



## Mentored Student Research Program

Des Moines University  
Olsen Medical Education Center and Ryan Hall  
July 20, 2012

### RESEARCH IS VITAL, AND AT DMU STUDENTS ARE VITAL TO RESEARCH.

The DMU Mentored Student Research Program is designed so that students may intensify or focus an interest in research while growing knowledge of how research impacts life.

### Agenda

9:30 a.m. Registration and Poster Presentations

*Location: Olsen Medical Education Center*

10 a.m. Welcome

*Jeffrey Gray, Ph.D.; Vice President for Research, Director of Master of Science in Biomedical Sciences, and Professor of Microbiology and Immunology, Des Moines University*

*Rachel Reimer, Ph.D.; Chair of the Research and Grants Committee, Assistant Professor of Master of Public Health, Des Moines University*

10:15 a.m. Keynote Address

DNA Methylation in Substance Use: Focus on Smoking

*Robert Philibert, M.D., Ph.D., Professor of Psychiatry and Director of the Psychiatric Genetics Laboratory, University of Iowa*

11:15 a.m. Presentation of Certificates and Recognition of Scholarship Recipients

11:30 a.m. Lunch and Poster Presentations

1 p.m. Oral Presentations

Physical Therapy – Ryan Hall 179

Public Health – Ryan Hall 181

Biomedical Sciences – Ryan Hall 280

Biomedical Sciences – Ryan Hall 281



## Poster Presentations

### Biomedical Sciences

Poster #	Title	Student	Mentor
1	Role of Interaction between the G Protein-Coupled Estrogen Receptor 1 (GPER) and Stromal Interaction Molecule 1 (Stim1) on Store-Operated Ca <sup>2+</sup> Entry in Vascular Smooth Muscle Cells	Yuko Iwanaga, D.O.'15	Kim Tran, M.D., Ph.D.
2	Role of Interaction between the G Protein-Coupled Estrogen Receptor 1 (GPER) and Stromal Interaction Molecule 1 (Stim1) on Store-Operated Ca <sup>2+</sup> Entry in Vascular Endothelial Muscle Cells	Lara Terry, Drake University	Kim Tran, M.D., Ph.D.
3	Cx43 mRNA Extraction and RT-PCR from Rat Left Ventricle	Jonathan Senkler, D.O.'15	Julia Moffitt, Ph.D.
4	Telomerase Inhibitor MST-312 Reduces Viral Replication of HSV-1 and HSV-2	Scott Roberts, D.O.'15	Marie Nguyen, Ph.D.
5	Analysis of Expressed Angiogenic Proteins in Glioblastoma Multiforme	Hannah Oliver, D.O.'15	David Strom, Ph.D.
6	Induction of Trehalose Synthase by Boric Acid	Shelbee Ellison, Grand View University	Martin Schmidt, Ph.D.
7	Examining the Effects of Multi-Drug Resistant CMY2 Plasmids on Environmental Fitness of <i>Salmonella enterica</i>	Taylor Hircock, University of Northern Iowa	Samina Akbar, Ph.D.
8	Increased Resistance to Multiple Antimicrobials in blaCMY-2 Salmonella Following Treatment with Ceftriaxone	Russell Hamilton, D.O.'15	Jeffrey Gray, Ph.D.
12	Acetylation of Histone H4 During Exposure to Boric Acid	Jonathan Kriescher, D.O.'15	Martin Schmidt, Ph.D.

### Physical Therapy

Poster #	Title	Student	Mentor
9	Reliability of Hip Strength Tests	Brittany Lovin, Iowa State University Rachel Turner, Columbia University	Shannon Petersen, P.T., DScPT, OCS, FAAOMPT, COMT
10	Total Hip Arthroplasty Effect on Activity Levels of Individuals with Osteoarthritis of the Hip	Katie Foarde, D.P.T.'15	Vassilios Vardaxis, Ph.D.
11	Gait Comparison of Minimally Invasive Direct Anterior and Posterolateral Total Hip Arthroplasty using Electromyography	Jennifer Perry, Drake University	Vassilios Vardaxis, Ph.D.

## Oral Presentations

	Physical Therapy Ryan Hall 179	Public Health Ryan Hall 181	Biomedical Sciences Ryan Hall 280	Biomedical Sciences Ryan Hall 281
1 p.m.	Predicting Physical Therapy Education Success Based on Undergraduate Institution Attended Nicole Hayden, Luther College <i>Mentor: Traci Bush, P.T., OTR/L, DHS and Julie Ronnebaum, M.P.T., D.P.T., GCS</i>	Hospital Utilization in Iowa Lindsey Miller, D.O.'15 <i>Mentor: Simon Geletta, Ph.D.</i>	Analysis of Angiogenic Biomarkers in Pancreatic Cancer Christopher Than, D.O.'15 <i>Mentor: David Strom, Ph.D.</i>	Boric Acid Resistance Screen in <i>Saccharomyces cerevisiae</i> Knockout Mutants Andrew Sims, D.O.'15 <i>Mentor: Martin Schmidt, Ph.D.</i>
1:20 p.m.	Gait Analysis of Minimally Invasive Direct Anterior and Posterolateral Total Hip Arthroplasty Alex Kelsheimer, D.O.'15 <i>Mentor: Vassilios Vardaxis, Ph.D.</i>	Diabetes Prevalence Measures: HCUP and BRFSS Cole Cheney, University of Iowa <i>Mentor: Simon Geletta, Ph.D.</i>	PCR Identification of Incompatibility Groups in Antibiotic Resistant <i>Salmonella</i> Strains Nicholas Noble, D.O.'15 <i>Mentor: Samina Akbar, Ph.D.</i>	Protein Kinases Impacting Phosphorylase Activity in <i>Saccharomyces cerevisiae</i> Kimberly Miller, Concordia University- Nebraska <i>Mentor: Wayne Wilson, Ph.D.</i>
1:40 p.m.	Proposing a Trial on the Effects on Strength of Thrust Manipulation Brittany Lovin, Iowa State University Rachel Turner, Columbia University <i>Mentor: Shannon Petersen, P.T., DScPT, OCS, FAAOMPT, COMT</i>	Micro-Populations in Central Iowa and Implications for Public Health and Health Care Delivery: Part 1 Than Pham, D.O.'15 <i>Mentor: Pamela Duffy, P.T., Ph.D.</i>	Exercise Training Reduces the Occurrence of Cardiac Arrhythmias and Changes the Pattern of Left Ventricular Connexin 43 Expression in Aged Rats Ashley Davenport, D.O.'15 Amanda Jepson, D.O.'15 Zachary Kadow, Drake University <i>Mentor: Julia Moffitt, Ph.D.</i>	Study of the Canid Amygdala for Insights into Human Neuroanatomy Brian Whyms, D.O.'16 <i>Mentor: Muhammad Spocter, Ph.D.</i>
2 p.m.		Gender and Ethnic Differences in Knowledge of the HPV Vaccine Among a Community Sample Julie Schommer, D.O.'15 <i>Mentor: Rachel Reimer, Ph.D.</i>		Role of Interaction between the G Protein-Coupled Estrogen Receptor 1 (GPER) and Stromal Interaction Molecule 1 (Stim1) on Store-Operated Ca <sup>2+</sup> Entry in Vascular Endothelial and Smooth Muscle Cells Yuko Iwanaga, D.O.'15 Lara Terry, Drake University <i>Mentor: Kim Tran, M.D., Ph.D.</i>