

Spring 4-2016

April 2016 ORED Communicator

Office of Economic Research and Development, Florida International University

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**April 2016
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FIU NSF I-Corps Team Working on Commercialization of a Blood Alcohol Monitoring system

Every two minutes a person is injured in a drunk driving-related crash. Drunk driving costs the United States \$199 billion a year, and 50 to 75% of convicted drunk drivers continue to drink and drive on suspended licenses. According to data released in March 2016 by the National Highway Traffic Safety Administration (NHTSA), 32,675 people died in traffic crashes on the nation's roads in 2014, 31% of whom were categorized as alcohol-impaired-driving fatalities. In a survey conducted by the Centers for Disease Control and Prevention (CDC) in 2012, 29.1 million people admitted to driving under the influence of alcohol. According to the CDC, the average drunk driver has driven drunk an astonishing 80 times before first arrest. The statistics also show that about one-third of all drivers arrested or convicted of drunk driving are repeat offenders.

To address this very serious public health problem, a research team at FIU is developing an exciting tool, the Transdermal Alcohol Monitoring System (TAMS). Based on a fuel cell type alcohol sensor developed at FIU, TAMS technology has the potential to revolutionize the wearable alcohol monitoring market and to reduce significantly the incidence and prevalence of drunk driving, which will, in turn, decrease the number of people who perish annually due to alcohol-impaired-driving fatalities.

To explore the commercial viability and value of the TAMS technology, the FIU researchers applied – successfully - to the Na-

tional Science Foundation's (NSF) Innovation Corps (I-Corps™) training program. Their I-Corps team, comprising Principal Investigator Dr. Shekhar Bhansali, chair of the Electrical and Computer Engineering (ECE) Department; Entrepreneurial Lead Dr. Yogeswaran Umasankar, a postdoctoral associate in the ECE department; and Mentor Peter Hernandez, Director of Technology Management and Commercialization at FIU, completed I-Corps training at the NSF I-Corps node at Georgia Institute of Technology. Over the next seven weeks of the I-Corps training program, the TAMS team conducted nearly 140 customer discovery interviews to determine the most appropriate customer segments and value propositions for their wearable transdermal blood alcohol monitoring technology.

Dr. Umasankar described participation in the NSF I-Corps training program as “an amazing learning experience that transformed my view of commercialization.” The team learned many valuable lessons, particularly how to conduct proper customer discovery interviews, develop value propositions based on the information gathered from potential customers, and apply the business model canvas (part of the Lean LaunchPad methodology) that helps visualize the components needed to turn the customer needs and problems (or pains) into a profitable company. “The customer discovery process led us to a deep understanding of societal norms, opportunities and challenges with alcohol. It showed us the potential for our product,” said Dr. Bhansali.

The team members plan to continue the commercialization of the TAMS technology with the knowledge and experience they gained through participation in the I-Corps program. For more information on how to apply for the NSF I-Corps teams program, please contact Peter Hernandez, Director of the Office of Technology Management and Commercialization at (305) 348-30151 or via email at pphernan@fiu.edu.



L to R: Dr. Shekhar Bhansali; NSF Program Officer Mr. Rathindra DasGupta; NSF Program Officer Ms. Lydia V. McClure; Dr. Yogeswaran Umasankar and Mr. Peter Hernandez

Upcoming Events

April 2016

- **April 1, 9 to 10 am, EC 2300, Current Clinical Status of Tissue Engineered Vascular Grafts in Heart Surgery**, presented by [Toshiharu Shinoka](#)
- **April 1, 11 am to 12 noon, PG5 #153 and BBC: MSB-105, Forensic Science Research at the US Secret Service**, presented by Robert Ramotowski, Chief Research Scientist in the Forensic Services Division of the United States Secret Service
- **April 1, 1:30 to 12:30 pm, GL 100A, LIGO, Squeezed States of Light, and Nonlinear Light-atom Interactions**, presented by [Eugeniy Mikhailov](#)—for more info [click here](#)
- **April 5, 10 am to 12 pm, AHC 4 #402, IRB Part 1—Obtaining Approval**, please contact molinae@fiu.edu to register
- **April 7, 2 to 3:15 pm, PG5 #155, The Organization of Indigenous Peoples of the Colombian Amazon (OPIAC) Adapts to Climate Change and Preserves Traditional Culture for a Post-Conflict Colombia**, panel discussion
- **April 8, 10 am to 4:30 pm, CBC #155, Conference in Statistical Methods and Mentoring**
- **April 8 – April 10, Miami Convention Center, 13th Annual Conference of Society for Brain Mapping and Therapeutics**, [register](#) online
- **April 8, 12 to 1 pm, GC 277, RCR in the Digital Age**, please contact Davfelix@fiu.edu to register
- **April 8, 12 to 1 pm, PG5 #155, A Vesicle-associated Tyrosine Phosphatase PTP-MEG2 Regulates TrkA Transport and Signal Transduction**, presented by [Guangpu Li](#)
- **April 11, 12 to 1 pm, WC 130, Teaching with Writing in STEM Courses: A Panel Discussion**, with Jennifer Bartman
- **April 11, 2 to 3 pm, GC 140, Gentrification and the Magic City: Change and Challenges**, presented by [Paul S. George](#), [RSVP](#) required
- **April 12, 12:30 to 2:30 pm, AHC1 #110, Summer Planning: How to Write a lot!**, please [RSVP](#)
- **April 13, 12:30 to 1:30 pm, AHC 4 # 402, Informed Consent**, please contact molinae@fiu.edu to register
- **April 14, 12 to 1 pm, WC 130, Biomolecular Sciences Institute lecture**, presented by [Milan Stojanvic](#)
- **April 15, 9 to 10 am, EC 2300, WHC Seminar Series** presented by [Prabir Patra](#)
- **April 15, 2 to 3 pm, ESC 241, Computational Thinking** presented by [Jeannette M. Wing](#)
- **April 18, 12 to 1 pm, WC 130, Perspectives on Chemistry Education Research**, presented by [Sonia Underwood](#)
- **April 18-19, 9 am to 5 pm, Miami Beach Convention Center, eMerge Americas Symposium—Innovation and Research—Smart Cities**, [additional information](#)
- **April 20, 12 to 1:30 pm, GL 100B, RCR Data Acquisition, Management, Sharing and Ownership**, please contact Davfelix@fiu.edu to register
- **April 22, 9 to 10 am, EC 2300, WHC Seminar Series** presented by [Javier Jo](#)
- **April 22, 1:30 to 2:30 pm, GL 100A, Nuclear Physics in Proton Therapy**, presented by [Cynthia Keppel](#), [additional information](#)
- **April 29, 10:30 am to 12 pm, MARC Pavilion, NSF Funding Opportunities workshop**, presented by [Rajakkannu Mutharasan](#), [additional information](#), [RSVP required](#)
- **April 29, 2 to 3 pm, ECS 241, Distinguished Women Lecture Series**, presented by [Rosalind Picard](#)

May 2016

- **May 5, 1 to 2 pm, AHC 4 #402, Preparing for IACUC Site Visits**, please contact molinae@fiu.edu to register
- **May 10, 8 am to 5 pm, South Florida Child Psychology Research Conference**, deadline for submissions is April 8, 2016, [additional information](#)
- **May 17, 1 to 3 pm, AHC 4 #402, IRB Part 2—Managing your Approved Protocol**, please contact molinae@fiu.edu to register

Awards Received—February 2016

FIU researchers were awarded \$5,253,741 in February 2016. Below is a listing of awards received.

PI: Marisela Agudelo COM IMMUNOLOGY Award Action Type: Continuation AWARDING SPONSOR: National Institutes of Health TITLE: EtOH-induced Immunomodulation: Role of Histone Deacetylases	AWARD: \$ 244,854
PI: William Anderson COLLEGE OF ARTS SCIENCE & EDUC Award Action Type: Increase AWARDING SPONSOR: Consortium For Ocean Leadership TITLE: IODP Expedition 346 Asian Monsoon	AWARD: \$ 2,000
PI: Joann Arnowitz JEWISH MUSEUM OF FLORIDA-FIU Award Action Type: Initial AWARDING SPONSOR: Miami-Dade County Cultural Affairs TITLE: Discovery and Recovery: Preserving Iraqi Jewish Heritage	AWARD: \$ 9,000
PI: Elizabeth M Bejar PROVOST AND EXEC VP ACAD AFF Award Action Type: Initial AWARDING SPONSOR: University of Pennsylvania TITLE: HSI-PATHWAYS Hispanic Serving Institutions: Pathways to the Professoriate	AWARD: \$ 34,164
PI: Shekhar Bhansali ELEC AND COMPUTER ENG Award Action Type: Increase AWARDING SPONSOR: National Science Foundation TITLE: Graduate Research Fellowship Program	AWARD: \$ 1,500
PI: Kevin Mershon Boswell BIOLOGY Award Action Type: Increase AWARDING SPONSOR: Prince William Sound Science Center TITLE: HRM - Non lethal sampling: In situ estimation of juvenile	AWARD: \$ 56,202
PI: Jeffrey Allen Boyd COM HUMAN AND MOL GENETICS Award Action Type: Increase AWARDING SPONSOR: FIU Foundation TITLE: Baptist Cancer Research Lab	AWARD: \$ 36,591
PI: Heather Bracken-Grissom BIOLOGY Award Action Type: Initial AWARDING SPONSOR: National Science Foundation TITLE: Collaborative Research: The evolution of bioluminescence	AWARD: \$ 389,020

PI: Henry Briceno
SOUTHEAST ENV RESEARCH CTR
Award Action Type: Increase
AWARDING SPONSOR: Environmental Protection Agency
TITLE: WATER QUALITY MONITORING PROJECT FOR THE **AWARD:** \$ 415,000

PI: Erika K Coles
PSYCHOLOGY
Award Action Type: Initial
AWARDING SPONSOR: Nova Southeastern University
TITLE: Behavior Assessment Team **AWARD:** \$ 26,400

PI: Shannon Dick
PSYCHOLOGY
Award Action Type: Increase
AWARDING SPONSOR: National Science Foundation
TITLE: Graduate Research Fellowship Program **AWARD:** \$ 1,500

PI: Kenneth Feeley
BIOLOGY
Award Action Type: Increase
AWARDING SPONSOR: National Science Foundation
TITLE: CAREER: Measuring the thermal tolerances of individuals **AWARD:** \$ 100,459

PI: Rebecca Friedman
PROVOST AND EXEC VP ACAD AFF
Award Action Type: Initial
AWARDING SPONSOR: European Commission
TITLE: BILAT USA 4.0 **AWARD:** \$ 7,619

PI: Raul Gonzalez Jr
PSYCHOLOGY
Award Action Type: Initial
AWARDING SPONSOR: National Institute on Drug Abuse
TITLE: The Impact of Cannabis Use on the Neurocognitive Functioning **AWARD:** \$ 429,807

PI: Boyuan Guan
LIBRARY OPERATIONS
Award Action Type: Initial
AWARDING SPONSOR: University of Florida
TITLE: Miami-Dade Bicycle Route Planner **AWARD:** \$ 35,000

PI: Tomas R Guilarte
ROBERT STEMPEL CPHSW DEANS OFF
Award Action Type: Initial
AWARDING SPONSOR: Environmental Health Sciences
TITLE: Peripheral BDZ Receptor Biomarker of Neurotoxicity **AWARD:** \$ 20,000

PI: Tomas R Guilarte
ROBERT STEMPEL CPHSW DEANS OFF
Award Action Type: Initial
AWARDING SPONSOR: Environmental Health Sciences
TITLE: Presynaptic Mechanisms of Lead Neurotoxicity **AWARD:** \$ 20,000

PI: Mohammed A Hadi CIVIL AND ENVIRON ENGINEERING Award Action Type: Initial AWARDING SPONSOR: Metric Engineering TITLE: Creating Broward County Dashboard and Production of Monthly	AWARD: \$ 6,595
PI: Kathryn Elizabeth Brogan Hartlieb DIETETICS AND NUTRITION Award Action Type: Continuation AWARDING SPONSOR: Eastern Michigan University TITLE: Parent Focused Obesity Intervention for Low Income African	AWARD: \$ 5,862
PI: Pedro Pablo Hernandez OFFICE OF RSCH AND ECO DEVELOP Award Action Type: Increase AWARDING SPONSOR: Triangle Transit TITLE: Bus Stop Management System	AWARD: \$ 30,000
PI: Cheryl L Holder COM HUMANITIES HLTH AND SOC Award Action Type: Increase AWARDING SPONSOR: FIU Foundation TITLE: South Florida Transgender Women HIV Knowledge and Risk	AWARD: \$ 124
PI: Krishnaswamy Jayachandran EARTH AND ENVIRONMENT Award Action Type: Initial AWARDING SPONSOR: U.S. Department of Agriculture TITLE: Broadening Agriculture Science Education (BASE) for Hispanic	AWARD: \$ 250,000
PI: Leonel E Lagos ARC APPLIED RESEARCH CENTER Award Action Type: Increase AWARDING SPONSOR: General Infomatics Inc. TITLE: Cyber Space Technology Research and STEM Development	AWARD: \$ 50,000
PI: Angela Marie Richmond Laird PHYSICS Award Action Type: Increase AWARDING SPONSOR: National Institute on Drug Abuse TITLE: FIU-ABCD: Pathways and Mechanisms to Addiction in the Latino	AWARD: \$ 402,277
PI: Chengxian Lin MECHANICAL AND MAT ENGINEERING Award Action Type: Initial AWARDING SPONSOR: American Society of Heating Refrigerati TITLE: Guidance for CFD Modeling of Data Centers	AWARD: \$ 136,792
PI: Debra Lundy SCH OF HOSP AND TOURISM MGMT Award Action Type: Initial AWARDING SPONSOR: Miami Beach Visitor & Convention Authori TITLE: 2015 Annual South Beach Wine & Food Festival	AWARD: \$ 85,000

PI: Modesto A Maidique DEPT OF MGMT AND INTL BUSINESS Award Action Type: Initial AWARDING SPONSOR: Miami-Dade County TITLE: Chapmanville Leadership Development Program	AWARD: \$ 342,125
PI: Mark A Marine ARCHICT AND THE ARTS DEANS OFF Award Action Type: Initial AWARDING SPONSOR: Florida Department of Transportation TITLE: FDOT District VI Building envelope project-Phase 3	AWARD: \$ 10,436
PI: Michael Maunder COLLEGE OF ARTS SCIENCE & EDUC Award Action Type: Initial AWARDING SPONSOR: FIU Foundation TITLE: Tropical Conservation Institute	AWARD: \$ 700,000
PI: Dana Lynn McMakin PSYCHOLOGY Award Action Type: Initial AWARDING SPONSOR: National Institute of Mental Health TITLE: Treatment Development Targeting Positive Affect Function in	AWARD: \$ 3,505
PI: Norman D Munroe MECHANICAL AND MAT ENGINEERING Award Action Type: Continuation AWARDING SPONSOR: Florida Agricultural and Mechanical Univ TITLE: Florida Georgia Louis Stokes for Minority Participation (FGLSAMP)	AWARD: \$ 7,500
PI: Norman D Munroe MECHANICAL AND MAT ENGINEERING Award Action Type: Continuation AWARDING SPONSOR: Florida Agricultural and Mechanical Univ TITLE: Florida Georgia Louis Stokes for Minority Participation (FGLSAMP)	AWARD: \$ 40,500
PI: Norman D Munroe MECHANICAL AND MAT ENGINEERING Award Action Type: Supplemental AWARDING SPONSOR: National Action Council for Minorities TITLE: NACME Initiative at Florida International University	AWARD: \$ 42,000
PI: Norman D Munroe MECHANICAL AND MAT ENGINEERING Award Action Type: Initial AWARDING SPONSOR: University of Central Florida TITLE: 2015-2016 NASA Hybrid Rocket Competition	AWARD: \$ 1,500
PI: Edward P Murray METROPOLITAN CENTER Award Action Type: Initial AWARDING SPONSOR: University of Miami TITLE: Miami Dade PHCD Housing Studies	AWARD: \$ 89,375

PI: Mesut Ozgen MUSIC Award Action Type: Initial AWARDING SPONSOR: D Addario Foundation TITLE: 2016 Guitar Festival	AWARD: \$ 1,500
PI: Nezh Pala ELEC AND COMPUTER ENG Award Action Type: Initial AWARDING SPONSOR: University of Utah TITLE: 3D Simulation of THz Plasmonic Structures	AWARD: \$ 17,763
PI: William E Pelham Jr PSYCHOLOGY Award Action Type: Initial AWARDING SPONSOR: National Institute of Mental Health TITLE: Examining Tolerance to CNS Stimulants in ADHD	AWARD: \$ 652,494
PI: Andy V Pham LEADERSHIP AND PROF STU Award Action Type: Initial AWARDING SPONSOR: Texas Woman's University TITLE: Inhibitory Control and Working Memory in Monolingual and Bilingual	AWARD: \$ 9,975
PI: Naphtali Rishe COMPUTER INFO SCIENCES Award Action Type: Increase AWARDING SPONSOR: National Science Foundation TITLE: I/UCRC Phase II: Center for Advanced Knowledge Enablement	AWARD: \$ 9,975
PI: Allan Rosenbaum PUBLIC ADMINISTRATION Award Action Type: Initial AWARDING SPONSOR: Miami-Dade County Port of Miami TITLE: XXII Inter-American Conference of Mayors and Local Authorities	AWARD: \$ 52,063
PI: Seyedmasoud Sadjadi COMPUTER INFO SCIENCES Award Action Type: Increase AWARDING SPONSOR: Georgia Institute of Technology TITLE: VIP Program at Florida International University	AWARD: \$ 71,473
PI: Misak Sargsian PHYSICS Award Action Type: Initial AWARDING SPONSOR: Jefferson Lab TITLE: Next Generation Nuclear Physics with JLab12 and EIC	AWARD: \$ 8,000
PI: Juan Pablo Sarmiento EXTREME EVENTS RESEARCH CENTER Award Action Type: Initial AWARDING SPONSOR: UnitedNations Office for Project Service TITLE: Disaster Risk Management in Business Education	AWARD: \$ 201,500

PI: Markus L Thiel POLITICS AND INTL RELATIONS Award Action Type: Initial AWARDING SPONSOR: European Commission TITLE: Miami Florida Jean Monnet Centre of Excellence (MF-JMCE)	AWARD: \$ 86,610
PI: Mary Jo Trepka EPIDEMIOLOGY Award Action Type: Continuation AWARDING SPONSOR: National Institutes of Health TITLE: Neighborhood-Level Determinants of Delayed HIV Diagnosis	AWARD: \$ 20,673
PI: Anna H Wachnicka Kosiorek SOUTHEAST ENV RESEARCH CTR Award Action Type: Initial AWARDING SPONSOR: University of Miami TITLE: Assessment of Hydro-Ecological Changes in Nearshore Areas of	AWARD: \$ 29,007
PI: Eric Wagner SCHOOL OF SOCIAL WORK Award Action Type: Continuation AWARDING SPONSOR: Ware Foundation TITLE: Yoga as a Complement to Standard Care for Adolescents with Eating	AWARD: \$ 60,000

Funding Opportunities

The funding opportunities are in a separate excel file, which includes a filter for agency, date and opportunity number.

Contact ORED Senior Leadership

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