

Vor Biopharma Hires Senior Cell and Gene Therapy Leaders as Chief Technology Officer and Vice President of Research

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CAMBRIDGE, Mass., October 1, 2019 — Vor Biopharma, an oncology company pioneering engineered hematopoietic stem cells (eHSCs) for the treatment of cancer, today announced senior appointments to its leadership team. Sadik Kassim, PhD, a cell and gene therapy bioprocessing and translational research expert, joins Vor from Kite Pharma as Chief Technology Officer. Tirtha Chakraborty, PhD, a hematological and gene engineering research specialist with experience at Sana Biotechnology and CRISPR Therapeutics, joins as Vice President of Research. These new positions follow Vor's recent move into an integrated headquarters in Cambridge, Mass., the appointment of Robert Ang, MBBS, MBA, as President and Chief Executive Officer and a \$42 million Series A financing directed at developing Vor's platform technology and advancing its pipeline of eHSC-based candidates.

"Vor is bringing a fundamentally novel approach to hematopoietic stem cells to empower targeted cancer therapies, and we are rapidly building an industry-leading team to realize the value in this scientific foundation," said Dr. Ang. "Dr. Kassim brings his substantial experience with the complex methods and processes that are required for manufacturing geneticallymanipulated cell therapies, and Dr. Chakraborty provides deep expertise in hematology and genetic engineering. Their complementary knowledge will aid Vor's expansion, platform development and the move towards our first Investigational New Drug filing for VOR33."

"I am impressed that compelling in vivo data already supports the potential of Vor's cellular engineering platform to protect healthy cells from antigendirected therapies via antigen removal," said Dr. Kassim. "This is especially noteworthy when therapeutic effectiveness is so often highly limited by co-location of target antigens on healthy immune cells, creating a huge opportunity for Vor to significantly broaden the applicability of these and future therapies."

"It's exciting to join the Vor team during this period of accelerated expansion," said Dr. Chakraborty. "As a geneticist and cell biologist, I look forward to developing this new approach to treat a range of devastating cancers, beginning with VOR33 in acute myeloid leukemia."

Dr. Kassim is a former Executive Director at Kite Pharma where he led the development of manufacturing processes for autologous CAR- and TCR-based gene-modified cell therapies. Prior to Kite, he served as Chief Scientific Officer at Mustang Bio, where he was the first employee and oversaw the foundational build-out of the company's preclinical and manufacturing activities. Prior to Mustang, Dr. Kassim was Head of Early Analytical Development for Novartis' Cell and Gene Therapies Unit, where he contributed to the BLA and MAA filings for Kymriah®. Earlier in his career, Dr. Kassim was a research biologist at the National Cancer Institute, where he was involved in early research and CMC work that led to the development of several first-in-human TCR and CAR-T products, including Kite's Yescarta®. Dr. Kassim has also conducted preclinical immunology research at Janssen and was a research fellow in the University of Pennsylvania Gene Therapy Program, where he led the initial discovery and preclinical studies for an AAV8 gene therapy for familial hypercholesterolemia, a program that is now in the clinic. Dr. Kassim earned his BS in Cell and Molecular Biology from Tulane University and received his PhD in Microbiology and Immunology from Louisiana State University.

Dr. Chakraborty joins Vor from Sana Biotechnology, where he served as the Vice President of Cell Therapy Research. Prior to Sana, Dr. Chakraborty was the Head of Hematology at CRISPR Therapeutics, where his team's work on hemoglobin disorders paved the way for the first clinical trial for the CRISPR industry. Before that, at Moderna Therapeutics, Dr. Chakraborty led synthetic mRNA platform technology research. He was trained as an RNA biologist and an immunologist during his postdoctoral research at Harvard Medical School. Dr. Chakraborty received his PhD from the Tata Institute of Fundamental Research in Mumbai, India.

About VOR33

Vor's lead engineered hematopoietic stem cell (eHSC) product candidate, VOR33, is in development for acute myeloid leukemia (AML). VOR33 is designed to produce healthy cells that lack the receptor CD33, thus enabling the targeting of AML cells through the CD33 antigen, while avoiding toxicity to the bone marrow. Currently, targeted therapies for AML and other liquid tumors can be limited by on-target toxicity. By rendering healthy cells "invisible" to CD33-targeted therapies, VOR33 aims to significantly improve the therapeutic window, utility and effectiveness of these AML therapies, with the potential to broaden clinical benefit to different patient populations.

About Vor Biopharma

<u>Vor Biopharma</u> aims to transform the lives of cancer patients by pioneering engineered hematopoietic stem cell (eHSC) therapies. Vor's eHSCs are designed to generate healthy, fully functional cells with specific advantageous modifications, protecting healthy cells from the toxic effects of antigentargeted therapies, while leaving tumor cells vulnerable.

Vor's platform could potentially be used to change the treatment paradigm of both hematopoietic stem cell transplants and antigen-targeted therapies, such as antibody drug conjugates, bispecific antibodies and CAR-T cell treatments. A proof-of-concept study for Vor's lead program has been published in *Proceedings of the National Academy of Sciences*.

Vor is based in Cambridge, Mass. and has a broad intellectual property base, including inlicenses from Columbia University, where foundational work was conducted by inventor and Vor Scientific Board Chair Siddhartha Mukherjee, MD, DPhil. Vor was founded by Dr. Mukherjee and PureTech Health and is supported by leading investors including 5AM Ventures and RA Capital Management, Johnson & Johnson Innovation — JJDC, Inc. (JJDC), Novartis Institutes for BioMedical Research and Osage University Partners.

Media:

Tom Donovan ±1 857 559 3397 tom@tenbridgecommunications.com