Molecular BioSystems

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IN THIS ISSUE

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Cover
See Lawrence H. Pinto and Robert A. Lamb, page 18. Controlling influenza virus replication by inhibiting its proton channel. Image reproduced with permission of Lawrence H. Pinto and Robert A. Lamb, from *Mol. BioSyst.*, 2007, **3**, 18.

CHEMICAL BIOLOGY

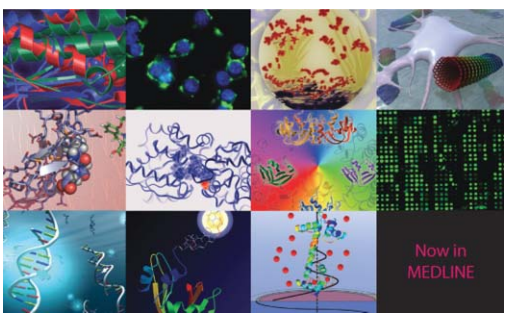
Drawing together research highlights and news from all RSC publications, *Chemical Biology* provides a 'snapshot' of the latest developments in chemical biology, showcasing newsworthy articles and significant scientific advances.

Chemical Biology
January 2007/Volume 2/Issue 1
www.rsc.org/chemicalbiology

EDITORIAL

Happy New Year from *Molecular BioSystems*

Welcome to the first issue of *Molecular BioSystems* for 2007. In this Editorial, we reflect on a successful year for *Molecular BioSystems* and look to the future and the exciting developments for the journal and RSC Publishing.

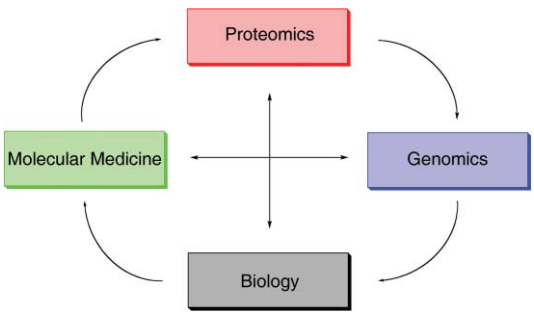


HOT OFF THE PRESS

Hot off the Press

Topics highlighted in this month's *Hot off the Press*: MALDI-TOF analysis of siRNA degradation published in this issue of *Molecular BioSystems*, one of our most regular contributors to *Hot off the Press* Ljiljana Fruk and an item published recently in one of the RSC's journals.

OPINION

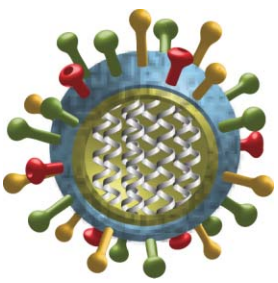


The future of proteomic analysis in biological systems and molecular medicine

Steven J. Bark* and Vivian Hook

The objective of proteomics is to understand health and disease at the protein level. We propose that the future of proteomics lies in the integration of different protein analysis technologies and other scientific disciplines to address important biological questions.

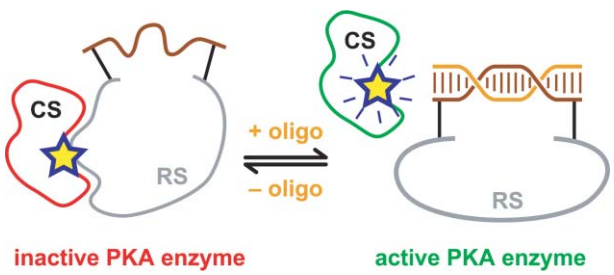
HIGHLIGHTS



Controlling influenza virus replication by inhibiting its proton channel

Lawrence H. Pinto* and Robert A. Lamb

Only two proteins encoded by the influenza virus have been shown to be viable targets for antiviral drugs, but for one of them, the M2 ion channel protein, escape mutants have lessened the usefulness of available antivirals. This review makes a case for the development of more effective antivirals.

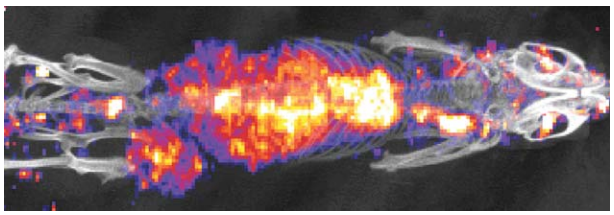


Control of macromolecular structure and function using covalently attached double-stranded DNA constraints

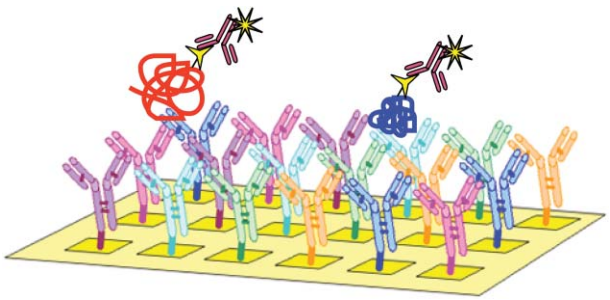
Scott K. Silverman*

This Highlight describes recent advances in the application of covalently attached double-stranded DNA to control the structures of other macromolecules such as protein and RNA.

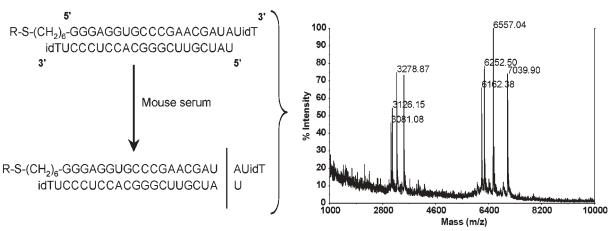
REVIEW

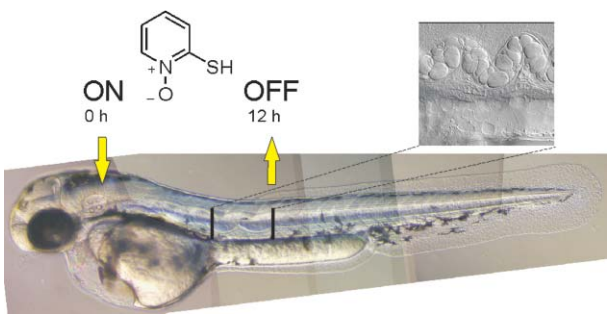


METHOD



PAPERS





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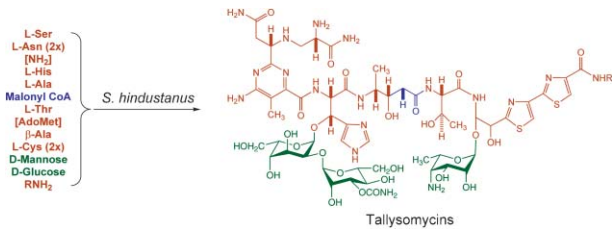

The tallysomycin biosynthetic gene cluster from *Streptoalloteichus hindustanus* E465-94 ATCC 31158 unveiling new insights into the biosynthesis of the bleomycin family of antitumor antibiotics

Meifeng Tao, Liyan Wang, Evelyn Wendt-Pienkowski, Nicholas P. George, Ute Galm, Guodong Zhang, Jane M. Coughlin and Ben Shen

The tallysomycin biosynthetic gene cluster was cloned from *Streptoalloteichus hindustanus*, demonstrating the feasibility of generating novel bleomycin and tallysomycin analogs by combinatorial biosynthesis methods.

AUTHOR INDEX

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