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Loudoun County Schools, Howard Hughes Medical Institute Announce Innovative Science Education Partnership

(ASHBURN, Va.) - Scholarships for two outstanding science students at every Loudoun County high school, planning for a science academy at Dominion High School, and a program to enhance the middle school science curriculum are the first three projects to be funded through the innovative partnership between the Howard Hughes Medical Institute and the Loudoun County Public Schools, according to a joint announcement by HHMI and LCPS.

“This is an unparalleled opportunity to work closely with an outstanding school district to create a unique science education program linked to HHMI's Janelia Farm Research Campus,” said Dr. Thomas R. Cech, president of HHMI. “What we create through this partnership will benefit Loudoun County's children for years to come.”

Speaking at a breakfast for business and community leaders held at Janelia Farm, HHMI's biomedical research campus now under construction in Ashburn, Cech said that HHMI is eager to work with the school district to develop programs for students and teachers in Loudoun County. HHMI is the nation's largest non-profit funder of science education programs, and has invested more than \$1.4 billion in a range of activities for students of all ages since the Institute began making grants for science education programs in 1988.

HHMI committed to an investment of at least \$1 million a year for a science education partnership with the Loudoun County Public Schools in connection with its application for a partial tax exemption for the Janelia Farm Research Campus. The campus will open in 2006 and provide unique resources for scientists from all over the world. The first year of the partnership includes one new initiative - scholarships for outstanding science students - and builds on two programs that would otherwise be funded through the school budget, specifically start-up costs for the planned science academy and teacher professional development focused on new curriculum.

Dr. Edgar Hatrick, superintendent of the Loudoun County Public Schools, and Dr. Peter Bruns, HHMI's vice president for grants and special programs, led a team of teachers and administrators to identify the most critical academic needs within the rapidly growing school district. The yearlong process included a workshop at HHMI with educators from around the country who shared their most successful science education programs with Loudoun County staff. HHMI also identified a consultant to work with science teachers throughout the district to solicit their ideas.

“Our effort in Loudoun County will draw on HHMI's national network of educators, allowing us to build on the most successful programs from throughout the country,” said Bruns, noting that the partnership is well under way. Bruns and several other scientists on the HHMI staff participated in the recent LCPS science fair as judges as well as supporting awards in two areas.

Bruns noted that HHMI is currently considering the creation of a national science learning center, which could be located at either Janelia Farm or at HHMI's headquarters in Chevy Chase, Maryland. HHMI also collaborates actively with the Montgomery County (Md.) Public Schools on a variety of programs that include research internships for high school students at the National Institutes of Health, as well as the development of hands-on teaching modules for middle school students.

Howard Hughes Medical Institute Scholarships The Howard Hughes Medical Institute has a long record of nurturing the careers of students pursuing an interest in science, both in college and graduate school. A new scholarship program -intended to foster further study in the biological sciences among Loudoun County students - will begin this year.

Beginning with the 2004 graduating class, HHMI will provide one-time scholarships of \$7,000 each to two outstanding seniors from each Loudoun County high school. The winners will be selected on the basis of factors that include academic achievement, demonstrated interest in science or science education, a brief essay, and financial need. They will be identified through the existing scholarship committee process at each high school. Winners will be able to use the one-time scholarship award to defray the costs of tuition, books, or other expenses; the funds will be deposited directly into their college account.

Fourteen Loudoun County students will receive Howard Hughes Medical Institute Scholarships in 2004 for a total of \$98,000 in awards. The number of awards made will increase as new high schools graduate students.

District-wide Science Academy at Dominion High School The proposed 2005 budget for the Loudoun County Public Schools called for the hiring of a coordinator to begin planning for a new district-wide science academy to be located within the newly opened Dominion High School in Sterling. Funding from HHMI will enable the district to proceed with hiring the coordinator so that the curriculum can be developed. HHMI will likely provide funding for equipment and other items that will be required for laboratories in the new school. No budget yet exists for equipment purchases. Salary and benefits for

the coordinator amount to \$100,000.

Teaching and Learning: Hands-on Science in Middle School Teachers and administrators in the Loudoun County Public Schools were almost unanimous in their desire to create hands-on learning experiences within the science curriculum for every middle school child. Indeed, research has shown interest in science peaks at the beginning of middle school (Grades 6, 7, and 8) and often declines after that because children perceive classroom teaching as dull.

LCPS and HHMI will begin work this summer jointly to create a more effective middle school curriculum. HHMI will fund a two-week-long Middle School Summer Science Institute for 36 teachers from schools throughout the district - three from each school, including the two middle schools slated to open in September 2004. The core group of teachers will participate in a two-day "booster" program at the start of the school year and will receive ongoing support in the classroom during the 2004-2005 school year as they evaluate new, hands-on activities developed during the summer.

Dr. Keith Verner, formerly of the Pennsylvania State University College of Medicine and now president of the Cognitive Learning Institute, will lead the program. Verner, a long-time HHMI grantee, developed a successful hands-on science program for elementary students in Pennsylvania called "Lab Lion" that is now used nationwide. Verner, who participated in the workshops with LCPS educators, is already working with the district as part of a collaborative grant that involves the Fairchild Gardens in Miami.

A workshop to plan the summer institute is scheduled for March 29. Equipment and other needs will be identified at that time, but the overall cost of the initiative is more than \$300,000.

Loudoun County Public Schools is the second-fastest growing school system in America. LCPS currently has 61 schools and centers serving 40,751 students. Dominion High School, which opened in August 2003, is the newest of Loudoun County's eight high schools.

The Howard Hughes Medical Institute is a medical research organization whose principal mission is the conduct of biomedical research. Approximately 320 Hughes investigators conduct medical research in HHMI laboratories at 69 of the nation's leading research centers and universities; HHMI also is developing a research campus in Loudoun County, Va. Through its complementary grants program, HHMI supports science education in the United States and a select group of researchers abroad.

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