

PRESS ROOM

PRESS RELEASES AND STATEMENTS

Foundation Funds 78 New Innovative Global Health Projects Including Cell Phone Blood Tests, Carnivorous Plants and Sweat-triggered Vaccines | Bill & Melinda Gates Foundation

Grants from 18 countries poised to help prevent and diagnose infectious disease and promote family health

LONDON -- The Bill & Melinda Gates Foundation today announced 78 grants of US\$100,000 each in the latest round of Grand Challenges Explorations. Grants include the development of a low-cost cell phone microscope to diagnose malaria, study of the strategic placement of insect-eating plants to reduce insect-borne diseases, and investigation of nanoparticles to release vaccines when they come in contact with human sweat. The grants support research across 18 countries and six continents.

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“Grand Challenges Explorations continues to generate unique and creative ways to tackle global health issues,” said Dr. Tachi Yamada, president of the Gates Foundation’s Global Health Program. “We are convinced that some of these ideas will lead to new innovations and eventually solutions that will save lives.”

This year’s European grantees are based at universities, research institutes and non-profit organizations. The winners represent groups in Germany, Sweden, Norway and the UK.

Some examples of the breadth of projects funded this round include:

More effective vaccines:

- **Sweat-triggered vaccine delivery:** Carlos Alberto Guzman of the Helmholtz Centre for Infection Research in Germany with Claus-Michael Lehr and Steffi Hansen of the Helmholtz-Institute for Pharmaceutical Research will develop nanoparticles that penetrate the skin through hair follicles and burst upon contact with human sweat to release vaccines.
- **A “seek-and-destroy” laser vaccine:** Owain Millington and Gail McConnell of University of Strathclyde in the United Kingdom will use existing imaging systems to identify and destroy Leishmania parasites with a targeted laser;
- **Treating worm infections to improve vaccine effectiveness:** Susanne Nylén Spoomaker of the Karolinska Institute in Sweden will research whether treating patients for worm infections prior to

vaccinations can improve the ability of the immune system to respond effectively to vaccines.

New strategies to fight malaria:

- **Insecticide-treated traditional scarves:** David Sintasath of the Malaria Consortium in Thailand will research whether treating traditional scarves worn by migrant workers along the Thai-Cambodia border with insecticides will reduce the rate of drug-resistant malaria.
- **Using carnivorous plants to control mosquitoes:** Jasper Ogwal-Okeng of Makerere University in Uganda will test whether insect-eating plants can reduce the population of malaria transmitting mosquitoes and their larvae.

Cell phone microscope to diagnose malaria: Aydogan Ozcan of the University of California, Los Angeles in the U.S. will test a low-cost, compact cell phone microscope to diagnose malaria in field settings.

Solutions to promote family health:

- **Ultrasound as a reversible male contraceptive:** James Tsuruta and Paul Dayton of the University of North Carolina, Chapel Hill in the U.S. will study the ability of ultrasound to temporarily deplete testicular sperm counts for possible use as new contraceptive method for men.
- **Vitamin A probiotics to combat diarrhea:** Douglas Watson and colleagues of SRI International in the U.S. will develop probiotic bacteria that produce Vitamin A to stimulate a healthy gastrointestinal tract in children and reduce diarrheal diseases, the second-leading cause of childhood death.

Grand Challenges Explorations is a five-year, \$100 million initiative to promote innovation in global health. It is part of the Grand Challenges in Global Health initiative which is supported by the Gates Foundation to achieve major breakthroughs in global health.

Applications for the next round of Grand Challenges Explorations are being accepted through May 19, 2010. Topics for Round 5 are:

- Create Low-Cost Cell Phone-Based Applications for Priority Global Health Conditions
- Create New Technologies to Improve the Health of Mothers and Newborns
- Create New Ways to Protect Against Infectious Disease
- Create New Technologies for Contraception

Grant application instructions, including the list of topic areas in which proposals are currently being accepted, are available at the Grand Challenges Explorations website: www.grandchallenges.org.

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