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#### **Biochemical Pharmacology**





#### Biochemical Pharmacology, Volume 78, issue 9, 1 November 2009 Contents

#### **COMMENTARY**

#### Models for prevention and treatment of cancer: Problems vs promises

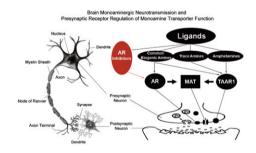
1083-1094

Bharat B. Aggarwal, Divya Danda, Shan Gupta, Prashasnika Gehlot

#### Trace amine-associated receptor 1 as a monoaminergic modulator in brain

1095-1104

Zhihua Xie, Gregory M. Miller

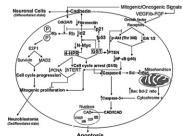


#### **ANTIBIOTICS AND CHEMOTHERAPEUTIC**

N-Myc down regulation induced differentiation, early cell cycle exit, and apoptosis in 1105–1114 human malignant neuroblastoma cells having wild type or mutant p53

Rajiv Janardhanan, Naren L. Banik, Swapan K. Ray

Combination of 4-HPR and GST controlled neuroblastoma by (i) decreasing Id2 and fibronectin for neuronal differentiation, (ii) increasing p53 and PTEN, and (iii) inducing G1/S phase arrest leading to apoptosis.



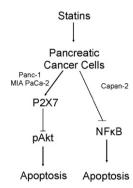
e2 Contents

#### Statins inhibit Akt/PKB signaling via P2X7 receptor in pancreatic cancer cells

1115-1126

Oras Mistafa, Ulla Stenius

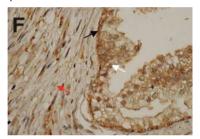
Summary of statin-induced effects in pancreatic cancer cell lines.



### Retinoid metabolism and ALDH1A2 (RALDH2) expression are altered in the transgenic 1127–1138 adenocarcinoma mouse prostate model

Sue Ellen Touma, Sven Perner, Mark A. Rubin, David M. Nanus, Lorraine J. Gudas

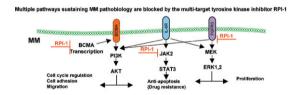
Through immunocytochemistry and Western analysis, we demonstrate that ALDH1A2 (RALDH2), which produces retinoic acid, exhibits reduced expression in human prostate cancer specimens and in the TRAMP mouse model of prostate cancer.



## Concomitant downregulation of proliferation/survival pathways dependent on FGF-R3, JAK2 and BCMA in human multiple myeloma cells by multi-kinase targeting

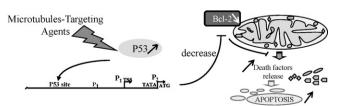
1139-1147

Giuliana Cassinelli, Domenica Ronchetti, Diletta Laccabue, Michela Mattioli, Giuditta Cuccuru, Enrica Favini, Valentina Nicolini, Angela Greco, Antonino Neri, Franco Zunino, Cinzia Lanzi



### Transcriptional down-regulation of Bcl-2 by vinorelbine: Identification of a novel binding site of p53 on Bcl-2 promoter 1148–1156

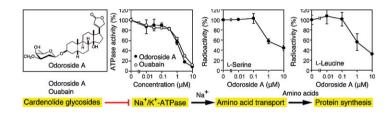
Véronique Bourgarel-Rey, Amandine Savry, Guoqiang Hua, Manon Carré, Céline Bressin, Christine Chacon, Jean Imbert, Diane Braguer, Yves Barra



Contents e3

### Odoroside A and ouabain inhibit Na<sup>+</sup>/K<sup>+</sup>-ATPase and prevent NF-<sub>K</sub>B-inducible protein 1157–1166 expression by blocking Na<sup>+</sup>-dependent amino acid transport

Yohei Takada, Kentaro Matsuo, Hirotsugu Ogura, Liming Bai, Asami Toki, Liyan Wang, Masayoshi Ando, Takao Kataoka

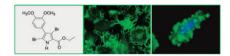


### Interference with endothelial cell function by JG-03-14, an agent that binds to the colchicine site on microtubules

1167-1177

Nava Dalyot-Herman, Fernando Delgado-Lopez, David A. Gewirtz, John T. Gupton, Edward L. Schwartz

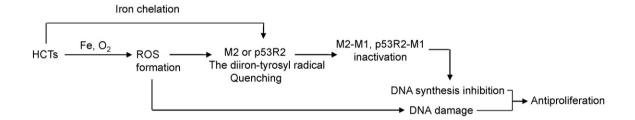
The microtubule-binding agent JG-03-14 (left) disrupted the structure of adherens junctions (middle) and caused membrane blebbing (right) in endothelial cells, suggesting it may have anti-angiogenic and vascular-disrupting actions.



### Inhibitory mechanisms of heterocyclic carboxaldehyde thiosemicabazones for two forms of human ribonucleotide reductase

1178-1185

Lijun Zhu, Bingsen Zhou, Xinhuan Chen, Hongjuan Jiang, Jimin Shao, Yun Yen

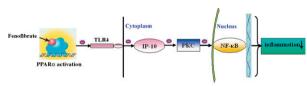


#### CARDIOVASCULAR PHARMACOLOGY

## $PPAR_{\alpha}$ activator fenofibrate modulates angiotensin II-induced inflammatory responses in vascular smooth muscle cells via the TLR4-dependent signaling pathway

1186-1197

Yuan-Yuan Ji, Jun-Tian Liu, Na Liu, Zhi-Dong Wang, Chuan-Hao Liu



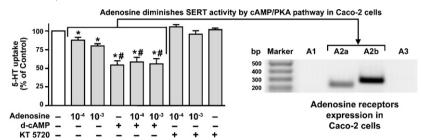
Anti-inflammatory action of fenofibrate via interfering with the TLR4-dependent signaling pathway(TLR4/IP-10/ PKC/NF-κB) e4 Contents

#### **GASTROINTESTINAL PHARMACOLOGY**

#### Regulation of serotonin transporter activity by adenosine in intestinal epithelial cells

1198-1204

N. Matheus, C. Mendoza, R. Iceta, J.E. Mesonero, A.I. Alcalde

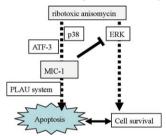


# Macrophage inhibitory cytokine-1 (MIC-1) and subsequent urokinase-type plasminogen activator mediate cell death responses by ribotoxic anisomycin in HCT-116 colon cancer cells

1205-1213

Hyun Yang, Hye Jin Choi, Seong Hwan Park, Jong Sik Kim, Yuseok Moon

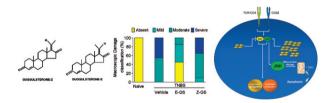
The schematic signaling patterns illustrate that chemical ribotoxic stress-induced MIC-1 protein and PLAU system are modulated in the colon cancer cells.



# The plant sterol guggulsterone attenuates inflammation and immune dysfunction in 1214–1223 murine models of inflammatory bowel disease

Andrea Mencarelli, Barbara Renga, Giuseppe Palladino, Eleonora Distrutti, Stefano Fiorucci

Guggulsterone is a plant sterol that exerts immunomodulatory activities in rodent models of T-cell-induced colitis. Guggulsterone directly modulates intracellular pathways in intestinal CD4+ cells.

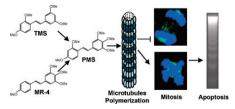


### 2,3',4,4',5'-Pentamethoxy-trans-stilbene, a resveratrol derivative, is a potent inducer of apoptosis in colon cancer cells via targeting microtubules

1224-1232

Haitao Li, William Ka Kei Wu, Zongping Zheng, Chun Tao Che, Le Yu, Zhi Jie Li, Ya Chun Wu, Ka-Wing Cheng, Jun Yu, Chi Hin Cho, Mingfu Wang

2,3',4,4',5'-Pentamethoxy-trans-stilbene, the hybrid molecule of TMS and MR-4, induced colon cancer cells apoptosis via targeting microtubules.



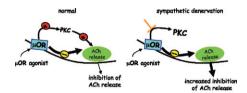
Contents e5

### Involvement of Ca<sup>2+</sup>-dependent PKCs in the adaptive changes of $\mu$ -opioid pathways to sympathetic denervation in the guinea pig colon

1233-1241

C. Giaroni, E. Zanetti, A. Pascale, R. Oldrini, L. Canciani, D. Giuliani, M. Amadio, A.M. Chiaravalli, S. Lecchini, G.M. Frigo

 $\mu$ -Opioid receptors uncoupling to PKC in the guinea pig colon myenteric plexus underlays development of supersensitivity to the inhibitory effect of  $\mu$ -opioid agonists on acetylcholine release after chronic sympathetic denervation.

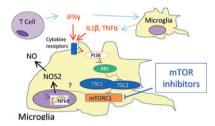


#### INFLAMMATION AND IMMUNOPHARMACOLOGY

### Involvement of mTOR kinase in cytokine-dependent microglial activation and cell proliferation

1242-1251

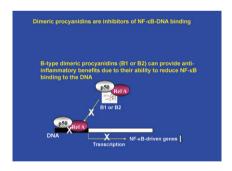
Cinzia Dello Russo, Lucia Lisi, Giuseppe Tringali, Pierluigi Navarra



#### Dimeric procyanidins are inhibitors of NF-κB-DNA binding

1252-1262

Gerardo G. Mackenzie, Jose M. Delfino, Carl L. Keen, Cesar G. Fraga, Patricia I. Oteiza



#### PHARMACOKINETICS AND DRUG METABOLISM

## Protective effect of concomitant administration of imatinib on cisplatin-induced nephrotoxicity focusing on renal organic cation transporter OCT2

1263-1271

Yuko Tanihara, Satohiro Masuda, Toshiya Katsura, Ken-ichi Inui

Coadministration of imatinib reduced the OCT2-mediated renal accumulation and subsequent nephrotoxicity of cisplatin.



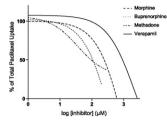
e6 Contents

### Opiates inhibit paclitaxel uptake by P-glycoprotein in preparations of human placental inside-out vesicles

1272-1278

Sarah J. Hemauer, Svetlana L. Patrikeeva, Tatiana N. Nanovskaya, Gary D.V. Hankins, Mahmoud S. Ahmed

Brush border membrane vesicles prepared from human placenta were used to determine the effects of methadone, buprenorphine, and morphine on paclitaxel transfer by placental P-glycoprotein.



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