

RECENT INNOVATIONS AND VENTURES

The UNC Gillings School of Global Public Health has been an innovation leader since the School graduated its first class in 1940. This summary describes some of our most recent innovations and ventures.

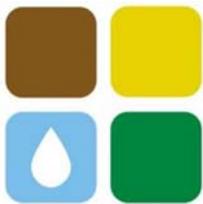
See www.unc.sph.edu for many more examples.

WASH COMPANIES (WATER, SANITATION AND HYGIENE)



Aquagenx (<http://www.aquagenx.com/>)

Aquagenx, formerly KM Water Solutions, aims to provide greater water security to the more than one billion people worldwide who lack consistent access to clean, safe drinking water. Previously, water quality testing required trained personnel, electricity, and expensive equipment. Now, with the Aquagenx Compartment Bag Test (CBT), almost *anyone* can easily, accurately and inexpensively test water on a regular basis, protecting them from contracting water-borne illnesses. Aquagenx is co-led by **Mark D. Sobsey**, PhD, Kenan Distinguished Professor in environmental sciences and engineering; alumnus **Lanakila “Ku” McMahan**, PhD; and principal member **Alice Wang**, an environmental sciences and engineering doctoral student. This social enterprise arose from the team’s years of research to improve monitoring of drinking water quality in low resource settings. A Gillings Innovation Lab led to invention of the Compartment Bag Test (CBT). Aquagenx received first-place in the 2012 Carolina Challenge.



WaterSHED (<http://www.watershedasia.org/>)

WaterSHED, an NGO, brings effective, affordable water, sanitation and hygiene products and services to market in Cambodia, Laos and Vietnam. WaterSHED products include water filters, latrines and handwashing stations. All WaterSHED products are inexpensive, durable, and country appropriate. They are made and sold for profit by local entrepreneurs. WaterSHED was the creation of WaterSHED-Asia, a public-private partnership led by UNC Gillings School of Public Health, with **Mark Sobsey**, PhD, Kenan Distinguished Professor of environmental sciences and engineering, as PI. WaterSHED has received funding support from USAID’s Regional Development Mission-Asia and the Stone Family Foundation.



Sanitation Creations (<http://sanitationcreations.com/>)

Founded and led by UNC Gillings School of Public Health alumna Liz Morris (MS 2011), Sanitation Creations offers innovative, environmentally-friendly, hygienic sanitation solutions. The Sanitation Creations team invented the Dungaroo, a revolutionary port-a-potty that is odorless, waterless, and turns waste into safe-to-use fertilizer or bio gas. Sanitation Creations was a Cherokee Challenge winner, a runner up in the UNC Social Business Competition, and is a member of the Blackstone Entrepreneurs Network.

ASSESSMENT AND TOOLS COMPANIES



ImmunoBenefit (<http://immunobenefit.com/ImmunoBenefit/Index.html>)

ImmunoBenefit provides the highest quality, state-of-the-art research techniques available to tests food, beverages, and supplements for their immune-enhancing properties. ImmunoBenefit is led by nutritional immunologists **Melinda Beck**, PhD, professor and associate chair of nutrition; **Patricia Sheridan**, PhD, research assistant professor of nutrition; and alumna **Heather Nelson Cortes** (PhD 2003).



Counter Tools (<http://countertools.org/>)

Counter Tools is a North Carolina-based NPO dedicated to disseminating cutting-edge, evidence-based software tools to public health workers in the U.S. and abroad. Counter Tools’ inventions include the Counter Tobacco Store Audit Center© and Counter Tobacco Store Mapper© -- customizable, easy to use audit and mapping tools. A large proportion of tobacco products are marketed and sold near K-12 schools. In this context, Counter Tools software increases communities’ ability to implement “point of sale” policies that prevent kids from buying and using tobacco products. Counter Tools was founded and is led by Executive Director **Kurt Ribisl**, PhD, professor of health behavior, and Deputy Director, **Allison Myers**, MPH, a doctoral student in health behavior.

AIR QUALITY COMPANIES



BioDeptronix

BioDeptronix, LLC, received a small business grant from the National Institutes of Health and the U.S. Department of Defense to commercialize an instrument that measures the toxicity of the air. BioDeptronix created a working prototype to study how different cell lines and different human genes respond to toxic air. A Gillings Innovation Lab grant funded some stages of the device's development for air quality testing using UNC's rooftop environment chamber. BioDeptronix is led by environmental sciences and engineering professors: **Will Vizuete**, associate professor, **Ilona Jaspers**, joint associate professor, **Ken Sexton**, research assistant professor, and **Glenn Walters**, Director of ESE Design Center.

OTHER RECENT INNOVATIONS



Ralph Baric

A joint team of researchers from UNC and Vanderbilt discovered a new live vaccine approach for SARS and novel coronaviruses. **Ralph Baric**, PhD, professor of epidemiology at UNC Gillings School of Public Health and microbiology and immunology at UNC School of Medicine joined with Vanderbilt colleague **Mark Denison**, MD, Craig-Weaver Professor of Pediatrics and professor of pathology, and microbiology and immunology over a decade ago to better understand how viruses causing the common cold evolve and spread between species. Dr. Baric received a \$21.4 million grant from the National Institute of Allergy and Infectious Diseases to extend his vaccine research.



Suzanne Maman

The National Institute of Mental Health (NIMH) awarded **Suzanne Maman**, PhD, associate professor of health behavior, more than \$2.6 million in funding to expand her promising HIV and partner violence prevention efforts in Tanzania. Her innovative twist is use of small loans and leadership training to young men in Dar es Salaam, Tanzania. A Gillings Innovation Lab grant supported Maman's pilot work in this area, as did a NIMH intervention development grant and a small grant from the UNC Injury Prevention and Research Center.



The Water Institute at UNC (<http://waterinstitute.unc.edu/>)

The Water Institute at UNC came to life through UNC Gillings School of Global Public Health's commitment to water and health, along with support from UNC's general administration, the Chancellor's Office, and the Gillings Gift. The Institute brings together individuals and institutions from across disciplines and sectors; together, they work to solve the most critical global issues in water and health. **Jamie Bartram**, PhD, Don and Jennifer Holzworth Distinguished Professor in environmental sciences and engineering, directs The Water Institute at UNC.



Center for Innovative Clinical Trials (CICT) (http://www.sph.unc.edu/clinical_trials/)

The Center for Innovative Clinical Trials develops and integrates methodologic and applied research for the design and analysis of clinical trials. Specifically, the CICT advances statistical science in clinical trials and quickly moves the science forward into clinical and statistical practice. **Joseph G. Ibrahim**, PhD, Alumni Distinguished Professor of Biostatistics in the Department of Biostatistics and Director of the Biostatistics Core at the Lineberger Comprehensive Cancer Center (LCCC) directs the CICT.



Center for Pharmacoepidemiology (http://www.sph.unc.edu/cpe/personnel_10010_9834.html)

The Center for Pharmacoepidemiology in the Department of Epidemiology, UNC Gillings School of Global Public Health provides a unique forum to generate innovative, evidence-based solutions to challenges related to comparative effectiveness research and the safety of drugs and devices in real-world clinical settings. Initiated through a grant from GlaxoSmithKline in 2002, the Center has a history of fostering collaborative research between the pharmacoepidemiology program and industry partners who share a commitment to developing robust methodologies and generating valid evidence using observational data on real-world patients from a variety of sources. **Til Stürmer**, MD, PhD, professor/head of the pharmacoepidemiology program in the department of epidemiology, is the director of the Center for Pharmacoepidemiology.