

2005–2006 ACS Division of Organic Chemistry 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 25th year, has awarded over 290 fellowships. The complete list of Fellows is available on the Division of Organic Chemistry web site at http://organicdivision.org/fellowships_previous.html.

The fellowship stipend this year is \$24,000, and the Fellows will travel to the 2007 National Organic Symposium to present a poster on their work. Each of the fellowships is sponsored by a prominent company, organization, or individual endowment. Awardees are selected by an independent committee, and evidence of research accomplishments is an important factor in the selection process. The applicants for the fellowship submit a short original essay as part of the competition, and the essays of the award winners are available on the Division of Organic Chemistry web site (http://organicdivision.org/fellowship_awardee_bios_05.html).

I want to take this opportunity to thank all the companies and individuals who have sponsored fellowships. Two companies, Roche Pharmaceutical and Sanofi-Aventis, stepped forward to support the fellowship program for the first time this year. If your company is not currently sponsoring a fellowship, please consider supporting this worthwhile program. I welcome contacts from companies, individuals, and organizations interested in sponsoring annual fellowships or wishing to endow a fellowship. There are always many more deserving applicants than there are fellowships! The Division of Organic Chemistry congratulates the following 18 award winners, gratefully acknowledges the sponsors, and thanks *Organic Letters* for the opportunity to publish these biographical sketches.

Scott Rychnovsky
Chair, Division of Organic Chemistry Graduate Fellowship Program
University of California, Irvine, October 31, 2005



Timothy E. Barder

Sponsor: Novartis Pharmaceuticals

University: Massachusetts Institute of Technology

Advisor: Stephen Buchwald

Essay - The Growing Utility of Ag(I) Catalysts in Organic Synthesis. Timothy Barder graduated with a B.S. degree from the University of California at San Diego in 2002. He is currently a fourth year graduate student at M.I.T. working in Stephen Buchwald's laboratory. Timothy's research has involved developing catalysts for the Suzuki–Miyaura coupling reaction and exploring the relationship between their structure and activity.



Daniel D. Caspi

Sponsor: Merck Research Laboratories

University: California Institute of Technology

Advisor: Brian M. Stoltz

Essay - Recent Advances in Enantiodivergent Strategies. Daniel Caspi graduated with a B.S. degree in Chemistry with High Honors from the University of California at San Diego in 2002. He is currently a fourth year graduate student at Caltech working in Brian Stoltz's laboratory. Daniel was involved in the total synthesis of both enantiomers of the natural product dragmacidin F. He has also expanded the scope of a palladium-catalyzed oxidative kinetic resolution of secondary alcohols using oxygen as the oxidant.



M. Kevin Brown

Sponsor: Schering-Plough Research Institute

University: Boston College

Advisor: Amir Hoveyda

Essay - Direct and Selective Transition-Metal-Catalyzed Olefin Hydroalkoxylation. Kevin Brown graduated with a B.A. with Honors in Chemistry from Hamilton College in Clinton, NY. He is currently a fourth year graduate student at Boston College working in Amir Hoveyda's laboratory. Kevin has developed peptide–copper complexes that catalyze the asymmetric conjugate addition of organo-metallic reagents to various classes of unsaturated carbonyl compounds.



Arthur Catino

Sponsor: Emmanuil Troyansky Fellowship

University: University of Maryland

Advisor: Michael Doyle

Essay - Recent Developments in the Direct Catalytic Asymmetric Nitro-Mannich Reaction. Arthur Catino graduated with a B.A. in Chemistry (with Honors) from Franklin and Marshall College in Lancaster, PA. He is currently a fourth year graduate student at the University of Maryland, College Park, working in Mike Doyle's laboratory. Arthur is working on allylic oxidation and aziridination methods employing rhodium catalysis.



Juan Diaz

Sponsor: Organic Syntheses, Inc.

University: *University of California at Irvine*

Advisor: Gregory Weiss

Essay - Correlating Structure and Function in Enzymatic Organic Synthesis of Terpenes. Juan Diaz graduated with a B.S. magna cum laude in Biological Sciences from California State University, Fullerton. He is currently a third year graduate student at the University of California, Irvine, working in Gregory Weiss' laboratory. Juan is using phage display libraries to engineer novel transcription factors and overexpressing the resultant proteins for X-ray crystallography and biophysical characterization.



Robert M. Hughes

Sponsor: Albany Molecular Research, Inc.

University: *University of North Carolina*

Advisor: Marcey Waters

Essay - Two Design Strategies for Peptide-Based Asymmetric Catalysis. Robert Hughes graduated with a B.A. in Music and a B.S. in Chemistry magna cum laude from Washington and Lee University in Lexington, VA. He is currently a fourth year graduate student at the University of North Carolina working in Marcey Waters' laboratory. Robert has used β -hairpin peptides to investigate the structure and energetics of π -cation interactions.



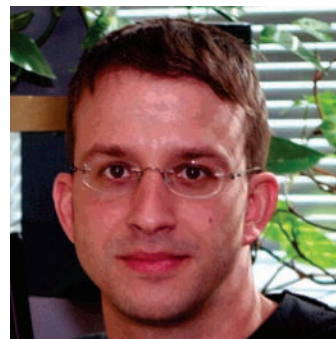
Matthew B. Harney

Sponsor: The Proctor and Gamble Company

University: *University of Maryland*

Advisor: Lawrence Sita

Essay - Stereoblock Polypropylene Elastomers. Matthew Harney graduated with a B.S. in Chemistry from George Mason University in Fairfax, VA. He is currently a fourth year graduate student at the University of Maryland working in Larry Sita's laboratory. Matthew designed and synthesized the first homogeneous, well-defined isotactic-atactic stereoblock polypropylene materials and has also studied the mechanism of the Ziegler-Natta polymerization with a monamidinate zirconium complex.



Jason Lowe

Sponsor: Bristol-Myers Squibb

University: *Boston University*

Advisor: James Panek

Essay - Direct Coupling of N-Heterocycles: Highly Convergent Approach to Complex Molecular Architecture. Jason Lowe graduated with a B.A. in Chemistry and Geology from the University of Rhode Island in Kingston, RI. He is currently a fourth year graduate student at Boston University working in James Panek's laboratory. Jason is working on the total synthesis of bistramide A and kendomycin using a [4 + 2] annulation approach.



Anita E. Mattson

Sponsor: Eli Lilly and Company
University: Northwestern University
Advisor: Karl Scheidt

Essay - Recent Umpolung Reactions Catalyzed by *N*-Heterocyclic Carbenes. Anita Mattson graduated with a B.S. in Chemistry from Northern Michigan University in Marquette, MI. She is currently a fourth year graduate student at Northwestern University working in Karl Scheidt's laboratory. Anita's research has focused on synthetic methodology primarily using acylsilanes. She has developed a thiazolium-catalyzed sila-Stetter reaction and an acyl anion approach to α -amino ketones using a catalytic addition of acylsilanes to phosphorylimines.



Joshua E. Ney

Sponsor: GlaxoSmithKline
University: University of Michigan
Advisor: John Wolfe

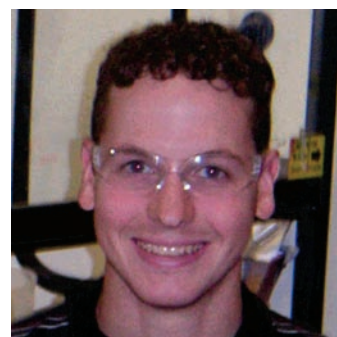
Essay - Recent Advances in Palladium-Catalyzed Functionalization of sp^3 C-H Bonds. Joshua Ney graduated magna cum laude from Dartmouth College with a B.A. in Chemistry. He is currently a fourth year graduate student in John Wolfe's laboratory at the University of Michigan. In his graduate work, Joshua has developed a palladium-catalyzed stereoselective synthesis of pyrrolidines and studied the scope and mechanism of the method.



Steven Mennen

Sponsor: Abbott Laboratories
University: Boston College
Advisor: Scott Miller

Essay - Preventing β -Hydride Elimination in Pd(II)-Catalyzed Bond-Forming Processes. Steve Mennen graduated with a B.S. with distinction in Chemistry from the University of Wisconsin—Stevens Point. He is currently a fourth year graduate student at Boston College working in Scott Miller's laboratory. He developed a streamlined synthesis of the core of mitomycin C, a peptide-catalyzed Stetter reaction, and a thiazolylalanine-derived catalyst for enantioselective intermolecular aldehyde-imine cross-coupling.



Brian Northrop

Sponsor: Nelson J. Leonard ACS DOC Fellowship,
sponsored by Organic Syntheses, Inc.
University: University of California, Los Angeles
Advisors: Fraser Stoddart and Ken Houk

Essay - Self-Assembling Interwoven and Interlocked Dendrimer Architectures. Brian H. Northrop received his B.A. degree (with Honors) in Chemistry from Middlebury College in Vermont in 2001. He is a fourth year graduate student with Professors J. F. Stoddart and K. N. Houk in the Department of Chemistry and Biochemistry at the University of California, Los Angeles. His research includes the synthesis and computational modeling of supramolecular interlocked bundles, single-molecule force spectroscopy of [2]rotaxanes, computational investigations of diradical rearrangements, and the study of charge-charge interactions in mechanically interlocked molecules.



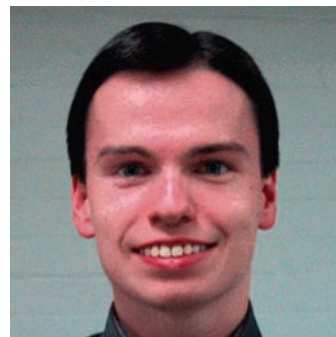
Izzat Raheem

Sponsor: Pfizer, Inc.

University: *Harvard University*

Advisor: Eric Jacobsen

Essay - Recent Advances in C—C Bond Formation via C—H Activation. Izzat Raheem graduated with a B.S. in Chemistry (with University Honors) from Carnegie Mellon University in Pittsburgh. He is currently a fourth year graduate student at Harvard University working in Eric Jacobsen's laboratory. Izzat was involved in an asymmetric total synthesis of quinine and quinidine and has developed asymmetric synthetic methods, including a highly enantioselective aza-Baylis—Hillman reaction.



Thomas Snyder

Sponsor: Organic Reactions, Inc.

University: *Harvard University*

Advisor: David Liu

Essay - Recent Chemical Strategies for the Site-Specific Modification of Proteins. Thomas Snyder graduated from the California Institute of Technology with a B.S. in Chemistry and Economics (with Honors). He is currently a fourth year graduate student at Harvard University working in David Liu's laboratory. Thomas's research goal is to develop new methods for controlling the reactivity of small molecules using DNA-templated synthesis.



Valentin Rodionov

Sponsor: Boehringer Ingelheim

University: *Scripps Research Institute*

Advisor: M. G. Finn

Essay - State of the Art in Anion Receptor Design. Valentin Rodionov performed his undergraduate studies at the Moscow Chemical Lyceum and the Higher Chemical College of the Russian Academy of Sciences in Moscow. Valentin earned a M.S. degree in Chemistry at the University of Maryland before moving to Scripps. He is currently a third year graduate student at Scripps Research Institute working in M. G. Finn's laboratory. Valentin is working on developing new catalysts for the copper-promoted azide—alkyne cycloaddition and has performed mechanistic studies on the same reaction.



Benjamin D. Stevens

Sponsor: Sanofi-Aventis

University: *University of Pittsburgh*

Advisor: Scott Nelson

Essay - Applications of Strain-Induced Lewis Acidity to Stereoselective Organic Synthesis. Benjamin Stevens graduated with a B.S. cum laude in Biochemistry from the University of Rochester. He is currently a fourth year graduate student at the University of Pittsburgh working in Scott Nelson's laboratory. Benjamin has developed an olefin isomerization—Claisen rearrangement with subsequent intramolecular Sakurai reaction for preparing carbocyclic compounds.



Mark Tichenor

Sponsor: Roche Pharmaceuticals

University: *Scripps Research Institute*

Advisor: Dale Boger

Essay - C–H Bond Functionalization of Nitrogen Heterocycles. Mark Tichenor graduated with a B.S. summa cum laude in Chemistry from the University of California at San Diego. He is currently a fourth year graduate student at the Scripps Research Institute working in Dale Boger's laboratory. Mark was involved in the successful total synthesis, structure revision, and absolute configuration determination of the natural product (+)-yatakemycin.



Ryan Yoder

Sponsor: Wyeth Research

University: *Indiana University*

Advisor: Jeffrey Johnston

Essay - Enantioselective Biomimetic Total Syntheses Inspired by Nature's Elegance. Ryan Yoder graduated with a B.S. with Honors in Chemistry from Indiana University in Bloomington, IN. He is currently a fourth year graduate student at Indiana University working in Jeff Johnston's laboratory. Ryan has developed "chiral proton catalysts" and applied them to an enantioselective aza-Henry reaction.

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