

# SOCIAL ENTREPRENEURSHIP –

## USING INNOVATIVE BUSINESS PRINCIPLES TO ACHIEVE BENEFICIAL SOCIAL CHANGE

Thanks to the entrepreneurial spirit of faculty members and students, research from UNC Gillings School of Global Public Health labs is finding its way to market.

Don Holzworth, MS – entrepreneur and founder of multiple global health companies, including Constella Group LLC – knows what it takes to develop a thriving business from a good idea. As the School’s executive in residence since 2009, Holzworth provides support, feedback, and sometimes, a reality check for those who want to translate research discoveries into commercial applications.

“I understand firsthand the challenges faced by people who have a dream but don’t know how to make it into a reality,” Holzworth says. “I guide students and faculty members through the steps involved in transforming an idea into a revenue-producing enterprise, including developing a business plan, refining business presentation skills and understanding markets.”

During Holzworth’s tenure at the School, faculty members have incorporated three companies: Aquagenx LLC, BioDeptronix LLC and ImmunoBenefit.

Aquagenx offers an accurate, easy-to-use and affordable method of water-quality testing.

“Our goal is to become the go-to water-quality test for anyone who conducts testing in the developing world,” says Mark Sobsey, PhD, Kenan Distinguished Professor of environmental sciences and engineering (ESE). Sobsey founded the company with alumnus Lanakila “Ku” McMahan, PhD. Current ESE doctoral student Alice Wang is a principal member of

the company. In April, Aquagenx received the first-place prize in Carolina Challenge, a business and social venture competition designed to promote entrepreneurship at UNC.

Will Vizuete, PhD, ESE associate professor, is co-founder of BioDeptronix ([www.unc.edu/~vizuete](http://www.unc.edu/~vizuete)), which offers a device that can test air toxicity.

“We developed this method, which uses human lung cells as part of the testing, in our lab,” Vizuete says. “Our technology offers more accurate results in a shorter time.”

ImmunoBenefit ([immunobenefit.com](http://immunobenefit.com)), founded by nutrition professor Melinda Beck, PhD, is a contract research organization that exclusively tests food, food supplements and beverages to determine whether they contain the immune system benefits they promise. “Ultimately, I would like our company to be the “Good Housekeeping Seal” for immuno-enhancing properties,” Beck says. “That would allow consumers to be confident that a product actually has health benefits.”

Sanitation Creations ([sanitationcreations.com](http://sanitationcreations.com)), which develops environmentally friendly sanitation solutions, is another company with roots in the School. The group designed the Dungaroo, a waterless, easy-to-empty, cost-efficient retrofit for existing portable toilets. The product seals waste in odor-blocking bags and turns it into safe-to-use fertilizer





Clockwise, from left: Doctoral student Alice Wang fills bottles with filtered water in Cambodia; Don Holzworth engages students in a discussion; Liz Morris makes a presentation about the Dungaroo.



or bio-gas. Liz Morris, MS (2011), conducted the original research for her master's thesis in ESE, under the guidance of Jamie Bartram, PhD.

"We recently won the Cherokee Challenge [which funds high-impact environmental business ventures]," Morris says. "We are excited to have acquired our initial investment."

The School is mindful of conflicts that can arise when research at the university is combined with product development partnerships in industry.

"Conflicts of interest (COI) are going to occur," says Sandra Martin, PhD, associate dean for research at the School. "That doesn't mean the researcher has done anything wrong."

She says School leaders are dedicated to transparency. "Our COI committee, chaired by ESE professor Dr. Leena Nylander-French and including a representative from each department, helps faculty members assure that their work adheres to federal, university and other COI guidelines."

Julie MacMillan, MPH, managing director of the School's Research and Innovation Solutions (RIS) unit, says the School is committed to supporting entrepreneurship. "Within the School, we have a spectrum of people – from those new to public health and research to those who have patents and own companies," she says. "We try to meet people along that spectrum and connect them to advice."

RIS offers a wealth of information online ([www.sph.unc.edu/accelerate](http://www.sph.unc.edu/accelerate)). The group also invites speakers to the School from UNC Kenan-Flagler Business School, UNC Office of Technology Development and other entrepreneurial endeavors.

School personnel also offer training in intellectual property. Dixon McKay, a Carolina law student and School intern, helps organize seminars and publicize UNC resources to educate researchers about trademarks, patents, copyrights, trade secrets and other legal issues in business. "We want to help entrepreneurs understand what they can and can't protect," McKay says.

—Michele Lynn