



DEM BioPharma Launches with \$70 Million Financing

Company will pursue untapped opportunities in the field of innate immune system checkpoints to eliminate cancer

Proprietary platform leverages CRISPR screening and macrophage biology to systematically discover and drug “don’t eat me” (DEM) and “eat me” (EM) signals

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CAMBRIDGE, Mass., June 23, 2022-- DEM BioPharma, Inc. (DEM Bio), an immuno-oncology company developing therapies that target novel innate immune system checkpoints to eliminate cancer, today announced its initial \$70 million financing led by founding investor [Longwood Fund](#) and [Alta Partners](#), with additional participation from [Insight Partners](#), [Pfizer Ventures](#), [Astellas Venture Management](#), [Emerson Collective](#), [UTokyo Innovation Platform](#) and [Alexandria Venture Investments](#).

DEM Bio is pioneering the next generation of immunotherapeutics designed to unleash macrophages and other myeloid effector cells to eliminate tumors by targeting novel ‘don’t eat me’ (DEM) and ‘eat me’ (EM) signals on cancer cells and macrophages. The company’s approach builds on the groundbreaking research from its scientific co-founders:

- Jonathan Weissman, Ph.D. - Whitehead Institute, National Academy of Sciences member, HHMI, world leader in genome-wide CRISPR screens;
- Michael Bassik, Ph.D. - Stanford University, a distinguished biologist in cancer, phagocytes, and CRISPR screening; and
- Kipp Weiskopf, M.D., Ph.D. – Whitehead Fellow and physician at Dana-Farber Cancer Institute, one of the world’s leaders in macrophage and cancer biology.

DEM Bio is focused on accessing the largely untapped opportunity around macrophage biology and innate immune system pathways to discover potent DEM and EM signals on cancers and expand the therapeutic potential of the field beyond the relatively small number of signals targeted by current investigational therapies. The company’s proprietary CHoMP™ platform (Co-culture with Human Myeloid Phagocytes) will be used to identify unexplored DEM and EM signals in a systematic and unbiased manner via inter-cellular CRISPR screening using tumor cells, primary macrophages, and other innate immune effector cells.

DEM Bio also announced the appointment of Jan Skvarka, former CEO of Trillium Therapeutics (acquired by Pfizer for \$2.22 billion in November 2021), as Executive Chairman. As part of the financing, Christoph Westphal, M.D., Ph.D., Founding CEO, DEM Bio, and Founding Partner Longwood Fund; Dan Janney, Managing Partner, Alta Partners; Dylan Morris, Managing Director, Insight Partners; Marie-Claire Peakman, Ph.D., Principal, Pfizer Ventures; and Hiro Kimura, Ph.D., Investment Director, Astellas Venture Management have joined DEM Bio’s [Board of Directors](#).

“Currently known DEM signals have been described in an ad hoc manner. DEM Bio’s founders discovered a scalable approach to systematically unlock the potential of innate immune system checkpoints,” noted Dr. Westphal.

“This financing from an exceptional group of investors positions us to execute on our ambitious plans to develop the next generation of macrophage checkpoint inhibitors that may revolutionize how we treat cancer,” said Mr. Skvarka.

DEM Bio has assembled a world-class [Scientific Advisory Board](#) consisting of leaders in the field of CRISPR high-throughput screening, immune phagocytes, cancer biology, and therapeutic development, including co-founders Drs. Weissman, Bassik and Weiskopf, Roarke Kamber, Ph.D., Postdoctoral fellow, Genetics, Stanford School of Medicine, Dian Yang, Ph.D., Postdoctoral fellow, Whitehead Institute for Biomedical Research, as well as Kai Wucherpennig, M.D., Ph.D., Professor and Chair, Dana-Farber Cancer Institute; Dane Wittrup, Ph.D., Professor of Chemical Engineering & Bioengineering, MIT; and Bob Uger, Ph.D., former CSO, Trillium Therapeutics.

“The currently known DEM and EM pathways were discovered serendipitously,” said Dr. Bassik. “Similar to other areas of immunotherapy, there are likely other signals that are more potent and offer better therapeutic targets, but no one has yet taken a systematic approach to identifying those pathways.”

“By leveraging cutting-edge functional genomics and macrophage biology, we created the CHoMP platform to discover new DEM/EM signals in a fully unbiased and systematic way,” said Dr. Weiskopf.

“CHoMP is a highly differentiated platform built on unique, proprietary CRISPR screening capabilities in primary human cells, enabling DEM Bio to methodically evaluate unexplored DEM/EM signals,” said Dr. Weissman.

The CHoMP platform has identified a number of promising new DEM/EM signals, including the novel DEM pathway APMAP. In preclinical work, targeting APMAP enhanced tumor cell phagocytosis in multiple cancer cell types and animal cancer models, and demonstrated synergistic effects with a broad range of tumor-binding antibodies.

David Donabedian, Co-founder and start-up CEO of DEM Bio, and Operating Partner, Longwood Fund added, “APMAP is just one of the promising programs identified using the CHoMP platform, and the encouraging initial data on this pathway has helped validate our differentiated approach to identifying novel, potent DEM/EM signals. The company plans to use proceeds from this financing to further develop our platform and to advance our portfolio of novel targets towards therapeutic development in oncology.”

About DEM BioPharma Inc.

DEM Bio is pioneering the next generation of immunotherapeutics that unleash the innate immune system to eliminate tumors by targeting ‘don’t eat me’ (DEM) and ‘eat me’ (EM) signals on cancer cells, macrophages and other myeloid effector cells. Founded by Longwood Fund, the company’s approach builds on the groundbreaking functional genomics research and discoveries in macrophage biology from its scientific co-founders: Drs. Jonathan Weissman and Kipp Weiskopf of the Whitehead Institute and Dr. Michael Bassik of Stanford University. The proprietary CHoMP™ platform (Co-culture with Human

Myeloid Phagocytes) utilizes CRISPR-based functional genomic screens in human cancer cells and/or primary macrophages to discover and validate new DEM and EM signals that could profoundly induce and enhance cancer cell elimination through increased phagocytosis.

Contacts

Kari Watson or Nicholas Chang

kwatson@macdougall.bio or nchang@macdougall.bio

(781) 235-3060