

MOLECULAR BIOLOGY BIOCHEMISTRY MAJORS

<u>Class</u>	<u>Major</u>	<u>Full Name</u>	<u>Mentor</u>	<u>Thesis Title</u>
2013	MBBC	Christopher Batson '13	Spritzer	Potential Roles of Testosterone and Luteinizing Hormone in Spatial Memory in Male Rats
2013	MBBC	Louis Cornacchione '13	Spatafora	Identifying Critical Nucleotides for the SloR:SRE Interaction in <i>Streptococcus mutans</i>
2013	MBBC	Clark Hathaway '13	Spatafora	Mutational analysis of SloR metal ion-binding sites 1 and 2 in <i>Streptococcus mutans</i> : deciphering the respective impacts of conservative and double non-conservative amino acid substitutions on the SloR-SRE interaction
2012	MBBC	Claire Bovet '12	Ward	Alternative Splicing Determines AKAP9 Expression in Somatic Cells
2012	MBBC	Samantha Chirunomula '12	Combelles	Antioxidant Activities in Granulosa Cells of Developing Bovine Antral Follicles
2012	MBBC	Michael Downey '12	Sandwick	Implications for the Effects of Cytochrome c Glycation on the Intrinsic Apoptotic Pathway
2012	MBBC	Jeff Hasell '12	Spatafora	Characterizing functional domains of the SloR metalloregulatory protein in <i>Streptococcus mutans</i>
2012	MBBC	Nolan Maier '12	Cluss	Proteins in the Moonlight: the multifunctional enolase of a Lyme disease spirochete
2012	MBBC	Kathryn Nagel '12	Ward	An Immunocytochemical Analysis of Ccnb1IP1 and Its Role in DNA Repair
2012	MBBC	Elizabeth Nuttall '12	Spatafora	SloR: Single component regulation of manganese sensing in <i>Streptococcus mutans</i>
2012	MBBC	Martine Stewart '12	Ward	Protein expression and post-translational modification in mei4 spermatocytes
2012	MBBC	Barbara Wilkinson '12	Combelles	Hormonal modulation of antioxidants in bovine granulosa cell cultures
2011	MBBC	Hannah Elizabeth Dzimitrowicz '11	Ward	Effects of mei4, a mutation in the mouse ortholog of CCNB1IP1, on chromatin organization and maturation of oocytes
2011	MBBC	William Krystyniak McConaughy '11	Spatafora	Finding a Protein's Shoe Size: Using DNA Footprinting to Decipher SloR's Binding Sites in <i>Streptococcus mutans</i>
2011	MBBC	Benjamin Emery Rubin '11	Spatafora	Relating Genotype to Phenotype in Promising Biofuel Crop Miscanthus
2011	MBBC	Mark Sorrentino '11	Spatafora	Characterizing IGR174 as a putative small regulatory RNA and mediator of <i>Streptococcus mutans</i> virulence gene expression
2011	MBBC	Patrick Tivnan '11	Spatafora	The role of SRE: promoter positioning in SloR class I and class II gene regulation in <i>Streptococcus mutans</i>
2011	MBBC	Hope Yao Yu '11	Combelles	Hydrogen peroxide in follicular fluid of developing bovine antral follicles
2010	MBBC	Lisa Mariko Gretebeck	Sandwick	Reduction of Bovine Heart Cytochrome c by Ribose 5-Phosphate
2010	MBBC	Caitlin Elizabeth King	Sandwick	The Nonenzymatic Glycation of Tubulin using Ribose 5-phosphate
2010	MBBC	Mitchell W. Pesesky '10	Spatafora	Characterizing the SloR Response Element in Vitro
2010	MBBC	Dijana Poljak '10	Combelles	The Expression of the Antioxidant Enzyme Catalase in the Follicular Fluid and Cumulus-Oocyte Complex During Bovine Antral Follicle Development
2010	MBBC	Evan Smith '10	Spatafora	Characterizing SloR binding to palindromic SRE sequences on the <i>S. mutans</i> chromosome: A protein perspective.
2010	MBBC	Gretchen Marie Van Deventer '10	Combelles	The Expression of Glutathione Peroxidase Isoforms in the Follicular Fluid and Cumulus-Oocyte Complex of Bovine Antral Follicles
2009	MBBC	Mohammed Ibrahim Almzayyen '09	Sandwick	The Kinetics of RpiA
2009	MBBC	Hussein R.H. Alramini '09	Cluss	Elucidation Of a Putative Isoprene Pathway In The Lyme Disease Bacterium <i>Borrelia burgdorferi</i>
2009	MBBC	Jeffrey Cloutier '09	Ward	Toward understanding the behavior of essential meiotic proteins: expression studies of CCNB1IP1 and CDK2
2009	MBBC	Jesse Davidson '09	Sandwick	Investigation of Substrate Channeling in the De Novo Purine Synthesis Pathway
2009	MBBC	Whitney Kathryn Hendrickson '09	Spatafora	Who's talking to whom? Investigating the modulation of gcrR in <i>Streptococcus mutans</i>
2009	MBBC	Kevin Patrick O'Rourke '09	Spatafora	Genome-wide characterization of SloR, a bifunctional metalloregulator of <i>Streptococcus mutans</i> cariogenesis
2009	MBBC	David Martin Ozimek '09	Combelles	Antioxidant enzyme activities and steroid hormone concentrations within the follicular fluid of individual developing antral follicles
2009	MBBC	Julia Ashley Schwartzman '09	Spatafora	Eat Your Spinach: A Ferric Uptake Regulator Homolog Represses the Oxidative Stress Response and Contributes to Maintenance of Metal Ion Homeostasis in Cariogen <i>Streptococcus mutans</i>
2009	MBBC	Rebecca Kiino Swartz '09	Ward	Effects of the mCCNB1IP1mei4 Mutation on Meiotic Recombinatorial Proteins in Male Mice
2008	MBBC	Andrew Wesley Harris '08	Sandwick	Site-Specificity of Protein Glycation
2008	MBBC	Gregory Lariviere Judson '08	Daugherty	Mutation and Characterization of the Mouse Inhibitor of Carbonic Anhydrase
2008	MBBC	Robert Bernard Levine '08	Spatafora	The Future of Biofuels: Using Microalgae to Produce Biodiesel and Treat Wastewater
2008	MBBC	Andrew Tillotson Livermore '08	Sandwick	Ribose-5-Phosphate-Induced Changes in the Porphyrin Ring and Peptide Portions of Myoglobin
2008	MBBC	Lathan William McCall '08	Spatafora	How Bacteria Survive in the Oral Cavity: Regulation of the Acid Tolerance Response in <i>S. mutans</i>
2008	MBBC	Cheryl Jane McClurg '08	Spatafora	Monitoring the Kinetics of the GcrR-Mediated Acid Tolerance Response in <i>Streptococcus mutans</i>
2008	MBBC	Qiaqia Wu '08	Combelles	Expression of the Antioxidant Enzymes Catalase and Glutathione Peroxidase in Ovarian Granulosa Cells
2007	MBBC	Laurie B. Griffin '07	Ward	The Positional Cloning and Characterization of mei 2.5, an Ethyl Methane Sulfonate (EMS) Induced Mutation of Akap9 Causing Defective Spermatogenesis in Mice

MOLECULAR BIOLOGY BIOCHEMISTRY MAJORS

2007	MBBC Dekker C. Deacon '07	Ward	Characterization of the Role of Apoptosis and Cyclin B3, a Putative Binding Partner of HE110, in the Male Mei4 Arrest Phenomenon
2007	MBBC Thuy Thanh Dinh '07	Spatafora	Characterization of a Putative Multi-Drug Resistance Locus That Is Subject to Metalloregulation in <i>Streptococcus mutans</i>
2007	MBBC Loseke P. Losambe '07	Spatafora	<i>Streptococcus mutans</i> Bacteriocin Expression Is Modulated by the SloR Metalloregulator
2007	MBBC Erin M. McConocha '07	Spatafora	Exploring a Putative Role for radA in the <i>Streptococcus mutans</i> Acid Tolerance Response
2007	MBBC Lisa M. Niswander '07	Ward	Cell Cycle Regulation of the Meiotic DNA Repair System: The Role of Hei10 in the Proper Progression of Prophase I
2007	MBBC Conor H. O'Neill '07	Spatafora	Identification of SloR Binding Sequences in the Genes Expressed by SloR Modulation Using DNA Footprint Analysis
2007	MBBC Louis J. Paolella '07	Combelles	Characterization of Superoxide Dismutase Antioxidants in Developing Bovine Antral Follicles
2006	MBBC Lindsay A. Newlon '06	Spatafora	The <i>Streptococcus mutans</i> SloR Metalloregulator Modulates Sucrose-Independent and -Dependent Adherence
2006	MBBC Jonathan L. Berliner '06	Byers	Variable Temperature Decarboxylation of Non-Steroidal Anti-Inflammatory Drugs
2006	MBBC Julie A. Godfrey '06	Spatafora	Characterization of the <i>Streptococcus mutans</i> vicRKX Signal Transduction System and Its Novel vicX Gene
2006	MBBC Laura A. Helft '06	Ward	Establishment of Two Cell Culture Systems to Study the Function of a Putative Ubiquitin Ligase
2006	MBBC William F. Powell Jr. '06	Spatafora	Exploring a Putative Role for the tarC Gene Product in the Acid Tolerance Response of <i>Streptococcus mutans</i>
2006	MBBC Stephanie R. Pritchard '06	Spatafora	Excessive Use of the Letter P: Studying uppP and pap2 in <i>Streptococcus mutans</i> Bacitracin Resistance
2006	MBBC Susanne M. Roberts '06	Spatafora	Now I Know My BZCs: The Effect of Manganese Ion Availability on the Expression of citBZC and Virulence in <i>Streptococcus mutans</i>
2006	MBBC Jeremy D. Shaw '06	Spatafora	Global Genomic Profiling: Identification of <i>Streptococcus mutans</i> Mn-responsive Virulence Genes by Microarray
2006	MBBC Adam D. Swick '06	Spatafora	Characterization of a Novel Quinone Oxidoreductase (qor) in <i>Streptococcus mutans</i>
2005	MBBC Charles W. Acher '05	Spatafora	TarC Control of Sucrose-Dependent Adherence in <i>Streptococcus mutans</i>
2005	MBBC Elizabeth A. Breuer '05	Sandwick	Ribose-5-Phosphate and the Maillard Reaction: Formation of Advanced Glycation End Products From Amino Acids and Proteins
2005	MBBC Andrew Fanous '05	Sandwick	Purification and Characterization of a New Splice Variant of Versican: A Porcine Spinal Cord Proteoglycan
2005	MBBC Nathaniel B. Langer '05	Spatafora	Characterizing a Role for Fimbrial Surface Protein Fap1 in the <i>Streptococcus parasanguis</i> : Endothelial Cell Interaction
2005	MBBC Yong Pan '05	Spatafora	Investigating Dlg Controlled Expressions of <i>S. mutans</i> Iron-Regulated Genes
2005	MBBC Amrita Sarkar '05	Sontum	Approaches to Protein Folding: Determination of the Structures of Selected Proteins of <i>Borrelia burgdorferi</i> Through a Compendium of Methods
2005	MBBC Stephen C. Swank '05	Spatafora	DNA repair gene radA is involved in the Acid Tolerance Response of <i>Streptococcus mutans</i>
2004	MBBC James R. Gahagan '04	Cluss	Homology Models and Molecular Analysis of Putative Carboxy-Peptidases in <i>Borrelia burgdorferi</i>
2004	MBBC Julie E. Heaphy '04	Kavaler	Putative Targets of The Transcription Factor D-Pax2 in <i>Drosophila melanogaster</i>
2004	MBBC Christine S. Lambert '04	Sandwick	An Analysis of Methods Used in the Purification of Two Purine Synthesis Enzymes: Glutamine-PRPP Amidotransferase and Purine Nucleoside Phosphorylase
2004	MBBC Corinne N. Lemay '04	Kavaler	Bacterial Growth in Farm Bedding as a Risk Factor for Clinical Mastitis in Holstein Cows
2004	MBBC Kyle L. Viani '04	Cluss	Identification of the <i>Borrelia burgdorferi</i> 3-hydroxy-3-methylglutaryl-CoA-reductase and Cloning of the HMGR Gene"
2003	XMBI Peter D. Newell '03	Kavaler	Genomic Studies of Gene Regulation: Developing a Dual-Plasmid Reporter System for Determining Target Sequences of Transcription Factors
2003	XMBI Hallie Parker Prescott '03	Kavaler	The Regulation of d-Pax2 during <i>Drosophila</i> Sensory Organ Development
2003	XMBI Jason R. Teichman '03	Watters	Inhibition of Calpain Prevents Downstream Caspase Activation of Immortalized Mammary Epithelial Cells Undergoing Apoptosis
2002	XMBI Nicholas Dutton-Swain '02	Spatafora	The Involvement of a Response Regulator in the GtfS-mediated Adherence of <i>Streptococcus mutans</i> to the Tooth Pellicle
2002	XMBI Sara E. Selgrade '02	Spatafora	Investigating Putative Cross-Regulation Between the <i>Streptococcus mutans</i> dlt and glg Loci
2002	XMBI Anne W. Thompson '02	Kavaler	The Role of Pax2 and Notch Signaling in the Execution of the Glial Cell Fate
2002	XMBI Ian S. Zenlea '02	Cluss	Two Dimensional Gel Electrophoretic Analysis of a Putative Lipase Produced by <i>Borrelia burgdorferi</i>
2001	XMBI Benjamin B. Freeman '01	Spatafora	Characterization of a Putative Metal Ion Transport Operon in <i>Streptococcus mutans</i>
2001	XMBI Vincent J. Idone '01	Spatafora	Tenacious adherence Regulator (tar) Controls the Gtf-S-mediated Adherence of <i>Streptococcus mutans</i> to the Tooth Pellicle
2001	XMBI Daniel Lagasse '01	Spatafora	Oxidative Stress Regulates Expression of a Newly-Identified Per Gene in <i>Streptococcus mutans</i>
2001	XMBI Emily A. Stonehouse '01	Spatafora	<i>Streptococcus mutans</i> fimA Codes for an Iron Transporter and is Regulated by a DtxR Homolog
2000	XMBI Ashley M. Forbes '00	Spatafora	Characterization of gtf-S Expression in <i>Streptococcus mutans</i> GMS315, an Adherence-Deficient Mutant
2000	XMBI Jennifer F. Frashure '00	Spatafora	Adhesion and Invasion of <i>Streptococcus pyogenes</i> to a Pharyngeal Carcinoma Cell Line
2000	XMBI Robert J. Gillespie '00	Spatafora	Characterization of tarC: A Putative Regulator of Gtf-S Expression in <i>Streptococcus mutans</i>
1999	XMBI Ginelle K. Andrews '99	Dick	Expression of the Distal-Less Gene in the Polychaete Worm <i>Ctenodrilus serratus</i>
1999	XMBI Michael A. Balamotis '99	Spatafora	In Vitro Expression of a Putative Response Regulator Protein in <i>Streptococcus mutans</i>
1999	XMBI Silas T. Marshall '99	Bult, Abel	Calretinin is Not a Marker for Subdivisions in the Uprachiasmatic Nucleus

MOLECULAR BIOLOGY BIOCHEMISTRY MAJORS

1998	XMBI	Gregory A. Burkett '98	Bunt or Byer	Stereoselective Synthesis of a Precursor to an Arylacetic Acid
1998	XMBI	David T. Luyimbazi '98	Spatafora	Regulation of <i>Streptococcus mutans</i> Intracellular Polysaccharide (IPS) Accumulation by the Phosphoenolpyruvate Phosphatase
1998	XMBI	Neal S. Van Hoeven '98	Spatafora	Identification of an Antioxidant in <i>Streptococcus parasanguis</i>
1998	XMBI	Katherine J. (Howard) Wagner '98	Spatafora	Evidence for Horizontal Gene Transfer in <i>Streptococcus parasanguis</i>
1998	XMBI	Wayne V. Warren '98	Spatafora	Evidence that a Two-Component Regulatory System Controls Gtf-S Expression in <i>Streptococcus mutans</i>
1997	XMBI	Joanna F. Bloom '97	Spatafora	Cloning of Iron-Responsive Genes from <i>Streptococcus mutans</i>
1997	XMBI	Patrick J. Donovan '97	Spatafora	<i>Streptococcus mutans</i> glg Gene Expression is Transcriptionally-Regulated.
1997	XMBI	Margaret E. Macy '97	Spatafora	Carbohydrate-regulated glg Gene Expression in <i>Streptococcus mutans</i>
1997	XMBI	Megan Noelle Sheets '97	Spatafora	Construction of glg:cat Fusions in <i>S. mutans</i> Mutants Altered in IPS Accumulation
1996	XMBI	Elizabeth D. Prescott '96	Fleming, Honoree	Nitric Oxide and Endocytosis: Possible Roles in the Differentiation of Endometrial Epithelia
1995	XMBI	Loren E. Clarke '95	Spatafora	Characterization of glg Locus in <i>Streptococcus mutans</i>
1995	XMBI	Andrew F. Gardner '95	Spatafora	Generation of Site-Directed Mutations to Study Structure-Function Relationships
1995	XMBI	Mai X. Luong '95		
1994	XMBI	James M. Donovan Jr. '94	Spatafora	Construction of Operon Fusions to Study <i>Streptococcus mutans</i> IPS Regulation
1994	XMBI	Kellie A. (Rohrer) Hemme '94	Spatafora	Mapping of Transposon Insertions in <i>Streptococcus mutans</i> Supports a glg Operon
1994	XMBI	Erica L. Peterson '94	Spatafora	Generation of a <i>Streptococcus mutans</i> Transposon Mutant Defective in Adherence to Hydroxyapatite
1993	XMBI	Timothy B. Curry '93	Watters	Identification and Characterization of Ca ²⁺ -Binding Proteins in Cytosolic Fractions of Mouse Mammary Glands Utilizing SDS-PAGE
1993	XMBI	Jeffrey David Kim '93	Spatafora	Subcloning of the <i>Streptococcus mutans</i> glg Locus for Subsequent In-Vitro Analysis of Putative glg B Gene Products
1993	XMBI	Heidi Rehm '93	Cluss	
1992	XMBI	Jon L. Bass '92	Choi, Sunhe	A Study of Phospholipid Bilayers by Phosphorus Nuclear Magnetic Resonance Spectroscopy
1992	XMBI	Colin F. Tan '92	Marano, Nat	Purification of Cytoskeletally-Associated T Cell Receptor Complexes
1992	XMBI	Bethany D. Tucker '92	Small, Pame	Further Characterization of Conjugal Systems Containing a Test Plasmid with Two OriT's
1991	XMBI	Emily S. (Stowe) Cleaveland '91	Saul, George	Transfer of the Tinged 277 Incompatibility Factor Into Wild Type Strain of <i>Nasonia (Mormoniella) vitripennis</i> by Feed
1991	XMBI	Lesley A. Jarvis '91	Fleming, Honoree	
1991	XMBI	Karl Michalko '91	Fleming, Honoree	
1991	XMBI	Donald Robert Morse '91	Choi, Sunhe	Atomic Absorption Spectroscopic and Differential Scanning Calorimetric Studies on the Effect of Cholesterol on the Divalent Cation Binding of Phospholipid Bilayers
1991	XMBI	Rodney Thompson '91	Fleming, Honoree	
1990	XMBI	Robert C. Baran '90	Byers, Jeff	Synthesis and Reactions of Some New Formaldehyde Cyanohydrins

MOLECULAR BIOLOGY BIOCHEMISTRY MAJORS

on

tral Folliculogenesis

ollicles

llicles

MOLECULAR BIOLOGY BIOCHEMISTRY MAJORS

notype

is mutans

roteins

Combination of Theoretical Methods

and GAR Synthetase

Transcription Factors

mitosis

e

picole

MOLECULAR BIOLOGY BIOCHEMISTRY MAJORS

γ-phosphotransferase (PTS)

S-PAGE and the Dyes Stains-All and Ruthenium Red

Cloning of Vector in Homogenate

Effect of Cation Binding Properties of Phospholipids