

Recent Graduates (M.A., M.S.) in Chemistry, Biochemistry, and Clinical Chemistry

August, 2020 - May, 2021

Emmanuel Aidoo, M.S., Biochemistry
Tyler Bielinski, M.S., Biochemistry
Monserrath Camacho Ayala, M.S., Biochemistry
Wenhan Cheng, M.S., Clinical Chemistry
Claire Eberle, M.S., Chemistry
Mark Fetter, Jr., M.S., Clinical Chemistry
Joseph Fose, M.S., Chemistry
Steven Parrinelli, M.S., Biochemistry
Amanda Pecora, M.S., Chemistry
Robert Staubach, M.S., Chemistry
Kassaundra Thiel, M.S., Biochemistry

August, 2019 - May, 2020

Nicholas Denniston, M.S., Biochemistry
Matthew Finnerty, M.S., Clinical Chemistry
Giancarlo Montovano, M.S., Biochemistry
Nazia Nowshin, M.S., Biochemistry
Sarah Nsiah, M.S., Chemistry
Raymundo Nunez, M.S., Biochemistry

August, 2018 - May, 2019

Matthew Basara, M.S., Biochemistry
John Ebeid, M.S., Clinical Chemistry
Matthew Fava, M.S., Chemistry
Alexandria Gallagher, M.S., Biochemistry
Michael Klaum, M.S., Biochemistry
Kari Koval, M.S., Clinical Chemistry
Vashishtha Lalkiya, M.S., Chemistry
Andrea Lara, M.S., Biochemistry
Tyler Milewski, M.S., Biochemistry
Siddharth Patel, M.S., Biochemistry
Viren Patel, M.S., Biochemistry

August, 2017 - May, 2018

Faris Alfifi, M.S., Chemistry
Tim Corcoran, M.S., Biochemistry
Ashlee Dougher, M.S., Biochemistry
Jessica Esposito, M.S., Biochemistry
Matthew Finor, M.S., Biochemistry
Paul Griffin, M.S., Chemistry
Carly Hudson, M.S., Chemistry
Christopher Kustera, M.S., Biochemistry
Alysia Lucarelli, M.S., Chemistry
John Riccardi, M.S., Biochemistry
Cody Sacks, M.S., Biochemistry
Samantha Saylock, M.S. Biochemistry

August, 2016 - May, 2017

Megan Carey, M.S., Biochemistry
Carissa Chrobak, M.S., Biochemistry
Zachary Dyer, M.S., Biochemistry
Ashley Marmaro, M.S., Biochemistry
Jillian Obuhosky Riccardo, M.A., Clinical Chemistry
Zachary Rickard, M.S., Chemistry
Mia Robb, M.S., Biochemistry
Daniel Webb, M.S., Chemistry

August, 2015 - May, 2016

Fatimah Alsaffar, M.S., Clinical Chemistry
Manal Awadh, M.A., Clinical Chemistry
Arielle Burkavage, M.S., Biochemistry
Xi Chen, M.A., Biochemistry
Stacey Crawford, M.A., Biochemistry
Angela Celeste Edwards, M.S., Chemistry
Brian Entler, M.S., Biochemistry
Joseph Giannetta, M.S., Biochemistry
Salwa Harbi, M.A., Biochemistry
Raykia Koroma, M.A., Biochemistry
Andrew Loughnane, M.S., Biochemistry
Nicholas Minissale, M.S., Biochemistry
Daniel Perez, M.A., Biochemistry
Dana Poloni, M.A., Biochemistry

Lauren Rumberger, M.S., Biochemistry
Natalie Wentz, M.S., Biochemistry
Deirdre Yarosh, M.A., Biochemistry

August, 2014 - May, 2015

Amal Alanazi, M.A., Biochemistry
Sharifah Albraiki, M.A., Clinical Chemistry
Sokinah Alkhattam, M.S., Clinical Chemistry
Alexander Ametrano, M.A., Chemistry
John Bahnsen, M.S., Biochemistry
Karen Caparo, M.S., Chemistry
Blythe Golosky, M.A., Biochemistry
Intesar Hawasawi, M.A., Clinical Chemistry
James Hockenbury, M.S., Biochemistry
Evan Holland, M.A., Chemistry
Rania Hussien, M.A., Biochemistry
Anthony Mariani, M.S., Biochemistry
Melissa McHale, M.A., Clinical Chemistry
Suzanne Szewczyk, M.A., Chemistry

August, 2013 - May, 2014

Najla Alqahtani, M.S., Chemistry
Ibtehaj Alshdoukhi, M.A., Chemistry
Reem Alshehri, M.S., Chemistry
Reem Alshehry, M.S., Clinical Chemistry
Taryn Anthony, M.A., Chemistry
Matthew Baer, M.A., Biochemistry
Jason Bozinko, M.S., Biochemistry
Kristen Cantarella, M.A., Biochemistry
Siqi Cui, M.S., Chemistry
Jenna Fancher, M.A., Clinical Chemistry
Sean Hirschler, M.S., Biochemistry
Mary Kovatich, M.S., Biochemistry
Amani Kurdi, M.S., Clinical Chemistry
Thomas Majernick, M.S., Clinical Chemistry
Toni Ann Padavano, M.S., Chemistry
Maria Scalzo-Rinehimer, M.A., Biochemistry
Nathan Stebbins, M.A., Biochemistry

August, 2012 - May, 2013

Morog Almirza, M.S., Clinical Chemistry
Marmikkumar Brahmbhatt, M.S., Biochemistry
Vikram Chopra, M.A. Biochemistry
Tiffanie Driscoll, M.S., Biochemistry
Peter Ebeid, M.A., Biochemistry
Jessica Hubiak, M.A., Chemistry
Eric Kawka, M.A., Chemistry
Melissa Keller, M.A., Clinical Chemistry
Sean Kelly, M.A., Clinical Chemistry
Jessica Linck, M.S., Clinical Chemistry
Luyu Liu, M.S., Clinical Chemistry
Matthew Mariyampillai, M.S., Biochemistry
Ryan McDonnell, M.A., Biochemistry
Kyle Mecca, M.S., Clinical Chemistry
Sezin Patel, M.S., Clinical Chemistry
Michael Stoko, M.S. Biochemistry
Ann Zeleniak, M.A., Biochemistry

August, 2011 - May, 2012

Maher Alraddadi, M.S., Chemistry
Turkeyah Alswillah, M.S., Clinical Chemistry
Zainab Al Taleeb, M.S., Clinical Chemistry
Zainab Alumrani, M.S., Clinical Chemistry
Basel Bandak, M.A., Clinical Chemistry
Robert Hasselbach, M.S., Biochemistry
Neel Jhaver, M.S., Biochemistry
Nathaniel Ohlinger, M.S., Biochemistry
Nikita Patel, M.S., Biochemistry
Ronakumar Patel, M.A., Biochemistry
Colin Peters, M.A., Clinical Chemistry
Chaitali Raskapur, M.A., Biochemistry
Rajan Shah, M.S., Biochemistry
Joel Turinski, M.S., Biochemistry

August, 2010 - May, 2011

Qinglan Duan, M.A., Biochemistry
Michael Faris, M.A., Biochemistry
Brenda Gocek, M.S., Biochemistry
Brianna Mew, M.S., Clinical Chemistry

Maharshi Patel, M.A., Chemistry
Brett Taroli, M.A., Chemistry

August, 2009 - May, 2010

Luli Akinfiresoye, M.A., Clinical Chemistry
Dorina Amendola, M.A., Biochemistry
Teresa Coppa, M.A., Biochemistry
Robert Davis, Jr., M.S., Biochemistry
Charles Decker III, M.A., Chemistry
Kristina DeLorenzo, M.S., Biochemistry
Janice Ezdebski, M.A., Biochemistry
Jiaxi Gao, M.S., Clinical Chemistry
Victoria Hoch, M.S., Biochemistry
Helene Janosczyk, M.A., Biochemistry
Ernest Kawka, M.A., Chemistry
Ying Liu, M.A., Biochemistry
Ryan Marsico, M.A., Chemistry
Kimberly McHugh, M.S., Clinical Chemistry
Charles Penn, M.S., Biochemistry
Amanda Riccio, M.A., Biochemistry
Mary Ann Smith, M.A., Biochemistry
Michael Soltus, M.S., Biochemistry
Frank Valla, Jr., M.S., Clinical Chemistry
Melanie Zipp, M.S., Biochemistry

August, 2008 - May, 2009

Michael Aversa, M.S., Biochemistry
Paul Homnick, M.A., Biochemistry
Amanda Hvizda, M.S., Biochemistry
Craig Onofry, M.A., Biochemistry
Christine Richards, M.A., Chemistry
Mark Romanczyk, M.A., Biochemistry
Suraj Saraswat, M.A., Biochemistry
Hueiwen Tan, M.S., Biochemistry
Szuyun Wang, M.A., Biochemistry

August, 2007 - May, 2008

Seaton Angle, M.S., Chemistry
Kathleen Joyce, M.S., Biochemistry
Eric Kemmerer, M.S., Biochemistry
Kunal Patel, M.S., Clinical Chemistry
Elizabeth Rogers, M.S., Biochemistry
Kristin Marie Stempa, M.S., Biochemistry

Brian Weidlich, M.S., Biochemistry

August, 2006 - May, 2007

Robert Congdon, M.A., Biochemistry
Christopher Fazen, M.A., Biochemistry
Jason Koval, M.A., Biochemistry
Renee Salvo, M.A., Biochemistry
Thomas Umile, M.A., Chemistry
Debbie Valentin, M.A., Biochemistry

August, 2005 - May, 2006

Krista Cohen, M.A., Biochemistry
James Collins, M.A., Chemistry
Christopher Corey, M.A., Biochemistry
Edward Evans, M.A., Biochemistry
John Flynn, Jr., M.A., Biochemistry
Derek Bruce Gilpin, M.S., Biochemistry
Peter Olinitz, M.S., Biochemistry
Renee Elizabeth Schaefer, M.S., Clinical Chemistry
Wei-Cheng Tung, M.A., Chemistry
Joseph Urban, M.S., Biochemistry
Daniel Van Ness, M.A., Chemistry

August, 2004 - May, 2005

Daniel Czyzyk, M.A., Biochemistry
Sonak Dalal, M.A., Biochemistry
Valerie Ebert, M.S., Biochemistry
Rania Hamed, M.A., Clinical Chemistry
Marissa Kintner, M.A., Biochemistry
Kimberly Kishel, M.S., Clinical Chemistry
Adam Kocyk, M.S., Clinical Chemistry
Cynthia LaCapra, M.S., Biochemistry
Melissa Lacina, M.A., Biochemistry
Christian Merz, M.A., Biochemistry
Vinesh Naik, M.A., Chemistry
Laura Petro, M.A., Biochemistry
Kimberly Sarosky, M.S., Clinical Chemistry
Kate Shanley, M.S., Clinical Chemistry
Brad Solomon, M.S., Biochemistry
Margaret Wright, M.S., Biochemistry

August, 2003 - May, 2004

Magee Allegrucci, M.A., Biochemistry
Yuxing Cai, M.A., Biochemistry
Janine Lamonica, M.A., Biochemistry
Michael Mandarano, M.S., Biochemistry
Scott Martin, M.A., Chemistry
Christopher Mitkowski, M.A., Clinical Chemistry
Richard Morgan, M. A., Biochemistry
Brian Rizzo, M.S., Biochemistry
Peter Saengthien, M.S., Biochemistry
Najwa Samman, M.S., Biochemistry

August, 2002 - May, 2003

- Sunil Anamandla, M.A., Biochemistry
- Xinxing Cai, M.S., Biochemistry
- Troy Horn, M.A., Biochemistry
- Kimberly Morgan, M.A., Chemistry
- **Carol Ritter, M.S., Biochemistry**
- SonYun Rizzo, M.S., Biochemistry
- Brian Schmidt, M.S., Clinical Chemistry
- Donna Shuta, M.A., Biochemistry
- Candice Taylor, M.A., Chemistry
- Jared Varaly, M.A., Biochemistry
- Leanne Williams, M.A., Biochemistry

August, 2001 - May, 2002

- Rabab Al-Lahham, M.A., Clinical Chemistry
- Ronald Hartung, M.S., Clinical Chemistry
- Brian Kupchak, M.A., Biochemistry
- **Kimberly Kutch, M.A., Biochemistry**
- Weiwen Long, M.A. Biochemistry
- Megan Neuschafer, M.S., Biochemistry
- Brian Venturi, M.S., Biochemistry
- Michael Walton, M.A., Chemistry

August, 2000- May, 2001

- Mohamad Hassan Al Kharrat, M.S., Chemistry
- Lori Andreoli, M.S., Clinical Chemistry
- Mary Kay Aston, M.S., Biochemistry
- Matthew Balmer, M.S., Biochemistry
- Denise Frailey, M.S., Clinical Chemistry
- Jason Howe, M.A., Chemistry
- Denise Insogna, M.S., Biochemistry
- Cassandra Kobrick, M.S., Chemistry
- Shad Lewis, M.A., Biochemistry
- **Barbara Lyons, M.S., Biochemistry**
- Denise Mahalidge, M.A., Chemistry
- Jennifer Morrison, M.S., Biochemistry
- Lisa Notartomaso, M.S., Biochemistry
- Christine Policare, M.S., Biochemistry
- Sabzada Rasool, M.A., Biochemistry
- Mary Grace Sandy, M.A., Biochemistry
- Pranav Shah, M.A., Chemistry
- Patrick Sullivan, M.S., Biochemistry
- Sarah Zigmont, M.A., Chemistry

Names in **boldface** are recipients of the *Outstanding Graduate in Chemistry, Biochemistry, and Clinical Chemistry Award*

Master's Theses

August, 2020- May, 2021

Emmanuel Aidoo

Mentor: Nicholas Sizemore

“Transannular Cyclizations of Medium-Ring Amido Alkenes: A Computational Study.”

Tyler Bielinski

Mentor: Katherine Stumpo

Title: “Optimization and Method Development of Pneumatically Sprayed AuNPs for Laser-Desorption Ionization Mass Spectrometry Imaging.”

Monserrath Camacho Ayala

Mentor: Timothy Foley

Title: "The Identification of the Reducible Disulfide Proteomes of Synaptosomes Isolated from Rat Brains and the Metabolic Implications of Reversibly Oxidized Protein Thiols."

Wenhan Cheng

Mentor: Katherine Stumpo

Title: "Gas Chromatography-Mass Spectrometry Analysis of Chemical Synthesized Standard Pheomelanin and Determine Concentration of Pheomelanin in Gray Catbird Feathers to Distinguish Differences Between Males and Females."

Claire Eberle

Mentor: Katherine Stumpo

"Fragmentation and gas-phase reactions of diphenhydramine and analogues using AuNPs for LDI-MS"

Mark Fetter, Jr.

Mentor: Joe Vinson

"PC-12 Cell Compartmentalization of Free and LDL-Bound Baicalein and Baicalin"

Joseph Fose

Mentor: Michael Fennie

"Investigation of Copper Catalyzed Heterocycle Synthesis"

Steven Parrinelli

Mentor: Nicholas Sizemore

Title: "Computational Studies of Intramolecular and Intermolecular Diels–Alder Reactions: N-substituted Oxazolone Trienes and α -Amido Acrylates."

Amanda Pecora

Mentor: Michael Fennie

"Progress toward the Installation of Triple-Bond Containing, Non-Native Side Chains on Tryptophan Derivatives and Modified Indoles"

Robert Staubach

Mentor: Arthur Catino

Title: "Progress toward the Directed Ortho-Metalation of N-Coordinated Aryl Boronates."

Kassaundra Thiel

Mentor: Katherine Stumpo

"A Comparison of Euthanasia Methods in Larval Zebrafish using Mass Spectrometry Imaging"

August, 2019- May, 2020

Nicholas Denniston

Mentor: David Rusak

Title: "Distinguishing Intra- and Extra-cellular Analytes by Laser-Induced Breakdown Spectroscopy Using Sodium Potassium Ratios."

Matthew Finnerty

Mentor: Joan Wasilewski

Title: "The Effects of Long Chain Fatty Acids on *Saccharomyces Cerevisiae*."

Giancarlo Montovano

Mentor: Timothy Foley

Title: "Identification of the Reducible Disulfide Proteome of Synaptosomes and Implications of Reversible Protein Thiol Oxidations for Synaptic Metabolism."

Nazia Nowshin

Mentor: Joan Wasilewski

Title: "An Investigation on the Effect of Statin Drugs, Butyrate and Hexanoate as Inhibitors of Cell Growth Using *Saccharomyces cerevisiae* as a Cancer Model."

Sarah Nsiah

Mentor: David Rusak

Title: "Analysis of Pharmaceutical Market Products Using LIBS."

Raymundo Nunez

Mentor: Joan Wasilewski

Title: "An Investigation of the Role of Pyruvate Carboxylase Inhibitors on *Saccharomyces cerevisiae* as a Model for Cancer Cell Metabolism."

August, 2018- May, 2019

John Ebeid

Mentor: Katherine Stumpo

Title: "Characterization of N-Glycan Moieties in Plasma IgY from *Dumetella carolinensis* via Mass Spectrometry and the Effects of Haemoproteus spp. Infection."

Matthew Fava

Mentor: Arthur Catino

Title: "An Expansion on the Friedel-Crafts Cyclization/Reductive Desulfurization Approach to the Synthesis of Tetraarylmethanes."

Alexandria Gallagher

Mentor: Timothy Foley

Title: "Cross-Linking Vicinal Thiols on Key Cellular Proteins as a Mechanism for Cytotoxicity."

Michael Klaum

Mentor: David Rusak

Title: "Using Principal Component Analysis to Determine Appropriate Compounds for Preparation of Solid Standards in Laser-Induced Breakdown Spectroscopy."

Kari Koval

Mentor: Timothy Foley

Title: "Effects of Animal Restraint on Nitric Oxide Metabolism in the Brain: Insight into the Links Between Psychophysiological Stress and Central Nervous System Disease."

Andrea Lara

Mentor: Katherine Stumpo

Title: "Analysis and Comparison of N-linked Glycans in *Naja kaouthia* and *Naja mossambica* Snake Venoms via Mass Spectrometry."

Tyler Milewski

Mentor: Katherine Stumpo

Title: "The Effect of a Juvenile High Fat Diet on Cognition, ERK Phosphorylation and the Production of O-linked-N-acetylglucosamine via Mass Spectrometry."

Siddharth Patel

Mentor: Joe Vinson

Title: "Separation and Quantification of Free Polyphenols and Polyphenols Bound to Albumin Using Size Exclusion Chromatography and HPLC."

Viren Patel

Mentor: David Rusak

Title: "Quantitative Analysis of Atovaquone, Mefloquine, and Proguanil by Thin Layer Chromatography"

August, 2017- May, 2018

Faris Alfifi

Mentor: David Rusak

Title: "Detection of Fluorine and Chlorine in Pharmaceuticals by Using Laser-Induced Breakdown Spectroscopy (LIBS)."

Tim Corcoran

Mentor: Marc Seid

Title: "The Effects of Varying Macronutrients on the microbiome of *Camponotus*."

Ashlee Dougher

Mentor: Timothy Foley

Title: "Effects of Medium Chain Fatty Acids on Cancer-like Growth and Metabolism of *Saccharomyces cerevisiae*."

Jessica Esposito

Mentor: Katherine Stumpo

Title: "Method Optimization for the Extraction of Eumelanin from Gray Catbird Feathers, and Distinctions in Concentration Between Males and Females."

Matthew Finor

Mentor: David Rusak

Title: "Frugal Methods for Determination of Artemisinin."

Paul Griffin

Mentor: Arthur Catino

Title: "A Friedel-Crafts Cyclization/Reductive Desulfurization Approach to the Synthesis of Tetraarylmethanes."

Carly Hudson

Mentor: David Rusak

Title: "Laser-Induced Plasma Diagnostics in Ionic, Covalent, and Dehydrated Gel Matrices."

Christopher Kustera

Mentor: David Marx

Title: "Characterization of Silver Nanoparticle Infused Ethyl and Octyl Cyanoacrylate Adhesives for the Assessment of Feasibility in Formulating a Relevant Antimicrobial Cyanoacrylate Tissue Adhesive for Wound Care."

Alysia Lucarelli

Mentor: Christopher Baumann

Title: "Photochemistry and Photophysics of Vinyl Acetate."

John Riccardi

Mentor: Timothy Foley

Title: "Probing Vicinal thiol Crosslinking as a Radical-Free Pathway of Oxidative Cellular Impairment."

Cody Sacks

Mentor: Katherine Stumpo

Title: "Gold Nanoparticles for Enhanced Laser Desorption/Ionization of Biomolecules."

Samantha Saylock

Mentor: David Rusak

Title: "Determination of Quinine, Chloroquine, and Artesunate by Colorimetric and Chromatographic Methods."

August, 2016- May, 2017

Megan Carey

Mentor: David Rusak

Title: "Laser-Induced Breakdown Spectroscopy for Elemental Analysis of Human Teeth."

Carissa Chrobak

Mentor: Sonia Planey

Title: "The Effect of Reduced DHHC2 Expression on Cancer Cell Migration."

Zachary Dyer

Mentor: Katherine Stumpo

Title: "Various Methodologies and the Efficacies thereof for the Release of Kentucky Bluegrass and Rye N-Linked Glycans from their Peptide Backbone."

Ashley Marmaro

Mentor: Katherine Stumpo

Title: "Method Development of the Analytical and Biochemical Characterization of the Antioxidant Content of Honeybee Pollen."

Jillian Obuhosky Riccardo

Mentor: David Rusak

Title: "The Determination of Calcium, Magnesium and Zinc in Human Fingernails and Hair by Laser-Induced Breakdown Spectroscopy (LIBS) and Atomic Absorption Spectroscopy (AAS)."

Zachary Rickard

Mentor: Michael Fennie

Title: "Isoxazolines as Precursors to Indoles."

Mia Robb

Mentor: Arthur Catino

Title: "Studies Directed toward the Synthesis of Vinyl Boronates from Aldehydes."

Daniel Webb

Mentor: Arthur Catino

Title: "Synthetic Efforts toward the Synthesis of Hexaphenylethane."

August, 2015- May, 2016

Manal Awadh

Mentor: David Rusak

Title: "Elemental Analysis of Glass Using Laser-Induced Breakdown Spectroscopy"

Arielle Burkavage

Mentor: Arthur Catino

Title: "Studies Directed toward the Synthesis of a Borylanion."

Xi Chen

Mentor: Joe Vinson

Title: "Research into Identification and Quantification of Stilbene Polyphenols Resveratrol, Pterostilbene and Curcumin in Pig Blood Compartments."

Stacey Crawford

Mentor: Christopher Baumann

Title: "Computational Study of Fragmentation Pathways after Photodecomposition of Vinyl Acetate."

Brian Entler

Mentor: Marc Seid

Title: "Morphine Addiction in Ants: Quantifying dopamine, serotonin, and octopamine using HPLC equipped with Electrochemical Detection."

Joseph Giannetta

Mentor: Timothy Foley

Title: "Say NO to Cancer-like Cell Growth and Metabolism in *Saccharomyces cerevisiae*."

Salwa Harbi

Mentor: Joe Vinson

Title: "Detection and Determination of Quercetin in Albumin, HDL, LDL, and VLDL in Plasma."

Raykia Koroma

Mentor: Joe Vinson

Title: "The Detection and Importance of Polyphenols and their Metabolites Bound to Albumin and Lipoproteins in Porcine Plasma."

Nicholas Minissale

Mentor: Christopher Baumann

Title: "Infrared Spectra and Photochemistry of γ -Butyrolactone*Water Complexes Isolated in Inert Gas Matrices: A Theoretical Study."

Daniel Perez

Mentor: Joe Vinson

Title: "Pig's Blood Compartmentalization of Four Polyphenols."

Dana Poloni

Mentor: Joe Vinson

Title: "A Comparative Study of the Binding Constants of Several Polyphenols with BSA and LDL-VLDL through Fluorescence Quenching: A Potential Tool in the Fight against Atherosclerosis."

Lauren Rumberger

Mentor: Arthur Catino

Title: "Studies Directed toward a Borylene Transfer Reagent."

Natalie Wentz

Mentor: John Deak

Title: "Separation of Bulk and Interfacial FTIR Absorption Spectra for H₂O/AOT/Isooctane Reverse Micelles ($38 \leq w_0 \leq 60$) by Volumetric Analysis of the OH Stretching Band of Water."

Deirdre Yarosh

Mentor: David Marx

Title: "Silver Release from Electroless Plated Silver Wound Dressings in Various Media under Approximate Physiologic Conditions."

August, 2014- May, 2015

Amal Alanazi

Mentor: Joe Vinson

Title: "Detection and Determination of Phenolic Acids in Plasma, RBCs, Surface of RBCs, Low Density Lipoprotein, and Very Low Density Lipoprotein from Pig Blood."

Sharifah Albraiki

Mentor: Raj Kumar

Title: "Estrogen Receptors in Cancers."

Alexander Ametrano

Mentor: David Marx

Title: "A Photochemical Study of Buckminsterfullerene and Group VI Metal Carbonyl Complexes."

John Bahnsen

Mentor: David Marx

Title: "Measuring the Maximum Effective Depth of Silver-Impregnated Fabrics and Biocidal Silver Against *Staphylococcus epidermidis* and *Escherichia coli*."

Blythe Golosky

Mentor: David Rusak

Title: "The Comparison of Multivariate Data Analysis Techniques and the Calculation of ΔE Values Using Conventional Software for Color Matching."

Intesar Hawasawi

Mentor: Joe Vinson

Title: "The Detection and Determination of Flavanols and Metabolites in Red Blood Cells (RBCs), Albumin and Plasma."

Evan Holland

Mentor: Michael Fennie

Title: "Synthesis of Aryl-Nitro Containing Isoxazolines and Subsequent Reductions under Mild Conditions to Form Quinoline Scaffolds."

Rania Hussien

Mentor: Joe Vinson

Title: "Antioxidant Effect of green tea (Catechin, Epicatechin and EGCG) Detection and Determination of Polyphenols or metabolites in RBC, Bound to RBCs, Lipoprotein and Plasma."

Melissa McHale

Mentor: Joe Vinson

Title: "Artificial Sweeteners and their Effects on Antioxidant Capacity and Effect on Glucose Absorption in Liver Cells."

Suzanne Szewczyk

Mentor: Michael Fennie

Title: "Investigations of Diastereoselective [3+2] Cycloadditions toward the Synthesis of Pyrrolidine Organocatalysts."

August, 2013- May, 2014

Ibtehaj Alshdoukhi

Mentor: Joe Vinson

Title: "The Detection and Determination of Anthocyanins in Pig Blood Compartments."

Taryn Anthony

Mentor: David Rusak

Title: "Identification of Sulfur Emission Lines and Use of Nanoparticles for Signal Amplification in Laser-Induced Breakdown Spectroscopy (LIBS)."

Matthew Baer

Mentor: Christopher Baumann

Title: "A Study of Vinyl Acetate Utilizing Complete Active Space and Density Functional Theory Anharmonic Calculations."

Kristen Cantarella

Mentor: Timothy Foley

Title: "Protein Vicinal Thiol Oxidations in the Healthy Brain: Not So Radical Links between Physiological Oxidative Stress and Neural Cell Activity."

Jenna Fancher

Mentor: Timothy Foley

Title: "Experimental Design for the Production and Purification of Recombinant Protein, Specifically Aspartyl Proteases."

Maria Scalzo-Rinehimer

Mentor: Michael Coyer

Title: "The Evaluation of Solid Phase Extraction Materials for the Reduction of Matrix Effects in Urine Samples."

Nathan Stebbins

Mentor: Joe Vinson

Title: "Antioxidant and Anti-inflammatory Comparison of Plant Extracts and Pure Polyphenols."

August, 2012- May, 2013

Vikram Chopra

Mentor: Joe Vinson

Title: "Polyphenols Dose-Responsively Enter Red Blood Cells Creating a Polyphenol Reservoir."

Peter Ebeid

Mentor: David Marx

Title: "Comparison of Antimicrobial Efficacy of Nanocrystalline Silver and Electroless Plated Silver on MRSA and *P.aeruginosa*."

Jessica Hubiak

Mentor: David Marx

Title: "Oxidized Silver Nylon: A Study of the Effect on Silver Release."

Eric Kawka

Mentor: Sean Devine

Title: "Alkaloid Synthesis Using Palladium-Catalyzed Coupling."

Melissa Keller

Mentor: Moses Prabu

Title: "Generation, Optimization and Secondary Structural Analysis of Recombinantly Cloned Cathepsin D Isoforms."

Sean Kelly

Mentor: Sean Devine

Title: "Synthesis of Alkaloid Natural Products Via Palladium-Catalyzed Coupling Chemistry."

Ryan McDonnell

Mentor: Timothy Foley

Title: "Protein Destabilization and Aggregation of Brain Proteins: Redox Dependent and Independent Mechanisms."

Ann Zeleniak

Mentor: David Rusak

Title: "Laser-Induced Breakdown Spectroscopy (LIBS) for Quantitative Elemental Analysis in Fingernails as a Method of Potential Disease Diagnosis."

August, 2011- May, 2012

Basel Bandak

Mentor: David Rusak

Title: "Laser-Induced Breakdown Spectroscopy (LIBS) for Elemental Analysis of Barium and Strontium in Tree Rings as a Method of Environmental Monitoring."

Ronakkumar Patel

Mentor: Erin McClelland

Title: "The Role of the *RtaI* Gene in *Cryptococcus neoformans*."

Colin Peters

Mentor: Joe Vinson

Title: "The Quantification and Determination of the Uptake and Binding of Citrus Polyphenols by Erythrocytes in Whole Blood."

Chaitali Raskapur

Mentor: Joe Vinson

Title: "HPLC and LC-MS Analysis of Quercetin Metabolites in Rat Organs."

August, 2010- May, 2011

Qinglan Duan

Mentor: David Rusak

Title: "Using Analytical Techniques (LIBS, ICP-AES, UV-Vis, and IR) to Prescreen Archaeological Bones for Radiocarbon-Dating."

Michael Faris

Mentor: David Rusak

Title: "Determination and Quantitation of Carotenoids in *Setophaga ruticilla* Feathers."

Brett Taroli

Mentor: David Rusak

Title: "Elemental Analysis of Coral and Bone Using Laser-Induced Breakdown Spectroscopy."

Maharshi Patel

Mentor: David Marx

Title: "Development of Semicontinuous Electroless Plating Baths."

August, 2009- May, 2010

Luli Akinfiresoye

Mentor: Joe Vinson

Title: "Effect of Three Piper Species on Oxidative Stress Induced by High Cholesterol Diet in Hamsters."

Dorina Amendola

Mentor: Joe Vinson

Title: "In Vitro Biotransformation by Human Recombinant Liver Microsomes and Antioxidant Effectiveness of Soy Isoflavones Genistein and Daidzein and its Metabolite Equol."

Teresa Coppa

Mentor: Timothy Foley

Title: "The Isolation and Identification of Candidate Redox Receptor Proteins in Brain by an Improved Phenylarsine Oxide Affinity Chromatography Method."

Charles Decker III

Mentor: David Marx

Title: "Synthesis, Characterization, and Fluorescence Analysis of Silver Nanoparticle Preparations."

Janice Ezdebski

Mentor: Joe Vinson

Title: "Analysis of Cranberry Anthocyanins and their Distribution in Hamster Organs."

Helene Janosczyk

Mentor: Joan Wasilewski

Title: "Cloning of the *Brucella Melitensis* Gene Suspected to Express a DNA Protection Against Starvation (DPS) Protein."

Ernest Kawka

Mentor: David Rusak

Title: "Method and Apparatus for Null-Measurement of Molecular Absorption Using Pulse Width Modulation."

Ying Liu

Mentor: Joe Vinson

Title: "Green Tea and Black Tea Polyphenols Antioxidative Effects and Their Binding to LDL/vLDL."

Ryan Marsico

Mentor: David Rusak

Title: "Laser-Induced Breakdown Spectroscopy to Identify Bone Samples as Candidates for Radiocarbon Dating."

Amanda Riccio

Mentor: David Marx

Title: "The Antimicrobial Efficacy of Electroless Copper and Gold Nylon."

Mary Ann Smith

Mentors: David Rusak and Michael Hardisky

Title: "Production of Ethanol Derived from Biological Feedstock Sources for a Determination of Feedstock Efficiencies."

August, 2008- May, 2009

Paul Homnick

Mentor: Jennifer Tripp

Title: "Towards the Continuous-Flow Polymer-Supported Dioxolanation of 4-Chlorobenzaldehyde using a Vicinal Diol-Functionalized Macroporous Monolithic Polymer Column."

Craig Onofry

Mentor: Michael Cann

Title: "Catalytic Microwave-Driven Dehydration of Glycerol to Acetol."

Christine Richards

Mentor: Christopher Baumann

Title: "Infrared Spectra and Photochemistry of Biacetyl*Water Complexes Isolated in Inert Gas Matrices."

Mark Romanczyk

Mentor: Joe Vinson

Title: "Polyphenol Binding and Antioxidant Effectiveness of Hydroxycinnamic Acids."

Suraj Saraswat

Mentor: Joe Vinson

Title: "Antioxidant Effect of Polyphenols and Their Binding Ability with LDL/VLDL."

Szuyun Wang

Mentor: Joe Vinson

Title: "Quantitative Measurement of Polyphenols of Breakfast Cereals by Folin and FRAP Methods."

August, 2006- May, 2007

Robert Congdon

Mentor: David Rusak

Title: "Depth Profiling of Metal Platings with Laser-Induced Breakdown Spectroscopy."

Christopher Fazen

Mentor: Timothy Foley

Title: "Oxidative Stress-Induced Protein Disulfides and Destabilization of Soluble Proteins from Rat Brain."

Jason Koval

Mentor: Timothy Foley

Title: "Brain Protein Phosphatase 2A: Thiol-Based Redox Regulation and Aging."

Renee Salvo

Mentor: Timothy Foley

Title: "Disulfide-Based Modification of Protein Phosphatase 2A (PP2A) from Rat Brain: Possible Molecular Basis for the Responsiveness of PP2A to Oxidative Stress."

Thomas Umile

Mentor: Michael Cann

Title: "Preparation of a Polylactic Acid Oligomer via Sulfuric Acid-Catalyzed, Microwave Assisted Polycondensation Reaction."

Debbie Valentin

Mentor: David Rusak

Title: "Cyclodextrin-Enhanced Fluorescence of Acenaphthene."

August, 2005- May, 2006

Krista Cohen

Mentor: Christopher Baumann

Title: "A Study of Isotopically Labeled Vinyl Acetate in Matrix Isolation Infrared Spectroscopy Experiments."

James Collins

Mentor: Christopher Baumann

Title: "A Study of the Desorption Kinetics and Infrared Spectrum of Glyoxal Adsorbed on Alkali Halide Films."

Christopher Corey

Mentor: David Marx

Title: "A Comparative Study of Electroless-Plated Silver Wound Care Dressings to Commercial Silver-Based Wound Care Dressings."

Edward Evans

Mentor: Tabbi Miller

Title: "Proteome Analysis by Two Dimensional Gel Electrophoresis (2DE) and Matrix Assisted Laser Desorption/Ionization Time of Flight Mass Spectroscopy (MALDI-TOF MS) of the halophile *Haloferax volcanii* DS2."

John Flynn, Jr.

Mentor: David Marx

Title: "The Oligodynamic Effect of Copper."

Wei-Cheng Tung

Mentor: Joe Vinson

Title: "Investigation of Polyphenol Complexes with Lipoprotein and Albumin."

Daniel Van Ness

Mentor: David Marx

Title: "Electroless Deposition of Silver Metal on Kevlar® Surfaces."

August, 2004- May, 2005

Daniel Czyzyk

Mentor: Christopher Baumann

Title: "Desorption Kinetics and Infrared Spectroscopy of Deuterated Biacetyl on Alkali Halide Films."

Sonak Dalal

Mentor: Joe Vinson

Title: "Comparative Human Bioavailability of Different Forms of CoQ₁₀."

Rania Hamed

Mentor: John Deak

Title: "Permeation Enhancers of Indomethacin Using Franz Diffusion Cell Technique."

Marissa Kintner

Mentor: Timothy Foley

Title: "Regulation of Brain Protein Phosphatase 2A by Inorganic Phosphate and Intermolecular Disulfide Bond Formation."

Melissa Lacina

Mentor: Joan Wasilewski

Title: "Fluorescence Spectroscopic Studies of the Binding of Bacteriophage λ Cro Repressor with O_R3 DNA in the Presence of Monovalent and Divalent Metal Cations."

Christian Merz

Mentor: Tabbi Miller

Title: "Comparative Genomics Investigation and Bioinformatics of a Highly Variable

Genomic Region in Chromosome II, which Includes a Putative Hemagglutinin Gene, among *Brucella* Strains.”

Vinesh Naik

Mentor: David Marx

Title: “A Low Temperature Electroless Nickel Bath.”

Laura Petro

Mentor: Timothy Foley

Title: “Direct and Reversible Inhibition of Brain Protein Phosphatase 2A by the Cellular Oxidant Glutathione Disulfide.”

August, 2003- May, 2004

Magee Allegrucci

Mentor: Vito Del Vecchio

Title: “Comparative Analysis of the Exosporiomes of *Bacillus anthracis* and Other Closely Related Organisms”

Yuxing Cai

Mentor: Joe Vinson

Title: "Determination of Quality and Quantity of Polyphenols in Nuts."

Janine Lamonica

Mentor: Vito Del Vecchio

Title: “Comparative Two-Dimensional Gel Electrophoretic Study of the Secretome Profiles of Two *Bacillus anthracis* RA3 Derivative Strains Collected under Standard Aerobic and Host-Simulated Conditions.”

Michael Mandarano

Mentor: Joe Vinson

Title: “The Effect of Various Antioxidants on the Biochemistry of Chronic Complications Especially Cardiovascular Disease and Nephropathy in Streptozotocin-Diabetic Rats.”

Scott Martin

Mentor: David Rusak

Title: “Trace Metal Speciation Using HPLC-AA Technique.”

Christopher Mitkowski

Mentor: David Rusak

Title: “Spectroscopic Determination of Temperature in a Laser-Induced Plasma on a Lead-Carbon Target.”

Richard Morgan

Mentor: Christopher Baumann

Title: "A Study of the Desorption Kinetics and Infrared Spectrum of Biacetyl Adsorbed on Alkali Halide Films."

Brian Rizzo

Mentor: Joe Vinson

Title: "A Quantitative Investigation of Polyphenols Bound to LDL and VLDL."

August, 2002- May, 2003

Sunil Anamandla

Mentor: Joe Vinson

Title: "Measuring the Absorption of Co-enzyme Q-10 in the Human Skin and its *in vivo* Antioxidant Effect."

Troy Horn

Mentor: Vito Del Vecchio

Title: "Comparative Proteomic Study of *Brucella melitensis* strain 16M and *Brucella abortus* strain 2308."

Kimberly Morgan

Mentor: Donna Narsavage-Heald

Title: "Investigation of the Reaction of a Cyclotrisilazane with a Borane Adduct."

Donna Shuta

Mentor: Joe Vinson

Title: "Qualitative and Quantitative Measurement of Antioxidants in Coffee and the Effect of Coffee on Atherosclerosis in Hamsters."

Candice Taylor

Mentor: Christopher Baumann

Title: "Infrared Analysis of Acetonitrile Adsorbed on Alkali Halide Films."

Jared Varaly

Mentor: Christopher Baumann

Title: "The Characterization of the 405 nm Photoproducts in Deuterated Biacetyl."

Leanne Williams

Mentor: Vito DelVecchio

Title: "Comparative Study of the *in vitro* *Bacillus anthracis* Secretome With or Without CO₂ Induction: A Two-Dimensional Protein Electrophoresis Study."

August, 2001- May, 2002

Rabab Al-Lahham

Mentor: Timothy Foley

Title: "Development of a Novel and Sensitive RT-PCR Assay for the Detection of ErbB2 Expression in Breast Cancer."

Brian Kupchak

Mentor: Timothy Foley

Title: "The Effects of Reactive Nitrogen Oxide Species on Brain Protein Phosphatases."

Kimberly Kutch

Mentor: Christopher Baumann

Title: "Infrared Analysis of Orientational Diffusion of Methyl Rotors on Alkali Halide Films."

Weiwen Long

Mentor: Timothy Foley

Title: "Receptor Tyrosine Kinase, ErbB4, Plays an Essential Role in Mammary Epithelium Differentiation and Lactation."

Michael Walton

Mentor: Donna Narsavage-Heald

Title: "The Synthesis and Characterization of a Bis-GMA/Silsesquioxane Dental Composite."

August, 2000- May, 2001

Jason Howe

Mentor: Donna Narsavage-Heald

Title: "Poly(borosilazane) Derived Ceramic as Carbon Substrate Coating."

Shad Lewis

Mentor: Larry Sherman

Title: "Tributyltin Chloride Biotransformation in the Perfused Rat Liver."

Denise Mahalidge

Mentor: Christopher Baumann

Title: "Infrared Analysis and Vibrational Dephasing Studies of Methyl Halides on Alkali Halide Surfaces."

Sabzada Rasool

Mentor: Larry Sherman

Title: "The Synergistic Effect of Organotin Compounds in Polysorbate 80 as a Chronic Nerve Toxin."

Mary Grace Sandy

Mentor: Joan Wasilewski

Title: "Observation of Bacteriophage *lambda* Cro Protein with Nonspecific DNA in the Presence of Divalent Metal Cations Using Fluorescence Spectroscopy."

Pranav Shah

Mentor: Donna Narsavage-Heald

Title: "Synthesis and Characterization of Three Copolymers and Investigation of Crosslinking by Sol-gel Process."

Sarah Zigmont

Mentor: Donna Narsavage-Heald

Title: "Studies of Bis-GMA/TEGMA/Silsesquioxane Composites."