

Maria Fernanda Campa

University of Tennessee, Knoxville

Bredesen Center for Interdisciplinary Research and Graduate Education, 426 Greve Hall, Knoxville, TN 37996.

E-mail: mcampa@utk.edu

EDUCATION

University of Tennessee, Knoxville

Doctoral student, Energy Science and Engineering

University of Virginia, Charlottesville, VA. May 2012

Bachelor of Science, Engineering Science- Nanomedicine

Minors: Biomedical Engineering and Chemistry

RESEARCH AND WORK EXPERIENCE

Post-Baccalaureate Intern, Society-Technology Interactions Group, Mentor: Amy Wolfe, Ph.D., July 2012- July 2013

Oak Ridge National Laboratory, Oak Ridge, TN

- Analysed ethical, legal, and social implications (ELSLI) of emerging technologies, such as nanotechnology, bioenergy, and synthetic biology.
- Conducted interviews with researchers, managers, and others involved in the research, development, and use of the emerging technologies.
- Assisted in writing and submitting proposals.
- Helped develop and maintain the website sti.ornl.gov.

Undergraduate Researcher, Mentor: Alexander Klivanov, Ph.D., May 2010- July 2012

Department of Cardiovascular Medicine and Biomedical Engineering, University of Virginia, Charlottesville, VA

- Pursued research on the optimization of a stable doxorubicin loaded liposome-microbubble complex that could be imaged and locally target within the body with the use of focused ultrasound.
- Maximized the stability and the load the complex can carry and deliver.

Technician, June 2011- May 2012

Center for Diabetes Technology and the School of Medicine, University of Virginia, Charlottesville, VA

- Ensured safety control in every insulin dosage patients receive in an on-going clinical trial for an artificial pancreas system for Type 1 Diabetes patients.
- Performed YSI readings of patients' glucose levels.
- Monitored and inserted data entry into the Artificial Pancreas System.

Teaching Assistant, August 2011- May 2012

ENGR 2500- Introduction to Nanoscience and Technology, University of Virginia, Charlottesville, VA

- Assisted Professor Dr. John Bean, weekly laboratory sessions where students learn about crucial technical skills needed for the study of nanoscience.
- Topics and equipment included, Scanning Electron Microscope (SEM), Scanning Tunnelling Microscope (STM), Atomic Force Microscope (AFM), Hydrophobicity, and DNA electrophoresis.

Summer Intern, June 2011- July 2011

Focused Ultrasound Surgery Foundation, Charlottesville, VA

- Organized and added content to the collaborative research network: a portal where researchers from around the world can collaborate on their research involving focused ultrasound.
- Reviewed research proposals submitted to the Foundation for funding.
- Shadowed first in the world clinical trial for the treatment of essential tremor using MRI guided focused ultrasound.
- Assisted in a preclinical study that combined focused ultrasound and microbubbles to achieve gene transfection.

Spanish Tutor, January 2011- May 2012

Office Assistant, January 2010- May 2010

Counselor, Summer BRIDGE Program, June 2009- July 2009

The Center for Diversity in Engineering, University of Virginia, Charlottesville, VA.

AWARDS, PUBLICATIONS, AND PRESENTATIONS

1st Annual Conference Governance of Emerging Technologies: Law, Policy, and Ethics, Presenter
May 20-21, 2013, Chandler, AZ

From Lab Bench to Fuel Pump: Policy Implications in the Development of Lignocellulosic Biofuels.

Maria Fernanda Campa, David J. Bjornstad, Amy K. Wolfe, and Barry Shumpert

Annual Engineering Science Symposium, First Place in Poster Competition

April 2012, University of Virginia, Charlottesville, VA.

Microbubble-Liposome Complexes as a Novel Drug Delivery System

Maria Fernanda Campa, Juliana Cano-Mejia, Tyler Pegoraro, and Brittany Johnson

Campa, M.F., Cano-Mejia, J., Madenjian, R. A Review of the Pathogenesis of Necrotizing Fasciitis by Group A Streptococci. *The Spectra Journal: the Virginia Undergraduate Engineering and Science Research Journal.*(2011). Available at:

<http://www.seas.virginia.edu/pubs/spectra/pdfs/archives/spring11.pdf>

NanoStar Undergraduate Research Grant

Summer 2010

- Conducted research under Dr. Alexander Klivanov with this grant.
- Presented research at the NanoStar annual research symposiums in 2011 and 2012.

LEADERSHIP ACTIVITIES

President, August 2011- May 2012

NExT: Nano and Emerging Technologies Club, University of Virginia Chapter.

- Increased awareness of nanotechnology through the organization of monthly speaker series, poster sessions, student and faculty mixers, community outreach (nanotech demos for K-12), and industry and laboratory tours.
- Served as Vice-President August 2010- May 2011 and as Treasurer October 2009- May 2010.

Engineering Student Council, University of Virginia.

Fourth Year Board, August 2011- May 2012

- Helped plan, organize, and execute social activities for the senior engineering students.

Fundraising Committee, August 2009-May 2010

Resident Advisor, August 2010- May 2012

Office of the Dean of Students, University of Virginia

- Identified and tailored programs to meet the needs of first year students in the areas of academic, multicultural, health/wellness, and personal development.
- Served as a leader, mentor, and advisor for 24 first year girls.

Engineering Advisor, August 2010- May 2012

Engineering Student Advising Program, University of Virginia.

SKILLS

Lab: Cell Culture, Ultrasound Imaging, Experimentation with Small Animals, Microscopy (Optical, Fluorescent, Scanning Electron Microscope, Atomic Force Microscope and Scanning Tunneling Microscope), Coulter Counter, DNA Electrophoresis, Liposome Preparation and Loading.

Computational: Proficient in Microsoft Word, Power Point, Excel, online research community networks, and Prezi. Basic understanding of MathCad, JAVA, Drupal and Image Pro.

Languages: Bilingual in English and Spanish. Basic French.