

**TEXAS STATE VITA****I. Academic/Professional Background**Name: Joel BerghTitle: Senior Lecturer

## Educational Background

Degree	Year	University	Major	Thesis/Dissertation
PhD	2003	University of Delaware	Biological Sciences	Osteoblastic voltage-sensitive calcium channels mediate the actions of 1,25-dihydroxyvitamin D3 during bone remodeling.
MBA	2001	University of Delaware	Finance	
BS	1996	University of Houston-Clear Lake	Biology	

## University Experience

Position	University	Dates
Senior Lecturer	Texas State University	2014-Present
Instructor	St. Edward's University	2010-2014

## Relevant Professional Experience

Position	Entity	Dates
Assistant Director of Business Development and Finance	Pharmaceutical Research Institute, Albany College of Pharmacy	2006-2007
Postdoctoral Research Fellow	Ordway Research Institute, Albany New York	2004-2006

**II. TEACHING**

## Courses Taught:

Texas State University:

Bio 1320 Modern Biology 1

Bio 1421 Modern Biology 2

Coordinator Bio 2450 Genetics Lab

St. Edwards University:

Biol 3324 Human Anatomy and Physiology I and II, Lecture and Lab

Biol 3345 Human Anatomy, Lecture and Lab

Biol 1305 Stem Cell Biology

Biol 1107 Cells, Genetics, and Organ Systems Lab

Biol 1108 Organismal Biology Lab

Biol 3145 Special Topics in Biology – Basic Laboratory Skills

Biol 4435 Cell Biology Lab

## Courses Prepared and Curriculum Development:

### St. Edwards University:

Biol 3324 Human Anatomy and Physiology I and II, Lecture and Lab

Biol 3345 Human Anatomy, Lecture and Lab

Biol 1305 Stem Cell Biology

Biol 1107 Cells, Genetics, and Organ Systems Lab

Biol 1108 Organismal Biology Lab

Biol 3145 Special Topics in Biology – Basic Laboratory Skills

## Teaching Development

**Online Learning Consortium Certificate Program.** A year-long internationally recognized program for certification for teaching online and hybrid courses. (expected completion 2016).

**Introduction to Audio and Visual Tools** – Online Learning Consortium, a week long course providing hands on experience in a multitude of tools that can be used in online and hybrid courses. August 2015.

**Designing a Flipped Classroom** – Online Learning Consortium, a week long course for developing strategies and best practices for flipping classroom to facilitate learning. August 2015.

**Fundamentals: Increasing Interaction and Engagement** – Online Learning Consortium, a week long course providing hands on experience designing and implementing activities to increase student involvement. July 2015.

**STEM Teaching Strategies Summit** – McGraw Hill – a discussion meeting to improve STEM teaching methodologies. March 2015.

**New to Online Essentials** – Online Learning Consortium, a week long course designed to introduce faculty to the online learning environment. March 2015.

**The Grant Application Writer's Workbook.** A week long active learning seminar dedicated to improving the grant writing process. Facilitated by Grant Writers' Seminars and Workshops. Fall 2011.

## III. SCHOLARLY/CREATIVE

### Refereed Journal Articles:

Mousa S.A., Bergh J.J., Dier E., Rebbaa A., O'Connor L.J., Yalcin M., Aljada A., Dyskin E., Davis F.B., Lin H.Y., Davis P.J.. "Tetraiodothyroacetic Acid, a Small Molecule Integrin Ligand, Blocks VEGF and bFGF-Stimulated Angiogenesis." *Angiogenesis*. 2008;11(2):183-90.

Lin, H-Y., Lansing, L., Merillon J.M., Davis F.B., Tang H.Y., Shih A, Vitrac X, Krisa S, Keating T, Cao H.J., Bergh, J.J., Quackenbush S., and Davis P.J.. "Integrin AphaVBeta3 Contains a Receptor Site for Resveratrol." *FASEB J*. 2006 Aug;20(10):1742-4.

Bergh, J.J., Shao, Y., Puente, E.C., Duncan, R.L., and Farach-Carson, M.C.. "Osteoblast Ca<sup>2+</sup> Permeability and Voltage-Sensitive Calcium Channel Expression is Temporally Regulated by 1,25-Dihydroxyvitamin D<sub>3</sub>." *American Journal of Physiology – Cell Physiology*. 2005 Oct 12.

Mousa, S.A., O'Connor, L.J., Bergh, J.J., Davis, F.B., Scanlan, T.S., and Davis, P.J.. "The Proangiogenic Action of Thyroid Hormone Analogue GC-1 Is Initiated at an Integrin." *J of Cardiovascular Pharmacology*. 2005 Sep;46(3):356-360.

Bergh, J.J., Lansing, L., Lin, H.-Y., Mohamed, S.N., Davis, F.B., Mousa, S.A., and Davis, P.J.. “Integrin  $\alpha V\beta 3$  Contains a Cell Surface Receptor Site for Thyroid Hormone that is Linked to Activation of MAPK and Induction of Angiogenesis.” *Endocrinology*. 2005 Jul;146(7):2864-71.

Farach-Carson, M.C., Bergh, J.J., and Xu, Y.. “Integrating rapid responses to 1,25-dihydroxyvitamin D<sub>3</sub> with transcriptional changes in osteoblasts:Ca<sup>2+</sup> regulated pathways to the nucleus.” *Steroids*. 2004 Aug;69(8-9):543-7.

Bergh, J.J., Xu, Y., and Farach-Carson, M.C.. “Osteoprotegerin expression and secretion isregulated by calcium influx through the L-type voltage-sensitive calcium channel.” *Endocrinology*. 2004 Jan;145(1):426-36.

Bergh, J.J., Shao, Y., Akanbi, K.A., and Farach-Carson, M.C.. “Rodent osteoblastic cells express voltage-sensitive calcium channels lacking a gamma subunit.” *Calcified Tissue International*. 2003 Nov;73(5):502-10.

Swann, S.L., Bergh, J.J., Farach-Carson, M.C., Ocasio, C.A., and Koh, J.T.. “Structure-based design of selective agonists for a rickets-associated mutant of the vitamin D receptor.” *Journal of the American Chemical Society*. 2002 Nov 20;124(46):13795-805.

Swann, S.L., Bergh, J.J., Farach-Carson, M.C., and Koh, J.T.. “Rational design of vitamin D<sub>3</sub> analogues which selectively restore activity to a vitamin D receptor mutant associated with rickets.” *Organic Letters*. 2002 Oct 31;4(22):3863-6.

Liu, R., Li, W., Karin, N.J., Bergh, J.J., Adler-Storthz, K., and Farach-Carson, M.C.. “Ribozyme ablation demonstrates that the cardiac subtype of the voltage-sensitive calcium channel is the molecular transducer of 1,25-dihydroxyvitamin D<sub>3</sub>-stimulated calcium influx in osteoblastic cells.” *Journal of Biological Chemistry*. 2000 Mar 24; 275(12):8711-8.

#### Abstracts:

Endocrine Society – 2005, San Diego, California, poster discussion.

American Thyroid Association – 2004, Vancouver, British Columbia, Canada, poster discussion

Endocrine Society – 2003, Philadelphia, Pennsylvania, poster discussion.

American Society for Bone and Mineral Research – 2002, San Antonio, Texas, poster discussion.

American Society for Bone and Mineral Research – 2001, Phoenix, Arizona, poster discussion.

American Society for Cell Biology – 2000, San Francisco, California, poster discussion.

#### Invited Talks, Lectures, Presentations:

Federation of American Societies for Experimental Biology. – Tucson, Arizona 2006,  
“Nongenomic actions of thyroid hormone on angiogenesis and cell migration”

## IV. SERVICE

University:

**Committee Member, College of Science and Engineering Safety Committee** – Texas State University – Spring 2015 to present.

**Committee Member, Institutional Review Board** - St. Edwards University Fall 2011-Spring 2014

**Departmental Radiation Safety Officer**, Ordway Research Institute – January 2005-August 2008

Departmental:

**Member, Nonmajors Biology textbook evaluation committee** – Texas State University Spring 2015  
**Safety Officer, Biology**, University of Delaware

Organizations:

**Sigma Xi** – Member, 2012-present

**American Thyroid Association** – Member, 2005 – 2008

Awarded travel grant to 2004 annual meeting in Vancouver, British Columbia, Canada

**Endocrine Society** – Member, 2004-2008