

**The Integrascope® Technology Concept:
An Example of an IVD Designed for Low Resource Settings**

Prof. Antonio (“Tony”) Garcia
Engineering & Translational Biomedicine Center
Arizona State University

THURSDAY, APRIL 14, 2011
LECTURE: 1:00 PM - 2:00 PM
ENGINEERING CENTER
ROOM EC 2300
10555 WEST FLAGLER STREET
MIAMI, FL 33174



Abstract: Currently rapid *in vitro* diagnostic devices are available or under development for infectious disease detection in low resource settings. Some developers have focused on the creation of low cost instruments or microfluidic systems as a platform for specific types of tests such as immunoassays. Others stress simplicity and low cost for one specific test, usually for the acute manifestation of an infectious disease. We are developing a very low cost instrument that can be adapted to the resources of the environment and uses the patient’s bodily fluid sample as an essential component to rapidly generate readings useful for medical decision-making. The intent is to address the unmet need of at least 85% of the world’s population for medical instrumentation that can provide rapid and useful clinical assessment to guide patient care and direct resources of the community during an outbreak. This talk will describe the technology and strategy behind the device and discuss the opportunities and challenges of making low cost and sustainable technology available for global health.

Biography: Dr. García is the Associate Director of the Hispanic Research Center and Foundation Professor of Bioengineering in the Ira A. Fulton School of Engineering at Arizona State University where he has focused on designing and characterizing surfaces and colloids for diagnostic devices and biomolecule separation. He obtained a doctorate in Chemical Engineering from the University of California, Berkeley and a baccalaureate in Chemical Engineering from Rutgers University, New Brunswick. He co-authored the textbook Bioseparation Process Science (Blackwell Science). Dr. García is also actively involved in education and human resource projects aimed at improving math, science, and engineering education as well as meeting the demand for a technological workforce as the nation’s demographics changes. He was Associate Editor of the Journal of Research in Science Teaching 2003-2005 and is currently co-project director of National Science Foundation programs to enhance opportunities for undergraduate and graduate students in science, math and engineering. His educational efforts in collaboration with faculty in the Colleges of Liberal Arts and Engineering were featured on the cover of Journal of Chemical Education (September 2000 issue). Recently, his work with colleagues in engineering and sciences on combining surface chemistry and fractal texturing in order to move water drops us-

Contact: bmeinfo@fiu.edu; 305-348-6717

Map: <http://campusmaps.fiu.edu/> (Other campuses/ - Engineering Center)