

Overview of the 2019 Michelson Prizes

KEY DATES

- Pre-application portal opens September 17, 2018
- Pre-applications due October 29, 2018, 5:00 pm EDT (UTC -4)
- Applicants chosen for full-application submission notified by Dec. 18, 2018
- Full applications due February 4, 2019 5:00 pm EST (UTC -5)
- Notice of award April 18, 2019
- Awards ceremony and Conference on the Future of Vaccine Discovery, late-June 2019.
- Award start date July 1, 2019
- Award cycle is July 1, 2019 - June 30, 2020

Expanded Areas of Vaccine and Immunotherapy Discovery Research for 2019 USD \$150,000 each

The Michelson Medical Research Foundation (MMRF) together with the Human Vaccines Project established the Michelson Prizes for Vaccine Research in 2018. This \$20 million initiative, funded by the MMRF and administered by the Human Vaccines Project, supports young investigators under the age of 35 who are using disruptive research concepts and inventive processes to significantly advance the development of vaccines and immunotherapies for major global diseases. For 2019, the Michelson Prizes has expanded the vaccine and immunotherapy discovery-related research focus areas that will be funded by this award. The three focus areas for 2019 are: 1) Human Immunology 2) Computational Biology and Protein Engineering, and 3) Neglected Parasitic Diseases (excluding malaria).

The 2019 Michelson Prizes are intended to draw young investigators from a wide range of disciplines, including computer science, artificial intelligence/machine learning, engineering, nanotechnology, genomics, parasitology and tropical medicine.

Applicants must submit an online pre-application that will be judged based primarily on innovation and the ability to bring new insight and approaches to vaccine-based research. Pre-applications and full applications will be reviewed by a distinguished committee of internationally-recognized research scientists.

2019 Focus Areas

Human Immunology

This award is intended to fund research aimed at tackling the current roadblocks that exist in human vaccine development and expanding our limited understanding of key immune processes that are fundamental to successful vaccine and immunotherapeutics development, (e.g., immune memory, immune receptor recognition, tissue-specific responses, host-microbe interactions, underlying genetic mechanisms, genetic susceptibility, etc.).

Computational Biology and Protein Engineering

This award is intended to fund research that utilizes bioinformatics, theoretical methods, mathematical modeling, machine learning and/or computational approaches to elucidate protein structures involved

in immune recognition, immunogenicity, protein-ligand interactions, or other biological functions related to the human immune response. Other areas of research that will be considered for funding include protein design studies with the intent of generating novel structures and/or function for the development of vaccine antigens or adjuvants, and/or for modulating or targeting host proteins to elicit increased or more specific immune response(s).

Neglected Parasitic Diseases

This award is intended to fund research that is focused on antigen discovery, immune response mechanisms, and the development and testing of vaccines and immunotherapeutic agents for neglected parasitic diseases. This award is designed to foster research of human parasitic diseases that traditionally have been difficult to study due to antigen complexity and multifaceted host-parasite interactions. **NB: This award will not fund malaria research.**

Award Information - All Focus Areas

The Michelson Prizes are intended to support individuals early in their careers who possess novel ideas and who have significant potential to execute these ideas to affect transformative change in their respective fields. Research within all three focus areas should incorporate multiplexed and non-traditional approaches from outside the fields of immunology and vaccinology and demonstrate a high degree of novelty and creative thinking. The successful applicants will clearly articulate a vision that challenges current dogma and demonstrates an ability to look beyond convention to make a lasting impact on vaccine and immunotherapy research.

Eligibility Information

Applicants must be under the age of 35 at the time of pre-application submission (born on or after Oct 29, 1983). Early career independent investigators, postdoctoral fellows, clinical fellows (including residents and interns), and other researchers currently in training positions are eligible for these awards. An eligible applicant, regardless of ethnicity, nationality or citizenship status, must be employed by, or affiliated with, an eligible organization. Examples of eligible organizations include academia, biotechnology companies, foundations, government and non-governmental organizations, and research institutes. Individuals from such organizations, including organizations based outside of the US, are eligible to apply. Each applicant may submit only one Michelson Prize application per year.

While the Michelson Prizes are focused on research outcomes in the fields of vaccine and immunotherapy discovery, applicants from the full spectrum of related disciplines, including clinical research, biochemistry, molecular biology, engineering, computer science, biophysics, nanotechnology, etc., are encouraged to apply. *Prior experience in the specific focus areas of the Michelson Prizes (e.g., human immunology, vaccinology, computational biology/protein engineering, or parasitic diseases) is not required;* however, the pre-application must clearly articulate how the proposed research will impact and advance our understanding of human immunology and/or vaccine science.

Pre-Application Submission

Applying for a Michelson Prize is a two-step process requiring both a **pre-application** and **full application**. The submission process should be started early to avoid missing deadlines. **All communications, including the invitation to submit a full application, will be made through email.**

How to Submit an Online Pre-Application

- Click the *Apply Now* link on the Human Vaccines Project's website: www.humanvaccinesproject.org/michelsonprizes
- Fill out the 2019 Michelson Prizes pre-application form directly online and submit your completed form.
- Pre-applications must contain all the information required in the form in order to be accepted.
- Pre-applications must be submitted no later than October 29th, 2018, 5:00 pm EDT (UTC -4)

Selection Process

Pre-Applications

All pre-applications will be reviewed by highly qualified scientists and clinicians with relevant expertise in the scientific subject areas of the pre-application. Pre-applications will be evaluated based on innovation, impact and achievability. Each pre-application will be evaluated for its own merit, independent of other pre-applications. **Unfortunately, we are unable to provide any feedback to applicants regarding the specific review of their pre-application.** However, we will communicate with applicants once a decision has been reached.

Full Applications

Submission of a full application will be *by invitation only*, after the review of pre-applications. We expect to communicate to all applicants by December 18, 2018 the status of their pre-application. If you are selected to submit a full application, you will receive an invitation email from the Human Vaccines Project. Instructions on how to prepare a full research application will be provided by email with the invitation to participate. Full applications will be due February 4, 2019 by 5:00 pm EST (UTC -5)

All applicants will be notified by email in a timely manner of any changes in the deadline dates for pre- or full applications.

Award Announcement

Applicants will be notified of their selection to receive a Michelson Prize no later than April 18, 2019. The award period commences on July 1, 2019 and ends on June 30, 2020.

Oral Presentation and Awards Dinner

Michelson Prize winners will be required to present a brief overview of their awarded research project at the 2nd Annual *Conference on the Future of Vaccine Discovery*, as well as attend the 2019 Michelson Prizes awards ceremony dinner, which will be held in late June 2019 (date and location TBD).

Questions?

Please review our online Frequently Asked Questions first.

Specific questions about eligibility or the application process, please email us at:

michelsonprizes@humanvaccinesproject.org

Research Conditions

The applicant must maintain a 50% dedication of his/her full-time professional effort during the award period to the research funded by this award. The applicant is expected to assemble a research team that will provide the necessary expertise and collaborative efforts toward accomplishing the research goals proposed in the application.

The allocation of award funds for conduct of the Michelson Prize-funded project is under the control of the awardee and may be used flexibly for items such as salary, equipment, consumable supplies, travel to scientific meetings, and laboratory personnel working with the awardee. Specific limitations include the following: No more than 40% of the total award can be used for salaries, travel costs cannot exceed \$1500 and there is a \$15,000 cap on equipment. The Human Vaccines Project does not pay indirect costs on the Michelson Prizes.

It is the responsibility of the awardee, in conjunction with their institution, to ensure that all academic and research activities funded by this award and carried out in or outside the US comply with the laws or regulations of the US and/or of the foreign country in which the academic and/or research activities are conducted.

Research Involving Human Anatomical Substances, Human Subjects, or Human Cadavers: Research involving new and ongoing research with human anatomical substances, human subjects, or human cadavers must be reviewed and approved by the applicant's local Human Research Protection Office (HRPO), Institutional Review Board (IRB) or Ethics Committee (EC). Local IRB/EC approval at the time of submission is **not** required.

Research Involving Animals: Research involving new and ongoing research with animals must be reviewed and approved by applicant's local Institutional Animal Care and Use Committee (IACUC) of record. IACUC approval at the time of submission is **not** required.

Specific documents related to the use of human subjects, human anatomical substances, human cadavers and/or animals in the proposed research will be requested **if the applicant is selected for funding**.

The MMRF and the Human Vaccines Project intend that information, data, and research resources generated under awards funded by these prizes be made available to the research community and to the public at large in a timely manner via standard means of scientific communication, including publications and/or presentations in scientific forums. The MMRF and the Human Vaccines Project will not retain any rights to published results or patents that result from research funded by these prizes.

The MMRF and the Human Vaccines Project reserve the right to discontinue award funds if the recipient terminates or suspends their employment or association with their research institution, or terminates or suspends their research activities for any reason (e.g. graduates, leaves the laboratory, leave of absence, etc.).

Award recipients are required to submit a progress report and accounting of the use of funds prior to the conclusion of the award funding cycle, which is June 30, 2020. Any publications or works created by the award recipient must acknowledge support from the Michelson Prizes for Human Immunology and Vaccine Research as follows: Author X and/or this research was supported by the Michelson Prizes for Human Immunology and Vaccine Research. Copies of journal articles and other publications that result from this research prize should be sent to the Human Vaccines Project (contact person will be provided).