

BIOCHEMISTRY CENTENNIAL CELEBRATION 1915 - 2015



FEATURED SPEAKERS

Dr. Hung-Ying Kao (Ph.D., 1995)
Professor of Biochemistry
Case Western Reserve University | Cleveland, OH

Dr. Venkateswarlu Pothapragada (Ph.D., 1962)
Division Scientist, 3M | Minneapolis-St. Paul, MN

Dr. Melanie Simpson (Ph.D., 1997)
Professor of Biochemistry
University of Nebraska | Lincoln, NE

Dr. Rebecca Moen (Ph.D., 2013)
Assistant Professor of Chemistry & Geology
Minnesota State University | Mankato, MN

Dr. Amy Rocklin (Ph.D., 2000)
Corning, Inc. | Painted Post, NY

Dr. Brad Wallar (Ph.D., 2000)
Associate Professor of Chemistry
Grand Valley State University | Allendale, MI

Thursday, May 14, 2015, 1:00-5:30 PM
2-470 Phillips-Wangensteen Building
Minneapolis Campus

UNIVERSITY OF MINNESOTA

Twin Cities Campus

Department of Biochemistry,
Molecular Biology and Biophysics

Medical School and
College of Biological Sciences

6-155 Jackson Hall
321 Church St. SE
Minneapolis, MN, 55455
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<http://www.cbs.umn.edu/bmbb>

May 14, 2015

Dear Friends;

Welcome to the Centennial Celebration commemorating the 100th anniversary of the first PhD granted in biochemistry at the University of Minnesota. Morris J. Blish was our first PhD recipient and he went on to a marvelously distinguished career in the food industry and was recognized by the U of MN in 1952 by President Morrill with the Outstanding Achievement Award (now the Outstanding Alumni Achievement Award). Our celebration today and tomorrow is focused on commemorating the achievements of our PhD students and their advisors. An amazing statistic is that we have graduated 981 PhD's in biochemistry over the past 100 years—an inspiring accomplishment that is even more impressive if you consider that PhD #1000 is working in the lab right now! Moreover, 157 different faculty members have trained biochemistry PhDs making our program one of the largest in the country.

Our history takes us from Agricultural Chemistry and Physiological Chemistry through Biochemistry to today's Biochemistry, Molecular Biology and Biophysics. Regardless of the name, all PhD students and their advisors are tied together through a common history characterized by uncommon accomplishments. From the discovery of essential fatty acids to the roles of Vitamins A, B6, E and K our history is filled with seminal contributions made by exceptional students and faculty. From sporulation to saponification, biochemistry faculty and students have been pioneers in the study of our most basic biochemical process. Moreover, from the sequence analysis of lectins to the bending of DNA, from structural studies using x-rays to the worlds most high-powered magnets, biochemistry students have led the way using sophisticated technologies that push the boundary of science in the name of discovery. This celebration is to recognize our past, to appreciate the present and to create the future by showing how the footprint of Minnesota biochemistry has changed our discipline and the world.

Thank you for being here and thank you for being a part of our Centennial. We welcome you to explore the campus and our laboratories. We look forward to staying connected over the next decades and celebrating again in the future. The best is yet to come.



David Bernlohr
Professor and Head

BIOCHEMISTRY CENTENNIAL CELEBRATION 1915 - 2015

Centennial Symposium

Thursday, May 14, 2015

2-470 Phillips-Wangensteen Building

- 1:00 Welcome & Introductions – David Bernlohr
- 1:10 Welcome from the Dean of the Graduate School – Henning Schroeder
- 1:15 History of the Department – John Anderson & Howard Towle
- 1:30 Speaker Introduction
- 1:35 **Dr. Hung-Ying Kao** | Case Western Reserve University | Cleveland, OH
“My many firsts”
- 2:05 Speaker Introduction
- 2:10 **Dr. Amy Rocklin** | Corning, Inc. | Corning, NY
“Go East, Young Woman”
- 2:40 Speaker Introduction
- 2:45 **Dr. Venkateswarlu Pothapragada** | 3M | Minneapolis-St. Paul, MN
“An Unplanned Journey”
- 3:15 Break
- 3:45 Speaker Introduction
- 3:50 **Dr. Brad Wallar** | Grand Valley State University | Allendale, MI
“My Life as a Biochemist, BL/DL/AL (Before, During, and After Lipscomb)”
- 4:20 Speaker Introduction
- 4:25 **Dr. Rebecca Moen** | Minnesota State University | Mankato, MN
“Minnesota Muscle and Modified Myosin”
- 4:55 Speaker Introduction
- 5:00 **Dr. Melanie Simpson** | University of Nebraska | Lincoln, NE
“DAB’s Top Ten List #4: Plan to get lucky”
- 5:30 Closing Remarks – David Bernlohr
- 5:35 Group Photo on the steps of Nils Hasselmo Hall

Friday, May 15, 2015

- 9:00-10:00: **Breakfast** – Minnesota NMR Conference Room, G-205 Mayo
- 9:00-11:00: **Poster Session** – Minnesota NMR Center, G-205 Mayo
- 11:00-12:00: **Student Presentations** – Minnesota NMR Conference Room, G-205 Mayo
- 12:00: **Campus Tours**

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Speaker Biographies

Dr. Hung-Ying Kao is Professor of Biochemistry at Case Western Reserve University School of Medicine. Dr. Kao is from Taiwan and received his PhD at Minnesota in 1996 studying with Paul Siliciano. Following a postdoc at the Salk Institute with Ron Evans he took a faculty position in biochemistry at CWRU School of Medicine. Dr. Kao's research interests focus on transcriptional regulation of genes linked to human disease and their regulation by acetylation/deacetylation mechanisms. His primary projects today emphasize histone deacetylase 7 (HDAC7) and its interacting proteins including alpha actinin 4 (ACTN4) as well as investigating post translational modifications involving the function and regulation of promyelocytic leukemia protein. Dr. Kao has trained 12 PhD students while in his laboratory and excels at mentoring young scientists, particularly those from China, towards a career in biomedical science.

Dr. Amy Rocklin holds both a PhD (Minnesota) and JD (George Washington University) and is the division intellectual property counsel to the Science & Technology division of Corning International. She received her undergraduate degree in biochemistry from California State University and received her PhD under the direction of John Lipscomb. Prior to joining Corning, Amy held positions at Smiths Group, including chief intellectual property counsel for the Detection division. Amy also practiced law in at the Washington, DC offices of Foley & Lardner LLP and Banner & Witcoff. She is a member of the Virginia, District of Columbia, and New York bars, and is licensed to practice before the U.S. Patent and Trademark Office.

Dr. Venkateswarlu Pothapragada is a retired division scientist at 3M Company in St. Paul, MN. He received his undergraduate D.Sci degree from Andhra University, India and his PhD in 1962 studying fluorine metabolism with Dr. Wallace Armstrong. Dr. V as he is known is an internationally recognized biochemist in the area of fluorine chemistry. At 3M, Dr. Pothapragada spent 32 years in R&D research related to fluoro-chemicals including biochemistry, toxicology, and problem solving related to process technology and environmental fluorine biology. He has written the authoritative monograph "Fluorides and Human Health" for the World Health Organization, a volume widely considered the most comprehensive analysis of environmental fluorine chemistry. He received the 3M Circle of Technical Excellence award in 1982 and the 3M Innovator award for enhancing 3M productivity and industrial hygiene in 1996.

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Dr. Bradley Waller is Associate Professor of Chemistry at Grand Valley State University in Allendale, MI. Dr. Waller received his PhD in 2000 from Minnesota studying with Dr. John Lipscomb. He carried out postdoctoral work at the Van Andel Institute in Grand Rapids MI and moved to Grand Valley State in 2003. At GVSU he carries out research on cytoskeleton structure and function and mentors numerous undergraduates in research, many of whom have gone onto graduate school. At GVSU he is the recipient of the University Outstanding Educator Award, The Distinguished Undergraduate Mentor Award and in 2010 received the Outstanding Teacher Award. His research is supported by NIH and NSF grants and he has been active in the ASBMB undergraduate research section.

Dr. Rebecca Moen is Assistant Professor of Chemistry and Geology at Mankato State University. She received her PhD from Minnesota in 2013 with David Thomas and immediately began her position at MSU. She received her undergraduate degree from Hamline University where she was an all-conference tennis player and following a MS in Biochemistry and Molecular Biology from UCLA returned to Minnesota in 2006 for PhD work. Her PhD work emphasized structure-function studies of myosin with a particular emphasis on oxidation of side chain cysteine residues. While in graduate school she received both the Mary Dempsey Fellowship and the Huber Warner Fellowship. An outstanding teacher, Dr. Moen continues her research work today emphasizing undergraduate experiences in the laboratory.

Dr. Melanie Simpson is the Rosowski Professor of Biochemistry and the Associate Director of the Center for Biotechnology at the University of Nebraska-Lincoln. She received her undergraduate and PhD degrees in biochemistry from Minnesota studying with David Bernlohr. Following her PhD degree she carried out postdoctoral studies with James McCarthy. Her primary research emphasis is on the role of extracellular matrix in regulating prostate cancer progression. Her work emphasizes the role of steroid inactivation enzymes in the intracrine control of prostate tumor androgen dependence, and potentiation of tumor response to pharmacological androgen blockade. Her lab has developed a unique set of molecular and cellular tools to quantify the respective roles of hyaluronan biosynthesis and turnover in cellular processes underlying invasive tumor progression, and to determine molecular receptors and signaling pathways responsible for the effects.

BIOCHEMISTRY CENTENNIAL CELEBRATION 1915 - 2015

Poster Session - Friday, May 15 Minnesota NMR Center, G205 Mayo: 9:00 am – 11 am

Student: Seunghee Cho
Poster Title: "Structure, Function, and Commercial Applications of Cyanuric Acid Hydrolase : enzyme-substrate intermediate trapped in action"
Thesis Advisor: Larry Wackett

Student: Bryan Jones
Poster Title: "Separating Enantioselectivity from Reaction Mechanism in an alpha/beta Hydrolase"
Thesis Advisor: Romas Kazlauskas

Student: Jordon Becker
Poster Title: "Ubiquitination and sumoylation of PCNA counteract genotoxic stress"
Thesis Advisor: Anja Bielinsky

Student: Kun Zhou
Poster Title: "Regulation of BCAR3 by tRF5-Glu in Ovarian Cancer Cells"
Thesis Advisor: Lester Drewes

Student: Cory Knoot
Poster Title: "The catalytic pathway of an Fe³⁺-dependent aromatic ring-cleaving dioxygenase probed in crystallo"
Thesis Advisor: John Lipscomb

Student: Brent Rivard
Poster Title: "Kinetic Analysis Reveals New Catalytic Mechanism for cis-Dihydroxylation by Rieske Oxygenases"
Thesis Advisor: John Lipscomb

Student: Michael Lane
Poster Title: "Directed Evolution of a Protease to Inactivate Biological Toxins"
Thesis Advisor: Burckhard Seelig

Student: Luke Erber
Poster Title: "Discovery of Chromatin Interactomes at Specific Genomic Loci"
Thesis Advisor: Yue Chen

Student: Thomas Bohl
Poster Title: "X-ray Crystallography of LpxB, an Enzyme in the Lipid A Synthesis Pathway"
Advisor: Hideki Aihara

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- Student: Sarah Nelson
Poster Title: "Characterization of calmodulin binding to the ryanodine receptor by solution and solid-state NMR"
Thesis Advisor: Gianluigi Veglia
- Student: Ben Binder
Poster Title: "High-resolution helix orientation measured in actin-bound myosin: applications of EPR using a bifunctional spin label"
Thesis Advisor: David Thomas
- Student: Bob Evans
Poster Title: "Structural studies of PqqC mutants provide clues to the enzymatic mechanism of this cofactorless oxidase"
Thesis Advisor: Carrie Wilmot
- Student: Adam Harvey
Poster Title: "The loss of ATRX in cells under telomere stress is sufficient for ALT activation"
Thesis Advisor: Eric Hendrickson
- Student: Katie Muratore
Poster Title: "Subcellular Analysis in the Arriaga Group"
Thesis Advisor: Edgar Arriaga
- Student: Jackie McCourt
Poster Title: "*In vitro* stability of therapeutically relevant, internally truncated dystrophins"
Thesis Advisor: James Ervasti
- Student: Brett Anderson
Poster Title: "Transcriptional Regulation of APOBEC3 Antiviral Immunity Through the CBF β /RUNX Axis"
Thesis Advisor: Reuben Harris
- Student: Chris Flynn
Poster Title: "Non-trichothecene sesquiterpenes are produced by *Fusarium graminearum* PH-1 and are dependent on Tri5 expression"
Thesis Advisor: Claudia Schmidt-Dannert
- Student: Lori Zacharoff
Poster Title: "Expanded understanding of reduction of low redox potential acceptors in *G. sulfurreducens* biofilms"
Thesis Advisor: Dan Bond
- Student: Claïressa Brown
Poster Title: "A Next-Generation Sequencing Approach for Determining Sources of Fecal Bacteria in the Lake Superior Watershed"
Thesis Advisor: Michael Sadowsky

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- Student: Ajeetha Rajan
Poster Title: "Extracellular Transport Of Fatty Acid Binding Protein By Exosomes"
Thesis Advisor: David Bernlohr
- Student: Hsin Sung (Simon) Yeh
Poster Title: "mRNA 3'UTR shortening is a molecular signature of mTORC1 activation"
Thesis Advisor: Jeongsik Yong
- Student: Maya Raghunandan
Poster Title: "The central Fanconi Anemia pathway member FANCD2 mediates replication fork recovery independently of "upstream" FA core complex"
Thesis Advisor: Alex Sobeck
- Student: Klaus Lovendahl
Poster Title: "Sequence-directed formation of covalent protein-DNA bonds"
Thesis Advisor: Wendy Gordon
- Student: Aaron Edmund
Poster Title: "Catalytically Active Guanylyl Cyclase-B Requires Glycosylation and Mutations That Inhibit This Process Cause Dwarfism"
Thesis Advisor: Lincoln Potter
- Student: Casey Solomon
Poster Title: "Impact of H216 on the DNA binding and catalytic activity of the HIV restriction factor APOBEC3G"
Thesis Advisor: Hiroshi Matsuo
- Student: Douglas Grunwald
Poster Title: "Investigating the function of Atg13 in autophagy induction"
Thesis Advisor: Do-Hyung Kim
- Student: Megan McCarthy
Poster Title: "Structural dynamics of calmodulin in regulation of cardiac calcium release in health and disease"
Thesis Advisor: David Thomas

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Speaker Session – Friday, May 15 Minnesota NMR Conference Room, 11 am – 12 pm

Student: Karl Petersen

Title: “Structural States of the Myosin Motor in Live Cells”

Division: Chemical & Structural Biology

Thesis Advisor: Margaret Titus & Dave Thomas

Bio: Karl J. Petersen is a 3rd-year graduate student in the BMBB program advised by David D. Thomas (BMBB) and Meg Titus (GCD). Karl is a Twin Cities native with BS degrees from CBS (biochemistry) and CSE (physics). His research focuses on using fluorescence spectroscopy and microscopy to understand the molecular mechanism of myosin motor proteins.

Abstract: Myosin is a motor protein that performs mechanical work coupled to ATP hydrolysis activity. Myosin motors pull against actin filaments to maintain cell shape, take up food particles, transport materials within the cell and perform muscle contraction. Structural changes with the myosin catalytic domain regulate force generation, but the rapid nature of these changes makes them difficult to observe. We use nanosecond-resolved fluorescence spectroscopy combined with green and red fluorescent protein tags to study the structural states of myosin in the social amoeba *Dictyostelium discoideum*. Understanding the structural changes associated with force generation will suggest new therapeutic avenues for muscle disorders such as heart failure, muscular dystrophy, and muscle weakness associated with aging.

Student: Hongliang (Arthur) Xu

Title: “The Mystery of Bariatric Surgery- Will UCP2 Be The Answer”

Division: Metabolic & Systems Biology

Thesis Advisor: David Bernlohr

Bio: I got my bachelor degree in Bioengineering in 2008 from Xi’an Polytechnique University. In 2011, I got my Master degree in Molecular Genetics from Capitol Normal University. Joined the BMBB program in the fall of 2011. I really love to work at my bench, but other than that I do play quite a bit of badminton. Anything beyond above is pretty boring.

Abstract: Obesity-linked metabolic disorders including type 2 diabetes, fatty liver disease, and coronary arterial disease share the common signature of chronic inflammation and endoplasmic reticulum (ER) stress induced insulin resistance. Polymorphism at the promoter region of *Fabp4* that lead to reduced expression are associated with decreased risk of diabetes and heart disease. In murine model systems, decreased expression of FABP4 (which protects animals from the metabolic syndrome) leads to up-regulation of macrophage uncoupling protein 2. Increased expression of UCP2 in macrophages mediates the decreased inflammation and ER stress and potentially explains the protection from metabolic disease. Bariatric surgery is the most potent available treatment of obesity-linked type 2 diabetes. Comparing bariatric surgery patients to a hypocaloric control group, our results reveal a dramatic decrease in FABP4 expression following surgery and prior to any weight loss. Moreover, decreased expression of FABP4 is accompanied by an increased expression of UCP2. To test whether up regulation of UCP2 after the surgery is determinative of the benefits following bariatric surgery, we used a mouse model with UCP2 conditionally ablated in macrophages and performed bariatric surgery on obese, insulin resistant mice. Preliminary evidence suggests that UCP2 is required for the metabolic benefits of bariatric surgery and points towards the FABP4-UCP2 axis as a key determinant in obesity-linked metabolic disease.

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Student: Brett Anderson

Title: "HIV-1 uses two mechanisms to subvert restriction by the APOBEC family of DNA deaminases"

Division: Molecular Biology

Thesis Advisor: Rueben Harris

Bio: Brett Anderson graduated from the University of Minnesota - Twin Cities in 2011 with a B.S. in Biochemistry. He is currently a 4th year student in the BMBB graduate program conducting his thesis research in the lab of Dr. Reuben Harris. Brett's thesis work has focused on understanding the molecular interplay between the APOBEC3 antiviral enzymes and the AIDS virus HIV-1.

Abstract: HIV-1 employs multiple mechanisms to circumvent destruction by innate antiviral defenses in order to establish a productive infection and promote viral pathogenesis. Several members of the APOBEC3 family of DNA cytidine deaminases have the capacity to potently inhibit HIV-1 replication by catalyzing the conversion of cytosines to uracils in the viral cDNA during reverse transcription, which can ultimately destroy the coding capacity of the viral genome. HIV-1 overcomes this replication barrier by encoding the accessory protein Vif, which co-opts a host ubiquitin ligase complex to specifically target the APOBEC3 enzymes for degradation through a polyubiquitination mechanism. At the heart of this complex, Vif binds and functionally repurposes the host transcription factor CBF β as a molecular scaffold from its normal role as a critical regulator of hematopoietic cell development and immune function. Surprisingly, we show that CBF β is a transcriptional regulator of the APOBEC3 genes themselves, and that CBF β expression is required for maintenance of the APOBEC3 antiviral state in CD4+ T cells. These findings reveal a new strategy of evolutionary economization whereby a virus hijacks a single host protein to simultaneously suppress a potent antiviral defense system at both transcriptional and post-translational levels.

Student: Aunica Kane

Title: "Bioremediation of Methylmercury Using Encapsulated *E. coli* Harboring the *mer* Operon"

Division: Synthetic Biology and Biotechnology

Thesis Advisor: Jeff Gralnick

Bio: Aunica Kane is a fifth year Ph.D. candidate working in the laboratory of Dr. Jeffrey Gralnick. Her work focuses on microbial communities and the impacts microbes play on the biogeochemical cycling of metals in the environment. Her work has produced synthetic model communities that enable determination of genetic factors leading to multi-species cooperation and engineered strains able to remediate toxic metals from the environment.

Abstract: Microbial transformation of metals has a large impact on biogeochemical cycles and can alter metal partitioning in the environment. Alteration, such as change in redox state and conversion between organic and inorganic states, affect solubility and toxicity and have important impacts on environmental and public health. One metal of particular concern is mercury, which in some forms can bioaccumulate in the environment. While remediation strategies exist, they are prohibitively costly in many environments, and other solutions are needed. We introduced the mercury resistance (*mer*) operon into *E. coli* K12 to facilitate remediation of both ionic and organic forms of mercury. These cells were then encapsulated in a silica gel material creating a biological-based filter. Encapsulated *E. coli* K12 cells containing the *mer* operon were able to reduce methylmercury concentrations to below detection level at rates similar to un-encapsulated cells. Tests also indicated cells remained metabolically active following encapsulation. Encapsulation, by providing protection to the biocatalysts and overall mechanical structure, broadens possible engineering applications for the remediation of mercury.

BIOCHEMISTRY CENTENNIAL CELEBRATION 1915 - 2015

Current BMBB Graduate Students

Anderson, Brett	Her, Cheng	Morelli, Aleardo
Becker, Jordan	Horn, Timothy	Muratore, Katherin
Binder, Benjamin	Hsu, Szu Yi	Nelson, Sarah
Bohl, Thomas	Jensen, Matthew	Patrinostro, Xiaobai
Bonis, Benjamin	Jimenez Otero, Fernanda	Petersen, Karl
Brown, Claïressa	Jones, Bryan	Raghuñandan, Maya
Burrill, Joel	Joseph Rajan, Ajeetha	Rivard, Brent
Cho, Seunghee	Kan, Yinan	Robinson, Christine
Christenson, James	Kane, Aunica	Rohde, John
Cox, Karlee	Karamafrooz, Adak	Schaaf, Tory
Dicke, Alysha	Keller, Bryant	Schoenecker, Amber
Edmund, Aaron	Knoot, Cory	Solomon, Casey
Erber, Luke	Lane, Michael	Steen, Kaylee
Evans, Robert	Leung, Wendy	Stroik, Dan
Fealey, Michael	Li, Chao	Wang, Jiayi
Flynn, Chris	Lovendahl, Klaus	Xu, Hongliang
Grunwald, Douglas	Mauseth, Matthew	Yeh, Hsin Sung
Hanson, Benjamin	Maysonet Sanchez, Rebecca	Yeom, Sujin
Harvey, Adam	Mc Carthy, Megan	Zacharoff, Lori Ann
Hauck, Amy	Mccourt, Jackie	Zhou, Kun
Hayward, Amanda	Molan, Amy	

BIOCHEMISTRY CENTENNIAL CELEBRATION 1915 - 2015

Current Thesis Advisors

Adolph, Kenneth	Gralnick, Jeffrey	Orr, Harry
Aihara, Hideki	Griffin, Timothy	Parker, Laurie
Anderson, Grant	Harki, Daniel	Potter, Lincoln
Andrews, Matthew	Harris, Reuben	Que, Lawrence
Armitage, Ian	Hays, Tom	Roon, Robert
Arriaga, Edgar	Hendrickson, Eric	Sadowsky, Michael
Bardwell, Vivian	Hinderliter, Anne	Sanders, Michel
Bernlohr, David	Katagiri, Fumiaki	Schmidt-Dannert, Claudia
Bielinsky, Anja	Kazlauskas, Romas	Schottel, Janet
Bond, Daniel	Khodursky, Arkady	Seelig, Burckhard
Brooker, Robert	Kim, Do-Hyung	Simon, Jeffrey
Carter, Clay	Lange, Alex	Smanski, Michael
Chen, Yue	Laporte, David	Sobeck, Alexandra
Clarke, Benjamin	Li, Fang	Thomas, David
Cormier, Robert	Lipscomb, John	Titus, Margaret
Das, Anath	Livingston, Dennis	Towle, Howard
Dehm, Scott	Ly, Hinh	Tretyakova, Natalia
Dong, Zigang	Mansky, Louis	Veglia, Gianluigi
Drewes, Lester	Matsuo, Hiroshi	Wackett, Lawrence
Elias, Mikael	Mayo, Kevin	Wallace, Kendall
Ervasti, James	Murphy, Sharon	Wilmot, Carrie
Ferrington, Deborah	Nelsestuen, Gary	
Metzger, Joseph	Ohlendorf, Douglas	

Graduate Thesis Advisors 1915 – Present

Allewell, Norma M. (3)	Frame, E. G. (1)	Livingston, Dennis M. (9)	Schultze, Max O. (15)
*Anderson, John S. (3)	Frantz, Ivan D. (7)	Louis, Charles F. (8)	Seal, Ulysses S. (1)
Anderson, Paul M. (1)	Frenkel, Albert W. (1)	Lovrien, Rex E. (7)	Seelig, Burckhard (1)
Armitage, Ian M. (2)	Fuchs, James A. (15)	Lundberg, Walter O. (6)	Sheaff, Robert J. (1)
Armstrong, Wallace D. (19)	Gander, John E. (12)	Mangold, Helmut K. (2)	Siliciano, Paul G. (7)
Atassi, M. Z. (1)	Geddes, William F. (27)	Mann, Kenneth G. (5)	Simon, Jeffrey A. (4)
Bailey, C. H. (28)	Glass, Robert L. (4)	Mason, H. L. (1)	Singer, Leon (8)
Banaszak, Leonard J. (9)	Glick, David (4)	**Matsuo, Hiroshi (2)	Smith, Fred (32)
Bardwell, Vivian J. (2)	Goldberg, Nelson D. (1)	Mattox, V. R. (2)	Sollner, Karl (4)
Barnum, Cyrus P. (18)	Gortner, Ross A. (60)	Mayo, Kevin H. (5)	Stenstrom, K. W. (1)
Barry, Bridgette A. (8)	Gray, Ernest D. (6)	McClendon, Jesse F. (8)	Thatcher, R. W. (2)
Benson, Ellis S. (1)	Gray, Gary R. (3)	McHugh, R. B. (1)	Thomas, David D. (33)
*Bernlohr, David A. (20)	Griffin, Timothy J. (2)	Mescher, Matthew F. (1)	*Towle, Howard C. (21)
Bernlohr, Robert W. (4)	Guilfoyle, Thomas J. (1)	Messing, Joachim W. (3)	Tretyakova, Natalia Y. (1)
*Bielinsky, Anja K. (7)	Gutmann, H. R. (3)	Metzger, Joseph (1)	Ugurbil, Kamil (3)
Bloomfield, Victor A. (11)	Harris, J. A. (1)	Mickelson, Olaf (1)	Ungar, Frank (6)
Bodley, James W. (11)	Harris, Reuben S. (8)	Muenck, Eckard (2)	*Van Ness, Brian G. (9)
Bollman, J. L. (1)	Hays, Thomas S. (1)	*Murphy, Sharon E. (5)	Van Pilsun, John F. (5)
Bond, Daniel R. (3)	Hemingway, Allan (2)	Musier-Forsyth, Karin (2)	Veglia, Gianluigi (5)
Boyer, Paul D. (23)	Henderson, LaVell M. (11)	*Nelsestuen, Gary L. (19)	Veneziale, C. M. (2)
Bradley, S. Gaylen (1)	Hendrickson, Eric A. (6)	Oegema Jr, Theodore R. (5)	Visscher, Maurice B. (3)
Briggs, David R. (30)	Herrera, Julio E. (2)	Ohlendorf, Douglas H. (3)	Von Korff, R. W. (3)
Brooker, Robert J. (3)	Hogenkamp, Henricus P. C. (10)	Orr, Harry T. (3)	Wackett, Lawrence P. (9)
Burr, George O. (11)	Holman, Ralph T. (2)	Oursler, Merry Jo (1)	Walters, Kylie J. (4)
Carr, Charles W. (5)	Hooper, Alan B. (3)	Palmer, Leroy S. (31)	Wang, N. N. (1)
Chapman, Peter J. (4)	Hossfeld, R. L. (1)	Penniston, J. T. (1)	Warner, Huber R. (11)
Cohen, Saul T. (2)	Howard, James B. (8)	Potter, Lincoln R. (3)	Westendorf, Jennifer J. (1)
Conklin, Kathleen F. (3)	Jenness, Robert (10)	Prohaska, Joseph R. (1)	Wetlaufer, Donald B. (9)
Conti-Tronconi/Fine, Bianca M. (3)	**Kazlauskas, Romas J. (2)	Que Jr., Lawrence (1)	Willaman, J. J. (6)
Cormier, Robert (1)	Kendall, Edward C. (7)	Roepke, M. H. (4)	Wilmot, Caroline M. (5)
Dagley, Stanley (7)	Khodursky, Arkady B. (2)	Rogers, Palmer (1)	*Wold, Finn (7)
Das, Anath (4)	Kim, Do-Hyung (3)	Roon, Robert J. (3)	Woodward, Clare K. (9)
Dempsey, Mary E. (5)	Kirkwood, Samuel (17)	Rosenberg, Andreas (1)	Zarkower, David A. (4)
**Drewes, Lester R. (5)	Klein, Dolph (1)	Rougvie, Ann E. (1)	
Edstrom, Ronald D. (4)	Koerner, James F. (12)	Sadowsky, Michael J. (6)	
Ekker, Stephen C. (3)	Lakowicz, J. R. (1)	Samuels, L. T. (1)	
Ervasti, James (4)	Lange, Alex J. (2)	*Sanders, Michel M. (13)	
Evans, G. T. (2)	*LaPorte, David C. (16)	Sandstrom, William M. (23)	
Ferrington, Deborah A. (3)	Larner, Joseph (1)	*Schmidt-Dannert, Claudia (7)	
Fleisher, G. A. (2)	Liener, Irvin E. (20)	Schmitz, Henry (4)	
Flickinger, Michael C. (3)	*Lipscomb, John D. (24)	Schottel, Janet L. (5)	

() Indicates the number of advisees

*Indicates former BMBB Director of Graduate Studies

**Indicates current BMBB Director of Graduate Studies

Ph.D Graduates 1915 to 2015

1915

Name: Blish, Morris J.
Degree Program: Agricultural Biochemistry
Thesis Title: The Chemical Constitution of Wheat Proteins and Their Relationship to Baking Strength in Flour
Thesis Advisor: Thatcher, R. W.

1918

Name: Miller, Emerson
Degree Program: Agricultural Biochemistry
Thesis Title: A Chemical Investigation of the Volatile Oils of Some Species of the Genus *Pycnanthemum Michx*
Thesis Advisor: Gortner, Ross A.

1919

Name: Holm, George Elmer
Degree Program: Agricultural Biochemistry
Thesis Title: The Hydrolysis of Proteins in the Presence of Aldehydes
Thesis Advisor: Thatcher, R. W.

1922

Name: Collatz, Ferdinand Albert
Degree Program: Agricultural Biochemistry
Thesis Title: Flour Strength as Influenced by the Addition of Diastatic Ferments
Thesis Advisor: Gortner, Ross A. and Bailey, C.H.

Name: Pervier, Norville Clarence
Degree Program: Agricultural Biochemistry
Thesis Title: The Estimation of Pentoses
Thesis Advisor: Gortner, Ross A.

Name: Rumsey, Louys Anthony
Degree Program: Agricultural Biochemistry
Thesis Title: Diastatic Enzymes of Wheat Flour in Their Relation to Flour Strength
Thesis Advisor: Bailey, C. H.

Name: Sharp, Paul Francis
Degree Program: Agricultural Biochemistry
Thesis Title: Viscosity as a Measure of Hydration Capacity of Wheat Flour and Its Relation to Baking Strength
Thesis Advisor: Gortner, Ross A.

1923

Name: Anderson, Arthur Von Krogh
Degree Program: Agricultural Biochemistry
Thesis Title: The Biochemistry of *Fusarium Lini*
Thesis Advisor: Willaman, J. J.

Name: Burr, George Oswald
Degree Program: Agricultural Biochemistry
Thesis Title: The Condensation of Indole Derivatives with Aldehydes with Especial Reference to the Humins of Protein Hydrolysis
Thesis Advisor: Gortner, Ross A.

Name: Newton, Robert
Degree Program: Agricultural Biochemistry
Thesis Title: The Nature and Practical Measurement of Cold Resistance in Winter Wheat
Thesis Advisor: Gortner, Ross A.

1924

Name: Dingwall, Andrew
Degree Program: Agricultural Biochemistry
Thesis Title: Studies of the Proteins of Wheat Flours and Their Relation to Flour Strength
Thesis Advisor: Bailey, C. H.

Name: Hoffman, Walter Fred
Degree Program: Agricultural Biochemistry
Thesis Title: Studies on the Prolamines
Thesis Advisor: Gortner, Ross A.

Name: Johnson, Arnold Harvey
Degree Program: Agricultural Biochemistry
Thesis Title: A Physico-Chemical Study of Cracker Dough Fermentation
Thesis Advisor: Bailey, C. H.

Name: Osterberg, Arnold Erwin
Degree Program: Agricultural Biochemistry
Thesis Title: Chemical Nature and Physiologic Significance of Thyroxin and Related Compounds
Thesis Advisor: Kendall, Edward C.

1925

Name: Richardson, Jessie Emma
Degree Program: Agricultural Biochemistry
Thesis Title: A Study of the Interrelationship of the Carriers of Vitamins A and B as Affecting the Growth and Development of the Tissues of Young Animals
Thesis Advisor: Palmer, Leroy S.

Name: Sherwood, Reginald Carter
Degree Program: Agricultural Biochemistry
Thesis Title: The Control of Diastatic Activity in Wheat Flour
Thesis Advisor: Bailey, C. H.

1926

Name: Davison, Forrest Ramon
Degree Program: Agricultural Biochemistry
Thesis Title: The Pectic Enzymes
Thesis Advisor: Willaman, J. J.

Name: Grewe, Emily Helene
Degree Program: Agricultural Biochemistry
Thesis Title: Glutenin in Its Relation to Flour Strength
Thesis Advisor: Bailey, C. H.

Name: Haag, J. Roy
Degree Program: Agricultural Biochemistry
Thesis Title: The Antagonism of Mineral Ions in Animal Nutrition
Thesis Advisor: Palmer, Leroy S.

Name: Hauge, Sigfred Melanchthon
Degree Program: Agricultural Biochemistry
Thesis Title: Studies in Absorption with Carbons
Thesis Advisor: Willaman, J. J.

Name: Martin, John Holmes
Degree Program: Agricultural Biochemistry
Thesis Title: Comparative Studies of Winter Hardiness in Wheat
Thesis Advisor: Gortner, Ross A.

Name: Mulder, Arthur George
Degree Program: Physiological Chemistry
Thesis Title: The Physiologic Chemistry of Fluorine
Thesis Advisor: McClendon, Jesse F.

Name: Vinson, Carl George
Degree Program: Agricultural Biochemistry
Thesis Title: Some Nitrogenous Constituents of Corn Pollen
Thesis Advisor: Gortner, Ross A.

1927

Name: Briggs, David Reuben
Degree Program: Agricultural Biochemistry
Thesis Title: The Determination of the Zeta-Potential on Cellulose--a Method
Thesis Advisor: Gortner, Ross A.

Name: Franke, Kurt Walter
Degree Program: Agricultural Biochemistry
Thesis Title: Measurement of Hydrogen-Ion Concentrations in the Control of Pulp and Paper Manufacture
Thesis Advisor: Willaman, J. J.

Name: Gregory, Raymond Leslie
Degree Program: Physiological Chemistry
Thesis Title: A Study of the Quantitative Determination of Bile Salts
Thesis Advisor: McClendon, Jesse F.

Name: Larmour, Ralph Kenneth
Degree Program: Agricultural Biochemistry
Thesis Title: A Comparative Study of Glutelins of the Cereal Grains
Thesis Advisor: Gortner, Ross A.

Name: Richardson, George Arthur
Degree Program: Agricultural Biochemistry
Thesis Title: Studies on the Chemical Nature of Casein and Paracasein and the Colloid Chemistry of the Cheese-Clotting Process
Thesis Advisor: Palmer, Leroy S.

Name: Sandstrom, William Martin
Degree Program: Agricultural Biochemistry
Thesis Title: Studies on Some Globulins and Deamidized Proteins
Thesis Advisor: Gortner, Ross A.

Name: St. John, James Leonard
Degree Program: Agricultural Biochemistry
Thesis Title: The Colloidal Behavior of Dough and the Properties of Bread as Influenced by Dry Skim Milk
Thesis Advisor: Bailey, C. H.

Name: Sweetman, Marion Deyoe
Degree Program: Agricultural Biochemistry
Thesis Title: The Nutritional Requirements of Certain Insects Infesting Cereals and Their Products
Thesis Advisor: Palmer, Leroy S.

Name : White, Mollie Grace
Degree Program: Agricultural Biochemistry
Thesis Title: Fermentation of Pentoses by *Fusarium Lini*
Thesis Advisor: Willaman, J. J.

1928

Name: DeLong, Walter Anthony
Degree Program: Agricultural Biochemistry
Thesis Title: Respiration of Apple Twigs in Relation to Winter Hardiness
Thesis Advisor: Willaman, J. J.

Name: Dunn, Joseph Avery
Degree Program: Agricultural Biochemistry
Thesis Title: Factors Influencing Checking in Biscuits
Thesis Advisor: Bailey, C. H.

Name: Ferrari, Charles Guido
Degree Program: Agricultural Biochemistry
Thesis Title: A Study of the Carotinoid Pigments of Wheat and Flour with Soocial Reference to Flour Bleaching
Thesis Advisor: Bailey, C. H.

Name: Malloch, John Gordon
Degree Program: Agricultural Biochemistry
Thesis Title: Studies on the Effect of Environment on the Diastatic Activity of Wheat
Thesis Advisor: Bailey, C. H.

Name: Mather, Thomas Herbert
Degree Program: Agricultural Biochemistry
Thesis Title: The Forms of Phosphorus in Forage Crops as Influenced by Phosphorus Fertilization
Thesis Advisor: Gortner, Ross A.

Name: Olsen, Aksel Giklrog
Degree Program: Agricultural Biochemistry
Thesis Title: A Study of the Role of Protective Colloids in Digestive Processes
Thesis Advisor: Gortner, Ross A.

Name: Pascoe, Truman Archie
Degree Program: Agricultural Biochemistry
Thesis Title: A Study of the Properties of Wheat Flour as Produced by Different Milling Systems
Thesis Advisor: Gortner, Ross A.

Name: Remington, Roe Eugene
Degree Program: Agricultural Biochemistry
Thesis Title: Electrical Conductivity as a Measure of the Permeability of Cells of the Beet Root
Thesis Advisor: McClendon, Jesse F.

1929

Name: Aronovsky, Samuel Isaac
Degree Program: Agricultural Biochemistry
Thesis Title: The Cooking Process. 1. The Role of Water in the Cooking of Wood
Thesis Advisor: Gortner, Ross A.

Name: Geddes, William Findlay
Degree Program: Agricultural Biochemistry
Thesis Title: Chemical and Physico-Chemical Changes in Wheat and Wheat Products Induced by Elevated Temperatures
Thesis Advisor: Bailey, C. H.

Name: Martin, William McKinley
Degree Program: Agricultural Biochemistry
Thesis Title: Relation of Interfacial Energy to the Molecular Structure of Organic Compounds
Thesis Advisor: Gortner, Ross A.

Name: Neal, Wayne Miller
Degree Program: Agricultural Biochemistry
Thesis Title: The Major Mineral Constituents of the Skeletal Structure of Mammals as Influenced by Age and Nutrition
Thesis Advisor: Palmer, Leroy S.

Name: Sinclair, William Bunyan
Degree Program: Agricultural Biochemistry
Thesis Title: The Effect of Inorganic Salt Solutions on Gliadin
Thesis Advisor: Gortner, Ross A.

Name: Staker, Ernest Vernon
Degree Program: Agricultural Biochemistry
Thesis Title: A Comparative Study of the Peptization of the Protein Complex in Various Seeds and Grains
Thesis Advisor: Gortner, Ross A.

Name: Triebold, Howard Oltas
Degree Program: Agricultural Biochemistry
Thesis Title: A Chemical Study of Rancidity
Thesis Advisor: Bailey, C. H.

1930

Name: Bull, Henry Bolivar
Degree Program: Agricultural Biochemistry
Thesis Title: On the Significance of Conditions at the Interface in Relation to the Zeta Potential
Thesis Advisor: Gortner, Ross A.

Name: Morris, Harold Paul
Degree Program: Agricultural Biochemistry
Thesis Title: An Experimental Study of Inheritance as a Factor Influencing Food Utilization in the Rat
Thesis Advisor: Palmer, Leroy S.

Name: Robinson, Allen Dinwoody
Degree Program: Agricultural Biochemistry
Thesis Title: The Effect of Salts on the Paracasein-Sodium Hydronide Equilibrium
Thesis Advisor: Gortner, Ross A.

Name: Treloar, Alan Edward
Degree Program: Agricultural Biochemistry
Thesis Title: A Biometric Study of the Chemical Properties of Wheat and Wheat Flour
Thesis Advisor: Harris, J. A. and C. H. Bailey

Name: Wiese, Hilda Frieda
Degree Program: Agricultural Biochemistry
Thesis Title: A Study of the Substances Adsorbed on the Fat Globules in Cream and Their Relations to Churning
Thesis Advisor: Palmer, Leroy S.

Name: Zeleny, Lawrence
Degree Program: Agricultural Biochemistry
Thesis Title: The Action of Formaldehyde on Amino Acids with Special Reference to the Formation of Amines
Thesis Advisor: Gortner, Ross A.

Name: Barnett, Harold Montgomery
Degree Program: Agricultural Biochemistry
Thesis Title: Studies on Leucine and Dileucine Hydrochloride and the Development of a New Method for the Isolation of Leucine from Proteins
Thesis Advisor: Gortner, Ross A.

1931

Name: Freeman, Monroe Edward
Degree Program: Agricultural Biochemistry
Thesis Title: The Gums of Cereal Grains
Thesis Advisor: Gortner, Ross A.

Name: Jensen, Otto Gerhard
Degree Program: Agricultural Biochemistry
Thesis Title: Interfacial Energy and the Molecular Structure of Organic Compounds
Thesis Advisor: Gortner, Ross A.

Name: Jones, Ivan Dunlavy
Degree Program: Agricultural Biochemistry
Thesis Title: Studies on Free and Bound Water in Elastic and Non-Elastic Gels
Thesis Advisor: Gortner, Ross A.

Name: Read, John William
Degree Program: Agricultural Biochemistry
Thesis Title: The Effects of Ultra-Violet Irradiation on the Chemical and Nutritive Properties of Baked Products
Thesis Advisor: Bailey, C. H.

Name: Thor, Clifford James Byron
Degree Program: Agricultural Biochemistry
Thesis Title: The Effect of Alkalis upon Cystine
Thesis Advisor: Gortner, Ross A.

1932

Name: Armstrong, Wallace D.
Degree Program: Physiological Chemistry
Thesis Title: Studies on Fluorine Analysis Materials
Thesis Advisor: McClendon, Jesse F.

Name: Brown, William Redman
Degree Program: Agricultural Biochemistry
Thesis Title: Some Factors Influencing Lactose Secretion
Thesis Advisor: Gortner, Ross A. and W. E. Peterson

Name: Guanzon, Getulio Augusto
Degree Program: Agricultural Biochemistry
Thesis Title: The Uronic Acid Content of the Nitrogen-free Extract of Feeding Stuffs
Thesis Advisor: Gortner, Ross A.

Name: Mangels, Charles Edwin
Degree Program: Agricultural Biochemistry
Thesis Title: Physico-Chemical Studies on Wheat Starches
Thesis Advisor: Bailey, C. H.

Name: Myers, Charles Snoddy
Degree Program: Physiological Chemistry
Thesis Title: Derivatives of Diiodotyrosine and Thyroxine
Thesis Advisor: Kendall, Edward C.

Name: Simonsen, Daisy Grace
Degree Program: Biochemistry
Thesis Title: The Biological and Chemical Study of Cysteine and Cystine with Special Reference to Their Oxidation Reactions
Thesis Advisor: Kendall, Edward C.

Name: Wiles, Harold Oliver
Degree Program: Agricultural Biochemistry
Thesis Title: The Rotatory Dispersion of Gliadin Peptized by Different Solutions
Thesis Advisor: Gortner, Ross A.

Name: Wilkerson, Vernon Alexander
Degree Program: Agricultural Biochemistry
Thesis Title: A Biochemical Study of Embryonic (Pig) Growth with Special Reference to Nitrogenous Compounds
Thesis Advisor: Gortner, Ross A.

1933

Name: Buckman, Stanley Joseph
Degree Program: Agricultural Biochemistry
Thesis Title: A Study of Certain Factors Influencing the Movement of Liquids in Wood
Thesis Advisor: Schmitz, Henry and Ross A. Gortner

Name: Hamilton, Jr., Robert Houston
Degree Program: Physical Chemistry
Thesis Title: Some Studies on Carbohydrate Metabolism
Thesis Advisor: McClendon, Jesse F.

Name: Jackson, Stanley McAfee
Degree Program: Agricultural Biochemistry
Thesis Title: A Study of the Proteins of the Mammary Gland
Thesis Advisor: Gortner, Ross A.

Name: Lachat, Lawrence Lysle
Degree Program: Agricultural Biochemistry
Thesis Title: The Study of the Rachitogenic Properties of Cereals
Thesis Advisor: Palmer, Leroy S.

Name: Mason, Inez Dora
Degree Program: Agricultural Biochemistry
Thesis Title: Studies in the Relative Utilization of Biologically Adequate and Inadequate Proteins by Animals
Thesis Advisor: Palmer, Leroy S.

1934

Name: Arnow, Leslie Earle
Degree Program: Physiological Chemistry
Thesis Title: Physico-Chemical Effects Produced by the Irradiation of Crystalline Egg Albumin Solutions with Alpha-Particles
Thesis Advisor: Stenstrom, K. W.

Name: Jeffrey, Robert Newell
Degree Program: Agricultural Biochemistry
Thesis Title: Studies on Photosynthesis
Thesis Advisor: Burr, George O. and Ross A. Gortner

Name: Lasby, Helen Adams
Degree Program: Agricultural Biochemistry
Thesis Title: A Study of the Effect of Pasteurization on the Biological Properties of Milk
Thesis Advisor: Palmer, Leroy S.

Name: Linner, Edward Robert
Degree Program: Agricultural Biochemistry
Thesis Title: Adsorbability and Organic Structure
Thesis Advisor: Gortner, Ross A.

Name: Markley, Max Castleberry
Degree Program: Agricultural Biochemistry
Thesis Title: The Inheritance of the Carotinoid Pigments in *Triticum Vulgare* and *Triticum Durum*
Thesis Advisor: Bailey, C. H.

Name: Nilson, Hugo Waldemar
Degree Program: Agricultural Biochemistry
Thesis Title: A Study of Certain Fundamental Factors Involved in the Stimulation of Growth by the Pituitary Hormones
Thesis Advisor: Palmer, Leroy S.

Name: Powell, Milton Edward
Degree Program: Agricultural Biochemistry
Thesis Title: Studies on the Effects of Heating Milk upon Its Coagulation with Renin
Thesis Advisor: Palmer, Leroy S.

Name: Rimpila, Charles Einar
Degree Program: Agricultural Biochemistry
Thesis Title: Factors Influencing the Composition of the Adsorption Membrane Around the Fat Globules in Cream
Thesis Advisor: Palmer, Leroy S.

1935

Name: Allers, William Duane
Degree Program: Physiological Chemistry
Thesis Title: The Influence of Diet and Mineral Metabolism on Dogs after Suprarenalectomy
Thesis Advisor: Kendall, Edward C.

Name: Bohn, Leonard John
Degree Program: Agricultural Biochemistry
Thesis Title: Significant Physical Properties of Flour Doughs
Thesis Advisor: Bailey, C. H.

Name: Das, Upendra Kumar
Degree Program: Agricultural Biochemistry
Thesis Title: The Nitrogen Nutrition of Sugar Cane
Thesis Advisor: Gortner, Ross A. and C. H. Bailey

Name: Flock, Eunice Verna
Degree Program: Physiological Chemistry
Thesis Title: A Study of the Phosphorus Compounds in the Liver of the Dog
Thesis Advisor: Kendall, Edward C.

Name: Lundgren, Harold Palmer
Degree Program: Physiological Chemistry
Thesis Title: A New Chronometric Micro Method for Determination of Iodine Based on Its Catalytic Effect on an Oxidation-Reduction Reaction
Thesis Advisor: McClendon, Jesse F.

Name: Munz, Emil
Degree Program: Agricultural Biochemistry
Thesis Title: Enzymatic Amylolysis as a Function of Temperature
Thesis Advisor: Bailey, C. H.

Name: Patton, Alva Rae
Degree Program: Agricultural Biochemistry
Thesis Title: Biochemical Studies of the Influence of Diet on the Composition and Biological Properties of Eggs
Thesis Advisor: Palmer, Leroy S.

Name: Senum, Tellef
Degree Program: Agricultural Biochemistry
Thesis Title: The Effect of Oxidizing and Reducing Agents
Thesis Advisor: Sandstrom, William M.

Name: Shellenberger, John Alfred
Degree Program: Agricultural Biochemistry
Thesis Title: Biochemical Distinctions Between Barley Varieties
Thesis Advisor: Bailey, C. H.

Name: Skovholt, Oscar
Degree Program: Agricultural Biochemistry
Thesis Title: Effect of Plasticity and Related Physical Properties of the Substratum of Enzyme Activity
Thesis Advisor: Bailey, C. H.

Name: Street, Harold Richardson
Degree Program: Physiological Chemistry
Thesis Title: The Biological and Chemical Study of Cysteine and Cystine with Special Reference to Their Oxidation Reactions
Thesis Advisor: Kendall, Edward C.

Name: Sullivan, Betty Jane
Degree Program: Agricultural Biochemistry
Thesis Title: The Lipids of the Wheat Embryo
Thesis Advisor: Bailey, C. H.

1936

Name: Blickensdorfer, Philip
Degree Program: Agricultural Biochemistry
Thesis Title: Enzyme Versus Acid Hydrolysis
Thesis Advisor: Sandstrom, William M.

Name: Frampton, Vernon Lachoneus
Degree Program: Agricultural Biochemistry
Thesis Title: Electrokinetics: Studies on Charcoal
Thesis Advisor: Gortner, Ross A.

Name: Harris, Rae Hudson
Degree Program: Agricultural Biochemistry
Thesis Title: Wheat Flour Proteins in their Relation to Peptization and Flour Strength
Thesis Advisor: Bailey, C. H.

Name: Hessler, Lyle Edward
Degree Program: Agricultural Biochemistry
Thesis Title: The Carbon Metabolism of *Gibberella saubinetti* (Mont.) Sacc. On Glucose
Thesis Advisor: Gortner, Ross A.

1937

Name: Clark, Ronald Elvyn
Degree Program: Agricultural Biochemistry
Thesis Title: Physical Chemical Studies on Starch Gelatinization
Thesis Advisor: Gortner, Ross A.

Name: Donaldson, Frank Thomas
Degree Program: Agricultural Biochemistry
Thesis Title: A Study of the Mineral Nutrition of Wheat as Influenced by Fertilizer Combinations
Thesis Advisor: Gortner, Ross A.

Name: Erickson, Harvey Dorlin
Degree Program: Agricultural Biochemistry
Thesis Title: Directional Permeability of Seasoned Woods to Water and Some Factors Which Affect It
Thesis Advisor: Gortner, Ross A. and Henry Schmitz

Name: Gross, Roland Albert
Degree Program: Agricultural Biochemistry
Thesis Title: The Properties of Oils Extracted from Oil-Seeds by Various Techniques
Thesis Advisor: Bailey, C. H.

Name: Hills, Claude Hibbard
Degree Program: Agricultural Biochemistry
Thesis Title: The Amylases of Different Varieties of Barley
Thesis Advisor: Bailey, C. H.

Name: Kass, Jacob Peter
Degree Program: Agricultural Biochemistry
Thesis Title: The Chemical Factors Involved in the Browning of Autoclaved Milk
Thesis Advisor: Palmer, Leroy S.

Name: Lauffer, Jr., Max Augustus
Degree Program: Agricultural Biochemistry
Thesis Title: Electric Forces at Organic Liquid-Solid Interfaces
Thesis Advisor: Gortner, Ross A.

Name: Tarassuk, Nikita Paul
Degree Program: Agricultural Biochemistry
Thesis Title: Study of Physical and Chemical Properties of the Adsorption "Membrane" Around the Fat Globules in Cream
Thesis Advisor: Palmer, Leroy S.

1938

Name: Barnicoat, Cuthbert Richmond
Degree Program: Agricultural Biochemistry
Thesis Title: A Study of the Chemistry of Certain Incipient Flavour Defects in Butter
Thesis Advisor: Palmer, Leroy S.

Name: Bernhart, Finn Westelius
Degree Program: Physiological Chemistry
Thesis Title: The Chemical Effects of the Ultra-Violet Irradiation of Crystalline Egg Albumin
Thesis Advisor: McClendon, Jesse F.

Name: Calverley, Charles Ernest
Degree Program: Agricultural Biochemistry
Thesis Title: A Study of Certain Physiological and Metabolic Factors Related to Efficiency of Food Utilization for Growth
Thesis Advisor: Palmer, Leroy S.

Name: Evans, Cyril David
Degree Program: Agricultural Biochemistry
Thesis Title: Peptization and Study of the Oat Proteins
Thesis Advisor: Bailey, C. H.

Name: Lohn, Cecil Olan
Degree Program: Agricultural Biochemistry
Thesis Title: A Study of the Efficiency of Food Metabolism for the Maintenance of Inbred Animals Differing in Their Efficiency of Food Utilization During Growth
Thesis Advisor: Palmer, Leroy S.

Name: Mitra, Bhupendra Nath
Degree Program: Agricultural Biochemistry
Thesis Title: Some Chemical Studies on Cholera Vibrios and Related Organisms
Thesis Advisor: Gortner, Ross A.

Name: Nelson, John Wesley
Degree Program: Agricultural Biochemistry
Thesis Title: A Study of the Nutritive Value of Fresh-water Plants
Thesis Advisor: Palmer, Leroy S.

Name: Olson, Floyd C.
Degree Program: Agricultural Biochemistry
Thesis Title: A Comparative Study of Chemical and Biochemical Methods for Determining the Nutritive Value of Proteins for Growth
Thesis Advisor: Palmer, Leroy S.

Name: Reitz, Henry Charles
Degree Program: Agricultural Biochemistry
Thesis Title: A Comparative Study of the Starches of the Triticum Species
Thesis Advisor: Gortner, Ross A.

Name: Sellers, Lois Coates
Degree Program: Agricultural Biochemistry
Thesis Title: Properties of the Proteins Resulting from the Thermal Fractionation of Glutenin
Thesis Advisor: Bailey, C. H.

Name: Stamberg, Olof Ernest
Degree Program: Agricultural Biochemistry
Thesis Title: The Amyloses of Wheat Starch
Thesis Advisor: Bailey, C. H.

Name: Stone, William Ellis
Degree Program: Physiological Chemistry
Thesis Title: Intermediary Carbohydrate Metabolism of the Brain: Quantitative Studies of Lactic Acid and Some Carbonyl Compounds
Thesis Advisor: McClendon, Jesse F.

Name: Wender, Simon Harold
Degree Program: Agricultural Biochemistry
Thesis Title: The Isolation of Photosensitizing Agents from Buckwheat
Thesis Advisor: Gortner, Ross A.

1939

Name: Barnes, Eleanor Olds
Degree Program: Agricultural Biochemistry
Thesis Title: Biochemical Studies of Varieties of Minnesota Fruits
Thesis Advisor: Gortner, Ross A.

Name: Hankinson, Cloyce Leroy
Degree Program: Agricultural Biochemistry
Thesis Title: The Relation of Waterbinding Properties of Casein to Physical and Chemical Properties of Milk and Dairy Products
Thesis Advisor: Palmer, Leroy S.

Name: Lund, Axel Palmer
Degree Program: Agricultural Biochemistry
Thesis Title: A Study of the Protein Complex in Various Tree Seeds
Thesis Advisor: Sandstrom, William M.

Name: Migicovsky, Bert Baruch
Degree Program: Agricultural Biochemistry
Thesis Title: The Use of Larvae of *Tribolium confusum* Duval in a Method of Assay for Vitamin B and a Study of Their Vitamin Requirements
Thesis Advisor: Palmer, Leroy S.

Name: Painter, Edgar Page
Degree Program: Agricultural Biochemistry
Thesis Title: Studies on Organic Selenium Compounds with Relation to Those of Natural Occurrence in Plants
Thesis Advisor: Gortner, Ross A.

Name: Rogers, Charles Fletcher
Degree Program: Agricultural Biochemistry
Thesis Title: Biological Aspects of Cyanogenesis
Thesis Advisor: Bailey, C. H.

Name: Vail, Gladys Ellen
Degree Program: Agricultural Biochemistry
Thesis Title: The State of Water in Collidal Gels
Thesis Advisor: Bailey, C. H.

1940

Name: Anderson, Bror Ernest
Degree Program: Agricultural Biochemistry
Thesis Title: Factors Affecting the Decreasing Rate of Flow of Liquids through Wood, with Special Reference to Electrokinetic Phenomena
Thesis Advisor: Schmitz, Henry and Ross A. Gortner

Name: Barnes, Richard Henry
Degree Program: Physiological Chemistry
Thesis Title: Fat Transport
Thesis Advisor: Visscher, Maurice B. and George O. Burr

Name: Barnum, Jr., Cyrus Paine
Degree Program: Physiological Chemistry
Thesis Title: Polarographic Investigations of the Cystein-Cysteine System
Thesis Advisor: Visscher, Maurice B.

Name: Evans, James William
Degree Program: Agricultural Biochemistry
Thesis Title: The Interrelationship of the Lipides in the Starch from the Seed of the Zea Mays
Thesis Advisor: Briggs, David R.

Name : Greenwood, Fred Laurel 1940.
Degree Program: Agricultural Biochemistry
Thesis Title: Part I. The Effect of Certain Ethers, Tertiary Amines and Acetals on Proteins. The Behavior of Proteins with the Grignard Reagent. Part II. The Reaction of Ethyl Glycinate Hydrochloride with Primary, Secondary, and Tertiary Grignard Reagents
Thesis Advisor: Gortner, Ross A.

Name: Hollihan, John Philip
Degree Program: Agricultural Biochemistry
Thesis Title: A Viscosity Study of Particle Shape and Solvation Factors Involved in the Heat Bodying of Tung Oils
Thesis Advisor: Briggs, David R.

Name: Lindstrom, Harold Vernon
Degree Program: Agricultural Biochemistry
Thesis Title: Qualitative Studies in the Alkaline Decomposition of Cystine
Thesis Advisor: Sandstrom, William M.

Name: Loeb, Harold Gordon
Degree Program: Physiological Chemistry
Thesis Title: The Composition of Rats Maintained on Diets High in Carbohydrate and Saturated Fat but Devoid of Unsaturated Fatty Acids, with Emphasis on the Lipid Component
Thesis Advisor: Burr, George O.

Name: Roberts, Eric Richard
Degree Program: Agricultural Biochemistry
Thesis Title: The Use of Polariograph in Some Biochemical Problems
Thesis Advisor: Gortner, Ross A.

Name: Rusoff, Louis Leon
Degree Program: Agricultural Biochemistry
Thesis Title: The Distribution and Concentration of Copper and Other Trace Elements in the Govine at Birth as Influenced by the Nutrition of the Dam
Thesis Advisor: Palmer, Leroy S.

Name: Stearns, Thomas Wesley
Degree Program: Agricultural Biochemistry
Thesis Title: Electrophoresis Studies on Brucella
Thesis Advisor: Roepke, M. H.

Name: Yen, En-Chu
Degree Program: Agricultural Biochemistry
Thesis Title: Natural Antioxidants in Vegetable Oils
Thesis Advisor: Briggs, David R.

1941

Name: Berryman, George Hugh
Degree Program: Physiological Chemistry
Thesis Title: Studies on the Role of the Liver in the Formation of the Plasma Proteins
Thesis Advisor: Bollman, J. L.

Name: Jensen, James Leroy
Degree Program: Agricultural Biochemistry
Thesis Title: A Study of the Thiamine, Riboflavine and Ascorbic Acid Content of the Organs of Vitamin E Deficient and Normal Rats
Thesis Advisor: Palmer, Leroy S.

Name: Lew, Baak Wai
Degree Program: Agricultural Biochemistry
Thesis Title: The Gums from the Carob Bean, *Ceratonia siliqua* L. and the Honey Locust Bean, *Gleditschia triacanthos* L.
Thesis Advisor: Gortner, Ross A.

Name: Macdonald, Robert Michael Theis
Degree Program: Agricultural Biochemistry
Thesis Title: A Physico-Chemical Study of Zein
Thesis Advisor: Gortner, Ross A.

Name: Niven, Thomas Blaney
Degree Program: Agricultural Biochemistry
Thesis Title: The Alkaline Hydrolysis of Proteins
Thesis Advisor: Gortner, Ross A.

Name: Roy, Wallace Robert
Degree Program: Agricultural Biochemistry
Thesis Title: The Effect of Potassium Deficiency on the Juice of Valencia Oranges
Thesis Advisor: Gortner, Ross A.

Name: Scott, Edward Marion
Degree Program: Agricultural Biochemistry
Thesis Title: Studies on Papain
Thesis Advisor: Sandstrom, William M.

Name: Stuart, Sister Mary Urban
Degree Program: Agricultural Biochemistry
Thesis Title: Biochemical Studies on the Reactions of Sorbose in Alkaline Solutions
Thesis Advisor: Sandstrom, William M.

Name: Swendseid, Marian Edna
Degree Program: Physiological Chemistry
Thesis Title: The Use of Stable Isotope Heavy Carbon in the Study of Intermediary Metabolism
Thesis Advisor: Hemingway, Allan

Name: Wells, Benjamin Baxter
Degree Program: Physiological Chemistry
Thesis Title: The Biochemical and Physiologic Properties of Compounds Separated from the Adrenal Cortex
Thesis Advisor: Kendall, Edward C.

Name: Weswig, Paul Henry
Degree Program: Agricultural Biochemistry
Thesis Title: A Study of Growth, Metabolism and Efficiency of Inbred Animals as Affected by Physiological Stimulants and Inhibitors
Thesis Advisor: Palmer, Leroy S.

1942

Name: Abrams, Irving Melvin
Degree Program: Physiological Chemistry
Thesis Title: Studies on Model Membranes with Particular Reference to Anomalous Osmosis
Thesis Advisor: Sollner, Karl and Maurice B. Visscher

Name: Fishman, Myer
Degree Program: Agricultural Biochemistry
Thesis Title: The Chlorophyll-protein Complex
Thesis Advisor: Gortner, Ross A. and L. S. Moyer

Name: Hossfeld, Ralph Lowell
Degree Program: Agricultural Biochemistry
Thesis Title: The Cooking Process: XII. The Action of Aqueous Solutions of Pure Sodium Hydrosulfide on Aspen Wood
Thesis Advisor: Gortner, Ross A.

Name: Kelley, Vincent Charles
Degree Program: Agricultural Biochemistry
Thesis Title: Viscosity Studies in Relation to Gelatinized Starches. A Theory of Starch Viscosity
Thesis Advisor: Briggs, David R. and Ross A. Gortner

Name: Kneen, Eric
Degree Program: Agricultural Biochemistry
Thesis Title: Studies on the Cereal Amylases
Thesis Advisor: Geddes, William F.

Name: Mann, Frank Daniels
Degree Program: Agricultural Biochemistry
Thesis Title: The Hydration of Hemoglobin in Solution
Thesis Advisor: Sandstrom, William M.

Name: Matterson, Lloyd Daniel
Degree Program: Agricultural Biochemistry
Thesis Title: Studies on the Formation of Vitamin A from β Carotene
Thesis Advisor: Palmer, Leroy S.

Name: Olsen, Norman Stanley
Degree Program: Physiological Chemistry
Thesis Title: The Synthesis and Metabolism of Glycine
Thesis Advisor: Hemingway, Allan

Name: Pepper, James Hubert
Degree Program: Agricultural Biochemistry
Thesis Title: Biochemical Studies on the Fat Body of the Sugar Beet Webworm, *Loxostege sticticalis* L.
Thesis Advisor: Gortner, Ross A.

Name: Putnam, Frank William
Degree Program: Agricultural Biochemistry
Thesis Title: A Study of Factors Affecting the Degree of Protein Dispersion
Thesis Advisor: Gortner, Ross A.

Name: Ramstad, Paul Ellertson
Degree Program: Agricultural Biochemistry
Thesis Title: A Study of the Respiration and Storage Behaviour of Soybeans
Thesis Advisor: Geddes, William F.

Name: Szego, Clara Marian
Degree Program: Physiological Chemistry
Thesis Title: Studies on Methods of Chemical Assay of Estrogenic Substances and the Physiological Problem of Steroid Metabolism
Thesis Advisor: Burr, George O.

Name: Westlake, William Ellis
Degree Program: Agricultural Biochemistry
Thesis Title: A Comparative Study of Acid and Alkaline Hydrolysis on Cereal Proteins
Thesis Advisor: Gortner, Ross A.

1943

Name: Croston, Clarence Bradford
Degree Program: Agricultural Biochemistry
Thesis Title: The Actions of Acids and of Alkalies on Certain Amino Acids and Their derivatives
Thesis Advisor: Sandstrom, William M.

Name: Eckles, Nylene Elvira
Degree Program: Physiological Chemistry
Thesis Title: Studies on Intravenous Administration of Emulsified Fat
Thesis Advisor: Evans, G. T. and George O. Burr

Name: Hill, Douglas Calvert
Degree Program: Agricultural Biochemistry
Thesis Title: A Polarographic Study of D-Glucose and D-Fructose
Thesis Advisor: Geddes, William F. and I. M. Kolthoff

Name: Johnson, Leon H.
Degree Program: Agricultural Biochemistry
Thesis Title: Sulfur in Plants. The Effect of a Sulfur Deficiency in Plants on Accumulation of Iron, Copper and Manganese
Thesis Advisor: Briggs, David R.

Name: Luecke, Richard William
Degree Program: Agricultural Biochemistry
Thesis Title: A Study of Vitamin Deficient Diets in Relation to Body Storage in Rats Differing in Their Efficiency of Food Utilization
Thesis Advisor: Palmer, Leroy S.

Name: Luh, Ching Fan
Degree Program: Agricultural Biochemistry
Thesis Title: Peptization of Gliadin by Various Organic Solvents
Thesis Advisor: Sandstrom, William M.

Name: Reid, Thomas Stout
Degree Program: Agricultural Biochemistry
Thesis Title: A Study of the Fodor-Kuk Technic of Protein Degradation
Thesis Advisor: Sandstrom, William M.

Name: Roberts, Sidney
Degree Program: Physiological Chemistry
Thesis Title: The Influence of Previous Diet on the Preferential Utilization of Foodstuffs
Thesis Advisor: Samuels, L. T.

Name: Rusoff, Irving Isadore
Degree Program: Physiological Chemistry
Thesis Title: Spectral Adsorption Characteristics of Lipids
Thesis Advisor: Burr, George O.

Name: Sanders, Robert Gordon
Degree Program: Agricultural Biochemistry
Thesis Title: Quantitative Absorption Studies on *Brucella abortus* Antibody Antigen System
Thesis Advisor: Roepke, M. H. and William M. Sandstrom

Name: Schwert, George William
Degree Program: Agricultural Biochemistry
Thesis Title: Electrokinetic Studies with the Tiselius Apparatus
Thesis Advisor: Briggs, David R.

Name: Vivino, Aurelio Earl
Degree Program: Agricultural Biochemistry
Thesis Title: The Chemical Composition and Nutritional Value of Pollen Collected by Bees
Thesis Advisor: Palmer, Leroy S.

Name: Wolman, Walter
Degree Program: Agricultural Biochemistry
Thesis Title: The Synthesis of ms-Tetraphenylisoporphine and Rearrangement Reactions of the Substituted Porphine Ring
Thesis Advisor: Sandstrom, William M.

1944

Name: Greenberg, Goodwin
Degree Program: Physiological Chemistry
Thesis Title: An Ultraviolet Spectroscopic Study of the Structure of Amino Acids and Proteins
Thesis Advisor: Burr, George O.

Name: Hoffer, Abraham
Degree Program: Agricultural Biochemistry
Thesis Title: Studies on the B Vitamins of Wheat
Thesis Advisor: Geddes, William F.

Name: Holland, Bryant Richard
Degree Program: Agricultural Biochemistry
Thesis Title: The Elimination of Humin Formation in the Acid Hydrolysis of Protein Carbohydrate Mixtures, and the Quantitative Separation of the Amino Acids by Electrical Transport
Thesis Advisor: Sandstrom, William M.

Name: Holman, Ralph Theodore
Degree Program: Physiological Chemistry
Thesis Title: Studies in the Autooxidation of Lipids
Thesis Advisor: Burr, George O.

Name: Jenness, Robert
Degree Program: Agricultural Biochemistry
Thesis Title: Factors Affecting the Natural Materials Adsorbed on the Surface of the Fat Globules of Milk
Thesis Advisor: Palmer, Leroy S.

Name: Merritt, Paul Prowers
Degree Program: Agricultural Biochemistry
Thesis Title: A Study of the Physical Properties of Doughs as Measured with the Extensograph
Thesis Advisor: Bailey, C. H.

Name: Ofelt, Chester Winfield
Degree Program: Agricultural Biochemistry
Thesis Title: The Influence of Oxidizing and Reducing Agents on the Baking Characteristics of Wheat Flour
Thesis Advisor: Geddes, William F.

Name: Stansly, Philip
Degree Program: Agricultural Biochemistry
Thesis Title: *In vitro* Studies of Sulfonamides on Bacteria of the Genus *Salmonella*
Thesis Advisor: Roepke, M. H.

Name: Yoshida, Ruth Kojima
Degree Program: Agricultural Biochemistry
Thesis Title: A Chemical and Physiological Study on the Nature and Properties of the Toxic Principle in *Leucaena glauca* (Koa Haole)
Thesis Advisor: Palmer, Leroy S.

1945

Name: Ackerman, Elizabeth Monroe
Degree Program: Physiological Chemistry
Thesis Title: An Enzymatic Study of the Submicroscopic Particles of Cytoplasm
Thesis Advisor: Burr, George O. and Cyrus P. Barnum

Name: Chen, Keng-Tao
Degree Program: Agricultural Biochemistry
Thesis Title: Studies on the Wheat Pigments
Thesis Advisor: Geddes, William F.

Name: Fan, Hsing-Yun
Degree Program: Agricultural Biochemistry
Thesis Title: The Use of Organic Arsenicals as Insecticides
Thesis Advisor: Sandstrom, William M.

Name: Garst, Josephine Burgis
Degree Program: Physiological Chemistry
Thesis Title: Clinical Studies of Sex Sterols
Thesis Advisor: Evans, G. T.

Name: Lerner, Aaron
Degree Program: Physiological Chemistry
Thesis Title: Studies on Plasma Proteins. I. The Nature and Significance of Serum Turbidity. II. The Ultraviolet Absorption of the Plasma Proteins. III. An Ultraviolet Absorption Basis for the Determination of Serum Albumin and Globulin
Thesis Advisor: Barnum, Cyrus P. and George O. Burr

Name: Milner, Max
Degree Program: Agricultural Biochemistry
Thesis Title: The Respiration and Storage Behavior of Soybeans
Thesis Advisor: Geddes, William F.

Name: Sperber, Nathan
Degree Program: Agricultural Biochemistry
Thesis Title: Studies in the Synthesis of D-Ribose
Thesis Advisor: Sandstrom, William M.

Name: Warshowsky, Benjamin
Degree Program: Agricultural Biochemistry
Thesis Title: The Action of Molecular Oxygen on Glucose and Glucosamine in the Presence of Potassium Hydroxide
Thesis Advisor: Sandstrom, William M.

1946

Name: Chipault, Jacques Robert
Degree Program: Agricultural Biochemistry
Thesis Title: The Identification and Determination of the Natural Antioxidant of Hog Fat
Thesis Advisor: Sandstrom, William M. and George O. Burr

Name: Hanig, Martin
Degree Program: Agricultural Biochemistry
Thesis Title: Hog Cholera Virus: Immunochemical Studies
Thesis Advisor: Briggs, David R.

Name: Kielley, William Wayne
Degree Program: Agricultural Biochemistry
Thesis Title: Some Biochemical Properties of the Muscle Protein, Myosin
Thesis Advisor: Briggs, David R.

Name: Lillevik, Hans A
Degree Program: Agricultural Biochemistry
Thesis Title: The Technic of Catalytic Hydrogenation and Hydrogenolysis Applied to Proteins and Related Model Compounds
Thesis Advisor: Sandstrom, William M.

Name: Noznick, Peter Paul
Degree Program: Agricultural Biochemistry
Thesis Title: Rheological, Creaming and Cake Making Properties of Mixtures of Simple Synthetic Triglycerides as Evaluated by Micro Techniques
Thesis Advisor: Geddes, William F.

1947

Name: Brakke, Myron Kendal
Degree Program: Agricultural Biochemistry
Thesis Title: Studies in the Hydrogenation of Proteins with Raney Nickel
Thesis Advisor: Sandstrom, William M.

Name: Kretchmer, Norman
Degree Program: Physiological Chemistry
Thesis Title: A Serial Study of the Chemistry and Histology of the Mouse Liver Cell Cytoplasm during Carbon Tetrachloride Induction of Hepatoma
Thesis Advisor: Barnum, Cyrus P.

Name: Larsen, Robert Arthur
Degree Program: Agricultural Biochemistry
Thesis Title: The Effect of Heat Treatment on the Value of Nonfat Milk Solids as a Supplement in Bread Baking
Thesis Advisor: Geddes, William F. and Robert Jenness

1948

Name: Behr, Eldon August
Degree Program: Agricultural Biochemistry
Thesis Title: Studies on Passage of Liquids and Dissolved Materials through Wood Under Pressure and Diffusion Gradients
Thesis Advisor: Briggs, David R. and Henry Schmitz

Name: Caster, William Oviatt
Degree Program: Physiological Chemistry
Thesis Title: The Excretion of Thiamine and Its Degradation Products
Thesis Advisor: Mickelson, Olaf and Ancel B. Keys

Name: Siminovitch, David
Degree Program: Agricultural Biochemistry
Thesis Title: Seasonal Chemical Changes in the Living Bark of the Common Locust Tree in Relation to the Problem of Frost Hardiness
Thesis Advisor: Briggs, David R.

Name: Smith, Donald Edgar
Degree Program: Agricultural Biochemistry
Thesis Title: The Effect of Drying Conditions upon the Biochemical Properties of Corn
Thesis Advisor: Geddes, William F. and E. L. Piret

Name: Tsuboi, Kenneth Kazutaka
Degree Program: Physiological Chemistry
Thesis Title: A Chemical and Enzymatic Study of Pentose Nucleic Acids and Their Hydrolysis by Cytoplasmic Fractions of Liver Tissue
Thesis Advisor: Barnum, Cyrus P.

1949

Name: Bachrach, Howard Lloyd
Degree Program: Agricultural Biochemistry
Thesis Title: Physico- and Immuno-Chemical Studies of the Hog Cholera Virus
Thesis Advisor: Briggs, David R.

Name: Bieri, John Genter
Degree Program: Agricultural Biochemistry
Thesis Title: Factors Affecting the Utilization of Beta-carotene by the Rat
Thesis Advisor: Schultze, Max O.

Name: Bottomley, Robert Alwyn
Degree Program: Agricultural Biochemistry
Thesis Title: The Relationship Between Mold Growth and Deterioration in Stored Yellow Corn at Various Temperatures, Humidities and Oxygen Concentrations
Thesis Advisor: Geddes, William F.

Name: Devik, Ole Gabriel
Degree Program: Agricultural Biochemistry
Thesis Title: The Effects of Low Temperatures upon the Stability and the Activity of Enzymes
Thesis Advisor: Sandstrom, William M.

Name: Lindenbaum, Arthur
Degree Program: Physiological Chemistry
Thesis Title: Investigations with Radioactive Isotopes
Thesis Advisor: Armstrong, Wallace D.

Name: Mann, Robert Leslie
Degree Program: Agricultural Biochemistry
Thesis Title: A Study of the Proteins of Soybeans
Thesis Advisor: Briggs, David R.

Name: Schwert, Margaret Houlton
Degree Program: Agricultural Biochemistry
Thesis Title: Some Chemical Studies on Insulin
Thesis Advisor: Sandstrom, William M.

1950

Name: Bice, Claude Wesley
Degree Program: Agricultural Biochemistry
Thesis Title: A Study of Certain Biochemical Changes Occurring in Bread during Storage
Thesis Advisor: Geddes, William F.

Name: Bitman, Joel
Degree Program: Physiological Chemistry
Thesis Title: A Study of the Acetate Buffer Hydrolysis of the Conjugated 17-Ketosteroids of Normal Male Urine
Thesis Advisor: Cohen, Saul T.

Name: Craig, Burton Mackay
Degree Program: Agricultural Biochemistry
Thesis Title: Relation between Glyceride Composition and Some Physical Properties of Synthetic Fats
Thesis Advisor: Geddes, William F.

Name: Cuendet, Louis Samuel
Degree Program: Agricultural Biochemistry
Thesis Title: Researches on a Fructosan and a Hemicellulose of Rye and a Galactomannan of the Carob Bean
Thesis Advisor: Smith, Fred

Name: Ehrenthal, Irving
Degree Program: Agricultural Biochemistry
Thesis Title: Studies on the Chemical Consitution of Xylan
Thesis Advisor: Smith, Fred

Name: Grim, Eugene Donald
Degree Program: Physiological Chemistry
Thesis Title: An Experimental Study of Anomalous Osmosis with Particular Reference to its Possible Physiological Significance
Thesis Advisor: Armstrong, Wallace D. and Karl Sollner

Name: Heinicke, Ralph Martin
Degree Program: Agricultural Biochemistry
Thesis Title: Studies on Phospholipides
Thesis Advisor: Briggs, David R.

Name: Kleinschmidt, Walter John
Degree Program: Agricultural Biochemistry
Thesis Title: Biochemical Studies of Antigens and Antibodies and their Interaction
Thesis Advisor: Boyer, Paul D.

Name: Malm, Mildred
Degree Program: Agricultural Biochemistry
Thesis Title: The Reaction of Periodic Aci and Sodium Metaperiodate with Chitin and Related Amino Sugars
Thesis Advisor: Sandstrom, William M.

Name: Neihof, Rex Albert
Degree Program: Physiological Chemistry
Thesis Title: An Experimental Study of Mosaic Membranes which are Composed of Selectivity Anion and Selectivity Cation Permeable Parts
Thesis Advisor: Armstrong, Wallace D. and Karl Sollner

Name: Probst, Gerald William
Degree Program: Agricultural Biochemistry
Thesis Title: Some Studies on the Biosynthesis of Ascorbic Acid in the Rat
Thesis Advisor: Schultze, Max O.

Name: Rabinovitz, Marco
Degree Program: Agricultural Biochemistry
Thesis Title: Studies on the Biological Function of Vitamin E
Thesis Advisor: Boyer, Paul D.

Name: Rafique, Chowdhry Mohammad
Degree Program: Agricultural Biochemistry
Thesis Title: Studies on the Constitution of the Polysaccharides of Guar Gum
Thesis Advisor: Smith, Fred

Name: Stenberg, Russell Julius
Degree Program: Agricultural Biochemistry
Thesis Title: A Study of the Browning of Bread on Storage
Thesis Advisor: Geddes, William F.

Name: Tollefson, Charles Ivar
Degree Program: Agricultural Biochemistry
Thesis Title: Studies with Lactose as a Dietary Component for the Rat
Thesis Advisor: Schultze, Max O.

Name: Turner, Earl Wilbert
Degree Program: Agricultural Biochemistry
Thesis Title: Protein Interaction Studies. I. The Combination of Modified Serum Gamma Globulin with Other Proteins. II. Factors Effecting the Solubilization and Dissociation of Specific Diphtheria Toxoid-Antotoxin Precipitates
Thesis Advisor: Boyer, Paul D.

1951

Name: Boggs, Lawrence Allen
Degree Program: Agricultural Biochemistry
Thesis Title: The Constitution of the Fructosan of the Tuber of *Cordyline terminalis* (Hawaiian "Ti" Plant)
Thesis Advisor: Smith, Fred

Name: Colvin, John Ross
Degree Program: Agricultural Biochemistry
Thesis Title: An Explanation of Some Electrophoretic Boundary Anomalies and Its Relation to the General Problem of Protein-Anion Interaction
Thesis Advisor: Briggs, David R.

Name: Ewart, Mervyn Henry
Degree Program: Agricultural Biochemistry
Thesis Title: Studies on Development of Frost Resistance in Plant Tissues. Investigation of Some Enzyme Systems in Living Bark Cells of the Black Locust Tree
Thesis Advisor: Briggs, David R.

Name: Larson, Bruce Linder
Degree Program: Agricultural Biochemistry
Thesis Title: Studies on the Sulfhydryl Groups of Proteins with Particular Reference to Their Effect on the Baking Action of Nonfat Dry Milk Solids
Thesis Advisor: Geddes, William F. and Robert Jenness

Name: Malmstrom, Bo Gunnar
Degree Program: Physiological Chemistry
Thesis Title: A Quantitative Histochemical Method for the Determination of Zinc and its Application to Studies on the Gastric Mucosa
Thesis Advisor: Glick, David

Name: Nygaard, Oddvar Frithjof
Degree Program: Physiological Chemistry
Thesis Title: Studies on the Kinetics of Acid Hydrolysis of Pentose Nucleic Acid Derivatives
Thesis Advisor: Barnum, Cyrus P.

Name: Oneson, Irvine Bernt
Degree Program: Physiological Chemistry
Thesis Title: Studies on the Conjugated Steroids of Human Urine
Thesis Advisor: Cohen, Saul T.

Name: Savchuck, Willaim Basil
Degree Program: Physiological Chemistry
Thesis Title: Fluoride Analytical Studies and Turnover in the Mammalian Skeleton
Thesis Advisor: Armstrong, Wallace D.

Name: Smith, Robert Franklin
Degree Program: Agricultural Biochemistry
Thesis Title: Studies on Protein Interaction--A Method for Determining the Constantsof Interaction from Electrophoresis Data
Thesis Advisor: Briggs, David R.

Name: Tappel, Aloys Louis
Degree Program: Agricultural Biochemistry
Thesis Title: Kinetics and Mechanisms of the Lipoxidase Catalyzed Oxidation of Linoleate
Thesis Advisor: Boyer, Paul D. and Walter O. Lundberg

Name: Van Cleve, John Woodbridge
Degree Program: Agricultural Biochemistry
Thesis Title: Correlation of the Structure of the Glycosides
Thesis Advisor: Smith, Fred

Name: Von Korff, Richard W.
Degree Program: Physiological Chemistry
Thesis Title: Studies on Gastric Urease Employing Isotopic Urea
Thesis Advisor: Glick, David

Name: Ward, Wilfred Hamlin
Degree Program: Agricultural Biochemistry
Thesis Title: The Electrokinetics of Cellulose-Alcohol Systems: The Effect of Salts
Thesis Advisor: Briggs, David R.

1952

Name: Abdel-Akher, Mahmoud A.
Degree Program: Agricultural Biochemistry
Thesis Title: The Constitution of Glycogen
Thesis Advisor: Smith, Fred

Name: Bleidner, William Egidius
Degree Program: Agricultural Biochemistry
Thesis Title: The Construction and Calibration of a Light Scattering Photometer
Thesis Advisor: Briggs, David R.

Name: Cohen, Willaim David
Degree Program: Physiological Chemistry
Thesis Title: Hormonal Influences on the Carbohydrate Metabolism of Isolated Muscle
Thesis Advisor: Frame, E. G. and Wallace D. Armstrong

Name: Fathy, Abdel Aziz
Degree Program: Agricultural Biochemistry
Thesis Title: The Chemistry and Toxicity of Fluoroketones
Thesis Advisor: Smith, Fred and L. K. Cutkomp

Name: Gilles, Kenneth Albert
Degree Program: Agricultural Biochemistry
Thesis Title: Studies on the Gums Derived from Barley Flour, Wheat Flour and Fresh and Stale Bread
Thesis Advisor: Smith, Fred and William F. Geddes

Name: Gordon, Arthur Leonard
Degree Program: Agricultural Biochemistry
Thesis Title: The Biochemical Behavior of Wheat Flour Doughs Supplemented with Milk Solids
Thesis Advisor: Geddes, William F. and Robert Jenness

Name: Hamilton, John Kelvin
Degree Program: Agricultural Biochemistry
Thesis Title: The Constitution of Starch
Thesis Advisor: Smith, Fred

Name: Kachmar, John Frederick
Degree Program: Agricultural Biochemistry
Thesis Title: A Study of the Mechanism of Potassium Actiation of Pyruvic Phosphoferase
Thesis Advisor: Boyer, Paul D.

Name: Koch, Robert B.
Degree Program: Agricultural Biochemistry
Thesis Title: The Fate of the Sugars in Bread Doughs and Synthetic Nutrient Solutions Undergoing Fermentation with Bakers' Yeast
Thesis Advisor: Geddes, William F. and Fred Smith

Name: Loewus, Frank A.
Degree Program: Agricultural Biochemistry
Thesis Title: Studies on the Physical and Chemical Properties of Starch. The Retrogradation of Amylose in the Presence and Absence of Gelatinizing Agents and Similar Compounds
Thesis Advisor: Briggs, David R.

Name: Norcia, Leonard Nicholas
Degree Program: Physiological Chemistry
Thesis Title: The Use of Synthetic, Simple, Pure Triglycerides in a Study Relating to Fat Metabolism
Thesis Advisor: Lundberg, Walter O.

Name: Segal, Harold L.
Degree Program: Agricultural Biochemistry
Thesis Title: Kinetic Studies of Enzyme Reactions I. Extension of Kinetic Analysis. II. Mechanism of Action of 3-Phosphoglyceraldehyde Dehydrogenase
Thesis Advisor: Boyer, Paul D.

Name: Towey, John Patrick
Degree Program: Physiological Chemistry
Thesis Title: Influence of Some Nutritional Factors on the Ash Content, Breaking Stress, and Elasticity of Rat Bones
Thesis Advisor: Armstrong, Wallace D.

1953

Name: Christianson, George
Degree Program: Agricultural Biochemistry
Thesis Title: Studies of Some Physical and Chemical Changes in Milk in Frozen Storage
Thesis Advisor: Jenness, Robert and S. T. Coulter

Name: Cifonelli, Joseph Anthony
Degree Program: Agricultural Biochemistry
Thesis Title: A Study of Invertase
Thesis Advisor: Smith, Fred

Name: Dirks, Brinton Marlo
Degree Program: Agricultural Biochemistry
Thesis Title: The Properties of Some Fungal Lipases and Their Role in Grain Deterioration
Thesis Advisor: Boyer, Paul D. and William F. Geddes

Name: Geerdes, James Devine
Degree Program: Agricultural Biochemistry
Thesis Title: The Constitution of Flax Straw Hemicellulose
Thesis Advisor: Smith, Fred

Name: Hamilton, Jr., James Guthrie
Degree Program: Physiological Chemistry
Thesis Title: Displacement Separation of Lipids
Thesis Advisor: Armstrong, Wallace D.

Name: Hammond, Earl Gulette
Degree Program: Agricultural Biochemistry
Thesis Title: The Chemistry and Metabolism of Highly Unsaturated Fatty Acids
Thesis Advisor: Lundberg, Walter O.

Name: Loewus, Mary Walz
Degree Program: Agricultural Biochemistry
Thesis Title: Interactions Between Enzymes and Competitive Inhibitors
Thesis Advisor: Briggs, David R.

Name: McGuckin, Warren Francis
Degree Program: Physiological Chemistry
Thesis Title: The Partial Synthesis and Physiologic Study of Some Analogs of Adrenal Hormones
Thesis Advisor: Mason, H. L. and Wallace D. Armstrong

Name: Misra, Krishna Prasad
Degree Program: Agricultural Biochemistry
Thesis Title: Studies on the Existence and Nature of Combined Ascorbic Acid in Plant and =
Animal Materials
Thesis Advisor: Schultze, Max O.

Name: Nayyar, Som Nath
Degree Program: Physiological Chemistry
Thesis Title: Quantitative Histological Distribution of β -Glucuronidase in the Adrenal Gland in
Various Physiological States
Thesis Advisor: Glick, David

Name: Pallansch, Michael Joseph
Degree Program: Agricultural Biochemistry
Thesis Title: Studies on the Interaction of Synthetic Detergents with Proteins in Solution
Thesis Advisor: Briggs, David R.

Name: Pollock, James Marshall
Degree Program: Agricultural Biochemistry
Thesis Title: The Biochemical Functions of Soy Flour in White Bread Products
Thesis Advisor: Geddes, William F.

Name: Rebers, Paul Armand
Degree Program: Agricultural Biochemistry
Thesis Title: The Constitution of Iles Mannan: Part I-The Structure of Iles Mannan; Part II
The Colorimetric Determination of Sugars
Thesis Advisor: Smith, Fred

Name: Robertson, Hugh Elburn
Degree Program: Agricultural Biochemistry
Thesis Title: The Mechanisms of Enzymic Reactions of Phosphate as Studied with Sodium
Azide, 2,4-Dinitrophenol and Compounds of Tervalent Phosphorus
Thesis Advisor: Boyer, Paul D.

1954

Name: Blakley, Edwin Raymond
Degree Program: Agricultural Biochemistry
Thesis Title: The Synthesis of 6-Deoxy-6-Fluoro-D-Glucose and a Study of Its Metabolic Effects
Thesis Advisor: Boyer, Paul D.

Name: Brink, David Liddell
Degree Program: Agricultural Biochemistry
Thesis Title: The Cooking Process XIII. The Effect of Aqueous Solutions of Pure Sodium
Hydrosulfide on the Constituents of Wood
Thesis Advisor: Hossfeld, R. L. and William M. Sandstrom

Name: Cunningham, David Kenneth
Degree Program: Agricultural Biochemistry
Thesis Title: Comparative Studies of the Chemical and Physical Properties of Some Cereal
Proteins
Thesis Advisor: Geddes, William F.

Name: Dray, Sheldon
Degree Program: Physiological Chemistry
Thesis Title: A Quantitative Theory of Dynamic Polyionic Potentials Across Membranes of
Ideal Ionic Selectivity in Terms of Transference Numbers and Its Experimental
Test with Permselective Membranes
Thesis Advisor: Armstrong, Wallace D. and Karl Sollner

Name: Falcone, Alfonso Benjamin
Degree Program: Agricultural Biochemistry
Thesis Title: Study of the Mechanism of Enzyme Action by Use of Isotopes of Oxygen and Phosphorus
Thesis Advisor: Boyer, Paul D.

Name: Harrison Jr., William Henry
Degree Program: Agricultural Biochemistry
Thesis Title: Studies on the Mechanism of Enzymic Phosphate Transfer with O18
Thesis Advisor: Boyer, Paul D.

Name: Johnson Jr., John Alexander
Degree Program: Agricultural Biochemistry
Thesis Title: Properties of Certain Protease Systems Used in Bread Making
Thesis Advisor: Geddes, William F. and Paul D. Boyer

Name: Spriestersbach, David Richard
Degree Program: Agricultural Biochemistry
Thesis Title: The Constitution of Plant Gums
Thesis Advisor: Smith, Fred

Name: Walden, Cecil Craig
Degree Program: Agricultural Biochemistry
Thesis Title: Purification of Wheat Alpha and Beta Amylases
Thesis Advisor: Geddes, William F.

1955

Name: Anderson Jr., Charles Albert
Degree Program: Agricultural Biochemistry
Thesis Title: The Heat Denaturation of Beta-Lactoglobulin and Alpha-Lactalbumin
Thesis Advisor: Jenness, Robert

Name: Clausen, Donald Frederick
Degree Program: Physiological Chemistry
Thesis Title: Studies on the Determination of Inulin and Evans Blue in Blood and Tissues
Thesis Advisor: Barnum, Cyrus P.

Name: Dutton, Guy Gordon Studdy
Degree Program: Agricultural Biochemistry
Thesis Title: A Study of the Hemicelluloses of Western Hemlock (*Tsuga heterophylls*)
Thesis Advisor: Smith, Fred

Name: Fuller, Robert Arthur
Degree Program: Agricultural Biochemistry
Thesis Title: Interspecies Complex Formation in Denatured Protein Mixtures
Thesis Advisor: Briggs, David R.

Name: Guy, Eugene James
Degree Program: Agricultural Biochemistry
Thesis Title: The Amylases of Milk
Thesis Advisor: Jenness, Robert

Name: Hill, Robert Mathew
Degree Program: Agricultural Biochemistry
Thesis Title: Some Physical Properties of Beta-Lactoglobulin
Thesis Advisor: Briggs, David R.

Name: Holme, John
Degree Program: Agricultural Biochemistry
Thesis Title: Studies on the Physical Nature of Gliadin
Thesis Advisor: Briggs, David R.

Name: Hummel, Brian Christopher Warren
Degree Program: Agricultural Biochemistry
Thesis Title: The Isolation and Partial Characterization of Flavicipic Acid, a Phytotoxic Metabolite of *Aspergillus flavus*
Thesis Advisor: Geddes, William F. and L. S. Cuendet

Name: Jardetzky, Christine D.
Degree Program: Physiological Chemistry
Thesis Title: Kinetic Studies on the Nucleic Acids of Regenerating Mouse Liver
Thesis Advisor: Barnum, Cyrus P.

Name: Klosterman, Harold Joseph
Degree Program: Agricultural Biochemistry
Thesis Title: Flaxseed Glucosides
Thesis Advisor: Smith, Fred

Name: Peters, John Henry
Degree Program: Physiological Chemistry
Thesis Title: Studies on the Metabolism of Carcinogenic Fluorine Derivatives
Thesis Advisor: Gutmann, H. R.

Name: Rose, Joseph Edward
Degree Program: Agricultural Biochemistry
Thesis Title: A Study of Non-Specific *Brucella* Agglutinins in Bovine Serum
Thesis Advisor: Briggs, David R. and M. H. Roepke

Name: Woods, Kenneth Ray
Degree Program: Physiological Chemistry
Thesis Title: Magnesium Metabolism Studies
Thesis Advisor: Armstrong, Wallace D.

1956

Name: Bollum, Frederick James
Degree Program: Physiological Chemistry
Thesis Title: The Effect of Glutathione on the X-Ray Inhibition of Phosphorous-32 Incorporation into Deoxyribonucleic Acid of a Mouse Mammary Carcinoma
Thesis Advisor: Barnum, Cyrus P.

Name: Gander, John E.
Degree Program: Agricultural Biochemistry
Thesis Title: I. Interrelationship of Tocopherol Oxidation Products; II. Mechanism of the Biosynthesis of Lactose
Thesis Advisor: Boyer, Paul D.

Name: Garner, Eugene Francis
Degree Program: Agricultural Biochemistry
Thesis Title: Part I. An Investigation into the Oxidation of Glycosides with Periodic Acid. Part II. Paper Electrophoresis of Carbohydrates
Thesis Advisor: Smith, Fred

Name: Glass, Robert Louis
Degree Program: Agricultural Biochemistry
Thesis Title: Chemical, Physical, and Biological Studies of Rats' Milk and Its Components
Thesis Advisor: Schultze, Max O.

Name: Goldstein, Irwin Joseph
Degree Program: Agricultural Biochemistry
Thesis Title: Methylation Studies on the Reduced Products of Periodate Oxidized Carbohydrates
Thesis Advisor: Smith, Fred

Name: Huffman, George Wallen
Degree Program: Agricultural Biochemistry
Thesis Title: A New Procedure for Determining the Structure of Polysaccharides
Thesis Advisor: Smith, Fred

Name: Laakso, John William
Degree Program: Agricultural Biochemistry
Thesis Title: The Biochemistry of Orotic Acid
Thesis Advisor: Schultze, Max O.

Name: Luchsinger, Wayne Wesley
Degree Program: Agricultural Biochemistry
Thesis Title: A Study of Oxidative Phosphorylation Using Isotopes of Oxygen and Phosphorous
Thesis Advisor: Boyer, Paul D.

Name: Mizuno, Nobuko Shimotori
Degree Program: Physiological Chemistry
Thesis Title: Biochemical Studies on an Experimentally Induced Hypoplastic Anemia in Calves
Thesis Advisor: Armstrong, Wallace D. and Max O. Schultze

Name: Prentice, Neville
Degree Program: Agricultural Biochemistry
Thesis Title: Studies on the Chemical Composition of Wheat Stem Rust Urediospores
Thesis Advisor: Smith, Fred and William F. Geddes

Name: Simmons, Noel
Degree Program: Physiological Chemistry
Thesis Title: Studies on Glycine-2-C14 Incorporation into Mouse Liver Constituents
Thesis Advisor: Barnum, Cyrus P.

Name: Srivastave, Harish Chandra
Degree Program: Agricultural Biochemistry
Thesis Title: Structural Studies on Glucomannans
Thesis Advisor: Smith, Fred

Name: Wolf, Walter James
Degree Program: Agricultural Biochemistry
Thesis Title: Physical and Chemical Studies on Soybean Plants
Thesis Advisor: Briggs, David R.

1957

Name: Christensen, Glenn Marvin
Degree Program: Agricultural Biochemistry
Thesis Title: The Constitution of Starch Dextrins
Thesis Advisor: Smith, Fred

Name: Golubchuk, Moishe
Degree Program: Agricultural Biochemistry
Thesis Title: Studies on the Relation of Molds and Mold Products to "Sick Wheat" and Other Types of Damage in Stored Wheat
Thesis Advisor: Geddes, William F.

Name: Lee, John Wilson
Degree Program: Agricultural Biochemistry
Thesis Title: Fermentation Studies on the Sponge and Dough and Stable Ferment Methods of Bread Manufacture
Thesis Advisor: Geddes, William F.

Name: Lewis, Bertha Ann
Degree Program: Agricultural Biochemistry
Thesis Title: Studies on Periodate Oxidation Products of Carbohydrates
Thesis Advisor: Smith, Fred

Name: Mahadevan, Vaidyanatha
Degree Program: Agricultural Biochemistry
Thesis Title: Dilatometric Behavior of Tristearin, Triolein, and Mixtures Thereof
Thesis Advisor: Lundberg, Walter O.

Name: Melnychyn, Paul
Degree Program: Agricultural Biochemistry
Thesis Title: Studies of the Interaction of Proteins with Detergents; Effects of pH, Ionic Strength and Detergent Structure
Thesis Advisor: Briggs, David R.

Name: Robbins, Ernest Aleck
Degree Program: Agricultural Biochemistry
Thesis Title: The Free Energy of Hydrolysis of High Energy Phosphates
Thesis Advisor: Boyer, Paul D.

Name: Seto, Thomas Akiyoshi
Degree Program: Agricultural Biochemistry
Thesis Title: Studies on the Chemical Nature of a Toxic Factor which Causes Aplastic Anemia in Calves
Thesis Advisor: Schultze, Max O.

Name: Wada, Shohachi
Degree Program: Agricultural Biochemistry
Thesis Title: Structural Studies on Soybean Hemagglutinin
Thesis Advisor: Schultze, Max O.

1958

Name: Drechsler, Edward Robert
Degree Program: Agricultural Biochemistry
Thesis Title: The Catalytic Activity of Carboxypeptidase-Degraded Aldolase
Thesis Advisor: Boyer, Paul D.

Name: Gray, Ernest David
Degree Program: Physiological Chemistry
Thesis Title: Kinetic Studies of Metabolic Interactions among Mono- and Polynucleotides of Mouse Liver
Thesis Advisor: Barnum, Cyrus P.

Name: Greenberg, Leonard Jason
Degree Program: Physiological Chemistry
Thesis Title: Quantitative Histochemical Distribution of Coenzyme A and Certain Phosphorous Compounds in the Rat Adrenal Gland in Various Functional States
Thesis Advisor: Glick, David

Name: Hedin, Paul Arthur
Degree Program: Agricultural Biochemistry
Thesis Title: Products of Metabolism of Protein-Free Amino Acid Diets Fed to Rats
Thesis Advisor: Schultze, Max O.

Name: Jackson, John Edward
Degree Program: Agricultural Biochemistry
Thesis Title: The Preparation and Properties of Some Synthetic Glycerides
Thesis Advisor: Lundberg, Walter O.

Name: Nelson, Walter Leland
Degree Program: Physiological Chemistry
Thesis Title: The Effect of Diisopropylfluorophosphate Administration on the Phosphorus Metabolism of Mouse Brain
Thesis Advisor: Barnum, Cyrus P.

Name: Stulberg, Melvin Philip
Degree Program: Agricultural Biochemistry
Thesis Title: The Participation of Adenosine Triphosphate in Protein Synthesis
Thesis Advisor: Boyer, Paul D.

1959

Name: Carlson, Curtis Harvey
Degree Program: Physiological Chemistry
Thesis Title: Retention, Distribution, and Excretion of Radiofluoride
Thesis Advisor: Armstrong, Wallace D.

Name: Fischer, Milton Harold
Degree Program: Agricultural Biochemistry
Thesis Title: I. Graft Polymerization and Transglycosidation of Polysaccharides; II. The Bound Carbohydrate Constituents of Soybean Lecithin; III. The Isolation of Isomaltose from Enzyme Degraded Starch
Thesis Advisor: Smith, Fred

Name: Hay, George William
Degree Program: Agricultural Biochemistry
Thesis Title: I. The Constitution of the Oat Hull Hemicellulose; II. Electrolysis in the Study of Carbohydrate Compounds
Thesis Advisor: Smith, Fred

Name: Smith, Quenton Terrill
Degree Program: Physiological Chemistry
Thesis Title: In vivo Effects of Certain Hormonal Variations on Collagen Metabolism
Thesis Advisor: Armstrong, Wallace D.

Name: Sorger-Domenigg, Heinz
Degree Program: Agricultural Biochemistry
Thesis Title: Structural Studies on Oat Glucan
Thesis Advisor: Smith, Fred

1960

Name: Ives, David Homer
Degree Program: Physiological Chemistry
Thesis Title: A Kinetic Evaluation, Empolying Radiophosphorus of the Synthesis and Metabolic Stability of DNA in Regenerating Rat Liver
Thesis Advisor: Barnum, Cyrus P.

Name: Parekh, Amritlal Chhagnlal
Degree Program: Physiological Chemistry
Thesis Title: Quantitative Cytochemical Studies of the Mast Cell
Thesis Advisor: Glick, David

Name: Potter, Clarence Scott
Degree Program: Agricultural Biochemistry
Thesis Title: Studies on the Biochemical Mechanisms of Active Transport
Thesis Advisor: Boyer, Paul D.

Name: Reynard, Alan Mark
Degree Program: Physiological Chemistry
Thesis Title: The Mechanism of Enzymatic Phosphate Transfer Reactions
Thesis Advisor: Boyer, Paul D.

Name: Unrau, Abraham Martin
Degree Program: Agricultural Biochemistry
Thesis Title: I. The Structure of Laminarin; II. End-Group Analysis and the Molecular Weight of Polysaccharides
Thesis Advisor: Smith, Fred

Name: Zealey, Marion Edward
Degree Program: Agricultural Biochemistry
Thesis Title: The Reactivity of Sulfhydryl Groups in Proteins as Evidenced by the Binding of Certain Reagents
Thesis Advisor: Jenness, Robert

1961

Name: Chang, Kim Yong
Degree Program: Physiological Chemistry
Thesis Title: Studies on Fine Structure of Nucleic Acids and Nucleoproteins by Ion Binding Techniques
Thesis Advisor: Carr, Charles W.

Name: Dahle, Leland Kenneth
Degree Program: Physiological Chemistry
Thesis Title: Effects of Protein and Unsaturated Fatty Acids in Autoxidation Phenomena
Thesis Advisor: Holman, Ralph T.

Name: Dempsey, Mary Elizabeth
Degree Program: Physiological Chemistry
Thesis Title: Studies on the Possible Occurrence of Unrecognized Phosphate Compounds Related to Muscle Thesis Contraction and Oxidative Phosphorylation
Thesis Advisor: Boyer, Paul D.

Name: Derr, Robert Frederick
Degree Program: Agricultural Biochemistry
Thesis Title: The Synthesis and Metabolism of S35-(1,2-Dichlorovinyl)-L-Cysteine
Thesis Advisor: Schultze, Max O.

Name: Hayes, Dora Kruse
Degree Program: Physiological Chemistry
Thesis Title: Body Fluid and Skeletal Tissue Interrelations in the American Lobster
Thesis Advisor: Armstrong, Wallace D.

Name: Lewbart, Marvin Louis
Degree Program: Biochemistry
Thesis Title: Formation and Reactions of Steroidal Glyoxals: I. Reactions of α -Ketolic Steroids with Methanolic Cupric Acetate; II. The Mechanism of the Porter-Silver Reaction
Thesis Advisor: Mattox, V. R.

Name: Nelson, John Howard
Degree Program: Agricultural Biochemistry
Thesis Title: The Nature of Wheat Lipids and Their Role in Flour Deterioration
Thesis Advisor: Glass, Robert L.

Name: Schroepfer, Jr., George John
Degree Program: Physiological Chemistry
Thesis Title: Studies on the Conversion of Zymosterol to Cholesterol in the Rat
Thesis Advisor: Frantz, Ivan D.

Name: Witonksy, Philip
Degree Program: Agricultural Biochemistry
Thesis Title: Studies on a Mitochondrial Iodinating System
Thesis Advisor: Kirkwood, Samuel

1962

Name: Bahl, Om Parkash
Degree Program: Agricultural Biochemistry
Thesis Title: Studies on the Fine Structure of Glycogen and Amylopectin
Thesis Advisor: Smith, Fred

Name: Daniel, Robert George
Degree Program: Agricultural Biochemistry
Thesis Title: The Interaction of S-(1,2-Dichlorovinyl)-L-Cysteine with Cellular Components of *E. coli* B
Thesis Advisor: Schultze, Max O.

Name: De Freitas, Anthony Stanley Walter
Degree Program: Agricultural Biochemistry
Thesis Title: The Preparation and Film-Forming Properties of Synthetic Glycerides
Thesis Advisor: Lundberg, Walter O.

Name: King, Charles Miller
Degree Program: Physiological Chemistry
Thesis Title: Studies on the Interaction of Oxidative Metabolites of the Carcinogen 2 Acetylaminofluorene with Protein
Thesis Advisor: Gutmann, H. R.

Name: Klubes, Philip
Degree Program: Agricultural Biochemistry
Thesis Title: Synthesis of S-(1,2-Dichlorovinyl)-D-Cysteine-3-C14 and S-(1,2-Dichlorovinyl)-L-Cysteine-3-C14 and Their Uses with *E. coli* B
Thesis Advisor: Schultze, Max O.

Name: Mullen, Joseph David
Degree Program: Agricultural Biochemistry
Thesis Title: Studies on the Nature of the Protein Sites Involved in the Interaction of Bovine Serum Albumin with Detergents
Thesis Advisor: Briggs, David R.

Name: Myhre, David Vernon
Degree Program: Agricultural Biochemistry
Thesis Title: Constituents of the Hemicelluloses of Alfalfa (*Medicago sativa*) and Brome Grass (*Bromus inermis*)
Thesis Advisor: Smith, Fred

Name: Pothapragada, Venkateswarlu
Degree Program: Physiological Chemistry
Thesis Title: Studies on Fluoride Metabolism and Transport
Thesis Advisor: Armstrong, Wallace D

Name: Wong, Robert C.
Degree Program: Agricultural Biochemistry
Thesis Title: The Peptic Activation of Acetylated Trypsinogen and the Isolation of Degradation Products Labeled with ³²P
Thesis Advisor: Liener, Irvin E.

1963

Name: Cunningham, Bryce Allen
Degree Program: Agricultural Biochemistry
Thesis Title: Enzymes Concerned with Biological Iodination
Thesis Advisor: Kirkwood, Samuel

Name: Deluca, Marlene Anderegg
Degree Program: Physiological Chemistry
Thesis Title: Studies of the Rapid Uptake of Inorganic Phosphate P₃₂ by Mitochondria as related to Oxidative Phosphorylation
Thesis Advisor: Boyer, Paul D.

Name: Hullar, Theodore Lee
Degree Program: Agricultural Biochemistry
Thesis Title: I. Reaction of Methyl Pentofuranosides with Periodate; II. Structural Studies on the Arabian of Sugar Beets; III. Neutral Carbohydrates from Rubber Latex
Thesis Advisor: Smith, Fred

Name: Oleson, Arland Eugene
Degree Program: Physiological Chemistry
Thesis Title: A Newly-Formed Deoxyribonuclease from Cells of *Escherichia coli* Infected with T2 Bacteriophage
Thesis Advisor: Barnum, Cyrus P.

Name: Peterson, William Jennings
Degree Program: Physiological Chemistry
Thesis Title: Studies on the Structure of the Red Cell Membrane
Thesis Advisor: Carr, Charles W.

Name: Pollara, Bernard
Degree Program: Physiological Chemistry
Thesis Title: Studies on the Nature of Cryofibrinogens
Thesis Advisor: Von Korff, R. W.

Name: Rahm, Joseph John
Degree Program: Physiological Chemistry
Thesis Title: The Effects of Dietary Fatty Acids Upon Lipids of Subcellular Particles
Thesis Advisor: Holman, Ralph T.

Name: Rathbun, William Burton
Degree Program: Agricultural Biochemistry
Thesis Title: S-(1,2-Dichlorovinyl)-L-Cysteine; I. Its Effect on Two Species of *Ochromonas*; II. Its Catalytic Degradation
Thesis Advisor: Schultze, Max O.

Name: Silverstein, Emanuel
Degree Program: Physiological Chemistry
Thesis Title: Equilibrium Reaction Rates and Enzyme Mechanism. I. Beef Heart and Rabbit Muscle Lactate Dehydrogenase. II. Liver and Yeast Alcohol Dehydrogenase. III. Yeast Hexokinase
Thesis Advisor: Boyer, Paul D.

Name: Stauffer, Clyde Eugene
Degree Program: Agricultural Biochemistry
Thesis Title: The Esteratic Enzymes of Wheat Germ
Thesis Advisor: Glass, Robert L.

1964

Name: Anderson, Paul Martin
Degree Program: Agricultural Biochemistry
Thesis Title: The Interaction with Proteins and Enzymatic Cleavage of S-(1,2-Dichlorovinyl)-L Cysteine
Thesis Advisor: Schultze, Max O.

Name: Blomquist, Charles Howard
Degree Program: Physiological Chemistry
Thesis Title: Studies of Embryonic Chick Heart Cells in Tissue Culture
Thesis Advisor: Armstrong, Wallace D.

Name: Bose, Robert John
Degree Program: Agricultural Biochemistry
Thesis Title: Periodate Oxidation of Fructans and Related Compounds
Thesis Advisor: Smith, Fred

Name: Gould, Norman Russell
Degree Program: Agricultural Biochemistry
Thesis Title: A Study of the Active Site of Enzymes Sulfhydryl
Thesis Advisor: Liener, Irvin E.

Name: Joos, Richard William
Degree Program: Physiological Chemistry
Thesis Title: Calcium Binding to Phospholipids and Phospholipid-Protein Complexes
Thesis Advisor: Carr, Charles W.

Name: Kvistberg, David Robert
Degree Program: Physiological Chemistry
Thesis Title: Model Studies on the Staining reaction of Beta Cells of the Islets of Langerhans by Aldehyde Fuchsin
Thesis Advisor: Barnum, Cyrus P.

Name: Niehaus, Jr., Walter Gerhard
Degree Program: Biochemistry
Thesis Title: Characterization of Nuclei from Regenerating Rat Liver on the Basis of Incorporation of Radioisotope *In Vivo*
Thesis Advisor: Barnum, Cyrus P.

Name: Peter, James Bernard
Degree Program: Physiological Chemistry
Thesis Title: Studies of Bound Phosphohistidine and its Possible Precursors in Mitochondria and in Soluble Enzyme Systems
Thesis Advisor: Boyer, Paul D.

Name: Roberts, Ronald Clair
Degree Program: Agricultural Biochemistry
Thesis Title: Studies on the Proteins of Soybean: Isolation and Characterization of the 7S Component of the Globulin Fraction
Thesis Advisor: Briggs, David R.

Name: Travis, James
Degree Program: Agricultural Biochemistry
Thesis Title: Physico-Chemical Studies of Porcine Trypsin
Thesis Advisor: Liener, Irvin E.

1965

Name: Bevill, III, Rardon Dixon
Degree Program: Agricultural Biochemistry
Thesis Title: Mode of Action of Enzymes Acting on Carbohydrates: A Study of UDP-Gal-4 Epimerase
Thesis Advisor: Kirkwood, Samuel

Name: Bond, Andrew Buck
Degree Program: Biochemistry
Thesis Title: The Sugars and the Alpha-1,4 Glucosidases of Germinating Corn
Thesis Advisor: Glass, Robert L.

Name: Choi, Yong Sung
Degree Program: Biochemistry
Thesis Title: Magnesium Binding Studies of Ribosomes
Thesis Advisor: Carr, Charles W.

Name: Cost, Helen Marie Bakos
Degree Program: Biochemistry
Thesis Title: Studies on the Incorporation of Radioactive Phosphate into Ribonucleic Acid and Other Cell Components During the Formation of Bacteriochlorophyll in *Rhodospirillum rubrum*
Thesis Advisor: Frenkel, Albert W.

Name: Dickie, Nester
Degree Program: Agricultural Biochemistry
Thesis Title: Studies on the Proteolytic Enzymes of *Tetrahymena pyriformis* W
Thesis Advisor: Liener, Irvin E.

Name: Lee, Su Rae
Degree Program: Biochemistry
Thesis Title: Purification and Properties of Enzymes Which Attack Buar Gum
Thesis Advisor: Kirkwood, Samuel

Name: Linn, Tracy Claud
Degree Program: Physiological Chemistry
Thesis Title: β -Hydroxy- β -Methylglutaryl-CoA Reduction by an Enzyme From Rat Liver
Microsomes
Thesis Advisor: Frantz, Ivan D.

Name: Mobberley, Mary Louise
Degree Program: Biochemistry
Thesis Title: Evidence for the Existence of Multiple Pools of Late Cholesterol Intermediates in
the Rat
Thesis Advisor: Frantz, Ivan D.

Name: Nelson, Thomas Evar
Degree Program: Agricultural Biochemistry
Thesis Title: Studies on the Mechanism of Carbohydrase Action
Thesis Advisor: Kirkwood, Samuel

Name: Pierre, Kenneth Jonas
Degree Program: Biochemistry
Thesis Title: Constitution of the Hemicellulose of Fescue Grass (*Festuca arundinacea* Shreb)
Thesis Advisor: Kirkwood, Samuel

Name: Preston, III, James Faulkner
Degree Program: Agricultural Biochemistry
Thesis Title: Chemical, Immunological and Metabolic Studies on the Extracellular
Polysaccharides of *Penicillium charlesii* G. Smith
Thesis Advisor: Gander, John E.

Name: Scallen, Terence Joseph
Degree Program: Biochemistry
Thesis Title: Chemical Synthesis of Cholesta-5,7,24-Trien-3 β -ol and Demonstration of Its
Conversion to Cholesterol in the Rat
Thesis Advisor: Frantz, Ivan D.

Name: Simon, Gerald Ralph
Degree Program: Biochemistry
Thesis Title: Conversion of Aspartic Acid to Glutamic Acid in Guinea Pig Cerebral Cortex Slices
'In Vitro'
Thesis Advisor: Barnum, Cyrus P.

Name: Smith, Betty Faye
Degree Program: Agricultural Biochemistry
Thesis Title: Determination of the Distribution of the Methoxyl Groups in Methylated
Cellulose
Thesis Advisor: Smith, Fred

Name: Yarbro, John Williamson
Degree Program: Physiological Chemistry
Thesis Title: Hydroxyurea and Mithramycin Inhibition of Nucleic Acid Synthesis in Mouse
Ascites Tumor as Measured by Radiophosphorus Incorporation
Thesis Advisor: Barnum, Cyrus P.

1966

Name: Anderson, David Gene
Degree Program: Biochemistry
Thesis Title: Studies on the Physical-Chemical Properties of Proteins: Characterization of the
Region B Segment of the Interaction Isotherm of n-Octylbenzene-p-Sulfonate
with Bovine Plasma Albumin, Ovalbumin, and Beta-Lactoglobulin
Thesis Advisor: Briggs, David R.

Name: Burkwall, Jr., Morris Paton
Degree Program: Biochemistry
Thesis Title: The Glycerol Ester Hydrolases of Wheat
Thesis Advisor: Glass, Robert L.

Name: Cough, Patricia Marie
Degree Program: Biochemistry
Thesis Title: Further Studies of a Mercaptoethanol-Sensitive *Brucella* Agglutinin in Bovine Milk
Thesis Advisor: Jenness, Robert

Name: Horisberger, Marc
Degree Program: Biochemistry
Thesis Title: I. Synthesis of Glycosyl-Glyceritoals. II. Study of Pseudonigeran
Thesis Advisor: Kirkwood, Samuel

Name: Huotari, Frances Irene
Degree Program: Biochemistry
Thesis Title: An Exo- β - $(\rightarrow 3)$ -Glucanase from *Basidiomycete* QM 806
Thesis Advisor: Kirkwood, Samuel

Name: Johnson, Arthur Rinaldo
Degree Program: Biochemistry
Thesis Title: The Relationship of Calcium and Strontium in the Mineralization of Tissues of the Rat: Replacement and Exchange of These Elements *In Vivo* and *In Vitro*
Thesis Advisor: Armstrong, Wallace D.

Name: Johnson, Jr., Joe
Degree Program: Biochemistry
Thesis Title: The Purification and Specificity of an Endo- β -D-(1-3)-Glucanase from *Rhizopus arrhizus*
Thesis Advisor: Kirkwood, Samuel

Name: Jorgensen, Sally Elizabeth
Degree Program: Biochemistry
Thesis Title: Separation and Characterization of a New Deoxyribonuclease of *Esherichia coli*
Thesis Advisor: Koerner, James F.

Name: Olson, Merle Stratte
Degree Program: Biochemistry
Thesis Title: The Metabolic Variability of Isolated Heart Muscle Mitochondria: The Dependency of Metabolic Reactions on the Endogenous Substrates and the External Environment
Thesis Advisor: Von Korff, R. W.

Name: Sanghvi, Ajitkumar Tapidas
Degree Program: Biochemistry
Thesis Title: Isolation and Chemical Characterization of 4 β -Methyl- Δ 8,24-Cholestadien-3 β -ol from Rat Skin
Thesis Advisor: Frantz, Ivan D.

Name: St. Cyr, Marlys Joan
Degree Program: Biochemistry
Thesis Title: Structural Studies on the Detran and Fructan Produced by *Leuconstoc mesenteroides*
Thesis Advisor: Kirkwood, Samuel

Name: Tarjan, Endre Mihaly
Degree Program: Biochemistry
Thesis Title: Regulation of Oxygen Utilization in Isolated Mitochondria
Thesis Advisor: Von Korff, R. W.

Name: Yasmineh, Walid Gabriel
Degree Program: Biochemistry
Thesis Title: On the Mechanism of Action of the Nucleases of Group A Streptococci
Thesis Advisor: Gray, Ernest D.

1967

Name: Batra, Krishan Kumar
Degree Program: Biochemistry
Thesis Title: Studies on the Biosynthesis of a β -D-Glucan Elaborated by *Sclerotium rolfsii* sacc.
Thesis Advisor: Kirkwood, Samuel

Name: Cane, William Parker
Degree Program: Biochemistry
Thesis Title: Studies on Homologous Acyl-Chymotrypsins
Thesis Advisor: Wetlaufer, Donald B.

Name: Chao, Li-Pen
Degree Program: Biochemistry
Thesis Title: Studies on the Active Site of the SH-Protease, Bromelain
Thesis Advisor: Liener, Irvin E.

Name: Ferretti, Joseph Jerome
Degree Program: Biochemistry
Thesis Title: Studies on the Control of Macromolecular Synthesis in Synchronous Populations of *Rhodopseudomonas spheroides*
Thesis Advisor: Gray, Ernest D.

Name: Gilboe, Daniel Pierre
Degree Program: Biochemistry
Thesis Title: The Metabolism of Lysine and Hydroxylysine in *Streptococcus faecalis*
Thesis Advisor: Henderson, LaVell M.

Name: Klatt, Kenneth Paul
Degree Program: Biochemistry
Thesis Title: The Metabolism of Tartaric Acid by *Penicillium charlesii*, G.Smith
Thesis Advisor: Gander, John E.

Name: Leitzmann, Claus
Degree Program: Biochemistry
Thesis Title: Studies on Threonine Dehydratase from *Bacillus licheniformis*
Thesis Advisor: Bernlohr, Robert W.

Name: Olson, Mark Obed Jerome
Degree Program: Biochemistry
Thesis Title: Chemical and Physical Studies on Concanavalin A, a Phytohemagglutinin From the Jack Bean, *Canavalia ensiformis*
Thesis Advisor: Liener, Irvin E.

Name: Peterson, Anne Margaret
Degree Program: Biochemistry
Thesis Title: Characterization Studies on Phosphorus-32 Labeled Fractions of Ribonucleic Acids from Mouse Liver
Thesis Advisor: Barnum, Cyrus P.

Name: Salo, Wilmar Lawrence
Degree Program: Biochemistry
Thesis Title: Biochemical Reactions of Nucleoside Diphosphate Sugars
Thesis Advisor: Kirkwood, Samuel

Name: Smith, Richard Alan
Degree Program: Biochemistry
Thesis Title: A Comparative Study of the Sequence of Amino Acids in the Vicinity of the Histidine Residues in Porcine and Bovine Trypsin
Thesis Advisor: Liener, Irvin E.

Name: Tan, Agnes Wen Hui
Degree Program: Biochemistry
Thesis Title: The Effect of Hypophysectomy and Growth Hormone Treatment on Arginine-Guanido-C14 Conversion to Creatine in the Rat
Thesis Advisor: Ungar, Frank

Name: Tewfik, Enayat Mohammed
Degree Program: Biochemistry
Thesis Title: Genetic Homologies Among Actinomycetes
Thesis Advisor: Bradley, S. Gaylen

1968

Name: Besrat, Abraham
Degree Program: Biochemistry
Thesis Title: Mammalian Metabolism of Glutaric Acid
Thesis Advisor: Henderson, LaVell M.

Name: Brunelle, Thomas Eugene
Degree Program: Biochemistry
Thesis Title: A Study of the Binding of Small Cations by Acid Polysaccharides
Thesis Advisor: Carr, Charles W.

Name: Elam, John Stewart
Degree Program: Biochemistry
Thesis Title: The Degradation of Bacterial DNA to Mononucleotides Following Infection of *Escherichia coli* with T-2 Bacteriophage
Thesis Advisor: Koerner, James F.

Name: Hammerstedt, Roy Hugo
Degree Program: Biochemistry
Thesis Title: Metabolism of Hydroxylysine and its Stereoisomers by Rats
Thesis Advisor: Henderson, LaVell M.

Name: Hof, Hildegard Inga
Degree Program: Biochemistry
Thesis Title: Nuclear RNA of Rat Liver and Morris Hepatoma 5123 D
Thesis Advisor: Armstrong, Wallace D.

Name: Kramer, John Karl Gerhard
Degree Program: Biochemistry
Thesis Title: Synthesis and Characterization of Neutral Diol Plasmalogens
Thesis Advisor: Mangold, Helmut K.

Name: Lan, Shih-Jung
Degree Program: Biochemistry
Thesis Title: Metabolism of Pyridinium Precursors of Pyridine Nucleotides by Perfused Rat Liver and Erythrocytes
Thesis Advisor: Henderson, LaVell M.

Name: Mills, Donald Andrew
Degree Program: Biochemistry
Thesis Title: Chemical Characterization of the C-Chain of Human Fibrinogen
Thesis Advisor: Liener, Irvin E.

Name: Price, Alan Roger
Degree Program: Biochemistry
Thesis Title: Purification and Properties of T4 Bacteriophage-Induced Deoxycytidine Triphosphate-Deoxyuridine Triphosphate Nucleotidohydrolase
Thesis Advisor: Warner, Huber R.

Name: Short, Jr., Everett Charles
Degree Program: Physiological Chemistry
Thesis Title: Deoxyribonucleases Induced by Infection of *Escherichia coli* with Bacteriophage T2
Thesis Advisor: Koerner, James F.

Name: Zacchei, Anthony Gabriel
Degree Program: Biochemistry
Thesis Title: Chemical Synthesis of Two Methylated Sterols and Demonstration of Their Conversion to Cholesterol
Thesis Advisor: Frantz, Ivan D.

1969

Name: Ahmed, Abdul Karim
Degree Program: Biochemistry
Thesis Title: Kinetics of the Reactivation of Disulfide-Reduced RNase
Thesis Advisor: Wetlaufer, Donald B.

Name: Bandi, Zoltan Laszio
Degree Program: Biochemistry
Thesis Title: Metabolism of Alkoxy lipid in the Rat
Thesis Advisor: Mangold, Helmut K.

Name: Berger, George Michael Benjamin
Degree Program: Biochemistry
Thesis Title: Aspects of the Control of Corticosteroidogenesis in the Adrenal Cortex
Thesis Advisor: Ungar, Frank and V. R. Mattox

Name: Bough, Wayne Arnold
Degree Program: Biochemistry
Thesis Title: The Metabolism of Tyrosine in *Sorghum vulgare*
Thesis Advisor: Gander, John E.

Name: Dearborn, Dorr Gellatly
Degree Program: Biochemistry
Thesis Title: Structural Studies on Human Serum Beta1 Lipoprotein
Thesis Advisor: Wetlaufer, Donald B.

Name: DiBella, Francis Paul
Degree Program: Biochemistry
Thesis Title: The Role of Disulfide Bonds in the Structure and Activity of Soybean Trypsin Inhibitor
Thesis Advisor: Liener, Irvin E.

Name: Elin, Ronald John
Degree Program: Biochemistry
Thesis Title: Biochemical and Pathological Studies in Magnesium Deficiency in the rat
Thesis Advisor: Armstrong, Wallace D.

Name: Kolb, Edith
Degree Program: Biochemistry
Thesis Title: Isolation and Characterization of a Testis Specific Lactate Dehydrogenase
Thesis Advisor: Fleisher, G. A. and Frank Ungar

Name: Peterson, Dennis Randall
Degree Program: Biochemistry
Thesis Title: Studies on the Structure and Catalytic Mechanism of a Fungal β -1,3-Glucan Glucohydrolase
Thesis Advisor: Kirkwood, Samuel

Name: Straw, Thomas Eugene
Degree Program: Biochemistry
Thesis Title: The Purification of Uridine Diphosphate Glucose Dehydrogenase of Beef Liver
Thesis Advisor: Kirkwood, Samuel

Name: Vatassery, Govindakutty Thekke
Degree Program: Biochemistry
Thesis Title: Studies of the Constitution of Bone Mineral and of the Calcification Mechanism
Thesis Advisor: Armstrong, Wallace D.

1970

Name: Carlson, Mildred Virginia
Degree Program: Biochemistry
Thesis Title: Studies in Creatine Metabolism. I. Hormonal Control of S-Adensylmethionine: Guanidinoacetic Acid N-Methyltransferase. II. Development of a Micro-assay for N-Methyltransferase Activity. III. Isolation, Purification, and Determination of Some Properties of
Thesis Advisor: Van Pilsum, John F.

Name: Drewes, Lester Richard
Degree Program: Biochemistry
Thesis Title: Fungal Polysaccharides: Structure and Biosynthesis of an Exocellular Phosphopolysaccharide of *Penicillium charlesii*
Thesis Advisor: Gander, John E.

Name: Friedenson, Bernard Allen
Degree Program: Biochemistry
Thesis Title: Chemical Studies on the Protease Ficin and a Comparison of its Multiple Forms
Thesis Advisor: Liener, Irvin E.

Name: Gustafson, Gary Lee
Degree Program: Biochemistry
Thesis Title: Purification and Properties of UDPG Pyrophosphorylase from *Sorghum vulgare*
Thesis Advisor: Gander, John E.

Name: Hargrave, Paul Allan
Degree Program: Biochemistry
Thesis Title: Molecular Properties of Yeast Enolase
Thesis Advisor: Wold, Finn

Name: Ley, Arthur Newton
Degree Program: Biochemistry
Thesis Title: A Study of Bacteriophage Infection of *Rhizobium leguminosarum*
Thesis Advisor: Warner, Huber R.

Name: Nelsetuen, Gary Lee
Degree Program: Biochemistry
Thesis Title: Studies on the Mechanism of Action of the Enzyme Uridine Diphosphoglucose 4-Epimerase (E.C. 5.1.3.2)
Thesis Advisor: Kirkwood, Samuel

Name: Nuttall, Frank Quentin
Degree Program: Biochemistry
Thesis Title: Studies on the Hormonal and Non-Hormonal Control of the Rat Heart Glycogen Transferase System
Thesis Advisor: Larner, Joseph

Name: Ottaway, Clifford Allan
Degree Program: Biochemistry
Thesis Title: The Circular Dichroism of Polypeptides in Turbid Systems
Thesis Advisor: Wetlaufer, Donald B.

Name: Peters, Louis Henry
Degree Program: Biochemistry
Thesis Title: The Effect of Aluminum Phosphate on the Gastrointestinal Absorption of Fluoride from Diets Containing Fish Protein Concentrate or Casein
Thesis Advisor: Singer, Leon

Name: Schaffer, Stephen Ward
Degree Program: Biochemistry
Thesis Title: Mechanism of Reactivation of Disulfide Proteins
Thesis Advisor: Wetlaufer, Donald B.

Name: Sparnins, Velta Ligita
Degree Program: Biochemistry
Thesis Title: Purification and Characterization of Exonuclease IV-A from *Escherichia coli* B
Thesis Advisor: Koerner, James F.

Name: Spring, Thomas Gardner
Degree Program: Biochemistry
Thesis Title: Purification and Characterization of *Escherichia coli* Enolase and Two High Affinity Enolase Inhibitors
Thesis Advisor: Wold, Finn

Name: Statland, Bernard Eugene
Degree Program: Biochemistry
Thesis Title: The Role of Calcium Ion in Muscle Contraction and a Possible Transformational Change of Action During the Contraction Cycle
Thesis Advisor: Benson, Ellis S.

Name: Tuominen, Francis William
Degree Program: Biochemistry
Thesis Title: The Regulation of Pyruvic Kinase in *Bacillus licheniformis*
Thesis Advisor: Bernlohr, Robert W.

Name: Wenger, Jane Idell
Degree Program: Biochemistry
Thesis Title: Mitochondrial Alcohol Dehydrogenase from *Saccharomyces cerevisiae*
Thesis Advisor: Fleisher, G. A.

1971

Name: Brown, William Eugene
Degree Program: Biochemistry
Thesis Title: Alkyl Isocyanates: Active-Site-Directed Inhibitors of Chymotrypsin and Elastase
Thesis Advisor: Wold, Finn

Name: Collingsworth, William Lee
Degree Program: Biochemistry
Thesis Title: Identification and Metabolism of Certain Intermediates in the Enzyme Degradation of the Benzene Nucleus by Meta Fission of Catechol
Thesis Advisor: Dagley, Stanley

Name: Delarco, Joseph Edward
Degree Program: Biochemistry
Thesis Title: The Site of Interaction Between Soybean Trypsin Inhibitor and Trypsin
Thesis Advisor: Liener, Irvin E.

Name: Dennis, Donna Adele Hoppenstedt
Degree Program: Biochemistry
Thesis Title: The Bacterial Metabolism of Protocatechuic Acid and of Tropic Acid
Thesis Advisor: Dagley, Stanley

Name: Friede, John Davis
Degree Program: Biochemistry
Thesis Title: Bacterial Metabolism of Lysine and 5-Hydroxylysine. I. Degradation of Lysine and Hydroxylysine in *Pseudomonas*. II. Lysine and Hydroxylysine Transport in *Streptococcus faecalis*
Thesis Advisor: Henderson, LaVell M.

Name: Gleisner, John Matthew
Degree Program: Biochemistry
Thesis Title: The Role of Histidine in the Activity of Ficin
Thesis Advisor: Liener, Irvin E.

Name: Highland, Joseph Harris
Degree Program: Biochemistry
Thesis Title: Characteristics of Synthetic Polynucleotide Translation
Thesis Advisor: Bodley, James W.

Name: Johnson, John Arnold
Degree Program: Biochemistry
Thesis Title: Purification and Properties of Lamprey Liver Transamidinase
Thesis Advisor: Van Pilsum, John F.

Name: Marschke, Charles Keith
Degree Program: Biochemistry
Thesis Title: The Regulation of Phosphofructokinase in *Bacillus licheniformis*
Thesis Advisor: Bernlohr, Robert W.

Name: Rick, Paul David
Degree Program: Biochemistry
Thesis Title: Structural and Biosynthetic Investigations on the Exocellular Peptidophosphogalactomannan Produced by *Penicillium charlesii*, G. Smith
Thesis Advisor: Gander, John E.

Name: Ritter, Mary Catherine
Degree Program: Biochemistry
Thesis Title: Activators and Inhibitors of Enzymic Cholesterol Biosynthesis
Thesis Advisor: Dempsey, Mary E.

Name: Tack, Brain Frank
Degree Program: Biochemistry
Thesis Title: The Bacterial Metabolism of Gallic Acid and the Purification and Properties of a New Bacterial Lyase
Thesis Advisor: Dagley, Stanley

Name: Wovcha, Merle Gene
Degree Program: Biochemistry
Thesis Title: Synthesis and Nucleolytic Degradation of Uracil-Containing DNA by *E. coli* DNA Polymerase
Thesis Advisor: Koerner, James F. and Huber R. Warner

Name: Zieve, Franklin Joseph
Degree Program: Biochemistry
Thesis Title: Inhibition of Ribonucleic Acid Polymerase by the Carcinogen N-Hydroxy-2-fluorenylacetamide
Thesis Advisor: Gutmann, H. R.

1972

Name: Fenton, John Joseph
Degree Program: Biochemistry
Thesis Title: The Bacterial Metabolism of Streptomycin
Thesis Advisor: Klein, Dolph and LaVell M. Henderson

Name: Kan, Kenneth Wing Cheung
Degree Program: Biochemistry
Thesis Title: Steroidogenesis in Mammalian Adrenal
Thesis Advisor: Ungar, Frank

Name: Lin, Leu-Fen Hou
Degree Program: Biochemistry
Thesis Title: Biosynthesis of Pyridine Nucleotides in the Rat
Thesis Advisor: Henderson, LaVell M.

Name: Messer, Harold Henry
Degree Program: Biochemistry
Thesis Title: Metabolic Effects of Fluoride on Bone in Tissue Culture
Thesis Advisor: Armstrong, Wallace D.

Name: Petersburg, Sandra Jane
Degree Program: Biochemistry
Thesis Title: The Metabolism of Lipoprotein-Bound Cholesterol and Cholesteryl Esters by the Perfused Rat Liver
Thesis Advisor: Van Pilsum, John F.

Name: Ristow, Sandra Seif
Degree Program: Biochemistry
Thesis Title: Nucleation Studies on Lysozyme Folding
Thesis Advisor: Wetlaufer, Donald B.

Name: Sly, Dayle Ann
Degree Program: Biochemistry
Thesis Title: Structural Studies on Concanavalin A
Thesis Advisor: Liener, Irvin E.

Name: Tavernier, Paul Edward
Degree Program: Biochemistry
Thesis Title: Studies on the Ribosomal RNA from *Rhodopseudomonas spheroides*
Thesis Advisor: Gray, Ernest D.

1973

Name: Byun, Si Myung
Degree Program: Biochemistry
Thesis Title: Myo-Inositol Biosynthesis in Mammals
Thesis Advisor: Jenness, Robert

Name: Ridley III, William Pillow
Degree Program: Biochemistry
Thesis Title: Stereochemical Studies on the Mechanism of Action of Uridine
Diphosphoglucose Dehydrogenase
Thesis Advisor: Kirkwood, Samuel

Name: Schrader, William Patrick
Degree Program: Biochemistry
Thesis Title: Isolation and Characterization of a Membrane Bound Nucleotidase of
Bacillus cereus
Thesis Advisor: Anderson, John S.

Name: Tsai, Cheng-Hsien
Degree Program: Biochemistry
Thesis Title: Degradation of O-Phosphohydroxylysine in Rat Liver
Thesis Advisor: Henderson, LaVell M.

Name: Zytkevicz, Thomas Henry
Degree Program: Biochemistry
Thesis Title: A Study of Dipicolinic Acid Biosynthesis by Bacterial Spores
Thesis Advisor: Warner, Huber R.

1974

Name: Anderson, William Lloyd
Degree Program: Biochemistry
Thesis Title: Nucleation of Hen Egg Lysozyme Under Physiological Conditions
Thesis Advisor: Wetlaufer, Donald B.

Name: Benbasat, Julyet Aksiyote
Degree Program: Biochemistry
Thesis Title: Kinetic Studies by Inelastic Light Scattering: The Spontaneous Head-to-Tail
Assembly of Bacteriophage T4D
Thesis Advisor: Bloomfield, Victor A.

Name: Berget, Peter Blyton
Degree Program: Biochemistry
Thesis Title: The Identification of Proteins P48 and P54 as Structural Components of
Bacteriophage T4 Baseplates
Thesis Advisor: Warner, Huber R.

Name: Berget, Susan Marie
Degree Program: Biochemistry
Thesis Title: Deoxyribonucleotide Metabolism After Infection of *Escherichia coli* with Bacteriophage T5
Thesis Advisor: Warner, Huber R.

Name: Calimbas, Thelma Diaz
Degree Program: Biochemistry
Thesis Title: Sterol Metabolism in a Protozoan
Thesis Advisor: Dempsey, Mary E.

Name: Hedlund, Bo Erik
Degree Program: Biochemistry
Thesis Title: A Study of the Interactions Between 2,3-Diphosphoglycerate, Adenosine Triphosphate and Hemoglobin
Thesis Advisor: Lovrien, Rex E.

Name: Heldebrant, Charles Michael
Degree Program: Biochemistry
Thesis Title: The Activation of Prothrombin
Thesis Advisor: Mann, Kenneth G.

Name: Jentoft, Neil Howard
Degree Program: Biochemistry
Thesis Title: Studies on the Structure of the Extracellular Peptidophosphogalacto Mannan Produced by *Penicillium charlesii*, G. Smith
Thesis Advisor: Gander, John E.

Name: Johnson, Eric Richard
Degree Program: Biochemistry
Thesis Title: Regeneration Studies on Hen Egg Lysozyme Fragments: Localization of Nucleation Regions
Thesis Advisor: Wetlaufer, Donald B.

Name: Ophaug, Robert Henry
Degree Program: Biochemistry
Thesis Title: Magnesium-Fluoride Interrelationships During Acute Magnesium Deficiency
Thesis Advisor: Singer, Leon

Name: Parson, Kathleen Ann Kutzke
Degree Program: Biochemistry
Thesis Title: Membran-DNA Associations in bacteriophage Infected *Escherichia coli*
Thesis Advisor: Warner, Huber R.

Name: Pick, Peter William
Degree Program: Biochemistry
Thesis Title: Mechanism of Oxidative Regeneration of Native Lysozyme from Reduced Lysozyme
Thesis Advisor: Wetlaufer, Donald B.

Name: Tormanen, Calvin Douglas
Degree Program: Biochemistry
Thesis Title: The Purification and Properties of Rat Kidney Transamidinase
Thesis Advisor: Van Pilsum, John F.

Name: Turner, Richard Harry
Degree Program: Biochemistry
Thesis Title: The Effect of Acidic Groups on the Activity of Bowman Birk Inhibitor
Thesis Advisor: Liener, Irvin E.

Name: Walter, Bert
Degree Program: Biochemistry
Thesis Title: The Role of Lysines in the Structure and Function of Ribonuclease
Thesis Advisor: Wold, Finn

1975

Name: Bajaj, Satya Paul
Degree Program: Biochemistry
Thesis Title: Activation of Prothrombin by Purified Factors (Factor Xa, Calcium, Phospholipid and Factor V)
Thesis Advisor: Mann, Kenneth G.

Name: Clark, Deane Randall
Degree Program: Biochemistry
Thesis Title: Purification and Characterization of the endo- β (1 \rightarrow 3)-D-Glucanase from *Rhizopus arrhizus*
Thesis Advisor: Kirkwood, Samuel

Name: O'Brien, Kennedy Joseph
Degree Program: Biochemistry
Thesis Title: Isolation and Characterization of Glycoproteins from Lymphocyte Plasma Membrane and Erythrocyte Membrane
Thesis Advisor: Edstrom, Ronald D.

Name: Rohr, Thomas Eugene
Degree Program: Biochemistry
Thesis Title: Intermediates in Teichuronic Acid Biosynthesis by *Micrococcus lysodeikticus*
Thesis Advisor: Anderson, John S.

Name: Stark, Nancy Janette
Degree Program: Biochemistry
Thesis Title: Biosynthesis of Teichuronic Acid by *Micrococcus lysodeikticus* Membrane Fragments; Sequential Incorporation of Glucose Substitution and Solubilization of Glucosyl Transferase
Thesis Advisor: Anderson, John S.

Name: Townsend, Dewayne
Degree Program: Biochemistry
Thesis Title: The Effect of Fluoride on Lipid Metabolism
Thesis Advisor: Singer, Leon

Name: Triebwasser, Keith C
Degree Program: Biochemistry
Thesis Title: The Metabolism of D- and L-Tryptophan by Dogs and Other Species
Thesis Advisor: Henderson, LaVell M.

Name: Wegner, Mary Esther
Degree Program: Biochemistry
Thesis Title: The Relationship of Fluoride Intake and an Anemia Resulting from Stress
Thesis Advisor: Singer, Leon

1976

Name: Brenner, Stephen Craig
Degree Program: Biochemistry
Thesis Title: Human Erythrocyte Transglutaminase Purification and Application as a Protein Reagent
Thesis Advisor: Wold, Finn

Name: Kalb, Jr, Vernon Fredric
Degree Program: Biochemistry
Thesis Title: The Pyruvate Dehydrogenase Complex of *Bacillus licheniformis*
Thesis Advisor: Bernlohr, Robert W.

Name: Labrosse, Kingsley Roc
Degree Program: Biochemistry
Thesis Title: Collagenolytic Enzymes in Methylcholanthrene-Induced Fibrosarcomas in Mice
Thesis Advisor: Liener, Irvin E.

Name: Makey, Dale George
Degree Program: Biochemistry
Thesis Title: Transferrin--A Comparison Between the Vertebrates
Thesis Advisor: Seal, Ulysses S.

Name: Mc Call, Philip John
Degree Program: Biochemistry
Thesis Title: Thermodynamics and Kinetics of Proflavin Binding to Bacteriophage T2L and T4D
Thesis Advisor: Bloomfield, Victor A.

Name: Pahuja, Sham Lal
Degree Program: Biochemistry
Thesis Title: Evidence for the Association of Protein with Hyaluronic Acid in Vitreous Body
Thesis Advisor: Edstrom, Ronald D.

Name: Sodergren, Arnold Wayne
Degree Program: Biochemistry
Thesis Title: Investigations of the Bacterial Metabolism of Quinone Precursors and Their Analogues
Thesis Advisor: Chapman, Peter J.

Name: Twumasi, Daniel Yaw
Degree Program: Biochemistry
Thesis Title: Purification and Characterization on Leukocytic Proteases from Purulent Sputum
Thesis Advisor: Liener, Irvin E.

Name: Wehner, Jeanne Marie
Degree Program: Biochemistry
Thesis Title: Alternation of the *Escherichia coli* Induced by Bacteriophage T4 During Nuclear Disruption
Thesis Advisor: Koerner, James F.

Name: Welch III, John Benson
Degree Program: Biochemistry
Thesis Title: The Thermodynamics and Kinetics of the Slow-Fast Transition in Bacteriophage T2L
Thesis Advisor: Bloomfield, Victor A.

1977

Name: Apfel, Marilyn A
Degree Program: Biochemistry
Thesis Title: The Chemical Synthesis of a New Sterol (Cholesta-8[14],24-dien-3 beta-ol). An Improved Synthesis of Desmosterol (Cholesta-5,24-dien-3 beta-ol). Introducing a New Method for Preparing delta24 Sterols
Thesis Advisor: Frantz, Ivan D.

Name: Beachy, Joanna Christine van der Ziel
Degree Program: Biochemistry
Thesis Title: A New Membrane-Bound Lipo-Glycopeptide in *Penicillium charlesii*
Thesis Advisor: Gander, John E.

Name: Butkowski, Ralph Joseph
Degree Program: Biochemistry
Thesis Title: The Amino Acid Sequence Analysis: The Primary Structure of Human Prothrombin Fragment 2 and Prethrombin 2
Thesis Advisor: Mann, Kenneth G.

Name: Mozer, Thomas John
Degree Program: Biochemistry
Thesis Title: The Role of Deoxynucleoside 5'-Monophosphatase During Infection of *Escherichia coli* by Bacteriophage T5
Thesis Advisor: Warner, Huber R.

Name: Palta, Mari
Degree Program: Biochemistry
Thesis Title: Sample Size Determination for Clinical Trials
Thesis Advisor: McHugh, R. B.

Name: Pesheck, Peter Scott
Degree Program: Biochemistry
Thesis Title: The Thermodynamics of Monovalent Cation Binding to Pyruvate Kinase and the Effect of Potassium and Magnesium Ions on the Subunit Association Equilibrium
Thesis Advisor: Lovrien, Rex E.

Name: Prendergast, Franklyn Grenfel
Degree Program: Biochemistry
Thesis Title: Physical and Chemical Properties of a Photoprotein System from *Aequorea forskalea*
Thesis Advisor: Mann, Kenneth G.

Name: Wagenknecht, Terence Calvin
Degree Program: Biochemistry
Thesis Title: Assembly of the Bacteriophage T4 Tail Core
Thesis Advisor: Bloomfield, Victor A.

Name: Wititsuwannakul, Rapepun
Degree Program: Biochemistry
Thesis Title: Studies on the Enzymic Reactions of Purified Ciliar Contractile Proteins
Thesis Advisor: Dempsey, Mary E.

1978

Name: Eccleston, Jr., Eric Douglas
Degree Program: Biochemistry
Thesis Title: Regulation of Morphogenesis in *Rhodospseudomonas sphaeroides*: Role of Nucleotides
Thesis Advisor: Gray, Ernest D.

Name: Filpula, David Ray
Degree Program: Biochemistry
Thesis Title: Regulation of the Synthesis of Ribonucleoside Diphosphate Reductase in *Escherichia coli*
Thesis Advisor: Warner, Huber R. and James A. Fuchs

Name: Hildebrandt, James Raymond
Degree Program: Biochemistry
Thesis Title: The Relationship Between Self-Association and Function of E. coli Ribosomal Proteins L7 and L12
Thesis Advisor: Woodward, Clare K.

Name: Johnson, Mark Thore
Degree Program: Biochemistry
Thesis Title: Relationship of Adenosine Diphosphoribose: NAD⁺ Oxidoreductase to Uridine Diphosphogalactose:NAD⁺ 2-Hexosyl Oxidoreductase
Thesis Advisor: Gander, John E.

Name: Kohlmiller, Nancy Anne Federspiel
Degree Program: Biochemistry
Thesis Title: The Primary Structure of the Alpha Subunit of Protocatechuate 3,4-Dioxygenase
Thesis Advisor: Howard, James B.

Name: Larimore, Frederick Scott
Degree Program: Biochemistry
Thesis Title: A Possible Site-Specific Reagent for the General Amino Acid Transport System of *Saccharomyces cerevisiae*
Thesis Advisor: Roon, Robert J.

Name: Myrmel, Kurt Harold
Degree Program: Biochemistry
Thesis Title: Studies on the Prothrombinase Complex: Isolation of Factor V and Interactions Between Thrombin, Prothrombin Fragment 2 and Factor V
Thesis Advisor: Mann, Kenneth G.

Name: Nesheim, Michael Ernest
Degree Program: Biochemistry
Thesis Title: A Model and Methods for Determining the Velocity of Intracellular Reactions, with Application to the Processes of Glycolysis and Gluconeogenesis in Isolated, perfused Rat Liver
Thesis Advisor: Veneziale, C. M.

1979

- Name: Anderson, Paul Curtis
Degree Program: Biochemistry
Thesis Title: I. Analysis of the Response of Corn Coleoptile Tissue to Indoleacetic Acid by Means of Flow Calorimetry. II. The Enzymatic Preparation of Protoplasts from Corn Coleoptile Tissue
Thesis Advisor: Lovrien, Rex E.
- Name: Brown, Beverly Ann Lamb
Degree Program: Biochemistry
Thesis Title: I. Ultraviolet Light Crosslinking of Nucleic Acid-Protein Complexes Involved in Protein Synthesis. II. Primary Structure at the Site in Beef and Wheat Elongation Factor 2 of ADP-Ribosylation by Diphtheria Toxin
Thesis Advisor: Bodley, James W.
- Name: Citak, Brian Philip
Degree Program: Biochemistry
Thesis Title: Isolation and Characterization of Cellular Nucleases from *Streptococcus pyogenes*
Thesis Advisor: Gray, Ernest D.
- Name: Hulse, James David
Degree Program: Biochemistry
Thesis Title: Carnitine Biosynthesis: The Conversion of 6-N-Trimethyl-L-Lysine to L-Carnitine and the Enzymes Involved
Thesis Advisor: Henderson, LaVell M.
- Name: Kazim, Abdul Latif
Degree Program: Biochemistry
Thesis Title: Studies on the Antigenic Structure of Myoglobin, Serum Albumin and Hemoglobin
Thesis Advisor: Atassi, M. Z.
- Name: Lundell, Daniel Jerome
Degree Program: Biochemistry
Thesis Title: Subunit Structure and Sequence of the CysteinyI Peptides of the Molybdenum-iron Protein of the *Azotobacter vinelandii* Nitrogenase Complex
Thesis Advisor: Howard, James B.
- Name: Martodam, Raymond Richard
Degree Program: Biochemistry
Thesis Title: The Interaction of Alpha-1-Antitrypsin and Synthetic Inhibitors with Mammalian Proteases as Related to the Pathogenesis of Emphysema
Thesis Advisor: Liener, Irvin E.

Name: Pletcher, Carol Annette Heaton
Degree Program: Biochemistry
Thesis Title: Synthesis, Secretion, and Stability of Exo- β -D-Galactofuranosidase
Thesis Advisor: Gander, John E.

Name: Razel, Anthony Joseph
Degree Program: Biochemistry
Thesis Title: Modification of RNA in Differing Morphogenetic States of *Rhodopseudomonas sphaeroides*
Thesis Advisor: Gray, Ernest D.

Name: Swenson, Richard Paul
Degree Program: Biochemistry
Thesis Title: Isolation, Subunit Characterization, and Determination of a Unique, Covalently Modified, Alkylamin Sensitive Site of Alpha-2 Macroglobulin, a Plasma Protease Inhibitor
Thesis Advisor: Howard, James B.

Name: Wong, Kam Ming
Degree Program: Biochemistry
Thesis Title: The Effect of Fluoride, Hormones and Drugs on Bone Resorption
Thesis Advisor: Singer, Leon

1980

Name: Anderson, Jeffrey John
Degree Program: Biochemistry
Thesis Title: The Catabolism of Aromatic Acids in *Trichosporon cutaneum*
Thesis Advisor: Dagley, Stanley

Name: Anton, David Leroy
Degree Program: Biochemistry
Thesis Title: The Synthesis, Nuclear Magnetic and Electro Paramagnetic resonance Spectroscopy of Modified Cobalamins
Thesis Advisor: Hogenkamp, Henricus P. C.

Name: Donnelly, Mark Ignatius
Degree Program: Biochemistry
Thesis Title: Production of Methanol from the Bacterial Metabolism of Aromatic Acids and Succinic Semialdehyde Dehydrogenases of *Escherichia coli*
Thesis Advisor: Dagley, Stanley

Name: Hagedorn, Scott Richard
Degree Program: Biochemistry
Thesis Title: The Metabolism of Gentisate, Homogentisate and Related Analogues by Bacteria
Thesis Advisor: Chapman, Peter J.

Name: Hurwitz, Mary Yungman
Degree Program: Biochemistry
Thesis Title: Cyclic Nucleotide Phosphodiesterases in Human Lymphocytes
Thesis Advisor: Edstrom, Ronald D.

Name: Johnson, Mark Louis
Degree Program: Biochemistry
Thesis Title: Regulation of the Intracellular Concentration and Specific Activity of Pyruvate Kinase
Thesis Advisor: Veneziale, C. M.

Name: Knutson, Victoria Pawlik
Degree Program: Biochemistry
Thesis Title: Steroid Substrate Stereospecificity of Purified Rat Liver Alcohol Dehydrogenase
Thesis Advisor: Ungar, Frank

Name: Magil, Sheila Frances Goodstein
Degree Program: Biochemistry
Thesis Title: The Effect of Fluoride on the Lipids in Mouse Serum, Red Blood Cells, Bone and Bone Cell Cultures
Thesis Advisor: Singer, Leon

Name: Marschell, Ardin Herman
Degree Program: Biochemistry
Thesis Title: Studies on the Nature of the Active Sites in *Escherichia coli* Elongation Factors Tu and Ts
Thesis Advisor: Bodley, James W.

Name: McQuire, Denise Marie Bradford
Degree Program: Biochemistry
Thesis Title: The Effect of Growth Hormone and Thyroxine on Arginine-Glycine Amidinotransferase in Kidneys of Hypophysectomized Rats
Thesis Advisor: Van Pilsum, John F.

Name: Mehansho, Haile
Degree Program: Biochemistry
Thesis Title: Transport and Metabolism of Vitamin B6 in the Small Intestine, Liver and Erythrocytes of the Rat
Thesis Advisor: Henderson, LaVell M.

Name: Murray, Elsa Jean
Degree Program: Biochemistry
Thesis Title: The Effects of Zinc Deficiency on Bone Metabolism in the Rat
Thesis Advisor: Singer, Leon

Name: Omann, Geneva Marie
Degree Program: Biochemistry
Thesis Title: Fluorescence Spectroscopic Investigations of Chlorinated Hydrocarbon-membrane Interactions
Thesis Advisor: Lakowicz, J. R.

Name: Tsai, Pei-Kuo
Degree Program: Biochemistry
Thesis Title: The Purification and Characterization of Adenosylcobalamin-dependent Ribonucleotide Reductase from *Corynebacterium nephridii*
Thesis Advisor: Hogenkamp, Henricus P. C.

Name: Van Ness, Brian George
Degree Program: Biochemistry
Thesis Title: The Site of Diphtheria Toxin Catalyzed ADP-Ribosylation in Yeast Elongation Factor 2
Thesis Advisor: Bodley, James W.

1981

Name: Bourque Theiler, Elizabeth Anne
Degree Program: Biochemistry
Thesis Title: Enzymatic Regulation of Cycle GMP in Rat Cerebellar Synaptosomes
Thesis Advisor: Ungar, Frank

Name: Cox, Daniel Eugene
Degree Program: Biochemistry
Thesis Title: Calmodulin Interactions with Phosphorylase Kinase
Thesis Advisor: Edstrom, Ronald D.

Name: Graf, Ernst
Degree Program: Biochemistry
Thesis Title: Ca²⁺ ATPase from Human Erythrocyte Membranes: Purification, Characterization and Its Interaction with Calmodulin
Thesis Advisor: Penniston, J. T.

Name: Lucas, Paul Allen
Degree Program: Biochemistry
Thesis Title: The Effect of Vitamin A Deficiency and Fluoride on Glycosaminoglycan Metabolism in Bone
Thesis Advisor: Singer, Leon

Name: Meng, Mei
Degree Program: Biochemistry
Thesis Title: Purification, Characterization, and Amino Acid Sequence of Thioredoxin from *Corynebacterium nephridii*
Thesis Advisor: Hogenkamp, Henricus P. C.

Name: Mullin, Robert John
Degree Program: Biochemistry
Thesis Title: Isolation and Characterization of Several Lactoproteins from *Equus caballus* and *Enhydra lutris*
Thesis Advisor: Jenness, Robert

Name: Olstein, Alan David
Degree Program: Biochemistry
Thesis Title: Comparative Studies on the Major Collagenolytic Endoproteinases of Normal and Malignant Murine Tissues
Thesis Advisor: Liener, Irvin E.

Name: Unkefer, Clifford Jay
Degree Program: Biochemistry
Thesis Title: The 5-O-Beta-D-Galactofurnosyl-Containing Glycopeptide from *Penicillium charlesii*: Carbon 13 Enrichment and Nuclear Magnetic Resonance Studies
Thesis Advisor: Gander, John E.

1982

Name: Hausinger, Jr., Robert P
Degree Program: Biochemistry
Thesis Title: Structure Function Studies on the Iron Protein from the *Azotobacter vinlandii* Complex
Thesis Advisor: Howard, James B.

Name: Odegaard, Bruce Harold
Degree Program: Biochemistry
Thesis Title: Isolation and Partial Characterization of Four Components of the Multienzyme Cellulase Complex of *Trichoderma reesei* OM9414
Thesis Advisor: Lovrien, Rex E.

Name: Sand, Theodore Taylor
Degree Program: Biochemistry
Thesis Title: Thermodynamic and Kinetic Aspects of the Binding of Concanavalin A to Mammalian Artificial and Cell Surfaces
Thesis Advisor: Rosenberg, Andreas

Name: Schanus, Edward George
Degree Program: Biochemistry
Thesis Title: The Molecular Basis of Malignant Hyperthermia
Thesis Advisor: Lovrien, Rex E.

1983

Name: Anderson, Richard Allen
Degree Program: Biochemistry
Thesis Title: Glycophorin-Band 4.1 Is a Transmembrane Protein Complex Which is Linked to the Human Erythrocyte Membrane Skeleton and Is an Avenue for Lectin Control of Morphology Transformation
Thesis Advisor: Lovrien, Rex E.

Name: Brown, Terry Lee
Degree Program: Biochemistry
Thesis Title: Synthesis and Processing of Bovine and Porcine Pancreatic Amylase
Thesis Advisor: Wold, Finn

Name: Burlingame, Richard Paul
Degree Program: Biochemistry
Thesis Title: The Degradation of 3-Phenylpropionic Acid by *Escherichia coli* K-12
Thesis Advisor: Chapman, Peter J.

Name: Canales, Mark William
Degree Program: Biochemistry
Thesis Title: The Isolation and Structural Characterization of 6 Alpha-Epiophiobolin A and 3-anhydro-6 Alpa Epiophiobolin A, Host-Specific Pathoyoxins of Texas-Male-Sterile Corn
Thesis Advisor: Gray, Gary R.

Name: Donatucci, Dana Alan
Degree Program: Biochemistry
Thesis Title: The Role of Agglutinins (Lectins) in the Nutritional Toxicity of Raw Navy Beans (*Phaseolus vulgaris*) Specifically with Particular Reference to Their Effect on Intestinal Absorption
Thesis Advisor: Liener, Irvin E.

Name: Hanke, Paul David
Degree Program: Biochemistry
Thesis Title: Regulation of Ribonucleoside Diphosphate Reductase mRNA Synthesis in *Escherichia coli*
Thesis Advisor: Fuchs, James A.

Name: Liaw, Chen Wang
Degree Program: Biochemistry
Thesis Title: Identification and Characterization of a Rat Gene Regulated by Thyroid Hormone and Lipgenic Diet
Thesis Advisor: Towle, Howard

Name: Mayer, Lawrence David
Degree Program: Biochemistry
Thesis Title: Interactions Involved in the Prothrombinase System
Thesis Advisor: Nelsestuen, Gary L.

Name: Miksicek, Richard John
Degree Program: Biochemistry
Thesis Title: Dietary and Hormonal Regulation of the Hexose Shunt Dehydrogenases
Thesis Advisor: Towle, Howard

Name: Salt, Steven Dale
Degree Program: Biochemistry
Thesis Title: Extracellular Glycoprotein Enzymes from *Penicillium charlesii* G. Smith; Partial Purification, Chemical Composition and Relationship to Extracellular Glycopeptides
Thesis Advisor: Gander, John E.

Name: Song, Min-kyung Hong
Degree Program: Biochemistry
Thesis Title: Studies on Post-Translational Modifications of Non-Histone Proteins During the HeLa Cell Cycles
Thesis Advisor: Adoph, Kenneth

Name: Whittaker, James William
Degree Program: Biochemistry
Thesis Title: Structural and Mechanistic Studies of *Brevibacterium fuscum* Protocatechuate 3,4 Dioxygenase
Thesis Advisor: Lipscomb, John D.

Name: Woodall-Jappe (Vermeulen), Mary
Degree Program: Biochemistry
Thesis Title: Processing of Bacterial Cell Walls by Mononuclear Phagocytes
Thesis Advisor: Gray, Gary R.

1984

Name: Blaisdell, Peter Warren
Degree Program: Biochemistry
Thesis Title: Characterization of a Uracil-DNA Glycosylase from Wheat Germ and Localization of Bacteriophage T5 Pre-Early Genes
Thesis Advisor: Warner, Huber R.

Name: Carlson, John Ellert
Degree Program: Biochemistry
Thesis Title: The Use of Bacteriophage M13 in the Analysis of the Ribonucleotide Diphosphate Reductase Operon from *Escherichia coli*
Thesis Advisor: Fuchs, James A. and Joachim W. Messing

Name: Freund, Ronald Kent
Degree Program: Biochemistry
Thesis Title: Pharmacological Characterization of Excitatory Amino Acid Receptors in the Hippocampus
Thesis Advisor: Koerner, James F.

Name: Lampe, Paul Douglas
Degree Program: Biochemistry
Thesis Title: The Extrinsic Protein-Membrane Interactions of Myelin Basic Protein and Blood Coagulation Factor V
Thesis Advisor: Nelsestuen, Gary L.

Name: Liu Carlson, Ting Corina
Degree Program: Biochemistry
Thesis Title: Degradation of Chlorinated Aromatic Compounds by Microorganisms
Thesis Advisor: Chapman, Peter J.

Name: Narayan, Prema
Degree Program: Biochemistry
Thesis Title: Transcriptional and Post-Translational Regulation of a Thyroid Hormone
Thesis Advisor: Hogenkamp, Henricus P. C. and Howard C. Towle

Name: Norrander, Jan Marie
Degree Program: Biochemistry
Thesis Title: Zein Storage Proteins Expressed from Synthetic Genes Altered by Oligonucleotide-Directed in vitro Mutagenesis
Thesis Advisor: Messing, Joachim W.

Name: Powlowski, Justin
Degree Program: Biochemistry
Thesis Title: Enzymology of Anthranilic Acid and Cresol Degradation by *Trichosporon cutaneum*
Thesis Advisor: Dagley, Stanley

Name: Rosenthal Erickson, Luann Patrice
Degree Program: Biochemistry
Thesis Title: I. Borohydride Reduction of Periodate-Oxidized Nucleotides; Isolation and Characterization of the Reduction Intermediate. II. Purification and Characterization of Yeast Mitochondrial EP-Tu
Thesis Advisor: Bodley, James W.

Name: Senogles, Susan E
Degree Program: Biochemistry
Thesis Title: The Role of Von Willebrand Factor in Platelet Aggregation
Thesis Advisor: Nelsestuen, Gary L.

1985

Name: Arciero, David Michael
Degree Program: Biochemistry
Thesis Title: Structural and Mechanistic Studies of Protocatechuate 4,5 Dioxygenase
Thesis Advisor: Lipscomb, John D. and Henricus P.C. Hogenkamp

Name: Bensen, Robert John
Degree Program: Biochemistry
Thesis Title: Uracil-DNA Glycosylase Activity in Plants. A Kingdom Survey, The Purification and Characterization of Acctivity from *Neurospora crassa* Hyphae and Zea maize Nuclei, Chloroplasts and Mitochondria, and a Physiological Model for Activity Levels
Thesis Advisor: Warner, Huber R.

Name: Bigelow, Diana Jean
Degree Program: Biochemistry
Thesis Title: Lipid and Protein Dynamics in Sarcoplasmic Reticulum
Thesis Advisor: Thomas, David D.

Name: Chen, Joanne Jeou-Yuan
Degree Program: Biochemistry
Thesis Title: Biosynthesis of Diphthamide in the Yeast *Saccharomyces cerevisiae*
Thesis Advisor: Bodley, James W.

Name: Kim, Kyu-Won
Degree Program: Biochemistry
Thesis Title: Yeast Asparaginase II: Structural Gene Expression
Thesis Advisor: Roon, Robert J.

Name: McLaughlin, Mary Elizabeth Heron
Degree Program: Biochemistry
Thesis Title: Applications of An Improved Quantitative *in vitro* Assay for Cell Migration/Invasion
Thesis Advisor: Wang, N. N. and Irvin E. Liener

Name: Robinson, Michael Byrne
Degree Program: Biochemistry
Thesis Title: Characterization of Excitatory Amino Acid Transmitter Systems in the Rat Central Nervous System
Thesis Advisor: Koerner, James F.

Name: Sommerville, Leslie Eugene
Degree Program: Biochemistry
Thesis Title: Terbium as a Probe of Calcium Binding Sites on Prothrombin Alone and the Prothrombin-Membrane Complex
Thesis Advisor: Nelsestuen, Gary L.

Name: Squier, Thomas Comey
Degree Program: Biochemistry
Thesis Title: ST-EPR Studies on the Ca-ATPase in Sarcoplasmic Reticulum: Correlation of Protein Mobility and Enzymatic Activity
Thesis Advisor: Thomas, David D.

Name: Sze, Isaac Shun-Yan
Degree Program: Biochemistry
Thesis Title: Novel Oxygenases and Metabolic Pathways of Microbial Aromatic Catabolism
Thesis Advisor: Dagley, Stanley

Name: Yet, Mei-Gang
Degree Program: Biochemistry
Thesis Title: Oligosaccharide Distribution on Glycoproteins. Part I. Crosslinking Oligosaccharide Units on Glycoproteins. Part II. Purification of an Endoglycosidase from Jack Bean Meal
Thesis Advisor: Wold, Finn

1986

Name: Griep, Mark A.
Degree Program: Biochemistry
Thesis Title: The Binding and Activation Properties of Human Blood Coagulation Factor XII
Thesis Advisor: Nelsestuen, Gary L.

Name: Klein, David J.
Degree Program: Biochemistry
Thesis Title: Structural Characterization and Metabolism of Isolated Glomerular Heparan- and Dermatan-Sulfate Proteoglycans from Normal Rats, with Comparisons Made to Those from Streptozotocin-Induced Diabetics
Thesis Advisor: Oegema Jr, Theodore R.

Name: Lim, Chang-Jin
Degree Program: Biochemistry
Thesis Title: Cloning and Characterization of the Thioredoxin Genes in Prokaryotic Organisms
Thesis Advisor: Fuchs, James A.

Name: Silversmith, Ruth Ellen
Degree Program: Biochemistry
Thesis Title: The Assembly of the Membrane Attack Complex of Complement on Membranes
Thesis Advisor: Nelsestuen, Gary L.

Name: Sun, Shizhang
Degree Program: Biochemistry
Thesis Title: The Purification and Characterization of Ribonucleotide Reductase from a Thermophilic Organism, *Thermus X-1*
Thesis Advisor: Hogenkamp, Henricus P. C.

Name: Tuggle, Christopher Keith
Degree Program: Biochemistry
Thesis Title: Regulation of Ribonucleotide Reductase mRNA Synthesis in *Escherichia coli*
Thesis Advisor: Fuchs, James A.

1987

Name: Ahn, Byung-Yoon
Degree Program: Biochemistry
Thesis Title: A Study of Genetic Recombination in Yeast Plasmids
Thesis Advisor: Livingston, Dennis M.

Name: Anderson, Gretchen L.
Degree Program: Biochemistry
Thesis Title: Characterization of Oxidation States of the Fe-Protein from *Azotobacter vinlandii*
Thesis Advisor: Howard, James B.

Name: Kamerud, John Quentin
Degree Program: Biochemistry
Thesis Title: Expression of Amidases in *Saccharomyces cerevisiae*: Asparaginase II and w-Amidase
Thesis Advisor: Roon, Robert J.

Name: Ludwig, Steven Ray
Degree Program: Biochemistry
Thesis Title: Characterization of the Alpha-Tubulin Gene Family of *Arabidopsis thaliana*
Thesis Advisor: Fuchs, James A.

Name: McClure, Bruce A.
Degree Program: Biochemistry
Thesis Title: Characterization of Auxin Regulated Polyadenylated RNAs from Soybean
Thesis Advisor: Guilfoyle, Thomas J.

Name: Polanski, Malu
Degree Program: Biochemistry
Thesis Title: Incorporation of Bacterial Peptidoglycan Constituents into Macrophage Lipids During Phagocytosis
Thesis Advisor: Gray, Gary R.

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Thesis Title: Cholinergic Actions and Control in Signal Transduction and Acetylcholine Synthesis
Thesis Advisor: Drewes, Lester R.

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Degree Program: Biochemistry
Thesis Title: Metabolic Studies via *in vivo* Nuclear Magnetic Resonance
Thesis Advisor: Ugurbil, Kamil

Name: Yoon, Jong-Bok
Degree Program: Biochemistry
Thesis Title: Regulation of Gene Expression by Growth Hormone in Rat Liver
Thesis Advisor: Towle, Howard C.

1988

Name: Abbott, Alan John
Degree Program: Biochemistry
Thesis Title: Assembly Characteristics of the Prothrombinase Protein Complex
Thesis Advisor: Nelsestuen, Gary L.

Name: Chung, Taeowan
Degree Program: Biochemistry
Thesis Title: Cloning and Characterization of the Glyoxylate Bypass Operon of *Escherichia coli*
Thesis Advisor: LaPorte, David C. and Howard C. Towle

Name: Defranco, Chistopher Lynn
Degree Program: Biochemistry
Thesis Title: Analysis of Chloramphenicol Acetyltransferase mRNA Degradation in *Escherichia coli*
Thesis Advisor: Fuchs, James A. and Janet L. Schottel

Name: Jacoby, Douglas Burtner
Degree Program: Biochemistry
Thesis Title: Characterization of the Thyroid Hormone and Carbohydrate Regulation of Spot 14 Gene Expression in Rat Liver
Thesis Advisor: Towle, Howard C.

Name: Kirihara, Julie Anderson
Degree Program: Biochemistry
Thesis Title: Isolation, Characterization and Differential Expression of a Gene Encoding a 10kD Zein Protein from Maize
Thesis Advisor: Messing, Joachim W.

Name: Kuzj, Ann Elizabeth
Degree Program: Biochemistry
Thesis Title: Chloramphenicol Acetyltransferase Gene Expression During the *Escherichia coli* Culture Growth Cycle
Thesis Advisor: Schottel, Janet L.

Name: Leder, Richard Owen
Degree Program: Biochemistry
Thesis Title: Diffusion-Enhanced Energy Transfer Studies of Bacteriorhodopsin From *Halobacterium halobium*
Thesis Advisor: Thomas, David D.

Name: Lewis, Scott Mitchell
Degree Program: Biochemistry
Thesis Title: The Molecular Dynamics of the Active Transport Cycle of the Sarcoplasmic Reticulum Calcium ATPase
Thesis Advisor: Thomas, David D.

Name: Malinski, Justine Ann
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Thesis Title: The Interaction of the Membrane Attack Complex of Human Complement with Phospholipid Membranes
Thesis Advisor: Nelsestuen, Gary L.

Name: Rusnak, Frank Myles
Degree Program: Biochemistry
Thesis Title: Mossbauer and Electron Paramagnetic Resonance Studies of Hydrogenase II from *Clostridium pasteurianum* and the Cytochrome Oxidases, Cytochrome C1AA3 and Cytochrome BA3 from *Thermus thermophilus*
Thesis Advisor: Muenck, Eckard

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Thesis Title: Identification and Characterization of the cyn Operon and its Regulation in *Escherichia coli* K-12
Thesis Advisor: Fuchs, James A.

Name: Trescony, Paul V
Degree Program: Biochemistry
Thesis Title: Characterization of Proteoglycans from Bovine Aortic Endothelial Cells in Culture and from the Murine Engelbreth-Swarm-Holm Basement Membrane Tumor in Culture
Thesis Advisor: Oegema Jr, Theodore R.

Name: Welsch, Dean James
Degree Program: Biochemistry
Thesis Title: Chemical Derivatization of Prothrombin Fragment 1 Reveals Several Unusually Reactive Amino Acids as Well as a Critical Amino Group
Thesis Advisor: Nelsestuen, Gary L.

Name: Whittemore, Edward Reed
Degree Program: Biochemistry
Thesis Title: Characterization of Recognition Sites for L-2-Amino-4-Phosphonobutanoic Acid (L-AP4) in the Mammalian Central Nervous System
Thesis Advisor: Koerner, James F.

1989

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Thesis Title: Skeletal Muscle Abnormalities in Malignant Hyperthermia
Thesis Advisor: Louis, Charles F.

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Degree Program: Biochemistry
Thesis Title: Mechanistic Studies of the Catalytic Cycle of Methane Monooxygenase from *Methylosinus trichosporium* OB3b
Thesis Advisor: Lipscomb, John D.

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Degree Program: Biochemistry
Thesis Title: Multiple Thyroid Hormone Receptors and Their Interactions with DNA
Thesis Advisor: Towle, Howard C.

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Degree Program: Biochemistry
Thesis Title: Specific Gene Expression During the Maturation of Cytolytic Effector Function in Lymphocytes
Thesis Advisor: Schottel, Janet L. and Howard C. Towle

Name: Plum, George Eric
Degree Program: Biochemistry
Thesis Title: Interactions of Spermidine and Analogues with DNA
Thesis Advisor: Bloomfield, Victor A.

Name: Strand, Andrew David
Degree Program: Biochemistry
Thesis Title: Analysis of the Major DNase I Hypersensitive Site on the Yeast Two-Micron DNA Plasmid
Thesis Advisor: Livingston, Dennis M.

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Degree Program: Biochemistry
Thesis Title: Structure and Biological Function of Isocitrate Dehydrogenase Kinase/Phosphatase
Thesis Advisor: LaPorte, David C.

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Thesis Title: Mossbauer and Electron Paramagnetic Resonance Studies of MFe₃S₄ (M=Zn, Cd, Ga, Ni) and Fe₃S₄ Clusters
Thesis Advisor: Muenck, Eckard

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Thesis Title: Structural and Mechanistic Studies of Protocatechuate 2,3 Dioxygenase from *Bacillus macerans*
Thesis Advisor: Lipscomb, John D.

1990

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Degree Program: Biochemistry
Thesis Title: Conformational Dynamics of Myosin and Their Relation to the Molecular Mechanism of Muscle Contraction
Thesis Advisor: Thomas, David D.

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Degree Program: Biochemistry
Thesis Title: Mechanism of the Inner Membrane Permeability Transition in Rat Liver Mitochondria
Thesis Advisor: Dempsey, Mary E.

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Thesis Title: Light Scattering Studies of Mononucleosomal DNA
Thesis Advisor: Bloomfield, Victor A.

Name: Harpel, Mark Robert
Degree Program: Biochemistry
Thesis Title: Mechanistic Studies of *Pseudomonas* Gentisate 1,2-Dioxygenase
Thesis Advisor: Lipscomb, John D.

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Degree Program: Biochemistry
Thesis Title: Application and Development of Nuclear Magnetic Resonance Techniques for the Study of *in vivo* Biological Processes
Thesis Advisor: Ugurbil, Kamil

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Degree Program: Biochemistry
Thesis Title: The Adipocyte Lipid Binding Protein: Purification, Functional Characterization, and Physicochemical Analysis
Thesis Advisor: Bernlohr, David A.

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Degree Program: Biochemistry
Thesis Title: The Ribosomal "Achilles Heel" of the Elongation Cycle: A Study of the Ribosomal Target Sites of the Protein Cytotoxins
Thesis Advisor: Bodley, James W.

Name: Palosaari, Neil Robert
Degree Program: Biochemistry
Thesis Title: Regulation of the Butyryl-CoA Branched Pathway During Solvent Fermentation by *Clostridium acetobutylicum*
Thesis Advisor: Rogers, Palmer

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Degree Program: Biochemistry
Thesis Title: Molecular Analysis of Lipid Binding Protein Gene Expression
Thesis Advisor: Dempsey, Mary E.

Name: Williams, William Albert
Degree Program: Biochemistry
Thesis Title: Structure/Function Relationships Within Pig Heart CoA Transferase
Thesis Advisor: Howard, James B.

1991

Name: Berger, Christopher Lewis
Degree Program: Biochemistry
Thesis Title: Rotational Dynamics of Myosin Heads Bound to Actin During the Acto-Myosin ATPase Cycle
Thesis Advisor: Thomas, David D.

Name: Buelt Gebhardt, Melissa Kay
Degree Program: Biochemistry
Thesis Title: Analysis of the Ligand Binding and Phosphorylation Domains of the Adipocyte Lipid Binding Protein
Thesis Advisor: Bernlohr, David A.

Name: Dornfeld, Kenneth Jon
Degree Program: Biochemistry
Thesis Title: Characterization of Recombination in a Mutant of Yeast
Thesis Advisor: Livingston, Dennis M.

Name: Ikeda, Timothy Paul
Degree Program: Biochemistry
Thesis Title: The Structure and Biological Function of Isocitrate Dehydrogenase
Thesis Advisor: LaPorte, David C.

Name: Kim, Key Sun
Degree Program: Biochemistry
Thesis Title: Correlation Between Thermodynamic Stability and Internal Flexibility of Bovine Pancreatic Trypsin Inhibitor (BPTI) and Its Variants
Thesis Advisor: Woodward, Clare K.

Name: McLane, Kathryn Evans
Degree Program: Biochemistry
Thesis Title: Identification of Sequence Segments Forming the Binding Sites for Alpha Bungarotoxin and Kappa-Bungarotoxin on Different Alpha Subunits of the Vertebrate Nicotinic Acetylcholine Receptor
Thesis Advisor: Conti-Tronconi, Bianca M.

Name: Nelms, Keats Avon
Degree Program: Biochemistry
Thesis Title: Regulation of Immunoglobulin Intron Enhancers in B Cells
Thesis Advisor: VanNess, Brian G.

Name: Nelson, Scott Edward
Degree Program: Biochemistry
Thesis Title: Embryonic and Adult Acetylcholine Receptor and Myasthenia Gravis Pathogenesis
Thesis Advisor: Conti-Tronconi, Bianca M.

Name: Pazour, Gregory Joseph
Degree Program: Biochemistry
Thesis Title: Regulation of the Virulence Genes of *Agrobacterium tumefaciens*
Thesis Advisor: Das, Anath and James A. Fuchs

Name: Veldman (Mickelson?), Sarah Anne
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Thesis Title: Protein Synthesis Elongation Factor 2: Transcriptional Regulation and Post Translational Modification
Thesis Advisor: Bodley, James W.

1992

Name: Augustin, Lance Biscoff
Degree Program: Biochemistry
Thesis Title: Regulation of Ribonucleotide Reductase Expression in *Escherichia coli*
Thesis Advisor: Fuchs, James A.

Name: Boundy-Mills, Kyria Louise
Degree Program: Biochemistry
Thesis Title: A *Saccharomyces cerevisiae* RAD52 Allele Expressing a C-terminal Truncation Protein: Activities and Intragenic Complementation of Missense Mutations
Thesis Advisor: Livingston, Dennis M.

Name: He, Siqian
Degree Program: Biochemistry
Thesis Title: Kinetics of DNA Condensation by Hexamine Cobalt (III)
Thesis Advisor: Bloomfield, Victor A.

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Thesis Title: Functional Studies of Lens Fiber Cell Membrane Proteins
Thesis Advisor: Louis, Charles F.

Name: Jollie, David R
Degree Program: Biochemistry
Thesis Title: Structure and Mechanism of Formate Dehydrogenase Isolated from the Methanotroph, *Methylosinus trichosporium* OB3b
Thesis Advisor: Lipscomb, John D.

Name: Kren, Betsy Jean Thompson
Degree Program: Biochemistry
Thesis Title: Function and Regulation of Glutaredoxin in *Escherichia coli*
Thesis Advisor: Fuchs, James A.

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Thesis Title: Thyroid Hormone Receptor Regulation Of S14 Gene Expression In Hepatocytes.
Thesis Advisor: Towle, Howard C.

Name: McTavish, Hugh Elser
Degree Program: Biochemistry
Thesis Title: Enzymology and Molecular Biology of Ammonia Oxidation in *Nitrosomonas europaea*
Thesis Advisor: Hooper, Alan B.

Name: Ouyang, Tracy Xin
Degree Program: Biochemistry
Thesis Title: Overexpression. Purification. and Investigation of Stress-Induced Expression of the *E. coli* Stringent Starvation Protein
Thesis Advisor: Flickinger, Michael C.

Name: Peterson, Nancy Lee
Degree Program: Biochemistry
Thesis Title: Characterization of the L-2-Amino-4-Phosphonobutanoic Acid (L-AP4) Receptor Using Conformationally Constrained Analogues of AP4
Thesis Advisor: Koerner, James F.

Name: Rowen, Donald Wayne
Degree Program: Biochemistry
Thesis Title: GLC3: The Gene Encoding the Glycogen Branching Enzyme of *Saccharomyces cerevisiae*
Thesis Advisor: LaPorte, David C.

Name: Schulte, Marvin Kenneth
Degree Program: Biochemistry
Thesis Title: The Mechanisms of Quisqualic Acid Induced Sensitization of Hippocampal Slices to Depolarization by L-2-Amino-4-Phosphonobutanoic Acid (L-AP4)
Thesis Advisor: Koerner, James F.

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Degree Program: Biochemistry
Thesis Title: Transcriptional Regulation by Steroid Hormones: The Ovalbumin Gene
Thesis Advisor: Towle, Howard C. and Michel M. Sanders

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Degree Program: Biochemistry
Thesis Title: The Adipocyte Low Molecular Weight Acid Phosphatase: Its Cloning, Expression and Characterization
Thesis Advisor: Bernlohr, David A.

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Thesis Title: Angle- and Time-Resolved Phosphorescence Anisotropy: Theory and Application to Contracting Muscle Fibers
Thesis Advisor: Thomas, David D.

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Thesis Title: Regulation of the Glyoxylate Bypass Operon: Cloning and Characterization of ic1R
Thesis Advisor: LaPorte, David C.

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Thesis Title: J-Coupling Related B1 Insensitive NMR Technique Development
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Thesis Title: Regulation and Function of the Stringent Starvation Protein of *Escherichia coli*
Thesis Advisor: Fuchs, James A. and Michael C. Flickinger

Name: Xu, Zhaohui
Degree Program: Biochemistry
Thesis Title: The Molecular Structure of the Adipocyte Lipid Binding Protein
Thesis Advisor: Banaszak, Leonard J.

1993

Name: Arneson, Mark Lewis
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Thesis Title: The Organization of Mammalian Lens Fiber Cell Membrane Proteins
Thesis Advisor: Louis, Charles F.

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Thesis Title: Enzymatic Glutathione Dependent Dehalogenation Of Dichloromethane and Structural Modeling Of A Glutathione S-Transferase Homolog, TRANSMIF
Thesis Advisor: Wackett, Lawrence P.

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Thesis Title: Biochemical and Spectroscopic Studies of the Photosynthetic Water-Splitting Complex
Thesis Advisor: Thomas, David D. and Bridgette A. Barry

Name: Gurnack, Mary Elizabeth
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Thesis Title: Glycogen-Concanavalin A-Sepharose as an Affinity Matrix for Glycogen Phosphorylase
Thesis Advisor: Goldberg, Nelson D.

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Thesis Title: Structure and Function Of Multi-Subunit Proteins
Thesis Advisor: Allewell, Norma M.

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Thesis Title: Regulation Of Ribonucleotide Reductase Expression In *Escherichia coli*
Thesis Advisor: Fuchs, James A.

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Thesis Title: Transcriptional Regulation Of The *Escherichia coli* K-12 Cyn Operon.
Thesis Advisor: Fuchs, James A.

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Thesis Title: Oxidative and Reductive Dehalogenation Reactions Catalyzed by Toluene Dioxygenase and Cytochrome P450CAM
Thesis Advisor: Lipscomb, John D. and Lawrence P. Wackett

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Degree Program: Biochemistry
Thesis Title: The Functional Importance of Invariant Cysteinyll Residues in Fe-Protein and MoFe-Protein of *Azotobacter vinelandii* Nitrogenase
Thesis Advisor: Howard, James B.

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Thesis Title: Regulation of the Hepatic Acute Phase Response: Direct Control of the Synthesis of a 23 Kilodalton Hepatic Secretory Protein by Endotoxin and Various Inflammatory Mediators
Thesis Advisor: Towle, Howard C.

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Thesis Title: Regulation of Expression of a Gene for Glycogen Synthase in *Saccharomyces cerevisiae*
Thesis Advisor: LaPorte, David C.

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Thesis Title: Regulation Transcription and V(D)J Recombination Of The Kappa Immunoglobulin Light Chain Locus
Thesis Advisor: Van Ness, Brian G.

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Thesis Title: Molecular Dynamics and Biochemical Kinetics of Actin and Myosin
Thesis Advisor: Thomas, David D.

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Thesis Title: The Orientation and Rotational Dynamics Of Spin-Labeled Myosin Heads During Muscle Contraction.
Thesis Advisor: Thomas, David D.

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Thesis Title: *E. coli* Glutaredoxin: Purification, Stability and Folding and Structural and Functional Comparison with *E. coli* Thioredoxin
Thesis Advisor: Woodward, Clare K.

Name: Schanke (Meis), Judith Evelyn Talsky
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Thesis Title: Analysis of the Spatial Organization of Transcription Factor Binding Sites Within the Kappa Immunoglobulin Intron Enhancer
Thesis Advisor: Van Ness, Brian G.

Name: Schwalbe, Ruth Ann
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Thesis Title: Interactions of the Pentraxin Family of Serum Proteins
Thesis Advisor: Nelsestuen, Gary L.

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Thesis Title: Regulation Of Hepatic S14 Gene Expression By Carbohydrate Metabolism
Thesis Advisor: Towle, Howard C.

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Thesis Title: Regulation of the Expression of the Chicken Ovalbumin Gene by Insulin and Second Messengers
Thesis Advisor: Sanders, Michel M.

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Thesis Title: Regulation of *E. coli nrd* Operon Encoding Ribonucleotide Reductase
Thesis Advisor: Fuchs, James A.

Name: Tao, Feng
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Thesis Title: The Structure, Stability, and Dynamics of Bovine Pancreatic Trypsin Inhibitor Hydrophobic Core Mutants
Thesis Advisor: Woodward, Clare K.

Name: Thompson, Kimberly Sue
Degree Program: Biochemistry
Thesis Title: Regulation of L-Type Pyruvate Kinase Gene Expression
Thesis Advisor: Towle, Howard C.

Name: Voss, John Carl
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Thesis Title: Molecular Mechanism of Ca-ATPase Regulation in Cardiac Sarcoplasmic Reticulum: A Time-Resolved Phosphorescence Anistropy Study
Thesis Advisor: Thomas, David D.

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Thesis Title: Protein-Protein Interaction Sites in the Nitrogenase Enzyme Complex From *Azotobacter vinelandii*
Thesis Advisor: Howard, James B.

1994

Name: Borson, Nancy D Caple
Degree Program: Biochemistry
Thesis Title: Canine Glucose Transporter 3: The Sequence and the Message
Thesis Advisor: Drewes, Lester R. and Wilmar L Salo

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Thesis Title: The Effects Of Divalent Metal Cations On DNA Structure
Thesis Advisor: Bloomfield, Victor A.

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Thesis Title: Transcriptional Regulation of the Chicken Ovalbumin Gene
Thesis Advisor: Sanders, Michel M.

Name: Frazee, Richard William
Degree Program: Biochemistry
Thesis Title: Cloning, Sequencing, Expression, and Site Directed Mutagenesis of the *Pseudomonas putida* Protocatechuate 3,4-dioxygenase Genes
Thesis Advisor: Lipscomb, John D.

Name: Froland, Wayne Allen
Degree Program: Biochemistry
Thesis Title: Catalytic and Structural Studies of Methane Mono-oxygenase from *Methylosinus trichosporium* OB3b: A Biological Mechanism for Methane Oxidation
Thesis Advisor: Lipscomb, John D.

Name: Hertz, Ann Marie Vogel
Degree Program: Biochemistry
Thesis Title: Characterization of the virD Operon of *Agrobacterium tumefaciens*
Thesis Advisor: Das, Anath

Name: Karon, Bradley Samuel
Degree Program: Biochemistry
Thesis Title: Molecular Mechanisms of Ca⁺⁺-ATPase Regulation by Oligomeric State in Skeletal and Cardiac Sarcoplasmic Reticulum
Thesis Advisor: Thomas, David D.

Name: Liu, Hsien-Chin
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Multiple Thyroid Hormone Response Elements Synergistically Regulate the Hepatic Expression of the Rat S14 Gene
Thesis Advisor: Towle, Howard C.

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Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Transcriptional Regulation Of The L-Type Pyruvate Kinase Gene By Carbohydrate Metabolism
Thesis Advisor: Towle, Howard C.

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Thesis Title: Effects of Supercoiling, Z-forming Sequences and Cationic Molecules on DNA Condensation
Thesis Advisor: Bloomfield, Victor A.

Name: MacDonald, Gina Marie
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: A Difference Fourier-Transform Infrared Spectroscopic Study Of Electron Transfer Intermediates In The Photosynthetic Water-Oxidizing Complex
Thesis Advisor: Barry, Bridgette A.

Name: Matta, John Joseph
Degree Program: Biochemistry
Thesis Title: Biochemical and Mechanical Effects of Spin Labeling Muscle Fibers
Thesis Advisor: Thomas, David D.

Name: Plager, Douglas Allen
Degree Program: Biochemistry
Thesis Title: Thermodynamic and Structural Changes Associated with Binding by Two Classes of Calcium-Dependent Membrane-Binding Proteins
Thesis Advisor: Nelsestuen, Gary L.

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Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: G Domain Characterization and Reulated Expression of *Saccharomyces cerevisiae* Elongation Factor-2
Thesis Advisor: Bodley, James W.

Name: Resnik, Ernesto Ruben
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Expression Of The Genes Of The aceBAK Operon of *Escherichia coli*
Thesis Advisor: LaPorte, David C.

Name: Sha, Ronald Steven
Degree Program: Biochemistry
Thesis Title: Studies on the Function(s) of Adipocyte Lipid Binding Protein *in vitro* and *in situ*
Thesis Advisor: Bernlohr, David A.

Name: Vannelli, Todd Michael
Degree Program: Biochemistry
Thesis Title: Oxidation of Halogenated Alkanes, Alkenes and Aromatics by the Ammonia Oxidizing Bacterium *Nitrosomonas europaea*
Thesis Advisor: Hooper, Alan B.

Name: Young, Helen C
Degree Program: Biochemistry
Thesis Title: Nuclear Magnetic Resonance Spectroscopic Studies Of Neutrophil Activating Peptide-2 and Related Proteins
Thesis Advisor: Mayo, Kevin H.

1995

Name: Hale, Valerie Ann
Degree Program: Biochemistry
Thesis Title: Protein Secretion in the Streptomyces: the *Streptomyces scabies* Esterase as a Model System
Thesis Advisor: Schottel, Janet L.

Name: Hong, Jin
Degree Program: Biochemistry
Thesis Title: cDNA Sequences and Expression of Carbamyl Phosphate Synthetase II and III in *Squalus acanthias*
Thesis Advisor: Anderson, Paul M. and Wilmar L. Salo

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Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Mutational Analysis Of The Adipocyte Lipid Binding Protein As A Probe For Lipid Protein Interactions
Thesis Advisor: Bernlohr, David A.

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Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Temperature-Sensitive Mutations Of The Yeast Rad52 Gene
Thesis Advisor: Livingston, Dennis M.

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Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Mutations Upstream Of The 3' Splice Site Increase The Splicing Of Mutant Introns
Thesis Advisor: Siliciano, Paul G.

Name: Kroening, Kurt Dubear
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Genetic Analysis Of Fatty Acid Repression Mutants In *Saccharomyces cerevisiae*
Thesis Advisor: Bernlohr, David A.

Name: Liu, Yi
Degree Program: Biochemistry
Thesis Title: Regulation of Catalysis of Methan Monooxygenase from *Methylosinus trichosporium* OB3b by Component Complexes: A Novel Mechanism for Regulation of Catalysis in a Multicomponent Enzyme System
Thesis Advisor: Lipscomb, John D.

Name: Martinez, Michael Bacil
Degree Program: Biochemistry
Thesis Title: An Investigation of Enzyme Kinetics at the Diffusion Limit. Enzymes in the Periplasm of *Escherichia coli*
Thesis Advisor: Nelsestuen, Gary L.

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Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Identification Of A Class Of *Saccharomyces Cerevisiae* Mutants Defective In Fatty Acid Repression Of Gene Transcription
Thesis Advisor: Bernlohr, David A.

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Thesis Title: Regulation Of Gsy2, A Glycogen Synthase Gene In *Saccharomyces cerevisiae*
Thesis Advisor: LaPorte, David C.

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Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Regulation Of Yeast Glycogen Metabolism: Expression Of Gph1, Encoding Yeast Glycogen Phosphorylase
Thesis Advisor: LaPorte, David C.

Name: Vannelli (Steinbrenner), Jill Marie
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Characterization Of The Molecular Events Which Occur In The Development Of The Chondrocytic Phenotype
Thesis Advisor: Oegema Jr, Theodore R.

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Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: NMR Characterization of Two Related Proteins: Structural Studies of GlutaredoxinN and Active Site Titrations of Thioredoxin
Thesis Advisor: Woodward, Clare K.

1996

Name: Bergmann, David John
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Molecular Biology Of Cytochromes Involved In Ammonia Oxidation and Electron Transport In The Nitrifying Bacterium *Nitrosomonas europaea*
Thesis Advisor: Hooper, Alan B.

Name: Dean, Diane Mable Vician
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Identification Of A Steroid-Dependent Cis-Acting DNA Element In The Chicken Ovalbumin Gene
Thesis Advisor: Sanders, Michel M.

Name: Evans, Jr., Thomas Corwin
Degree Program: Biochemistry
Thesis Title: Characterization of Pentraxins, Annexins, and Vitcamin K-Dependent Proteins; Dissimilar Proteins That Use a Calcium-Ligand Bridging Model
Thesis Advisor: Nelsestuen, Gary L.

Name: Gui, Lizhen
Degree Program: Biochemistry
Thesis Title: Regulation Of Iclr, The Gene Encoding The Repressor Of The Glyoxylate Bypass Operon
Thesis Advisor: LaPorte, David C

Name: Hills, Robert Longman
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Thesis Title: Studies on the Role Disulfide Bond Exchange Plays in the Aggregation of Aggrecan with Hyaluronic Acid
Thesis Advisor: Oegema Jr, Theodore R.

Name: Houtz, Elizabeth King
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Thesis Title: Cell Type Specific Activity and Cellular Transactivators Of Avian Retroviral Long Terminal Repeat Enhancers
Thesis Advisor: Conklin, Kathleen F. and Brian G. Van Ness

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Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Identification Of Prp40, A Novel Essential Yeast Splicing Factor Associated With The U1 Snrnp
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Thesis Title: Calcium-Dependent Protein-Membran Interaction and Prothrombinase Reaction: A Kinetic and Mechanistic Study
Thesis Advisor: Nelsestuen, Gary L.

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Degree Program: Biochemistry
Thesis Title: Mechanistic Studies of Homoprotecatechuate 2,3-Dioxygenase from *Brevibacterium fuscum*
Thesis Advisor: Lipscomb, John D.

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Thesis Title: Repression and Activation Of The Glyoxylate Bypass Operon Of *Escherichia coli*
Thesis Advisor: LaPorte, David C

Name: Phan, Lon Dinh
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Thesis Title: Protein Synthesis Elongation Factor 2: Post-Translational Modifications
Thesis Advisor: Bodley, James W.

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Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: The Structure Of The Apo-Cellular Retinoic Acid Binding Protein and In Complex With Linoleate
Thesis Advisor: Banaszak, Leonard J.

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Thesis Title: The Structure Of Fumarase C From *Escherichia coli*
Thesis Advisor: Banaszak, Leonard J.

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Thesis Title: Expression Of Ovine Lens Junctional Proteins
Thesis Advisor: Louis, Charles F.

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Thesis Title: Regulation Of The Gene Encoding The Glycogen Branching Enzyme Of *Saccharomyces cerevisiae*
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1997

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Thesis Title: Characterization Of The DNA Transfer Proteins Of *Agrobacterium tumefaciens*
Thesis Advisor: Das, Anath

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Thesis Title: Isolation and Analysis of mRNA Instability Elements From *Escherichia coli*
Thesis Advisor: Schottel, Janet L.

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Thesis Title: Calcium Regulation in the Lens
Thesis Advisor: Louis, Charles F.

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Thesis Title: Molecular Dynamics and Calcium Transport In Sarcoplasmic Reticulum. Lipid Protein And Protein-Protein Interactions
Thesis Advisor: Thomas, David D.

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Thesis Title: Functional Interactions Of U1 Snrnp Proteins In Yeast Pre-mRNA Splicing
Thesis Advisor: Siliciano, Paul G.

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Thesis Title: Molecular Analysis Of The Murine Fatty Acid Transport Protein Gene
Thesis Advisor: Bernlohr, David A.

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Thesis Title: Regulation of Ribonucleotide Reductase Expression in *Escherichia coli*
Thesis Advisor: Fuchs, James A.

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Thesis Title: Nutritional Regulation Of Hepatic S14 and Liver-Type Pyruvate Kinase Gene Expression
Thesis Advisor: Towle, Howard C.

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Thesis Title: Fluorescence Study Of The Molecular Mechanism Of Phospholamban Regulation Of Cardiac Sarcoplasmic Reticulum Calcium Pump.
Thesis Advisor: Thomas, David D.

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Thesis Advisor: Nelsestuen, Gary L.

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Thesis Advisor: Allewell, Norma M.

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Thesis Advisor: Woodward, Clare K.

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Thesis Advisor: Bernlohr, David A.

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Thesis Advisor: LaPorte, David C

1998

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Thesis Advisor: Wackett, Lawrence P. and Michael J. Sadowsky

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Thesis Title: Reaction Of Sulfur Iv Compounds With Nitric Oxide and S-Nitrosothiol Compounds: Implications For Sulfur Iv Toxicity
Thesis Advisor: Nelsestuen, Gary L.

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Thesis Title: The Effect Of Elongation Factor 2 Depletion On Protein Synthesis and Growth In *Saccharomyces cerevisiae*
Thesis Advisor: Bodley, James W.

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Thesis Title: Mechanism of Dioxygen Activation by Methane Monooxygenase Hydroxylase: Structural and Transient Kinetic Studies
Thesis Advisor: Lipscomb, John D.

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Thesis Title: Regulation Of V-J Rearrangement and Transcription Of The Mouse Immunoglobulin Kappa Light Chain Locus
Thesis Advisor: Van Ness, Brian G.

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Thesis Title: Thermodynamics Of Anionic Sulfonate Ligand Binding To Proteins and The Effect On Protein Structure And Stability
Thesis Advisor: Lovrien, Rex E.

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Thesis Title: Solution Structures and Dynamics Of Heparin-Derived Oligosaccharides And Their Interactions With Peptides And Proteins
Thesis Advisor: Mayo, Kevin H.

Name: Murphy, Mark William
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Thesis Title: A Role For Prp40 In U1 Snrnp Biogenesis.
Thesis Advisor: Siliciano, Paul G.

Name: Nesheim, Jeremy C.
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Thesis Title: Mechanistic Characterization of Methane Monooxygenase by Kinetic Isotope Effect and Transient Kinetic Studies
Thesis Advisor: Lipscomb, John D.

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Thesis Title: Structural and Kinetic Characterization of the Binding Cavity of Adipocyte Lipid Binding Protein.
Thesis Advisor: Banaszak, Leonard J.

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Thesis Title: Structural Changes In The Photosynthetic Water Oxidizing Complex Upon Charge Separation During The S1 To S2 Transition.
Thesis Advisor: Barry, Bridgette A.

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Thesis Title: The Investigation of Molecular Recognition via Nuclear Magnetic Resonance Spectroscopy and Computational Modeling
Thesis Advisor: Woodward, Clare K. and Deborah H. Kallick

1999

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Thesis Title: Regulation Of Hepatic Uncoupling Protein-2: Implications Of Its Role In Energy Metabolism
Thesis Advisor: Towle, Howard C.

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Thesis Title: Mechanochemical Coupling In Muscle: Determining The Relationship Between Myosin Biochemistry, Myosin Structure, and Muscle Force
Thesis Advisor: Thomas, David D. and Clayton F. Giese

Name: Berger, Ryan Robert
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Thesis Title: Gene Regulation and Developmental Roles Of Winged Helix Transcription Factors In The Chick Oviduct
Thesis Advisor: Sanders, Michel M.

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Thesis Title: Purification and Properties Of The Rat Chondrosarcoma Xylosyl Kinase
Thesis Advisor: Oegema Jr, Theodore R.

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Thesis Title: Quisqualic Acid Transport, Sensitization and Neurotoxicity In Rat Hippocampal Slices
Thesis Advisor: Koerner, James F.

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Thesis Title: Phosphorylation Of Lens Connexin Protein, Cx49
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Thesis Title: The Role Of The Two-Handed Zinc Finger/Homeodomain Protein Deltaef1/Areb6 In Estrogen Signaling and Carcinomas Of The Human Female Reproductive Tract
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Thesis Title: Folding Kinetics Of Bpti Variants and Development Of A Model For The Relationship Of Hydrogen Exchange To Protein Folding.
Thesis Advisor: Woodward, Clare K.

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Thesis Advisor: Simon, Jeffrey A.

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Thesis Title: Effects Of Solution Conditions On DNA Condensation and Protein-DNA Interactions
Thesis Advisor: Bloomfield, Victor A.

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Thesis Title: Identification and Characterization Of The Af-1 Transactivation Domain Of Thyroid Hormone Receptor Beta-1
Thesis Advisor: Towle, Howard C.

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Thesis Title: Zinc Uptake and Its Transcriptional Regulation In *Saccharomyces cerevisiae*
Thesis Advisor: Drewes, Lester R. and David J. Eide

2000

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Thesis Title: Differential Transcriptional Regulation Of Serine Protease Inhibitor (Spi) 2.1 and 2.2 Genes In The Hepatic Acute Phase Response
Thesis Advisor: Towle, Howard C. and David C. Laporte

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Thesis Title: Functional and Regulatory Studies Of The Fatty Acid Transport Protein 1
Thesis Advisor: Bernlohr, David A.

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Thesis Title: Synthetic Studies On Bovine Pancreatic Trypsin Inhibitor (Bpti). I. Optimized Stepwise Protocols. Ii. Segment Condensation Strategies
Thesis Advisor: Woodward, Clare K. and George Barany

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Thesis Title: Mechanisms Of Transcriptional Repression By Bcl-6.
Thesis Advisor: Bardwell, Vivian J.

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Thesis Title: Involvement Of A Novel Transcription Factor Complex In Glucose Regulation Of Hepatic Genes
Thesis Advisor: Towle, Howard C.

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Thesis Title: Estrogen Opposes Apoptosis By Repressing Bmp-7 and Initiator Caspase Gene Transcription
Thesis Advisor: Sanders, Michel M.

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Thesis Title: A Fourier Transform-Infrared Spectroscopy Study Of The Lactose Permease Of *Escherichia coli*
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Thesis Title: Protein-DNA and Protein-Protein Interactions Of Polycomb Group Transcriptional Repressors From *Drosophila melanogaster*
Thesis Advisor: Simon, Jeffrey A.

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Thesis Advisor: Zarkower, David A.

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Thesis Advisor: Que Jr., Lawrence and John D. Lipscomb

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Thesis Title: Cag Trinucleotide Repeat Tract Instability In Yeast
Thesis Advisor: Livingston, Dennis M.

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Thesis Title: Xenopus Frizzled-7 Is Required For Vertebrate Axis Specification
Thesis Advisor: Ekker, Stephen C.

Name: Wallar, Bradley J
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Thesis Title: Probing The Interactions Between Component B and The Hydroxylase Of Methane Monooxygenase
Thesis Advisor: Lipscomb, John D.

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Thesis Title: Kinetic and Spectroscopic Studies Of Rieske Dioxygenase Catalysis
Thesis Advisor: Lipscomb, John D.

2001

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Thesis Title: Structural and Biochemical Characterization Of D-3 Phosphoglycerate Dehydrogenase: Subunit: Subunit Interface Point Mutations And Subcloned Domains
Thesis Advisor: Banaszak, Leonard J.

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Thesis Advisor: Mayo, Kevin H.

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Thesis Title: Mechanism Of Hiv-1 Nucleocapsid Protein-Mediated Trna Primer Annealing
Thesis Advisor: Musier-Forsyth, Karin

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Thesis Title: Characterization, Complete Nucleotide Sequence and Organization Of Atrazine Catabolic Plasmid Padp-1 From *Psuedomonas* Sp. Strain Adp
Thesis Advisor: Sadowsky, Michael J. and Lawrence P. Wackett

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Thesis Title: Structural and Functional Studies On Cyclophilin A, Bacteriophage Lambda Protein Phosphatase, And The DNA-Binding Domain Of The Vitamin D Receptor By Multinuclear, Multidimensional NMR
Thesis Advisor: Armitage, Ian M. and Patrick E. Hanna

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Thesis Advisor: Ekker, Stephen C.

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Thesis Title: Structural and Dynamic Studies Of A Brain Specific Growth Inhibitory Factor: Metallothionein-3
Thesis Advisor: Armitage, Ian M.

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Thesis Advisor: Banaszak, Leonard J.

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Thesis Advisor: Siliciano, Paul G.

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Thesis Title: Critical Amino Acids In Triazine Degrading Enzymes: Determining Metal Binding and Reaction Specificity
Thesis Advisor: Wackett, Lawrence P. and Michael J. Sadowsky

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Thesis Title: Crystallographic Studies Of Intradiol Dioxygenases
Thesis Advisor: Ohlendorf, Douglas H.

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Thesis Title: Site-Directed Mutagenesis Of A Manganese (Ii) -Containing Ring-Cleavage Dioxygenase From *Arthrobacter globiformis* Strain Cm-2.
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Thesis Title: Biochemical and Genetic Correlates Of Porcine Malignant Hyperthermia
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Thesis Title: The Role Of Delta ef1 and Usf In Estrogen Signaling Cascades
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Thesis Title: Spectroscopic Investigations Of Photosynthetic Water Oxidation In Photosystem II
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Thesis Title: Molecular, Genetic and Physical Mapping Of The Porcine Genome
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Name: Laconte (Williams), Leslie E
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Biochemistry and Kinetics Of The Myosin Structural Change Responsible For Force Generation In Activce, Spin-Labeled Muscle Fibers
Thesis Advisor: Thomas, David D.

Name: Ouellette, Anthony JA
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Vibrational Studies Of Redox-Active Tyrosine Residues In Biology
Thesis Advisor: Barry, Bridgette A.

Name: Pujols-Ayala, Idelisa
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Vibrational Studies of Redox-Active Tyrosine Residues in Biology.
Thesis Advisor: Barry, Bridgette A.

Name: Singh, Satinder Kaur
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Substrate Specificity Of *Escherichia coli* Isocitrate Dehydrogenase Kinase/Phosphatase
Thesis Advisor: Banaszak, Leonard J. and David C. Laporte

Name: Tham, Ee Loon
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: The Biochemical Basis For Activation-Induced Non-Responsiveness In Cd8 T Cells
Thesis Advisor: Mescher, Matthew F.

Name: Valley, Michael P
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Mechanistic and Mutagenesis Studies Of Protocatechuate 3,4-Dioxygenase
Thesis Advisor: Lipscomb, John D.

Name: Vonweymarn, Linda B
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: The Characterization Of P450 2a Enzymes and Their Role In N Nitrosobenzylmethylamine Metabolism In The Rat Esophagus
Thesis Advisor: Murphy, Sharon E.

2003

Name: Bennaars-Eiden, Assumpta
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Characterization Of The Role Of Fatty Acid Binding Proteins In Lipolysis and Antioxidant Biology
Thesis Advisor: Bernlohr, David A.

Name: Brazeau, Brian
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Kinetics and Activation Thermodynamics Of Methane Monooxygenase Compound Q Formation And Reaction With Substrates
Thesis Advisor: Lipscomb, John D.

Name: Enerson, Bradley
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Molecular and Genomic Analysis Of The Cerebral Vascular Endothelium
Thesis Advisor: Drewes, Lester R.

Name: Groce, Stephanie L
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Mechanistic and Mutagenesis Studies Of Homoprotocatechuate 2,3 Dioxygenase
Thesis Advisor: Lipscomb, John D.

Name: Kuehl, Gwendolyn
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: N-Glucuronidation Of Nicotine, Its Metabolites, and The Structurally Related Carcinogen Nnal Catalyzed By Udp-Glucuronosyltransferases
Thesis Advisor: Murphy, Sharon E.

Name: Nelson, Wendy Diane
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Site-Directed Spin-Labeling Of The Regulatory Light Chain Of Smooth Muscle Myosin: Phosphorylation-Induced Structural Changes
Thesis Advisor: Thomas, David D.

Name: Olson, Brian
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Interaction Of The Splicing Factor Prp40p With Nuclear Export Proteins
Thesis Advisor: Siliciano, Paul G.

Name: Pederson, Charlotte Rosendahl
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Microbial Metabolism Of The S-Triazine Herbicide Ametryn: A Comparison To Atrazine Metabolism
Thesis Advisor: Wackett, Lawrence P. and Michael J. Sadowsky

2004

Name: Anose, Bynthia Marie
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Role and Regulation Of Human Zeb-1 In Reproductive Carcinomas
Thesis Advisor: Sanders, Michel M.

Name: Arroyo, Monica Marie
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Structural and Biophysical Studies Of The Anti-Angiogenic Peptide Anginex And Related Analogs
Thesis Advisor: Mayo, Kevin H.

Name: Hosch-Abbey, Sarah Elizabeth
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Natriuretic Peptide Receptor-B Inhibition By Vasoactive Agents
Thesis Advisor: Potter, Lincoln R.

Name: Mueller, Benjamin
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Direct Detection Of Phospholamban and Serca Interaction In Membranes Using Fluorescence Resonance Energy Transfer
Thesis Advisor: Thomas, David D.

Name: Riley, Brigit Erin
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: The Coupling Of Ubiquitin-Like Proteins and The Neurodegenerative Disease Protein, Ataxin-1
Thesis Advisor: Orr, Harry T.

Name: Simmons, Heidi M
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Identification and Characterization Of Nom1, A Novel Gene Located Within The 7q36 Breakpoint Region Of 7q36;12p13 Rearrangements Associated With Pediatric Acute Myeloid Leukemia
Thesis Advisor: Conklin, Kathleen F. and Vivian J. Bardwell

Name: Zmoon, Jamillah
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Solution and Solid-State NMR Of Phospholamban: Structure, Topology And Calcium ATPase Interaction
Thesis Advisor: Thomas, David D. and Gianluigi Veglia

2005

Name: Brown, Christopher Kent
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Proteases and Dioxygenases: A Structural Analysis Of Enzymes
Thesis Advisor: Ohlendorf, Douglas H.

Name: Cox, Bryan
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Structure and Stability Of Amino-Terminal Translocatable Precursor Proteins
Thesis Advisor: Banaszak, Leonard J.

Name: Devany, Matthew H
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Nmr Structural Studies Of The Human Protein Dek
Thesis Advisor: Matsuo, Hiroshi

Name: Dougherty, Dawne Colleen
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: The Role Of The Car Element In The Negative Regulation Of The Ovalbumin Gene
Thesis Advisor: Sanders, Michel M.

Name: Hall, Angela Marie
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Molecular Analysis Of Fatty Acid Transport Proteins In Adipocytes
Thesis Advisor: Bernlohr, David A.

Name: Judd, Paul K
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Analysis Of The Virulence Protein Virb6 and The Assembly Of The Type Iv Secretion Apparatus Of *Agrobacterium tumefaciens*
Thesis Advisor: Das, Anath

Name: Kang, Johnthomas Eng Tat
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: The Role Of 6-Phosphofructo-2-Kinase/Fructose-2,6 Bisphosphatase and Fructose-2,6-Bisphosphate In Hepatic Glucose Metabolism
Thesis Advisor: Lange, Alex J.

Name: Ma, Lin
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Role Of Chrebp/Mlx In Regulating Hepatic Glucose-Responsive Genes
Thesis Advisor: Towle, Howard C.

Name: Mische, Sarah Elizabeth
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: A Molecular Characterization Of Cytoplasmic Dynein Function During *Drosophila melanogaster* Development.
Thesis Advisor: Hays, Thomas S.

Name: Schroeder, Tania Marie
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Regulation Of Osteoblast Differentiation By Histone Deacetylases
Thesis Advisor: Westendorf, Jennifer J.

Name: SternJohn, Julius R
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Amino Acid Editing and Orthogonal Enzyme Complementation Screen By Class II Prolyl-tRNA Synthetase
Thesis Advisor: Siliciano, Paul G., and Karin Musier-Forsyth

Name: Stone, Matthew D
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Analysis Of Membrane Dependent Reactions In Blood Coagulation: Comparison Of Factor Viii Variants With Enhanced Membrane Affinity
Thesis Advisor: Nelsestuen, Gary L.

Name: Wang, Qinghua
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Ubiquitin Recognition By Hhr23a and S5a
Thesis Advisor: Walters, Kylie J.

Name: Wang, Yexun (Bill)
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Nicotinic Cholinergic Signaling System In Human Bronchial Epithelial and Vascular Endothelial Cells
Thesis Advisor: Conti-Fine, Bianca M.

2006

Name: Bolon, Yung-Tsi Esther
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Investigation Into The Initiation Of DNA Replication: Functional Analysis Of Origin Sequences In Budding Yeast
Thesis Advisor: Bielinsky, Anja K.

Name: Bryan, Paula Marie
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Utilization Of A Novel Method To Determine Natriuretic Peptide Receptor Phosphorylation: Investigation Of The Role Of Cyclic Gmp- Dependent Protein Kinase-I In Natriuretic Peptide Receptor-A Regulation and Resolution Of A Mechanism For Renal Hyporesponsiv
Thesis Advisor: Potter, Lincoln R.

Name: Ethen, Cheryl M
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Retinal Protein Changes With Age-Related Macular Degeneration
Thesis Advisor: Ferrington, Deborah A.

Name: Haemig, Heather Anne Hrodey
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Investigation Of The Metal Binding Site Of Mnth, A Divalent Metal Cation/H+ Transporter Of *Escherichia coli*
Thesis Advisor: Brooker, Robert J.

Name: Jeong, Kyeong Soo
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Biochemical and Genetic Probing Of Transcriptional Activity Of The *Escherichia Coli* Chromosome.
Thesis Advisor: Khodursky, Arkady B.

Name: Nacusi, Lucas Pablo
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Characterizing Mechanisms Regulating Cell Cycle Inhibitors P21cip1 and P27kip1
Thesis Advisor: Sheaff, Robert J.

Name: Neibergall, Matthew Bruce .
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Biochemical, Spectroscopic, and Kinetic Studies Of The Mechanism And Regulation Of Rieske Dioxygenases
Thesis Advisor: Lipscomb, John D.

Name: Polzin, Ronald Gene
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Transcriptional Regulation Of The Oncoprotein18 (Op18) Gene In Response To Chemotherapeutic Agents
Thesis Advisor: Herrera, Julio E.

Name: Ricke, Robin Marie
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Coordinating Continuous and Discontinuous DNA Replication
Thesis Advisor: Bielinsky, Anja K.

Name: Surek, Jack Thomas
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: The Development Of A Voltmeter For Solution EPR and Its Application To Measure Voltages Of Myosin Biochemical States
Thesis Advisor: Thomas, David D.

Name: Watts, Kevin
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Investigation Of Plant Flavonoid Biosynthesis In *Escherichia coli*
Thesis Advisor: Schmidt-Dannert, Claudia

Name: Zhang, Yan
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Searching For Biomarkers For Diagnosis and Early Detection Of Lung Transplant Chronic Rejection
Thesis Advisor: Nelsestuen, Gary L.

2007

Name: Benlhabib, Houda
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Transcriptional Regulation Of The Oncoprotein 18/Stathmin Gene
Thesis Advisor: Herrera, Julio E.

Name: Fan, Yao "Franz"
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Protein Dynamics In Enzyme Catalysis and Ligand Binding: A Computational Study
Thesis Advisor: Banaszak, Leonard J. and Jiali Gao

Name: Fattah, Kazi Riaz
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Functional Characterization Of Ku70 In Human Somatic Cells
Thesis Advisor: Hendrickson, Eric A.

Name: Ghosh, Goutam
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Functional Characterization Of Ku86 In Human Somatic Cells
Thesis Advisor: Hendrickson, Eric A.

Name: Gingery, Anne
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: New Paradigm: Survival Pathway Promotion Of Osteoclast Survival
Thesis Advisor: Oursler, Merry Jo

Name: Johnson, Bryan Jonas
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Mechanistic Characterization Of Amine Oxidases From *Hansenula polymorpha*
By X-Ray Crystallographic Structural Studies
Thesis Advisor: Wilmot, Caroline M.

Name: Kim, Shinseog
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: The Role Of Doublesex-Related Genes In Mammalian Sexual Development
Thesis Advisor: Zarkower, David A.

Name: Kim, Haeyoung
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Characterization Of The Local Chromatin Structure Of CAG Trinucleotide Repeat
Tracts and CAG Repeat Chromatin-Associated Proteins
Thesis Advisor: Livingston, Dennis M.

Name: Raveendranathan, Miruthubashini (Bashi)
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Replication Fork Progression Through Fragile Sites In *Saccharomyces cerevisiae*
Thesis Advisor: Bielinsky, Anja K.

Name: Schlicht, Kari Elizabeth
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Human Cytochrome P450-Mediated Metabolism Of Nicotine and Tobacco
Specific Carcinogens: N-Nitrosornicotine And 4 -(Methylnitrosamino)-1-(3
Pyridyl)-1-Butanone
Thesis Advisor: Murphy, Sharon E.

Name: Tsatsos, Nikolas G (Niko)
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Carbohydrate Response Element Binding Protein Is A Phosphoprotein That Activates Lipogenic Enzyme Genes In Response To Glucose
Thesis Advisor: Towle, Howard C.

Name: Wangenstein, Kirk Joseph
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Expression Of Transgenes In Liver By Gene Therapy-Mediated Repopulation
Thesis Advisor: Ekker, Stephen C.

2008

Name: Agger, Sean
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Identification and Characterization Of Bacterial And Fungal Terpenoid Cyclases
Thesis Advisor: Schmidt-Dannert, Claudia

Name: Antos, Laura
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Adenine Nucleotide Regulation Of Natriuretic Peptide Receptor Activation
Thesis Advisor: Potter, Lincoln R.

Name: Carlson Winters, Deborah
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Sarcoendoplasmic Reticulum Ca-ATPase Domain Dynamics As Detected By Fluorescence Resonance Energy Transfer
Thesis Advisor: Thomas, David D.

Name: Chattopadhyay (Banerjee), Sharbani
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Maintaining Genome Integrity During DNA Replication
Thesis Advisor: Bielinsky, Anja K.

Name: De la Mora-Rey, Teresa R
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Crystallographic and Biochemical Studies Of Methylamine Dehydrogenase From *Paracoccus denitrificans*: A Tryptophan Tryptophylquinone Containing Enzyme
Thesis Advisor: Wilmot, Caroline M.

Name: Fattah, Farjana Jahan
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: The Impact Of Loss Of Function Mutations Of Nhej Genes On Gene Targeting and Dna Dsb Repair In Human Somatic Cells
Thesis Advisor: Hendrickson, Eric A.

Name: Gosse, Jimmy
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Investigation Of Cellular Factors In Nongrowing *Rhodopseudomonas palustris* Hydrogen Production
Thesis Advisor: Flickinger, Michael C.

Name: Grimsrud, Paul A
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Proteomic and Biochemical Analysis Of Adipose Protein Carbonylation In Obesity Linked Insulin Resistance
Thesis Advisor: Bernlohr, David A.

Name: Gybina, Anna
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Effect Of Copper Deficiency In Rodents On Induction Of Neuronal Apoptosis
Thesis Advisor: Prohaska, Joseph R.

Name: Holtzapple, Erik K
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Investigation Of Isoprenoid Wax Ester Syntheses In *Marinobacter hydrocarbonoclasticus* and Their Applications In Biotechnology
Thesis Advisor: Schmidt-Dannert, Claudia

Name: Klein, Jennifer C.
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Molecular Dynamics Of Myosin II By Site-Directed Spin-Labeling and EPR
Thesis Advisor: Thomas, David D.

Name: MacDuff, Donna Alexandra
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Regulators Of Activation-Induced Deaminase In Antibody Gene Diversification and Transposon Restriction
Thesis Advisor: Harris, Reuben S.

Name: Marasco, Erin Kathleen
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Identification and Characterization Of Bacterial Carotenoid Cleavage Oxygenases
Thesis Advisor: Schmidt-Dannert, Claudia

Name: Schumacher, April J
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: APOBEC3G Mediates Restriction Of Retroelments
Thesis Advisor: Harris, Reuben S.

Name: Thompson, Brian
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Protein-Protein Interactions and The Characterization Of Adipocyte Fatty Acid Binding Protein
Thesis Advisor: Bernlohr, David A.

2009

Name: Gehrking, Kristin Marie
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Partial Tip60 Loss Slows Cerebellar Degeneration In A Spinocerebellar Ataxia Type 1 (Sca1) Mouse Model
Thesis Advisor: Orr, Harry T.

Name: Guza, Rebecca
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Effect Of Sequence Context On The Formation and Repair Of DNA Adducts
Thesis Advisor: Tretyakova, Natalia Y.

Name: Hache, Guylaine
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Toward An Understanding Of The Mechanism Of Hiv-1 Restriction By APOBEC3 Proteins
Thesis Advisor: Harris, Reuben S.

Name: Huseby, Medora Jean
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Structure and Activities Of Beta Toxin: A Virulence Factor Of *Staphylococcus aureus*
Thesis Advisor: Ohlendorf, Douglas H.

Name: Jahren, Neal Richard
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Molecular Analysis Of Components In *Drosophila* Polycomb Group Silencing
Thesis Advisor: Simon, Jeffrey A.

Name: Jiang, Yun
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Synthesis Of Carotenoid-Containing Polyesters and Protein Engineering To Improve Synthetic Efficiency Of *Pseudomonas fluorescens* Esterase
Thesis Advisor: Kazlauskas, Romas J.

Name: Karanja, Kenny
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: C-Terminal Flap Endonuclease (Rad27) Mutations: Lethal Interactions With A DNA Ligase I Mutation (Cdc9-P) and Suppression By Proliferating Cell Nuclear Antigen (Pol30) In *Saccharomyces cerevisiae*
Thesis Advisor: Livingston, Dennis M.

Name: Khan, Salmaan Ahmed
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Beyond The Allosteric Role Of Fructose-2,6-Bisphosphate: Exploring Its Effects On Gene Expression and Signal Transduction
Thesis Advisor: Lange, Alex J

Name: Kweon, Junghun
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Analysis Of V(D)J Recombination In Nhej-Defective Human Cells & A Structure: Function Analysis Of Mammalian Ku86
Thesis Advisor: Hendrickson, Eric A.

Name: Liu, Fen
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Misfolded Cytosolic Proteins Are Trafficked Through The Endoplasmic Reticulum For Degradation: The Molecular and Cellular Mechanisms For The Turnover Of Human Nat1 R64w And Parkin R42p
Thesis Advisor: Walters, Kylie J.

Name: Saykally Chang, Jessica Nicole
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Identification Of The Transcription Factor Zeb1 As A Novel Modulator Of Adiposity
Thesis Advisor: Sanders, Michel M.

Name: Stenglein, Mark Daniel
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: APOBEC3 Proteins Restrict Mobile and Foreign DNA
Thesis Advisor: Harris, Reuben S.

Name: Wiczler, Brian
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Biochemical and Functional Characterization Of Fatty Acid Transport Proteins
Thesis Advisor: Bernlohr, David A.

Name: Zinggeler-Berg, Jeannette Marion
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Metabolism Of Nicotine and The Tobacco Carcinogen 4-(Methylnitrosamino)-1 (3-Pyridyl)-1-Butanone (Nnk): Genetic And Phenotypic Variation
Thesis Advisor: Murphy, Sharon E.

2010

Name: Broege, Aaron Michael
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Transcriptional Regulation Of Transcription Factor 8
Thesis Advisor: Sanders, Michel M.

Name: Bunnell, Tina M
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Distinct Developmental Functions For Cytoplasmic Actin Isoforms
Thesis Advisor: Ervasti, James

Name: Chakrabarty, Sarmistha
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Insight Into The Oxygen Activation Mechanism By Rieske Dioxygenases Through Kinetic, Spectroscopic and Mutagenesis Studies
Thesis Advisor: Lipscomb, John D.

Name: Chen, Kuan-Ming
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Structural Studies Of The Deaminase Domain Of The Human Hiv-1 Restriction Protein Apobec3g.
Thesis Advisor: Matsuo, Hiroshi

Name: Coursolle, Daniel
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Characterization Of The Mechanisms Used To Reduce Anaerobic Electron Acceptors By *Shewanella oneidensis* Strain Mr-1
Thesis Advisor: Bond, Daniel R.

Name: Davies, Michael
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Chrebp: Insights Into The Mechanism Of Action By Glucose
Thesis Advisor: Towle, Howard C.

Name: Haworth, Justin Christopher
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: McM10 Regulates The Turnover Of DNA Polymerase Alpha
Thesis Advisor: Bielinsky, Anja K.

Name: Hussong, Stacy Ann
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Identifying Novel Roles For The Immunoproteasome In The Retina
Thesis Advisor: Ferrington, Deborah A.

Name: Karunadharm, Pabalu
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Defining Amd Disease Mechanisms: A Comparative Analysis Of Proteins and Mitochondrial DNA
Thesis Advisor: Ferrington, Deborah A.

Name: Kast, David John Edward
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Phosphorylation-Induced Structural Changes In Smooth Muscle Myosin
Thesis Advisor: Thomas, David D.

Name: Prins, Kurt
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Analysis Of Cytoskeletal Interactions and Their Implications In Skeletal Muscle Disease
Thesis Advisor: Ervasti, James

Name: Roe, Mikel R
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Improving The Detection Of Carbonylated Peptides By Mass Spectrometry *via* Solid-Phase Hydrazide Enrichment and Selective Labeling With Oxygen-18 (18O)
Thesis Advisor: Griffin, Timothy J.

Name: Torgersen, Kurt Daniel
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Cardiac Calcium Transport Regulation Probed By Electron Paramagnetic Resonance Spectroscopy.
Thesis Advisor: Thomas, David D.

2011

Name: Cheever, Thomas
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Actin Isoforms In Neuronal Structure and Function
Thesis Advisor: Ervasti, James

Name: Curtis, Jessica
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Adipocyte Protein Carbonylation and Oxidative Stress In Obesity-Linked Mitochondrial Dysfunction And Insulin Resistance
Thesis Advisor: Bernlohr, David A.

Name: Demorest, Zachary
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Post-Translational Regulation Of Mammalian Dna Cytidine Deaminases
Thesis Advisor: Harris, Reuben S.

Name: Frias, Janice
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Microbial Synthesis and Fuel Hydrocarbons: Enzymes And Metabolic Pathways
Thesis Advisor: Wackett, Lawrence P.

Name: Goblirsch, Brandon
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: X-Ray Crystallographic Studies Reveal Essential Structural Features Of Specialized Microbial Enzymes: Molecular Oxygen Production By The Heme Dependent Enzyme Chlorite Dismutase and Fatty Acid Condensation By The Olefin Biosynthesis Enzyme Olea
Thesis Advisor: Wilmot, Caroline M.

Name: Henderson, Davin
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: A Biochemical and Biophysical Study Of Dystrophin
Thesis Advisor: Ervasti, James

Name: Lai, Shaojuan (Shawna)
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Regulation and Subcellular Compartmentalization Of Ataxin-1 Phosphorylation At Serine776
Thesis Advisor: Orr, Harry T.

Name: Lockamy, Elizabeth Lee
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Probing Cardiac Calcium Regulation Using Fluorescence Spectroscopy
Thesis Advisor: Thomas, David D.

Name: Oh, Sehyun
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Interaction Between The Three DNA Double Strand Break Repair Pathways In Human Cells
Thesis Advisor: Hendrickson, Eric A.

Name: Ro, Seung-Hyun "David"
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Distinct Functions Of Autophagy Kinases Ulk1 and Ulk2 In Adipogenesis And Adipocyte Metabolism
Thesis Advisor: Kim, Do-Hyung

Name: Rollefson Lawrence, Janet
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Identification Of Extracellular Matrix Components Essential For A Conductive *Geobacter sulfurreducens* Biofilm
Thesis Advisor: Bond, Daniel R.

Name: Sandri, Brian
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: The Zeb1 Transcription Factor Links Estrogen Links Estrogen Signaling To Fgf21 and Reduced Adiposity
Thesis Advisor: Sanders, Michel M.

Name: Verardi, Raffaello
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Biophysical Characterization Of Membrane Proteins and Antimicrobial Peptides By Solution And Solid-State NMR Spectroscopy
Thesis Advisor: Veglia, Gianluigi

Name: Yin, Tyler (De L)
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Enzyme Catalyzed Perhydrolysis, Molecular Basis and Application
Thesis Advisor: Kazlauskas, Romas J.

2012

Name: Alver, Bob
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: The N-terminus of Mcm10 functions in DNA damage resistance.
Thesis Advisor: Bielinsky, Anja K.

Name: Cao, Jing
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Beneficial Effects Of Omega-3 Fatty Acids On Cardiovascular Disease Risk
Thesis Advisor: Kim, Do-Hyung

Name: Cedervall, Peder
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Structural Studies Of Two Metallo-Enzymes: Methyl-Coenzyme M Reductase and Hydroxylamine Oxidoreductase
Thesis Advisor: Wilmot, Caroline M.

Name: Gonzalez, Tanhia
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: From Functional Metagenomics To Unique Synthetic Expression Strategies In Iron-Reducing Bacteria
Thesis Advisor: Bond, Daniel R.

Name: Gustavsson, Martin
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Characterization of the Conformational States of Phospholamban and their Roles in Regulation of SR Calcium-ATPase.
Thesis Advisor: Veglia, Gianluigi

Name: Ha, Kim
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Rational Design Of Loss-Of-Function Phospholamban Mutants To Tune Serca Function
Thesis Advisor: Veglia, Gianluigi

Name: Hellberg, Kristina
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Studies of fatty acid binding proteins and inflammatory lipids in adipose biology.
Thesis Advisor: Bernlohr, David A.

Name: Klema, Valerie
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Toward A Mechanistic Understanding Of Cofactor Biogenesis and Catalysis In Copper Amine Oxidases From *Hansenula polymorpha*
Thesis Advisor: Wilmot, Caroline M.

Name: Lackey, Lela
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: APOBEC3 Subcellular Localization and Genomic Editing
Thesis Advisor: Harris, Reuben S.

Name: Lin, Yun (Ava)
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: From Structure and Dynamics To Novel Therapeutic Development For Muscular Dystrophy
Thesis Advisor: Thomas, David D.

Name: Mbughuni, Michael
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Kinetic, Spectroscopic, and Mutagenesis Studies Of Homoprotocatechuate 2,3 Dioxygenase
Thesis Advisor: Lipscomb, John D.

Name: Nair-Rai, Aswathy Krishnamma
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Functional Analysis Of The Core Subunits Of Polycomb Repressive Complex 2
Thesis Advisor: Simon, Jeffrey A.

Name: Nguyen, Hai Dang
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Accumulation Of Unligated Okazaki Fragments Induces PcnA Ubiquitination At Lysine 107 and Rad59-Dependent Replication Fork Progression
Thesis Advisor: Bielinsky, Anja K.

Name: Randles, Leah
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Defining How the 26S Proteasome Recognizes Ubiquitinated Substrates.
Thesis Advisor: Walters, Kylie J.

2013

Name: Ablorh, Naa-Adjeley
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Accurate Quantitation of Phospholamban Expression and Phosphorylation in Biological Samples.
Thesis Advisor: Thomas, David D.

Name: Banerjee, Rahul
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Kinetic and Spectroscopic Characterization of Intermediates in the Soluble Methane Monooxygenase Catalytic Cycle: The Old and the New
Thesis Advisor: Lipscomb, John D.

Name: Burns, Michael
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: APOBEC3B-driven mutagenesis in breast and other human cancers.
Thesis Advisor: Harris, Reuben S.

Name: Gruber, Simon
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Fluorescence Tools to Identify Novel SERCA Activators.
Thesis Advisor: Thomas, David D.

Name: Hamann, Bree Lyn
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Elucidating the mechanism of thymineless death in *Escherichia coli* using global strategies.
Thesis Advisor: Khodursky, Arkady B.

Name: Kooren, Joel A.
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Informing the Oral Squamous Cell Carcinoma Biomarker Search by Exudate Proteomics.
Thesis Advisor: Griffin, Timothy J.

Name: Kramlinger, Valerie
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Characterization of b-nicotyrine-mediated inactivation of cytochrome P450 2A6.
Thesis Advisor: Murphy, Sharon E.

Name: Miller, Michelle
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Galectin-1 Interactions with Complex Glycans and Alpha-linked Carbohydrates.
Thesis Advisor: Mayo, Kevin H.

2014

- Name: Bloch, Sarah Elizabeth
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Plant Phenylpropanoid Biosynthesis in *Escherichia coli*: Engineering Novel Pathways and Tools.
Thesis Advisor: Schmidt-Dannert, Claudia
- Name: Cameron, Stephan Mary
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Biuret Hydrolase and Cyanuric Acid Hydrolase: Enzymes for Metabolism and Detection of s-Triazines.
Thesis Advisor: Wackett, Lawrence P. and Michael J. Sadowsky
- Name: Chao, Fa-An (Frank)
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: On the role of conformational dynamics in enzyme function.
Thesis Advisor: Veglia, Gianluigi
- Name: Ehlinger, Aaron C.
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Proteasome Activation by the 19S Regulatory Particle: Structural Dynamics of 26S Assembly and Substrate Recognition.
Thesis Advisor: Walters, Kylie J.
- Name: Haugner, John C
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: *In vitro* evolution of artificial enzymes: method development
Thesis Advisor: Seelig, Burckhard
- Name: James, Zachary M.
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: SERCA-Phospholamban Structural Dynamics Studied by Electron Paramagnetic Resonance.
Thesis Advisor: Thomas, David D.
- Name: Lee, Eu Han
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: The Essential Roles of DNA Resection AND The Impact of Loss of Function NHEJ Mutations on DSB Repair In Human Somatic Cells.
Thesis Advisor: Hendrickson, Eric A.
- Name: Liu, Zejian
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Regulation of Monocarboxylate Transporter 1 (MCT1) by Protein Kinase A (PKA), the Canonical WNT/Beta-Catenin, Notch Signaling Pathways, and by a MCT Metabolic Blocker
Thesis Advisor: Drewes, Lester R.

Name: Moen, Rebecca Jane
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Site-directed Modifications of Myosin.
Thesis Advisor: Thomas, David D.

Name: Otto, Neil
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Exploring the Interactions and Functions of the ULK1 Complex in the Autophagy Pathway
Thesis Advisor: Kim, Do-Hyung

Name: Refsland, Eric
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Determination of the Endogenous HIV-Restrictive APOBEC3 Repertoire.
Thesis Advisor: Harris, Reuben S.

Name: Tikh, Ilya
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Engineering Light-Energy Conversion into Nonphotosynthetic Hosts.
Thesis Advisor: Schmidt-Dannert, Claudia

Name: Wawrzyn, Grayson
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Discovery and Characterization of Sesquiterpenoid Biosynthetic Pathways from Basidiomycota.
Thesis Advisor: Schmidt-Dannert, Claudia

Name: Zhao, Lei
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Functional Characterization of the Candidate Colorectal Cancer Gene CNOT1.
Thesis Advisor: Cormier, Robert

2015

Name: Heinis, Frazer I
Degree Program: Biochemistry, Molecular Biology, and Biophysics
Thesis Title: Molecular dissection of compensatory pathways in models of severe heart failure
Thesis Advisor: Metzger, Joseph

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