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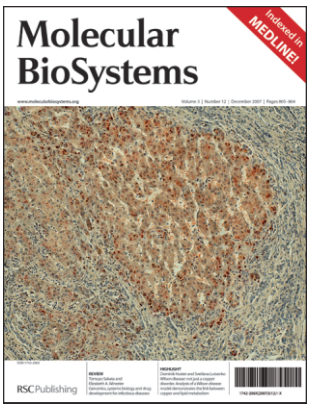


Cover

See Dominio Huster and Svetlana Lutsenko, pp. 816 Wilson disease: not just a copper disorder. Analysis of a Wilson disease model demonstrates the link between copper and lipid metabolism. Image reproduced by permission of Dominio Huster and Svetlana Lutsenko from *Mol. BioSyst.*, 2007, **3**, 816.

CHEMICAL BIOLOGY

B89

Chemical Biology

December 2007/Volume 2/Issue 12

www.rsc.org/chembiology

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.

HOT OFF THE PRESS

814

HOT OFF THE PRESS

Hot off the press

Hot off the Press highlights recently published work for the benefit of our readers. Our contributors this month has focused on *in situ* membrane protein sythesis and protein labelling in living systems. New contributors are always welcome. If you are interested please contact molbiosyst@rsc.org for more information, we'd like to hear from you.

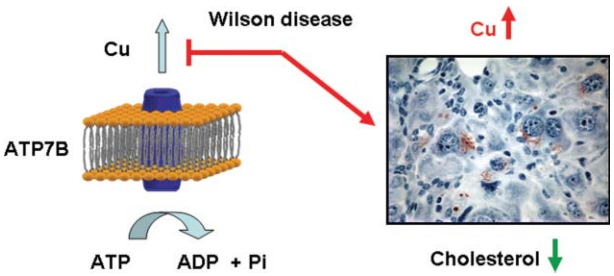
HIGHLIGHTS

816

Wilson disease: not just a copper disorder. Analysis of a Wilson disease model demonstrates the link between copper and lipid metabolism

Dominik Huster and Svetlana Lutsenko*

Inactivation of ATP7B in Wilson disease results in tissue accumulation of copper and liver pathology. Animal models reveal metabolic pathways affected by high copper and a link between copper and lipid metabolism.

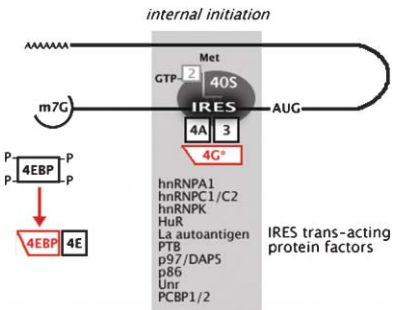


825

Cap-independent regulation of gene expression in apoptosis

Tyson E. Graber and Martin Holcik*

When it comes to protein translation during cell stress, all mRNAs are not treated equally. Many proteins that influence the cell's decision to live or die under stress are synthesized using an alternative mechanism of translation initiation. Possible mechanisms of action and the physiological relevance of IRES-mediated translation initiation in human disease are explored.

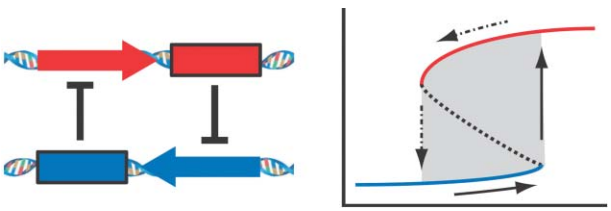


835

Engineering and applications of genetic circuits

Daniel J. Sayut, Pavan Kumar Reddy Kambam and Lianhong Sun*

As fundamental biological network motifs, genetic circuits with a variety of functions have been constructed, engineered, and applied in biomedical engineering and metabolic engineering.



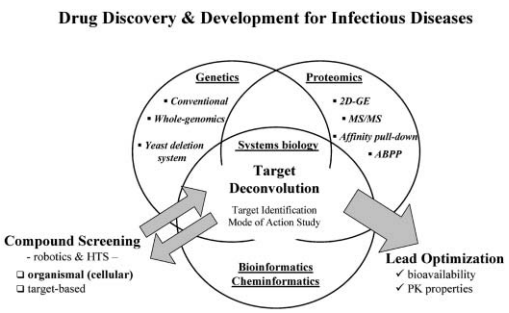
REVIEW

841

Genomics, systems biology and drug development for infectious diseases

Tomoyo Sakata and Elizabeth A. Winzeler*

Systems biology plays a central role in understanding how small molecules are acting on the cell.



REVIEW

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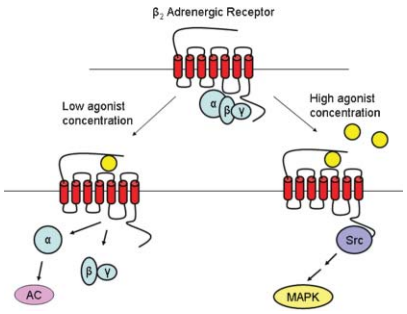


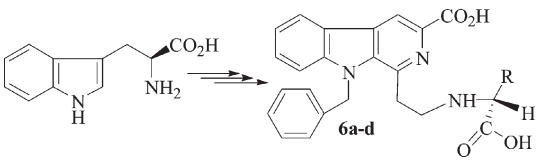
When a G protein-coupled receptor does not couple to a G protein

Yutong Sun, Deirdre McGarrigle and Xin-Yun Huang*

G protein-coupled receptors (or seven-transmembrane receptors) can signal through G protein-dependent and -independent mechanisms. The agonist dosage can act as a switch for the shift of signaling modes.

PAPER

855



Novel *N*-(3-carboxyl-9-benzylcarboline-1-yl)ethylamino acids: synthesis, anti-proliferation activity and two-step-course of intercalation with calf thymus DNA

Jianhui Wu, Guohui Cui, Ming Zhao,* Chunying Cui and Shiqi Peng*

The synthetic novel *N*-(3-carboxyl-9-benzylcarboline-1-yl)-ethyl-phenylalanine (**6a**), -alanine (**6b**), -isoleucine (**6c**) and -glycine (**6d**) intercalate CT DNA following a two-step-course consisting of stacking and intercalating, of which the stacking was defined as the key step to the intercalating mechanism and considered as the practical contributor to the anticancer activities of **6a–d**.

RETRACTION

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Julie E. Bryant

In-cell protein dynamics

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