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Biochemical Pharmacology





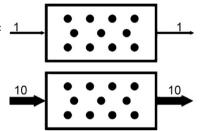
Biochemical Pharmacology, Volume 79, issue 5, 1 March 2010 Contents

COMMENTARY

Measuring *levels* of proteins by various technologies: Can we learn more by measuring 665–668 turnover?

Michael J. Kuhar

Protein levels (the number of dots per compartment) do not change, but turnover (the rate in and out of the compartment: 1 vs. 10) does.

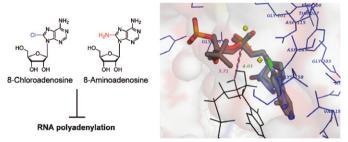


ANTIBIOTICS AND CHEMOTHERAPEUTICS

Chain termination and inhibition of mammalian poly(A) polymerase by modified ATP 669–677 analogues

Lisa S. Chen, Lei Du-Cuny, Vasupradha Vethantham, David H. Hawke, James L. Manley, Shuxing Zhang, Varsha Gandhi

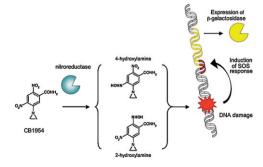
Inhibition of polyadenylation by the metabolites of C-8 modified adenosine analogues, 8-chloroadenosine and 8-aminoadenosine. Molecular modeling of 8-Cl-ATP in the active site of poly(A) polymerase.



Discovery and evaluation of *Escherichia coli* nitroreductases that activate the anti-cancer prodrug CB1954

678-687

G.A. Prosser, J.N. Copp, S.P. Syddall, E.M. Williams, J.B. Smaill, W.R. Wilson, A.V. Patterson, D.F. Ackerley



e2 Contents

Targets and effectors of the cellular response to aurora kinase inhibitor MK-0457 (VX-680) in imatinib sensitive and resistant chronic myelogenous leukemia

688-697

Nicholas J. Donato, Dexing Fang, Hanshi Sun, Diane Giannola, Luke F. Peterson, Moshe Talpaz

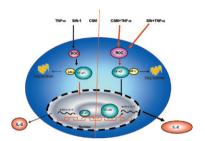


Inflammation and Immunopharmacology

IL-8 production by macrophages is synergistically enhanced when cigarette smoke is combined with TNF-α

Hadi Sarir, Esmaeil Mortaz, Willem. T. Janse, Masoumeh E. Givi, Frans P. Nijkamp, Gert Folkerts

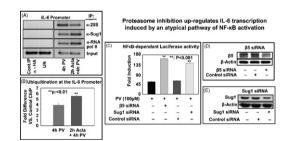
Macrophages are key inflammatory cells in chronic obstructive pulmonary disease (COPD). The pathophysiology of cigarette smoke-induced lung emphysema is complex but there is a clear role for reactive oxygen species (ROS, such as peroxynitrite), tumor necrosis factor (TNF- α) and interleukin (IL)-8. We investigated whether TNF- α or cigarette smoke medium (CSM) alone or in combination induces the production of IL-8 by human macrophages or monocyte lymphoma U937. CSM and TNF-α induces a dose- and time-dependent increase in IL-8 production. Interestingly, when sub-threshold concentrations of CSM and TNF- α were co-incubated, a 1500% increase in IL-8 production was observed compared to either of the compounds alone. Similar results were obtained with TNF- α and the peroxynitrite donor SIN-1. Moreover, the overproduction of IL-8 was associated with an enhanced increase in the translocation of NF-kB and an enhanced decrease in glutathione levels. Preincubation of the cells with antioxidants, such as N-acetyl-L-cysteine, prevented the overproduction of IL-8 and activation of NF-kB. In conclusion, CSM exposure of macrophages up-regulates the expression and the production of IL-8 via reactive oxygen species and NF- κB activation. Moreover, CSM dramatically enhances the production of IL-8 in combination with TNF- α . Based upon the strong synergistic action, a combination therapy directed against ROS and TNF-α could be a new approach to stop the progression in lung damage during emphysema.



Proteasome inhibition up-regulates inflammatory gene transcription induced by an atypical pathway of NF-kB activation

706-714

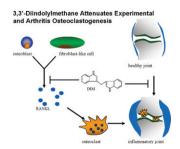
Sarah J. Cullen, Subramaniam Ponnappan, Usha Ponnappan



3,3'-Diindolylmethane attenuates experimental arthritis and osteoclastogenesis

715-721

Lei Dong, Suhua Xia, Fengbo Gao, Dachuan Zhang, Jiangning Chen, Junfeng Zhang



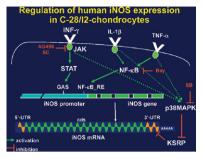
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Transcriptional and post-transcriptional regulation of iNOS expression in human chondrocytes

722-732

Nadine Schmidt, Andrea Pautz, Julia Art, Peter Rauschkolb, Matthias Jung, Gerhard Erkel, Mary B. Goldring, Hartmut Kleinert

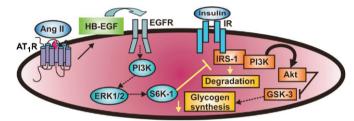


METABOLIC DISORDERS AND ENDOCRINOLOGY

Angiotensin-induced EGF receptor transactivation inhibits insulin signaling in C9 hepatic cells

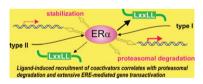
733-745

Araceli Arellano-Plancarte, Judith Hernandez-Aranda, Kevin J. Catt, J. Alberto Olivares-Reyes



Capacity of type I and II ligands to confer to estrogen receptor alpha an appropriate 746–757 conformation for the recruitment of coactivators containing a LxxLL motif—Relationship with the regulation of receptor level and ERE-dependent transcription in MCF-7 cells

Sandrine Bourgoin-Voillard, Dominique Gallo, Ioanna Laïos, Anny Cleeren, Latifa El Bali, Yves Jacquot, Denis Nonclercq, Guy Laurent, Jean-Claude Tabet, Guy Leclercq

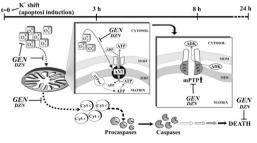


NEUROPHARMACOLOGY

Genistein and daidzein prevent low potassium-dependent apoptosis of cerebellar granule cells

758-767

Anna Atlante, Antonella Bobba, Gianluca Paventi, Roberto Pizzuto, Salvatore Passarella GEN and DZN reduce the level of ROS, the release of cytochrome *c*, the impairment of ANT, the opening of mPT and the apoptotic death in CGCs.



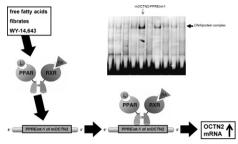
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PHARMACOKINETICS AND DRUG METABOLISM

Mouse OCTN2 is directly regulated by peroxisome proliferator-activated receptor α (PPAR α) via a PPRE located in the first intron

768-776

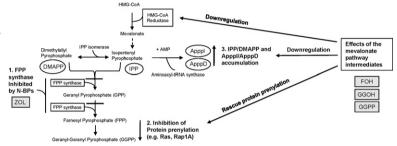
Gaiping Wen, Robert Ringseis, Klaus Eder



Mevalonate pathway intermediates downregulate zoledronic acid-induced isopentenyl 777–783 pyrophosphate and ATP analog formation in human breast cancer cells

Johanna Räikkönen, Hannu Mönkkönen, Seppo Auriola, Jukka Mönkkönen

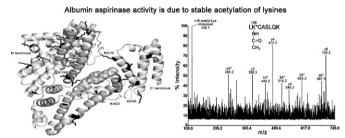
Regulation of the mevalonate pathway after FPP synthase inhibition by using selected intermediates.



Reaction of human albumin with aspirin *in vitro*: Mass spectrometric identification of acetylated lysines 199, 402, 519, and 545

784-791

Mariya S. Liyasova[,] Lawrence M. Schopfer, Oksana Lockridge

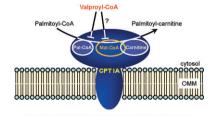


TOXICOLOGY

Inhibition of hepatic carnitine palmitoyl-transferase I (CPT IA) by valproyl-CoA as a possible mechanism of valproate-induced steatosis

792-799

Cátia C.P. Aires·, Lodewijk IJlst, Femke Stet, Carina Prip-Buus, Isabel Tavares de Almeida, Marinus Duran, Ronald J.A. Wanders, Margarida F.B. Silva



Proposed mechanism of CPT IA inhibition by Valproyl-CoA Valproyl-CoA competitively inhibits palmitoyl-CoA binding and affects the physiological inhibition of malonyl-CoA.

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