Faculty Start-up Awards Program

Institution	Awardee	Department	Area of Interest
2007			
Barnard College	John S. Magyar	Chemistry	Elucidating molecular mechanisms of cobalt uptake and homeostasis in the marine photosynthetic prokaryote Prochlorococcus marinus
Bowdoin College	Danielle H. Dube	Chemistry and Biochemistry	Development of tools to chemically target opportunistic pathogens, and to better understand the role of glycosylation in human disease
Creighton University	Bradley F. Parsons	Chemistry	Uptake Kinetics of Aqueous-Organic Aerosol using Laser Raman Tweezers
Denison University	Annabel H. Muenter	Chemistry and Biochemistry	Attenuated Total Reflection FTIR-Spectroscopy Studies of Waxy Thin Films to Probe the Barrier Properties of Plant Cuticles
Hope College	Jeffrey B. Johnson	Chemistry	Mechanistic elucidation of carbon-carbon bond activation and the development of a general strategy for the carboacylation of olefins
Lewis & Clark College	Anne K. Bentley	Chemistry	Synthesis of Luminescent Lanthanide Nanoparticle/Solid State Thin Film Composite Materials via Electrochemical Co-Deposition
Pomona College	Matthew H. Sazinsky	Chemistry	Structural, Mechanistic and Engineering Studies of Diiron Proteins for Probing Metalloenzyme Tuning and Developing Biocatalysts
Swarthmore College	Liliya A. Yatsunyk	Chemistry and Biochemistry	Synthesis and Characterization of New Cationic Porphyrins: Applications to Cancer Treatment and Chirality Sensing
2006			
College of the Holy Cross	Bianca R. Sculimbrene	Chemistry	Utilizing organic synthesis for development of chemical tools: new methods for phosphorylation, facile amino acid synthesis, and vancomycin probes.
Haverford College	Casey H. Londergan	Chemistry	Infrared and Raman spectroscopy will be combined with chemical side-chain modification to determine fluctuating structure in disordered and polymorphic proteins.
Kenyon College	Simon P. Garcia	Chemistry	Molecular control of crystal growth will enable the rational synthesis of nanostructured metal oxide materials
Trinity University	Jessica J. Hollenbeck	Chemistry	The proposed research describes a biosynthetic strategy to generate a novel linear multivalent ligand scaffold from designed ankyrin repeat proteins.
Washington and Lee University	Frederick J. LaRiviere	Chemistry	Investigation of the mechanisms of ribosome synthesis and ribosomal RNA degradation.
Wellesley College	Didem Vardar Ulu	Chemistry	Characterization of metal binding and disulfide bond formation in Lin12/Notch repeats as determinates of protein folding and structural integrity using a variety of biophysical and biochemical techniques.
Willamette University	Andrew P. Duncan	Chemistry	A series of sugar-derived heterocycles will be synthesized and used as organocatalysts for the kinetic resolution of carbinols.

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2005			
Barnard College	Matthew R. Birck	Chemistry	Study of the enzyme FtsZ will provide a rational basis for the design of antimicrobial drugs targeting bacterial programmed cell death
Bryn Mawr College	Jonas I. Goldsmith	Chemistry	Non-covalent functionalization of single-walled carbon nanotubes via molecular interfaces based on polypyridyl transition metal complexes
Earlham College	Lori A. Watson	Chemistry	Reactivity of unsaturated bisimido, phosphinoimido, and phosphineoxoimido transition metal complexes toward alkene metathesis, hydrogenation and C-X bond activation
Eastern Michigan University	Cory D. Emal	Chemistry	Design and synthesis of bioactive small molecules as antiparasitic agents: development of endoperoxides and 1,2-aminoalcohols as antimalarials
Harvey Mudd College	David A. Vosburg	Chemistry	Biomimetic cyclizations in natural product synthesis: concise routes to (+)-davanone, endiandric acids A-H, and related compounds
Kenyon College	John E. Hofferberth	Chemistry	Investigation of Antibacterial Agents with Potential Applications in Directed Molecular Evolution
Oakland University	John M. Finke	Chemistry	Time-resolved fluorescence experiments and molecular dynamics simulations to explore the molecular structures of intermediates in the fibril aggregation pathway of Alzheimer's Abeta peptides
Oberlin College	Rebecca J. Whelan	Chemistry and Biochemistry	Biological affinity interactions, micro-scale separations, and surface-sensitive spectroscopy will form the basis of novel assays for ovarian cancer biomarkers
Seattle University	Joseph M. Langenhan	Chemistry	Novel nucleoside and oligonucleotide analogs will be synthesized and evaluated as potential therapeutic agents and as models to study the recognition of nucleic acids
St. John's University	Gina M. Florio	Chemistry	Toward Understanding Charge Transfer at the Nanometer Scale: Experimental and computational characterization of single molecule and monolayer systems

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2004			
College of the Holy Cross	Cathrine A. Southern	Chemistry	Examining antibody flexibility and conformational distributions through the use of single-molecule fluorescence resonance energy transfer microscopy.
Eastern Illinois University	Rebecca A. Peebles	Chemistry	Infrared cavity ringdown spectroscopy is used to investigate weak complexes of possible atmospheric significance which contain water and sulfur dioxide.
Hobart and William Smith Colleges	Justin S. Miller	Chemistry	Solid Phase Synthesis of Peptide Bioconjugates and Peptidic Natural Products: A Streamlined, Practical Approach
Hope College	Jason G. Gillmore	Chemistry	Perimidinespirocyclohexadienone Photochromic Photooxidants: developing a series of photochromic reactions to allow gating of photoinduced charge transfer initiation of cation radical reactions.
Randolph-Macon College	Nora Green	Chemistry	Targeting the envelope glycoprotein and the NS3 protese for the development of antiviral compounds for the treatment of Dengue virus infection.
Swarthmore College	Stephen T. Miller	Chemistry and Biochemistry	Investigations of the molecular basis of interspecies bacterial communication via small signalling molecules by x-ray crystallography and biochemical methods
University of San Diego	Jeremy S. Kua	Chemistry	Preliminary steps toward simulating self-assembly of metal-organic frameworks
Vassar College	Zachary J. Donhauser	Chemistry	The structure and dynamics of microtubule proteins will be studied at the molecular scale with atomic force microscopy.
Williams College	Sarah L. Goh	Chemistry	Synthesis and characterization (physical, mechanical, kinetic) of biodegradable hydrogels from peptide-polyester block copolymers for use in controlled drug delivery.
2003			
Claremont Mckenna College	Burke S. Williams	Joint Science Dept (Chemistry)	The impact of cis/trans ligand geometry on C-H and C-C sxidative addition and reductive elimination reactions of platinum and iridium
Denison University	Kimberly M. Specht	Chemistry and Biochemistry	Molecular recognition of surface carbohydrates by epidermal growth factor receptor
DePauw University	Sharon M. Crary	Chemistry	Investigating the RNA encapsidation signal for the binding of the nucleocapsid protein in Ebola virus
Harvey Mudd College	Karl A. Haushalter	Chemistry	The influence of chromatin structure on the repair of aberrant bases by DNA glycosylases
Haverford College	Alexander J. Norquist	Chemistry	Synthesis of organically templated vanadium sulfates under hydrothermal conditions
Lewis & Clark College	Nikolaus M. Loening	Chemistry	Pulse sequence and instrumentation development for high-throughput/high-speed nuclear magnetic resonance spectroscopy
Mount Holyoke College	Megan E. Nunez	Chemistry	Needle in a haystack: Removing base lesions from DNA

Faculty Start-up Awards Program

Institution	Awardee	Department	Area of Interest
Wabash College	Lon A. Porter, Jr.	Chemistry	Harnessing synthetic versatility for intelligent interfacial design: towards atom economy and green chemistry via molecular nanotechnology