



2014 Annual Meeting

Montana Academy of Sciences

Montana Tech, April 11-12, 2014

Friday, April 11, 2014

5:30-7:00 Registration and Hang Posters, Lobby and Big Butte Room (SUB)

6:00-7:00 Reception and Poster Session, Big Butte Room (SUB)

7:00-8:00 *Buffet Dinner, Copper Lounge (SUB)*

8:00 Awards Presentation, Copper Lounge (SUB)

8:15-~9:30 Poster Session (Continued), Big Butte Room (SUB)

Saturday, April 12, 2014

7:30-9:00 Board of Directors Meeting, Pintler Room (SUB)

8:00-9:00 Breakfast (SUB)

9:00-10:20 Presentation Session #1, Copper Lounge (SUB)

10:00-12:00 Junior Academy Breakout Sessions, Big Butte Room (SUB)

10:30-10:45 *Coffee Break, Lobby (SUB)*

10:45-12:00 Presentation Session #2, Copper Lounge (SUB)

12:00-1:00 *Lunch (SUB)*

1:00-3:30 Presentation Sessions #3 and #4, Big Butte Room and Copper Lounge (SUB)

Presenter Schedule, Session #1, Copper Lounge (SUB) Saturday, April 12, Plenary Session

9:15 Jr. Academy Talk

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9:45 Kayla Baisch, RMC, "Evolution of Receptor-Isoform Signaling Specificity in the Activin Signaling Pathway"

10:00 Heidi M. Clark, MSU, "Response and Resilience of Rivers in the Greater Yellowstone Ecosystem: A Repeat Photography Analysis"

10:15 Russell Kaehler, UM, "Identifying K-Mers that Contribute Strongly to Effective Classification of Metagenomic Samples"

Presenter Schedule, Session #2, Copper Lounge (SUB) Saturday, April 12, Plenary Session

10:45 Carey Phelan, Carroll, "Nurses' Commitment and Motivation to Improved Personal Health: The Role of Hospital Administration"

11:00 Melissa Herrygers, MSU, "Pregnancy Rate and Metabolites in Bighorn Sheep (*Ovis canadensis*) at the End of Breeding Season and the First Trimester of Pregnancy"

11:15 Samantha Jones, UGF, Properties of Water and their Effects on the Rate of Decomposition"

11:30 Crystal L. Richards, MSUB, "The Acetate/Mevelonate pathway of *Borrelia burgdorferi* is required for viability not virulence factor gene expression"

11:45 Gereint P. Sis, RMC, "Detection of Biologically Produced Hydrogen using Platinum Nanoparticles and an Oxidizing Agent"

Presenter Schedule, Session #3, Big Butte Room (SUB) Saturday, April 12

1:00 John Anderson, Tech, "Identifying Water Endmembers and Comparing Groundwater Surface Water Interactions for Three Water Years in the Upper Boulder River, MT"

1:15 Sarah Chappell, Tech, "Installation of Distributed Temperature Sensing (DTS) Fiber Optic Cable to Measure Temperature Profiles in Underground Geothermal Water Shafts and Drifts"

1:30 Joshua Beisel, Tech, "Fabrication and Characterization of Nanoscale Sensors Made via Electrospinning"

1:45 Andrew Erickson, Tech, "Developing a Predictive Model for the Plastic Deformation of Friction Welded Tubing"

2:00 Break

2:15 Ryan Hensleigh, Tech, "Synthesis of Supramolecular Nanoparticle Structures"

2:30 Mariah McCormick, Tech, "Joint Roughness Comparison Using Tilt Testing, Laser Screening, and Laboratory Direct Shear Testing"

2:45 Heidi Reid, Tech, "A Study of the Fluorescent Properties of Nanoapatite Particles under Externally Applied Magnetic Fields"

3:00 Jessica Taylor, Tech, "Temperature Effects on the Synthesis of Nanohydroxyapatites and Lanthanum Silicates"

3:15 Dennis Moritz, Tech, "An Algebraic Method using Finite Groups of Optimization of Hearts"

Presenter Schedule, Session #4, Copper Lounge (SUB) Saturday, April 12

1:00 R. Samuel Hall, Tech, “Optimizing the Lipid Production of *Chromulina freisburgensis*”

1:15 Dylan Uecker, Tech, “Developing a Testing Method for Repeated Lipid Analysis and Maximizing Lipid Production of Algae for Biofuels”

1:30 Casey McConnell, Tech, “Infection Rate of NC64A *Chlorella variabilis* by PBCV-1 in the Presence of Iron-doped Hydroxyapatite Nanoparticles”

1:45 Joslyn Reisinger, Tech, “Analysis of Volumetric Space between the Brain and the Inner Neurocranium in Relation to Highest Level of Education Achieved”

2:00 *Break*

2:15 Alexandra Weinheimer, Tech, “*E. coli* as a Model System to Determine the Essential Genes Involved in Recognition and Repair of Chromium Mediated DNA Damage”

2:30 Brittney Robbins, UGF, “Optimum Protein for Optimum Performance”

2:45 Brennan Zotovich, RMC, “Phenotypic and Genetic Characterization of a Hybrid *Phoxinus* Community in a Montana Prairie Stream”

3:00 James Barron, MSUB, “Factors promoting coexistence in a sexual/asexual minnow complex”

3:15