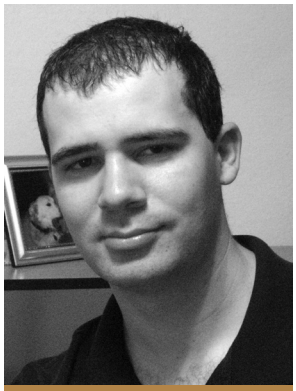
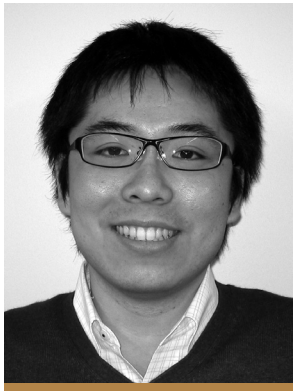
Introducing our AUTHORS



M. Jack Borrok

Current position: University of Texas at Austin, Department of Chemical Engineering, Postdoctoral Researcher in Prof. George Georgiou's group
Education: University of Missouri–Columbia, B.S. in biochemistry, 2001; University of Wisconsin–Madison, Ph.D. in biochemistry with Prof. Laura Kiessling, 2007
Nonscientific interests: Hiking, camping, traveling

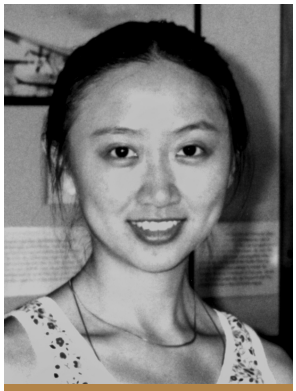
For decades, medicinal chemists and drug designers have been modifying natural ligands to create analogs that are potent receptor agonists or antagonists. Only relatively recently have we looked at modifying the way in which ligands are presented to receptors as a means to control cellular responses. Herein, we show that altering the presentation of a chemotactic repellent can transform it into an attractant. Displaying repellent moieties on polymers capable of interacting with multiple receptors simultaneously disrupts the organization of the signaling lattice, changing the cellular response. We suspect that altering the way in which ligands are displayed may provide a useful tool for eliciting desired signaling outcomes in other transmembrane signaling systems as well. (Read Borrok's article on p 101 and Point of View on p 89.)



Yuki Goto

Current position: The University of Tokyo, Research Center for Advanced Science and Technology, Ph.D. candidate with Prof. Hiroaki Suga
Education: Kyoto University, Japan, B.S. in bioorganic chemistry with Prof. Isao Saito, 2003; Kyoto University, M.S. in biotechnology with Prof. Kazuhiko Nakatani, 2005
Nonscientific interests: Tasting Japanese *la-mu-ne* candies, traveling, camping, mountaineering

My master's graduate work centered on the synthesis, evaluation, and application of novel binders to mismatched DNA and RNA. During my Ph.D. studies, I became interested in the development of versatile synthetic tools to generate complex compounds, previously difficult to synthesize by standard organic chemistry. More specifically, I have been developing a novel technology for the ribosomal synthesis of bioactive peptides containing unusual building blocks. After completing my Ph.D., I envision shifting my research focus from the translation system to nonribosomal biosynthesis. I will pursue my postdoctoral studies under the guidance of Prof. van der Donk at the University of Illinois at Urbana–Champaign. (Read Goto's article on p 120 and Point of View on p 87.)



Jinge Zhu

Current position: University of Wisconsin–Madison, Department of Biochemistry, Research Associate with Prof. Hector F. DeLuca
Education: Fudan University, China, B.S. in applied chemistry, 2000; The Ohio State University, Ph.D. in biochemistry with Prof. Dehua Pei, 2005
Postdoctoral work: The Ohio State University, Department of Chemistry, with Prof. Dehua Pei, 2005–2007
Nonscientific interests: Traveling, reading, shopping

S-Ribosylhomocysteinase (LuxS) is one of the key enzymes involved in bacterial quorum sensing. It catalyzes the cleavage of thioether bond in *S*-ribosylhomocysteine to produce homocysteine and 4,5-dihydroxy-2,3-pentanedione (DPD), the precursor of type II autoinducer signals. My work focuses on the elucidation of the catalytic mechanism of the LuxS reaction and the design of LuxS inhibitors as novel antimicrobials. However, the detection and quantification of DPD remain a challenge. Recently, we developed this new method using LuxP- and LsrB-based sensors modified with fluorescent dyes to achieve accurate, reliable, and convenient quantification of DPD molecules in real-time enzymatic assays and in bacterial cultures. (Read Zhu's article on p 110.)

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