AWARD WINNING ORAL PRESENTATIONS

**EXTRACTION OF GLANDS AND ANALYSIS OF THE TOXIN IN TADPOLE MADTOMS**
*Noturus gyrinus*
Elizabeth Arnold and Randy Krainock (Advisor)
*Biology Department*
*St. Mary’s University of Minnesota, Winona, MN*

**CHRONIC ALLERGEN CHALLENGE PROVOKES PERSISTENT VULVAR PAIN IN MICE**
Alyssa Ashbaugh, Tijana Martinov, and Dr. Devavani Chatterjea (Advisor)
*Department of Biology*
*Macalester College, St. Paul, MN*

**FUNCTIONAL ANALYSIS OF A PROPOSED CELLULASE GENE IN Cellulophaga lytica**
Rachel A. Blesi, Trevor J. Diercks, and Joanna R. Klein (Advisor)
*Department of Biology*
*University of Northwestern, St. Paul, MN*

**ULTRASONIC BACKSCATTER COEFFICIENT MEASUREMENTS FOR TISSUE MIMICKING PHANTOM**
Rehman S. Eon and Anthony Gerig (Advisor)
*Department of Chemistry and Physics*
*Viterbo University, La Crosse, WI*

**DEVELOPMENTAL EFFECT OF ETHANOL ON ALCOHOL CONSUMPTION IN MULTIPLE GENERATIONS**
Felicia M. Houk and Robert C. Lawrence (Advisor)
*Biology Department*
*Viterbo University, La Crosse, WI*

**OVENBIRDS IN EAST-CENTRAL MINNESOTA FOREST FRAGMENTS THREATENED BY VERY HIGH LEVELS OF RACCOON NEST PREDATION**
Karina Li, Lilly Bock-Brownstein, Nolan Kriegel, Mike D. Anderson, Marta LeFevre-Levy, Casey Dallavalle, Jerald J. Dosch, and Mark A. Davis (Advisor)
*Department of Biology*
*Macalester College, St. Paul, MN*

**HEAVY-METAL ANALYSIS OF BLUEGILL (Lepomis macrochirus) FROM EAST LAKE WINONA**
Amy I. Spitzmueller, Raymond Faber (Advisor), and Nathan Lien (Advisor)
*Department of Biology*
*St. Mary’s University of Minnesota, Winona, MN*

**EUROBONDS AND ITS APPLICATION IN EUROPEAN DEBT CRISIS**
Yue Yin, Dr. Kristina Terkun-Castro (Advisor)
*Department of Economics*
*Gustavus Adolphus College, Saint Peter, MN*
AWARD WINNING POSTERS

A STUDY TO DETERMINE THE PROPER TECHNIQUE FOR USE OF THE BREATHACTUATED NEBULIZER TO DELIVER THE HIGHEST PROPORTION OF AEROSOL TO THE LUNGS
Nicole K. Benhart, and Kerry E. George (Advisor)
Department of Respiratory Therapy
Des Moines Area Community College, Ankeny, IA

DEVELOPMENT OF A SYSTEM FOR ANALYSIS OF THE PATTERN OF MUSCLE CONTRACTIONS DURING Drosophila melanogaster CRAWLING BEHAVIOR
Mary Catherine M. Decker and Jenifer Schaefer (Advisor)
Department of Biology
College of St. Benedict – St. John’s University, Collegeville, MN

C-H ACTIVATION AT GOLD(III): SYNTHESIS OF CHIRAL SULFONIUM SALTS
Arianna M. Kooyman and Daron E. Janzen (Advisor)
Department of Chemistry and Biochemistry
St. Catherine University, St. Paul, MN

SYNTHESIS OF C5 AND C10 VINYLOXYBENZENE-CONTAINING SUBSTRATES FOR THE ENZYME PROTEIN FARNESYLTRANSFERASE
Janet Muzulu, Katelyn Caron, and James W. Wollack (Advisor)
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SIZE AND AGE STRUCTURE OF BLACK, GOLDEN, AND SHORTHEAD REDHORSE IN THE NORTH BRANCH ROOT RIVER
Collin A. Nienhaus and Philip Cochran (Advisor)
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TEMPLATE DIRECTED POLYMERIZATION VIA REDUCTIVE AMINATION OF MODIFIED THYMINE MONOMERS
Laura Rasmussen, and Mitchell Maddox (Advisor)
Department of Chemistry
Bethel University, St. Paul, MN

THE CORNER STORE PROCUREMENT PROJECT
Taylor K. Schuweiler¹, Nora Hoeft², Kristen Klingler², and Adam D. Kay (Advisor)¹
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MORPHOLOGICAL CONTROL IN PECHINI GEL SYNTHESIS: A STUDY OF POROUS METAL OXIDES
Sammy Shaker, Stephen Rudisill, and Andreas Stein (Advisor)
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HEAVY-METAL ANALYSIS OF BLUEGILL (Lepomis macrochirus) FROM EAST LAKE WINONA
Amy I. Spitzmueller, Raymond Faber (Advisor), and Nathan Lien (Advisor)
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INVESTIGATING THE ROLE OF TRIAZOLE BASED LIGANDS IN A NICKEL-CATALYZED DEHYDROGENATION OF AMMONIA-BORANE
Meghan O. Talbot and Marites A. Guino-o (Advisor)
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