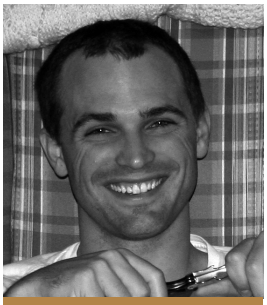
Introducing our AUTHORS



Coby B. Carlson

Current position: Scientist, R&D, Invitrogen Discovery Sciences
Education: Gonzaga University, B.S. in chemistry, 1996; University of Utah, Ph.D. in bioorganic chemistry with Prof. P. A. Beal, 2002
Postdoctoral work: University of Wisconsin–Madison, with Prof. L. L. Kiessling, 2003–2006
Nonscientific interests: Soccer, music, travel, and spending time with my family

I started my scientific career as an organic chemist and soon became interested in how small molecules could interact with proteins and nucleic acids to affect biological pathways. In the Kiessling lab, I have been involved in a variety of projects, all focused on molecular recognition events. This particular work highlights ligand–receptor interactions occurring on various fronts, including binding of a synthetic compound to a cell-surface receptor and multivalent recognition of a carbohydrate epitope by an antibody. In true chemical biology fashion, we use a bifunctional conjugate to demonstrate that we can manipulate the immune system and selectively render tumor cells, and not "normal" cells, susceptible to a cytotoxic response. Our work represents an alternative cell-targeting approach that mimics physiological cell recognition processes. (Read Carlson's article on p 119.)

Anne-Sophie Wavreille

Current position: The Ohio State University, Department of Internal Medicine, postdoctoral researcher in Prof. S. Tridandapani's group
Education: CPE Lyon, France, M.S. in chemistry and process engineering, 2002; The Ohio State University, Ph.D. in chemistry with Prof. Dehua Pei, 2006
Nonscientific interests: Running, practicing martial arts (Tang Soo Do, Judo), traveling, reading

Protein interactions form the molecular basis of a wide variety of cellular processes. Understanding how proteins interact with each other and identifying their binding partners are key steps for studying the biochemistry of the cell. Many of these interactions are mediated by protein modules that recognize small-peptide motifs in their target proteins. Most of my work has been focused on one of these fascinating domains: the Src homology 2 (SH2) domain. SH2 domains have been shown to play many roles in signal transduction and to be involved in human cancers, making them an attractive drug target. In this paper, we describe an exciting method for discovering the interacting partners of SH2 and other modular domains. With our technique, potent inhibitors against these protein modules can also be designed and used as effective pharmacological tools. (Read Wavreille's article on p 109 and Point of View p 93.)

Christian P. Ridley

Current position: Postdoctoral research associate, Stanford University, with Prof. Chaitan Khosla
Education: Southampton College, Long Island University, B.S. in marine science/chemistry, 1999; Scripps Institution of Oceanography, University of California, San Diego, Ph.D. in oceanography (natural products) with John Faulkner, Bill Fenical, and Margo Haygood, 2005
Nonscientific interests: Camping and hiking

Many research areas in natural products draw my interest. For my Ph.D. work, I explored the synthesis and structural elucidation of bioactive natural products and investigated the roles that symbiotic bacteria play in natural product production in marine sponges. My current research involves the genetic engineering of *Streptomyces* to produce polyketides for biological evaluation, investigating the biosynthesis of unusual polyketides, and modifying engineered aromatic polyketides through semisynthesis for biological evaluation. Our paper demonstrates that a common functional group on these engineered polyketides provides a useful synthetic handle to generate bioactive molecules. As such, a new use has been demonstrated for these structurally diverse compounds. (Read Ridley's article on p 104.)

Karina B. Xavier

Current position: Universidade Nova de Lisboa, Instituto de Tecnologia Química e Biológica, Assistant Professor and Head of Bacterial Signaling Laboratory at Instituto Gulbenkian de Ciência, Oeiras, Portugal
Education: Universidade de Lisboa, Faculdade de Ciências, M.S. in biochemistry in 1994; Universidade Nova de Lisboa, Ph.D. in biochemistry with Prof. Helena Santos, 1999
Postdoctoral work: Princeton University, Department of Molecular Biology with Prof. Bonnie L. Bassler, 2000–2006
Nonscientific interests: I spend most of my free time playing with my two children

My major research interest is to understand the complex networks of bacterial communities. Elucidation of bacterial–bacterial and bacterial–host interactions is essential not only to control pathogenic bacteria but also to profit from the successful symbiosis numerous harmless bacteria establish with humans. In this publication, we elucidate the first steps of the metabolic pathway involved in destroying a signal molecule that mediates bacterial interspecies communication. This publication reflects the highly interdisciplinary environment I benefited from throughout my stay in Princeton. For this study, I spent my days running from the molecular biology building to the chemistry building and to the Genomics Institute, where I prepared enzymatic reactions; discussed results with chemists; and analyzed my samples by thin-layer chromatography, NMR, and mass spectrometry. All of these things happened while I was packing to move across the ocean to start my own laboratory. (Read Xavier's article on p 128 and Point of View p 89.)

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