’s molecular therapeutics program.
- Richard Wood, Ph.D. FRS, Grady F. Saunders Distinguished Professor in Molecular Biology at the University of Texas MD Anderson Cancer Center.

About Repare

Repare is developing new, precision oncology drugs for patients that target specific vulnerabilities of tumor cells. Its approach integrates insights from several fields of cell biology including DNA repair and synthetic lethality. Repare’s platform combines a proprietary, high-throughput, CRISPR-enabled gene editing target discovery method with high-resolution protein crystallography, computational biology and clinical informatics. The company is backed by leading global healthcare investors including founding investor Versant Ventures and MPM Capital. For additional information, please visit www.reparerx.com.

About Versant

Versant Ventures is a leading healthcare investment firm committed to helping exceptional entrepreneurs build the next generation of great healthcare companies. The firm invests across the healthcare sector and at all stages of company development, with an emphasis on the discovery and development of novel therapeutics. With $2.3 billion under management and offices in North America and Europe, Versant has built a team with deep investment, operating, and scientific expertise that enables a hands-on approach to company building. Since the firm’s founding in 1999, more than 65 Versant companies have achieved successful acquisitions or IPOs. For more information, please visit www.versantventures.com.
About MPM Capital

MPM Capital is an early-stage life sciences venture firm founding and investing in companies that seek to cure major diseases by translating scientific innovations into positive clinical outcomes. MPM’s portfolio of companies aims to revolutionize the face of medicine across multiple areas including cancer, neuroscience, metabolic disorders, and regenerative medicine. With its experienced and dedicated team of operating executives and medical and scientific advisory board, MPM is powering novel medical breakthroughs that transform patients’ lives. MPM has more than $2.6 billion dollars in assets under management and is currently investing from two funds — the BV2014 and UBS Oncology Impact Fund. For further information, please visit www.mpmcapital.com.

About the Fonds de solidarité FTQ

The Fonds de solidarité FTQ is a development capital fund that channels the savings of Quebecers into investments. As at November 30, 2016, the organization had $12.2 billion in net assets, and through its current portfolio of investments has helped create and protect over 187,000 jobs. The Fonds is a partner in more than 2,600 companies and has nearly 618,000 shareholder-savers. fondsftq.com.

About BDC Capital

With more than $2 billion under management, BDC Capital is the investment arm of BDC, serving as a strategic partner to Canada’s most innovative and high potential firms. It offers a range of equity, venture capital and flexible growth and transition capital solutions to help Canadian entrepreneurs scale their businesses into global champions. To find out more, visit bdc.ca/capital.

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