

Highlights 2013 *Department of Basic Medical Sciences*

Mission:

Through discovery, education and service, the BMS faculty strive to be leaders in their areas of scholarship. Using interdisciplinary approaches, BMS faculty perform hypothesis-driven investigations to reveal biological processes and human disease and collaborate with clinical researchers to facilitate the development of novel diagnostics, therapies and preventive measures. BMS faculty are also engaged in medical and graduate education by developing, delivering and assessing curricula, and conduct educational scholarship.



Paul E. Boehmer, PhD
*Chair and Professor, Basic
Medical Sciences*



Publications: In calendar year 2013, the core faculty in the Department of Basic Medical Sciences published 31 original research articles in peer reviewed journals, including the following:

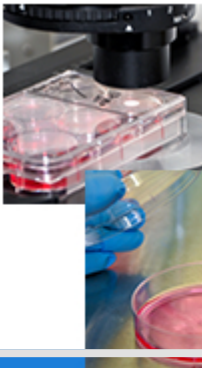
- McGowin CL, Radtke AL, Abraham K, Martin DH, Herbst-Kralovetz M. Mycoplasma genitalium infection activates cellular host defense and inflammation pathways in a 3-dimensional human endocervical epithelial cell model. *J Infect Dis* (2013) 207:1857-68.
- Hiroi R, Lacagnina AF, Hinds LR, Carbone DG, Uht RM, Handa RJ. The androgen metabolite, 5 α -androstane-3 β ,17 β -diol (3 β -diol), activates the oxytocin promoter through an estrogen receptor- β pathway. *Endocrinology*. (2013) 154:1802-12.
- Carroll CC, O'Connor DT, Steinmeyer R, Del Mundo JD, McMullan DR, Whitt JA, Ramos JE, Gonzales RJ. The influence of acute resistance exercise on cyclooxygenase-1 and -2 activity and protein levels in human skeletal muscle. *Am J Physiol Regul Integr Comp Physiol* (2013) 305:R24-30.

Grants: In calendar year 2013, the core faculty in the Department of Basic Medical Sciences had an active grant portfolio of ~\$10M from federal, state and private sources, including the following grants awarded in 2013:

- Dr. Shenfeng Qiu, PhD, **INeural substrates underlying autism risk gene MET1 from the Institute of Mental Health Research.**
- Dr. Karen Hastings, MD, PhD, **IGILT and regulation of Treg development in cutaneous autoimmunity** R03 grant from the National Institute of Arthritis and Musculoskeletal and Skin Diseases.
- Dr. Robert Handa, PhD, multiple projects supported by Syngenta Crop protection LLC to investigate the effects of herbicides and fungicides on neuroendocrine function.

Patents:

- Application number: 20130095134 **IStabilized virus like particles having enhanced mucosal immunogenicity** issued to Charles J. Arntzen and Melissa Herbst-Kralovetz.
- Application number: 20130323737 **IMethod and system for analyzing a sample** issued to Frederic Zenhausern et al.



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Faculty Appointments:

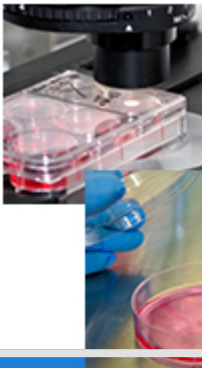
- Dr. Salvatore Oddo, PhD, Associate Professor (tenure-eligible).
- Dr. Shalini Sharma, PhD, Assistant Professor (tenure-eligible).
- Dr. Van Keuren-Jensen, PhD, Research Assistant Professor.
- Dr. Dawn Coletta, PhD, Research Assistant Professor.
- Dr. Andre Valdez, PhD, Research Assistant Professor.

Promotions:

- Dr. Rayna Gonzales, PhD.
- Dr. Karen Hasting, MD, PhD.
- Dr. Amelia Gallitano, MD, PhD.
- Dr. Suwon Kim, PhD.

Outreach and Service:

- BMS faculty mentored medical students from the College of Medicine at Al-Imam Muhammad Ibn Saud Islamic University in Saudi Arabia as part of the Global Health Institute-Summer Research Training Program offered by the Mel and Enid Zuckerman College of Public Health.
- Dr. Rebecca Fisher, PhD, member of the American Association of Anatomists Board of Directors.
- Dr. Ron Hammer, PhD, appointed to the University Advisory Committee on Promotion and Tenure.
- Dr. Mark Haussler, PhD, keynote speaker at the 17th Annual Phoenix Academic Excellence Day: **I**The Vitamin D controversy: does D-supplementation provide defense against chronic diseases other than rickets/osteomalacia.
- Twenty-one scientific presentations as part of the annual Department of Basic Medical Sciences Seminar Series.



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National and International Committees:

- Dr. Robert Handa, PhD, organizing committee member of the International Workshop on Neuroendocrinology, a National Science Foundation sponsored committee to establish and foster collaborations in neuroendocrinology research between the USA and South American countries.
- Dr. Ron Hammer, PhD, member of National Institutes of Health-Center for Scientific Review, Molecular Neurogenomics Study Section.

Honors and Awards:

- Dr. Amanda Maple, PhD, named as Bisgrove Scholar by Science Foundation Arizona to study pharmacological manipulations of the nucleus accumbens, a brain region implicated in schizophrenia.
- Dr. Gholam Peyman, MD, elected as Fellow of the National Academy of Inventors.
- Dr. Robert Handa, PhD, member of Faculty of 1000, composed of 5,000 Faculty Members, senior scientists and leading experts in all areas of biology and medicine. The Faculty recommends the most important articles, rating them and providing short explanations for their selections.

Editorial Boards:

- Dr. Kurt Gustin, PhD, appointed to the editorial board of the journal Virology, publishing the results of basic research in all branches of virology.
- Dr. Robert Handa, PhD, editorial advisory board member of Journal of Neuroendocrinology, publishing the newest ideas in classical neuroendocrinology and its expanding interface with the regulation of behavioral, cognitive, developmental, degenerative and metabolic processes.

Teaching Awards:

- Dr. Suwon Kim, PhD, received the College of Medicine-Phoenix Educator of the Year Award from the Class of 2015.