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Media Contacts:

Vickie Chachere, USF News / 813-974-6251 / vchachere@usf.edu

Daniel Yeh, College of Engineering / 813-974-4746 / dhyeh@usf.edu

Janet Gillis, College of Engineering / 813-974-3485 / janetgillis@usf.edu

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University of South Florida Receives Grand Challenges Explorations Funding

TAMPA, Fla – The University of South Florida announced today that it will receive funding through Grand Challenges Explorations, an initiative created by the Bill & Melinda Gates Foundation that enables researchers worldwide to test unorthodox ideas that address persistent health and development challenges. **Daniel Yeh**, associate professor of Civil & Environmental Engineering will pursue an innovative global health research project, titled **“NEWgenerator for recovery of nutrients, energy and water from human wastes.”**

Grand Challenges Explorations funds scientists and researchers worldwide to explore ideas that can break the mold in how we solve persistent global health and development challenges. Professor Yeh’s project is one of 110 Grand Challenges Explorations grants announced today.

“We believe in the power of innovation—that a single bold idea can pioneer solutions to our greatest health and development challenges,” said Chris Wilson, Director of Global Health Discovery for the Bill & Melinda Gates Foundation. “Grand Challenges Explorations seeks to identify and fund these new ideas wherever they come from, allowing scientists, innovators and entrepreneurs to pursue the kinds of creative ideas and novel approaches that could help to accelerate the end of polio, cure HIV infection or improve sanitation.”

Projects that are receiving funding show promise in tackling priority global health issues where solutions do not yet exist. This includes finding effective methods to eliminate or control infectious diseases such as polio and HIV as well as discovering new sanitation technologies.

To learn more about Grand Challenges Explorations, visit www.grandchallenges.org.

Yeh is a faculty member of the Environmental Engineering program at USF, which has a strong emphasis on the integration of research, education and practice. “The world’s population just reached seven billion. With that many people, we need new solutions for age old problems. This project is about recognizing that wastewater can be a tremendous renewable resource if the right technologies are applied,” explained Yeh. “For example, microorganisms can turn wastes into beneficial products, and we can harness that power in engineered bioreactors. This project is about the careful management of the carbon, nitrogen, phosphorus and water cycles.”

Using advanced membrane biotechnology, Dr. Yeh and his research team aim to develop a decentralized sanitation technology for harnessing nutrients, energy and water from wastewater for safe reuse. The goal of the NEWgenerator is to simultaneously address critical needs for sanitation, fuel and food production for communities worldwide. In partnership with Learning Gate Community School, an environmentally-themed K-9 charter school in Tampa Bay, the research team will build and field test a pilot version of the NEWgenerator. They will also work with Learning Gate teachers to incorporate bioenergy and other engineering solutions into the curriculum.

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About Grand Challenges Explorations

[Grand Challenges Explorations](http://www.grandchallenges.org) is a US\$100 million initiative funded by the Bill & Melinda Gates Foundation. Launched in 2008, Grand Challenge Explorations grants have already been awarded to nearly 500 researchers from over 40 countries. The grant program is open to anyone from any discipline and from any organization. The initiative uses an agile, accelerated grant-making process with short, two-page online applications and no preliminary data required. Initial grants of \$100,000 are awarded two times a year. Successful projects have an opportunity to receive a follow-on grant of up to US\$1 million.

About University of South Florida

The University of South Florida is a high-impact, global research university dedicated to student success. USF is classified by the Carnegie Foundation for the Advancement of Teaching in the top tier of research universities, a distinction attained by only 2.2 percent of all universities. The Carnegie Foundation also classifies USF as a community engaged university. It is ranked 44th in total research expenditures and 34th in federal research expenditures for public universities by the National Science Foundation. The USF System has an annual budget of \$1.5 billion, an annual economic impact of \$3.7 billion, and serves 47,000 students in Tampa, St. Petersburg, Sarasota-Manatee and Lakeland.