

OCTOBER 11, 2007

HHMI Adds 15 Patient-Oriented Researchers

New Researchers Speed Translation of Basic Discoveries into Improved Treatments

The Howard Hughes Medical Institute (HHMI) has selected 15 of the nation's top physician-scientists to be appointed as HHMI investigators in an initiative that underscores HHMI's commitment to ensuring that basic research discoveries are translated into improved treatments for patients. The Institute has committed approximately \$150 million to their first term of appointment.

"These 15 physician-scientists are changing the way we think about and treat a variety of diseases," said HHMI President Thomas R. Cech. "The impact of their research is already being felt by people suffering from malaria in Africa, by those with post-traumatic stress disorder in the United States, and by people worldwide with leukemia or lung cancer. As a group, they have demonstrated extraordinary creativity and innovation."

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The new HHMI investigators, who come from 13 institutions from across the country, were selected in a nationwide competition that sought applications from researchers who lead patient-oriented research programs and whose scientific work is guided by their interaction with patients. These physician-scientists spend their professional lives crossing the boundaries between the laboratory bench and the bedside, convinced that patient care informs and enhances their research.

This competition differed from previous competitions for new HHMI investigators because eligible researchers with faculty appointments at 121 institutions were invited to apply directly to HHMI. Prior institutional approval was not part of the process, as it had been for previous HHMI investigator competitions where a researcher's host institution nominated the candidate. The Institute received 242 applications from eligible candidates, of which 15 were selected to become HHMI investigators. To evaluate the applications, HHMI assembled review panels consisting of distinguished physician-scientists and biomedical scientists.

“We were pleased with the depth and breadth of candidates who applied in this competition,” said David A. Clayton, vice president for research operations at HHMI. “This was the first time that HHMI solicited applications directly from individual faculty at leading institutions and the outcome is an unqualified success.”

In 2002, the Institute completed its first competition dedicated to selecting physician-scientists who conduct patient-oriented research. In that competition, 12 new HHMI investigators were selected from 138 nominees. HHMI physician-scientists selected in the 2002 competition have identified new drug targets, developed new therapeutic agents, and improved our understanding of the genetic bases of several diseases that affect humans.

Despite the potential benefit that can come from nurturing the careers of physician-scientists, there is abundant anecdotal evidence that the number of physician-scientists pursuing careers in patient-oriented research is declining in the United States, said Cech. “We certainly don't have all the answers. But with the appointment of these new investigators -- who will also serve as mentors for the next generation of patient-oriented researchers -- and our early career awards to physician-scientists, we are sending a strong message that HHMI is committed to supporting the people who perform this vital work,” he said.

In another program, HHMI announced earlier this year that it was expanding support for its Physician-Scientist Early Career Awards. In August 2007, the Institute selected 20 awardees and announced that it is investing \$7.5 million to help ensure that promising physician-scientists have the resources they need to launch their careers. Each awardee is receiving \$375,000 over a five-year period. When the Institute announced its first early-career awards in 2006, 13 physician-scientists received \$150,000, awarded over a three-year period.

Although some of the 291 current HHMI investigators are doing patient-oriented research, a large number of Hughes scientists focus on basic research directed toward understanding the genetic, molecular and cellular bases of human disease. Some of these projects can be generally characterized as being disease-oriented rather than patient-oriented, because the research does not require significant contact with patients.

Applicants for the patient-oriented research competition were eligible to submit an application if they met the following requirements:

- Have an M.D. or M.D./Ph.D. degree or the equivalent
- Have a current license to practice medicine in the United States
- Be a tenured or tenure-track (or equivalent) faculty member at one of the 121 eligible host institutions on the date of submission of the application
- Have between four and 16 years of experience as an independent investigator
- Be engaged in the conduct of patient-oriented research
- Be the principal investigator on a funded NIH R01 grant or a project leader on a NIH P01 grant

HHMI enters into long-term collaboration agreements with universities and other academic research organizations, where its investigators hold faculty appointments. Under these agreements, HHMI investigators, who are directly employed by the Institute, and their research teams carry out their research in HHMI laboratories located on various campuses. Through its flagship investigator program, HHMI has joined with more than 60 distinguished U.S. universities, hospitals, institutes, and medical schools to create an environment that provides flexible, long-term support for 291 Hughes scientists and members of their research teams.

The Howard Hughes Medical Institute

The Howard Hughes Medical Institute, a non-profit medical research organization that ranks as one of the nation's largest philanthropies, plays a powerful role in advancing biomedical research and science education in the United States. In the past two decades HHMI has made investments of more than \$8.3 billion for the support, training, and education of the nation's most

creative and promising scientists.

HHMI's principal mission is conducting basic biomedical research, which it carries out in collaboration with more than 60 universities, medical centers and other research institutions throughout the United States. 291 HHMI investigators, along with a scientific staff of 2,200, work at these institutions in Hughes laboratories. The Institute's scientific research expenditures at the close of fiscal year 2007 totaled \$613 million. HHMI grants totaled \$86 million at the close of fiscal year 2007. The Institute's philanthropic grants program emphasizes initiatives with the power to transform graduate and undergraduate education in the life sciences. It also supports the work of biomedical researchers in many countries around the globe. Through aggregate investments of more than \$1.2 billion, the Institute has sought to reinvigorate life science education at both research universities and liberal arts colleges and to engage the nation's leading scientists in teaching.

At the end of its 2007 fiscal year, HHMI had an endowment of \$18.7 billion. Its headquarters are located in Chevy Chase, Maryland, just outside Washington, D.C.