Bryan T. Hackfort

1111 PeachTree St. Omaha, NE 68178 402-000-0000 bthackfort@creighton.edu CURRICULUM VITAE

Education

Doctorate of Philosophy in Biomedical Sciences (ABD)

August 2014

Creighton University, Omaha, NE

Bachelor of Science in Microbiology

May 2006

University of Iowa, Iowa City, IA

Research Experience

Graduate Research Assistant

Creighton University

2010 - Present

Determine the effects of Cox-2 inhibition on the *in vivo* bone response to mechanical forces

Advisor: Diane Cullen

- Tibial Compression Model
- Bone Histomorphometry
- Immunohistochemistry
- ELISAs

- Quantitative PCR
- Managing Mouse Colony
- Micro Computed Tomography

Research Laboratory Technician

Creighton University

2006 - 2010

Researched the in vivo bone response to mechanical forces using the mouse tibial compression model

- Included maintaining the breeding colony with five different genotypes, experimental design, anesthesia, subcutaneous and intraperitoneal injections, tissue processing, histomorphometry, genotyping, and immunohistochemistry
- PI: Diane Cullen

Researched the effects of smoke inhalation on mouse bone marrow cell populations

• Conducted smoke study on mice, tissue collection, and processing for histomorphometry and PCR

Teaching Experience

Teaching Assistant

Creighton University

Fall 2011

Teaching Practicum in Gross Anatomy

Publications

Hackfort BT, Akhter MP, Cullen DM. Cyclooxygenase inhibition on a single versus multiple mechanical loads in mice. *In preparation*, 2014

Hackfort BT, Akhter MP, Cullen DM. Gene response to single vs multiple mechanical loads with Cox-2 inhibition. *In preparation*, 2014

Ma D; Li Y; **Hackfort BT**; Zhao Y; Xiao J; Swanson PC; Lappe J; Xiao P; Cullen D; Akhter M; Recker R; Xiao GG. Smoke-induced signal molecules in bone marrow cells from altered low-density lipoprotein receptor-related protein 5 mice. Journal of Proteome Research, 2012 Jul 6; 11 (7), 3548-60

Fusby JS; Kassmeier MD; Palmer VL; Perry GA; Anderson DK; **Hackfort BT**; Alvarez GK; Cullen DM; Akhter MP; Swanson PC. Cigarette smoke-induced effects on bone marrow B-cell subsets and CD4+:CD8+ T-cell ratios are reversed by smoking cessation: influence of bone mass on immune cell response to and recovery from smoke exposure. Inhal Toxicol, 2010 Aug; 22 (9), 785-96

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Conference Presentations

"Cyclooxygenase Response to Multiple Mechanical Loads" American Society of Bone and Mineral Research, Houston, TX. September 2014. Abstract Accepted for Poster Presentation

"Gene Response to Mechanical Loading and Chronic Cox-2 Inhibition" Midwest Student Biomedical Research Forum, Omaha, NE. Feb 16, 2013. Poster Presentation

"Cox-2 is Not Essential for the Bone Formation Response to Long Term Tibial Compression in Mice" American Society of Bone and Mineral Research, Minneapolis, MN. October 2012. Poster Presentation

"Cox-2 Inhibition Suppresses the Bone Response to Mechanical Loading in Mice" St. Albert's Day Student Research Forum, Omaha, NE. March 28, 2012. Poster Presentation

"Time Course of Bone Response to Smoke Exposure in Cortical Bone" American Society of Bone and Mineral Research, San Diego, CA. September 2011. Poster Presentation

"Cox-2 Inhibition Suppresses the Response to Short Term Tibial Compression in Mice" American Society of Bone and Mineral Research, San Diego, CA. September 2011. Poster Presentation

"Lrp5 Receptor and PGE₂ in Bone Response to Mechanical Loading" St. Albert's Day Student Research Forum, Omaha, NE. April 5, 2011. Oral Presentation

"Lrp5 Receptor and PGE₂ in Bone Response to Mechanical Loading" Midwest Student Biomedical Research Forum, Omaha, NE. Feb 19, 2011. Oral Presentation

"Lrp5 Receptor and PGE₂ in Bone Response to Mechanical Loading" American Society of Bone and Mineral Research, Toronto, Ontario, Canada. October 2010. Poster Presentation

"Differential Effects of Parathyroid Hormone (PTH) and Tibial Compression on Bone Formation with Variation in Lrp5 Expression" American Society of Bone and Mineral Research, Denver, CO. September 2009. Poster Presentation

"Bone Response to Mechanical Loads and Lrp5 Genotype" American Society of Bone and Mineral Research, Montreal, Quebec, Canada; September 2008. Poster Presentation

Professional Organizations

American Society of Bone and Mineral Research, 2010-Present American Association for the Advancement of Science, 2012-Present President, Graduate Student Government, Creighton University, 2013 Vice-President, Graduate Student Government, Creighton University, 2012

Service

Eastern Nebraska Office on Aging, Omaha, NE	2012 - Present
Habitat for Humanity, Omaha, NE	2012, 2013
St. Stephen's Center, Omaha, NE	2013
Relay for Life, Creighton University, Omaha, NE	2013
Heartland Hope Mission, Omaha, NE	2012
Holy Cross Church, Omaha, NE	2011 - Present
St. Vincent DePaul Shelter, Omaha, NE	2012