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Institute for Genome Sciences Receives \$100,000 Grand Challenges Explorations Grant for Innovative Global Health Research

The Institute for Genome Sciences at the University of Maryland School of Medicine announced today that it has received a US\$100,000 Grand Challenges Explorations grant from the Bill & Melinda Gates Foundation. The grant will support an innovative global health research project conducted by Julie Dunning Hotopp, Assistant Professor, titled “Targeting Bacterial Genes Found on Filarial Chromosomes for the Treatment of Lymphatic Filariasis.”

Dr. Dunning Hotopp’s project is one of 78 grants announced by the Gates Foundation in the fourth funding round of [Grand Challenges Explorations](#), an initiative to help scientists around the world explore bold and largely unproven ways to improve health in developing countries. The grants were provided to scientists in 18 countries on six continents.

To receive funding, Dr. Dunning Hotopp showed in a two-page application how her idea falls outside current scientific paradigms and might lead to significant advances in global health. The initiative is highly competitive, receiving almost 2,700 proposals in this round.

Approximately 120 million people worldwide have lymphatic filariasis and another 1.2 billion people, predominantly in the developing world, are at risk of infection in 83 countries and territories in Asia, Africa, the Pacific, and the Americas. Although rarely fatal, the disease causes significant pain, profound disfigurement, and substantial stigma. Dr. Julie Dunning Hotopp at the UMSOM Institute for Genome Sciences will study bacterial genes in the parasitic worm genomes resulting from interdomain lateral gene transfer. She proposes that targeting these bacterial genes may provide novel ways to cure lymphatic filariasis and the related river blindness. This Gates Grand Challenges project expands upon her seminal work documenting extensive lateral gene transfer between bacterial endosymbionts and invertebrates, including these filarial nematodes (Dunning Hotopp *et al.* 2007 *Science* 317: 1753-1756).

“I am delighted to have this opportunity early in my career to develop my creative and innovative ideas to solve a major health challenge” says Dr. Dunning Hotopp. “The impact of interdomain lateral gene transfer is not yet widely recognized, but it constitutes a prime target for the development of novel therapeutics,” she adds.

“The winners of these grants show the bold thinking we need to tackle some of the world’s greatest health challenges,” said Dr. Tachi Yamada, president of the Gates Foundation’s [Global](#)



[Health Program](#). “I’m excited about their ideas and look forward to seeing some of these exploratory projects turn into life-saving breakthroughs.”

About Grand Challenges Explorations

[Grand Challenges Explorations](#) is a five-year, \$100 million initiative of the Gates Foundation to promote innovation in global health. The program uses an agile, streamlined grant process – applications are limited to two pages, and preliminary data are not required. Proposals are reviewed and selected by a committee of foundation staff and external experts, and grant decisions are made within approximately three months of the close of the funding round.

Applications for the current round of Grand Challenges Explorations are being accepted through May 19, 2010. Grant application instructions, including the list of topics for which proposals are currently being accepted, are available at <http://www.grandchallenges.org/explorations>.

About IGS

The Institute for Genome Sciences (IGS) at the University of Maryland School of Medicine is an international research center dedicated to advancing the use of genomics to improve healthcare. Led by Dr. Claire Fraser-Liggett, a preeminent genome scientist and microbiologist, IGS is located in a 10-acre BioPark in downtown Baltimore. IGS scientists are pioneers in the expanding fields of genomics, bioinformatics and metagenomics. For more information, see www.igs.umaryland.edu <<http://www.igs.umaryland.edu>>