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Open Science Prize announces six team finalists in first phase of competition

Finalists receive \$80,000 each to develop products to overcome hurdles in big data access and usage

Six teams have been selected to advance their product ideas into prototypes to compete for \$230,000 in the Open Science Prize, a global science competition to make both the outputs from science and the research process broadly accessible to the public. The finalists, announced at the 7th Health Datapalooza Conference in Washington, D.C., were selected out of 96 multinational, interdisciplinary teams representing 450 innovators from 45 countries. These are the first finalists for this recently launched global prize competition, a collaboration between the National



Image can be downloaded at: <u>https://www.flickr.com/photos/nihgov/albu</u> ms/72157664245977753 Credit: NIH

Institutes of Health and the U.K.-based Wellcome Trust with additional funding provided by the Howard Hughes Medical Institute of Chevy Chase, Maryland.

Final prototypes will be submitted on Dec. 1, 2016, and will be demonstrated at an Open Science Prize Showcase to be held in early December 2016. The public will also be invited to consider and vote online for their favorite prototype. The ultimate Open Science Prize winner is expected to be announced in late February or early March 2017.

In order to qualify, each finalist team must be composed of at least two or more individuals or entities of which at least one member is representative of the United States and another is representative of another country.

"The six finalists highlighted through the Open Science Prize competition demonstrate some of the exciting ways in which publically available information can be used to advance biomedical science and health care," said Philip Bourne, Ph.D., associate director for data science at NIH. "These innovations illustrate how new knowledge can be derived from existing data sources to advance our understanding of issues such as clinical trials, environmental exposures and neuroscience."

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The volume of digital information generated by biomedical research, often referred to as big data, is growing at a rapidly increasing pace. Researchers' ability to derive knowledge from data is hindered by their ability to find, access, and use it. The goal of the Open Science Prize is to support the development and prototyping of services, tools, and platforms to overcome these hurdles to ensure data can be used to advance discovery and spur innovation.

"Open science, by its very nature, transcends borders," said Clare Matterson, director of strategy at the Wellcome Trust. "We're supporting these six international teams of innovators so that they can demonstrate the exciting potential of open science both to advance discovery and, through the application of research, to improve health across the world."

The submissions were evaluated based upon the following six criteria:

- Advancement of open science
- Impact of the innovation on the research enterprise and healthcare
- Originality of the idea
- Level of creativity and innovation
- Technological viability
- Feasibility

A panel of expert advisors representing leading thinkers in the open science movement provided input to the organizers of the Open Science Prize as part of the judging process.

The 2016 Open Science Prize finalist teams are:

OpenAQ: A Global Community Building the First Open, Real-Time Air Quality Data Hub for the World - Providing real-time information on poor air quality by combining data from across the globe.

- Michael Brauer (University of British Columbia, Vancouver)
- Joseph Flasher (Development Seed, Washington, D.C.)
- Michael Hannigan (University of Colorado, Boulder)
- Christa Hasenkopf (OpenAQ, Washington, D.C.)
- Asep Sofyan (Institut Teknologi, Indonesia)

OpenTrialsFDA: Making Unbiased Clinical Trial Data Accessible - Enabling better access to drug approval packages submitted to and made available by the Food and Drug Administration.

- Emma Beer, James Gardner, Paul Walsh (Open Knowledge International, Cambridge, U.K.)
- Ben Goldacre (University of Oxford, U.K.)
- Erick Turner (Portland, Oregon)

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Real-Time Evolutionary Tracking for Pathogen Surveillance and Epidemiological Investigation -Permitting real-time analysis of emerging epidemics, such as Ebola, MERS-CoV, and Zika.

- Trevor Bedford (Fred Hutchinson Cancer Research Center, Seattle)
- Richard Neher (Max Planck Institute for Developmental Biology, Tubingen, Germany)

Open Neuroimaging Laboratory - Advancing brain research by enabling collaborative annotation, discovery, and analysis of brain imaging data.

- Roberto Toro (Institute Pasteur, Paris)
- Satrajit Ghosh (Massachusetts Institute of Technology, Cambridge)
- Katja Heuer (Max Plank Institute for Human and Brain Sciences, Tubingen, Germany)
- Amy Robinson (Wired Differently, Inc., Boston)

Fruit Fly Brain Observatory - Allowing researchers to better conduct modeling of mental and neurological diseases by connecting data related to the fly brain.

- Aurel Lazar, Lev Givon, Nikul Ukani, Chung-Heng Yeh, Yiyin Zhou (Columbia University, New York City)
- Ann-Shyn Chiang, Chung-Chuan Lo (National Tsing Hua University, Hsinchu City, Taiwan)
- Daniel Coca, Dorian Florescu, Luna Carlos, Paul Richmond, Adam Tomkins (University of Sheffield, U.K.)

MyGene2: Accelerating Gene Discovery via Radically Open Data Sharing - Facilitating the public sharing of health and genetic data through integration with publicly available information.

- Jessica Chong, Michael Bamshad (University of Washington, Seattle)
- Tudor Groza, Craig McNamara, Edwin Zhang (Garvan Institute of Medical Research, Darlinghurst, Australia)

A complete description of the competition, including descriptions of the finalist teams and their innovations can be found at: <u>https://www.openscienceprize.org/</u>.

The Open Science Prize is made possible through a collaboration between NIH and the Wellcome Trust. The Howard Hughes Medical Institute is also contributing funds to Wellcome Trust for the effort. The NIH effort is part of the Big Data to Knowledge (BD2K) Initiative, launched in December 2013 as a trans-NIH program with funding from all 27 institutes and centers as well as the NIH Common Fund.

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About the Wellcome Trust: The Wellcome Trust is a global charitable foundation dedicated to improving health that supports bright minds in science, the humanities, and the social sciences as well as education, public engagement, and the application of research to medicine. Its investment portfolio allows for the independence to support such transformative work as the sequencing and understanding of the human genome, research that established front-line drugs for malaria, and Wellcome Collection, our free venue for the incurably curious to explore medicine, life, and art.

About the Howard Hughes Medical Institute: The Howard Hughes Medical Institute (HHMI) plays a powerful role in advancing scientific research and education in the United States. Its scientists, located across the country and around the world, have made important discoveries that advance both human health and our fundamental understanding of biology. The Institute also aims to transform science education into a creative, interdisciplinary endeavor that reflects the excitement of real research. HHMI's headquarters are located in Chevy Chase, Maryland, just outside Washington, DC.

About the National Institutes of Health (NIH): NIH, the nation's medical research agency, includes 27 Institutes and Centers and is a component of the U.S. Department of Health and Human Services. NIH is the primary Federal agency conducting and supporting basic, clinical, and translational medical research and is investigating the causes, treatments, and cures for both common and rare diseases. For more information about NIH and its programs, visit www.nih.gov. *NIH...Turning Discovery Into Health*[®]