Ventus Therapeutics Launches with $60 Million Series A

Founded by Versant Ventures to develop medicines that target the innate immune system

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WALTHAM, Mass. & MONTREAL--(BUSINESS WIRE)--Ventus Therapeutics Inc. today announced a $60 million Series A financing led by founding investor Versant Ventures with participation by GV (formerly Google Ventures). Proceeds will be used to advance three pipeline programs and to expand the company’s structural immunology platform to pursue previously intractable drug targets.

“The know-how and technologies within Ventus provide the opportunity to develop selective small molecule drugs for innate immunity,” said Marcelo Bigal, M.D., Ph.D., president and CEO of Ventus. “These capabilities have enabled us to tackle several challenging and disease-relevant pathways. With the backing from Versant and GV, we can now translate our progress into innovative medicines for autoimmune diseases and oncology.”

Drugging the inflammasome and nucleic acid-sensing pathways

The innate immune system's inflammasome and nucleic acid sensing pathways are comprised of many proteins such as the NOD-like receptors, gasdermins and enzymes involved in DNA and RNA sensing. Despite the therapeutic importance of these targets, drug discovery has been limited by a lack of molecular structures, direct assays and chemical matter.

Ventus’ structural immunology platform addresses many of these barriers. The approach is based on protein engineering capabilities with the necessary know-how to generate and express stable monomers of known targets, including the inflammasomes and nucleic acid sensing targets. This in turn enables the elucidation of protein structures and the implementation of direct biochemical and biophysical assays that previously did not exist.

“In assembling Ventus, we saw the opportunity to pursue inflammasome and nucleic acid-sensing targets in a new way,” said Jerel Davis, Ph.D., managing director at Versant. “Our academic leaders contribute unique know-how in the fields of structural biology and immunology that underpin the company’s platform and approach.”

During Ventus’ stealth period, the academic founders and Versant's Inception Discovery Engine assembled the structural immunology platform, pursued screens against multiple targets, and advanced qualified hits into lead discovery. The company plans to pursue its internal pipeline and also consider discovery-stage partnerships to fully exploit the potential of this approach.

Relevance to a broad set of diseases
Ventus’ current pipeline includes programs relevant to multiple autoimmune and inflammatory diseases, as well as certain forms of resistant cancers.

In autoimmune disease, the importance of specific inflammasome and nucleic acid sensing targets is well-established based on genetics and evidence that clinical- and commercial-stage medicines can disrupt pathways involving IL-1B and the type I interferons. In cancer, clinical results continue to establish the importance of the innate immune system and specific cell types such as macrophages and natural killer cells.

“Ventus is positioned to open up new territory for developing better medicines that target innate immunity pathways behind many important diseases,” said Brendan Bulik-Sullivan, Ph.D., a partner at GV. “We are confident in the experienced leadership team and the scientific expertise that is propelling the company’s drug development.”

Scientific founders and operating plans

Ventus’ internal team is working alongside a founding team of leading scientists who have made major contributions to the fields of structural biology and immunology. The company’s scientific founders and advisors include:

- **Hao Wu, Ph.D.**, Professor, Department of Biological Chemistry and Molecular Pharmacology at Harvard Medical School; Senior Investigator of Program in Cellular and Molecular Medicine, Boston Children’s Hospital; Member of the National Academy of Sciences. Dr. Wu is a pioneer in structural immunology focused on elucidating molecular mechanisms of signal transduction by immune receptors, particularly innate immune receptors.

- **Richard Flavell, Ph.D.**, Sterling Professor of Immunobiology, Yale University; Investigator, Howard Hughes Medical Institute. Dr. Flavell is a world-renowned immunologist who pioneered the use of transgenic mouse models to study autoimmune and inflammatory diseases. He is a member of the National Academy of Sciences, National Academy of Medicine (USA), and a Fellow of the Royal Society.

- **Judy Lieberman, M.D., Ph.D.**, Endowed Chair in Cellular and Molecular Medicine and Professor of Pediatrics, Harvard Medical School. Dr. Lieberman is a leading expert in immune pathways that trigger cell death.

- **Thomas Tuschl, Ph.D.**, Professor and head of the laboratory for RNA molecular biology at the Rockefeller University. Dr. Tuschl is a pioneer in the field of nucleic acid biology, including the implementation of gene silencing in mammalian cells and the identification of small molecule modulators of nucleic acid sensing pathways.

- **Feng Shao, Ph.D.**, Investigator and Deputy Director for Academic Affairs, National Institute of Biological Sciences, Beijing. Dr. Shao is a renowned structural biologist, including molecular mechanisms of bacterial infection and host innate immunity defense.

- **Douglas Green, Ph.D.**, Chair, Immunology and Co-Leader, Cancer Biology Program, St. Jude Children’s Research Hospital. Dr. Green is a pioneer in identifying the fundamental molecular events directing the death of the cell.

- **Russell Vance, Ph.D.**, Professor of Immunology and Pathogenesis at the University of California at Berkeley; Investigator, Howard Hughes Medical Institute. Dr. Vance is a leading expert in mechanisms of innate immunity, particularly the role of NLRP1 inflammasomes.
Ventus will operate across two sites in Montreal, Canada, and in Boston, Massachusetts. This allows the company to deploy an industry-trained drug discovery team equipped with know-how and capabilities in protein engineering and structural biology. With this financing, the company plans to expand its headcount to more than 30 scientists this year and advance three programs into development.

**About Ventus Therapeutics**
Ventus Therapeutics is a biopharmaceutical company discovering and developing novel small molecule medicines that target the innate immune system to treat autoimmunity diseases, inflammatory diseases and cancer. Our structural immunology platform offers unprecedented insight into mechanisms and molecular structures, combining core capabilities for precisely targeting the innate immune system: proprietary protein engineering capabilities that elucidate innate immune mechanisms, and leading-edge rational and structure-based drug design tools. Ventus has built an emerging pipeline of multiple drug programs addressing key targets in the innate immune system. Our team combines experienced biopharmaceutical leadership with a founding team of leading scientists whose discoveries have opened a new understanding of innate immune system mechanisms. Ventus is backed by Versant Ventures, its founding investor, and GV (formerly Google Ventures). The company has locations in Boston, Massachusetts and Montreal, Canada. For more information, please visit [www.ventustx.com](http://www.ventustx.com).

**About Versant Ventures**
Versant Ventures is a leading healthcare venture capital firm committed to helping exceptional entrepreneurs build the next generation of great companies. The firm's emphasis is on biotechnology companies that are discovering and developing novel therapeutics. With $3.2 billion under management and offices in the U.S., Canada and Europe, Versant has built a team with deep investment, operating and R&D expertise that enables a hands-on approach to company building. Since the firm's founding in 1999, 75 Versant companies have achieved successful acquisitions or IPOs. Versant is currently investing out of its seventh fund, Versant Venture Capital VII, a $600 million global biotech fund closed in December 2018. In parallel the firm co-invests out of its Canadian strategic fund Versant Voyageurs I and its later-stage biotech opportunity fund Versant Vantage I. For more information, please visit [www.versantventures.com](http://www.versantventures.com).

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**Tweets by @Ventus_Tx**

Ventus Therapeutics
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Congratulations to Judy Lieberman, Ventus founder, and Doug Green, Ventus advisor, both elected to the National Academy of Sciences @theNASciences last week, just prior to our launch! nasonline.org/news-and-multi...
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