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STAR Analytical Services Receives $100,000 Grand Challenges Explorations Grant for Innovative Global Health Research

STAR Analytical Services 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 Dr. Suzanne Smith, Senior Investigator, and Dr. Joel MacAuslan, Co-investigator, titled "Using Acoustic Analysis of Cough to Diagnose Pneumonia."

Dr. Suzanne Smith's project is one of 76 grants announced by the Gates Foundation in the third 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 16 countries on five continents.

To receive funding, STAR showed in a two-page application how their idea falls outside current scientific paradigms and might lead to significant advances in global health. The initiative is highly competitive, receiving almost 3,000 proposals in this round.

STAR scientists will use their acoustic vocalization analysis software to measure the cough characteristics of pneumonia, the leading cause of death for children in developing countries. If the coughs generate distinctive sounds, they could form the basis for a tool for first-level health workers in isolated areas that may be hours to days from any diagnostic technology. Individuals who would benefit from antibiotics could be identified quickly. Such a breakthrough may lead to dramatic improvements in the management of severe respiratory illness in the developing world and interrupt epidemics far more rapidly.

The acoustic analysis of cough might be the technology that makes surveillance and containment of these epidemics possible. Such a tool would have critical implications worldwide for severe respiratory infections. For acute infections, measuring cough could become as familiar as recording a patient's temperature. If successful, cough measurement may become the one vital sign available by phone. This grant could enable a Nigerian mother without a car to transmit the sound of her child's cough by cell phone to a hospital 50 miles away, where a doctor checks this vital sign and determines if a nurse in a clinic 15 miles away should make a trip out to the sick child to bring antibiotics.

Dr. Smith, the Principal Investigator, joined STAR after her recent retirement following a 22-year career at the executive levels of the Centers for Disease Control & Prevention (CDC) in Atlanta, GA. Dr. Joel MacAuslan is STAR's President and Chief Science Officer. In discussing the origin of the project idea, Dr. Smith noted, "Cough is one of the most common symptoms of illness and a common mode of disease spread, yet we don't use technology in any way to measure or understand what coughs mean."

"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 November 2, 2009. Grant application instructions, including the list of topics for which proposals are currently being accepted, are available at http://www.grandchallenges.org/explorations.

ABOUT STAR Analytical Services

STAR Analytical Services works with information intensive industries that require specialized mathematical and analytical expertise for innovative projects. STAR provides expertise in mathematical modeling, image and signal processing, and algorithm development, creating the path to a solution for the most complex needs including: analyzing large volume data, creating a solution model & testing mechanism, and delivering a repeatable process for ongoing data analysis.

Working hand-in-hand with business problem owners, STAR helps accelerate the solution process in industries ranging from aerospace, mapping, and surveillance to manufacturing, printing and neurosurgery. The company has particular expertise in complex systems, those with strongly interacting parts; in image and signal processing, and in knowledge-based (objective) speech and vocalization analysis. For more information: http://www.STARanalyticalservices.com

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