
A Nanotechnology Research Collaboration between Harvard University and Moderna

2019-10-10

Harvard University has recently signed an agreement with the biotech company of Moderna to develop mRNA technologies for use in the treatment of immunological diseases. The establishment of an initiative called ARTiMIS is one of the successful outcomes of this collaboration, which provides Harvard researchers with the opportunity to access Moderna's mRNA platform and use it for supporting drug development research. Moderna has provided the ARTiMIS initiative with a grant of \$1.2 million, in addition to its support in providing the researchers with mRNA and nanoparticle-delivery technology.

[Harvard University](#) has established a multi-year research collaboration with the biotech company [Moderna, Inc.](#), with the goal of identifying and developing novel therapeutic approaches that could improve the lives of patients with immunological diseases. Additional funding from Moderna to Harvard Medical School ([HMS](#)) will establish an initiative at HMS called the Alliance for RNA Therapies for the Modulation of the Immune System (ARTiMIS), which will enable basic science research in the field of immunology using Moderna's mRNA and nanoparticle delivery technology. The HMS Department of Immunology is hosting a symposium with Moderna to launch the ARTiMIS initiative today.

"Between the ARTiMIS initiative and the broader research collaboration between Moderna and Harvard, we have established a collaborative framework to support continuous innovation in immunology," said Isaac Kohlberg, Harvard's Chief Technology Development Officer and Senior Associate Provost. "This access to focused funding and technical resources will enable Harvard researchers to make impactful advances in biomedical science, from the generation of basic biological insights to, we hope, the preclinical development of new immunotherapies."

ARTiMIS to support research through grants, materials

The ARTiMIS initiative will enable HMS-affiliated investigators to access Moderna's platform for mRNA and novel immune delivery and will provide financial support for exploratory research projects, including the work of postdoctoral researchers at HMS. Moderna has provided the initial funding for ARTiMIS through a \$1.2 million grant and will also provide investigators with mRNA and nanoparticle delivery technology and materials. Projects selected for funding by ARTiMIS will aim to advance basic understandings of fundamental immunological processes, generate new mechanistic insights in the pathogenesis of immunological diseases and discover novel approaches to the prevention, diagnosis and therapy of human diseases.

"ARTiMIS provides an exciting opportunity for the HMS Immunology community to utilize Moderna's mRNA and delivery technology to advance the field of immunology, toward our shared goal of serving patients," said Arlene Sharpe, M.D., Ph.D., chair of the Department of Immunology and co-director of the Evergrande Center for Immunologic Diseases at Harvard Medical School. "By combining the talents of leading immunologists at Harvard with this innovative technology, we hope to enable new discoveries in multiple areas of immunology."

Research collaboration to facilitate further discovery and development

To further advance insights toward therapeutics, Moderna has also entered into a multi-year research agreement with the university at large, through the [Harvard Office of Technology Development](#). Under this collaboration framework, Moderna will initially provide sponsored research funding of up to \$2.45 million in support of a project led by Ulrich von Andrian, M.D., Ph.D., the Edward Mallinckrodt Jr. Professor of Immunopathology and Director of the Center for Immune Imaging at HMS. This project aims to use mRNA technologies to study and manipulate the migration of immune cells from blood to tissues.

"Immunological dysfunction is at the heart of many of the biggest medical challenges faced today. Harvard University and its affiliated medical institutions are leaders in advancing basic and translational science to better understand the biological mechanisms of these complex disorders," said Stephen Hoge, M.D., president at Moderna. "We believe that combining our technical capabilities in mRNA delivery with Harvard Medical School's expertise in immunology will lead to innovative therapies with the potential to make a significant impact

on people's lives."

Read the [original article](#) on Harvard Office of Technology Development.