

available at www.sciencedirect.com



journal homepage: www.elsevier.com/locate/biochempharm



Subject index Volume 73

14-3-3

Regulation of $\alpha_2 AR$ trafficking and signaling by interacting proteins, 1135

17-AAG

Inhibition of G1/S transition potentiates oxaliplatininduced cell death in colon cancer cell lines, 1715

A253

Efficacy of increasing the therapeutic index of irinotecan, plasma and tissue selenium concentrations is methylselenocysteine dose dependent, 1280

A2780 human ovarian cancer cells

Promotion of DNA strand breaks, interstrand cross-links and apoptotic cell death in A2780 human ovarian cancer cells by transplatinum planar amine complexes, 1749

A-688057

Novel heterocyclic-substituted benzofuran histamine $\rm H_3$ receptor antagonists: In vitro properties, drug-likeness, and behavioral activity, 1243

ABC efflux transporters

Functional studies on the activity of efflux transporters in an ex vivo model with chicken splenocytes and evaluation of selected fluoroquinolones in this model, 752

ABCC1

Multidrug resistance related protein (ABCC1) and its role on nitrite production by the murine macrophage cell line RAW 264.7, 665

Absorption

Role of Tyr306 in the C-terminal fragment of Clostridium perfringens enterotoxin for modulation of tight junction, 824

Accumulation

Relevance of drug uptake and efflux for cisplatin sensitivity of tumor cells, 298

Acetylcholine

Partial agonists as therapeutic agents at neuronal nicotinic acetylcholine receptors, 459

Histamine in the brain: Beyond sleep and memory, 1113 Acetylcholinesterase

Kinetic analysis of reactivation and aging of human acetylcholinesterase inhibited by different phosphoramidates, 1807

Acid-β-glucosidase

Selective action of the iminosugar isofagomine, a pharmacological chaperone for mutant forms of acid- β -glucosidase, 1376

Acridine derivatives

Novel tetra-acridine derivatives as dual inhibitors of topoisomerase II and the human proteasome, 1863

Acyclic nucleoside phosphonates

Acyclic nucleoside phosphonates: Past, present and future. Bridging chemistry to HIV, HBV, HCV, HPV, adeno-, herpes-, and poxvirus infections: The phosphonate bridge, 911

Acyclic retinoid

An antioxidant effect by acyclic retinoid suppresses liver tumor in mice, 1405

Adefovir

Acyclic nucleoside phosphonates: Past, present and future. Bridging chemistry to HIV, HBV, HCV, HPV, adeno-, herpes-, and poxvirus infections: The phosphonate bridge, 911

Adenosine

Intracellularly transported adenosine induces apoptosis in HuH-7 human hepatoma cells by downregulating c-FLIP expression causing caspase-3/-8 activation, 1665

Mitochondria play an important role in adenosineinduced ATP release from Madin–Darby canine kidney cells, 1676

Adenosine receptors

Interaction of valerian extracts of different polarity with adenosine receptors: Identification of isovaltrate as an inverse agonist at A₁ receptors, 248

S-Adenosylhomocysteine hydrolase

Structure and function of eritadenine and its 3-deaza analogues: Potent inhibitors of S-adenosylhomocysteine hydrolase and hypocholesterolemic agents, 981

Adipocyte

Effects of leptin on apoptosis and adipogenesis in 3T3-L1 adipocytes, 378

Adipogenesis

Effects of leptin on apoptosis and adipogenesis in 3T3-L1 adipocytes, 378

Adolescent

Comparison of the maturation of the adrenergic and serotonergic neurotransmitter systems in the brain: Implications for differential drug effects on juveniles and adults, 1225

ADP

Inhibition of ADP-induced platelet adhesion to immobilised fibrinogen by nitric oxide: Evidence for cGMP-independent mechanisms, 1593

ADP-ribosyl transferases

Nicotinamide inhibits B lymphocyte activation by disrupting MAPK signal transduction, 831

Adrenaline

Histamine augments β_2 -adrenoceptor-induced cyclic AMP accumulation in human prostate cancer cells DU-145 independently of known histamine receptors, 814

Adrenergic

Structure–function of α_1 -adrenergic receptors, 1051

 α_1 -Adrenergic receptor

Signal transduction and regulation: Are all $\alpha_1\text{-adrenergic}$ receptor subtypes created equal?, 1097

α1-Adrenergic receptors

Clinical implications from studies of $\alpha 1$ adrenergic receptor knockout mice, 1107

α_1 -Adrenoceptor

Central α_1 -adrenergic system in behavioral activity and depression, 1063

α_2 -Adrenergic receptor

Regulation of $\alpha_2 AR$ trafficking and signaling by interacting proteins, 1135

β-Adrenoceptors

Inhibition of nitric oxide-guanylate cyclase-dependent and -independent signaling contributes to impairment of β -adrenergic vasorelaxations by cyclosporine, 359

Adrenoceptors

"Phenotypic" pharmacology: The influence of cellular environment on G protein-coupled receptor antagonist and inverse agonist pharmacology, 737

Histamine augments β_2 -adrenoceptor-induced cyclic AMP accumulation in human prostate cancer cells DU-145 independently of known histamine receptors, 814

Constitutive activity and inverse agonism at the $\alpha_1 adrenoceptors,\,1076$

AE1

Sulfated cyclodextrins inhibit the entry of *Plasmodium* into red blood cells. Implications for malarial therapy, 632

Ageing

Induction of CYP2C12 expression in senescent male rats is well correlated to an increase of HNF3 β expression, while the decline of CYP2C11 expression is unlikely due to a decrease of STAT5 activation, 923

Aging

Glutathione depletion and recovery after acute ethanol administration in the aging mouse, 1613

Kinetic analysis of reactivation and aging of human acetylcholinesterase inhibited by different phosphoramidates, 1807

Agonism

Structure–function of α_1 -adrenergic receptors, 1051

Agonist

Partial agonists as therapeutic agents at neuronal nicotinic acetylcholine receptors, 459

Ah receptor

Coordinate regulation of Phase I and II xenobiotic metabolisms by the Ah receptor and Nrf2, 1853

AKT

Blockade of AKT activation in prostate cancer cells with a small molecule inhibitor, 9-chloro-2-methylellipticinium acetate (CMEP), 15

Suppression of NF- κ B activation by curcumin leads to inhibition of expression of cyclo-oxygenase-2 and matrix metalloproteinase-9 in human articular chondrocytes: Implications for the treatment of osteoarthritis, 1434

Alkaline Comet assay

The novel atypical retinoid ST1926 is active in ATRA resistant neuroblastoma cells acting by a different mechanism, 643

Allodynia

Structurally novel histamine H₃ receptor antagonists GSK207040 and GSK334429 improve scopolamine-induced memory impairment and capsaicin-induced secondary allodynia in rats, 1182

Allosteric site

Irreversible inhibition of glucose-6-phosphate dehydrogenase by the coenzyme A conjugate of ketoprofen: A key to oxidative stress induced by non-steroidal anti-inflammatory drugs?, 405

Allylisothiocyanate

Novel agonistic action of mustard oil on recombinant and endogenous porcine transient receptor potential V1 (pTRPV1) channels, 1646

Alpha

Structure–function of α_1 -adrenergic receptors, 1051

Alveolar macrophages

Inhibition of lipopolysaccharide-stimulated NO production by a novel synthetic compound CYL-4d in RAW 264.7 macrophages involving the blockade of MEK4/JNK/AP-1 pathway, 1796

4-Aminoquinolines

Activity of piperaquine and other 4-aminoquinoline antiplasmodial drugs against chloroquine-sensitive and resistant blood-stages of *Plasmodium falciparum*. Role of β -haematin inhibition and drug concentration in vacuolar water- and lipid-phases, 1910

Analgesia

Prostanoids in nociception and pain, 165

Anandamide

Cannabinoids inhibit sodium-dependent, high-affinity excitatory amino acid transport in cultured rat cortical astrocytes, 2004

Angiogenesis

Harnessing the hypoxia-inducible factor in cancer and ischemic disease, 450

Angiotensin

Rosiglitazone inhibits angiotensin II-induced CTGF expression in vascular smooth muscle cells—Role of PPAR- γ in vascular fibrosis, 185

Angiotensin receptor

 ${\rm AT_1}$ receptor blocker-insensitive mutant ${\rm AT_{1A}}$ angiotensin receptors reveal the presence of G protein-independent signaling in C9 cells, 1582

Antagonism

"Phenotypic" pharmacology: The influence of cellular environment on G protein-coupled receptor antagonist and inverse agonist pharmacology, 737

Structure–function of α_1 -adrenergic receptors, 1051

A_1 antagonist

Interaction of valerian extracts of different polarity with adenosine receptors: Identification of isovaltrate as an inverse agonist at A_1 receptors, 248

Antagonis

Novel heterocyclic-substituted benzofuran histamine ${\rm H_3}$ receptor antagonists: In vitro properties, drug-likeness, and behavioral activity, 1243

Anthracycline derivatives

Accumulation of γ -globin mRNA and induction of irreversible erythroid differentiation after treatment of CML cell line K562 with new doxorubicin derivatives, 175

Antibody

Conformational state of human cardiac 5-HT $_{4(g)}$ receptors influences the functional effects of polyclonal anti-5-HT $_4$ receptor antibodies, 964

Anti-cancer therapy

Focal adhesion kinase: A potential target in cancer therapy, 597

Antidepressant

The effects of antidepressants on cyclic AMP-response element-driven gene transcription in a model cell system,

Antidiarrheic

Oral administration of phenolic antidiarrheic ingredients prevents ovariectomy-induced bone loss, 385

Anti-inflammatory

Suppression of NF-κB activation by curcumin leads to inhibition of expression of cyclo-oxygenase-2 and matrix metalloproteinase-9 in human articular chondrocytes: Implications for the treatment of osteoarthritis, 1434

Antimycin A

The changes of intracellular ${\rm H_2O_2}$ are an important factor maintaining mitochondria membrane potential of antimycin A-treated As4.1 juxtaglomerular cells, 863

Antioxidative effect

An antioxidant effect by acyclic retinoid suppresses liver tumor in mice, 1405

Antisauvagine-30

Functional CRF receptors in BON cells stimulate serotonin release, 805

Anti-tumor

Acylation with diangeloyl groups at C21–22 positions in triterpenoid saponins is essential for cytotoxcity towards tumor cells, 341

Antitumor activity

Preclinical efficacy of ST1976, a novel camptothecin analog of the 7-oxyiminomethyl series, 656

Antiviral activity

Acyclic nucleoside phosphonates: Past, present and future. Bridging chemistry to HIV, HBV, HCV, HPV, adeno-, herpes-, and poxvirus infections: The phosphonate bridge, 911

Aorta

Inhibition of nitric oxide-guanylate cyclase-dependent and -independent signaling contributes to impairment of β -adrenergic vasorelaxations by cyclosporine, 359

AP-1

Inducible overexpression of c-Jun in MCF7 cells causes resistance to vinblastine via inhibition of drug-induced apoptosis and senescence at a step subsequent to mitotic arrest, 481

Inhibition of lipopolysaccharide-stimulated NO production by a novel synthetic compound CYL-4d in RAW 264.7 macrophages involving the blockade of MEK4/JNK/AP-1 pathway, 1796

Role of IKK and ERK pathways in intrinsic inflammation of cystic fibrosis airways, 1982

Apigenin

Modulation of GSH levels in ABCC1 expressing tumor cells triggers apoptosis through oxidative stress, 1727

Apolipoprotein-E knockout mouse

Inhibition of atherosclerosis by the serine palmitoyl transferase inhibitor myriocin is associated with reduced plasma glycosphingolipid concentration, 1340

Apomorphine

Mechanism of dopamine mediated inhibition of neuropeptide Y release from pheochromocytoma cells (PC12 cells), 1446

Apoptosis

Blockade of AKT activation in prostate cancer cells with a small molecule inhibitor, 9-chloro-2-methylellipticinium acetate (CMEP), 15

Pharmacological profiling of disulfiram using human tumor cell lines and human tumor cells from patients, 25 Growth inhibitory activity of cucurbitacin glucosides isolated from Citrullus colocynthis on human breast cancer cells, 56

Elevated *gadd153/chop* expression during resveratrol-induced apoptosis in human colon cancer cells, 68

Data mining of NCI's anticancer screening database reveals mitochondrial complex I inhibitors cytotoxic to leukemia cell lines, 331

Effects of leptin on apoptosis and adipogenesis in 3T3-L1 adipocytes, 378

Inducible overexpression of c-Jun in MCF7 cells causes resistance to vinblastine via inhibition of drug-induced apoptosis and senescence at a step subsequent to mitotic arrest, 481

Mitochondria-mediated and p53-associated apoptosis induced in human cancer cells by a novel selenophene derivative, D-501036, 610

The novel atypical retinoid ST1926 is active in ATRA resistant neuroblastoma cells acting by a different mechanism, 643

Toxic effects of cobalt in primary cultures of mouse astrocytes. Similarities with hypoxia and role of HIF-1 α , 694 Comparative effects of five bisphosphonates on apoptosis of macrophage cells in vitro, 718

Mitochondria are primary targets in apoptosis induced by the mixed phosphine gold species chlorotriphenylphosphine-1,3-bis(diphenylphosphino)propanegold(I) in melanoma cell lines, 773

The changes of intracellular ${\rm H_2O_2}$ are an important factor maintaining mitochondria membrane potential of antimycin A-treated As4.1 juxtaglomerular cells, 863

Differences in the cellular response and signaling pathways of cisplatin and BBR3464 ([{trans-PtCl(NH $_3$) $_2$ } $_2\mu$ -(trans-Pt(NH $_3$) $_2$ (H $_2$ N(CH $_2$) $_6$ -NH $_2$) $_2$)] $^{4+}$) influenced by copper homeostasis, 1270

Celecoxib inhibits the expression of survivin via the suppression of promoter activity in human colon cancer cells, 1318 Effects of hydroxyl radical scavenging on cisplatin-induced p53 activation, tubular cell apoptosis and nephrotoxicity, 1499

Intracellularly transported adenosine induces apoptosis in HuH-7 human hepatoma cells by downregulating c-FLIP expression causing caspase-3/-8 activation, 1665

HIV-1 protease inhibitors do not interfere with provirus transcription and host cell apoptosis induced by combined treatment TNF- α + TSA, 1738

Involvement of reactive oxygen species on the apoptotic mechanism induced by IFN- α 2b in rat preneoplastic liver, 1776

Enhancement of cisplatin induced apoptosis by suberoylanilide hydroxamic acid in human oral squamous cell carcinoma cell lines, 1901

Oxidative DNA base damage in MCF-10A breast epithelial cells at clinically achievable concentrations of doxorubicin, 1947

Apoptotic cell death

Promotion of DNA strand breaks, interstrand cross-links and apoptotic cell death in A2780 human ovarian cancer cells by transplatinum planar amine complexes, 1749

Approach

Central α_1 -adrenergic system in behavioral activity and depression, 1063

Arachidonic acid

Cannabinoids inhibit sodium-dependent, high-affinity excitatory amino acid transport in cultured rat cortical astrocytes, 2004

Arecoline

The metabolomics of (±)-arecoline 1-oxide in the mouse and its formation by human flavin-containing monooxygenases, 561

Aromatase/CYP19

The effect of opiates on the activity of human placental aromatase/CYP19, 279

Arousal

The brain ${
m H_3}$ -receptor as a novel the rapeutic target for vigilance and sleep—wake disorders, 1157

Arrest-defective protein

Harnessing the hypoxia-inducible factor in cancer and ischemic disease, 450

Arrestin

Regulation of $\alpha_2 AR$ trafficking and signaling by interacting proteins, 1135

Aryl hydrocarbon receptor

β-Naphthoflavone and 3'-methoxy-4'-nitroflavone exert ambiguous effects on Ah receptor-dependent cell proliferation and gene expression in rat liver 'stem-like' cells, 1622

As4.1

The changes of intracellular $\rm H_2O_2$ are an important factor maintaining mitochondria membrane potential of antimycin A-treated As4.1 juxtaglomerular cells, 863

ASBT

Inhibition of the intestinal absorption of bile acids using cationic derivatives: Mechanism and repercussions, 394

Asthma

L-454,560, a potent and selective PDE4 inhibitor with in vivo efficacy in animal models of asthma and cognition, 1971

Astrocytes

Cannabinoids inhibit sodium-dependent, high-affinity excitatory amino acid transport in cultured rat cortical astrocytes, 2004

Atherosclerosis

Inhibition of atherosclerosis by the serine palmitoyl transferase inhibitor myriocin is associated with reduced plasma glycosphingolipid concentration, 1340

ATP

Toxic effects of cobalt in primary cultures of mouse astrocytes. Similarities with hypoxia and role of HIF- 1α , 694 An increase of cytochrome C oxidase mediated disruption of gemcitabine incorporation into DNA in a resistant KB clone, 1927

ATP binding cassette

Modulation of GSH levels in ABCC1 expressing tumor cells triggers apoptosis through oxidative stress, 1727

ATP release

Mitochondria play an important role in adenosineinduced ATP release from Madin–Darby canine kidney cells, 1676

ATP7B

Differences in the cellular response and signaling pathways of cisplatin and BBR3464 ([$\{trans-PtCl(NH_3)_2\}_2\mu-(trans-Pt(NH_3)_2(H_2N(CH_2)_6-NH_2)_2)\}^{4+}$) influenced by copper homeostasis, 1270

Atypical retinoids

The novel atypical retinoid ST1926 is active in ATRA resistant neuroblastoma cells acting by a different mechanism, 643

Autoactivation

Amino terminal domains of human UDP-glucuronosyltransferases (UGT) 2B7 and 2B15 associated with substrate selectivity and autoactivation, 1463

Automated behavioral analysis

Identification of zebrafish histamine $\rm H_1$, $\rm H_2$ and $\rm H_3$ receptors and effects of histaminergic ligands on behavior, 1205

B lymphocytes

Nicotinamide inhibits B lymphocyte activation by disrupting MAPK signal transduction, 831

Baboon liver

Kinetics of glyburide metabolism by hepatic and placental microsomes of human and baboon, 2012

Baboon placenta

Kinetics of glyburide metabolism by hepatic and placental microsomes of human and baboon, 2012

Baicalein

Protective effect of baicalein against endotoxic shock in rats in vivo and in vitro, 793

Barrier-function

Role of tyrosine residues in modulation of claudin-4 by the C-terminal fragment of Clostridium perfringens enterotoxin, 206

B-cells

Antagonism of the insulinotropic action of first generation imidazolines by openers of K_{ATP} channels, 94

BCRP

Preclinical efficacy of ST1976, a novel camptothecin analog of the 7-oxyiminomethyl series, 656

Bee venom

Melittin inhibits inflammatory target gene expression and mediator generation via interaction with IkB kinase, 237

Behavior

Central α_1 -adrenergic system in behavioral activity and depression, 1063

Benznidazole

Trypanocidal nitroimidazole derivatives: Relationships among chemical structure and genotoxic activity, 1537

Benzo[a]pyrene quinones

Coordinate regulation of Phase I and II xenobiotic metabolisms by the Ah receptor and Nrf2, 1853

N⁶-Benzyladenosine analogues

Synthesis, biological evaluation and molecular modeling studies of N⁶-benzyladenosine analogues as potential anti-toxoplasma agents, 1558

BeWo cells

Low-affinity uptake of the fluorescent organic cation 4-(4-(dimethylamino)styryl)-N-methylpyridinium iodide (4-Di-1-ASP) in BeWo cells, 891

BF2.649

Brain histamine and schizophrenia: Potential therapeutic applications of H₃-receptor inverse agonists studied with BF2.649, 1215

Bile acids

Matrix metalloproteinase-7-catalyzed release of HB-EGF mediates deoxycholyltaurine-induced proliferation of a human colon cancer cell line, 1001

Bilitranslocase

Properties of flavonoids influencing the binding to bilitranslocase investigated by neural network modelling, 308 pactivation

Human glutathione transferases catalyzing the bioactivation of anticancer thiopurine prodrugs, 1829

Bioassay-guided fractionation

Interaction of valerian extracts of different polarity with adenosine receptors: Identification of isovaltrate as an inverse agonist at A_1 receptors, 248

Bioavailability

Cancer chemopreventive properties of orally bioavailable flavonoids—Methylated versus unmethylated flavones, 1288

Biomarkers

Biomarker discovery for inflammatory bowel disease, using proteomic serum profiling, 1422

Bisphosphonates

Comparative effects of five bisphosphonates on apoptosis of macrophage cells in vitro, 718

Bisquaternary agonists

Chain length dependence of the interactions of bisquaternary ligands with the *Torpedo* nicotinic acetylcholine receptor, 417

BON cells

Functional CRF receptors in BON cells stimulate serotonin release, 805

Bone loss

Oral administration of phenolic antidiarrheic ingredients prevents ovariectomy-induced bone loss, 385

Bone morphogenetic protein-2

Myricetin induces human osteoblast differentiation through bone morphogenetic protein-2/p38 mitogenactivated protein kinase pathway, 504

Brain

Cholesterol reduction by methyl- β -cyclodextrin attenuates the delta opioid receptor-mediated signaling in neuronal cells but enhances it in non-neuronal cells, 534 Comparison of the maturation of the adrenergic and serotonergic neurotransmitter systems in the brain: Implications for differential drug effects on juveniles and adults, 1225

Brain-derived endothelial cells

Glutamate-stimulated peroxynitrite production in a brain-derived endothelial cell line is dependent on N-methyl-D-aspartate (NMDA) receptor activation, 228

Breast cancer

Growth inhibitory activity of cucurbitacin glucosides isolated from Citrullus colocynthis on human breast cancer cells, 56

Circumvention of the multidrug-resistance protein (MRP-1) by an antitumor drug through specific inhibition of gene transcription in breast tumor cells, 934

BRET

 ${
m AT_1}$ receptor blocker-insensitive mutant ${
m AT_{1A}}$ angiotensin receptors reveal the presence of G protein-independent signaling in C9 cells, 1582

L-Buthionine (S,R)-sulfoximine

Modulation of GSH levels in ABCC1 expressing tumor cells triggers apoptosis through oxidative stress, 1727

N-Butyldeoxynojirimycin

Selective action of the iminosugar isofagomine, a pharmacological chaperone for mutant forms of acid- β -glucosidase, 1376

BV-2 microglia

Inhibition of lipopolysaccharide-stimulated NO production by a novel synthetic compound CYL-4d in RAW 264.7 macrophages involving the blockade of MEK4/JNK/AP-1 pathway, 1796

Caco-2 cells

Role of tyrosine residues in modulation of claudin-4 by the C-terminal fragment of Clostridium perfringens enterotoxin, 206

Calcein assay

Comparison of the inhibitory activity of anti-HIV drugs on P-glycoprotein, 1573

Calcineurin

Inhibition of PI3K and calcineurin suppresses chemoattractant receptor-homologous molecule expressed on Th2 cells (CRTH2)-dependent responses of Th2 lymphocytes to prostaglandin $\rm D_2$, 843

Calcium

Capsaicin causes protein synthesis inhibition and microtubule disassembly through TRPV1 activities both on the plasma membrane and intracellular membranes, 1635 Mitochondria play an important role in adenosine-induced ATP release from Madin–Darby canine kidney cells, 1676

Calcium channel blocker

G1 cell cycle arrest by amlodipine, a dihydropyridine Ca²⁺ channel blocker, in human epidermoid carcinoma A431 cells, 943

Calcium signal

 ${
m AT}_1$ receptor blocker-insensitive mutant ${
m AT}_{1A}$ angiotensin receptors reveal the presence of G protein-independent signaling in C9 cells, 1582

Calmodulin

Calmodulin potentiates $G\beta\gamma$ activation of phospholipase C- $\beta 3,\,270$

Clotrimazole inhibits and modulates heterologous association of the key glycolytic enzyme 6-phosphofructo-1-kinase, 1520

Caloric intake

Antagonistic targeting of the histamine H_3 receptor decreases caloric intake in higher mammalian species, 1237

cAMP

Histamine augments β_2 -adrenoceptor-induced cyclic AMP accumulation in human prostate cancer cells DU-145 independently of known histamine receptors, 814

L-454,560, a potent and selective PDE4 inhibitor with in vivo efficacy in animal models of asthma and cognition, 1971

Camptothecins

Preclinical efficacy of ST1976, a novel camptothecin analog of the 7-oxyiminomethyl series, 656

Cancer

Harnessing the hypoxia-inducible factor in cancer and ischemic disease, 450

Focal adhesion kinase: A potential target in cancer therapy, 597

Redox in redux: Emergent roles for glutathione S-transferase P (GSTP) in regulation of cell signaling and S-glutathionylation, 1257

Novel bile acid derivatives (BANBs) with cytostatic activity obtained by conjugation of their side chain with nitrogenated bases, 1394

Novel tetra-acridine derivatives as dual inhibitors of topoisomerase II and the human proteasome, 1863

Cancer chemoprevention

Dihydrolipoic acid inhibits skin tumor promotion through anti-inflammation and anti-oxidation, 1786

Cancer prevention

Cancer chemopreventive properties of orally bioavailable flavonoids—Methylated versus unmethylated flavones, 1288

Cancer progression

PAX genes: Roles in development, pathophysiology, and cancer, 1

Candesartan

 ${\rm AT_1}$ receptor blocker-insensitive mutant ${\rm AT_{1A}}$ angiotensin receptors reveal the presence of G protein-independent signaling in C9 cells, 1582

Cannabinoid receptor subtype-1

Cannabinoids inhibit sodium-dependent, high-affinity excitatory amino acid transport in cultured rat cortical astrocytes, 2004

Cannabinoids

Cannabinoids inhibit sodium-dependent, high-affinity excitatory amino acid transport in cultured rat cortical astrocytes, 2004

Capsaicir

Structurally novel histamine ${\rm H_3}$ receptor antagonists GSK207040 and GSK334429 improve scopolamine-induced memory impairment and capsaicin-induced secondary allodynia in rats, 1182

Capsaicin causes protein synthesis inhibition and microtubule disassembly through TRPV1 activities both on the plasma membrane and intracellular membranes, 1635

Novel agonistic action of mustard oil on recombinant and endogenous porcine transient receptor potential V1 (pTRPV1) channels, 1646

Carboxylesterase

The role of esterases in the metabolism of ciclesonide to desisobutyryl-ciclesonide in human tissue, 1657

Carcinogenesis

CagA protein of Helicobacter pylori: A hijacker of gastric epithelial cell signaling, 1697

Cardiac synaptosomes

Histamine H₃-receptor signaling in cardiac sympathetic nerves: Identification of a novel MAPK-PLA₂-COX-PGE₂-EP₂R pathway, 1146

Cardiovascular disease

Production of extracellular superoxide by human lymphoblast cell lines: Comparison of electron spin resonance techniques and cytochrome *C* reduction assay, 972

Carnosine

Carnosine protects against NMDA-induced neurotoxicity in differentiated rat PC12 cells through carnosine-histidine-histamine pathway and H₁/H₃ receptors, 709

Cartilage destruction

Triptolide, a diterpenoid triepoxide, suppresses inflammation and cartilage destruction in collagen-induced arthritis mice, 136

Caspase

Mitochondria-mediated and p53-associated apoptosis induced in human cancer cells by a novel selenophene derivative, D-501036, 610

Mitochondria are primary targets in apoptosis induced by the mixed phosphine gold species chlorotriphenylphosphine-1,3-bis(diphenylphosphino)propanegold(I) in melanoma cell lines, 773

Caspase-3

Pharmacological inhibition of the MAPK/ERK pathway increases sensitivity to 2-chloro-2'-deoxyadenosine (CdA) in the B-cell leukemia cell line EHEB, 351

Peripheral-type benzodiazepine receptor overexpression and knockdown in human breast cancer cells indicate its prominent role in tumor cell proliferation, 491

Neuroprotective effects of PMC, a potent α -tocopherol derivative, in brain ischemia-reperfusion: Reduced neutrophil activation and anti-oxidant actions, 682

Caspase-8

Intracellularly transported adenosine induces apoptosis in HuH-7 human hepatoma cells by downregulating c-FLIP expression causing caspase-3/-8 activation, 1665

Catalase

The changes of intracellular $\rm H_2O_2$ are an important factor maintaining mitochondria membrane potential of antimycin A-treated As4.1 juxtaglomerular cells, 863

Catalysis

Biochemical and pharmacological characterization of Psite inhibitors on homodimeric guanylyl cyclase domain from natriuretic peptide receptor-A, 954

Catalytic efficiency

Diclofenac hydroxylation in monkeys: Efficiency, regioselectivity, and response to inhibitors, 880

Caveolin

Cholesterol reduction by methyl- β -cyclodextrin attenuates the delta opioid receptor-mediated signaling in neuronal cells but enhances it in non-neuronal cells, 534

CCL-34

A synthetic analog of α -galactosylceramide induces macrophage activation via the TLR4-signaling pathways, 1957

Cdc2

Geldanamycin induces G2 arrest in U87MG glioblastoma cells through downregulation of Cdc2 and cyclin B1, 1528 Cdk modulators

Inhibition of G1/S transition potentiates oxaliplatininduced cell death in colon cancer cell lines, 1715

Celecoxib

Celecoxib inhibits the expression of survivin via the suppression of promoter activity in human colon cancer cells, 1318

Cell adhesion molecules

Isoliquiritigenin inhibits I κ B kinase activity and ROS generation to block TNF- α induced expression of cell adhesion molecules on human endothelial cells, 1602

Cell background

"Phenotypic" pharmacology: The influence of cellular environment on G protein-coupled receptor antagonist and inverse agonist pharmacology, 737

Cell cycle

Dicoumarol impairs mitochondrial electron transport and pyrimidine biosynthesis in human myeloid leukemia HL-60 cells. 427

Irofulven induces replication-dependent CHK2 activation related to p53 status, 469

Peripheral-type benzodiazepine receptor overexpression and knockdown in human breast cancer cells indicate its prominent role in tumor cell proliferation, 491

The changes of intracellular $\rm H_2O_2$ are an important factor maintaining mitochondria membrane potential of antimycin A-treated As4.1 juxtaglomerular cells, 863 Inhibition of G1/S transition potentiates oxaliplatininduced cell death in colon cancer cell lines, 1715

Cell cycle arrest

Geldanamycin induces G2 arrest in U87MG glioblastoma cells through downregulation of Cdc2 and cyclin B1, 1528 Cell death

Inhibition of G1/S transition potentiates oxaliplatininduced cell death in colon cancer cell lines, 1715

Cell growth

Down-regulation of human telomerase reverse transcriptase through specific activation of RNAi pathway quickly results in cancer cell growth impairment, 1703

Cell lines

Pharmacological profiling of disulfiram using human tumor cell lines and human tumor cells from patients, 25

Cell proliferation

 β -Naphthoflavone and 3'-methoxy-4'-nitroflavone exert ambiguous effects on Ah receptor-dependent cell proliferation and gene expression in rat liver 'stem-like' cells, 1622

1321N1 cells

Calmodulin potentiates $G\beta\gamma$ activation of phospholipase C- $\beta3,270$

Cellular retinal-binding protein (CRBP)

Involvement of alcohol and aldehyde dehydrogenase activities on hepatic retinoid metabolism and its possible participation in the progression of rat liver regeneration, 586

Central nervous system

Clinical implications from studies of $\alpha 1$ adrenergic receptor knockout mice, 1107

c-FLIP

Intracellularly transported adenosine induces apoptosis in HuH-7 human hepatoma cells by downregulating c-FLIP expression causing caspase-3/-8 activation, 1665

CFTR

Role of IKK and ERK pathways in intrinsic inflammation of cystic fibrosis airways, 1982

cGMP

Inhibition of ADP-induced platelet adhesion to immobilised fibrinogen by nitric oxide: Evidence for cGMP-independent mechanisms, 1593

Chagas disease

Activity of "reversed" diamidines against Trypanosoma cruzi "in vitro", 1939

Chemical synthesis

Structure and function of eritadenine and its 3-deaza analogues: Potent inhibitors of S-adenosylhomocysteine hydrolase and hypocholesterolemic agents, 981

Chemoprevention

An antioxidant effect by acyclic retinoid suppresses liver tumor in mice, 1405

Chemosensitivity

Irofulven induces replication-dependent CHK2 activation related to p53 status, 469

Chemotaxis

Inhibition of PI3K and calcineurin suppresses chemoattractant receptor-homologous molecule expressed on Th2 cells (CRTH2)-dependent responses of Th2 lymphocytes to prostaglandin D_{2} , 843

Chemotherapy

Contribution of reactivated RUNX3 to inhibition of gastric cancer cell growth following suberoylanilide hydroxamic acid (vorinostat) treatment, 990

Differences in the cellular response and signaling pathways of cisplatin and BBR3464 ([[trans-PtCl(NH $_3$) $_2$] $_2\mu$ -(trans-Pt(NH $_3$) $_2$ (H $_2$ N(CH $_2$) $_6$ -NH $_2$) $_2$)] $^{4+}$) influenced by copper homeostasis, 1270

Novel bile acid derivatives (BANBs) with cytostatic activity obtained by conjugation of their side chain with nitrogenated bases, 1394

Synthesis, biological evaluation and molecular modeling studies of N^6 -benzyladenosine analogues as potential anti-toxoplasma agents, 1558

Human glutathione transferases catalyzing the bioactivation of anticancer thiopurine prodrugs, 1829

Enhancement of cisplatin induced apoptosis by suberoylanilide hydroxamic acid in human oral squamous cell carcinoma cell lines, 1901

Activity of "reversed" diamidines against Trypanosoma cruzi "in vitro", 1939

Oxidative DNA base damage in MCF-10A breast epithelial cells at clinically achievable concentrations of doxorubicin, 1947

Chicken lymphocytes

Functional studies on the activity of efflux transporters in an ex vivo model with chicken splenocytes and evaluation of selected fluoroquinolones in this model, 752

Chiral NSAID

Irreversible inhibition of glucose-6-phosphate dehydrogenase by the coenzyme A conjugate of ketoprofen: A key to oxidative stress induced by non-steroidal anti-inflammatory drugs?, 405

CHK2

Irofulven induces replication-dependent CHK2 activation related to p53 status, 469

Chloride channel

Curcumin induces electrical activity in rat pancreatic $\beta\text{-cells}$ by activating the volume-regulated anion channel, 1768

2-Chloro-2'-deoxyadenosine

Pharmacological inhibition of the MAPK/ERK pathway increases sensitivity to 2-chloro-2'-deoxyadenosine (CdA) in the B-cell leukemia cell line EHEB, 351

Chlorzovazone

Obesity-induced increase of CYP2E1 activity and its effect on disposition kinetics of chlorzoxazone in Zucker rats, 155 CHO cells

Conformational state of human cardiac 5-HT $_{4(g)}$ receptors influences the functional effects of polyclonal anti-5-HT $_4$ receptor antibodies, 964

The effects of antidepressants on cyclic AMP-response element-driven gene transcription in a model cell system, 1995

Cholesterol

Cholesterol reduction by methyl- β -cyclodextrin attenuates the delta opioid receptor-mediated signaling in neuronal cells but enhances it in non-neuronal cells, 534

Activation of PPAR α lowers synthesis and concentration of cholesterol by reduction of nuclear SREBP-2, 574

Cholesterol reduction

Structure and function of eritadenine and its 3-deaza analogues: Potent inhibitors of S-adenosylhomocysteine hydrolase and hypocholesterolemic agents, 981

Chondrocyte

Suppression of NF- κ B activation by curcumin leads to inhibition of expression of cyclo-oxygenase-2 and matrix metalloproteinase-9 in human articular chondrocytes: Implications for the treatment of osteoarthritis, 1434

CHOP

Elevated gadd153/chop expression during resveratrolinduced apoptosis in human colon cancer cells, 68

Chronic estrogen

Tamoxifen and estrogen attenuate enhanced vascular reactivity induced by estrogen deficiency in rat carotid arteries, 1330

Chronic lymphocytic leukemia

Pharmacological inhibition of the MAPK/ERK pathway increases sensitivity to 2-chloro-2'-deoxyadenosine (CdA) in the B-cell leukemia cell line EHEB, 351

Chronic tamoxifen

Tamoxifen and estrogen attenuate enhanced vascular reactivity induced by estrogen deficiency in rat carotid arteries, 1330

Ciclesonide

The role of esterases in the metabolism of ciclesonide to desisobutyryl-ciclesonide in human tissue, 1657

Cidofovir

Acyclic nucleoside phosphonates: Past, present and future. Bridging chemistry to HIV, HBV, HCV, HPV, adeno-, herpes-, and poxvirus infections: The phosphonate bridge, 911

Cimetidine

Identification of zebrafish histamine $\rm H_1$, $\rm H_2$ and $\rm H_3$ receptors and effects of histaminergic ligands on behavior, 1205 Pharmacokinetic significance of luminal multidrug and toxin extrusion 1 in chronic renal failure rats, 1482

Circular dichroism

Interactions of human serum albumin with retinoic acid, retinal and retinyl acetate, 901

Circulatory failure

Protective effect of baicalein against endotoxic shock in rats in vivo and in vitro, 793

cis-6-(2-Acetylvinylthio)purine

Human glutathione transferases catalyzing the bioactivation of anticancer thiopurine prodrugs, 1829

Cisplatin

Relevance of drug uptake and efflux for cisplatin sensitivity of tumor cells, 298

Excess ribonucleotide reductase R2 subunits coordinate the S phase checkpoint to facilitate DNA damage repair and recovery from replication stress, 760

Effects of hydroxyl radical scavenging on cisplatininduced p53 activation, tubular cell apoptosis and nephrotoxicity, 1499

Enhancement of cisplatin induced apoptosis by suberoylanilide hydroxamic acid in human oral squamous cell carcinoma cell lines, 1901

c-Jun

Inducible overexpression of c-Jun in MCF7 cells causes resistance to vinblastine via inhibition of drug-induced apoptosis and senescence at a step subsequent to mitotic arrest, 481

Claudin-4

Role of tyrosine residues in modulation of claudin-4 by the C-terminal fragment of Clostridium perfringens enterotoxin, 206

Role of Tyr306 in the C-terminal fragment of Clostridium perfringens enterotoxin for modulation of tight junction, 824

Clinical implications

Clinical implications from studies of $\alpha 1$ adrenergic receptor knockout mice, 1107

Cloning

Antagonistic targeting of the histamine H_3 receptor decreases caloric intake in higher mammalian species, 1237

Clostridium perfringens enterotoxin

Role of tyrosine residues in modulation of claudin-4 by the C-terminal fragment of Clostridium perfringens enterotoxin, 206

Role of Tyr306 in the C-terminal fragment of Clostridium perfringens enterotoxin for modulation of tight junction, 824

C-NH2 terminal jun kinase

Redox in redux: Emergent roles for glutathione S-transferase P (GSTP) in regulation of cell signaling and S-glutathionylation, 1257

CNS

Novel heterocyclic-substituted benzofuran histamine ${\rm H_3}$ receptor antagonists: In vitro properties, drug-likeness, and behavioral activity, 1243

Cobalt

Toxic effects of cobalt in primary cultures of mouse astrocytes. Similarities with hypoxia and role of HIF-1 α , 694

Maternal separation alters drug intake patterns in adulthood in rats. 321

Coenzyme A metabolite

Irreversible inhibition of glucose-6-phosphate dehydrogenase by the coenzyme A conjugate of ketoprofen: A key to oxidative stress induced by non-steroidal anti-inflammatory drugs?, 405

Cognition

Histamine $\rm H_3$ receptor antagonists: From target identification to drug leads, 1084

Structurally novel histamine $\rm H_3$ receptor antagonists GSK207040 and GSK334429 improve scopolamine-induced memory impairment and capsaicin-induced secondary allodynia in rats, 1182

L-454,560, a potent and selective PDE4 inhibitor with in vivo efficacy in animal models of asthma and cognition, 1971

Collagen-induced arthritis mice

Triptolide, a diterpenoid triepoxide, suppresses inflammation and cartilage destruction in collagen-induced arthritis mice, 136

Collateral sensitivity

Multidrug-resistant cancer cells are preferential targets of the new antineoplastic lanthanum compound KP772 (FFC24), 1873

Colon

Novel bile acid derivatives (BANBs) with cytostatic activity obtained by conjugation of their side chain with nitrogenated bases, 1394

Colon cancer

Tezacitabine enhances the DNA-directed effects of fluoropyrimidines in human colon cancer cells and tumor xenografts. 44

Elevated *gadd*153/*chop* expression during resveratrol-induced apoptosis in human colon cancer cells, 68

Colon cancer cell

Celecoxib inhibits the expression of survivin via the suppression of promoter activity in human colon cancer cells, 1318

Colon cancer cell proliferation

Matrix metalloproteinase-7-catalyzed release of HB-EGF mediates deoxycholyltaurine-induced proliferation of a human colon cancer cell line, 1001

Colonic motility

In vitro characterization of the effects of endomorphin 1 and 2, endogenous ligands for μ -opioid receptors, on mouse colonic motility, 1384

Combination chemotherapy

Tezacitabine enhances the DNA-directed effects of fluoropyrimidines in human colon cancer cells and tumor xenografts, 44

Combination treatment

Sorafenib alone or as combination therapy for growth control of cholangiocarcinoma, 1308

Comet assay

Trypanocidal nitroimidazole derivatives: Relationships among chemical structure and genotoxic activity, 1537

Common carotid arteries

Tamoxifen and estrogen attenuate enhanced vascular reactivity induced by estrogen deficiency in rat carotid arteries, 1330

Conformational state

Conformational state of human cardiac 5-HT $_{4(g)}$ receptors influences the functional effects of polyclonal anti-5-HT $_4$ receptor antibodies, 964

Connective tissue growth factor

Rosiglitazone inhibits angiotensin II-induced CTGF expression in vascular smooth muscle cells—Role of PPAR γ in vascular fibrosis, 185

Constitutive activity

Constitutive activity and inverse agonism at the $\alpha_1 adrenoceptors,\,1076$

Histamine H_3 and dopamine D_2 receptor-mediated [35 S]GTP γ [S] binding in rat striatum: Evidence for additive effects but lack of interactions, 1172

Coordinate induction

Coordinate regulation of Phase I and II xenobiotic metabolisms by the Ah receptor and Nrf2, 1853

COPD

L-454,560, a potent and selective PDE4 inhibitor with in vivo efficacy in animal models of asthma and cognition, 1971

Copper

Differences in the cellular response and signaling pathways of cisplatin and BBR3464 ([[trans-PtCl(NH₃)₂] $_2\mu$ -(trans-Pt(NH₃)₂(H₂N(CH₂)₆-NH₂)₂)]⁴⁺) influenced by copper homeostasis, 1270

Cortical EEG

The brain ${\rm H_3}$ -receptor as a novel the rapeutic target for vigilance and sleep—wake disorders, 1157

Corticosterone

Hexachlorobenzene as hormonal disruptor—studies about glucocorticoids: Their hepatic receptors, adrenal synthesis and plasma levels in relation to impaired gluconeogenesis, 873

Counter propagation-artificial neural network

Properties of flavonoids influencing the binding to bilitranslocase investigated by neural network modelling, 308

Coupled time-of-flight mass spectrometry

The metabolomics of (±)-arecoline 1-oxide in the mouse and its formation by human flavin-containing monooxygenases, 561

COX-2

Tangeretin suppresses IL-1β-induced cyclooxygenase (COX)-2 expression through inhibition of p38 MAPK, JNK, and AKT activation in human lung carcinoma cells, 215

cPLA₂α

Vanadate-induced activation of cytosolic phospholipase $A_{2}\alpha$ in L929 cells: Roles of tyrosine kinase, protein kinase C, and extracellular signal-regulated kinase, 854

CREE

The effects of antidepressants on cyclic AMP-response element-driven gene transcription in a model cell system, 1995

CRF

Functional CRF receptors in BON cells stimulate serotonin release, 805

CRF receptors

Functional CRF receptors in BON cells stimulate serotonin release, 805

Cross-talk

Heterodimerization and surface localization of G protein coupled receptors, 1043

CRTH2

Inhibition of PI3K and calcineurin suppresses chemoattractant receptor-homologous molecule expressed on Th2 cells (CRTH2)-dependent responses of Th2 lymphocytes to prostaglandin D₂, 843

Cucurbitacin glucoside

Growth inhibitory activity of cucurbitacin glucosides isolated from *Citrullus colocynthis* on human breast cancer cells, 56

Curcumin

Curcumin induces the degradation of cyclin E expression through ubiquitin-dependent pathway and up-regulates cyclin-dependent kinase inhibitors p21 and p27 in multiple human tumor cell lines, 1024

Suppression of NF-κB activation by curcumin leads to inhibition of expression of cyclo-oxygenase-2 and matrix metalloproteinase-9 in human articular chondrocytes: Implications for the treatment of osteoarthritis, 1434

Curcumin induces electrical activity in rat pancreatic β -cells by activating the volume-regulated anion channel, 1768

Cyclic AMP

The effects of antidepressants on cyclic AMP-response element-driven gene transcription in a model cell system, 1995

Cyclin B1

Geldanamycin induces G2 arrest in U87MG glioblastoma cells through downregulation of Cdc2 and cyclin B1, 1528

Cyclin dependent kinase

G1 cell cycle arrest by amlodipine, a dihydropyridine Ca²⁺ channel blocker, in human epidermoid carcinoma A431 cells, 943

Cyclin E

Curcumin induces the degradation of cyclin E expression through ubiquitin-dependent pathway and up-regulates cyclin-dependent kinase inhibitors p21 and p27 in multiple human tumor cell lines, 1024

Cyclooxygenase

Triptolide, a diterpenoid triepoxide, suppresses inflammation and cartilage destruction in collagen-induced arthritis mice, 136

Cyclooxygenase 2

Involvement of early growth response gene 1 in the modulation of microsomal prostaglandin E synthase 1 by epigallocatechin gallate in A549 human pulmonary epithelial cells, 125

Cyclooxygenase-2 (COX-2)

Mechanisms for prostaglandin $\rm E_2$ formation caused by proteinase-activated receptor-1 activation in rat gastric mucosal epithelial cells, 103

Cyclooxygenase-2 inhibitors

Selective cyclooxygenase-2 inhibitors stimulate glucose transport in L6 myotubes in a protein kinase $C\delta$ -dependent manner, 368

Cyclosporine

Inhibition of nitric oxide-guanylate cyclase-dependent and -independent signaling contributes to impairment of β -adrenergic vasorelaxations by cyclosporine, 359

CYL-4d

Inhibition of lipopolysaccharide-stimulated NO production by a novel synthetic compound CYL-4d in RAW 264.7 macrophages involving the blockade of MEK4/JNK/AP-1 pathway, 1796

Cyotoxicity

Preclinical efficacy of ST1976, a novel camptothecin analog of the 7-oxyiminomethyl series, 656

CYP2C11

Induction of CYP2C12 expression in senescent male rats is well correlated to an increase of HNF3 β expression, while the decline of CYP2C11 expression is unlikely due to a decrease of STAT5 activation, 923

CYP2C12

Induction of CYP2C12 expression in senescent male rats is well correlated to an increase of HNF3 β expression, while the decline of CYP2C11 expression is unlikely due to a decrease of STAT5 activation, 923

CYP2E

Obesity-induced increase of CYP2E1 activity and its effect on disposition kinetics of chlorzoxazone in Zucker rats, 155

Cysteinyl leukotrienes

Sodium nitroprusside decreased leukotriene C4 generation by inhibiting leukotriene C4 synthase expression and activity in hepatic ischemia-reperfusion injured rats, 724

Cytochrome C

Production of extracellular superoxide by human lymphoblast cell lines: Comparison of electron spin resonance techniques and cytochrome C reduction assay, 972

Cytochrome C oxidase

An increase of cytochrome C oxidase mediated disruption of gemcitabine incorporation into DNA in a resistant KB clone, 1927

Cytochrome P450

Identification of monoamine oxidase and cytochrome P450 isoenzymes involved in the deamination of phenethylamine-derived designer drugs (2C-series), 287

Cytochrome P450 3A4

Roles of CYP3A4 and CYP2C19 in methyl hydroxylated and N-oxidized metabolite formation from voriconazole, a new anti-fungal agent, in human liver microsomes, 2020

Cytokines

Inhibition of PI3K and calcineurin suppresses chemoattractant receptor-homologous molecule expressed on Th2 cells (CRTH2)-dependent responses of Th2 lymphocytes to prostaglandin $\rm D_2$, 843

Cytosine arabinoside

The synergistic interaction of gemcitabine and cytosine arabinoside with the ribonucleotide reductase inhibitor triapine is schedule dependent, 1548

Cytoskeleton

Alterations in cytoskeletal protein expression by mycophenolic acid in human mesangial cells requires Rac inactivation, 1491

Clotrimazole inhibits and modulates heterologous association of the key glycolytic enzyme 6-phosphofructo-1-kinase, 1520

Cytosolic calcium concentration

Antagonism of the insulinotropic action of first generation imidazolines by openers of K_{ATP} channels, 94

Cytostatic drugs

Pharmacokinetics of a hepatic stellate cell-targeted doxorubicin construct in bile duct-ligated rats, 1455

Cytotoxicity

Pharmacological profiling of disulfiram using human tumor cell lines and human tumor cells from patients, 25

Novel tetra-acridine derivatives as dual inhibitors of topoisomerase II and the human proteasome, 1863

DNA interactions of new cytotoxic tetrafunctional dinuclear platinum complex trans,trans-[{PtCl₂(NH₃)}₂(piperazine)], 1887

D₂ receptor

Histamine H_3 and dopamine D_2 receptor-mediated [35 S]GTP $_{\gamma}$ [S] binding in rat striatum: Evidence for additive effects but lack of interactions, 1172

Danio rerio

Identification of zebrafish histamine $\rm H_1$, $\rm H_2$ and $\rm H_3$ receptors and effects of histaminergic ligands on behavior, 1205

3-Deaza analogue

Structure and function of eritadenine and its 3-deaza analogues: Potent inhibitors of S-adenosylhomocysteine hydrolase and hypocholesterolemic agents, 981

Dendritic cells

Rosmarinic acid inhibits indoleamine 2,3-dioxygenase expression in murine dendritic cells, 1412

Deoxycytidine kinase

The synergistic interaction of gemcitabine and cytosine arabinoside with the ribonucleotide reductase inhibitor triapine is schedule dependent, 1548

2-Deoxy-glucose

Mitochondria play an important role in adenosineinduced ATP release from Madin–Darby canine kidney cells, 1676

Depression

Central α_1 -adrenergic system in behavioral activity and depression, 1063

Comparison of the maturation of the adrenergic and serotonergic neurotransmitter systems in the brain: Implications for differential drug effects on juveniles and adults, 1225

Desensitization

Delineation of the motilin domain involved in desensitization and internalization of the motilin receptor by using full and partial antagonists, 115

Effects of chronic opioid exposure on guinea pig mu opioid receptor in Chinese hamster ovary cells: Comparison with human and rat receptor, 1818

Designer drug

Identification of monoamine oxidase and cytochrome P450 isoenzymes involved in the deamination of phenethylamine-derived designer drugs (2C-series), 287

Development

Comparison of the maturation of the adrenergic and serotonergic neurotransmitter systems in the brain: Implications for differential drug effects on juveniles and adults, 1225

Diabetes

Improved endothelial function and reduced platelet activation by chronic HMG-CoA-reductase inhibition with rosuvastatin in rats with streptozotocin-induced diabetes mellitus, 1367

Diangeloyl acylation

Acylation with diangeloyl groups at C21–22 positions in triterpenoid saponins is essential for cytotoxcity towards tumor cells, 341

Diclofenac hydroxylation

Diclofenac hydroxylation in monkeys: Efficiency, regioselectivity, and response to inhibitors, 880

Dicoumarol

Dicoumarol impairs mitochondrial electron transport and pyrimidine biosynthesis in human myeloid leukemia HL-60 cells, 427

Differentiation

Accumulation of γ -globin mRNA and induction of irreversible erythroid differentiation after treatment of CML cell line K562 with new doxorubicin derivatives, 175

Myricetin induces human osteoblast differentiation through bone morphogenetic protein-2/p38 mitogen-activated protein kinase pathway, 504

Digestive side-effects

Irreversible inhibition of glucose-6-phosphate dehydrogenase by the coenzyme A conjugate of ketoprofen: A key to oxidative stress induced by non-steroidal anti-inflammatory drugs?, 405

Dihydrolipoic acid (DHLA)

Dihydrolipoic acid inhibits skin tumor promotion through anti-inflammation and anti-oxidation, 1786

Dimerization

Heterodimerization and surface localization of G protein coupled receptors, 1043

Molecular aspects of the histamine H_3 receptor, 1195

Dinuclear platinum complex

DNA interactions of new cytotoxic tetrafunctional dinuclear platinum complex trans,trans-[{PtCl₂(NH₃)}₂(piperazine)], 1887

Dipeptidyl peptidase-IV

Evaluation of therapeutic potentials of site-specific PEGylated glucagon-like peptide-1 isomers as a type 2 anti-diabetic treatment: Insulinotropic activity, glucose-stabilizing capability, and proteolytic stability, 84

Disaccharidase

Selective action of the iminosugar isofagomine, a pharmacological chaperone for mutant forms of acid- β -glucosidase, 1376

Disulfiram

Pharmacological profiling of disulfiram using human tumor cell lines and human tumor cells from patients, 25

DMP-696

Functional CRF receptors in BON cells stimulate serotonin release, 805

DNA cleavage

Preclinical efficacy of ST1976, a novel camptothecin analog of the 7-oxyiminomethyl series, 656

DNA cross-links

DNA interactions of new cytotoxic tetrafunctional dinuclear platinum complex trans,trans-[{PtCl₂(NH₃)}₂(piperazine)], 1887

DNA damage

Resveratrol protects dopaminergic neurons in midbrain slice culture from multiple insults, 550

CagA protein of Helicobacter pylori: A hijacker of gastric epithelial cell signaling, 1697

Oxidative DNA base damage in MCF-10A breast epithelial cells at clinically achievable concentrations of doxorubicin, 1947

DNA damage checkpoint

Excess ribonucleotide reductase R2 subunits coordinate the S phase checkpoint to facilitate DNA damage repair and recovery from replication stress, 760

DNA interaction

Novel tetra-acridine derivatives as dual inhibitors of topoisomerase II and the human proteasome, 1863

DNA methylation

Histone deacetylase inhibitor Trichostatin A induces global and gene-specific DNA demethylation in human cancer cell lines, 1297

DNA modification

DNA interactions of new cytotoxic tetrafunctional dinuclear platinum complex trans,trans-[{PtCl₂(NH₃)}₂(piperazine)], 1887

DNA repair

Excess ribonucleotide reductase R2 subunits coordinate the S phase checkpoint to facilitate DNA damage repair and recovery from replication stress, 760

DNA strand breaks

Promotion of DNA strand breaks, interstrand cross-links and apoptotic cell death in A2780 human ovarian cancer cells by transplatinum planar amine complexes, 1749

DNA topoisomerase I

Preclinical efficacy of ST1976, a novel camptothecin analog of the 7-oxyiminomethyl series, 656

DNA-damage

The novel atypical retinoid ST1926 is active in ATRA resistant neuroblastoma cells acting by a different mechanism, 643

DNA-protein cross-links

DNA interactions of new cytotoxic tetrafunctional dinuclear platinum complex trans,trans-[{PtCl₂(NH₃)}₂(piperazine)], 1887

Dopamine agonists

Mechanism of dopamine mediated inhibition of neuropeptide Y release from pheochromocytoma cells (PC12 cells), 1446

Dopamine neuron

Resveratrol protects dopaminergic neurons in midbrain slice culture from multiple insults, 550

Dopamine receptors

Mechanism of dopamine mediated inhibition of neuropeptide Y release from pheochromocytoma cells (PC12 cells), 1446

Dorsal root ganglion

Novel agonistic action of mustard oil on recombinant and endogenous porcine transient receptor potential V1 (pTRPV1) channels, 1646

Downregulation

Signal transduction and regulation: Are all α_1 -adrenergic receptor subtypes created equal?, 1097

Effects of chronic opioid exposure on guinea pig mu opioid receptor in Chinese hamster ovary cells: Comparison with human and rat receptor, 1818

Doxorubicin

Development of elastin-like polypeptide for thermally targeted delivery of doxorubicin, 620

Circumvention of the multidrug-resistance protein (MRP-1) by an antitumor drug through specific inhibition of gene transcription in breast tumor cells, 934

Oxidative DNA base damage in MCF-10A breast epithelial cells at clinically achievable concentrations of doxorubicin, 1947

Drug abuse

Maternal separation alters drug intake patterns in adulthood in rats, 321

Drug delivery

Development of elastin-like polypeptide for thermally targeted delivery of doxorubicin, 620

Drug design

Structure–function of $\boldsymbol{\alpha}_1\text{-adrenergic}$ receptors, 1051

Drug development

Clinical implications from studies of $\alpha 1$ adrenergic receptor knockout mice, 1107

Drug discovery

Data mining of NCI's anticancer screening database reveals mitochondrial complex I inhibitors cytotoxic to leukemia cell lines, 331

Drug resistance

An increase of cytochrome C oxidase mediated disruption of gemcitabine incorporation into DNA in a resistant KB clone, 1927

Drug targeting

Pharmacokinetics of a hepatic stellate cell-targeted doxorubicin construct in bile duct-ligated rats, 1455

Drug transport

Low-affinity uptake of the fluorescent organic cation 4-(4-(dimethylamino)styryl)-N-methylpyridinium iodide (4-Di-1-ASP) in BeWo cells, 891

Drug transporters

Gene expression and regulation of drug transporters in the intestine and kidney, 440

Drug-resistance

Activity of piperaquine and other 4-aminoquinoline antiplasmodial drugs against chloroquine-sensitive and resistant blood-stages of Plasmodium falciparum. Role of β -haematin inhibition and drug concentration in vacuolar water- and lipid-phases, 1910

DU-145 cells

Histamine augments β_2 -adrenoceptor-induced cyclic AMP accumulation in human prostate cancer cells DU-145 independently of known histamine receptors, 814

Early growth response gene 1

Involvement of early growth response gene 1 in the modulation of microsomal prostaglandin E synthase 1 by epigallocatechin gallate in A549 human pulmonary epithelial cells, 125

Efaroxan

Antagonism of the insulinotropic action of first generation imidazolines by openers of K_{ATP} channels, 94

Efflux

Relevance of drug uptake and efflux for cisplatin sensitivity of tumor cells, 298

EGF receptor trans-activation

Mechanisms for prostaglandin $\rm E_2$ formation caused by proteinase-activated receptor-1 activation in rat gastric mucosal epithelial cells, 103

EGI-1

Sorafenib alone or as combination therapy for growth control of cholangiocarcinoma, 1308

EHEB

Pharmacological inhibition of the MAPK/ERK pathway increases sensitivity to 2-chloro-2'-deoxyadenosine (CdA) in the B-cell leukemia cell line EHEB, 351

Elastin-like polypeptide

Development of elastin-like polypeptide for thermally targeted delivery of doxorubicin, 620

Electrical activity

Curcumin induces electrical activity in rat pancreatic β -cells by activating the volume-regulated anion channel, 1768

Electron spin resonance

Production of extracellular superoxide by human lymphoblast cell lines: Comparison of electron spin resonance techniques and cytochrome *C* reduction assay, 972

Embryological development

PAX genes: Roles in development, pathophysiology, and cancer, $\boldsymbol{1}$

Endocannabinoids

Histamine in the brain: Beyond sleep and memory, 1113 Cannabinoids inhibit sodium-dependent, high-affinity excitatory amino acid transport in cultured rat cortical astrocytes, 2004

Endomorphin 1

In vitro characterization of the effects of endomorphin 1 and 2, endogenous ligands for μ -opioid receptors, on mouse colonic motility, 1384

Endomorphin 2

In vitro characterization of the effects of endomorphin 1 and 2, endogenous ligands for μ -opioid receptors, on mouse colonic motility, 1384

Endoplasmic reticulum

Genistein induces apoptosis in human hepatocellular carcinomas via interaction of endoplasmic reticulum stress and mitochondrial insult, 782

Endothelial cells

Statins decrease TNF- α -induced osteoprotegerin production by endothelial cells and smooth muscle cells in vitro, 77 Isoliquiritigenin inhibits IkB kinase activity and ROS generation to block TNF- α induced expression of cell adhesion molecules on human endothelial cells, 1602

Endothelial dysfunction

Improved endothelial function and reduced platelet activation by chronic HMG-CoA-reductase inhibition with rosuvastatin in rats with streptozotocin-induced diabetes mellitus, 1367

Endothelium-derived hyperpolarizing factor

Tamoxifen and estrogen attenuate enhanced vascular reactivity induced by estrogen deficiency in rat carotid arteries, 1330

Enterohepatic circulation

Inhibition of the intestinal absorption of bile acids using cationic derivatives: Mechanism and repercussions, 394

Enzyme inhibition

Data mining of NCI's anticancer screening database reveals mitochondrial complex I inhibitors cytotoxic to leukemia cell lines, 331

Structure and function of eritadenine and its 3-deaza analogues: Potent inhibitors of S-adenosylhomocysteine hydrolase and hypocholesterolemic agents, 981

Enzyme kinetics

Kinetics of glyburide metabolism by hepatic and placental microsomes of human and baboon, 2012

Epidermal growth factor receptors

Matrix metalloproteinase-7-catalyzed release of HB-EGF mediates deoxycholyltaurine-induced proliferation of a human colon cancer cell line, 1001

(-)-Epigallocatechin gallate

Identification of two biologically crucial hydroxyl groups of (–)-epigallocatechin gallate in osteoclast culture, 34

Epigallocatechin gallate

Involvement of early growth response gene 1 in the modulation of microsomal prostaglandin E synthase 1 by epigallocatechin gallate in A549 human pulmonary epithelial cells, 125

Epigenetic mechanisms

Maternal separation alters drug intake patterns in adulthood in rats, 321

Eritadenine

Structure and function of eritadenine and its 3-deaza analogues: Potent inhibitors of S-adenosylhomocysteine hydrolase and hypocholesterolemic agents, 981

ERK1/2

Involvement of early growth response gene 1 in the modulation of microsomal prostaglandin E synthase 1 by epigallocatechin gallate in A549 human pulmonary epithelial cells, 125

Vanadate-induced activation of cytosolic phospholipase $A_2\alpha$ in L929 cells: Roles of tyrosine kinase, protein kinase C, and extracellular signal-regulated kinase, 854

Sorafenib alone or as combination therapy for growth control of cholangiocarcinoma, 1308

Erythrocyte

Clotrimazole inhibits and modulates heterologous association of the key glycolytic enzyme 6-phosphofructo-1-kinase, 1520

Erythroid gene expression

Accumulation of γ -globin mRNA and induction of irreversible erythroid differentiation after treatment of CML cell line K562 with new doxorubicin derivatives, 175

Esterases

The role of esterases in the metabolism of ciclesonide to desisobutyryl-ciclesonide in human tissue, 1657

Estrogen

Redox regulation of human estrogen sulfotransferase (hSULT1E1), 1474

Estrogen formation

The effect of opiates on the activity of human placental aromatase/CYP19, 279

Estrogen receptor agonist

The activation by estrogen receptor agonists of the BK_{Ca} -channel in human cardiac fibroblasts, 1347

Estrogen sulfotransferase

Redox regulation of human estrogen sulfotransferase (hSULT1E1), 1474

Ethanol

Maternal separation alters drug intake patterns in adulthood in rats, 321

Glutathione depletion and recovery after acute ethanol administration in the aging mouse, 1613

F-actin

Growth inhibitory activity of cucurbitacin glucosides isolated from Citrullus colocynthis on human breast cancer cells, 56

Factor inhibiting HIF

Harnessing the hypoxia-inducible factor in cancer and ischemic disease, 450

FaDu

Efficacy of increasing the therapeutic index of irinotecan, plasma and tissue selenium concentrations is methylselenocysteine dose dependent, 1280

Fast onset

Mechanism of action of AZD0865, a K⁺-competitive inhibitor of gastric H⁺,K⁺-ATPase, 198

Fear conditioning

Histamine in the brain: Beyond sleep and memory, 1113 Feeding

Histamine in the brain: Beyond sleep and memory, 1113 Ferric ion reduction

Identification of two biologically crucial hydroxyl groups of (–)-epigallocatechin gallate in osteoclast culture, 34

Fibrosis

Relaxin receptors in hepatic stellate cells and cirrhotic liver 1033

Flavin-containing monooxygenase

The metabolomics of (±)-arecoline 1-oxide in the mouse and its formation by human flavin-containing monooxygenases, 561

Flavones

 β -Naphthoflavone and 3'-methoxy-4'-nitroflavone exert ambiguous effects on Ah receptor-dependent cell proliferation and gene expression in rat liver 'stem-like' cells, 1622

Flavonoids

Properties of flavonoids influencing the binding to bilitranslocase investigated by neural network modelling, 308

Genistein induces apoptosis in human hepatocellular carcinomas via interaction of endoplasmic reticulum stress and mitochondrial insult, 782

Cancer chemopreventive properties of orally bioavailable flavonoids—Methylated versus unmethylated flavones, 1288

Flow cytometry

Comparative effects of five bisphosphonates on apoptosis of macrophage cells in vitro, 718

Flufenamic acid

Glucuronidation of fenamates: Kinetic studies using human kidney cortical microsomes and recombinant UDP-glucuronosyltransferase (UGT) 1A9 and 2B7, 1683

Fluorescence anisotropy

Calmodulin potentiates $G\beta\gamma$ activation of phospholipase $C-\beta 3,270$

Fluoropyrimidines

Tezacitabine enhances the DNA-directed effects of fluoropyrimidines in human colon cancer cells and tumor xenografts, 44

Fluoroquinolones

Functional studies on the activity of efflux transporters in an ex vivo model with chicken splenocytes and evaluation of selected fluoroquinolones in this model, 752

FMdC

Tezacitabine enhances the DNA-directed effects of fluoropyrimidines in human colon cancer cells and tumor xenografts, 44

Focal adhesion kinase

Focal adhesion kinase: A potential target in cancer therapy, 597

Free radical-scavenger

Neuroprotective effects of PMC, a potent α -tocopherol derivative, in brain ischemia-reperfusion: Reduced neutrophil activation and anti-oxidant actions, 682

Function

Structure–function of α_1 -adrenergic receptors, 1051

G protein-coupled receptors

Effect of lysophosphatidylglycerol on several signaling molecules in OVCAR-3 human ovarian cancer cells: Involvement of pertussis toxin-sensitive G-protein coupled receptor, 675

"Phenotypic" pharmacology: The influence of cellular environment on G protein-coupled receptor antagonist and inverse agonist pharmacology, 737

Constitutive activity and inverse agonism at the $\alpha_1 \text{adrenoceptors},\, 1076$

Molecular aspects of the histamine ${\rm H_3}$ receptor, 1195

Identification of zebrafish histamine $\rm H_1$, $\rm H_2$ and $\rm H_3$ receptors and effects of histaminergic ligands on behavior, 1205

Effects of chronic opioid exposure on guinea pig mu opioid receptor in Chinese hamster ovary cells: Comparison with human and rat receptor, 1818

G protein-coupled receptor kinase

Regulation of $\alpha_2 AR$ trafficking and signaling by interacting proteins, 1135

G proteins

Constitutive activity and inverse agonism at the $\alpha_1 \text{adrenoceptors},\, 1076$

 ${
m AT}_1$ receptor blocker-insensitive mutant ${
m AT}_{1A}$ angiotensin receptors reveal the presence of G protein-independent signaling in C9 cells, 1582

G1 cell cycle arrest

G1 cell cycle arrest by amlodipine, a dihydropyridine Ca²⁺ channel blocker, in human epidermoid carcinoma A431 cells. 943

G2/M

Geldanamycin induces G2 arrest in U87MG glioblastoma cells through downregulation of Cdc2 and cyclin B1, 1528

G_{α}/N_{α}

Growth inhibitory activity of cucurbitacin glucosides isolated from Citrullus colocynthis on human breast cancer cells, 56

GADD153

Elevated gadd153/chop expression during resveratrolinduced apoptosis in human colon cancer cells, 68 Genistein induces apoptosis in human hepatocellular carcinomas via interaction of endoplasmic reticulum stress and mitochondrial insult, 782

α-Galactosylceramide

A synthetic analog of α -galactosylceramide induces macrophage activation via the TLR4-signaling pathways, 1957

Gastric cancer

Contribution of reactivated RUNX3 to inhibition of gastric cancer cell growth following suberoylanilide hydroxamic acid (vorinostat) treatment, 990

Gastric/drug effects

Mechanism of action of AZD0865, a K⁺-competitive inhibitor of gastric H⁺,K⁺-ATPase, 198

Gaucher

Selective action of the iminosugar isofagomine, a pharmacological chaperone for mutant forms of acid-β-glucosidase, 1376

Gbetagamma

Calmodulin potentiates $G\beta\gamma$ activation of phospholipase $C\text{-}\beta3,\,270$

$G\beta\gamma_i$ subunit

Histamine $\rm H_3$ -receptor signaling in cardiac sympathetic nerves: Identification of a novel MAPK-PLA $_2$ -COX-PGE $_2$ -EP $_3$ R pathway, 1146

Geldanamycin

Geldanamycin induces G2 arrest in U87MG glioblastoma cells through downregulation of Cdc2 and cyclin B1, 1528

Gemcitabine

The synergistic interaction of gemcitabine and cytosine arabinoside with the ribonucleotide reductase inhibitor triapine is schedule dependent, 1548

An increase of cytochrome C oxidase mediated disruption of gemcitabine incorporation into DNA in a resistant KB clone, 1927

Gene expression

Role of IKK and ERK pathways in intrinsic inflammation of cystic fibrosis airways, 1982

Gene transcription

The effects of antidepressants on cyclic AMP-response element-driven gene transcription in a model cell system, 1995

Genistein

Genistein induces apoptosis in human hepatocellular carcinomas via interaction of endoplasmic reticulum stress and mitochondrial insult, 782

Gerbi

Molecular cloning, mutations and effects of NK_1 receptor antagonists reveal the human-like pharmacology of gerbil NK_1 receptors, 259

Gerbil foot tap

Molecular cloning, mutations and effects of NK_1 receptor antagonists reveal the human-like pharmacology of gerbil NK_1 receptors, 259

G_{i/o} protein

Histamine H_3 and dopamine D_2 receptor-mediated [35 S]GTP γ [S] binding in rat striatum: Evidence for additive effects but lack of interactions, 1172

Glioblastoma

Geldanamycin induces G2 arrest in U87MG glioblastoma cells through downregulation of Cdc2 and cyclin B1, 1528

Glomerulosclerosis

Alterations in cytoskeletal protein expression by mycophenolic acid in human mesangial cells requires Rac inactivation, 1491

Glucagons-like peptide-1

Evaluation of therapeutic potentials of site-specific PEGylated glucagon-like peptide-1 isomers as a type 2 anti-diabetic treatment: Insulinotropic activity, glucose-stabilizing capability, and proteolytic stability, 84

Glucocorticoids receptor

Hexachlorobenzene as hormonal disruptor—studies about glucocorticoids: Their hepatic receptors, adrenal synthesis and plasma levels in relation to impaired gluconeogenesis, 873

Gluconeogenesis

Hexachlorobenzene as hormonal disruptor—studies about glucocorticoids: Their hepatic receptors, adrenal synthesis and plasma levels in relation to impaired gluconeogenesis, 873

Glucose transport

Selective cyclooxygenase-2 inhibitors stimulate glucose transport in L6 myotubes in a protein kinase $C\delta$ -dependent manner, 368

Glucose-6-phosphate dehydrogenase

Irreversible inhibition of glucose-6-phosphate dehydrogenase by the coenzyme A conjugate of ketoprofen: A key to oxidative stress induced by non-steroidal anti-inflammatory drugs?, 405

α-Glucosidase II

Selective action of the iminosugar isofagomine, a pharmacological chaperone for mutant forms of acid-β-glucosidase, 1376

Glucuronidation

Amino terminal domains of human UDP-glucuronosyltransferases (UGT) 2B7 and 2B15 associated with substrate selectivity and autoactivation, 1463

Glucuronidation kinetics

Glucuronidation of fenamates: Kinetic studies using human kidney cortical microsomes and recombinant UDP-glucuronosyltransferase (UGT) 1A9 and 2B7, 1683

Glutamate

Glutamate-stimulated peroxynitrite production in a brainderived endothelial cell line is dependent on N-methyl-Daspartate (NMDA) receptor activation, 228

Glutamate transport

Cannabinoids inhibit sodium-dependent, high-affinity excitatory amino acid transport in cultured rat cortical astrocytes, 2004

Glutathione

Multidrug resistance related protein (ABCC1) and its role on nitrite production by the murine macrophage cell line RAW 264.7, 665

Redox in redux: Emergent roles for glutathione S-transferase P (GSTP) in regulation of cell signaling and S-glutathionylation, 1257

Glutathione depletion and recovery after acute ethanol administration in the aging mouse, 1613

Modulation of GSH levels in ABCC1 expressing tumor cells triggers apoptosis through oxidative stress, 1727

Glutathione S-transferase

Redox in redux: Emergent roles for glutathione Stransferase P (GSTP) in regulation of cell signaling and S-glutathionylation, 1257

Glutathione transferase

Human glutathione transferases catalyzing the bioactivation of anticancer thiopurine prodrugs, 1829

S-Glutathionylation

Redox in redux: Emergent roles for glutathione S-transferase P (GSTP) in regulation of cell signaling and S-glutathionylation, 1257

Glyburide (glibenclamide) metabolism

Kinetics of glyburide metabolism by hepatic and placental microsomes of human and baboon, 2012

Glycolysis

Clotrimazole inhibits and modulates heterologous association of the key glycolytic enzyme 6-phosphofructo-1-kinase, 1520

P-glycoprotein

Comparison of the inhibitory activity of anti-HIV drugs on P-glycoprotein, 1573

Multidrug-resistant cancer cells are preferential targets of the new antineoplastic lanthanum compound KP772 (FFC24), 1873

Glycosphingolipids

Inhibition of atherosclerosis by the serine palmitoyl transferase inhibitor myriocin is associated with reduced plasma glycosphingolipid concentration, 1340

Gold

Mitochondria are primary targets in apoptosis induced by the mixed phosphine gold species chlorotriphenylphosphine-1,3-bis(diphenylphosphino)propanegold(I) in melanoma cell lines, 773

GPCF

Regulatory mechanisms underlying GKR2 levels in U937 cells: Evidence for GRK3 involvement, 1758

GPCRs

Heterodimerization and surface localization of G protein coupled receptors, 1043

GRK:

Regulatory mechanisms underlying GKR2 levels in U937 cells: Evidence for GRK3 involvement, 1758

GRK3

Regulatory mechanisms underlying GKR2 levels in U937 cells: Evidence for GRK3 involvement, 1758

Growth arrest

Accumulation of γ -globin mRNA and induction of irreversible erythroid differentiation after treatment of CML cell line K562 with new doxorubicin derivatives, 175

Growth hormone

Induction of CYP2C12 expression in senescent male rats is well correlated to an increase of HNF3 β expression, while the decline of CYP2C11 expression is unlikely due to a decrease of STAT5 activation, 923

$[^{35}S]GTP\gamma S$

Histamine H_3 and dopamine D_2 receptor-mediated [35 S]GTP $_{\gamma}$ [S] binding in rat striatum: Evidence for additive effects but lack of interactions, 1172

$GTP\gamma S$ binding

Effects of chronic opioid exposure on guinea pig mu opioid receptor in Chinese hamster ovary cells: Comparison with human and rat receptor, 1818

Guanylate cyclase

Inhibition of nitric oxide-guanylate cyclase-dependent and -independent signaling contributes to impairment of β -adrenergic vasorelaxations by cyclosporine, 359

Guanylyl cyclase

Biochemical and pharmacological characterization of P-site inhibitors on homodimeric guanylyl cyclase domain from natriuretic peptide receptor-A, 954

Gut

Novel bile acid derivatives (BANBs) with cytostatic activity obtained by conjugation of their side chain with nitrogenated bases, 1394

γ-H2Ax

Excess ribonucleotide reductase R2 subunits coordinate the S phase checkpoint to facilitate DNA damage repair and recovery from replication stress, 760

H+,K+-ATPase/antagonists and inhibitors

Mechanism of action of AZD0865, a K^+ -competitive inhibitor of gastric H^+,K^+ -ATPase, 198

H₃ receptor

The brain $\rm H_3$ -receptor as a novel therapeutic target for vigilance and sleep–wake disorders, 1157

Histamine H_3 and dopamine D_2 receptor-mediated [35 S]GTP $_{\gamma}$ [S] binding in rat striatum: Evidence for additive effects but lack of interactions, 1172

Novel heterocyclic-substituted benzofuran histamine ${\rm H_3}$ receptor antagonists: In vitro properties, drug-likeness, and behavioral activity, 1243

H₂ receptor antagonist

Antagonistic targeting of the histamine ${\rm H_3}$ receptor decreases caloric intake in higher mammalian species, 1237

 $\mathrm{H}_3\text{-receptor-induced}$ attenuation of norepinephrine exocytosis

Histamine H₃-receptor signaling in cardiac sympathetic nerves: Identification of a novel MAPK-PLA₂-COX-PGE₂-EP₃R pathway, 1146

hCTR1

Differences in the cellular response and signaling pathways of cisplatin and BBR3464 ([{trans-PtCl(NH $_3$) $_2$ } $_2\mu$ -(trans-Pt(NH $_3$) $_2$ (H $_2$ N(CH $_2$) $_6$ -NH $_2$) $_2$)] $^{4+}$) influenced by copper homeostasis, 1270

Hedgehog

New paradigms in signal transduction, 1511

Hemolysis

Acylation with diangeloyl groups at C21–22 positions in triterpenoid saponins is essential for cytotoxcity towards tumor cells, 341

hENT4

Evidence for significant contribution of a newly identified monoamine transporter (PMAT) to serotonin uptake in the human brain, 147

Heparin-binding-EGF

Mechanisms for prostaglandin $\rm E_2$ formation caused by proteinase-activated receptor-1 activation in rat gastric mucosal epithelial cells, 103

Hepatic stellate cell

Pharmacokinetics of a hepatic stellate cell-targeted doxorubicin construct in bile duct-ligated rats, 1455

Hepatocarcinogenesis

Involvement of reactive oxygen species on the apoptotic mechanism induced by IFN- α 2b in rat preneoplastic liver, 1776

Hepatocellular carcinoma

Genistein induces apoptosis in human hepatocellular carcinomas via interaction of endoplasmic reticulum stress and mitochondrial insult, 782

Hexachlorobenzene

Hexachlorobenzene as hormonal disruptor—studies about glucocorticoids: Their hepatic receptors, adrenal synthesis and plasma levels in relation to impaired gluconeogenesis, 873

HIF-1α

Neuroprotective effects of PMC, a potent α -tocopherol derivative, in brain ischemia-reperfusion: Reduced neutrophil activation and anti-oxidant actions, 682

Histamine

Carnosine protects against NMDA-induced neurotoxicity in differentiated rat PC12 cells through carnosine-histidine-histamine pathway and $\rm H_1/H_3$ receptors, 709

Histamine augments β_2 -adrenoceptor-induced cyclic AMP accumulation in human prostate cancer cells DU-145 independently of known histamine receptors, 814

The brain H_3 -receptor as a novel therapeutic target for vigilance and sleep—wake disorders, 1157

Histamine H_3 and dopamine D_2 receptor-mediated [35 S]GTP $_{\gamma}$ [S] binding in rat striatum: Evidence for additive effects but lack of interactions, 1172

Antagonistic targeting of the histamine H_3 receptor decreases caloric intake in higher mammalian species, 1237

Novel heterocyclic-substituted benzofuran histamine ${\rm H_3}$ receptor antagonists: In vitro properties, drug-likeness, and behavioral activity, 1243

Histamine H3 receptor

Histamine H_3 receptor antagonists: From target identification to drug leads, 1084

Histamine H₃ receptor

Structurally novel histamine ${\rm H_3}$ receptor antagonists GSK207040 and GSK334429 improve scopolamine-induced memory impairment and capsaicin-induced secondary allodynia in rats, 1182

Molecular aspects of the histamine H₃ receptor, 1195 Brain histamine and schizophrenia: Potential therapeutic applications of H₃-receptor inverse agonists studied with BF2.649, 1215

Histidine kinase

New paradigms in signal transduction, 1511

Histone acetylation

Histone deacetylase inhibitor Trichostatin A induces global and gene-specific DNA demethylation in human cancer cell lines, 1297

Histone deacetylase inhibitor

Histone deacetylase inhibitor Trichostatin A induces global and gene-specific DNA demethylation in human cancer cell lines, 1297

HIV-1 protease inhibitor

HIV-1 protease inhibitors do not interfere with provirus transcription and host cell apoptosis induced by combined treatment TNF- α + TSA, 1738

HMG-CoA reductase

Activation of PPAR α lowers synthesis and concentration of cholesterol by reduction of nuclear SREBP-2, 574

Homology models

Molecular cloning, mutations and effects of NK_1 receptor antagonists reveal the human-like pharmacology of gerbil NK_1 receptors, 259

5-HT

Functional CRF receptors in BON cells stimulate serotonin release, 805

5-HT₄ receptor

Conformational state of human cardiac 5-HT $_{4(g)}$ receptors influences the functional effects of polyclonal anti-5-HT $_4$ receptor antibodies, 964

hTERT

Down-regulation of human telomerase reverse transcriptase through specific activation of RNAi pathway quickly results in cancer cell growth impairment, 1703

HuH-7 cell

Intracellularly transported adenosine induces apoptosis in HuH-7 human hepatoma cells by downregulating c-FLIP expression causing caspase-3/-8 activation, 1665

Human brain

Evidence for significant contribution of a newly identified monoamine transporter (PMAT) to serotonin uptake in the human brain, 147

Human cardiac fibroblast

The activation by estrogen receptor agonists of the BK_{Ca} -channel in human cardiac fibroblasts, 1347

Human epidermoid carcinoma A431 cells

G1 cell cycle arrest by amlodipine, a dihydropyridine Ca²⁺ channel blocker, in human epidermoid carcinoma A431 cells, 943

Human kidney

Glucuronidation of fenamates: Kinetic studies using human kidney cortical microsomes and recombinant UDP-glucuronosyltransferase (UGT) 1A9 and 2B7, 1683

Human liver

Kinetics of glyburide metabolism by hepatic and placental microsomes of human and baboon, 2012

Human liver microsomes

Carboxyl-glucuronidation of mitiglinide by human UDP-glucuronosyltransferases, 1842

Human placenta

The effect of opiates on the activity of human placental aromatase/CYP19, 279

Kinetics of glyburide metabolism by hepatic and placental microsomes of human and baboon, 2012

Human serum albumin

Interactions of human serum albumin with retinoic acid, retinal and retinyl acetate, 901

Human T cells

Rottlerin inhibits human T cell responses, 515

Hybrid depletion

Evidence for significant contribution of a newly identified monoamine transporter (PMAT) to serotonin uptake in the human brain, 147

Hydrogen peroxide generation

Identification of two biologically crucial hydroxyl groups of (-)-epigallocatechin gallate in osteoclast culture, 34

Hydrophobicity

Activity of piperaquine and other 4-aminoquinoline antiplasmodial drugs against chloroquine-sensitive and resistant blood-stages of *Plasmodium falciparum*. Role of β -haematin inhibition and drug concentration in vacuolar water- and lipid-phases, 1910

Hydroxyl radical

Effects of hydroxyl radical scavenging on cisplatininduced p53 activation, tubular cell apoptosis and nephrotoxicity, 1499

Hydroxylation

Roles of CYP3A4 and CYP2C19 in methyl hydroxylated and N-oxidized metabolite formation from voriconazole, a new anti-fungal agent, in human liver microsomes, 2020

Hydroxyurea

Histone deacetylase inhibitor Trichostatin A induces global and gene-specific DNA demethylation in human cancer cell lines, 1297

Hypertension

Rosiglitazone inhibits angiotensin II-induced CTGF expression in vascular smooth muscle cells—Role of PPAR-γ in vascular fibrosis, 185

Hypomethylation

Histone deacetylase inhibitor Trichostatin A induces global and gene-specific DNA demethylation in human cancer cell lines, 1297

Hypothalamus

Histamine in the brain: Beyond sleep and memory, 1113

Нурохіа

Toxic effects of cobalt in primary cultures of mouse astrocytes. Similarities with hypoxia and role of HIF-1 α , 694

Hypoxia-inducible factor

Harnessing the hypoxia-inducible factor in cancer and ischemic disease, 450

IBD

Biomarker discovery for inflammatory bowel disease, using proteomic serum profiling, 1422

IFN-γ

Rosmarinic acid inhibits indoleamine 2,3-dioxygenase expression in murine dendritic cells, 1412

ΙκΒα

Suppression of NF- κ B activation by curcumin leads to inhibition of expression of cyclo-oxygenase-2 and matrix metalloproteinase-9 in human articular chondrocytes: Implications for the treatment of osteoarthritis, 1434 Isoliquiritigenin inhibits I κ B kinase activity and ROS generation to block TNF- α induced expression of cell adhesion molecules on human endothelial cells, 1602

IKK

Melittin inhibits inflammatory target gene expression and mediator generation via interaction with IkB kinase, 237

IL-1β

Suppression of NF- κ B activation by curcumin leads to inhibition of expression of cyclo-oxygenase-2 and matrix metalloproteinase-9 in human articular chondrocytes: Implications for the treatment of osteoarthritis, 1434

Ileum

Inhibition of the intestinal absorption of bile acids using cationic derivatives: Mechanism and repercussions, 394

Imidazolines

Antagonism of the insulinotropic action of first generation imidazolines by openers of $K_{\rm ATP}$ channels, 94

Immepi

Identification of zebrafish histamine $\rm H_1$, $\rm H_2$ and $\rm H_3$ receptors and effects of histaminergic ligands on behavior, 1205 Immunosuppression

Nicotinamide inhibits B lymphocyte activation by disrupting MAPK signal transduction, 831

Indoleamine 2,3-dioxygenase

Rosmarinic acid inhibits indoleamine 2,3-dioxygenase expression in murine dendritic cells, 1412

Inflammation

Statins decrease TNF- α -induced osteoprotegerin production by endothelial cells and smooth muscle cells in vitro, 77 Triptolide, a diterpenoid triepoxide, suppresses inflammation and cartilage destruction in collagen-induced arthritis mice, 136

Melittin inhibits inflammatory target gene expression and mediator generation via interaction with IkB kinase, 237 Biomarker discovery for inflammatory bowel disease, using proteomic serum profiling, 1422

Dihydrolipoic acid inhibits skin tumor promotion through anti-inflammation and anti-oxidation, 1786

L-454,560, a potent and selective PDE4 inhibitor with in vivo efficacy in animal models of asthma and cognition, 1971 Role of IKK and ERK pathways in intrinsic inflammation of cystic fibrosis airways, 1982

Inflammatory cytokines

Triptolide, a diterpenoid triepoxide, suppresses inflammation and cartilage destruction in collagen-induced arthritis mice, 136

Inhibition

Clotrimazole inhibits and modulates heterologous association of the key glycolytic enzyme 6-phosphofructo-1-kinase, 1520

Inhibitor

Sulfated cyclodextrins inhibit the entry of Plasmodium into red blood cells. Implications for malarial therapy, 632

iNOS

Neuroprotective effects of PMC, a potent α -tocopherol derivative, in brain ischemia-reperfusion: Reduced neutrophil activation and anti-oxidant actions, 682

Inositol phosphate

Regulatory mechanisms underlying GKR2 levels in U937 cells: Evidence for GRK3 involvement, 1758

InsL3

Relaxin receptors in hepatic stellate cells and cirrhotic liver. 1033

Insulin secretion

Curcumin induces electrical activity in rat pancreatic $\beta\text{-cells}$ by activating the volume-regulated anion channel, 1768

Insulin-induced gene (Insig)

Activation of PPAR α lowers synthesis and concentration of cholesterol by reduction of nuclear SREBP-2, 574

Insulin-like growth factor receptor 1

Sorafenib alone or as combination therapy for growth control of cholangiocarcinoma, 1308

Integrin $\alpha_{IIb}\beta_2$

Inhibition of ADP-induced platelet adhesion to immobilised fibrinogen by nitric oxide: Evidence for cGMP-independent mechanisms, 1593

Internalization

Delineation of the motilin domain involved in desensitization and internalization of the motilin receptor by using full and partial antagonists, 115

Signal transduction and regulation: Are all α_1 -adrenergic receptor subtypes created equal?, 1097

Interstrand cross-links

Promotion of DNA strand breaks, interstrand cross-links and apoptotic cell death in A2780 human ovarian cancer cells by transplatinum planar amine complexes, 1749

Intestine

Inhibition of the intestinal absorption of bile acids using cationic derivatives: Mechanism and repercussions, 394 Novel bile acid derivatives (BANBs) with cytostatic activity obtained by conjugation of their side chain with nitrogenated bases, 1394

Intracellular Ca

Novel agonistic action of mustard oil on recombinant and endogenous porcine transient receptor potential V1 (pTRPV1) channels, 1646

Intracellular calcium increase

Effect of lysophosphatidylglycerol on several signaling molecules in OVCAR-3 human ovarian cancer cells: Involvement of pertussis toxin-sensitive G-protein coupled receptor, 675

Inverse agonism

"Phenotypic" pharmacology: The influence of cellular environment on G protein-coupled receptor antagonist and inverse agonist pharmacology, 737

Constitutive activity and inverse agonism at the $\alpha_1 adrenoceptors,\,1076$

Inverse agonist

Interaction of valerian extracts of different polarity with adenosine receptors: Identification of isovaltrate as an inverse agonist at A_1 receptors, 248

Conformational state of human cardiac 5-HT $_{4(g)}$ receptors influences the functional effects of polyclonal anti-5-HT $_4$ receptor antibodies, 964

Inverse agonist/antagonist

Brain histamine and schizophrenia: Potential therapeutic applications of $\rm H_3$ -receptor inverse agonists studied with BF2.649, 1215

Ion channels

Partial agonists as therapeutic agents at neuronal nicotinic acetylcholine receptors, 459

Irinotecan

Efficacy of increasing the therapeutic index of irinotecan, plasma and tissue selenium concentrations is methylselenocysteine dose dependent, 1280

Irofulven

Irofulven induces replication-dependent CHK2 activation related to p53 status, 469

Irritable bowel syndrome

Functional CRF receptors in BON cells stimulate serotonin release, 805

Ischemia-reperfusion injury

Sodium nitroprusside decreased leukotriene C4 generation by inhibiting leukotriene C4 synthase expression and activity in hepatic ischemia-reperfusion injured rats, 724

Islet

Curcumin induces electrical activity in rat pancreatic β -cells by activating the volume-regulated anion channel, 1768

Isofagomine

Selective action of the iminosugar isofagomine, a pharmacological chaperone for mutant forms of acid- β -glucosidase, 1376

Isolated sympathetic nerve endings

Histamine H₃-receptor signaling in cardiac sympathetic nerves: Identification of a novel MAPK-PLA₂-COX-PGE₂-EP₃R pathway, 1146

Isoliquiritigenin

Isoliquiritigenin inhibits $I\kappa B$ kinase activity and ROS generation to block TNF- α induced expression of cell adhesion molecules on human endothelial cells, 1602

Isoprenaline

Inhibition of nitric oxide-guanylate cyclase-dependent and -independent signaling contributes to impairment of β -adrenergic vasorelaxations by cyclosporine, 359

Isovaltrate

Interaction of valerian extracts of different polarity with adenosine receptors: Identification of isovaltrate as an inverse agonist at A_1 receptors, 248

Jejunum

Role of Tyr306 in the C-terminal fragment of Clostridium perfringens enterotoxin for modulation of tight junction,

JNJ-10181457

Histamine H₃ receptor antagonists: From target identification to drug leads, 1084

JNJ-5207852

Histamine H₃ receptor antagonists: From target identification to drug leads, 1084

INK

Tangeretin suppresses IL-1 β -induced cyclooxygenase (COX)-2 expression through inhibition of p38 MAPK, JNK, and AKT activation in human lung carcinoma cells, 215

K⁺ outward current

The activation by estrogen receptor agonists of the ${\rm BK_{Ca}}^-$ channel in human cardiac fibroblasts, 1347

K562

Accumulation of γ -globin mRNA and induction of irreversible erythroid differentiation after treatment of CML cell line K562 with new doxorubicin derivatives, 175

K562 leukemia cells

Data mining of NCI's anticancer screening database reveals mitochondrial complex I inhibitors cytotoxic to leukemia cell lines, 331

K_{ATP} channel

Antagonism of the insulinotropic action of first generation imidazolines by openers of $K_{\rm ATP}$ channels, 94

Keratinocyte

The autocrine $TNF\alpha$ signalling loop in keratinocytes requires atypical PKC species and NF- κB activation but is independent of cholesterol-enriched membrane microdomains, 526

Knockout mice

Clinical implications from studies of $\alpha 1$ adrenergic receptor knockout mice, 1107

The brain H₃-receptor as a novel therapeutic target for vigilance and sleep–wake disorders, 1157

Langendorff-perfused guinea-pig hearts

Histamine H₃-receptor signaling in cardiac sympathetic nerves: Identification of a novel MAPK-PLA₂-COX-PGE₂-EP₃R pathway, 1146

Lanthanum

Multidrug-resistant cancer cells are preferential targets of the new antineoplastic lanthanum compound KP772 (FFC24), 1873

Large-conductance Ca²⁺-activated K⁺ channel

The activation by estrogen receptor agonists of the BK_{Ca} -channel in human cardiac fibroblasts, 1347

LC/MS

Roles of CYP3A4 and CYP2C19 in methyl hydroxylated and N-oxidized metabolite formation from voriconazole, a new anti-fungal agent, in human liver microsomes, 2020

LDL receptor

Activation of PPAR α lowers synthesis and concentration of cholesterol by reduction of nuclear SREBP-2, 574

Leptin

Effects of leptin on apoptosis and adipogenesis in 3T3-L1 adipocytes, 378

LETFs and STAT5b

Induction of CYP2C12 expression in senescent male rats is well correlated to an increase of HNF3 β expression, while the decline of CYP2C11 expression is unlikely due to a decrease of STAT5 activation, 923

Leukotriene C4 synthase

Sodium nitroprusside decreased leukotriene C4 generation by inhibiting leukotriene C4 synthase expression and activity in hepatic ischemia-reperfusion injured rats, 724

LGR7

Relaxin receptors in hepatic stellate cells and cirrhotic liver, 1033

LGR8

Relaxin receptors in hepatic stellate cells and cirrhotic liver, 1033

Ligand-gated ion channels

Chain length dependence of the interactions of bisquaternary ligands with the *Torpedo* nicotinic acetylcholine receptor, 417

Ligands

Structure–function of α_1 -adrenergic receptors, 1051

Lipid mediators

The acetaminophen-derived bioactive N-acylphenolamine AM404 inhibits NFAT by targeting nuclear regulatory events, 1013

Lipid metabolism

An antioxidant effect by acyclic retinoid suppresses liver tumor in mice, 1405

Lipid rafts

The autocrine $TNF\alpha$ signalling loop in keratinocytes requires atypical PKC species and $NF-\kappa B$ activation but is independent of cholesterol-enriched membrane microdomains, 526

Cholesterol reduction by methyl- β -cyclodextrin attenuates the delta opioid receptor-mediated signaling in neuronal cells but enhances it in non-neuronal cells, 534

α -Lipoic acid (LA)

Dihydrolipoic acid inhibits skin tumor promotion through anti-inflammation and anti-oxidation, 1786

Liver

Properties of flavonoids influencing the binding to bilitranslocase investigated by neural network modelling, 308 Inhibition of the intestinal absorption of bile acids using cationic derivatives: Mechanism and repercussions, 394 Sodium nitroprusside decreased leukotriene C4 generation by inhibiting leukotriene C4 synthase expression and activity in hepatic ischemia-reperfusion injured rats, 724 Novel bile acid derivatives (BANBs) with cytostatic activity obtained by conjugation of their side chain with nitrogenated bases, 1394

The role of esterases in the metabolism of ciclesonide to desisobutyryl-ciclesonide in human tissue, 1657

Liver epithelial cells

 β -Naphthoflavone and 3'-methoxy-4'-nitroflavone exert ambiguous effects on Ah receptor-dependent cell proliferation and gene expression in rat liver 'stem-like' cells, 1622

Liver fibrosis

Pharmacokinetics of a hepatic stellate cell-targeted doxorubicin construct in bile duct-ligated rats, 1455

Liver proliferation

Involvement of alcohol and aldehyde dehydrogenase activities on hepatic retinoid metabolism and its possible participation in the progression of rat liver regeneration, 586

Liver tumor

An antioxidant effect by acyclic retinoid suppresses liver tumor in mice, 1405

Locomotor activity

Brain histamine and schizophrenia: Potential therapeutic applications of H_3 -receptor inverse agonists studied with BF2.649, 1215

Lower urinary tract

Clinical implications from studies of $\alpha 1$ adrenergic receptor knockout mice, 1107

Lung

The role of esterases in the metabolism of ciclesonide to desisobutyryl-ciclesonide in human tissue, 1657

Lysophosphatidylglycerol

Effect of lysophosphatidylglycerol on several signaling molecules in OVCAR-3 human ovarian cancer cells: Involvement of pertussis toxin-sensitive G-protein coupled receptor, 675

Lysosomotropism

Activity of piperaquine and other 4-aminoquinoline antiplasmodial drugs against chloroquine-sensitive and resistant blood-stages of Plasmodium falciparum. Role of β -haematin inhibition and drug concentration in vacuolar water- and lipid-phases, 1910

Macromolecule

Development of elastin-like polypeptide for thermally targeted delivery of doxorubicin, 620

Macrophage

Multidrug resistance related protein (ABCC1) and its role on nitrite production by the murine macrophage cell line RAW 264.7, 665

Comparative effects of five bisphosphonates on apoptosis of macrophage cells in vitro, 718

A synthetic analog of α -galactosylceramide induces macrophage activation via the TLR4-signaling pathways, 1957

Malaria

Sulfated cyclodextrins inhibit the entry of *Plasmodium* into red blood cells. Implications for malarial therapy, 632

Mannose-6-phosphate/insulin-like growth factor II receptor Pharmacokinetics of a hepatic stellate cell-targeted doxorubicin construct in bile duct-ligated rats, 1455

MAP kinases

Mechanisms for prostaglandin $\rm E_2$ formation caused by proteinase-activated receptor-1 activation in rat gastric mucosal epithelial cells, 103

Cannabinoids inhibit sodium-dependent, high-affinity excitatory amino acid transport in cultured rat cortical astrocytes, 2004

MAPK

A synthetic analog of $\alpha\mbox{-galactosylceramide}$ induces macrophage activation via the TLR4-signaling pathways, 1957

MAPK/ERK pathway

Pharmacological inhibition of the MAPK/ERK pathway increases sensitivity to 2-chloro-2'-deoxyadenosine (CdA) in the B-cell leukemia cell line EHEB, 351

MAPK-PLA₂-COX-PGE₂-EP₃-receptor cascade

Histamine H_3 -receptor signaling in cardiac sympathetic nerves: Identification of a novel MAPK-PLA₂-COX-PGE₂-EP₃R pathway, 1146

MATE1

Pharmacokinetic significance of luminal multidrug and toxin extrusion 1 in chronic renal failure rats, 1482

Maternal separation

Maternal separation alters drug intake patterns in adulthood in rats, 321

Matrix metalloproteinases

Triptolide, a diterpenoid triepoxide, suppresses inflammation and cartilage destruction in collagen-induced arthritis mice. 136

Matrix metalloproteinase-7-catalyzed release of HB-EGF mediates deoxycholyltaurine-induced proliferation of a human colon cancer cell line, 1001

MCAC

Neuroprotective effects of PMC, a potent α -tocopherol derivative, in brain ischemia-reperfusion: Reduced neutrophil activation and anti-oxidant actions, 682

MCF-7

Peripheral-type benzodiazepine receptor overexpression and knockdown in human breast cancer cells indicate its prominent role in tumor cell proliferation, 491

MDA-MB-231

Peripheral-type benzodiazepine receptor overexpression and knockdown in human breast cancer cells indicate its prominent role in tumor cell proliferation, 491

MDCK cells

Mitochondria play an important role in adenosine-induced ATP release from Madin–Darby canine kidney cells, 1676 Mechanism of action

Mechanism of action of AZD0865, a K⁺-competitive inhibitor of gastric H⁺,K⁺-ATPase, 198

Mefenamic acid

Glucuronidation of fenamates: Kinetic studies using human kidney cortical microsomes and recombinant UDP-glucuronosyltransferase (UGT) 1A9 and 2B7, 1683

MEK inhibitors

Pharmacological inhibition of the MAPK/ERK pathway increases sensitivity to 2-chloro-2'-deoxyadenosine (CdA) in the B-cell leukemia cell line EHEB, 351

Melanoma

Mitochondria are primary targets in apoptosis induced by the mixed phosphine gold species chlorotriphenylphosphine-1,3-bis(diphenylphosphino)propanegold(I) in melanoma cell lines, 773

Melittin

Melittin inhibits inflammatory target gene expression and mediator generation via interaction with IκB kinase, 237

Membrane

Clotrimazole inhibits and modulates heterologous association of the key glycolytic enzyme 6-phosphofructo-1-kinase, 1520

Merozoite

Sulfated cyclodextrins inhibit the entry of *Plasmodium* into red blood cells. Implications for malarial therapy, 632

Mesangial cell

Alterations in cytoskeletal protein expression by mycophenolic acid in human mesangial cells requires Rac inactivation, 1491

Metabolism

Identification of monoamine oxidase and cytochrome P450 isoenzymes involved in the deamination of phenethylamine-derived designer drugs (2C-series), 287 The role of esterases in the metabolism of ciclesonide to desisobutyryl-ciclesonide in human tissue, 1657

Metabolomics

The metabolomics of (±)-arecoline 1-oxide in the mouse and its formation by human flavin-containing monooxygenases, 561

Meta-iodobenzylguanidine

Nicotinamide inhibits B lymphocyte activation by disrupting MAPK signal transduction, 831

Metastasis

Focal adhesion kinase: A potential target in cancer therapy, 597

Methadone

Effects of chronic opioid exposure on guinea pig mu opioid receptor in Chinese hamster ovary cells: Comparison with human and rat receptor, 1818

Methanadamide

Cannabinoids inhibit sodium-dependent, high-affinity excitatory amino acid transport in cultured rat cortical astrocytes, 2004

N-methyĺ-p-aspartate

Carnosine protects against NMDA-induced neurotoxicity in differentiated rat PC12 cells through carnosine-histidine-histamine pathway and $\rm H_1/H_3$ receptors, 709

N-Methyl-D-aspartate receptor

Glutamate-stimulated peroxynitrite production in a brain-derived endothelial cell line is dependent on N-methyl-p-aspartate (NMDA) receptor activation, 228

Methylated flavones

Cancer chemopreventive properties of orally bioavailable flavonoids—Methylated versus unmethylated flavones,

Methyl-β-cyclodextrin

Cholesterol reduction by methyl- β -cyclodextrin attenuates the delta opioid receptor-mediated signaling in neuronal cells but enhances it in non-neuronal cells, 534

4-Methylpyrazole

Involvement of alcohol and aldehyde dehydrogenase activities on hepatic retinoid metabolism and its possible participation in the progression of rat liver regeneration, 586

Methylselenocysteine

Efficacy of increasing the therapeutic index of irinotecan, plasma and tissue selenium concentrations is methylselenocysteine dose dependent, 1280

Microdialysis

Histamine in the brain: Beyond sleep and memory, 1113 Microsomal enzymes

Kinetics of glyburide metabolism by hepatic and placental microsomes of human and baboon, 2012

Microsomal glutathione-S-transferase

Sodium nitroprusside decreased leukotriene C4 generation by inhibiting leukotriene C4 synthase expression and activity in hepatic ischemia-reperfusion injured rats, 724

Microsomal prostaglandin E synthase 1

Involvement of early growth response gene 1 in the modulation of microsomal prostaglandin E synthase 1 by epigallocatechin gallate in A549 human pulmonary epithelial cells, 125

Microtubule

Capsaicin causes protein synthesis inhibition and microtubule disassembly through TRPV1 activities both on the plasma membrane and intracellular membranes, 1635

Mitiglinide

Carboxyl-glucuronidation of mitiglinide by human UDP-glucuronosyltransferases, 1842

Mitochondria

Data mining of NCI's anticancer screening database reveals mitochondrial complex I inhibitors cytotoxic to leukemia cell lines, 331

Dicoumarol impairs mitochondrial electron transport and pyrimidine biosynthesis in human myeloid leukemia HL-60 cells, 427

Mitochondria-mediated and p53-associated apoptosis induced in human cancer cells by a novel selenophene derivative, D-501036, 610

Mitochondria are primary targets in apoptosis induced by the mixed phosphine gold species chlorotriphenylphosphine-1,3-bis(diphenylphosphino)propanegold(I) in melanoma cell lines, 773

Genistein induces apoptosis in human hepatocellular carcinomas via interaction of endoplasmic reticulum stress and mitochondrial insult, 782

Mitochondria play an important role in adenosineinduced ATP release from Madin–Darby canine kidney cells 1676

CagA protein of Helicobacter pylori: A hijacker of gastric epithelial cell signaling, 1697

Mitochondrial damage

Toxic effects of cobalt in primary cultures of mouse astrocytes. Similarities with hypoxia and role of HIF-1 α , 694

Mitochondrial dysfunction

Resveratrol protects dopaminergic neurons in midbrain slice culture from multiple insults, 550

Modafinil

The brain $\rm H_3\text{-}receptor$ as a novel therapeutic target for vigilance and sleep—wake disorders, 1157

Modeling

Structure–function of α_1 -adrenergic receptors, 1051

Molecular dynamics

Constitutive activity and inverse agonism at the $\alpha_1 adrenoceptors,\,1076$

Molecular modeling

Synthesis, biological evaluation and molecular modeling studies of N⁶-benzyladenosine analogues as potential anti-toxoplasma agents, 1558

Monkey liver microsomes

Diclofenac hydroxylation in monkeys: Efficiency, regioselectivity, and response to inhibitors, 880

Monkeys

Antagonistic targeting of the histamine H_3 receptor decreases caloric intake in higher mammalian species,

Monoamine oxidase

Identification of monoamine oxidase and cytochrome P450 isoenzymes involved in the deamination of phenethylamine-derived designer drugs (2C-series), 287

Morphine

Effects of chronic opioid exposure on guinea pig mu opioid receptor in Chinese hamster ovary cells: Comparison with human and rat receptor, 1818

Motilin agonist

Delineation of the motilin domain involved in desensitization and internalization of the motilin receptor by using full and partial antagonists, 115

Motilin antagonist

Delineation of the motilin domain involved in desensitization and internalization of the motilin receptor by using full and partial antagonists, 115

Motilin receptor

Delineation of the motilin domain involved in desensitization and internalization of the motilin receptor by using full and partial antagonists, 115

Mouse

Glutathione depletion and recovery after acute ethanol administration in the aging mouse, 1613

Mouse mutant

Prostanoids in nociception and pain, 165

mRNA stabilization

Accumulation of γ -globin mRNA and induction of irreversible erythroid differentiation after treatment of CML cell line K562 with new doxorubicin derivatives, 175

MRP-1

Circumvention of the multidrug-resistance protein (MRP-1) by an antitumor drug through specific inhibition of gene transcription in breast tumor cells, 934

Multidrug resistance

Multidrug resistance related protein (ABCC1) and its role on nitrite production by the murine macrophage cell line RAW 264.7, 665

Circumvention of the multidrug-resistance protein (MRP-1) by an antitumor drug through specific inhibition of gene transcription in breast tumor cells, 934

Modulation of GSH levels in ABCC1 expressing tumor cells triggers apoptosis through oxidative stress, 1727

Multidrug-resistant cancer cells are preferential targets of the new antineoplastic lanthanum compound KP772 (FFC24), 1873

Murine L929 cells

Vanadate-induced activation of cytosolic phospholipase $A_2\alpha$ in L929 cells: Roles of tyrosine kinase, protein kinase C, and extracellular signal-regulated kinase, 854

Muscarinic receptor

"Phenotypic" pharmacology: The influence of cellular environment on G protein-coupled receptor antagonist and inverse agonist pharmacology, 737

Mutagenesis

Structure–function of α_1 -adrenergic receptors, 1051

Mycophenolic acid

Alterations in cytoskeletal protein expression by mycophenolic acid in human mesangial cells requires Rac inactivation, 1491

Myricetin

Myricetin induces human osteoblast differentiation through bone morphogenetic protein-2/p38 mitogenactivated protein kinase pathway, 504

Myriocin/ISP-1

Inhibition of atherosclerosis by the serine palmitoyl transferase inhibitor myriocin is associated with reduced plasma glycosphingolipid concentration, 1340

Na⁺/H⁺ exchanger 3

Pharmacokinetic significance of luminal multidrug and toxin extrusion 1 in chronic renal failure rats, 1482

NADH: Coenzyme Q oxidoreductase

Data mining of NCI's anticancer screening database reveals mitochondrial complex I inhibitors cytotoxic to leukemia cell lines. 331

NADPH oxidase

Production of extracellular superoxide by human lymphoblast cell lines: Comparison of electron spin resonance techniques and cytochrome *C* reduction assay, 972 Involvement of reactive oxygen species on the apoptotic

mechanism induced by IFN- α 2b in rat preneoplastic liver,

1776 Narcolepsy

Histamine H₃ receptor antagonists: From target identification to drug leads, 1084

The brain H_3 -receptor as a novel therapeutic target for vigilance and sleep—wake disorders, 1157

Natriuretic peptide

Biochemical and pharmacological characterization of Psite inhibitors on homodimeric guanylyl cyclase domain from natriuretic peptide receptor-A, 954

Necrosis

Comparative effects of five bisphosphonates on apoptosis of macrophage cells in vitro, 718

5/6 Nephrectomy

Pharmacokinetic significance of luminal multidrug and toxin extrusion 1 in chronic renal failure rats, 1482

Nephrotoxicity

Effects of hydroxyl radical scavenging on cisplatininduced p53 activation, tubular cell apoptosis and nephrotoxicity, 1499

Neural blocking agents

In vitro characterization of the effects of endomorphin 1 and 2, endogenous ligands for μ -opioid receptors, on mouse colonic motility, 1384

Neuroanatomy

Central α_1 adrenergic system in behavioral activity and depression, 1063

Neuroblastoma

The novel atypical retinoid ST1926 is active in ATRA resistant neuroblastoma cells acting by a different mechanism, 643

Neurodegeneration

Partial agonists as therapeutic agents at neuronal nicotinic acetylcholine receptors, 459

Neuroinflammation

Resveratrol protects dopaminergic neurons in midbrain slice culture from multiple insults, 550

Neurokinin 1 receptor cloning

Molecular cloning, mutations and effects of NK_1 receptor antagonists reveal the human-like pharmacology of gerbil NK_1 receptors, 259

Neuron

Cholesterol reduction by methyl- β -cyclodextrin attenuates the delta opioid receptor-mediated signaling in neuronal cells but enhances it in non-neuronal cells, 534

Neuropeptide Y

Mechanism of dopamine mediated inhibition of neuropeptide Y release from pheochromocytoma cells (PC12 cells), 1446

Neuroprotection

Carnosine protects against NMDA-induced neurotoxicity in differentiated rat PC12 cells through carnosine-histidine-histamine pathway and $\rm H_1/H_3$ receptors, 709

Neurotoxicity

Carnosine protects against NMDA-induced neurotoxicity in differentiated rat PC12 cells through carnosine-histidine-histamine pathway and H₁/H₃ receptors, 709

Neutral endopeptidase 24.11

Evaluation of therapeutic potentials of site-specific PEGylated glucagon-like peptide-1 isomers as a type 2 anti-diabetic treatment: Insulinotropic activity, glucose-stabilizing capability, and proteolytic stability, 84

Nexavar™

Sorafenib alone or as combination therapy for growth control of cholangiocarcinoma, 1308

NF-κB

Melittin inhibits inflammatory target gene expression and mediator generation via interaction with IkB kinase, 237 The autocrine TNF α signalling loop in keratinocytes requires atypical PKC species and NF-kB activation but is

independent of cholesterol-enriched membrane microdomains, 526

Protective effect of baicalein against endotoxic shock in rats in vivo and in vitro, 793

Suppression of NF- κ B activation by curcumin leads to inhibition of expression of cyclo-oxygenase-2 and matrix metalloproteinase-9 in human articular chondrocytes: Implications for the treatment of osteoarthritis, 1434

Isoliquiritigenin inhibits IkB kinase activity and ROS generation to block TNF- α induced expression of cell adhesion molecules on human endothelial cells, 1602

HIV-1 protease inhibitors do not interfere with provirus transcription and host cell apoptosis induced by combined treatment TNF- α + TSA, 1738

Inhibition of lipopolysaccharide-stimulated NO production by a novel synthetic compound CYL-4d in RAW 264.7 macrophages involving the blockade of MEK4/JNK/AP-1 pathway, 1796

A synthetic analog of α -galactosylceramide induces macrophage activation via the TLR4-signaling pathways, 1957

Role of IKK and ERK pathways in intrinsic inflammation of cystic fibrosis airways, 1982

Nicotinamide

Nicotinamide inhibits B lymphocyte activation by disrupting MAPK signal transduction, 831

Nicotinic acetylcholine receptor

Partial agonists as therapeutic agents at neuronal nicotinic acetylcholine receptors, 459

Niflumic acid

Selective cyclooxygenase-2 inhibitors stimulate glucose transport in L6 myotubes in a protein kinase C8-dependent manner, 368

Glucuronidation of fenamates: Kinetic studies using human kidney cortical microsomes and recombinant UDP-glucuronosyltransferase (UGT) 1A9 and 2B7, 1683

Nimesulide

Selective cyclooxygenase-2 inhibitors stimulate glucose transport in L6 myotubes in a protein kinase $C\delta$ -dependent manner, 368

Nitric oxide

Glutamate-stimulated peroxynitrite production in a brain-derived endothelial cell line is dependent on N-methyl-p-aspartate (NMDA) receptor activation, 228

Inhibition of nitric oxide-guanylate cyclase-dependent and -independent signaling contributes to impairment of β -adrenergic vasorelaxations by cyclosporine, 359

Multidrug resistance related protein (ABCC1) and its role on nitrite production by the murine macrophage cell line RAW 264.7, 665

Sodium nitroprusside decreased leukotriene C4 generation by inhibiting leukotriene C4 synthase expression and activity in hepatic ischemia-reperfusion injured rats, 724 Protective effect of baicalein against endotoxic shock in rats in vivo and in vitro, 793

Improved endothelial function and reduced platelet activation by chronic HMG-CoA-reductase inhibition with rosuvastatin in rats with streptozotocin-induced diabetes mellitus, 1367

Inhibition of ADP-induced platelet adhesion to immobilised fibrinogen by nitric oxide: Evidence for cGMP-independent mechanisms, 1593

Inhibition of lipopolysaccharide-stimulated NO production by a novel synthetic compound CYL-4d in RAW 264.7 macrophages involving the blockade of MEK4/JNK/AP-1 pathway, 1796

5-Nitromegazol

Trypanocidal nitroimidazole derivatives: Relationships among chemical structure and genotoxic activity, 1537

NMR

Roles of CYP3A4 and CYP2C19 in methyl hydroxylated and N-oxidized metabolite formation from voriconazole, a new anti-fungal agent, in human liver microsomes, 2020

NNRTIs

Comparison of the inhibitory activity of anti-HIV drugs on P-glycoprotein, 1573

Nociception

Prostanoids in nociception and pain, 165

Nonsteroidal anti-inflammatory drugs (NSAIDs)

Celecoxib inhibits the expression of survivin via the suppression of promoter activity in human colon cancer cells, 1318

Noradrenaline

Histamine augments β_2 -adrenoceptor-induced cyclic AMP accumulation in human prostate cancer cells DU-145 independently of known histamine receptors, 814

Norepinephrine

Comparison of the maturation of the adrenergic and serotonergic neurotransmitter systems in the brain: Implications for differential drug effects on juveniles and adults, 1225

NQO:

Dicoumarol impairs mitochondrial electron transport and pyrimidine biosynthesis in human myeloid leukemia HL-60 cells, 427

Nrf2

Nrf2 is involved in the effect of tanshinone IIA on intracellular redox status in human aortic smooth muscle cells, 1358

Nrf2, Phase I and II metabolism

Coordinate regulation of Phase I and II xenobiotic metabolisms by the Ah receptor and Nrf2, 1853

NRTIs

Comparison of the inhibitory activity of anti-HIV drugs on P-glycoprotein, 1573

NSAID

Prostanoids in nociception and pain, 165

Nucleating receptor

New paradigms in signal transduction, 1511

Nucleoside analogs

Tezacitabine enhances the DNA-directed effects of fluoropyrimidines in human colon cancer cells and tumor xenografts, 44

Nucleotide

Biochemical and pharmacological characterization of Psite inhibitors on homodimeric guanylyl cyclase domain from natriuretic peptide receptor-A, 954

Nucleotide analogues

Acyclic nucleoside phosphonates: Past, present and future. Bridging chemistry to HIV, HBV, HCV, HPV, adeno-, herpes-, and poxvirus infections: The phosphonate bridge, 911

Nueurokin receptor antagonists

Molecular cloning, mutations and effects of NK₁ receptor antagonists reveal the human-like pharmacology of gerbil NK₁ receptors, 259

OAT

Gene expression and regulation of drug transporters in the intestine and kidney, 440

Obesity

Obesity-induced increase of CYP2E1 activity and its effect on disposition kinetics of chlorzoxazone in Zucker rats, 155

OCT

Gene expression and regulation of drug transporters in the intestine and kidney, 440

OCT1

Low-affinity uptake of the fluorescent organic cation 4-(4-(dimethylamino)styryl)-N-methylpyridinium iodide (4-Di-1-ASP) in BeWo cells, 891

OCT2

Low-affinity uptake of the fluorescent organic cation 4-(4-(dimethylamino)styryl)-N-methylpyridinium iodide (4-Di-1-ASP) in BeWo cells, 891

Oligomerization

Heterodimerization and surface localization of G protein coupled receptors, 1043

Opiates

The effect of opiates on the activity of human placental aromatase/CYP19, 279

Opioid receptors

Cholesterol reduction by methyl-\beta-cyclodextrin attenuates the delta opioid receptor-mediated signaling in neuronal cells but enhances it in non-neuronal cells, 534

Opioid receptors antagonists

In vitro characterization of the effects of endomorphin 1 and 2, endogenous ligands for μ -opioid receptors, on mouse colonic motility, 1384

Oral squamous cell carcinoma

Enhancement of cisplatin induced apoptosis by suberoylanilide hydroxamic acid in human oral squamous cell carcinoma cell lines, 1901

Organic cation transporters

Low-affinity uptake of the fluorescent organic cation 4-(4-(dimethylamino)styryl)-N-methylpyridinium iodide (4-Di-1-ASP) in BeWo cells, 891

Organophosphates

Kinetic analysis of reactivation and aging of human acetylcholinesterase inhibited by different phosphoramidates, 1807

Osteoarthritis (OA)

Suppression of NF- κ B activation by curcumin leads to inhibition of expression of cyclo-oxygenase-2 and matrix metalloproteinase-9 in human articular chondrocytes: Implications for the treatment of osteoarthritis, 1434

Osteoblasts

Oral administration of phenolic antidiarrheic ingredients prevents ovariectomy-induced bone loss, 385

Myricetin induces human osteoblast differentiation through bone morphogenetic protein-2/p38 mitogen-activated protein kinase pathway, 504

Osteoclasts

Identification of two biologically crucial hydroxyl groups of (–)-epigallocatechin gallate in osteoclast culture, 34 Oral administration of phenolic antidiarrheic ingredients prevents ovariectomy-induced bone loss, 385

Osteoprotegerin

Statins decrease TNF- α -induced osteoprotegerin production by endothelial cells and smooth muscle cells in vitro, 77

Ovarian cancer

Acylation with diangeloyl groups at C21–22 positions in triterpenoid saponins is essential for cytotoxcity towards tumor cells. 341

Ovarian cancer cell

Effect of lysophosphatidylglycerol on several signaling molecules in OVCAR-3 human ovarian cancer cells: Involvement of pertussis toxin-sensitive G-protein coupled receptor, 675

Ovariectomy

Oral administration of phenolic antidiarrheic ingredients prevents ovariectomy-induced bone loss, 385

Oxaliplatin

Inhibition of G1/S transition potentiates oxaliplatininduced cell death in colon cancer cell lines, 1715

Oxidative and nitrosative stress

Redox in redux: Emergent roles for glutathione S-transferase P (GSTP) in regulation of cell signaling and S-glutathionylation, 1257

Oxidative stress

Irreversible inhibition of glucose-6-phosphate dehydrogenase by the coenzyme A conjugate of ketoprofen: A key to oxidative stress induced by non-steroidal anti-inflammatory drugs?, 405

Resveratrol protects dopaminergic neurons in midbrain slice culture from multiple insults, 550

Nrf2 is involved in the effect of tanshinone IIA on intracellular redox status in human aortic smooth muscle cells, 1358 An antioxidant effect by acyclic retinoid suppresses liver tumor in mice, 1405

Effects of hydroxyl radical scavenging on cisplatininduced p53 activation, tubular cell apoptosis and nephrotoxicity, 1499

Involvement of reactive oxygen species on the apoptotic mechanism induced by IFN- α 2b in rat preneoplastic liver, 1776 Dihydrolipoic acid inhibits skin tumor promotion through anti-inflammation and anti-oxidation, 1786

Oxidatively damaged DNA

Trypanocidal nitroimidazole derivatives: Relationships among chemical structure and genotoxic activity, 1537

Kinetic analysis of reactivation and aging of human acetylcholinesterase inhibited by different phosphoramidates, 1807

Oxygen-sensor

Harnessing the hypoxia-inducible factor in cancer and ischemic disease, 450

p21

Curcumin induces the degradation of cyclin E expression through ubiquitin-dependent pathway and up-regulates cyclin-dependent kinase inhibitors p21 and p27 in multiple human tumor cell lines, 1024

Inhibition of G1/S transition potentiates oxaliplatininduced cell death in colon cancer cell lines, 1715

p21WAF/CIP1

Peripheral-type benzodiazepine receptor overexpression and knockdown in human breast cancer cells indicate its prominent role in tumor cell proliferation, 491

$p2\bar{1}^{\hbox{Waf1/Cip1}}$

G1 cell cycle arrest by amlodipine, a dihydropyridine Ca²⁺ channel blocker, in human epidermoid carcinoma A431 cells, 943

p27

Curcumin induces the degradation of cyclin E expression through ubiquitin-dependent pathway and up-regulates cyclin-dependent kinase inhibitors p21 and p27 in multiple human tumor cell lines, 1024

p34^{CDC2}

Growth inhibitory activity of cucurbitacin glucosides isolated from Citrullus colocynthis on human breast cancer cells, 56

p38

Myricetin induces human osteoblast differentiation through bone morphogenetic protein-2/p38 mitogen-activated protein kinase pathway, 504

p38 MAPK

Tangeretin suppresses IL-1 β -induced cyclooxygenase (COX)-2 expression through inhibition of p38 MAPK, JNK, and AKT activation in human lung carcinoma cells, 215

P450 2C19

Roles of CYP3A4 and CYP2C19 in methyl hydroxylated and N-oxidized metabolite formation from voriconazole, a new anti-fungal agent, in human liver microsomes, 2020

p53

Irofulven induces replication-dependent CHK2 activation related to p53 status, 469

Peripheral-type benzodiazepine receptor overexpression and knockdown in human breast cancer cells indicate its prominent role in tumor cell proliferation, 491

Mitochondria-mediated and p53-associated apoptosis induced in human cancer cells by a novel selenophene derivative, D-501036, 610

Curcumin induces the degradation of cyclin E expression through ubiquitin-dependent pathway and up-regulates cyclin-dependent kinase inhibitors p21 and p27 in multiple human tumor cell lines, 1024

Effects of hydroxyl radical scavenging on cisplatininduced p53 activation, tubular cell apoptosis and nephrotoxicity, 1499

Pain

Prostanoids in nociception and pain, 165

Structurally novel histamine ${\rm H_3}$ receptor antagonists GSK207040 and GSK334429 improve scopolamine-induced memory impairment and capsaicin-induced secondary allodynia in rats, 1182

Pancreatic beta cell

Curcumin induces electrical activity in rat pancreatic β -cells by activating the volume-regulated anion channel, 1768

Pancreatic islets

Antagonism of the insulinotropic action of first generation imidazolines by openers of $\rm K_{ATP}$ channels, 94

Parietal cell

Mechanism of action of AZD0865, a K^+ -competitive inhibitor of gastric H^+,K^+ -ATPase, 198

Parkinson's disease

Resveratrol protects dopaminergic neurons in midbrain slice culture from multiple insults, 550

Partial agonist

Partial agonists as therapeutic agents at neuronal nicotinic acetylcholine receptors, 459

Patient tumor samples

Pharmacological profiling of disulfiram using human tumor cell lines and human tumor cells from patients, 25

PAX genes

PAX genes: Roles in development, pathophysiology, and cancer, 1

PC12 cells

Mechanism of dopamine mediated inhibition of neuropeptide Y release from pheochromocytoma cells (PC12 cells), 1446

PDF.4

L-454,560, a potent and selective PDE4 inhibitor with in vivo efficacy in animal models of asthma and cognition, 1971

PEGylation

Evaluation of therapeutic potentials of site-specific PEGylated glucagon-like peptide-1 isomers as a type 2 anti-diabetic treatment: Insulinotropic activity, glucose-stabilizing capability, and proteolytic stability, 84

PEPT

Gene expression and regulation of drug transporters in the intestine and kidney, 440

Peroxisome proliferator-activated receptor (PPAR)-α

Activation of PPAR α lowers synthesis and concentration of cholesterol by reduction of nuclear SREBP-2, 574

Peroxynitrite

Glutamate-stimulated peroxynitrite production in a brainderived endothelial cell line is dependent on N-methyl-Daspartate (NMDA) receptor activation, 228

Pertussis toxin-sensitive G-protein

Effect of lysophosphatidylglycerol on several signaling molecules in OVCAR-3 human ovarian cancer cells: Involvement of pertussis toxin-sensitive G-protein coupled receptor, 675

Pharmacology

Heterodimerization and surface localization of G protein coupled receptors, 1043

Molecular aspects of the histamine ${\rm H_3}$ receptor, 1195

Phenanthroline

Multidrug-resistant cancer cells are preferential targets of the new antineoplastic lanthanum compound KP772 (FFC24), 1873

Phosphatidylinositol hydrolysis

Calmodulin potentiates $G\beta\gamma$ activation of phospholipase C- β 3, 270

Phosphine

Mitochondria are primary targets in apoptosis induced by the mixed phosphine gold species chlorotriphenylphosphine-1,3-bis(diphenylphosphino)propanegold(I) in melanoma cell lines, 773

Phosphodiesterase

L-454,560, a potent and selective PDE4 inhibitor with in vivo efficacy in animal models of asthma and cognition, 1971

Phosphoenol-pyruvate carboxykinase

Hexachlorobenzene as hormonal disruptor—studies about glucocorticoids: Their hepatic receptors, adrenal synthesis and plasma levels in relation to impaired gluconeogenesis,

Phosphofructokinase

Clotrimazole inhibits and modulates heterologous association of the key glycolytic enzyme 6-phosphofructo-1-kinase, 1520

Phospholipase C-beta

Calmodulin potentiates $G\beta\gamma$ activation of phospholipase G- $\beta 3, 270$

Phosphorylation

Delineation of the motilin domain involved in desensitization and internalization of the motilin receptor by using full and partial antagonists, 115

CagA protein of Helicobacter pylori: A hijacker of gastric epithelial cell signaling, 1697

אצום

Inhibition of PI3K and calcineurin suppresses chemoattractant receptor-homologous molecule expressed on Th2 cells (CRTH2)-dependent responses of Th2 lymphocytes to prostaglandin D_2 , 843

PI3K/AKT

Tangeretin suppresses IL-1β-induced cyclooxygenase (COX)-2 expression through inhibition of p38 MAPK, JNK, and AKT activation in human lung carcinoma cells, 215

Pigs

Antagonistic targeting of the histamine H_3 receptor decreases caloric intake in higher mammalian species, 1237

Piperaquine

Activity of piperaquine and other 4-aminoquinoline antiplasmodial drugs against chloroquine-sensitive and resistant blood-stages of Plasmodium falciparum. Role of β -haematin inhibition and drug concentration in vacuolar water- and lipid-phases, 1910

PKC

Vanadate-induced activation of cytosolic phospholipase $A_2\alpha$ in L929 cells: Roles of tyrosine kinase, protein kinase C, and extracellular signal-regulated kinase, 854

PKC.

Selective cyclooxygenase-2 inhibitors stimulate glucose transport in L6 myotubes in a protein kinase $C\delta$ -dependent manner, 368

Placenta

Low-affinity uptake of the fluorescent organic cation 4-(4-(dimethylamino)styryl)-N-methylpyridinium iodide (4-Di-1-ASP) in BeWo cells, 891

Plasmodium

Activity of piperaquine and other 4-aminoquinoline antiplasmodial drugs against chloroquine-sensitive and resistant blood-stages of Plasmodium falciparum. Role of β -haematin inhibition and drug concentration in vacuolar water- and lipid-phases, 1910

Plasmodium falciparum

Sulfated cyclodextrins inhibit the entry of *Plasmodium* into red blood cells. Implications for malarial therapy, 632

Platelets

Improved endothelial function and reduced platelet activation by chronic HMG-CoA-reductase inhibition with rosuvastatin in rats with streptozotocin-induced diabetes mellitus, 1367

Inhibition of ADP-induced platelet adhesion to immobilised fibrinogen by nitric oxide: Evidence for cGMP-independent mechanisms, 1593

Platinum

Differences in the cellular response and signaling pathways of cisplatin and BBR3464 ([[trans-PtCl(NH₃)₂] $_2\mu$ -(trans-Pt(NH₃) $_2$ (H₂N(CH₂) $_6$ -NH₂) $_2$)]⁴⁺) influenced by copper homeostasis, 1270

Platinum antitumor drug

DNA interactions of new cytotoxic tetrafunctional dinuclear platinum complex $trans, trans-[\{PtCl_2(NH_3)\}_2(piper-azine)], 1887$

PMAT

Evidence for significant contribution of a newly identified monoamine transporter (PMAT) to serotonin uptake in the human brain, 147

PMC

Neuroprotective effects of PMC, a potent α -tocopherol derivative, in brain ischemia-reperfusion: Reduced neutrophil activation and anti-oxidant actions, 682

Polyamine

Inhibition of the intestinal absorption of bile acids using cationic derivatives: Mechanism and repercussions, 394

olyploidy

Circumvention of the multidrug-resistance protein (MRP-1) by an antitumor drug through specific inhibition of gene transcription in breast tumor cells, 934

Poor metabolizer

Roles of CYP3A4 and CYP2C19 in methyl hydroxylated and N-oxidized metabolite formation from voriconazole, a new anti-fungal agent, in human liver microsomes, 2020

Porphyria

Hexachlorobenzene as hormonal disruptor—studies about glucocorticoids: Their hepatic receptors, adrenal synthesis and plasma levels in relation to impaired gluconeogenesis, 873

PPAR-γ

Rosiglitazone inhibits angiotensin II-induced CTGF expression in vascular smooth muscle cells—Role of PPAR- γ in vascular fibrosis, 185

pRB

G1 cell cycle arrest by amlodipine, a dihydropyridine Ca²⁺ channel blocker, in human epidermoid carcinoma A431 cells. 943

Pregnancy

The effect of opiates on the activity of human placental aromatase/CYP19, 279

Kinetics of glyburide metabolism by hepatic and placental microsomes of human and baboon, 2012

Proliferation

Cancer chemopreventive properties of orally bioavailable flavonoids—Methylated versus unmethylated flavones, 1288

Prolyl hydroxylase domain

Harnessing the hypoxia-inducible factor in cancer and ischemic disease, 450

Promoter

Elevated gadd153/chop expression during resveratrol-induced apoptosis in human colon cancer cells, 68

Promoter activity

Celecoxib inhibits the expression of survivin via the suppression of promoter activity in human colon cancer cells, 1318

Prostaglandin

Prostanoids in nociception and pain, 165

Prostaglandin E2

Mechanisms for prostaglandin $\rm E_2$ formation caused by proteinase-activated receptor-1 activation in rat gastric mucosal epithelial cells, 103

Prostate cancer

Blockade of AKT activation in prostate cancer cells with a small molecule inhibitor, 9-chloro-2-methylellipticinium acetate (CMEP), 15

Down-regulation of human telomerase reverse transcriptase through specific activation of RNAi pathway quickly results in cancer cell growth impairment, 1703

Protease inhibitors

Comparison of the inhibitory activity of anti-HIV drugs on P-glycoprotein, 1573

Proteasome

Curcumin induces the degradation of cyclin E expression through ubiquitin-dependent pathway and up-regulates cyclin-dependent kinase inhibitors p21 and p27 in multiple human tumor cell lines, 1024

Novel tetra-acridine derivatives as dual inhibitors of topoisomerase II and the human proteasome, 1863

Proteasome inhibitor

Pharmacological profiling of disulfiram using human tumor cell lines and human tumor cells from patients, 25

Protein dimer

Biochemical and pharmacological characterization of Psite inhibitors on homodimeric guanylyl cyclase domain from natriuretic peptide receptor-A, 954

Protein kinase C

The autocrine $TNF\alpha$ signalling loop in keratinocytes requires atypical PKC species and $NF-\kappa B$ activation but is independent of cholesterol-enriched membrane microdomains, 526

Protein kinase C θ

Rottlerin inhibits human T cell responses, 515

Protein synthesis

Capsaicin causes protein synthesis inhibition and microtubule disassembly through TRPV1 activities both on the plasma membrane and intracellular membranes, 1635

Proteinase-activated receptor-1 (PAR1)

Mechanisms for prostaglandin $\rm E_2$ formation caused by proteinase-activated receptor-1 activation in rat gastric mucosal epithelial cells, 103

Protein-induced chirality

Interactions of human serum albumin with retinoic acid, retinal and retinyl acetate, 901

Protein-protein interaction

Regulation of $\alpha_2 AR$ trafficking and signaling by interacting proteins, 1135

Proteomics

Biomarker discovery for inflammatory bowel disease, using proteomic serum profiling, 1422

P-site inhibitor

Biochemical and pharmacological characterization of Psite inhibitors on homodimeric guanylyl cyclase domain from natriuretic peptide receptor-A, 954

Psychostimulant

The brain H_3 -receptor as a novel therapeutic target for vigilance and sleep—wake disorders, 1157

Pulmonary inflammation

Involvement of early growth response gene 1 in the modulation of microsomal prostaglandin E synthase 1 by epigallocatechin gallate in A549 human pulmonary epithelial cells, 125

Purine

Biochemical and pharmacological characterization of Psite inhibitors on homodimeric guanylyl cyclase domain from natriuretic peptide receptor-A, 954

Pyrilamine

Identification of zebrafish histamine ${\rm H_1}$, ${\rm H_2}$ and ${\rm H_3}$ receptors and effects of histaminergic ligands on behavior, 1205 Pyrimidines biosynthesis

Dicoumarol impairs mitochondrial electron transport and pyrimidine biosynthesis in human myeloid leukemia HL-60 cells, 427

QSAR modelling

Properties of flavonoids influencing the binding to bilitranslocase investigated by neural network modelling, 308 Quantum chemical calculation

Identification of two biologically crucial hydroxyl groups of (–)-epigallocatechin gallate in osteoclast culture, 34

Radioimmunoassay

Mechanism of dopamine mediated inhibition of neuropeptide Y release from pheochromocytoma cells (PC12 cells), 1446

RAW 264.7

Multidrug resistance related protein (ABCC1) and its role on nitrite production by the murine macrophage cell line RAW 264.7, 665

RAW 264.7 macrophages

Inhibition of lipopolysaccharide-stimulated NO production by a novel synthetic compound CYL-4d in RAW 264.7 macrophages involving the blockade of MEK4/JNK/AP-1 pathway, 1796

Reactivation

Kinetic analysis of reactivation and aging of human acetylcholinesterase inhibited by different phosphoramidates, 1807

Reactive oxygen species

Toxic effects of cobalt in primary cultures of mouse astrocytes. Similarities with hypoxia and role of HIF- 1α , 694

Protective effect of baicalein against endotoxic shock in rats in vivo and in vitro, 793

New paradigms in signal transduction, 1511

Modulation of GSH levels in ABCC1 expressing tumor cells triggers apoptosis through oxidative stress, 1727

Oxidative DNA base damage in MCF-10A breast epithelial cells at clinically achievable concentrations of doxorubicin, 1947

Receptor

Structure–function of α_1 -adrenergic receptors, 1051 Receptor desensitization

Regulatory mechanisms underlying GKR2 levels in U937 cells: Evidence for GRK3 involvement, 1758

Receptor dimerization

"Phenotypic" pharmacology: The influence of cellular environment on G protein-coupled receptor antagonist and inverse agonist pharmacology, 737

Receptor internalization

 ${
m AT_1}$ receptor blocker-insensitive mutant ${
m AT_{1A}}$ angiotensin receptors reveal the presence of G protein-independent signaling in C9 cells, 1582

Receptor phosphorylation

"Phenotypic" pharmacology: The influence of cellular environment on G protein-coupled receptor antagonist and inverse agonist pharmacology, 737

Recombinant monkey CYP2C and CYP3A

Diclofenac hydroxylation in monkeys: Efficiency, regioselectivity, and response to inhibitors, 880

Recombinant UGTs

Carboxyl-glucuronidation of mitiglinide by human UDP-glucuronosyltransferases, 1842

Redox regulation

Redox regulation of human estrogen sulfotransferase (hSULT1E1), 1474

Regioselectivity and response to chemical inhibitors

Diclofenac hydroxylation in monkeys: Efficiency, regioselectivity, and response to inhibitors, 880

Regulation

Signal transduction and regulation: Are all α_1 -adrenergic receptor subtypes created equal?, 1097

Relaxin-3

Relaxin receptors in hepatic stellate cells and cirrhotic liver, 1033

Replication

Irofulven induces replication-dependent CHK2 activation related to p53 status, 469

Resistance

Relevance of drug uptake and efflux for cisplatin sensitivity of tumor cells, 298

Novel bile acid derivatives (BANBs) with cytostatic activity obtained by conjugation of their side chain with nitrogenated bases, 1394

Response elements

Coordinate regulation of Phase I and II xenobiotic metabolisms by the Ah receptor and Nrf2, 1853

Resveratrol

Elevated gadd153/chop expression during resveratrolinduced apoptosis in human colon cancer cells, 68

Retina

Interactions of human serum albumin with retinoic acid, retinal and retinyl acetate, 901

Retinoic acid

Interactions of human serum albumin with retinoic acid, retinal and retinyl acetate, 901

Retinol

Involvement of alcohol and aldehyde dehydrogenase activities on hepatic retinoid metabolism and its possible participation in the progression of rat liver regeneration, 586

Retinol/retinal ratio

Involvement of alcohol and aldehyde dehydrogenase activities on hepatic retinoid metabolism and its possible participation in the progression of rat liver regeneration, 586

Retinyl acetate

Interactions of human serum albumin with retinoic acid, retinal and retinyl acetate, 901

Reversed diamidines

Activity of "reversed" diamidines against Trypanosoma cruzi "in vitro", 1939

Rho GTPases

Alterations in cytoskeletal protein expression by mycophenolic acid in human mesangial cells requires Rac inactivation, 1491

Rhodamine 123

Functional studies on the activity of efflux transporters in an ex vivo model with chicken splenocytes and evaluation of selected fluoroquinolones in this model, 752

Rhodamine123 assay

Comparison of the inhibitory activity of anti-HIV drugs on P-glycoprotein, 1573

Ribonucleotide reductase

Excess ribonucleotide reductase R2 subunits coordinate the S phase checkpoint to facilitate DNA damage repair and recovery from replication stress, 760

The synergistic interaction of gemcitabine and cytosine arabinoside with the ribonucleotide reductase inhibitor triapine is schedule dependent, 1548

An increase of cytochrome C oxidase mediated disruption of gemcitabine incorporation into DNA in a resistant KB clone, 1927

RNA interference

Peripheral-type benzodiazepine receptor overexpression and knockdown in human breast cancer cells indicate its prominent role in tumor cell proliferation, 491

Down-regulation of human telomerase reverse transcriptase through specific activation of RNAi pathway quickly results in cancer cell growth impairment, 1703

Rofecoxib

Selective cyclooxygenase-2 inhibitors stimulate glucose transport in L6 myotubes in a protein kinase $C\delta$ -dependent manner, 368

ROS

The changes of intracellular $\rm H_2O_2$ are an important factor maintaining mitochondria membrane potential of antimycin A-treated As4.1 juxtaglomerular cells, 863

Isoliquiritigenin inhibits I κ B kinase activity and ROS generation to block TNF- α induced expression of cell adhesion molecules on human endothelial cells, 1602

ROS scavenger

The changes of intracellular $\rm H_2O_2$ are an important factor maintaining mitochondria membrane potential of antimycin A-treated As4.1 juxtaglomerular cells, 863

Rosmarinic acid

Rosmarinic acid inhibits indoleamine 2,3-dioxygenase expression in murine dendritic cells, 1412

Rottlerin

Rottlerin inhibits human T cell responses, 515

RUNX3

Contribution of reactivated RUNX3 to inhibition of gastric cancer cell growth following suberoylanilide hydroxamic acid (vorinostat) treatment, 990

SAR

Identification of two biologically crucial hydroxyl groups of (–)-epigallocatechin gallate in osteoclast culture, 34

Schizophrenia

Brain histamine and schizophrenia: Potential therapeutic applications of H_3 -receptor inverse agonists studied with BF2.649, 1215

Scopolamine

Structurally novel histamine ${\rm H_3}$ receptor antagonists GSK207040 and GSK334429 improve scopolamine-induced memory impairment and capsaicin-induced secondary allodynia in rats, 1182

Secondary malignancy

Oxidative DNA base damage in MCF-10A breast epithelial cells at clinically achievable concentrations of doxorubicin, 1947

SELDI-TOF-MS

Biomarker discovery for inflammatory bowel disease, using proteomic serum profiling, 1422

Selective delivery

Pharmacokinetics of a hepatic stellate cell-targeted doxorubicin construct in bile duct-ligated rats, 1455

Selectivity

Mechanism of action of AZD0865, a K⁺-competitive inhibitor of gastric H⁺,K⁺-ATPase, 198

Selenium

Efficacy of increasing the therapeutic index of irinotecan, plasma and tissue selenium concentrations is methylselenocysteine dose dependent, 1280

Selenophene derivative

Mitochondria-mediated and p53-associated apoptosis induced in human cancer cells by a novel selenophene derivative, D-501036, 610

Self-administration

Maternal separation alters drug intake patterns in adult-hood in rats, 321

Self-organized maps

Data mining of NCI's anticancer screening database reveals mitochondrial complex I inhibitors cytotoxic to leukemia cell lines, 331

Senescence

Inducible overexpression of c-Jun in MCF7 cells causes resistance to vinblastine via inhibition of drug-induced apoptosis and senescence at a step subsequent to mitotic arrest, 481

Sepsis

Protective effect of baicalein against endotoxic shock in rats in vivo and in vitro, 793

2C-series

Identification of monoamine oxidase and cytochrome P450 isoenzymes involved in the deamination of phenethylamine-derived designer drugs (2C-series), 287

Serotonin

Evidence for significant contribution of a newly identified monoamine transporter (PMAT) to serotonin uptake in the human brain, 147

Conformational state of human cardiac 5-HT $_{4(g)}$ receptors influences the functional effects of polyclonal anti-5-HT $_4$ receptor antibodies, 964

Comparison of the maturation of the adrenergic and serotonergic neurotransmitter systems in the brain: Implications for differential drug effects on juveniles and adults, 1225

Serum profiling

Biomarker discovery for inflammatory bowel disease, using proteomic serum profiling, 1422

Signal transducer and activator of transcription 1

Rosmarinic acid inhibits indoleamine 2,3-dioxygenase expression in murine dendritic cells, 1412

Signal transduction

"Phenotypic" pharmacology: The influence of cellular environment on G protein-coupled receptor antagonist and inverse agonist pharmacology, 737 The acetaminophen-derived bioactive N-acylphenolamine AM404 inhibits NFAT by targeting nuclear regulatory events, 1013

Signal transduction and regulation: Are all α_1 -adrenergic receptor subtypes created equal?, 1097

Molecular aspects of the histamine H₃ receptor, 1195

CagA protein of Helicobacter pylori: A hijacker of gastric epithelial cell signaling, 1697

Signaling

Heterodimerization and surface localization of G protein coupled receptors, 1043

Signaling by proteolysis

New paradigms in signal transduction, 1511

siRNA

Excess ribonucleotide reductase R2 subunits coordinate the S phase checkpoint to facilitate DNA damage repair and recovery from replication stress, 760

Site directed mutagenesis

Molecular cloning, mutations and effects of NK_1 receptor antagonists reveal the human-like pharmacology of gerbil NK_1 receptors, 259

Skeletal muscle

Selective cyclooxygenase-2 inhibitors stimulate glucose transport in L6 myotubes in a protein kinase $C\delta$ -dependent manner, 368

Sleep/wake

Brain histamine and schizophrenia: Potential therapeutic applications of $\rm H_3$ -receptor inverse agonists studied with BF2.649, 1215

Sleep-wake cycle

The brain ${
m H_3}$ -receptor as a novel the rapeutic target for vigilance and sleep–wake disorders, 1157

Sleep-wake disorders

The brain H₃-receptor as a novel therapeutic target for vigilance and sleep–wake disorders, 1157

Small interfering RNA

Down-regulation of human telomerase reverse transcriptase through specific activation of RNAi pathway quickly results in cancer cell growth impairment, 1703

Small molecule

Blockade of AKT activation in prostate cancer cells with a small molecule inhibitor, 9-chloro-2-methylellipticinium acetate (CMEP), 15

Smooth muscle

Rosiglitazone inhibits angiotensin II-induced CTGF expression in vascular smooth muscle cells—Role of PPAR- γ in vascular fibrosis, 185

Smooth muscle cells

Nrf2 is involved in the effect of tanshinone IIA on intracellular redox status in human aortic smooth muscle cells, 1358

SOD

The changes of intracellular $\rm H_2O_2$ are an important factor maintaining mitochondria membrane potential of antimycin A-treated As4.1 juxtaglomerular cells, 863

Sodium nitroprusside

Sodium nitroprusside decreased leukotriene C4 generation by inhibiting leukotriene C4 synthase expression and activity in hepatic ischemia-reperfusion injured rats, 724

Somnolence

The brain H₃-receptor as a novel therapeutic target for vigilance and sleep–wake disorders, 1157

Sp1

Elevated gadd153/chop expression during resveratrolinduced apoptosis in human colon cancer cells, 68

Sphingolipid inhibition

Inhibition of atherosclerosis by the serine palmitoyl transferase inhibitor myriocin is associated with reduced plasma glycosphingolipid concentration, 1340

Spin probe

Production of extracellular superoxide by human lymphoblast cell lines: Comparison of electron spin resonance techniques and cytochrome C reduction assay, 972

Spin trap

Production of extracellular superoxide by human lymphoblast cell lines: Comparison of electron spin resonance techniques and cytochrome *C* reduction assay, 972

Spinophilin

Regulation of $\alpha_2 AR$ trafficking and signaling by interacting proteins, 1135

Splice variant

Molecular aspects of the histamine H₃ receptor, 1195

Src

Vanadate-induced activation of cytosolic phospholipase $A_2\alpha$ in L929 cells: Roles of tyrosine kinase, protein kinase C, and extracellular signal-regulated kinase, 854

SSRIs

Evidence for significant contribution of a newly identified monoamine transporter (PMAT) to serotonin uptake in the human brain, 147

ST1926

The novel atypical retinoid ST1926 is active in ATRA resistant neuroblastoma cells acting by a different mechanism, 643

Statins

Statins decrease TNF- α -induced osteoprotegerin production by endothelial cells and smooth muscle cells in vitro, 77 Improved endothelial function and reduced platelet activation by chronic HMG-CoA-reductase inhibition with rosuvastatin in rats with streptozotocin-induced diabetes mellitus, 1367

Sterol regulatory element binding protein (SREBP)-2

Activation of PPAR α lowers synthesis and concentration of cholesterol by reduction of nuclear SREBP-2, 574

Stress

Central α_1 -adrenergic system in behavioral activity and depression, 1063

Structure

Structure–function of α_1 -adrenergic receptors, 1051

Structure-activity relationship

Kinetic analysis of reactivation and aging of human acetylcholinesterase inhibited by different phosphoramidates. 1807

Structure-function

Amino terminal domains of human UDP-glucuronosyltransferases (UGT) 2B7 and 2B15 associated with substrate selectivity and autoactivation, 1463

Suberoylanilide hydroxamic acid

Enhancement of cisplatin induced apoptosis by suberoylanilide hydroxamic acid in human oral squamous cell carcinoma cell lines, 1901

Suberyldicholine

Chain length dependence of the interactions of bisquaternary ligands with the *Torpedo* nicotinic acetylcholine receptor, 417

Subtype-specific signaling

Signal transduction and regulation: Are all α_1 -adrenergic receptor subtypes created equal?, 1097

Sulfated cyclodextrin

Sulfated cyclodextrins inhibit the entry of Plasmodium into red blood cells. Implications for malarial therapy, 632

Sulfotransferase

Redox regulation of human estrogen sulfotransferase (hSULT1E1), 1474

SULT1E1

Redox regulation of human estrogen sulfotransferase (hSULT1E1), 1474

Superoxide

Dicoumarol impairs mitochondrial electron transport and pyrimidine biosynthesis in human myeloid leukemia HL-60 cells. 427

Production of extracellular superoxide by human lymphoblast cell lines: Comparison of electron spin resonance techniques and cytochrome *C* reduction assay, 972

Survivin

Celecoxib inhibits the expression of survivin via the suppression of promoter activity in human colon cancer cells, 1318

Synergistic interaction

The synergistic interaction of gemcitabine and cytosine arabinoside with the ribonucleotide reductase inhibitor triapine is schedule dependent, 1548

T cells

The acetaminophen-derived bioactive N-acylphenolamine AM404 inhibits NFAT by targeting nuclear regulatory events, 1013

Rosmarinic acid inhibits indoleamine 2,3-dioxygenase expression in murine dendritic cells. 1412

TAM-67

Inducible overexpression of c-Jun in MCF7 cells causes resistance to vinblastine via inhibition of drug-induced apoptosis and senescence at a step subsequent to mitotic arrest, 481

Tandem mass spectrometry

The metabolomics of (\pm) -arecoline 1-oxide in the mouse and its formation by human flavin-containing monooxygenases, 561

Tangeretir

Tangeretin suppresses IL-1β-induced cyclooxygenase (COX)-2 expression through inhibition of p38 MAPK, JNK, and AKT activation in human lung carcinoma cells, 215

Tanshinone IIA

Nrf2 is involved in the effect of tanshinone IIA on intracellular redox status in human aortic smooth muscle cells, 1358

TCR/CD28 stimulation

Rottlerin inhibits human T cell responses, 515

Telomerase

Down-regulation of human telomerase reverse transcriptase through specific activation of RNAi pathway quickly results in cancer cell growth impairment, 1703

Tenofovir

Acyclic nucleoside phosphonates: Past, present and future. Bridging chemistry to HIV, HBV, HCV, HPV, adeno-, herpes-, and poxvirus infections: The phosphonate bridge, 911

Tezacitabine

Tezacitabine enhances the DNA-directed effects of fluoropyrimidines in human colon cancer cells and tumor xenografts, 44

TFK-1

Sorafenib alone or as combination therapy for growth control of cholangiocarcinoma, 1308

Th2 lymphocytes

Inhibition of PI3K and calcineurin suppresses chemoattractant receptor-homologous molecule expressed on Th2 cells (CRTH2)-dependent responses of Th2 lymphocytes to prostaglandin D_2 , 843

Thermal targeting

Development of elastin-like polypeptide for thermally targeted delivery of doxorubicin, 620

Thiadiazole-5-nitrofuran

Trypanocidal nitroimidazole derivatives: Relationships among chemical structure and genotoxic activity, 1537

Thioperamide

Identification of zebrafish histamine $\rm H_1$, $\rm H_2$ and $\rm H_3$ receptors and effects of histaminergic ligands on behavior, 1205

Thiopurine prodrugs

Human glutathione transferases catalyzing the bioactivation of anticancer thiopurine prodrugs, 1829

Thiosemicarbazone

Trypanocidal nitroimidazole derivatives: Relationships among chemical structure and genotoxic activity, 1537

Tight junction

Role of tyrosine residues in modulation of claudin-4 by the C-terminal fragment of Clostridium perfringens enterotoxin, 206 Role of Tyr306 in the C-terminal fragment of Clostridium perfringens enterotoxin for modulation of tight junction, 824

TLR4

A synthetic analog of α -galactosylceramide induces macrophage activation via the TLR4-signaling pathways, 1957

TNF-α

Suppression of NF- κB activation by curcumin leads to inhibition of expression of cyclo-oxygenase-2 and matrix metalloproteinase-9 in human articular chondrocytes: Implications for the treatment of osteoarthritis, 1434

Tolbutamide

Antagonism of the insulinotropic action of first generation imidazolines by openers of $\rm K_{ATP}$ channels, 94

Topoisomerase II

Novel tetra-acridine derivatives as dual inhibitors of topoisomerase II and the human proteasome, 1863

Torpedo nicotinic acetylcholine receptor

Chain length dependence of the interactions of bisquaternary ligands with the *Torpedo* nicotinic acetylcholine receptor, 417

Toxoplasma gondii adenosine kinase

Synthesis, biological evaluation and molecular modeling studies of N^6 -benzyladenosine analogues as potential anti-toxoplasma agents, 1558

Toxoplasmosis

Synthesis, biological evaluation and molecular modeling studies of N⁶-benzyladenosine analogues as potential anti-toxoplasma agents, 1558

trans-6-(2-Acetylvinylthio)guanine

Human glutathione transferases catalyzing the bioactivation of anticancer thiopurine prodrugs, 1829

Transcription

Gene expression and regulation of drug transporters in the intestine and kidney, 440

Transcription factors

Role of IKK and ERK pathways in intrinsic inflammation of cystic fibrosis airways, 1982

Transforming growth factor-β₁

Involvement of reactive oxygen species on the apoptotic mechanism induced by IFN- α 2b in rat preneoplastic liver, 1776

Transplantation

Alterations in cytoskeletal protein expression by mycophenolic acid in human mesangial cells requires Rac inactivation, 1491

Transplatinum planar amine complexes

Promotion of DNA strand breaks, interstrand cross-links and apoptotic cell death in A2780 human ovarian cancer cells by transplatinum planar amine complexes, 1749

Transport

Relevance of drug uptake and efflux for cisplatin sensitivity of tumor cells, 298

Properties of flavonoids influencing the binding to bilitranslocase investigated by neural network modelling, 308

Inhibition of the intestinal absorption of bile acids using cationic derivatives: Mechanism and repercussions, 394

Transporter

Pharmacokinetic significance of luminal multidrug and toxin extrusion 1 in chronic renal failure rats, 1482

Triapine

The synergistic interaction of gemcitabine and cytosine arabinoside with the ribonucleotide reductase inhibitor triapine is schedule dependent, 1548

Triptolide

Triptolide, a diterpenoid triepoxide, suppresses inflammation and cartilage destruction in collagen-induced arthritis mice. 136

Triterpenoid saponins

Acylation with diangeloyl groups at C21–22 positions in triterpenoid saponins is essential for cytotoxcity towards tumor cells, 341

TRPV1

Capsaicin causes protein synthesis inhibition and microtubule disassembly through TRPV1 activities both on the plasma membrane and intracellular membranes, 1635

Trypanosoma cruzi

Activity of "reversed" diamidines against Trypanosoma cruzi "in vitro", 1939

Tuberomamillary nucleus

Identification of zebrafish histamine H₁, H₂ and H₃ receptors and effects of histaminergic ligands on behavior, 1205

Tubular secretion

Pharmacokinetic significance of luminal multidrug and toxin extrusion 1 in chronic renal failure rats, 1482

Tumor

Novel bile acid derivatives (BANBs) with cytostatic activity obtained by conjugation of their side chain with nitrogenated bases, 1394

Tumor necrosis factor α

The autocrine TNF α signalling loop in keratinocytes requires atypical PKC species and NF- κ B activation but is independent of cholesterol-enriched membrane microdomains, 526

Tumor promotion

Dihydrolipoic acid inhibits skin tumor promotion through anti-inflammation and anti-oxidation, 1786

Tumor suppressor gene

Histone deacetylase inhibitor Trichostatin A induces global and gene-specific DNA demethylation in human cancer cell lines, 1297

Tumour invasion and metabolism

Harnessing the hypoxia-inducible factor in cancer and ischemic disease, 450

Type-2 diabetes

Evaluation of therapeutic potentials of site-specific PEGylated glucagon-like peptide-1 isomers as a type 2 anti-diabetic treatment: Insulinotropic activity, glucose-stabilizing capability, and proteolytic stability, 84

UDP-glucuronosyltransferanse

Carboxyl-glucuronidation of mitiglinide by human UDP-glucuronosyltransferases, 1842

UDP-glucuronosyltransferase

Amino terminal domains of human UDP-glucuronosyltransferases (UGT) 2B7 and 2B15 associated with substrate selectivity and autoactivation, 1463

Glucuronidation of fenamates: Kinetic studies using human kidney cortical microsomes and recombinant UDP-glucuronosyltransferase (UGT) 1A9 and 2B7, 1683

UGT1A3

Carboxyl-glucuronidation of mitiglinide by human UDP-glucuronosyltransferases, 1842

UGT2B15

Amino terminal domains of human UDP-glucuronosyltransferases (UGT) 2B7 and 2B15 associated with substrate selectivity and autoactivation, 1463

UGT2B7

Amino terminal domains of human UDP-glucuronosyltransferases (UGT) 2B7 and 2B15 associated with substrate selectivity and autoactivation, 1463

Carboxyl-glucuronidation of mitiglinide by human UDP-glucuronosyltransferases, 1842

Ultra-performance liquid chromatography

The metabolomics of (±)-arecoline 1-oxide in the mouse and its formation by human flavin-containing monooxygenases, 561

Uptake

Relevance of drug uptake and efflux for cisplatin sensitivity of tumor cells, 298

Urocortin 3

Functional CRF receptors in BON cells stimulate serotonin release, 805

Valerian

Interaction of valerian extracts of different polarity with adenosine receptors: Identification of isovaltrate as an inverse agonist at A_1 receptors, 248

Vanadate

Vanadate-induced activation of cytosolic phospholipase $A_2\alpha$ in L929 cells: Roles of tyrosine kinase, protein kinase C, and extracellular signal-regulated kinase, 854

Vanilloid

Novel agonistic action of mustard oil on recombinant and endogenous porcine transient receptor potential V1 (pTRPV1) channels, 1646

Vascular reactivity

Tamoxifen and estrogen attenuate enhanced vascular reactivity induced by estrogen deficiency in rat carotid arteries, 1330

Viability

Effects of leptin on apoptosis and adipogenesis in 3T3-L1 adipocytes, 378

Vigilance

The brain H_3 -receptor as a novel therapeutic target for vigilance and sleep—wake disorders, 1157

Vinblastine

Inducible overexpression of c-Jun in MCF7 cells causes resistance to vinblastine via inhibition of drug-induced apoptosis and senescence at a step subsequent to mitotic arrest, 481

Vitamines

Nicotinamide inhibits B lymphocyte activation by disrupting MAPK signal transduction, 831

Volume-regulated anion channel

Curcumin induces electrical activity in rat pancreatic β -cells by activating the volume-regulated anion channel, 1768

Vorinostat

Contribution of reactivated RUNX3 to inhibition of gastric cancer cell growth following suberoylanilide hydroxamic acid (vorinostat) treatment, 990

VR1

Capsaicin causes protein synthesis inhibition and microtubule disassembly through TRPV1 activities both on the plasma membrane and intracellular membranes, 1635

Wnt

New paradigms in signal transduction, 1511

Circumvention of the multidrug-resistance protein (MRP-1) by an antitumor drug through specific inhibition of gene transcription in breast tumor cells, 934

Xenobiotic-metabolizing enzymes

β-Naphthoflavone and 3'-methoxy-4'-nitroflavone exert ambiguous effects on Ah receptor-dependent cell proliferation and gene expression in rat liver 'stem-like' cells, 1622

Xenopus oocyte expression

Chain length dependence of the interactions of bisquaternary ligands with the *Torpedo* nicotinic acetylcholine receptor, 417

Zucker rat

Obesity-induced increase of CYP2E1 activity and its effect on disposition kinetics of chlorzoxazone in Zucker rats, 155