

UNIVERSITY OF MINNESOTA

2003 Life Sciences Summer Undergraduate Research Programs (LSSURP)

Poster Symposium

Friday, August 8, 2003

4:30 p.m. - 6:30 p.m.

Terrace Cafe

St. Paul Student Center

<u>Name</u> <u>Program</u>	<u>Poster Title</u> <u>Mentor(s)/Department(s)</u>	<u>College/University</u> <u>Field(s) of Study</u>	<u>Poster</u> <u>Number</u>
Julie Allen Molecular Biology	Investigating the Role of Myosin 1 Motor Protein in <i>C. Elegans</i> Margaret Titus, Genetics and Cell Development	Bates College Studio Art	26
Allison Ast Molecular Biology	Random Activation of Gene Expression Using the Sleeping Beauty Transposon System David Largaespada, Genetics and Cell Development	St. Mary's University Biology, Chemistry	27
Tyler Banaszak Molecular Biology	The Role of LEF1 and Runx2 in Breast Cancer-Associated Bone Disease Jennifer Westendorf, Orthopaedic Surgery	University of Minnesota – Morris Chemistry	28
Lynnette Batt Environmental Sciences	Male Assessment of Female Mating History and the Regulation of Sperm Transfer in Monarch Butterflies (<i>Danaus plexippus</i>) Karen Oberhauser, Ecology, Evolution, and Behavior	Bowdoin College Environmental Sciences, Biology	12
Jennifer Borja-Rivera Molecular Biology	Synthesis and Characterization of Phosphorothioate Analogs of 3-deaza-NAD and 3-deaza-cADPR Timothy Walseth, Pharmacology	University of Puerto Rico – Cayey Biology	29
John Cassady Independent Research	The Analysis of Bronchoalveolar Lavage Fluid Using Mass Spectrometry Gary Nelsestuen, Biochemistry, Molecular Biology, and Biophysics	Massachusetts Institute of Technology Biology, Engineering	20

Eric Chau Biomedical Engineering	Methods for Characterizing and Measuring the Kinetics of Nanocapsules for Cryopreservation Allison Hubel, Laboratory Medicine and Pathology	University of Minnesota – Twin Cities Biomedical Engineering	1
Annapoorani Chellappan Biomedical Engineering	The Effect of the Size and Surface Coatings of Magnetic Beads in Magnetic Bead Force Application (MBFA) Peter Steinmetz, Biomedical Engineering	University of Arizona Chemical Engineering	2
Daniel Chiou Biomedical Engineering	Bio-Microelectromechanical System (Bio-MEMS) Design Victor Barocas, Biomedical Engineering	Princeton University Electrical Engineering	3
Melissa Christopherson Molecular Biology	Characterization of <i>Arthrobacter aureescens</i> Metabolism Larry Wackett, Biochemistry, Molecular Biology, and Biophysics	Luther College Biology, Political Science	30
Noreen Cipriano Neuroscience	Different Models of Hyperalgesia in the Mouse Alice Larson, Veterinary Pathobiology	Brown University Neuroscience, Slavic Studies	42
Gladys Claudio-Ortiz Molecular Biology	Use of Subtractive Hybridization to Differentiate Escherichia Coli Isolates from Human and Cow Sources Michael Sadowsky, Soil, Water, and Climate	University of Puerto Rico – Humacao Microbiology	31
Megan Cleland Neuroscience	Effects of Intrathecal Calcitonin Gene-Related Peptide on Capsaicin Induced Hyperalgesia In Vivo Virginia Seybold, Neuroscience	St. Cloud State University Biomedical Sciences, Biochemistry	43
Eboni Corprew Molecular Biology	The Deletion of the Chromosome 5 Major Repeating Sequence and its Effects on Segregation in <i>Candida albicans</i> Pete Magee, Genetics and Cell Development	Longwood University Biology, Chemistry	32
Jennifer Craig Biomedical Engineering	Investigating poly(ethyleneoxide)-poly(caprolactone) as a Scaffolding Material for Tissue Equivalents Robert Tranquillo, Chemical Engineering and Material Sciences	University of Notre Dame Chemical Engineering	4
Mara Zoé Feliciano-Rivera Neuroscience	An Animal Model of Impulsivity (Delay Discounting) Predicts Vulnerability to Acquisition of I.V. Cocaine Self-Administration Marilyn Carroll, Psychiatry	University of Puerto Rico – Río Piedras Natural Sciences	44
Marién Fernández-París Independent Research	Calculation of the Final Helical Axis Using Clinical Bite Records Maria Pintado, Oral Sciences	University of Puerto Rico – Río Piedras Biology	21

Darren Galligan Biomedical Engineering	Comparing Assessment Techniques Used to Measure the Linearity of the Spine Paul Iaizzo, Anesthesiology	University of Michigan – Ann Arbor Biomedical Engineering	5
José R. Gómez-García Molecular Biology	Synthesis of a peptidomimetic L-prolyl-L-leucyl-glycinamide Rodney Johnson, Medicinal Chemistry	University of Puerto Rico – Río Piedras Education in Chemistry	33
Amy Hanson Neuroscience	Delineation of the Neural Pathway Mediating Compensatory Adrenal Growth Using Fos Immunohistochemistry William Engeland, Surgery	Bethel College Biology, Philosophy	45
Amber Harrer Biomedical Engineering	Streptomyces coelicolor DNA Microarray for Genome Wide Transcription Investigation Wei-Shou Hu, Chemical Engineering and Material Sciences	Montana State University Chemical Engineering	6
Elise Haupt Neuroscience	Mechanisms for D-serine Release in Muller Cells of the Retina Robert Miller, Neuroscience	University of Wisconsin –Stevens Point Biology	46
Kaoru Hida Biomedical Engineering	Tissue Engineering Blood Vessels and Heart Valves' Robert Tranquillo, Chemical Engineering and Material Sciences	University of California –Berkeley Bioengineering	7
Jessica Jarecki Neuroscience	Identification of Tumor-Related Cytokines in a Mouse Model of Cancer Pain Alvin Beitz, Veterinary Pathobiology	Ripon College Chemistry, Psychobiology	47
Shara Johnson Molecular Biology	Studying Powdery Mildew-Medicago Interactions Nevin Young, Plant Pathology	Alabama A&M University Food Science and Technology	34
Clinton Jones Biomedical Engineering	Utilizing Supersaturation to Facilitate the Intranasal Delivery of Diazepam Ron Siegel, Pharmaceuticals	Brigham Young University Chemical Engineering	8
William King, Jr. Biomedical Engineering	Radiation Therapy and Dosimetry in a Magnetic Resonance Scanner Bruce Hammer, Radiology	University of Toledo Bioengineering	9
James Klaas Molecular Biology	Fig Wasps: Reconstructing the Evolutionary History of the Pollinators, Parasites, and Parasitoids George Weiblen, Plant Biology	Dartmouth College Genetics	35

Megan Mackenzie Biomedical Engineering	Stabilizing the Breast for MR-Guided Biopsy Art Erdman, Mechanical Engineering	Columbia University Biomedical Engineering	10
Krystal Madden Molecular Biology	The Effects of Lamin A Mutations on Nuclear Localization and Protein Interactions Charlotte Brown, Laboratory Medicine and Pathology	Jackson State University Honors College Biology	36
Sofia Maldonado-Diaz Independent Research	Expression of the Paramyecium Telomerase Reverse Transcriptase N-Terminus in a Heterologous System Daniel Romero, Pharmacology	University of Puerto Rico –Cayey Biology	22
Claire Mielke Molecular Biology	Investigating Molecular Mechanisms of Nicotine-Induced Teratogenesis during Zebrafish Embryogenesis Stephen Ekker, Genetics and Cell Development	Gustavus Adolphus College Biology	37
Gabriela Monsalve Environmental Sciences	Genetic, Compositional, and Nutritional Characteristics of Soil Microbial Communities Associated with the Plant Hosts <i>Andropogon gerardi</i> , <i>Lespedeza capitata</i> , and <i>Liatris aspera</i> Linda Kinkel, Plant Pathology	University of Minnesota –Twin Cities Biology	13
Lauren Nettenstrom Environmental Sciences	Chitinase Expression and Its Possible Anti-Fungal Effects in Alfalfa Deborah Samac, Plant Pathology	Valparaiso University Biology, Chemistry, Spanish	14
Shanna Nifoussi Neuroscience	Protein Kinase B/Akt Signaling and Neurodegeneration Harry Orr, Laboratory Medicine and Pathology	College of St. Catherine–St. Paul Biology	48
Julie Nilsen Environmental Sciences	The Presence and Implications of <i>Ustilago maydis</i> Soil Populations Georgiana May, Ecology, Evolution, and Behavior	Carleton College Biology	15
Meredith Noetzel Neuroscience	Neuronal Expression Patterns of Bursicon, the Insect Tanning Hormone Karen Mesce, Entomology	University of Minnesota –Morris Biology, Chemistry	49
Edna Nore' Molecular Biology	Preconditioning Effects of Isoflurane on Swine Skeletal Muscle Paul Iaizzo, Anesthesiology	Oakwood College Biochemistry	38
Samuel Nummela Neuroscience	Automated Spike Sorting is More Consistent than Manual Method for Analysis of Human Single Unit Data Peter Steinmetz, Biomedical Engineering	St. Cloud State University Biotechnology, Mathematics	50

Cornelia Oehler Neuroscience	Levels of the Synaptosomal Associated Protein SNAP-25 in Prefrontal Cortex of Subjects with Schizophrenia Hossein Fatemi, Psychiatry	Colgate University Neuroscience	51
Irene Onyeneho Neuroscience	Neuron Regeneration, Older Chick Brainstem Neurons Regenerate Axons More Slowly than Younger Neurons During the Critical Period of Development Paul Letourneau, Neuroscience	Dartmouth College Cognitive Science	52
Charito Orengo-Rodríguez Environmental Sciences	Endomycorrhizal Fungi Characterization by Sequencing ITS Regions from Ribosomal RNA Genes Nicholas Jordan, Agronomy & Plant Genetics	University of Puerto Rico –Río Piedras Biology	16
Nicolás Ortiz Neuroscience	Electron Paramagnetic Resonance (EPR) to Study Muscle Force Generation at the Protein Level David Thomas, Biochemistry, Molecular Biology, and Biophysics	Southwestern Adventist University Biology	53
Kwadwo Owusu-Sarfo Molecular Biology	The Effect of Shoot on Nodule Development in Legume Roots Kathryn VandenBosch, Plant Biology	Claflin University Biochemistry	39
Angela Pawlak Environmental Sciences	Mosquito Larvae Grow Faster in Phosphorous-Enriched Food Robert Sterner, Ecology, Evolution, and Behavior	University of Minnesota –Morris Biology, Psychology	17
Dawn Peeples Independent Research	Biotechniques 2003: The Social Implications of Hard Science Jonathan Marchant, Pharmacology	Rutgers University Biomedical Engineering	23
Michael Pennino Environmental Sciences	Correlations in the Inhibitory, Nutrient Utilization, and Genetic Characteristics of Streptomycete Isolates – Compared Among 3 Prairie Plant Hosts Linda Kinkel, Plant Pathology	Oberlin College Biochemistry	18
Theresa Sauer Neuroscience	Characterization of Synaptogenesis-Related Gene Expression in Mouse Cerebellum Rod Feddersen, Veterinary Pathobiology	Iowa State University Genetics	54
Shannon Stepler Neuroscience	The Mapping of Neuromuscular Junctions in Developing Rabbit Muscles Linda McLoon, Ophthalmology	University of Mary Biology	55

Zeeshan Syedain Biomedical Engineering	Role of Nitric Oxide in Hibernating Myocardium Robert Bache, Medicine	Pennsylvania State University Chemical Engineering	11
Jaz-Min Taylor Environmental Sciences	Uncovering Factors that Contribute to Kura Clover's Slow Nodulation Michael Russelle, Soil, Water, and Climate	Fort Valley State University Biology	19
Jon (Mike) Underwood Independent Research	The Role of Rad51 Protein in Cellular Sensitivity to Diepoxybutane Colin Campbell, Pharmacology	Tuskegee University Biology	24
Phillip G. Walton, Jr. Molecular Biology	Matrix Metalloproteinase Activity in Human Benign Prostatic Hyperplasia (Bph) and Cancerous Tissue Michael Wilson, Laboratory Medicine and Pathology	Florida A&M University Chemistry, Molecular Biology	40
Wynette Will Independent Research	Expression of TGF- β /BMP Signaling Molecules During T Lymphocyte Development Kristin Hogquist, Laboratory Medicine and Pathology	Hamline University Biology	25
Rémy Wong Molecular Biology	Fbw7 DeltaFbox Variants Show Different Levels of Inhibition of Cyclin E Degradation In Vitro Deanna Koepf, Genetics and Cell Development	University of Minnesota –Twin Cities Microbiology	41