

# 3<sup>rd</sup> Annual Interdisciplinary Biomedical Research Symposium

October 22, 2011  
ATSU-Kirksville Campus

## Poster Session Presentations

(Responsible Author is underlined)

### MEDICAL EDUCATION

**Frequency of counterstrain tender points in osteopathic medical students – an osteopathic educational research project.** Karen T. Snider, D.O., John Glover, D.O., Paul Rennie D.O., Heather Ferrill, D.O., William F. Morris, D.O., Jane C. Johnson, M.A.

**Poster No. 01**

**The use of consensus training and calibrated pelvic models to determine the accuracy of medical students palpating pelvic landmarks.** Ben Cook, OMS II, Blake Hood, OMS II, Sam Engemann, OMS II, Melissa Kuehl, OMS II, Joshua Wilson, Allison Dooley, Brian Degenhardt, D.O.

**Poster No. 02**

### MUSCULOSKELETAL DISEASE

**Histological classification of the lateral patellofemoral ligament.** Michael B. McIntyre Jr., Peter Kondrashov, Ph.D.

**Poster No. 11**

**Comparison of isometric contractions of transverse abdominis EMG activity.** Laura Swaters, Jeremy J. Houser, Ph.D., Brian F. Degenhardt, D.O., Michael Bird, Ph.D.

**Poster No. 12**

**Osteopathic manual treatment of ankle pain in a rat model.** C Guthrie, A Schuerman, C Wilson, BD Worthington, M.S., EJ Snider, D.O., JC Johnson, M.A., VK Singh, Ph.D., NJ Sargentini, Ph.D., RL Ruhlen, Ph.D.

**Poster No. 13**

**Anatomical and radiographic characterization of the lateral patellofemoral ligament of the knee.**

Karl Boehm, B.S., Kevin Marberry, M.D., Fredrick Korpi, B.S., Peter Kondrashov, Ph.D.

**Poster No. 14**

**The phylogeny of extant Xenarthran genera based on post-cranial osteological morphology.**

Paul R. Buttars, B.S., Peter E. Kondrashov, Ph.D.

**Poster No. 15**

*Continued on next page...*

## **CANCER BIOLOGY**

**Effect of progesterone treatment on melanoma cell growth and adhesion.**

Pandurangan Ramaraj, Ph.D., Jason Brown, James L. Cox, Ph.D.

**Poster No. 21**

**Umbilical cord matrix stem cells as an anti-cancer delivery vehicle for melanoma treatment.**

Raja Rachakatla, Ph.D., Kelsey Davis, Ashley Reuter.

**Poster No. 22**

**Using neural stem cells as a drug delivery vehicle for human breast cancer.** Ashley Reuter, B.S.,

Kelsey Davis, B.S., Raja S. Rachakatla, Ph.D.

**Poster No. 23**

**Using FRET to measure MT1-MMP activity in melanoma cells.** Micheal S. McGrew, B.S.,

Robert Baer, Ph.D.

**Poster No. 24**

**Gene expression in x-irradiated *Escherichia coli*.** Deshala L. Castille, B.S., OMSII, Deborah A.

Hudman, M.S., Vineet K. Singh, Ph.D., Neil J. Sargentini, Ph.D.

**Poster No. 25**

**The effect of alanine substitutions on RadA/Sms epitope stability.** Melissa K. Stuart, Ph.D., Jacob L.

Hiatt, B.A., Nastassia C. Richardson, M.S., Neil J. Sargentini, Ph.D.

**Poster No. 26**

## **INFECTIOUS DISEASE**

***C. elegans* as a model for *S. aureus* virulence.** Terin E. Budine, Neal Chamberlain, Ph.D.,

Vineet Singh, Ph.D., Tim D. Walston, Ph.D.

**Poster No. 31**

**Discerning the effects of natural selection and genetic drift using a modification of Tajima's *D***

**statistic.** Nathan D. Kopp, Colin D. Teberg, Anton E. Weisstein, Ph.D., Pam J. Ryan, Ph.D.

**Poster No. 32**

**Development of culture and a rapid PCR assay for periodontal bacteria.** Nipa Patel, Alex Dalecki,

Nirupa Gariga, D.D.S., Inder Makin, M.D., Ph.D., Vineet Singh, Ph.D.

**Poster No. 33**

## **NEUROLOGICAL DISEASE**

**Chronic Buspirone treatment increases newborn cell survival in the dentate gyrus of the hippocampus in an adolescent rat model.** Stephanie Smith, Michelle Hovorka,

David Middlemas, Ph.D.

**Poster No. 41**

**Establishing *Caenorhabditis elegans* as a model for neural tube defects.** Bridget C. Waller,

Kassi L. Crocker, Timothy D. Walston, Ph.D.

**Poster No. 42**

*Continued on next page...*

## **CARDIOVASCULAR DISEASE**

**Pharmacological identification of voltage-gated sodium channels expressed in muscle afferent neurons.** Renuka Ramachandra, Ph.D., Stephanie McGrew, B.S., James Baxter, B.S., Keith S. Elmslie, Ph.D.

**Poster No. 51**

**The effects of caffeine on vascular injury-induced neointimal hyperplasia.** Ryan D. White, Yingzi Chang, Ph.D.

**Poster No. 52**

**Continuous multi-signal assessment of peripheral vascular flow following sequential, controlled digital vertebral pressure.** Deborah M. Heath, D.O., Inder Raj S. Makin, M.D., Ph.D., Chandhana Pedapati, M.S., T. Douglas Mast, Ph.D.

**Poster No. 53**

**Implementation of a long-duration multi-parameter peripheral vascular acquisition system following modification of a clinical device for ultrasound Doppler, photo-pulse plethysmography (PPG), and pulse volume recording (PVR).** Joshua Hope, MS, Inder Raj S. Makin, M.D., Ph.D., Deborah M. Heath, D.O.

**Poster No. 54**

## **MEDICAL RESEARCH**

**Confocal laser scanning microscopy at KCOM.** Stephanie Smith, Michelle S. Hovorka, David E. Ewing, David S. Middlemas, Ph.D.

**Poster No. 61**