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IN THIS ISSUE

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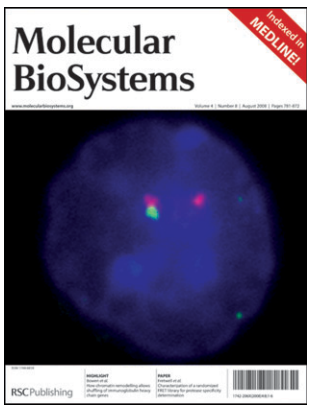


Cover

See Bowen and Corcoran pp. 790–798.

Depiction of non-coding RNA transcripts emanating from immunoglobulin alleles before V(D)J recombination – this intergenic transcription is believed to contribute to opening up the chromatin in these multigene loci. The red signal is a control non-coding transcript, a so called 'supergene' that is continuously transcribed, while the green signals represent V region antisense intergenic transcripts.

Image reproduced by permission of Adam J. Bowen and Anne E. Corcoran from *Mol. BioSyst.*, 2008, 4, 790.

CHEMICAL BIOLOGY

B57

Drawing together the 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

August 2008/Volume 3/Issue 8

www.rsc.org/chembiology

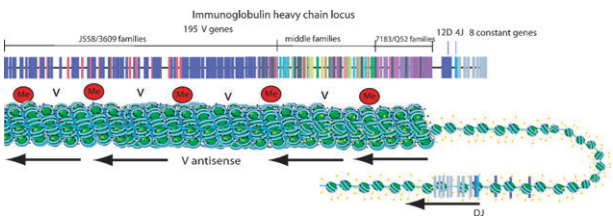
HIGHLIGHT

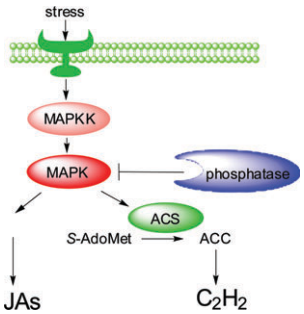
790

How chromatin remodelling allows shuffling of immunoglobulin heavy chain genes

Adam J. Bowen and Anne E. Corcoran*

This review explores the processes implicated in the shuffling of immunoglobulin heavy chain locus genes, including non-coding RNA transcription, histone modifications, transcription factors, nuclear relocation and locus contraction.

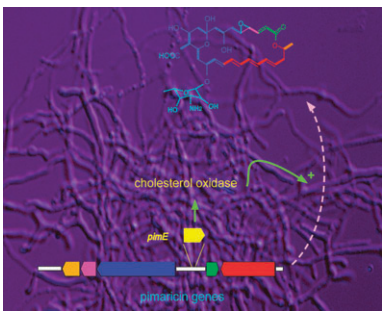




Regulation of stress hormones jasmonates and ethylene by MAPK pathways in plants

Alois Schweighofer and Irute Meskiene*

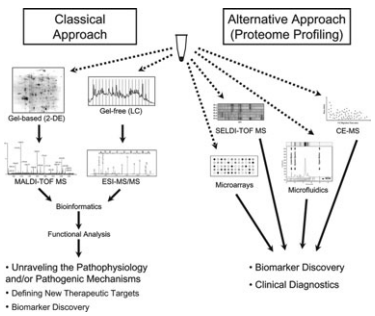
Jasmonates (JAs) and ethylene (ET) are plant stress hormones produced upon abiotic/biotic stress. Here, we highlight recent findings on protein phosphorylation cascades regulating their induction in plants.



Microbial cholesterol oxidases: bioconversion enzymes or signal proteins?

Jesús F. Aparicio* and Juan F. Martín

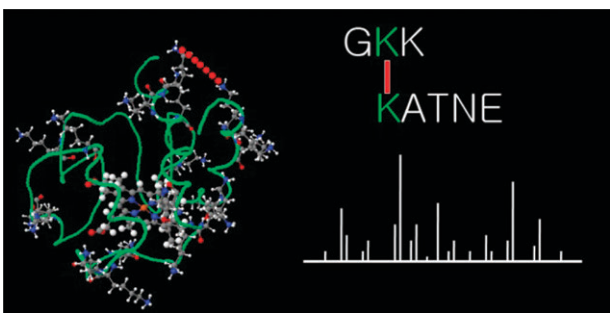
The recent discovery of cholesterol oxidases implicated in polyene antifungal biosynthesis expands the vast array of properties and biological roles of these fascinating enzymes.



Urinary proteomics: towards biomarker discovery, diagnostics and prognostics

Visith Thongboonkerd*

This article highlights and updates recent progress in the urinary proteomics field, which is moving towards biomarker discovery, diagnostics and prognostics. The concept of biomarker discovery is discussed and examples of successful clinical applications of urinary proteomics are given.

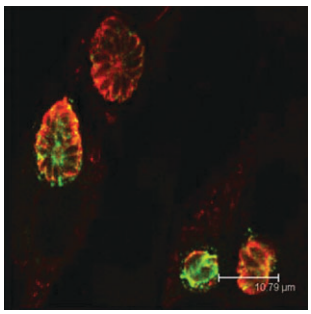


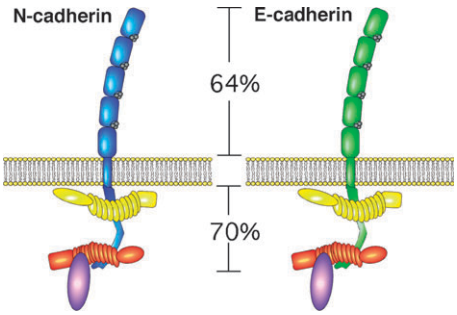
Mass spectrometric analysis of cross-linking sites for the structure of proteins and protein complexes

Young Jin Lee*

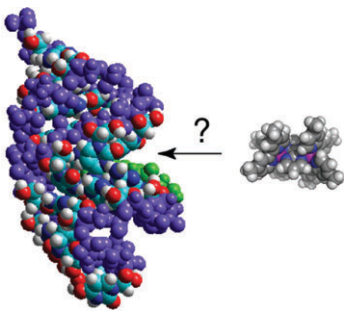
Chemical cross-linking of intact proteins or protein complexes followed by mass spectrometric analysis of cross-linked sites is rapidly emerging as a low resolution alternative technology that will supplement current X-ray or NMR based structural proteomics. We introduce this technology with focus on the recent advances.

REVIEW ARTICLES

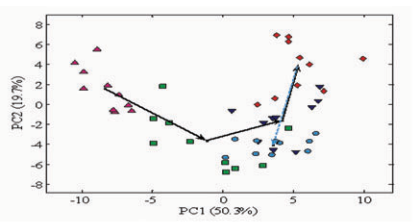




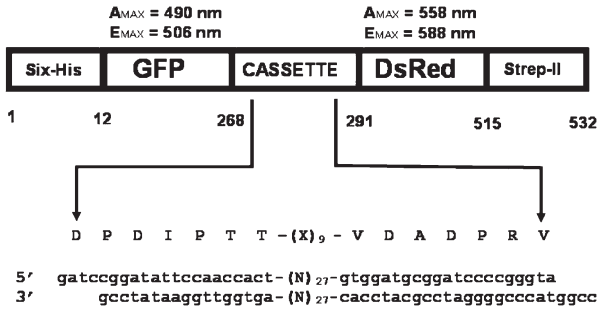
COMMUNICATION



PAPER



Metabolic trajectory of ageing in rat urine and the anti-ageing effect of TFE. Groups: 4 months (▲), 10 months (■), 18 months (▼) and 24 months (♦), and TFE intervention (●).



Characterization of a randomized FRET library for protease specificity determination

Jonathan F. Fretwell, Shams M. K. Ismail, Jeffrey M. Cummings and Thomas L. Selby*

We describe the construction and characterization of a FRET protease library using a randomized DNA region between two donor/acceptor proteins for use in both *in vivo* and *in vitro* applications.