Open Science and Innovation: Crowd Sourcing and Citizen Science at the CDC

While only a fraction of Americans are trained as professional scientists, everyone can contribute to science and technology through open science and innovation approaches such as crowdsourcing and citizen science (CCS).

Citizen science encourages members of the public to voluntarily participate in the scientific process. Whether by asking questions, making observations, conducting experiments, collecting data, or developing low-cost technologies and open-source code, members of the public can help advance scientific knowledge and benefit society.

Through **crowdsourcing** – an open call for voluntary assistance from a large group of individuals – individuals can study and tackle complex issues by conducting research at large geographic scales and over long periods of time in ways that professional scientists working alone cannot easily duplicate. Examples can include understanding the structure of protein-related viruses in order to support development of new medications, or preparing for, responding to, and recovering from disasters.

CDC's Innovation Lab (I-Lab) can help CDC programs explore these tools and approaches through technical assistance and consultation. The I-Lab is the agency's point of contact for CCS; Dr. Juliana Cyril is the CCS Coordinator for CDC.

CDC programs that support CCS activities directly with federal personnel, through partnerships, or through grant funding should disclose their work to the I-Lab for public reporting through CitizenScience.gov.

Current CDC-sponsored projects reported through CitizenScience.gov, April 2016:

Sponsoring program	Project Title	Project Website
The Agency for Toxic Substances and Disease Registry	ATSDR Environmental Odors website	http://www.atsdr.cdc.gov/odors/index.html
Office of Public Health Preparedness and Response	Operation Dragon Fire	http://odf.nvoad.org/
National Center for Immunization and Respiratory Diseases	FluSight: Seasonal Influenza Forecasting	http://predict.phiresearchlab.org/flu/index.html and http://www.cdc.gov/flu/news/flu-forecast-website-launched.htm
National Center for Emerging Zoonotic and Infectious Diseases	U.S.-Mexico Border Early Warning Disease Surveillance for Dengue and Chikungunya	http://www.cdc.gov/ophss/chiic/projects/2015/awarded/u.s.-mexico-border-early-warning-disease-surveillance-for-dengue-and-chikungunya.html

Food and Drug Administration, National Institutes of Health, CDC, Department of Agriculture	GenomeTrakr Network	http://www.fda.gov/Food/FoodScienceResearch/WholeGenomeSequencingProgramWGS/ucm363134.htm

For more information, contact us at OTI@cdc.gov.