

2002 Division of Organic Chemistry ACS Graduate Fellowship Awards

The Division of Organic Chemistry annually awards fellowships to outstanding third and fourth year graduate students in organic chemistry. The program, now in its 22nd year, has awarded almost 250 fellowships. The complete list of Fellows is available on the ACS Division of Organic Chemistry web site at <http://www.chem.wayne.edu/acs-organic-division/fellowships.html>.

The fellowship stipend this year is \$20,000, and the fellows will travel to the 2003 National Organic Symposium in Indianapolis, IN, to present a poster on their work. Each of the fellowships is sponsored by a prominent company or organization. We thank Organic Syntheses, Inc., for increasing their sponsorship from one fellowship to two this year. Awardees are selected by an independent committee, and evidence of research accomplishments is an important factor in the selection. The applicants for the fellowship submit a short original essay as part of the competition, and the essays of the award winners will soon be available from the Division of Organic Chemistry Web site.

The Division of Organic Chemistry congratulates the following 16 award winners, gratefully acknowledges the sponsorship of the companies and organizations, and thanks *Organic Letters* for the opportunity to publish these biographical sketches.

Dennis P. Curran
Chair, Division of Organic Chemistry Graduate Fellowship Program
University of Pittsburgh, October 10, 2002



Mark L. Bushey

Sponsor: Bristol-Myers Squibb Foundation
University: Columbia University
Advisor: Colin Nuckolls

Essay - Directed Self-Assembly and Covalent Capture of Supramolecular Objects. Mark L. Bushey graduated from the University of Minnesota, Minneapolis, with a B.S. degree in Chemistry. During his undergraduate studies, Mark worked under the direction of Professor George O'Doherty toward the synthesis of alkaloid natural products. He then moved on to Columbia University, where he has explored the development of self-assembling materials and liquid crystals. Mark is currently in his third year of graduate study under the supervision of Professor Colin Nuckolls.



David E. Chavez

Sponsor: Albany Molecular Research, Inc.
University: Harvard University
Advisor: Eric N. Jacobsen

Essay - Direct Catalytic, Asymmetric Synthesis of β -Lactams. David E. Chavez is a fourth year graduate student at Harvard University studying with Professor Eric N. Jacobsen. David's research has been directed toward the total synthesis of fostriecin and the development of a catalytic enantioselective inverse-electron-demand hetero-Diels–Alder reaction. David graduated *cum laude* from California Institute of Technology, where he received his B.S. degree in Chemistry and carried out undergraduate research with Professor Erick M. Carreira. In addition, he conducted research on the synthesis of high-nitrogen heterocycles and applications to energetic materials with Dr. Michael A. Hiskey at Los Alamos National Laboratory.



Stefan Debbert

Sponsor: Organic Reactions, Inc.

University: Cornell University

Advisor: Barry K. Carpenter

Essay - The Cobalt-Catalyzed Pauson–Khand Annulation: Mechanistic Insights and Novel Products. Stefan Debbert is a fourth year graduate student engaged in research in the laboratories of Professor Barry K. Carpenter at Cornell University, where he has contributed to the synthesis and kinetic studies of [1,3] sigmatropic shifts. He has also studied dynamics trajectories on reparametrized AM1 surfaces used to study the Cope rearrangement of 1,2,6-heptatriene in collaboration with Wes Borden and Dave Hrovat at the University of Washington. Stefan received his B.S. degree *cum laude* in Chemistry from the University of Minnesota, Minneapolis, where he conducted undergraduate research under the supervision of Professor Christopher Cramer and investigated heterocyclic σ biradicals and the Bergman cyclization with high-level electronic structure calculations.



Christine G. Espino

Sponsor: Merck Research Laboratories

University: Stanford University

Advisor: Justin Du Bois

Essay - Understanding the Mechanism of Dirhodium(II)-Mediated C–H Insertion Reactions. Christine G. Espino is a fourth year graduate student at Stanford University working in the laboratories of Professor Justin Du Bois. Christine's research efforts have resulted in the development of Rh(II)-catalyzed intramolecular C–H amination reactions using carbamate and sulfamate ester substrates. Currently, she is investigating Ru(II)-catalyzed C–H amination processes and exploring novel chiral Rh(II) complexes for the asymmetric functionalization of C–H bonds. Christine received her A.B. degree in Chemistry *magna cum laude* from Harvard University and, while an undergraduate, carried out research with Professor Eric Jacobsen on asymmetric additions of TMSCN and HCN to *meso*-epoxides and imines, respectively.



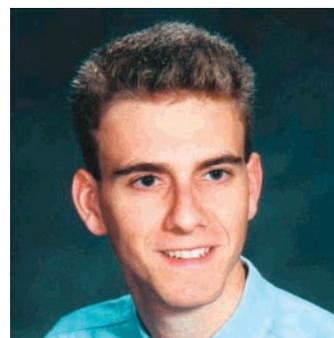
Tom G. Driver

Sponsor: Novartis Pharmaceuticals Corp.

University: University of California, Irvine

Advisor: Keith A. Woerpel

Essay - Synthetic Utility of Metal-Mediated Reductions of Epoxides. Tom G. Driver obtained an Honors B.S. degree in Chemistry at Indiana University. While an undergraduate, Tom synthesized an organic superconductor with Professor Lawrence K. Montgomery. Tom then moved on to the University of California at Irvine, where he has been mentored by Professor Keith A. Woerpel. His research has focused on the chemistry of silacyclopropanes, and he developed recently a diastereoselective thermal di-*tert*-butyl silylene transfer reaction for the preparation of these synthetic building blocks.



Andrew M. Harned

Sponsor: "Nelson J. Leonard Fellowship",

Sponsored by Organic Syntheses, Inc.

University: University of Kansas

Advisor: Paul R. Hanson

Essay - New Chemical Tagging Methods for Minimizing Purification in Organic Synthesis. Andrew M. Harned is a fourth year graduate student at the University of Kansas studying with Professor Paul R. Hanson. Andrew has been investigating sulfonamide oligomers as soluble supports for capture-ROMP-release. He has also contributed to ring-opening metathesis polymerization strategies for biological delivery agents. Andrew graduated from Virginia Tech, where he received his B.S. degree in Biochemistry. His undergraduate research with Professors Michael A. Calter and Neal Castagnoli, Jr., involved the syntheses of C-nucleosides and deuterium-labeled analogues of MpTp, respectively.



Ivory D. Hills

Sponsor: Abbott Laboratories

University: *Massachusetts Institute of Technology*

Advisor: Gregory C. Fu

Essay - Some Recent Advances in Supramolecular Catalysis. Ivory D. Hills is a fourth year graduate student of Professor Gregory C. Fu at the Massachusetts Institute of Technology. Ivory has been involved in the catalytic enantioselective formation of quaternary stereocenters. In the course of his research, Ivory has studied rearrangements of oxindole-derived enol carbonates using a planar-chiral nucleophilic catalyst. Ivory obtained a B.S. degree in Chemistry from the University of North Carolina at Chapel Hill. While an undergraduate, Ivory pursued research under the supervision of Professor Joseph L. Templeton.



David R. Jensen

Sponsor: Schering-Plough Research Institute

University: *University of Utah*

Advisor: Matthew Sigman

Essay - Towards More Practical and Selective Catalysts for the Hydrovinylation of Olefins. David R. Jensen obtained his B.S. degree in Chemistry from the University of Tennessee at Chattanooga, where he worked with Professor Robert Mebane on transfer hydrogenation using Raney nickel catalysts. He then moved on to the University of Utah and joined the research group of Professor Matthew S. Sigman where he is now in his fourth year as a graduate student. As part of David's research efforts, he has studied the enantioselective oxidation of alcohols and the role of sparteine in the palladium-catalyzed oxidative kinetic resolution of secondary alcohols.



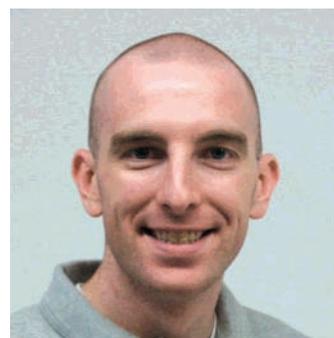
Erick B. Iezzi

Sponsor: Aventis Pharmaceuticals

University: *Virginia Polytechnic Institute and State University*

Advisor: Harry C. Dorn

Essay - Recent Developments in Catalytic Enantioselective Claisen, Acyl-Claisen, and Aza-Claisen Rearrangements. Erick B. Iezzi is a fourth year graduate student of Professor Harry C. Dorn, engaged in research at Virginia Tech. Erick has been investigating functionalizations of trimetallic nitride endohedral metallofullerenes. He received a B.S. degree in Chemistry *magna cum laude* from Duquesne University in Pittsburgh, Pennsylvania, where he carried out undergraduate research in the laboratories of Professor Ted J. Weismann, working on doping of YBCO (yttrium barium copper oxide) superconducting ceramics.



Richard J. Keaton

Sponsor: The Procter & Gamble Company

University: *University of Maryland*

Advisor: Lawrence R. Sita

Essay - Living Ziegler–Natta Polymerization. Richard J. Keaton obtained a B.S. degree in Chemistry at Eastern Illinois University. While an undergraduate, Richard served an internship at Pharmacia & Upjohn and studied the synthesis and characterization of phosphine transition-metal complexes with Professor Richard L. Keiter. Richard then moved on to the University of Maryland, where he has been mentored by Professor Lawrence R. Sita. Richard's research has focused on the kinetics of living Ziegler–Natta polymerization, the preparation and characterization of polymerization catalysts, and mechanistic studies.



Bianca R. Sculimbrene

Sponsor: Organic Syntheses, Inc.

University: Boston College

Advisor: Scott J. Miller

Essay - Recent Advances in the Use of Mass Spectrometry to Screen Combinatorial Libraries. Bianca R. Sculimbrene is a graduate student at Boston College, studying under the supervision of Professor Scott J. Miller. Bianca is currently starting her fourth year of graduate study after having obtained a B.S. degree in Chemistry *magna cum laude* from Xavier University. Bianca's research as an undergraduate with Professor Edward E. Fenlon centered in the synthesis and characterization of silatrane-nucleosides as transition-state analogues. As a graduate student, she is studying the total synthesis of D-*myo*-inositol 1-phosphate and peptide-based asymmetric nucleophilic catalysis.



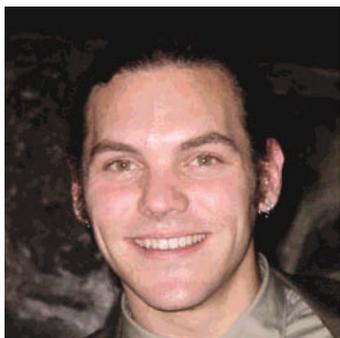
Kian L. Tan

Sponsor: Wyeth Research

University: University of California, Berkeley

Advisor: Jonathan Ellman

Essay - Recent Developments in Late Metal Catalyzed Hydroamination and Oxidative Amination of Alkenes. Kian L. Tan is a fourth year graduate student, studying in the laboratories of Professors Jonathan A. Ellman and Robert G. Bergman at the University of California, Berkeley. Kian has developed methodology toward selective C-H activation of heterocycles and currently studies the mechanism and intermolecular variants of this reaction. He graduated with a B.S. degree in Chemistry from the University of Virginia, where he was involved in osmium-mediated asymmetric Diels-Alder chemistry and alkaloid synthesis while conducting undergraduate research with Professor W. Dean Harman.



Matthew D. Simon

Sponsor: Pfizer, Inc.

University: University of California, Berkeley

Advisor: Kevan M. Shokat

Essay - Retrosynthetic Strategy in Chemical Biology. Matthew D. Simon is currently a fourth year graduate student at the University of California, Berkeley, working in the laboratories of Professor Kevan Shokat. In his graduate studies, Matthew has been involved in the development of a small-molecule switch approach for controlling transcription factors. Matthew graduated *summa cum laude* from Tufts University, where he received his B.A. degree in Biochemistry and synthesized small libraries of porphyrin derivatives for use in DNA-binding studies under the guidance of Professor Clemens Richert.



Chad D. Tatko

Sponsor: GlaxoSmithKline

University: University of North Carolina

Advisor: Marcey L. Waters

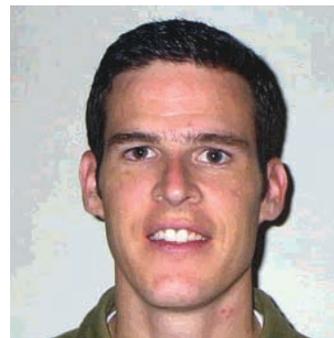
Essay - Aromatic Interactions in Biological Systems. Chad D. Tatko graduated from Wheaton College with a B.S. degree in Chemistry. As an undergraduate, Chad designed and evaluated a synthetic scheme of the synthesis of 2,6-disubstituted piperidones. Following work at Argonne National Laboratories in Argonne, Chad started graduate school and joined Professor Marcey L. Waters' group at the University of North Carolina, Chapel Hill, where he has been investigating the role of noncovalent interactions as stabilizing moieties in peptide secondary structure. He has been particularly interested in π -cation interactions in α -helices and the relative contributions of aromatic versus aliphatic interactions for β -hairpin stability.



Benjamin R. Travis

Sponsor: Pharmacia Corporation
University: Michigan State University
Advisor: Babak Borhan

Essay - Synthetic Strategies Towards Polypropionates. Benjamin R. Travis is currently a fourth year graduate student studying with Professor Babak Borhan at Michigan State University. Benjamin has been involved in the development of methodology for the oxidative cyclization of 1,4-dienes and the oxidative cleavage of olefins and oxidation of aldehydes. He obtained a B.S. degree in Chemistry from North Carolina State University and carried out undergraduate research internships at GlaxoWellcome and Hoffmann-La Roche.



Matthew G. Woll

Sponsor: Eli Lilly and Company
University: University of Wisconsin
Advisor: Samuel H. Gellman

Essay - Asymmetric Nucleophilic Acyl Transfer Catalysts. Matthew G. Woll graduated with a B.S. degree in Biochemistry from Brigham Young University where he carried out undergraduate research on natural product isolation and structural elucidation. Matthew then continued his education at the University of Wisconsin where he has been working in the laboratories of Professor Samuel H. Gellman. Matthew has synthesized 5-membered β -amino acids for use in foldamers and discovered the use of cyclic γ -amino acids as strand residues in hairpin structures.

OL020210B