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HHMI Selects 56 of the Nation's Top Scientists

Fifty-six of the nation's most creative biomedical scientists are being given the opportunity to tackle their most ambitious, risky research plans, as they become the newest class of Howard Hughes Medical Institute (HHMI) investigators. The Institute is committing more than \$600 million over their first term of appointment.

The 42 men and 14 women represent 31 institutions nationwide, including seven institutions — the Aaron Diamond AIDS Research Center, Boston University, Cornell University-Ithaca, Purdue University, Texas A&M; University, Cincinnati Children's Hospital Medical Center, and the University of Texas at Austin — that are adding an HHMI investigator for the first time. Their careers in science were launched in countries around the globe, including China, Israel, Argentina, Belgium, and the Netherlands.

“These 56 scientists will bring new and innovative ways of thinking about biology to the HHMI community,” said Thomas R. Cech, president of HHMI. “They are poised to advance scientific knowledge dramatically in the coming years, and we are committed to providing them with the freedom and flexibility to do so.”

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HHMI values innovation and encourages its investigators to extend the boundaries of science. By appointing scientists as Hughes investigators — rather than awarding research grants — HHMI is guided by the principle of “people, not projects.” HHMI investigators have the freedom to explore and, if necessary, to change direction in their research. Moreover, they have support to follow their ideas through to fruition — even if that process takes many years.

This crop of HHMI investigators is at the forefront of a wide range of scientific fields — ranging from microbiology, genetics, and immunology to fields of inquiry that are newer to HHMI, such as bioengineering, synthetic biology, and the ecology of infectious disease. Some of the scientific questions driving the new investigators' research include: How does aging contribute to neurodegeneration? Which genetic changes alter behavior throughout evolution? What can bacteria teach chemists about designing better antibiotics? And does climate change affect the spread of infectious diseases?

HHMI chose the 56 scientists from among 1,070 applications submitted in a nationwide competition, which was announced in 2007. Researchers with 4 to 10 years of experience as faculty members at more than 200 institutions were eligible to apply. To evaluate the applications, HHMI assembled review panels of distinguished biomedical scientists.

This is the first time that HHMI opened up a general competition to the direct application process. Prior institutional approval was not part of the process, as it had been for previous HHMI investigator competitions. It is an approach the Institute used for the first time in November 2006, for a smaller, more focused competition that led to the appointment of 15 physician scientists. HHMI changed the way it selects investigators to ensure that candidates are drawn from a broader and deeper pool of scientists.

“Opening the competition to a direct application process allowed us to identify new investigators who are working in areas that have historically been core strengths of the Institute - such as neuroscience and structural biology,” said Jack E. Dixon, vice president and chief scientific officer at HHMI. “But we have also added research fields that have not been strongly represented in the past. This is truly an expansion for HHMI.”

The investigator program is the Institute's flagship program. It currently employs more than 300 of the nation's most innovative scientists, who lead Hughes laboratories at 64 institutions. These scientists are widely recognized for their creativity and productivity: 124 are members of the National Academy of Sciences and 12 have been honored with the Nobel Prize.

The 56 newly selected investigators must now be formally appointed, a process that will take up to six months. Their selection is part of an ongoing expansion of the Institute's biomedical research mission. It comes less than a year after the Institute announced the selection of 15 investigators conducting patient-oriented research. At the same time, HHMI is conducting a national competition for a major new program, through which it will support outstanding scientists at a very early stage of their independent research careers. As many as 70 researchers will be selected as HHMI Early Career Scientists through this competition, which will be completed in the spring of 2009.

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. Approximately 300 HHMI investigators, along with a scientific staff of more than 2,000, work at these institutions in Hughes laboratories. In a complementary program at HHMI's Janelia Farm Research Campus in Loudoun County, Virginia, leading scientists are pursuing long-term, high-risk, high-reward research in a campus specially designed to bring together researchers from disparate disciplines. The Institute's biomedical research expenditures at the close of fiscal year 2007 totaled \$599 million.

The Institute also has a philanthropic grants program that emphasizes initiatives with the power to transform graduate and undergraduate education in the life sciences. Additionally, it 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. HHMI grants totaled \$86 million at the close of fiscal year 2007.

HHMI has an endowment of approximately \$18.7 billion. Its headquarters are located in Chevy Chase, Maryland, just outside Washington, D.C.