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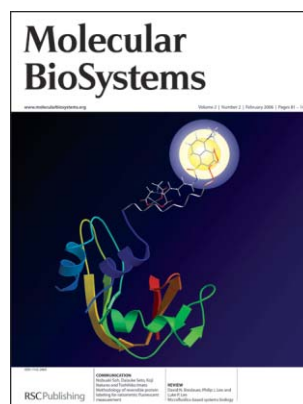
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ISSN 1742-206X CODEN MBOIBW 2(2) 81-144 (2006)



Cover

See Akimitsu Okamoto, Kazuki Tainaka, Yuji Ochi, Keiichiro Kanatani and Isao Saito, page 122. The marked changes in the fluorescence of base-discriminating fluorescent probes play a key role in a facile homogeneous SNP typing assay. Image reproduced by permission of Akimitsu Okamoto *et al.*, from *Mol. BioSyst.*, 2006, 2, 122.



Inside cover

See Nobuaki Soh, Daisuke Seto, Koji Nakano and Toshihiko Imato, page 128. Ratiometric fluorescent labeling technology was developed by utilizing a field-sensitive probe (dansyl-NTA-Ni²⁺ complex) and its corresponding tag (Trp-His-tag), in which RNase S' was used as a model protein. Image reproduced by permission of Toshihiko Imato *et al.*, from *Mol. BioSyst.*, 2006, 2, 128.

CHEMICAL BIOLOGY

B5

Drawing together research highlights and news from all RSC publications, *Chemical Biology* provides a 'snapshot' of the latest developments in chemical biology, showcasing newsworthy articles and significant scientific advances.

Chemical Biology

February 2006/Volume 1/Issue 2

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HOT OFF THE PRESS

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Hot off the Press

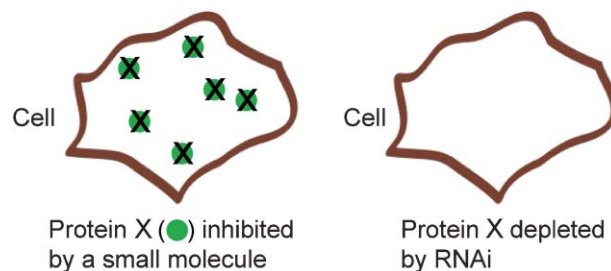
Topics highlighted in this month's *Hot off the Press* include the role of dopamine and parkin in Parkinson's disease, the use of a synthetic tryptophan metabolite in autoimmune diseases, and chitosan quantum dots as bioprobes.

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Small molecules in an RNAi world

Ulrike S. Eggert,* Christine M. Field and Timothy J. Mitchison

A comparison of small molecule and RNAi technologies and their use in dissecting biological mechanism.

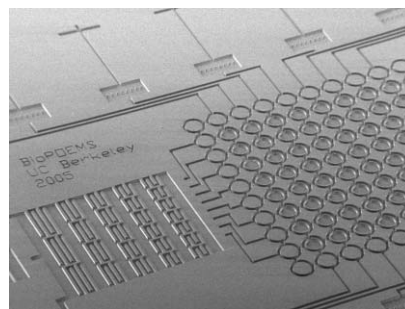


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Microfluidics-based systems biology

David N. Breslauer, Philip J. Lee and Luke P. Lee

Microfluidics technology has opened the door for radically new types of cellular and biomolecular experimentation. The microfluidic devices developed to date present unique opportunities for the fields of systems biology and quantitative biomedical science, through high-throughput and high fidelity experimental control.

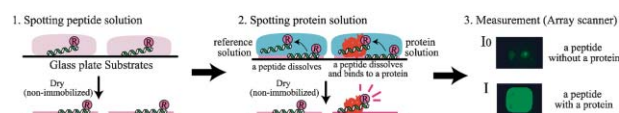


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A novel peptide microarray for protein detection and analysis utilizing a dry peptide array system

Kenji Usui, Kin-ya Tomizaki, Takafumi Ohyama, Kiyoshi Nokihara and Hisakazu Mihara*

A novel dry peptide microarray system is an array preparation and assay procedure which works under dry conditions with designed peptides as non-immobilized capture agents, to afford a practical solution for protein detection and analysis.

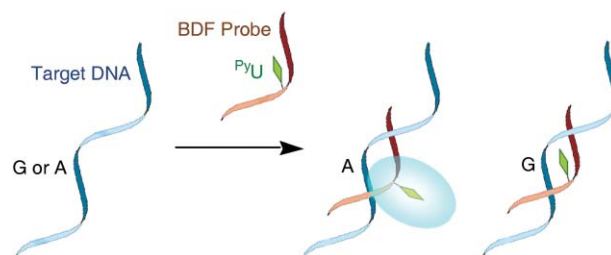


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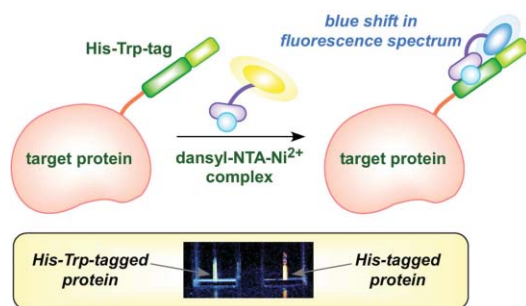
Simple SNP typing assay using a base-discriminating fluorescent probe

Akimitsu Okamoto,* Kazuki Tainaka, Yuji Ochi, Keiichiro Kanatani and Isao Saito*

Base-discriminating fluorescent (BDF) DNA probes enables a single-step homogeneous SNP typing assay.



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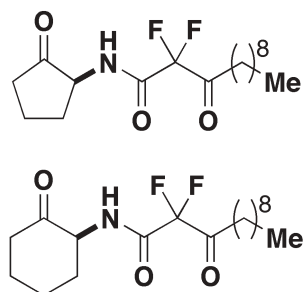
Methodology of reversible protein labeling for ratiometric fluorescent measurement

Nobuaki Soh, Daisuke Seto, Koji Nakano and Toshihiko Imato*

The first fluorescent labeling technology, which can induce not only an increase in the fluorescence intensity but also a shift in the fluorescence spectrum, has been developed for “ratiometric” measurements for a protein by utilizing a newly designed “field-sensitive” fluorescent probe and its corresponding unique amino acid tag.

PAPER

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Immunomodulatory effects of *Pseudomonas aeruginosa* quorum sensing small molecule probes on mammalian macrophages

Gemma L. Thomas, Christine M. Böhner, Hannah E. Williams, Catherine M. Walsh, Mark Ladlow, Martin Welch, Clare E. Bryant and David R. Spring*

The total synthesis of the bacterial natural product *N*-(3-oxododecanoyl)-L-homoserine lactone using polymer-supported reagents and scavengers, and, along with four analogues, its immunomodulatory bioactivity are reported.