

# Innovation Hub

+ The Intersection of Research, Innovation & Economic Development

*Inside this Issue:*

## **Spotlight**

*Gregg Givens - Inventor*

*Carmen Russoniello - Inventrepreneur*

*Erica Reid - Student*

*Innovation Hub:*

*Center of Innovation for*

*Nanobiotechnology*

*What's New?*

*IDEA Interns*



## OUR MISSION

*To engage, equip and empower the next generation of innovators, inventors and entrepreneurs to produce new products and businesses, drive the economy and provide for global wellness.*

## Inventor Spotlight

**Dr. Gregg Givens**, Chair of the Department of Communication Sciences and Disorders is a serial inventor. He started with one invention in the 1990's and has been a repeat inventor ever since. He began to scratch the innovation itch with the idea that hearing assessments could be performed remotely, without a face-to-face visit between an audiologist and the patient. Lacking engineering skills, Gregg approached others with the right skill set to begin making and testing the first remote hearing assessment prototype. What his first black box lacked in beauty was made up in functionality. His project ultimately gained the attention of the Department of the Defense and his ideas were rewarded with multiple U.S. Patents, and an industry partnership.

Dave Davis, Vice president of Otovations and licensee of Givens invention, shares a similar passion. Out-of-the-box thinking by Otovations has produced other advanced methods for convenient test and diagnosis of hearing problems.

While Gregg waits patiently for his first product to emerge in the marketplace, possibly as early as Spring 2012, he continues to exercise his innovation skills by identifying new solutions to old problems in a population that is as large as 30 million people in the U.S.

Partnerships have been invaluable in translating ideas into prototypes, and ultimately to products in the marketplace. Relationships, first with ECU's Center for Health Science Communications and later with Jason Yao of ECU's Department of Engineering, were essential to bring critical skills into the mix. The drive of Given's passion combined with the resources of engineering and business partners is the key to turning vision into success.



## Inventrepreneur ..... Spotlight ..... Student

**Carmen Russoniello**, has many titles: therapist, researcher, counselor, associate professor, inventor, former U.S. Marine, innovator, and entrepreneur. But the one title he embraces most combines many of these attributes - Inventrepreneur. Defined as an Innovator who seeks to produce or market his own invention, Inventrepreneur describes Carmen's passion to develop biofeedback and stress management tools to treat U.S. Marines with post traumatic stress syndrome and traumatic brain injury. Though Carmen doesn't qualify as an entrepreneur just yet, he has all the moving parts necessary to fulfill his dream of creating a new company to produce and market biofeedback tools. Years of research and many publications clearly demonstrate that biofeedback training decreases activation of the nervous system, improves quality of life, and extends life expectancy.

Partnering with BioCom Technologies, a Seattle based team of engineers, doctors and therapists, Carmen and his students are actively building advanced medical technologies that look and play much like a video game. Although his product feels like a video game, it offers much more than entertainment. His games have been shown to reduce heart rate variability for some of the nations most stressed individuals, U.S. Marines returning home from overseas battlefields. With pending support from DOD, Carmen and his team plan to refine the project and move toward development of a novel biofeedback product and maybe even that new company that he hopes to develop.



**Erica Reid** is an energetic, high achieving senior Chemistry student with a passion for improving safety of farmers throughout North Carolina. She was among ECU's first cohort of IDEA interns during summer 2011. Learning about various research programs on campus and cataloging projects with innovation potential, Erica became fully engaged with the innovation process following her visit to the NC Agromedicine Institute. Partnering with Stephanie Sullivan of the Department of Engineering and Robin Tutor and Michele Proctor of the Agromedicine Institute, Erica has designed her honors thesis around novel methods to improve respiratory safety of farm workers.



### Did You Know?

#### US Patent Reform changes from:

*"First to invent" to "first inventor to file"!*

**Internet Publications can Kill Patent RIGHTS and ROYALTIES!**

**50% of income earned from University Inventions goes directly to the inventor!**

Call OTT to learn more...

## National Academy of Inventors

*ECU's recognition of inventorship has risen from institutional acknowledgement to national stature. As a charter member of the national Academy of Inventors, ECU inventors will be recognized locally and nationally for their success in research and their impact on North Carolina and eastern North Carolina's economy. ECU's first cohort of NAI Inventors will be recognized as a program to be held in April 2012. Join us as we celebrate the success of ECU's own inventors.*

## What's New?

### INNOVATION HUB - NANOTECHNOLOGY

The marriage of nanotechnology (the study of super small particles) with biotechnology (the study of living cells) and business is the mission of North Carolina's Center of Innovation in Nanobiotechnology (COIN). A non-profit organization, COIN promotes innovation and commercialization in nanobiotech and nanomedicine. ECU's emerging research of the health effects of nanoparticles in the body was the theme of COIN's September roundtable held at the Eastern Carolina Heart Institute. In partnership, ECU's office of Technology Transfer with the NC Biotechnology Center and COIN, hosted the first of a series of programs in the Pirate Innovation Network entitled Innovation Hub - Nanotechnology. *An Ounce of Prevention - Developing Safe Nanomaterials for Commercial Use*. The program featured three outstanding experts in the field of nanotechnology and offered exciting dialog and networking opportunities for university and industry participants.

**Nigel Walker**, Ph.D., *DABT Deputy Program Director of Science for the National Toxicology Program (NTP)* at the National Institute of Environmental Health Sciences, described nanotechnology as a high priority of study for NIEHS. With global demand for nanomaterials expected to reach \$3.1 trillion by 2015. Research on nanoparticle exposures is critical to avoid a repeat of asbestos-like challenges faced in the 70's-90's.

**Jared Brown**, *Assistant Professor of Pharmacology & Toxicology at East Carolina University, Brody School of Medicine*, discussed ECU's emerging expertise in the study of toxic and inflammatory responses to the respiratory and cardiovascular systems to nanomaterials. Faculty from BSOM have secured more than \$6 million for the study of nanosafety and have active partnerships with (NIEHS, RTP, EPA).

**Gary Cassucio** Vice President of RJ Lee Group, Inc., described collaborative responses between industry and government (DOE, EPA, NIST and NIOSH) in the characterization of particulate matter.

### IDEA INTERNSHIPS

The Office of Technology Transfer, in partnership with ECU's Entrepreneurial Initiative and Innovation Design Academy hosted the first cohort of **IDEA** Interns over the 2011 summer. Undergraduate and graduate students from disciplines as diverse as art, chemistry, engineering, kinesiology, business and accounting, were identified from a rigorous selection process designed to identify dedicated, innovative individuals who could work effectively in a team environment.

The interns spent their summer learning about the innovation process, scouting out and cataloging inventions from across campus, and developing preliminary business concept plans.

This unique opportunity to gain experience in the ideation, technology transfer and commercialization process offered a foundation of skills that included opportunity identification, technical evaluation, intellectual property assessment (patents and copyrights), market analysis and business plan development.

The **IDEA** Internship was a tremendous success for the interns and for OTT. The office of Technology Transfer plans to offer the IDEA internship program again in 2012.

## Pirate Innovation Network Events and other Upcoming Events

### JANUARY 2012

*From Discovery to Market:  
Commercializing your Innovations*

### FEBRUARY 2012

*Mobile Applications in Healthcare Innovation*

### March 2012

*Eastern Bio Night 2012*

### March 2012

*Recognition of inventors & innovators from the ECU community*

...watch for updates in our Pirate Network Flyer