

Subject index Volume 67

- A₃ adenosine receptor agonist**
Structural determinants of efficacy at A₃ adenosine receptors: modification of the ribose moiety, 893
- A₃ adenosine receptor antagonist**
Structural determinants of efficacy at A₃ adenosine receptors: modification of the ribose moiety, 893
- A₁ adenosine receptors**
Modulation of A₁ adenosine receptor signaling by peroxynitrite, 375
- ABC transporter**
Evaluation of the binding of the tricyclic isoxazole photoaffinity label LY475776 to multidrug resistance associated protein 1 (MRP1) orthologs and several ATP-binding cassette (ABC) drug transporters, 1111
- ABCA1**
Stimulation of CD36 and the key effector of reverse cholesterol transport ATP-binding cassette A1 in monocytoid cells by niacin, 411
- ABCC1**
Folate concentration dependent transport activity of the Multidrug Resistance Protein 1 (ABCC1), 1541
- ABC-transporter**
Mediation of annexin 1 secretion by a probenecid-sensitive ABC-transporter in rat inflamed mucosa, 1195
- Acacetin**
Acacetin inhibits the proliferation of Hep G2 by blocking cell cycle progression and inducing apoptosis, 823
- α₁-Acid glycoprotein**
Specific ligand binding on genetic variants of human α₁-acid glycoprotein studied by circular dichroism spectroscopy, 679
- Acivicin**
Acivicin-induced alterations in renal and hepatic glutathione concentrations and in γ-glutamyltransferase activities, 1421
- Acridine orange**
Specific ligand binding on genetic variants of human α₁-acid glycoprotein studied by circular dichroism spectroscopy, 679
- Actin cytoskeleton**
Dual effect of hydrogen peroxide on store-mediated calcium entry in human platelets, 1065
- Activation**
Effects of triaryl phosphates on mouse and human nuclear receptors, 97
Differential activation of CYP2C9 variants by dapsone, 1831
- Acute myeloid leukemia**
Drastic effect of cell density on the cytotoxicity of daunorubicin and cytosine arabinoside, 1639
- Acute-phase reaction**
Hepatic expression of multiple acute phase proteins and down-regulation of nuclear receptors after acute endotoxin exposure, 1389
- Adenosine**
Adenosine A₃ receptor-mediated regulation of p38 and extracellular-regulated kinase ERK1/2 via phosphatidylinositol-3'-kinase, 129
Adenosine induces apoptosis in the human gastric cancer cells via an intrinsic pathway relevant to activation of AMP-activated protein kinase, 2005
- Adenosine 3',5'-cyclic monophosphate**
Characterization of mexiletine as an antagonist of β-adrenoceptor in Chinese hamster ovary cells expressing cloned human β-adrenoceptors, 815
- Adenosine A₁ receptors**
Chronic hypoxia up-regulates expression of adenosine A₁ receptors in DDT₁-MF2 cells, 421
- Adenosine kinase**
2-CIATP exerts anti-tumoural actions not mediated by P2 receptors in neuronal and glial cell lines, 621
- Adenosine receptor**
Protection against cisplatin ototoxicity by adenosine agonists, 1801
- Adenylyl cyclase**
Structural determinants of efficacy at A₃ adenosine receptors: modification of the ribose moiety, 893
- Adipocyte differentiation**
Inhibition of 3T3-L1 adipocyte differentiation by 6-ethoxyzolamide: repressed peroxisome proliferator-activated receptor γ mRNA and enhanced CCAAT/enhancer binding protein β mRNA levels, 1667
- Adrenaline**
Inhibition of formyl-methionyl-leucyl-phenylalanine-stimulated respiratory burst in human neutrophils by adrenaline: inhibition of Phospholipase A₂ activity but not p47phox phosphorylation and translocation, 183
- Adrenergic receptor**
Cloning, characterisation and identification of several polymorphisms in the promoter region of the human α_{2B}-adrenergic receptor gene, 469
- α₁-Adrenergic receptor**
Human α_{1D}-adrenoceptor phosphorylation and desensitization, 1853
- β-Adrenoceptor**
Characterization of mexiletine as an antagonist of β-adrenoceptor in Chinese hamster ovary cells expressing cloned human β-adrenoceptors, 815
- α₂-Adrenoceptors**
Medetomidine analogs as selective agonists for the human α₂-adrenoceptors, 87
- Aggregation**
Control of platelet activation by cyclic AMP turnover and cyclic nucleotide phosphodiesterase type-3, 1559
- Aging**
Activation of latent transforming growth factor beta 1 and inhibition of matrix metalloprotease activity by a thrombospondin-like tripeptide linked to elaidic acid, 2013
- Agonists**
Investigation of the mechanism of agonist and inverse agonist action at D₂ dopamine receptors, 1657
- AhR**
Inhibition of osteoclast formation by 3-methylcholanthrene, a ligand for arylhydrocarbon receptor: suppression of osteoclast differentiation factor in osteogenic cells, 119

AIDS

Binding of hybrid molecules containing pyrrolo [2,1-*c*][1,4]benzodiazepine (PBD) and oligopyrrole carriers to the human immunodeficiency type 1 virus TAR-RNA, 401

Air pollutants

Activation of nuclear factor kappa B by diesel exhaust particles in mouse epidermal cells through phosphatidylinositol 3-kinase/Akt signaling pathway, 1975

Akt

Inhibition of osteoclast differentiation and bone resorption by a novel lysophosphatidylcholine derivative, SCOH, 1239

Andrographolide suppresses endothelial cell apoptosis via activation of phosphatidyl inositol-3-kinase/Akt pathway, 1337

Inhibition of osteoclast differentiation and bone resorption by tanshinone IIA isolated from *Salvia miltiorrhiza* Bunge, 1647

Albumin affinity chromatography

Isolation and identification of heterogeneous nuclear ribonucleoproteins (hnRNP) from purified plasma membranes of human tumour cell lines as albumin-binding proteins, 655

Albumin-binding proteins (ABPs)

Isolation and identification of heterogeneous nuclear ribonucleoproteins (hnRNP) from purified plasma membranes of human tumour cell lines as albumin-binding proteins, 655

Alcohol dehydrogenase

WIF-B cells as a model for alcohol-induced hepatocyte injury, 2167

Aldose reductase inhibitor

Uridine diphosphate sugar-selective conjugation of an aldose reductase inhibitor (AS-3201) by UDP-glucuronosyltransferase 2B subfamily in human liver microsomes, 1269

Alkaline phosphatase

Stimulatory effect of naturally occurring flavonols quercetin and kaempferol on alkaline phosphatase activity in MG-63 human osteoblasts through ERK and estrogen receptor pathway, 1307

Allelic variants

Differential activation of CYP2C9 variants by dapsone, 1831

Amiloride derivatives

Inhibition of carcinogen-bioactivating cytochrome P450 1 isoforms by amiloride derivatives, 1711

Amino acid modification

Histidine residues in human phenol sulfotransferases, 1355

4-Aminoquinoline

Synergistic interaction of a chloroquine metabolite with chloroquine against drug-resistant malaria parasites, 1347

AMP

Adenosine induces apoptosis in the human gastric cancer cells via an intrinsic pathway relevant to activation of AMP-activated protein kinase, 2005

AMP-activated protein kinase

Adenosine induces apoptosis in the human gastric cancer cells via an intrinsic pathway relevant to activation of AMP-activated protein kinase, 2005

Amyloid β protein

Protective effects of a selective L-type voltage-sensitive calcium channel blocker, S-312-d, on neuronal cell death, 1153

S-(−)-Anabasine

Nicotine-related alkaloids and metabolites as inhibitors of human cytochrome P-450 2A6, 751

Analgesia

Variable modulation of opioid brain uptake by P-glycoprotein in mice, 269

Analogues

Novel Gemini analogs of 1 α ,25-dihydroxyvitamin D₃ with enhanced transcriptional activity, 1327

S-(−)-Anatabine

Nicotine-related alkaloids and metabolites as inhibitors of human cytochrome P-450 2A6, 751

Androgen receptor

Reduction of androgen receptor expression by benzo[*a*]pyrene and 7,8-dihydro-9,10-epoxy-7,8,9,10-tetrahydrobenzo[*a*]pyrene in human lung cells, 1523

Andrographolide

Andrographolide suppresses endothelial cell apoptosis via activation of phosphatidyl inositol-3-kinase/Akt pathway, 1337

Angiogenesis

Anti-proliferation effect of 5,5-diphenyl-2-thiohydantoin (DPTH) in human vascular endothelial cells, 67

Anti-proliferation effect of 3-amino-2-imino-3,4-dihydro-2*H*-1,3-benzothiazin-4-one (BJ-601) on human vascular endothelial cells: G0/G1 p21-associated cell cycle arrest, 1907

Angiotensin II

Effect of saponin and filipin on antagonist binding to AT₁ receptors in intact cells, 1601

Annexin 1

Mediation of annexin 1 secretion by a probenecid-sensitive ABC-transporter in rat inflamed mucosa, 1195

Antagonist

Effect of saponin and filipin on antagonist binding to AT₁ receptors in intact cells, 1601

Anthocyanins

Induction of apoptosis in two human leukemia cell lines as well as differentiation in human promyelocytic cells by cyanidin-3-*O*- β -glucopyranoside, 2047

1,4-Anthracenediones

Synthetic 1,4-anthracenedione analogs induce cytochrome *c* release, caspase-9, -3, and -8 activities, poly(ADP-ribose) polymerase-1 cleavage and internucleosomal DNA fragmentation in HL-60 cells by a mechanism which involves caspase-2 activation but not Fas signaling, 523

Anthramycin

Binding of hybrid molecules containing pyrrolo [2,1-*c*][1,4]benzodiazepine (PBD) and oligopyrrole carriers to the human immunodeficiency type 1 virus TAR-RNA, 401

Antibiotics

Novel *N*-thiolated β -lactam antibiotics selectively induce apoptosis in human tumor and transformed, but not normal or nontransformed, cells, 365

Anticancer drugs

Novel *N*-thiolated β -lactam antibiotics selectively induce apoptosis in human tumor and transformed, but not normal or nontransformed, cells, 365

Anti-copper drugs

Organic copper complexes as a new class of proteasome inhibitors and apoptosis inducers in human cancer cells, 1139

Antiestrogen

Quaternary ammonium-linked glucuronidation of tamoxifen by human liver microsomes and UDP-glucuronosyltransferase 1A4, 2093

Anti-Kir6.1 antibody

Selective expression of Kir6.1 protein in different vascular and non-vascular tissues, 147

Antioxidant response element

A cell-based system to identify and characterize the molecular mechanism of drug-metabolizing enzyme (DME) modulators, 1897

Antioxidants

Usnic acid-induced necrosis of cultured mouse hepatocytes: inhibition of mitochondrial function and oxidative stress, 439

Antiplatelet activity

Mechanisms involved in the antiplatelet activity of 8-methyl-4-(1-piperazinyl)-7-(3-pyridinylmethoxy)-2*H*-1-benzopyran-2-one (RC414), 911

Antiproliferative effect

Iron mobilization, cytoprotection, and inhibition of cell proliferation in normal and transformed rat hepatocyte cultures by the hydroxypyridinone CP411, compared to CP20: a biological and physicochemical study, 1479

Antitumor drugs

DNA interactions of new antitumor platinum complexes with *trans* geometry activated by a 2-methylbutylamine or *sec*-butylamine ligand, 1097

Antiviral

Potent, selective and cell-mediated inhibition of human herpesvirus 6 at an early stage of viral replication by the non-nucleoside compound CMV423, 325

Aortic smooth muscle cells

Isorhapontigenin and resveratrol suppress oxLDL-induced proliferation and activation of ERK1/2 mitogen-activated protein kinases of bovine aortic smooth muscle cells, 777

AP-1

Inhibition of lipopolysaccharide-induced expression of inducible nitric oxide synthase and tumor necrosis factor- α by 2'-hydroxychalcone derivatives in RAW 264.7 cells, 1549

Apoptosis

Comparative efficacy of novel platinum(IV) compounds with established chemotherapeutic drugs in solid tumour models, 17

Propolin C from propolis induces apoptosis through activating caspases, Bid and cytochrome *c* release in human melanoma cells, 53

Effect of vascular endothelial growth factor and epidermal growth factor on iatrogenic apoptosis in human endothelial cells, 277

Disruption of mitochondria during tocotrienol-induced apoptosis in MDA-MB-231 human breast cancer cells, 315

Novel *N*-thiolated β -lactam antibiotics selectively induce apoptosis in human tumor and transformed, but not normal or nontransformed, cells, 365

Selenite-induced apoptosis in doxorubicin-resistant cells and effects on the thioredoxin system, 513

Synthetic 1,4-anthracenedione analogs induce cytochrome *c* release, caspase-9, -3, and -8 activities, poly(ADP-ribose) polymerase-1 cleavage and internucleosomal DNA fragmentation in HL-60 cells by a mechanism which involves caspase-2 activation but not Fas signaling, 523

Methioninase and selenomethionine but not Se-methylselenocysteine generate methylselenol and superoxide in an *in vitro* chemiluminescent assay: implications for the nutritional carcinostatic activity of selenoamino acids, 547

Investigation of ouabain-induced anticancer effect in human androgen-independent prostate cancer PC-3 cells, 727

Acacetin inhibits the proliferation of Hep G2 by blocking cell cycle progression and inducing apoptosis, 823

Disorazol A₁, a highly effective antimetabolic agent acting on tubulin polymerization and inducing apoptosis in mammalian cells, 927

Role of reactive oxygen species, glutathione and NF- κ B in apoptosis induced by 3,4-methylenedioxymethamphetamine ("Ecstasy") on hepatic stellate cells, 1025

Relationship between daunorubicin concentration and apoptosis induction in leukemic cells, 1047

Protective effects of a selective L-type voltage-sensitive calcium channel blocker, S-312-d, on neuronal cell death, 1153

The biphasic effects of cyclopentenone prostaglandins, prostaglandin J₂ and 15-deoxy- $\Delta^{12,14}$ -prostaglandin J₂ on proliferation and apoptosis in rat basophilic leukemia (RBL-2H3) cells, 1259

Andrographolide suppresses endothelial cell apoptosis via activation of phosphatidylinositol-3-kinase/Akt pathway, 1337

Resveratrol, a polyphenol found in grapes, suppresses oxidative damage and stimulates apoptosis during early colonic inflammation in rats, 1399

Cyclooxygenase-2 (COX-2)-dependent and -independent anticarcinogenic effects of celecoxib in human colon carcinoma cells, 1469

Role of zinc and iron chelation in apoptosis mediated by tachpyridine, an anti-cancer iron chelator, 1677

Enhancement of peripheral benzodiazepine receptor ligand-induced apoptosis and cell cycle arrest of esophageal cancer cells by simultaneous inhibition of MAPK/ERK kinase, 1701

β -Cell toxicity of ATP-sensitive K⁺ channel-blocking insulin secretagogues, 1733

Diisothiocyanate derivatives as potent, insurmountable antagonists of P2Y₆ nucleotide receptors, 1763

Roles of p38 and JNK mitogen-activated protein kinase pathways during cantharidin-induced apoptosis in U937 cells, 1811

Tetrandrine-induced apoptosis is mediated by activation of caspases and PKC- δ in U937 cells, 1819

Involvement of tyrosine kinase p56/Lck in apoptosis induction by anticancer drugs, 1859

Roscovitine, olomoucine, purvalanol: inducers of apoptosis in maturing cerebellar granule neurons, 1947

Adenosine induces apoptosis in the human gastric cancer cells via an intrinsic pathway relevant to activation of AMP-activated protein kinase, 2005

Induction of apoptosis in two human leukemia cell lines as well as differentiation in human promyelocytic cells by cyanidin-3-*O*- β -glucopyranoside, 2047

Apoptotic injury in cultured human hepatocytes induced by HMG-CoA reductase inhibitors, 2175

Apoptotic cell death

Mechanism of mahanine-induced apoptosis in human leukemia cells (HL-60), 41

Ara-C

Antiproliferative activity and mechanism of action of fatty acid derivatives of arabinofuranosylcytosine in leukemia and solid tumor cell lines, 503

Ara-C derivative

Antiproliferative activity and mechanism of action of fatty acid derivatives of arabinofuranosylcytosine in leukemia and solid tumor cell lines, 503

Arachidonic acid

Non-toxic concentrations of peroxynitrite commit U937 cells to mitochondrial permeability transition-dependent necrosis that is however prevented by endogenous arachidonic acid, 1077

Arachidonic and eicosapentaenoic acid metabolism by human CYP1A1: highly stereoselective formation of 17(*R*),18(*S*)-epoxyeicosatetraenoic acid, 1445

Arachidonic acid release

Mechanisms of the influence of magnolol on eicosanoid metabolism in neutrophils, 831

2-Arachidonoylglycerol

Monoglyceride lipase-like enzymatic activity is responsible for hydrolysis of 2-arachidonoylglycerol in rat cerebellar membranes, 1381

Aromatase

N-Demethylation of levo- α -acetylmethadol by human placental aromatase, 885

Artery

Inhibition of nitric oxide/cyclic GMP-mediated relaxation by purified flavonoids, baicalin and baicalein, in rat aortic rings, 787

Artesunate

Combination treatment of glioblastoma multiforme cell lines with the anti-malarial artesunate and the epidermal growth factor receptor tyrosine kinase inhibitor OSI-774, 1689

Aryl hydrocarbon receptor

Functional characterization of aryl hydrocarbon receptor (zAHR2) localization and degradation in zebrafish (*Danio rerio*), 1363

Aryl hydrocarbon receptor (AhR)

The induction of human UDP-glucuronosyltransferase 1A1 mediated through a distal enhancer module by flavonoids and xenobiotics, 989

Aspartate aminotransferase

Opposite regulation of the rat and human cytosolic aspartate aminotransferase genes by fibrates, 213

Aspirin

NO-donating nonsteroidal antiinflammatory drugs (NSAIDs) inhibit colon cancer cell growth more potently than traditional NSAIDs: a general pharmacological property?, 2197

AT₁ receptor

Effect of saponin and filipin on antagonist binding to AT₁ receptors in intact cells, 1601

Atherosclerosis

Gene expression profile of the G_s-coupled prostacyclin receptor in human vascular smooth muscle cells, 757

Enzymatically modified low-density lipoprotein upregulates CD36 in low-differentiated monocytic cells in a peroxisome proliferator-activated receptor- γ -dependent way, 841

ATM

Genistein arrests hepatoma cells at G2/M phase: involvement of ATM activation and upregulation of p21^{waf1/cip1} and Wee1, 717

ATP

Effects of enhancing mitochondrial oxidative phosphorylation with reducing equivalents and ubiquinone on 1-methyl-4-phenylpyridinium toxicity and complex I-IV damage in neuroblastoma cells, 1167

Cloning and characterization of mouse nucleoside triphosphate diphosphohydrolase-3, 1917

ATP-sensitive potassium channel

Inhibition of ATP-sensitive K⁺ channels by taurine through a benzamido-binding site on sulfonylurea receptor 1, 1089

Atypical antipsychotic drugs

Inverse agonist properties of atypical antipsychotic drugs, 2039

Auranofin

Mitochondrial thioredoxin reductase inhibition by gold(I) compounds and concurrent stimulation of permeability transition and release of cytochrome *c*, 689

Aurothiomalate

Mitochondrial thioredoxin reductase inhibition by gold(I) compounds and concurrent stimulation of permeability transition and release of cytochrome *c*, 689

Autoschizis

Cell cycle arrest and autoschizis in a human bladder carcinoma cell line following Vitamin C and Vitamin K₃ treatment, 337

AY-9944

Up-regulation of low-density lipoprotein receptor in human hepatocytes is induced by sequestration of free cholesterol in the endosomal/lysosomal compartment, 2281

AZA-APs

Antitumor AZA-anthrapyrazoles: biophysical and biochemical studies on 8- and 9-aza regioisomers, 631

BAD

Andrographolide suppresses endothelial cell apoptosis via activation of phosphatidyl inositol-3-kinase/Akt pathway, 1337

Bafilomycin A1

Up-regulation of low-density lipoprotein receptor in human hepatocytes is induced by sequestration of free cholesterol in the endosomal/lysosomal compartment, 2281

Baicalein

Inhibition of inducible nitric oxide synthase expression by baicalein in endotoxin/cytokine-stimulated microglia, 957

BAPTA-AM

Activation of deoxycytidine kinase in lymphocytes is calcium dependent and involves a conformational change detectable by native immunostaining, 947

Bax

Apoptotic injury in cultured human hepatocytes induced by HMG-CoA reductase inhibitors, 2175

Bcl-2

Apoptotic injury in cultured human hepatocytes induced by HMG-CoA reductase inhibitors, 2175

BCRP

Subcellular localization of the camptothecin analogues, topotecan and gimatecan, 1035

Belactosin

A new structural class of proteasome inhibitors identified by microbial screening using yeast-based assay, 227

Benzo(a)pyrene

Inhibition of carcinogen-bioactivating cytochrome P450 1 isoforms by amiloride derivatives, 1711

Benzopyran derivative

Mechanisms involved in the antiplatelet activity of 8-methyl-4-(1-piperazinyl)-7-(3-pyridinylmethoxy)-2*H*-1-benzopyran-2-one (RC414), 911

Benzo[a]pyrene

Reduction of androgen receptor expression by benzo[a]pyrene and 7,8-dihydro-9,10-epoxy-7,8,9,10-tetrahydrobenzo[a]pyrene in human lung cells, 1523

Benzylamide

Benzylamide derivative compound attenuates the ultraviolet B-induced hyperpigmentation in the brownish guinea pig skin, 707

Biguanide

Metformin (Glucophage) inhibits tyrosine phosphatase activity to stimulate the insulin receptor tyrosine kinase, 2081

Bile acid synthesis

Indinavir alters sterol and fatty acid homeostatic mechanisms in primary rat hepatocytes by increasing levels of activated sterol regulatory element-binding proteins and decreasing cholesterol 7 α -hydroxylase mRNA levels, 255

Binding site

Site-directed mutagenesis at the human B₂ receptor and molecular modelling to define the pharmacophore of non-peptide bradykinin receptor antagonists, 601

2,3'-Bipyridyl

Nicotine-related alkaloids and metabolites as inhibitors of human cytochrome P-450 2A6, 751

BJ-601

Anti-proliferation effect of 3-amino-2-imino-3,4-dihydro-2*H*-1,3-benzothiazin-4-one (BJ-601) on human vascular endothelial cells: G0/G1 p21-associated cell cycle arrest, 1907

Bladder carcinoma

Cell cycle arrest and autoschizis in a human bladder carcinoma cell line following Vitamin C and Vitamin K₃ treatment, 337

Blood-brain barrier

Variable modulation of opioid brain uptake by P-glycoprotein in mice, 269

Bodipy-glibenclamide

Fluorescence microscopy studies with a fluorescent glibenclamide derivative, a high-affinity blocker of pancreatic β -cell ATP-sensitive K⁺ currents, 1437

Bone resorption

Inhibition of osteoclast differentiation and bone resorption by a novel lysophosphatidylcholine derivative, SCOH, 1239

Inhibitory effect of β -cryptoxanthin on osteoclast-like cell formation in mouse marrow cultures, 1297

Brain MAO

Inhibition of brain mitochondrial monoamine oxidases by the endogenous compound 5-hydroxyoxindole, 977

Brain mitochondria

Dopamine toxicity involves mitochondrial complex I inhibition: implications to dopamine-related neuropsychiatric disorders, 1965

Breast cancer resistance protein

Evaluation of the binding of the tricyclic isoxazole photoaffinity label LY475776 to multidrug resistance associated protein 1 (MRP1) orthologs and several ATP-binding cassette (ABC) drug transporters, 1111

Brown adipose tissue

Comparison of gene expression profiles between white and brown adipose tissues of rat by microarray analysis, 555

Buspirone analogues

Intrinsic activity and comparative molecular dynamics of buspirone analogues at the 5-HT_{1A} receptors, 2219

BV-2

Inhibition of inducible nitric oxide synthase expression by baicalein in endotoxin/cytokine-stimulated microglia, 957

 α 2C2

Cloning, characterisation and identification of several polymorphisms in the promoter region of the human α _{2B}-adrenergic receptor gene, 469

C/EBP

Induction of cyclooxygenase-2 by bovine type I collagen in macrophages via C/EBP and CREB activation by multiple cell signaling pathways, 2239

Ca²⁺

Effect of celecoxib on Ca²⁺ movement and cell proliferation in human osteoblasts, 1123

Ca²⁺ concentration

Inhibition of ATP-sensitive K⁺ channels by taurine through a benzamido-binding site on sulfonylurea receptor 1, 1089

Ca²⁺ entry

Dual effect of hydrogen peroxide on store-mediated calcium entry in human platelets, 1065

Ca²⁺ influx

Differential regulation of IL-4 expression and degranulation by anti-allergic olopatadine in rat basophilic leukemia (RBL-2H3) cells, 1315

Ca²⁺ release

Effect of hydrogen peroxide on Ca²⁺ mobilisation in human platelets through sulphhydryl oxidation dependent and independent mechanisms, 491

Ca²⁺ stores

Effect of celecoxib on Ca²⁺ movement and cell proliferation in human osteoblasts, 1123

Calcein-acetoxymethyl ester

Influence of lipid lowering fibrates on P-glycoprotein activity *in vitro*, 285

Calcitonin

Discovery of novel peptide/receptor interactions: identification of PHM-27 as a potent agonist of the human calcitonin receptor, 1279

Calcium

Ca²⁺ influx is not involved in acute cytotoxicity of arachidonic acid, 903

Activation of deoxycytidine kinase in lymphocytes is calcium dependent and involves a conformational change detectable by native immunostaining, 947

Suppression of receptor-mediated Ca²⁺ mobilization and functional leukocyte responses by hyperforin, 1531

Control of platelet activation by cyclic AMP turnover and cyclic nucleotide phosphodiesterase type-3, 1559

Prevention of macrophage adhesion molecule-1 (Mac-1)-dependent neutrophil firm adhesion by taxifolin through impairment of protein kinase-dependent NADPH oxidase activation and antagonism of G protein-mediated calcium influx, 2251

Counteracting effects of NADPH oxidase and the Na⁺/Ca²⁺ exchanger on membrane repolarisation and store-operated uptake of Ca²⁺ by chemoattractant-activated human neutrophils, 2263

Calcium ion

Role of sodium in intracellular calcium elevation and leukotriene B₄ formation by receptor-mediated activation of human neutrophils, 385

Calpain inhibition

Calpain as a multi-site regulator of cell cycle, 1513

Calreticulin

Isolation and identification of heterogeneous nuclear ribonucleoproteins (hnRNP) from purified plasma membranes of human tumour cell lines as albumin-binding proteins, 655

cAMP

Medetomidine analogs as selective agonists for the human α_2 -adrenoceptors, 87

Gene expression profile of the G_s-coupled prostacyclin receptor in human vascular smooth muscle cells, 757

Cross talk of cAMP and flavone in regulation of cystic fibrosis transmembrane conductance regulator (CFTR) Cl⁻ channel and Na⁺/K⁺/2Cl⁻ cotransporter in renal epithelial A6 cells, 795

Mechanisms involved in the antiplatelet activity of 8-methyl-4-(1-piperazinyl)-7-(3-pyridinylmethoxy)-2H-1-benzopyran-2-one (RC414), 911

Inverse agonist properties of atypical antipsychotic drugs, 2039

cAMP phosphodiesterase

Mechanisms involved in the antiplatelet activity of 8-methyl-4-(1-piperazinyl)-7-(3-pyridinylmethoxy)-2H-1-benzopyran-2-one (RC414), 911

Camptothecins

Subcellular localization of the camptothecin analogues, topotecan and gimatecan, 1035

Cancer

Methioninase and selenomethionine but not Se-methylselenocysteine generate methylselenol and superoxide in an *in vitro* chemiluminescent assay: implications for the nutritional carcinostatic activity of selenoamino acids, 547

Regulation of Hedgehog signaling: a complex story, 805

A cell-based system to identify and characterize the molecular mechanism of drug-metabolizing enzyme (DME) modulators, 1897

Cancer cells

Analysis of cell-cycle kinetics and sulfur amino acid metabolism in methionine-dependent tumor cell lines; the effect of homocysteine supplementation, 1587

Cannabinoid

Monoglyceride lipase-like enzymatic activity is responsible for hydrolysis of 2-arachidonoylglycerol in rat cerebellar membranes, 1381

Cantharidin

Roles of p38 and JNK mitogen-activated protein kinase pathways during cantharidin-induced apoptosis in U937 cells, 1811

Carbonic anhydrase

Inhibition of 3T3-L1 adipocyte differentiation by 6-ethoxyzolamide: repressed peroxisome proliferator-activated receptor γ mRNA and enhanced CCAAT/enhancer binding protein β mRNA levels, 1667

Carcinogen

Inhibition of carcinogen-bioactivating cytochrome P450 1 isoforms by amiloride derivatives, 1711

Caspase

Mechanism of mahanine-induced apoptosis in human leukemia cells (HL-60), 41

Synthetic 1,4-anthracenedione analogs induce cytochrome *c* release, caspase-9, -3, and -8 activities, poly(ADP-ribose) polymerase-1 cleavage and internucleosomal DNA fragmentation in HL-60 cells by a mechanism which involves caspase-2 activation but not Fas signaling, 523 Mitochondria permeability transition-dependent *tert*-butyl hydroperoxide-induced apoptosis in hepatoma HepG2 cells, 611

Andrographolide suppresses endothelial cell apoptosis via activation of phosphatidylinositol-3-kinase/Akt pathway, 1337

Role of zinc and iron chelation in apoptosis mediated by tachpyridine, an anti-cancer iron chelator, 1677

Tetrandrine-induced apoptosis is mediated by activation of caspases and PKC- δ in U937 cells, 1819

Involvement of tyrosine kinase p56/Lck in apoptosis induction by anticancer drugs, 1859

Apoptotic injury in cultured human hepatocytes induced by HMG-CoA reductase inhibitors, 2175

Caspase-3

Roles of p38 and JNK mitogen-activated protein kinase pathways during cantharidin-induced apoptosis in U937 cells, 1811

Caspase activation

Apoptosis by 6-*O*-palmitoyl-L-ascorbic acid coincides with JNK-phosphorylation and inhibition of Mg²⁺-dependent phosphatase activity, 919

Catecholamine

Cloning, characterisation and identification of several polymorphisms in the promoter region of the human α_{2B} -adrenergic receptor gene, 469

Dopaminergic D₁-like receptor-dependent inhibition of tyrosine hydroxylase mRNA expression and catecholamine production in human lymphocytes, 865

Cbl, receptor tyrosine kinases

Receptor endocytosis *via* ubiquitin-dependent and -independent pathways, 1013

- CCAAT box
Nuclear factor Y regulation and promoter transactivation of human ribonucleotide reductase subunit M2 gene in a Gemcitabine resistant KB clone, 1499
- CCAT/enhancer binding protein β
Inhibition of 3T3-L1 adipocyte differentiation by 6-ethoxyzolamide: repressed peroxisome proliferator-activated receptor γ mRNA and enhanced CCAAT/enhancer binding protein β mRNA levels, 1667
- CKK₂ receptor
Rapid tyrosine phosphorylation of focal adhesion kinase, paxillin, and p130^{Cas} by gastrin in human colon cancer cells, 135
- CDC2 kinase
Genistein inversely affects tubulin-binding agent-induced apoptosis in human breast cancer cells, 2031
- CDK
A new structural class of proteasome inhibitors identified by microbial screening using yeast-based assay, 227
- CD39L3
Cloning and characterization of mouse nucleoside triphosphate diphosphohydrolase-3, 1917
- cDNA cloning
Molecular cloning and characterization of a glutathione S-transferase from largemouth bass (*Micropterus salmoides*) liver that is involved in the detoxification of 4-hydroxynonenal, 2129
- Celecoxib
Effect of celecoxib on Ca²⁺ movement and cell proliferation in human osteoblasts, 1123
Cyclooxygenase-2 (COX-2)-dependent and -independent anticarcinogenic effects of celecoxib in human colon carcinoma cells, 1469
- Cell count
Drastic effect of cell density on the cytotoxicity of daunorubicin and cytosine arabinoside, 1639
- Cell cycle
Mechanism of mahanine-induced apoptosis in human leukemia cells (HL-60), 41
Acacetin inhibits the proliferation of Hep G2 by blocking cell cycle progression and inducing apoptosis, 823
Enhancement of peripheral benzodiazepine receptor ligand-induced apoptosis and cell cycle arrest of esophageal cancer cells by simultaneous inhibition of MAPK/ERK kinase, 1701
Cell cycle- and protein kinase C-specific effects of resiniferatoxin and resiniferonol 9,13,14-*ortho*-phenylacetate in intestinal epithelial cells, 1873
- Cell cycle arrest
Cell cycle arrest and autoschizis in a human bladder carcinoma cell line following Vitamin C and Vitamin K₃ treatment, 337
- Cell death
2-CIATP exerts anti-tumoural actions not mediated by P2 receptors in neuronal and glial cell lines, 621
Ca²⁺ influx is not involved in acute cytotoxicity of arachidonic acid, 903
Non-toxic concentrations of peroxynitrite commit U937 cells to mitochondrial permeability transition-dependent necrosis that is however prevented by endogenous arachidonic acid, 1077
- Cell proliferation
Effects of intracellular reactive oxygen species generated by 6-formylpterin on T cell functions, 1185
- Cell-cycle kinetics
Analysis of cell-cycle kinetics and sulfur amino acid metabolism in methionine-dependent tumor cell lines; the effect of homocysteine supplementation, 1587
- Cellular signaling
Mitochondrial biogenesis as a cellular signaling framework, 1
- Cerebellum
Roscovitine, olomoucine, purvalanol: inducers of apoptosis in maturing cerebellar granule neurons, 1947
- CFTR
Cross talk of cAMP and flavone in regulation of cystic fibrosis transmembrane conductance regulator (CFTR) Cl⁻ channel and Na⁺/K⁺/2Cl⁻ cotransporter in renal epithelial A6 cells, 795
The cystic fibrosis mutation G1349D within the signature motif LSHGH of NBD2 abolishes the activation of CFTR chloride channels by genistein, 2187
- Chelator
Organic copper complexes as a new class of proteasome inhibitors and apoptosis inducers in human cancer cells, 1139
Role of zinc and iron chelation in apoptosis mediated by tachpyridine, an anti-cancer iron chelator, 1677
- Chemoattractants
Counteracting effects of NADPH oxidase and the Na⁺/Ca²⁺ exchanger on membrane repolarisation and store-operated uptake of Ca²⁺ by chemoattractant-activated human neutrophils, 2263
- Chemoprevention
Inhibition of carcinogen-bioactivating cytochrome P450 1 isoforms by amiloride derivatives, 1711
A cell-based system to identify and characterize the molecular mechanism of drug-metabolizing enzyme (DME) modulators, 1897
Induction of apoptosis in two human leukemia cell lines as well as differentiation in human promyelocytic cells by cyanidin-3-*O*- β -glucopyranoside, 2047
NO-donating nonsteroidal antiinflammatory drugs (NSAIDs) inhibit colon cancer cell growth more potently than traditional NSAIDs: a general pharmacological property?, 2197
- Chemotherapeutic agent
Role of zinc and iron chelation in apoptosis mediated by tachpyridine, an anti-cancer iron chelator, 1677
- Chemotherapy
Comparative efficacy of novel platinum(IV) compounds with established chemotherapeutic drugs in solid tumour models, 17
Interaction of substituted hexose analogues with the *Trypanosoma brucei* hexose transporter, 459
- Chk1
Mechanism of cell cycle arrest by sulfoquinovosyl monoacylglycerol with a C18-saturated fatty acid (C18-SQMG), 1373
- Chk2
Mechanism of cell cycle arrest by sulfoquinovosyl monoacylglycerol with a C18-saturated fatty acid (C18-SQMG), 1373
- Chloro(triethylphosphine)gold(I)
Mitochondrial thioredoxin reductase inhibition by gold(I) compounds and concurrent stimulation of permeability transition and release of cytochrome *c*, 689
- 2-Chlorodeoxyadenosine (Cladribine)
Activation of deoxycytidine kinase in lymphocytes is calcium dependent and involves a conformational change detectable by native immunostaining, 947
- Chloroquine
Synergistic interaction of a chloroquine metabolite with chloroquine against drug-resistant malaria parasites, 1347
- CHO cells
Adenosine A₃ receptor-mediated regulation of p38 and extracellular-regulated kinase ERK1/2 via phosphatidylinositol-3'-kinase, 129
Molecular pharmacology of the ovine melatonin receptor: comparison with recombinant human MT₁ and MT₂ receptors, 667
- Cholesterol
Indinavir alters sterol and fatty acid homeostatic mechanisms in primary rat hepatocytes by increasing levels of activated sterol regulatory element-binding proteins and decreasing cholesterol 7 α -hydroxylase mRNA levels, 255
- Cholinephosphotransferase (CPT)
COX-2-mediated PGD₂ synthesis regulates phosphatidylcholine biosynthesis in rat renal papillary tissue, 245
- Circadian rhythms
Melatonin-mediated regulation of human MT₁ melatonin receptors expressed in mammalian cells, 2023

- Cisplatin**
 DNA interactions of new antitumor platinum complexes with *trans* geometry activated by a 2-methylbutylamine or *sec*-butylamine ligand, 1097
 Cisplatin-induced apoptosis in Hep3B cells: mitochondria-dependent and -independent pathways, 1459
 Protection against cisplatin ototoxicity by adenosine agonists, 1801
- c-Jun**
 Roscovitine, olomoucine, purvalanol: inducers of apoptosis in maturing cerebellar granule neurons, 1947
- Class Ib antiarrhythmic drug**
 Characterization of mexiletine as an antagonist of β -adrenoceptor in Chinese hamster ovary cells expressing cloned human β -adrenoceptors, 815
- Cloned opioid receptors**
 Synthesis and electrophysiological characterization of cyclic morphine analogues, 1887
- Cluster analysis**
 Differentiation of human hepatoma cells during confluence as revealed by gene expression profiling, 1249
- Cocaine antagonist**
 Structure–activity relationships for substrate recognition by the human dopamine transporter, 293
- Coenzyme Q**
 Effects of enhancing mitochondrial oxidative phosphorylation with reducing equivalents and ubiquinone on 1-methyl-4-phenylpyridinium toxicity and complex I–IV damage in neuroblastoma cells, 1167
- Cofactors**
 Novel Gemini analogs of 1 α ,25-dihydroxyvitamin D₃ with enhanced transcriptional activity, 1327
- Colon cancer**
 Rapid tyrosine phosphorylation of focal adhesion kinase, paxillin, and p130^{Cas} by gastrin in human colon cancer cells, 135
 Cyclooxygenase-2 (COX-2)-dependent and -independent anticarcinogenic effects of celecoxib in human colon carcinoma cells, 1469
 NO-donating nonsteroidal antiinflammatory drugs (NSAIDs) inhibit colon cancer cell growth more potently than traditional NSAIDs: a general pharmacological property?, 2197
- Colon carcinoma cells**
 Subcellular localization of the camptothecin analogues, topotecan and gimatecan, 1035
- Colorectal cancer**
 Immunohistochemical detection of melphalan–DNA adducts in colon cancer cells in vitro and human colorectal liver tumours in vivo, 1771
- Comparative genomic hybridization**
 Combination treatment of glioblastoma multiforme cell lines with the anti-malarial artesunate and the epidermal growth factor receptor tyrosine kinase inhibitor OSI-774, 1689
- Complex I**
 Dopamine toxicity involves mitochondrial complex I inhibition: implications to dopamine-related neuropsychiatric disorders, 1965
- Complex IV**
 Effects of enhancing mitochondrial oxidative phosphorylation with reducing equivalents and ubiquinone on 1-methyl-4-phenylpyridinium toxicity and complex I–IV damage in neuroblastoma cells, 1167
- Compound A**
 Acivicin-induced alterations in renal and hepatic glutathione concentrations and in γ -glutamyltransferase activities, 1421
- Conformational change**
 Activation of deoxycytidine kinase in lymphocytes is calcium dependent and involves a conformational change detectable by native immunostaining, 947
- Constitutive androstane receptor (CAR)**
 The induction of human UDP-glucuronosyltransferase 1A1 mediated through a distal enhancer module by flavonoids and xenobiotics, 989
- Copper**
 Organic copper complexes as a new class of proteasome inhibitors and apoptosis inducers in human cancer cells, 1139
- Cortical neurons**
 Protective effects of a selective L-type voltage-sensitive calcium channel blocker, S-312-d, on neuronal cell death, 1153
- Cortical spreading depression**
 Effects of phosphodiesterase inhibition on cortical spreading depression and associated changes in extracellular cyclic GMP, 1619
- COS-1**
 Selective expression of Kir6.1 protein in different vascular and non-vascular tissues, 147
- Cotransport**
 Cross talk of cAMP and flavone in regulation of cystic fibrosis transmembrane conductance regulator (CFTR) Cl[−] channel and Na⁺/K⁺/2Cl[−] cotransporter in renal epithelial A6 cells, 795
- Coumarin**
 Daphnetin induced differentiation of human renal carcinoma cells and its mediation by p38 mitogen-activated protein kinase, 1779
- COX-2**
 Induction of cyclooxygenase-2 by bovine type I collagen in macrophages via C/EBP and CREB activation by multiple cell signaling pathways, 2239
- CREB**
 Roscovitine, olomoucine, purvalanol: inducers of apoptosis in maturing cerebellar granule neurons, 1947
 Induction of cyclooxygenase-2 by bovine type I collagen in macrophages via C/EBP and CREB activation by multiple cell signaling pathways, 2239
- Cross-link**
 DNA interactions of new antitumor platinum complexes with *trans* geometry activated by a 2-methylbutylamine or *sec*-butylamine ligand, 1097
- Crosslinking**
 Isolation and identification of heterogeneous nuclear ribonucleoproteins (hnRNP) from purified plasma membranes of human tumour cell lines as albumin-binding proteins, 655
- β -Cryptoxanthin**
 Inhibitory effect of β -cryptoxanthin on osteoclast-like cell formation in mouse marrow cultures, 1297
- cSNP**
 Pharmacology of polymorphic variants of the human 5-HT_{1A} receptor, 479
- C18-SQMG**
 Mechanism of cell cycle arrest by sulfoquinovosyl monoacylglycerol with a C18-saturated fatty acid (C18-SQMG), 1373
- Cultured cells**
 Immunohistochemical detection of melphalan–DNA adducts in colon cancer cells in vitro and human colorectal liver tumours in vivo, 1771
- Cyclic GMP**
 Inhibition of nitric oxide/cyclic GMP-mediated relaxation by purified flavonoids, baicalin and baicalein, in rat aortic rings, 787
 Inhibitory mechanisms of YC-1 and PMC in the induction of iNOS expression by lipoteichoic acid in RAW 264.7 macrophages, 1411
 Native human nitric oxide sensitive guanylyl cyclase: purification and characterization, 1579
 Effects of phosphodiesterase inhibition on cortical spreading depression and associated changes in extracellular cyclic GMP, 1619
- Cyclic-AMP**
 Control of platelet activation by cyclic AMP turnover and cyclic nucleotide phosphodiesterase type-3, 1559
- Cyclic-GMP**
 Control of platelet activation by cyclic AMP turnover and cyclic nucleotide phosphodiesterase type-3, 1559
- Cyclin**
 A new structural class of proteasome inhibitors identified by microbial screening using yeast-based assay, 227
 Mechanism of cell cycle arrest by sulfoquinovosyl monoacylglycerol with a C18-saturated fatty acid (C18-SQMG), 1373

- Cyclin B1
Genistein inversely affects tubulin-binding agent-induced apoptosis in human breast cancer cells, 2031
- Cyclin D1
Cell cycle- and protein kinase C-specific effects of resiniferatoxin and resiniferonol 9,13,14-*ortho*-phenylacetate in intestinal epithelial cells, 1873
- Cyclin-dependent kinase
Anti-proliferation effect of 5,5-diphenyl-2-thiohydantoin (DPTH) in human vascular endothelial cells, 67
Anti-proliferation effect of 3-amino-2-imino-3,4-dihydro-2*H*-1,3-benzothiazin-4-one (BJ-601) on human vascular endothelial cells: G0/G1 p21-associated cell cycle arrest, 1907
- Cyclin-dependent kinase inhibitors
Roscovitine, olomoucine, purvalanol: inducers of apoptosis in maturing cerebellar granule neurons, 1947
- Cyclooxygenase-2
Protection against lipopolysaccharide-induced sepsis and inhibition of interleukin-1 β and prostaglandin E2 synthesis by silymarin, 175
- Cyclooxygenase
Role of direct cytotoxic effects of NSAIDs in the induction of gastric lesions, 575
Mechanisms of the influence of magnolol on eicosanoid metabolism in neutrophils, 831
Cyclooxygenase-2 (COX-2)-dependent and -independent anticarcinogenic effects of celecoxib in human colon carcinoma cells, 1469
NO-donating nonsteroidal antiinflammatory drugs (NSAIDs) inhibit colon cancer cell growth more potently than traditional NSAIDs: a general pharmacological property?, 2197
- Cyclooxygenase-2 (COX-2)
COX-2-mediated PGD₂ synthesis regulates phosphatidylcholine biosynthesis in rat renal papillary tissue, 245
- CYP7A1
Indinavir alters sterol and fatty acid homeostatic mechanisms in primary rat hepatocytes by increasing levels of activated sterol regulatory element-binding proteins and decreasing cholesterol 7 α -hydroxylase mRNA levels, 255
- CYP1A2
Determination of cytochrome P450 1A2 and cytochrome P450 3A4 induction in cryopreserved human hepatocytes, 427
- CYP3A4
Determination of cytochrome P450 1A2 and cytochrome P450 3A4 induction in cryopreserved human hepatocytes, 427
- CYP3A
Tamoxifen cytotoxicity in hepatoblastoma cells stably transfected with human CYP3A4, 1057
Down-regulation of cytochrome P450 proteins and its activities by Shiga-like toxin II from *Escherichia coli* O157:H7, 1427
- CYP1A1
Arachidonic and eicosapentaenoic acid metabolism by human CYP1A1: highly stereoselective formation of 17(*R*),18(*S*)-epoxyeicosatetraenoic acid, 1445
- CYP2C9
Differential activation of CYP2C9 variants by dapsone, 1831
- CYP2E1
Role of CYP2E1 in ketone-stimulated insulin release in pancreatic B-cells, 875
- CYP4F12
Functional characterization of genetic polymorphisms identified in the human cytochrome P450 4F12 (CYP4F12) promoter region, 2231
- CysLT₁ receptor
CysLT₁ signal transduction in differentiated U937 cells involves the activation of the small GTP-binding protein Ras, 1569
- Cysteinyl-leukotriene
CysLT₁ signal transduction in differentiated U937 cells involves the activation of the small GTP-binding protein Ras, 1569
- Cytarabine (AraC)
Drastic effect of cell density on the cytotoxicity of daunorubicin and cytosine arabinoside, 1639
- Cytidylyltransferase (CCT)
COX-2-mediated PGD₂ synthesis regulates phosphatidylcholine biosynthesis in rat renal papillary tissue, 245
- Cytochrome *c*
Propolin C from propolis induces apoptosis through activating caspases, Bid and cytochrome *c* release in human melanoma cells, 53
Disruption of mitochondria during tocotrienol-induced apoptosis in MDA-MB-231 human breast cancer cells, 315
Synthetic 1,4-anthracenedione analogs induce cytochrome *c* release, caspase-9, -3, and -8 activities, poly(ADP-ribose) polymerase-1 cleavage and internucleosomal DNA fragmentation in HL-60 cells by a mechanism which involves caspase-2 activation but not Fas signaling, 523
- Cytochrome P450
Cytochrome P450 dependent metabolism of the new designer drug 1-(3-trifluoromethylphenyl)piperazine (TFMPP). *In vivo* studies in Wistar and Dark Agouti rats as well as *in vitro* studies in human liver microsomes, 235
Determination of cytochrome P450 1A2 and cytochrome P450 3A4 induction in cryopreserved human hepatocytes, 427
Role of CYP2E1 in ketone-stimulated insulin release in pancreatic B-cells, 875
Differentiation of human hepatoma cells during confluence as revealed by gene expression profiling, 1249
Down-regulation of cytochrome P450 proteins and its activities by Shiga-like toxin II from *Escherichia coli* O157:H7, 1427
- Cytochrome P-450 2A6
Nicotine-related alkaloids and metabolites as inhibitors of human cytochrome P-450 2A6, 751
- Cytochrome P4501A1
Reduction of androgen receptor expression by benzo[*a*]pyrene and 7,8-dihydro-9,10-epoxy-7,8,9,10-tetrahydrobenzo[*a*]pyrene in human lung cells, 1523
- Cytochrome P4501B1
Reduction of androgen receptor expression by benzo[*a*]pyrene and 7,8-dihydro-9,10-epoxy-7,8,9,10-tetrahydrobenzo[*a*]pyrene in human lung cells, 1523
- Cytochrome P4502E1
WIF-B cells as a model for alcohol-induced hepatocyte injury, 2167
- Cytochromes P450 1 isoforms
Inhibition of carcinogen-bioactivating cytochrome P450 1 isoforms by amiloride derivatives, 1711
- Cytodifferentiation
Induction of apoptosis in two human leukemia cell lines as well as differentiation in human promyelocytic cells by cyanidin-3-*O*- β -glucopyranoside, 2047
- Cytokine
Gene expression changes in rat liver following exposure to liver growth agents: role of Kupffer cells in xenobiotic-mediated liver growth, 107
Effects of intracellular reactive oxygen species generated by 6-formylpterin on T cell functions, 1185
Activation of nuclear factor kappa B by diesel exhaust particles in mouse epidermal cells through phosphatidylinositol 3-kinase/Akt signaling pathway, 1975
- Cytoprotection
Iron mobilization, cytoprotection, and inhibition of cell proliferation in normal and transformed rat hepatocyte cultures by the hydroxypyridinone CP411, compared to CP20: a biological and physicochemical study, 1479
Protection against cisplatin ototoxicity by adenosine agonists, 1801
- Cytosolic calcium
Similar effects of succinic acid dimethyl ester and glucose on islet calcium oscillations and insulin release, 981
- Cytosolic phospholipase A₂
Mechanisms of the influence of magnolol on eicosanoid metabolism in neutrophils, 831

- Non-toxic concentrations of peroxynitrite commit U937 cells to mitochondrial permeability transition-dependent necrosis that is however prevented by endogenous arachidonic acid, 1077
- Cytotoxic drugs
Involvement of tyrosine kinase p56/Lck in apoptosis induction by anticancer drugs, 1859
- Cytotoxicity
Evidence that activation of nuclear factor- κ B is essential for the cytotoxic effects of doxorubicin and its analogues, 353
- D₂ dopamine receptor
Investigation of the mechanism of agonist and inverse agonist action at D₂ dopamine receptors, 1657
Inverse agonist properties of atypical antipsychotic drugs, 2039
- α_{1D} -Adrenoceptor
Human α_{1D} -adrenoceptor phosphorylation and desensitization, 1853
- Daphnetin
Daphnetin induced differentiation of human renal carcinoma cells and its mediation by p38 mitogen-activated protein kinase, 1779
- Dapsone
Differential activation of CYP2C9 variants by dapsone, 1831
- Dark Agouti rats
Cytochrome P450 dependent metabolism of the new designer drug 1-(3-trifluoromethylphenyl)piperazine (TFMPP). *In vivo* studies in Wistar and Dark Agouti rats as well as *in vitro* studies in human liver microsomes, 235
- Daunorubicin
Relationship between daunorubicin concentration and apoptosis induction in leukemic cells, 1047
Folate concentration dependent transport activity of the Multidrug Resistance Protein 1 (ABCC1), 1541
- Daunorubicin (DNR)
Drastic effect of cell density on the cytotoxicity of daunorubicin and cytosine arabinoside, 1639
- ddl
Glycine 154 of the equilibrative nucleoside transporter, hENT1, is important for nucleoside transport and for conferring sensitivity to the inhibitors nitrobenzylthioinosine, dipyridamole, and dilazep, 453
- DDT₁-MF2 cells
Chronic hypoxia up-regulates expression of adenosine A₁ receptors in DDT₁-MF2 cells, 421
- Degranulation
Differential regulation of IL-4 expression and degranulation by anti-allergic olopatadine in rat basophilic leukemia (RBL-2H3) cells, 1315
- Dehydroepiandrosterone
Tamoxifen cytotoxicity in hepatoblastoma cells stably transfected with human CYP3A4, 1057
- delF508
The cystic fibrosis mutation G1349D within the signature motif LSHGH of NBD2 abolishes the activation of CFTR chloride channels by genistein, 2187
- Deoxycytidine deaminase
Antiproliferative activity and mechanism of action of fatty acid derivatives of arabinofuranosylcytosine in leukemia and solid tumor cell lines, 503
- Deoxycytidine kinase
Activation of deoxycytidine kinase in lymphocytes is calcium dependent and involves a conformational change detectable by native immunostaining, 947
- Deoxynojirimycins
Inhibition of glycogen breakdown by imino sugars *in vitro* and *in vivo*, 697
- Desensitization
Human α_{1D} -adrenoceptor phosphorylation and desensitization, 1853
Melatonin-mediated regulation of human MT₁ melatonin receptors expressed in mammalian cells, 2023
- Desipramine
Relationship between the antinociceptive response to desipramine and changes in GABA_B receptor function and subunit expression in the dorsal horn of the rat spinal cord, 743
- Development
Regulation of Hedgehog signaling: a complex story, 805
- Diabetes
Role of CYP2E1 in ketone-stimulated insulin release in pancreatic B-cells, 875
4-Hydroxy tempol-induced impairment of mitochondrial function and augmentation of glucose transport in vascular endothelial and smooth muscle cells, 1985
Metformin (Glucophage) inhibits tyrosine phosphatase activity to stimulate the insulin receptor tyrosine kinase, 2081
- Diabetic vascular complications
Reduction of high glucose and phorbol-myristate-acetate-induced endothelial cell permeability by protein kinase C inhibitors LY379196 and hypocrelin A, 855
- Diaphorase
Flavin-dependent antioxidant properties of a new series of *meso-N,N'*-dialkyl-imidazolium substituted manganese(III) porphyrins, 77
- Diazoxide
Diazoxide affects the IF₁ inhibitor protein binding to F₁ sector of beef heart F₀F₁ATP synthase, 1843
- Dicumarol
Specific ligand binding on genetic variants of human α_1 -acid glycoprotein studied by circular dichroism spectroscopy, 679
- Diethylpyrocarbonate
Histidine residues in human phenol sulfotransferases, 1355
- Differentiation
Inhibition of osteoclast formation by 3-methylcholanthrene, a ligand for arylhydrocarbon receptor: suppression of osteoclast differentiation factor in osteogenic cells, 119
Nuclear receptor signaling in macrophages, 201
Reactive blue 2 inhibition of cyclic AMP-dependent differentiation of rat C6 glioma cells by purinergic receptor-independent inactivation of phosphatidylinositol 3-kinase, 1489
Daphnetin induced differentiation of human renal carcinoma cells and its mediation by p38 mitogen-activated protein kinase, 1779
- Dilazep
Glycine 154 of the equilibrative nucleoside transporter, hENT1, is important for nucleoside transport and for conferring sensitivity to the inhibitors nitrobenzylthioinosine, dipyridamole, and dilazep, 453
- Diltiazem
Preservation of mitochondrial function during ischemia as a possible mechanism for cardioprotection of diltiazem against ischemia/reperfusion injury, 565
- Diphenyleneiodonium
Flavin-dependent antioxidant properties of a new series of *meso-N,N'*-dialkyl-imidazolium substituted manganese(III) porphyrins, 77
- Dipyridamole
Glycine 154 of the equilibrative nucleoside transporter, hENT1, is important for nucleoside transport and for conferring sensitivity to the inhibitors nitrobenzylthioinosine, dipyridamole, and dilazep, 453
- Direct cytotoxicity
Role of direct cytotoxic effects of NSAIDs in the induction of gastric lesions, 575
- Disorazol
Disorazol A₁, a highly effective antimetabolic agent acting on tubulin polymerization and inducing apoptosis in mammalian cells, 927
- Distamycin
Binding of hybrid molecules containing pyrrolo [2,1-*c*][1,4]benzodiazepine (PBD) and oligopyrrole carriers to the human immunodeficiency type 1 virus TAR-RNA, 401
- Disulfide reduction
Reductive activation of ricin and ricin A-chain immunotoxins by protein disulfide isomerase and thioredoxin reductase, 1721
- DNA
DNA interactions of new antitumor platinum complexes with *trans* geometry activated by a 2-methylbutylamine or *sec*-butylamine ligand, 1097

- DNA binder
Antitumor AZA-anthrapyrazoles: biophysical and biochemical studies on 8- and 9-aza regioisomers, 631
- DNA damage
Novel *N*-thiolated β -lactam antibiotics selectively induce apoptosis in human tumor and transformed, but not normal or nontransformed, cells, 365
Antiproliferative activity and mechanism of action of fatty acid derivatives of arabinofuranosylcytosine in leukemia and solid tumor cell lines, 503
- DNA fragmentation
Synthetic 1,4-anthracenedione analogs induce cytochrome *c* release, caspase-9, -3, and -8 activities, poly(ADP-ribose) polymerase-1 cleavage and internucleosomal DNA fragmentation in HL-60 cells by a mechanism which involves caspase-2 activation but not Fas signaling, 523
Mitochondria permeability transition-dependent *tert*-butyl hydroperoxide-induced apoptosis in hepatoma HepG2 cells, 611
Relationship between daunorubicin concentration and apoptosis induction in leukemic cells, 1047
- DNA polymerases α and ϵ
Mechanism of cell cycle arrest by sulfoquinovosyl monoacylglycerol with a C18-saturated fatty acid (C18-SQMG), 1373
- DNA single-strand breakage
Non-toxic concentrations of peroxynitrite commit U937 cells to mitochondrial permeability transition-dependent necrosis that is however prevented by endogenous arachidonic acid, 1077
- DNA-fragmentation
Apoptosis by 6-*O*-palmitoyl-L-ascorbic acid coincides with JNK-phosphorylation and inhibition of Mg^{2+} -dependent phosphatase activity, 919
- Dopamine
Dopaminergic D_1 -like receptor-dependent inhibition of tyrosine hydroxylase mRNA expression and catecholamine production in human lymphocytes, 865
Dopamine toxicity involves mitochondrial complex I inhibition: implications to dopamine-related neuropsychiatric disorders, 1965
- Dopamine agonists
A novel mechanism for pergolide-induced neuroprotection: inhibition of NF- κ B nuclear translocation, 1743
- Dopamine carbonylation
Structure-activity relationships for substrate recognition by the human dopamine transporter, 293
- Dopamine hydroxylation
Structure-activity relationships for substrate recognition by the human dopamine transporter, 293
- Dopamine methylation
Structure-activity relationships for substrate recognition by the human dopamine transporter, 293
- Dopamine recognition
Structure-activity relationships for substrate recognition by the human dopamine transporter, 293
- Dopamine transport
Structure-activity relationships for substrate recognition by the human dopamine transporter, 293
- Dopaminergic D_1 -like receptors
Dopaminergic D_1 -like receptor-dependent inhibition of tyrosine hydroxylase mRNA expression and catecholamine production in human lymphocytes, 865
- Doxorubicin
Evidence that activation of nuclear factor- κ B is essential for the cytotoxic effects of doxorubicin and its analogues, 353
- DPTH
Anti-proliferation effect of 5,5-diphenyl-2-thiohydantoin (DPTH) in human vascular endothelial cells, 67
- Drug accumulation
Antiproliferative activity and mechanism of action of fatty acid derivatives of arabinofuranosylcytosine in leukemia and solid tumor cell lines, 503
- Drug discovery
Organic copper complexes as a new class of proteasome inhibitors and apoptosis inducers in human cancer cells, 1139
- Drug interactions
Influence of lipid lowering fibrates on P-glycoprotein activity *in vitro*, 285
- Drug resistance
Glucuronidation as a mechanism of intrinsic drug resistance in colon cancer cells: contribution of drug transport proteins, 31
Synergistic interaction of a chloroquine metabolite with chloroquine against drug-resistant malaria parasites, 1347
Nuclear factor Y regulation and promoter transactivation of human ribonucleotide reductase subunit M2 gene in a Gemcitabine resistant KB clone, 1499
- Drug retention
Antiproliferative activity and mechanism of action of fatty acid derivatives of arabinofuranosylcytosine in leukemia and solid tumor cell lines, 503
- Drug sensitivity
Antiproliferative activity and mechanism of action of fatty acid derivatives of arabinofuranosylcytosine in leukemia and solid tumor cell lines, 503
- Drug transport proteins
Glucuronidation as a mechanism of intrinsic drug resistance in colon cancer cells: contribution of drug transport proteins, 31
- Drug-metabolizing enzyme
A cell-based system to identify and characterize the molecular mechanism of drug-metabolizing enzyme (DME) modulators, 1897
- EAAT1
Pharmacological characterization of human excitatory amino acid transporters EAAT1, EAAT2 and EAAT3 in a fluorescence-based membrane potential assay, 2115
- EAAT2
Pharmacological characterization of human excitatory amino acid transporters EAAT1, EAAT2 and EAAT3 in a fluorescence-based membrane potential assay, 2115
- EAAT3
Pharmacological characterization of human excitatory amino acid transporters EAAT1, EAAT2 and EAAT3 in a fluorescence-based membrane potential assay, 2115
- Ebselen
Selenium compounds modulate the calcium release channel/ryanodine receptor of rabbit skeletal muscle by oxidizing functional thiols, 2071
- ecto-ATPase
Cloning and characterization of mouse nucleoside triphosphate diphosphohydrolase-3, 1917
- Efflux
Variable modulation of opioid brain uptake by P-glycoprotein in mice, 269
- EGF
Effect of vascular endothelial growth factor and epidermal growth factor on iatrogenic apoptosis in human endothelial cells, 277
- Eicosapentaenoic acid
Arachidonic and eicosapentaenoic acid metabolism by human CYP1A1: highly stereoselective formation of 17(*R*),18(*S*)-epoxyeicosatetraenoic acid, 1445
- Electron paramagnetic resonance
Relaxant effect of oxime derivatives in isolated rat aorta: role of nitric oxide (NO) formation in smooth muscle, 1203
- Endogenous regulation
Inhibition of brain mitochondrial monoamine oxidases by the endogenous compound 5-hydroxyoxindole, 977
- Endothelial cells
Anti-proliferation effect of 5,5-diphenyl-2-thiohydantoin (DPTH) in human vascular endothelial cells, 67
Andrographolide suppresses endothelial cell apoptosis via activation of phosphatidylinositol-3-kinase/Akt pathway, 1337

- Anti-proliferation effect of 3-amino-2-imino-3,4-dihydro-2*H*-1,3-benzothiazin-4-one (BJ-601) on human vascular endothelial cells: G0/G1 p21-associated cell cycle arrest, 1907
- Endothelial factor
- Reduced basal nitric oxide bioavailability and platelet activation in young spontaneously hypertensive rats, 2273
- Endothelial function
- Reduced basal nitric oxide bioavailability and platelet activation in young spontaneously hypertensive rats, 2273
- Endothelial permeability
- Reduction of high glucose and phorbol-myristate-acetate-induced endothelial cell permeability by protein kinase C inhibitors LY379196 and hypocrelin A, 855
- Endothelium
- Inhibition of nitric oxide/cyclic GMP-mediated relaxation by purified flavonoids, baicalin and baicalein, in rat aortic rings, 787
- Endotoxin shock
- Inhibitory mechanisms of YC-1 and PMC in the induction of iNOS expression by lipoteichoic acid in RAW 264.7 macrophages, 1411
- Energy metabolism
- Mitochondrial biogenesis as a cellular signaling framework, 1
 - Comparison of gene expression profiles between white and brown adipose tissues of rat by microarray analysis, 555
- Enzyme active site
- Histidine residues in human phenol sulfotransferases, 1355
- Enzyme inhibition
- Inhibition of glycogen breakdown by imino sugars *in vitro* and *in vivo*, 697
- Enzyme kinetics
- Molecular cloning and characterization of a glutathione *S*-transferase from largemouth bass (*Micropterus salmoides*) liver that is involved in the detoxification of 4-hydroxynonenal, 2129
- Epicatechin
- Interference of the polyphenol epicatechin with the biological chemistry of nitric oxide- and peroxynitrite-mediated reactions, 1285
- Epidermal growth factor receptor
- Combination treatment of glioblastoma multiforme cell lines with the anti-malarial artesunate and the epidermal growth factor receptor tyrosine kinase inhibitor OSI-774, 1689
 - Transinactivation of the epidermal growth factor receptor tyrosine kinase and focal adhesion kinase phosphorylation by dietary flavonoids: effect on invasive potential of human carcinoma cells, 2103
- Epithelium
- Cross talk of cAMP and flavone in regulation of cystic fibrosis transmembrane conductance regulator (CFTR) Cl⁻ channel and Na⁺/K⁺/2Cl⁻ cotransporter in renal epithelial A6 cells, 795
- ER stress
- Inverse gene expression patterns for macrophage activating hepatotoxins and peroxisome proliferators in rat liver, 2141
- ERK
- Inhibition of osteoclast differentiation and bone resorption by a novel lysophosphatidylcholine derivative, SCOH, 1239
 - Stimulatory effect of naturally occurring flavonols quercetin and kaempferol on alkaline phosphatase activity in MG-63 human osteoblasts through ERK and estrogen receptor pathway, 1307
- ERK1/2
- Enhancement of peripheral benzodiazepine receptor ligand-induced apoptosis and cell cycle arrest of esophageal cancer cells by simultaneous inhibition of MAPK/ERK kinase, 1701
 - Induction of cyclooxygenase-2 by bovine type I collagen in macrophages via C/EBP and CREB activation by multiple cell signaling pathways, 2239
- ERKs
- Effect of vascular endothelial growth factor and epidermal growth factor on iatrogenic apoptosis in human endothelial cells, 277
 - Isorhapontigenin and resveratrol suppress oxLDL-induced proliferation and activation of ERK1/2 mitogen-activated protein kinases of bovine aortic smooth muscle cells, 777
- Esophageal cancer
- Enhancement of peripheral benzodiazepine receptor ligand-induced apoptosis and cell cycle arrest of esophageal cancer cells by simultaneous inhibition of MAPK/ERK kinase, 1701
- Estrogen receptor
- Quaternary ammonium-linked glucuronidation of tamoxifen by human liver microsomes and UDP-glucuronosyltransferase 1A4, 2093
- Estrogen receptors
- Stimulatory effect of naturally occurring flavonols quercetin and kaempferol on alkaline phosphatase activity in MG-63 human osteoblasts through ERK and estrogen receptor pathway, 1307
- Ethanol metabolism
- WIF-B cells as a model for alcohol-induced hepatocyte injury, 2167
- 7-Ethoxyresorufin
- Relaxant effect of oxime derivatives in isolated rat aorta: role of nitric oxide (NO) formation in smooth muscle, 1203
- 6-Ethoxyzolamide
- Inhibition of 3T3-L1 adipocyte differentiation by 6-ethoxyzolamide: repressed peroxisome proliferator-activated receptor γ mRNA and enhanced CCAAT/enhancer binding protein β mRNA levels, 1667
- Excitatory amino acid transporter
- Pharmacological characterization of human excitatory amino acid transporters EAAT1, EAAT2 and EAAT3 in a fluorescence-based membrane potential assay, 2115
- Extracellular-signal regulated kinase 1/2
- Pancreatic stellate cell migration: role of the phosphatidylinositol 3-kinase (PI3-kinase) pathway, 1215
- FAK
- Induction of cyclooxygenase-2 by bovine type I collagen in macrophages via C/EBP and CREB activation by multiple cell signaling pathways, 2239
- Fanconi anemia
- The p38 pathway partially mediates caspase-3 activation induced by reactive oxygen species in Fanconi anemia C cells, 539
- Fas
- Synthetic 1,4-anthracenedione analogs induce cytochrome *c* release, caspase-9, -3, and -8 activities, poly(ADP-ribose) polymerase-1 cleavage and internucleosomal DNA fragmentation in HL-60 cells by a mechanism which involves caspase-2 activation but not Fas signaling, 523
- Fas/APO-1
- Acacetin inhibits the proliferation of Hep G2 by blocking cell cycle progression and inducing apoptosis, 823
- FasL
- Acacetin inhibits the proliferation of Hep G2 by blocking cell cycle progression and inducing apoptosis, 823
- Fast kinetics
- Polyhydroxylated 2-styrylchromones as potent antioxidants, 2207
- Fatty acid
- Indinavir alters sterol and fatty acid homeostatic mechanisms in primary rat hepatocytes by increasing levels of activated sterol regulatory element-binding proteins and decreasing cholesterol 7 α -hydroxylase mRNA levels, 255
 - Inhibition of plasmin-mediated prostromelysin-1 activation by interaction of long chain unsaturated fatty acids with kringle 5, 643
 - Ca²⁺ influx is not involved in acute cytotoxicity of arachidonic acid, 903
- Fatty acid amide hydrolase
- Monoglyceride lipase-like enzymatic activity is responsible for hydrolysis of 2-arachidonoylglycerol in rat cerebellar membranes, 1381
- Fatty acyl-peptide derivative
- Activation of latent transforming growth factor beta 1 and inhibition of matrix metalloproteinase activity by a thrombospondin-like tripeptide linked to elaidic acid, 2013
- Fenofibrate
- Opposite regulation of the rat and human cytosolic aspartate aminotransferase genes by fibrates, 213

- F₀F₁ATP synthase**
Diazoxide affects the IF₁ inhibitor protein binding to F₁ sector of beef heart F₀F₁ATP synthase, 1843
- Fibrates**
Lack of hypotriglyceridemic effect of gemfibrozil as a consequence of age-related changes in rat liver PPAR α , 157
Influence of lipid lowering fibrates on P-glycoprotein activity *in vitro*, 285
- Fibroblasts**
Peripheral-type benzodiazepine receptor (PBR) and PBR drug ligands in fibroblast and fibrosarcoma cell proliferation: role of ERK, c-Jun and ligand-activated PBR-independent pathways, 1927
- Fibrosarcoma**
Peripheral-type benzodiazepine receptor (PBR) and PBR drug ligands in fibroblast and fibrosarcoma cell proliferation: role of ERK, c-Jun and ligand-activated PBR-independent pathways, 1927
- Filipin**
Effect of saponin and filipin on antagonist binding to AT₁ receptors in intact cells, 1601
- F₂-isoprostanes**
Flavin-dependent antioxidant properties of a new series of *meso-N,N'*-dialkyl-imidazolium substituted manganese(III) porphyrins, 77
- Flavonoids**
Inhibition of nitric oxide/cyclic GMP-mediated relaxation by purified flavonoids, baicalin and baicalein, in rat aortic rings, 787
The induction of human UDP-glucuronosyltransferase 1A1 mediated through a distal enhancer module by flavonoids and xenobiotics, 989
Structural requirements for the flavonoid-mediated modulation of glutathione S-transferase P1-1 and GS-X pump activity in MCF7 breast cancer cells, 1607
The use of a new *in vitro* reaction substrate reproducing both U3 and U5 regions of the HIV-1 3'-ends increases the correlation between the *in vitro* and *in vivo* effects of the HIV-1 integrase inhibitors, 1751
Transinactivation of the epidermal growth factor receptor tyrosine kinase and focal adhesion kinase phosphorylation by dietary flavonoids: effect on invasive potential of human carcinoma cells, 2103
- Flavonols**
Stimulatory effect of naturally occurring flavonols quercetin and kaempferol on alkaline phosphatase activity in MG-63 human osteoblasts through ERK and estrogen receptor pathway, 1307
- FLIPR[®] Membrane Potential assay**
Functional characterisation of the human $\alpha 1$ glycine receptor in a fluorescence-based membrane potential assay, 1789
Pharmacological characterization of human excitatory amino acid transporters EAAT1, EAAT2 and EAAT3 in a fluorescence-based membrane potential assay, 2115
- Flow cytometry**
Cell cycle arrest and autschizis in a human bladder carcinoma cell line following Vitamin C and Vitamin K₃ treatment, 337
Relationship between daunorubicin concentration and apoptosis induction in leukemic cells, 1047
- Fluorescence**
Functional characterisation of the human $\alpha 1$ glycine receptor in a fluorescence-based membrane potential assay, 1789
- Fluorescence correlation spectroscopy**
Fluorescence microscopy studies with a fluorescent glibenclamide derivative, a high-affinity blocker of pancreatic β -cell ATP-sensitive K⁺ currents, 1437
- 2-(Fluoromethoxy)-1,1,3,3,3-pentafluoro-1-propene**
Acivicin-induced alterations in renal and hepatic glutathione concentrations and in γ -glutamyltransferase activities, 1421
- Flurbiprofen**
Differential activation of CYP2C9 variants by dapsone, 1831
- Focal adhesion kinase**
Transinactivation of the epidermal growth factor receptor tyrosine kinase and focal adhesion kinase phosphorylation by dietary flavonoids: effect on invasive potential of human carcinoma cells, 2103
- Folate**
Folate concentration dependent transport activity of the Multidrug Resistance Protein 1 (ABCC1), 1541
- 6-Formylpterin**
Effects of intracellular reactive oxygen species generated by 6-formylpterin on T cell functions, 1185
- Forskolin**
Cross talk of cAMP and flavone in regulation of cystic fibrosis transmembrane conductance regulator (CFTR) Cl⁻ channel and Na⁺/K⁺/2Cl⁻ cotransporter in renal epithelial A6 cells, 795
- Free radicals**
4-Hydroxy tempol-induced impairment of mitochondrial function and augmentation of glucose transport in vascular endothelial and smooth muscle cells, 1985
- Fructose-fed rat model**
Rosiglitazone increases extravasation of macromolecules and endothelial nitric oxide synthase in skeletal muscles of the fructose-fed rat model, 1997
- $\alpha 1$**
Functional characterisation of the human $\alpha 1$ glycine receptor in a fluorescence-based membrane potential assay, 1789
- Fura-2**
Effect of celecoxib on Ca²⁺ movement and cell proliferation in human osteoblasts, 1123
- G₁ phase**
Calpain as a multi-site regulator of cell cycle, 1513
- G protein-coupled receptor**
Rapid tyrosine phosphorylation of focal adhesion kinase, paxillin, and p130^{Cas} by gastrin in human colon cancer cells, 135
Site-directed mutagenesis at the human B₂ receptor and molecular modelling to define the pharmacophore of non-peptide bradykinin receptor antagonists, 601
Characterization of mexiletine as an antagonist of β -adrenoceptor in Chinese hamster ovary cells expressing cloned human β -adrenoceptors, 815
Melatonin-mediated regulation of human MT₁ melatonin receptors expressed in mammalian cells, 2023
- G protein-coupled receptors**
Receptor endocytosis *via* ubiquitin-dependent and -independent pathways, 1013
Suppression of receptor-mediated Ca²⁺ mobilization and functional leukocyte responses by hyperforin, 1531
- G₁/G₀ phase block**
Cyclooxygenase-2 (COX-2)-dependent and -independent anticarcinogenic effects of celecoxib in human colon carcinoma cells, 1469
- GABA_B receptors**
Relationship between the antinociceptive response to desipramine and changes in GABA_B receptor function and subunit expression in the dorsal horn of the rat spinal cord, 743
- Gastric lesions**
Role of direct cytotoxic effects of NSAIDs in the induction of gastric lesions, 575
- Gastrin**
Rapid tyrosine phosphorylation of focal adhesion kinase, paxillin, and p130^{Cas} by gastrin in human colon cancer cells, 135
- G1349D**
The cystic fibrosis mutation G1349D within the signature motif LSHGH of NBD2 abolishes the activation of CFTR chloride channels by genistein, 2187
- G551D**
The cystic fibrosis mutation G1349D within the signature motif LSHGH of NBD2 abolishes the activation of CFTR chloride channels by genistein, 2187
- Gemcitabine**
Nuclear factor Y regulation and promoter transactivation of human ribonucleotide reductase subunit M2 gene in a Gemcitabine resistant KB clone, 1499

Gemfibrozil

Lack of hypotriglyceridemic effect of gemfibrozil as a consequence of age-related changes in rat liver PPAR α , 157

Gemini

Novel Gemini analogs of 1 α ,25-dihydroxyvitamin D₃ with enhanced transcriptional activity, 1327

Gene and protein expression

Determination of cytochrome P450 1A2 and cytochrome P450 3A4 induction in cryopreserved human hepatocytes, 427

Gene expression

Gene expression profile of the G_s-coupled prostacyclin receptor in human vascular smooth muscle cells, 757

Enhancement of peripheral benzodiazepine receptor ligand-induced apoptosis and cell cycle arrest of esophageal cancer cells by simultaneous inhibition of MAPK/ERK kinase, 1701

Gene regulation

Statins upregulate CD36 expression in human monocytes, an effect strengthened when combined with PPAR- γ ligands Putative contribution of Rho GTPases in statin-induced CD36 expression, 303

Regulation of inosine monophosphate dehydrogenase type I and type II isoforms in human lymphocytes, 767

Genetic polymorphism

Functional characterization of genetic polymorphisms identified in the human cytochrome P450 4F12 (CYP4F12) promoter region, 2231

Genetic variants

Specific ligand binding on genetic variants of human α_1 -acid glycoprotein studied by circular dichroism spectroscopy, 679

Genistein

Genistein arrests hepatoma cells at G2/M phase: involvement of ATM activation and upregulation of p21^{waf1/cip1} and Wee1, 717

Genistein inversely affects tubulin-binding agent-induced apoptosis in human breast cancer cells, 2031

The cystic fibrosis mutation G1349D within the signature motif LSHGH of NBD2 abolishes the activation of CFTR chloride channels by genistein, 2187

G_i proteins

Modulation of A₁ adenosine receptor signaling by peroxynitrite, 375

GIRK

Synthesis and electrophysiological characterization of cyclic morphine analogues, 1887

Glial fibrillary acidic protein

Reactive blue 2 inhibition of cyclic AMP-dependent differentiation of rat C6 glioma cells by purinergic receptor-independent inactivation of phosphatidylinositol 3-kinase, 1489

Glioblastoma multiforme

Combination treatment of glioblastoma multiforme cell lines with the anti-malarial artesunate and the epidermal growth factor receptor tyrosine kinase inhibitor OSI-774, 1689

Glucose

Similar effects of succinic acid dimethyl ester and glucose on islet calcium oscillations and insulin release, 981

Glucose transport

4-Hydroxy tempol-induced impairment of mitochondrial function and augmentation of glucose transport in vascular endothelial and smooth muscle cells, 1985

Glucosidation

Uridine diphosphate sugar-selective conjugation of an aldose reductase inhibitor (AS-3201) by UDP-glucuronosyltransferase 2B subfamily in human liver microsomes, 1269

Glucuronidation

Glucuronidation as a mechanism of intrinsic drug resistance in colon cancer cells: contribution of drug transport proteins, 31

N-Glucuronidation

Quaternary ammonium-linked glucuronidation of tamoxifen by human liver microsomes and UDP-glucuronosyltransferase 1A4, 2093

Glucuronide

Induction of tumour necrosis factor and interferon- γ in cultured murine splenocytes by the antivasular agent DMXAA and its metabolites, 937

Glutamate

Pharmacological characterization of human excitatory amino acid transporters EAAT1, EAAT2 and EAAT3 in a fluorescence-based membrane potential assay, 2115

Glutamate-gated chloride channel

Agonist enhancement of macrocyclic lactone activity at a glutamate-gated chloride channel subunit from *Haemonchus contortus*, 1019

 γ -Glutamyltransferase

Acivicin-induced alterations in renal and hepatic glutathione concentrations and in γ -glutamyltransferase activities, 1421

Glutathione

Role of reactive oxygen species, glutathione and NF- κ B in apoptosis induced by 3,4-methylenedioxymethamphetamine ("Ecstasy") on hepatic stellate cells, 1025

Acivicin-induced alterations in renal and hepatic glutathione concentrations and in γ -glutamyltransferase activities, 1421

Glutathione S-conjugates

Acivicin-induced alterations in renal and hepatic glutathione concentrations and in γ -glutamyltransferase activities, 1421

Glutathione S-transferase

Structural requirements for the flavonoid-mediated modulation of glutathione S-transferase P1-1 and GS-X pump activity in MCF7 breast cancer cells, 1607

Molecular cloning and characterization of a glutathione S-transferase from largemouth bass (*Micropterus salmoides*) liver that is involved in the detoxification of 4-hydroxynonenal, 2129

Glycine receptor (GlyR)

Functional characterisation of the human $\alpha 1$ glycine receptor in a fluorescence-based membrane potential assay, 1789

Glycogen

Inhibition of glycogen breakdown by imino sugars *in vitro* and *in vivo*, 697

p-glycoprotein

Tamoxifen cytotoxicity in hepatoblastoma cells stably transfected with human CYP3A4, 1057

Glycosphingolipid

Inhibition of glycogen breakdown by imino sugars *in vitro* and *in vivo*, 697

G₂M phase

Calpain as a multi-site regulator of cell cycle, 1513

GPCR

Diisothiocyanate derivatives as potent, insurmountable antagonists of P2Y₆ nucleotide receptors, 1763

G-protein coupled receptor

Discovery of novel peptide/receptor interactions: identification of PHM-27 as a potent agonist of the human calcitonin receptor, 1279

GSTP1-1

Regulation of glutathione S-transferase P1-1 gene expression by NF- κ B in tumor necrosis factor alpha-treated K562 leukemia cells, 1227

GS-X pump

Structural requirements for the flavonoid-mediated modulation of glutathione S-transferase P1-1 and GS-X pump activity in MCF7 breast cancer cells, 1607

GT3-TKB cells

Adenosine induces apoptosis in the human gastric cancer cells via an intrinsic pathway relevant to activation of AMP-activated protein kinase, 2005

Guanylyl cyclase

Native human nitric oxide sensitive guanylyl cyclase: purification and characterization, 1579

GW707

Up-regulation of low-density lipoprotein receptor in human hepatocytes is induced by sequestration of free cholesterol in the endosomal/lysosomal compartment, 2281

Haem

Synergistic interaction of a chloroquine metabolite with chloroquine against drug-resistant malaria parasites, 1347

Haemonchus contortus

Agonist enhancement of macrocyclic lactone activity at a glutamate-gated chloride channel subunit from *Haemonchus contortus*, 1019

Haloalkenes

Acivicin-induced alterations in renal and hepatic glutathione concentrations and in γ -glutamyltransferase activities, 1421

HDL

Stimulation of CD36 and the key effector of reverse cholesterol transport ATP-binding cassette A1 in monocytoid cells by niacin, 411

Heart

Selective expression of Kir6.1 protein in different vascular and non-vascular tissues, 147

Preservation of mitochondrial function during ischemia as a possible mechanism for cardioprotection of diltiazem against ischemia/reperfusion injury, 565

Hedgehog

Regulation of Hedgehog signaling: a complex story, 805

HEK-293

Selective expression of Kir6.1 protein in different vascular and non-vascular tissues, 147

Pharmacological characterization of human excitatory amino acid transporters EAAT1, EAAT2 and EAAT3 in a fluorescence-based membrane potential assay, 2115

Helical displacements

Intrinsic activity and comparative molecular dynamics of buspirone analogues at the 5-HT_{1A} receptors, 2219

Hepatic injury

Hepatic expression of multiple acute phase proteins and down-regulation of nuclear receptors after acute endotoxin exposure, 1389

Hepatic stellate cells

Role of reactive oxygen species, glutathione and NF- κ B in apoptosis induced by 3,4-methylenedioxymethamphetamine ("Ecstasy") on hepatic stellate cells, 1025

Hepatocyte

Iron mobilization, cytoprotection, and inhibition of cell proliferation in normal and transformed rat hepatocyte cultures by the hydroxypyridinone CP411, compared to CP20: a biological and physicochemical study, 1479

Utric acid-induced necrosis of cultured mouse hepatocytes: inhibition of mitochondrial function and oxidative stress, 439

Apoptotic injury in cultured human hepatocytes induced by HMG-CoA reductase inhibitors, 2175

Hep3B

Cisplatin-induced apoptosis in Hep3B cells: mitochondria-dependent and -independent pathways, 1459

HepG2

Genistein arrests hepatoma cells at G2/M phase: involvement of ATM activation and upregulation of p21^{waf1/cip1} and Wee1, 717

HepG2 cells

Tamoxifen cytotoxicity in hepatoblastoma cells stably transfected with human CYP3A4, 1057

Herbimycin A

Potent, selective and cell-mediated inhibition of human herpesvirus 6 at an early stage of viral replication by the non-nucleoside compound CMV423, 325

 β -Herpesvirus

Potent, selective and cell-mediated inhibition of human herpesvirus 6 at an early stage of viral replication by the non-nucleoside compound CMV423, 325

Heterogeneous nuclear ribonucleoproteins (hnRNP)

Isolation and identification of heterogeneous nuclear ribonucleoproteins (hnRNP) from purified plasma membranes of human tumour cell lines as albumin-binding proteins, 655

Hexachloro-1,3-butadiene

Acivicin-induced alterations in renal and hepatic glutathione concentrations and in γ -glutamyltransferase activities, 1421

Hexose analogues

Interaction of substituted hexose analogues with the *Trypanosoma brucei* hexose transporter, 459

Hexose transporter

Interaction of substituted hexose analogues with the *Trypanosoma brucei* hexose transporter, 459

Hierarchical cluster analysis

Combination treatment of glioblastoma multiforme cell lines with the anti-malarial artesunate and the epidermal growth factor receptor tyrosine kinase inhibitor OSI-774, 1689

High throughput screening (HTS)

Functional characterisation of the human α 1 glycine receptor in a fluorescence-based membrane potential assay, 1789

Pharmacological characterization of human excitatory amino acid transporters EAAT1, EAAT2 and EAAT3 in a fluorescence-based membrane potential assay, 2115

High-throughput screen

Discovery of novel peptide/receptor interactions: identification of PHM-27 as a potent agonist of the human calcitonin receptor, 1279

Histamine

The biphasic effects of cyclopentenone prostaglandins, prostaglandin J₂ and 15-deoxy- $\Delta^{12,14}$ -prostaglandin J₂ on proliferation and apoptosis in rat basophilic leukemia (RBL-2H3) cells, 1259

Histidine

Histidine residues in human phenol sulfotransferases, 1355

Histidine tag

Inhibitors of gelatinase B/matrix metalloproteinase-9 activity. Comparison of a peptidomimetic and polyhistidine with single-chain derivatives of a neutralizing monoclonal antibody, 1001

HIT-cells

β -Cell toxicity of ATP-sensitive K⁺ channel-blocking insulin secretagogues, 1733

HIV-1

Binding of hybrid molecules containing pyrrolo [2,1-c][1,4]benzodiazepine (PBD) and oligopyrrole carriers to the human immunodeficiency type 1 virus TAR-RNA, 401

The use of a new in vitro reaction substrate reproducing both U3 and U5 regions of the HIV-1 3'-ends increases the correlation between the in vitro and in vivo effects of the HIV-1 integrase inhibitors, 1751

HIV

Effect of stereo and regiochemistry towards wild and multidrug resistant HIV-1 virus: viral potency of chiral PETT derivatives, 1933

HL-60 cells

Synthetic 1,4-anthracenedione analogs induce cytochrome *c* release, caspase-9, -3, and -8 activities, poly(ADP-ribose) polymerase-1 cleavage and internucleosomal DNA fragmentation in HL-60 cells by a mechanism which involves caspase-2 activation but not Fas signaling, 523

Interference of the polyphenol epicatechin with the biological chemistry of nitric oxide- and peroxynitrite-mediated reactions, 1285

HMG-CoA reductase inhibitor

Apoptotic injury in cultured human hepatocytes induced by HMG-CoA reductase inhibitors, 2175

HMG-CoA synthase

Pharmacological characterization of a human-specific peroxisome proliferator-activated receptor α (PPAR α) agonist in dogs, 2057

H₂O₂

Effect of hydrogen peroxide on Ca²⁺ mobilisation in human platelets through sulphhydryl oxidation dependent and independent mechanisms, 491

Homocysteine

Analysis of cell-cycle kinetics and sulfur amino acid metabolism in methionine-dependent tumor cell lines; the effect of homocysteine supplementation, 1587

5-HT

Pharmacology of polymorphic variants of the human 5-HT_{1A} receptor, 479

- 5-HT_{1A} receptor
Pharmacology of polymorphic variants of the human 5-HT_{1A} receptor, 479
Intrinsic activity and comparative molecular dynamics of buspirone analogues at the 5-HT_{1A} receptors, 2219
- Human
Effects of triaryl phosphates on mouse and human nuclear receptors, 97
- Human adrenergic receptor
Human α_{1D} -adrenoceptor phosphorylation and desensitization, 1853
- Human African trypanosomiasis
Interaction of substituted hexose analogues with the *Trypanosoma brucei* hexose transporter, 459
- Human colon cancer cells
Glucuronidation as a mechanism of intrinsic drug resistance in colon cancer cells: contribution of drug transport proteins, 31
- Human cytochrome P450 1A1
Arachidonic and eicosapentaenoic acid metabolism by human CYP1A1: highly stereoselective formation of 17(R),18(S)-epoxyeicosatetraenoic acid, 1445
- Human fibroblasts
Inhibition of plasmin-mediated prostromelysin-1 activation by interaction of long chain unsaturated fatty acids with kringle 5, 643
- Human hepatocytes
Determination of cytochrome P450 1A2 and cytochrome P450 3A4 induction in cryopreserved human hepatocytes, 427
- Human herpesvirus 6
Potent, selective and cell-mediated inhibition of human herpesvirus 6 at an early stage of viral replication by the non-nucleoside compound CMV423, 325
- Human kidney microsomes
Evidence that unsaturated fatty acids are potent inhibitors of renal UDP-glucuronosyltransferases (UGT): kinetic studies using human kidney cortical microsomes and recombinant UGT1A9 and UGT2B7, 191
- Human liver microsomes
Quaternary ammonium-linked glucuronidation of tamoxifen by human liver microsomes and UDP-glucuronosyltransferase 1A4, 2093
- Human neuroblastoma cell line
A novel mechanism for pergolide-induced neuroprotection: inhibition of NF- κ B nuclear translocation, 1743
- Human placenta
N-Demethylation of levo- α -acetylmetadol by human placental aromatase, 885
- Human platelets
Effect of hydrogen peroxide on Ca²⁺ mobilisation in human platelets through sulphhydryl oxidation dependent and independent mechanisms, 491
Dual effect of hydrogen peroxide on store-mediated calcium entry in human platelets, 1065
- Human promoter sequencing
Opposite regulation of the rat and human cytosolic aspartate aminotransferase genes by fibrates, 213
- Human T-lymphoblastoid cells
Induction of apoptosis in two human leukemia cell lines as well as differentiation in human promyelocytic cells by cyanidin-3-O- β -glucopyranoside, 2047
- Human umbilical vein endothelial cells
Reduction of high glucose and phorbol-myristate-acetate-induced endothelial cell permeability by protein kinase C inhibitors LY379196 and hypocrellin A, 855
- Hydrogen peroxide
Dual effect of hydrogen peroxide on store-mediated calcium entry in human platelets, 1065
- 4-Hydroxy tempol
4-Hydroxy tempol-induced impairment of mitochondrial function and augmentation of glucose transport in vascular endothelial and smooth muscle cells, 1985
- 2'-Hydroxychalcone
Inhibition of lipopolysaccharide-induced expression of inducible nitric oxide synthase and tumor necrosis factor- α by 2'-hydroxychalcone derivatives in RAW 264.7 cells, 1549
- Hydroxylated aromatics
The use of a new in vitro reaction substrate reproducing both U3 and U5 regions of the HIV-1 3'-ends increases the correlation between the in vitro and in vivo effects of the HIV-1 integrase inhibitors, 1751
- 4-Hydroxynonenal
Molecular cloning and characterization of a glutathione S-transferase from largemouth bass (*Micropterus salmoides*) liver that is involved in the detoxification of 4-hydroxynonenal, 2129
- 5-Hydroxyoxindole
Inhibition of brain mitochondrial monoamine oxidases by the endogenous compound 5-hydroxyoxindole, 977
- Hydroxypyridinone iron chelator
Iron mobilization, cytoprotection, and inhibition of cell proliferation in normal and transformed rat hepatocyte cultures by the hydroxypyridinone CP411, compared to CP20: a biological and physicochemical study, 1479
- Hydroxyurea
Mechanism of cell cycle arrest by sulfoquinovosyl monoacylglycerol with a C18-saturated fatty acid (C18-SQMG), 1373
- Hyperforin
Suppression of receptor-mediated Ca²⁺ mobilization and functional leukocyte responses by hyperforin, 1531
- Hypericum perforatum*
Suppression of receptor-mediated Ca²⁺ mobilization and functional leukocyte responses by hyperforin, 1531
- Hyperplasia
Gene expression changes in rat liver following exposure to liver growth agents: role of Kupffer cells in xenobiotic-mediated liver growth, 107
- Hypertension
Reduced basal nitric oxide bioavailability and platelet activation in young spontaneously hypertensive rats, 2273
- Hypocrellin A
Reduction of high glucose and phorbol-myristate-acetate-induced endothelial cell permeability by protein kinase C inhibitors LY379196 and hypocrellin A, 855
- Hypolipidemic effect
Lack of hypotriglyceridemic effect of gemfibrozil as a consequence of age-related changes in rat liver PPAR α , 157
- Hypoxia
Chronic hypoxia up-regulates expression of adenosine A₁ receptors in DDT₁-MF2 cells, 421
- Ibotenate
Agonist enhancement of macrocyclic lactone activity at a glutamate-gated chloride channel subunit from *Haemonchus contortus*, 1019
- IFN- γ
The p38 pathway partially mediates caspase-3 activation induced by reactive oxygen species in Fanconi anemia C cells, 539
- IkB
Inhibition of RANTES expression by indirubin in influenza virus-infected human bronchial epithelial cells, 167
- IL-4
Differential regulation of IL-4 expression and degranulation by anti-allergic olopatadine in rat basophilic leukemia (RBL-2H3) cells, 1315
- Imidazole
Medetomidine analogs as selective agonists for the human α_2 -adrenoceptors, 87
- Imidazolines
 β -Cell toxicity of ATP-sensitive K⁺ channel-blocking insulin secretagogues, 1733
- Imino sugar
Inhibition of glycogen breakdown by imino sugars *in vitro* and *in vivo*, 697

- Imipramine**
Specific ligand binding on genetic variants of human α_1 -acid glycoprotein studied by circular dichroism spectroscopy, 679
- Immune**
Regulation of inosine monophosphate dehydrogenase type I and type II isoforms in human lymphocytes, 767
- Immunohistochemistry**
Immunohistochemical detection of melphalan-DNA adducts in colon cancer cells *in vitro* and human colorectal liver tumours *in vivo*, 1771
- Immunotoxin**
Reductive activation of ricin and ricin A-chain immunotoxins by protein disulfide isomerase and thioredoxin reductase, 1721
- IMPDH**
Regulation of inosine monophosphate dehydrogenase type I and type II isoforms in human lymphocytes, 767
- In vitro***
Influence of lipid lowering fibrates on P-glycoprotein activity *in vitro*, 285
- Indinavir**
Indinavir alters sterol and fatty acid homeostatic mechanisms in primary rat hepatocytes by increasing levels of activated sterol regulatory element-binding proteins and decreasing cholesterol 7 α -hydroxylase mRNA levels, 255
- Indirubin**
Inhibition of RANTES expression by indirubin in influenza virus-infected human bronchial epithelial cells, 167
- Indirubin-3'-oxime**
Inhibition of RANTES expression by indirubin in influenza virus-infected human bronchial epithelial cells, 167
- Indomethacin**
Indomethacin-induced renal damage: role of oxygen free radicals, 587
- Induced circular dichroism**
Specific ligand binding on genetic variants of human α_1 -acid glycoprotein studied by circular dichroism spectroscopy, 679
- Inducible nitric oxide synthase**
Inhibition of inducible nitric oxide synthase expression by baicalein in endotoxin/cytokine-stimulated microglia, 957
- Induction**
Determination of cytochrome P450 1A2 and cytochrome P450 3A4 induction in cryopreserved human hepatocytes, 427
- Inflammation**
Nuclear receptor signaling in macrophages, 201
Statins upregulate CD36 expression in human monocytes, an effect strengthened when combined with PPAR- γ ligands Putative contribution of Rho GTPases in statin-induced CD36 expression, 303
Mediation of annexin 1 secretion by a probenecid-sensitive ABC-transporter in rat inflamed mucosa, 1195
Regulation of glutathione S-transferase P1-I gene expression by NF-kappaB in tumor necrosis factor alpha-treated K562 leukemia cells, 1227
Activation of nuclear factor kappa B by diesel exhaust particles in mouse epidermal cells through phosphatidylinositol 3-kinase/Akt signaling pathway, 1975
- Inflammatory cytokines**
Down-regulation of cytochrome P450 proteins and its activities by Shiga-like toxin II from *Escherichia coli* O157:H7, 1427
- Influenza**
Inhibition of RANTES expression by indirubin in influenza virus-infected human bronchial epithelial cells, 167
- Inhibition**
Influence of lipid lowering fibrates on P-glycoprotein activity *in vitro*, 285
Monoglyceride lipase-like enzymatic activity is responsible for hydrolysis of 2-arachidonoylglycerol in rat cerebellar membranes, 1381
Structural requirements for the flavonoid-mediated modulation of glutathione S-transferase P1-I and GS-X pump activity in MCF7 breast cancer cells, 1607
- Inhibition by fatty acids**
Evidence that unsaturated fatty acids are potent inhibitors of renal UDP-glucuronosyltransferases (UGT): kinetic studies using human kidney cortical microsomes and recombinant UGT1A9 and UGT2B7, 191
- Inhibitor**
A new structural class of proteasome inhibitors identified by microbial screening using yeast-based assay, 227
Inhibitors of gelatinase B/matrix metalloproteinase-9 activity. Comparison of a peptidomimetic and polyhistidine with single-chain derivatives of a neutralizing monoclonal antibody, 1001
- Inhibitor protein IF₁**
Diazoxide affects the IF₁ inhibitor protein binding to F₁ sector of beef heart F₀F₁ATP synthase, 1843
- iNOS**
Dietary compounds prevent oxidative damage and nitric oxide production by cells involved in demyelinating disease, 967
Inhibitory mechanisms of YC-1 and PMC in the induction of iNOS expression by lipoteichoic acid in RAW 264.7 macrophages, 1411
- Insulin**
Inhibition of ATP-sensitive K⁺ channels by taurine through a benzamido-binding site on sulfonylurea receptor 1, 1089
- Insulin release**
Similar effects of succinic acid dimethyl ester and glucose on islet calcium oscillations and insulin release, 981
- Insulin resistance**
Rosiglitazone increases extravasation of macromolecules and endothelial nitric oxide synthase in skeletal muscles of the fructose-fed rat model, 1997
- Insulin secretion**
Role of CYP2E1 in ketone-stimulated insulin release in pancreatic B-cells, 875
- Integrase**
The use of a new *in vitro* reaction substrate reproducing both U3 and U5 regions of the HIV-1 3'-ends increases the correlation between the *in vitro* and *in vivo* effects of the HIV-1 integrase inhibitors, 1751
- Integrase assay**
The use of a new *in vitro* reaction substrate reproducing both U3 and U5 regions of the HIV-1 3'-ends increases the correlation between the *in vitro* and *in vivo* effects of the HIV-1 integrase inhibitors, 1751
- Interleukin-1 β**
Protection against lipopolysaccharide-induced sepsis and inhibition of interleukin-1 β and prostaglandin E2 synthesis by silymarin, 175
- Interleukin (IL)-1 β**
Resveratrol, a polyphenol found in grapes, suppresses oxidative damage and stimulates apoptosis during early colonic inflammation in rats, 1399
- Internalization**
Melatonin-mediated regulation of human MT₁ melatonin receptors expressed in mammalian cells, 2023
- Invasion**
Transinactivation of the epidermal growth factor receptor tyrosine kinase and focal adhesion kinase phosphorylation by dietary flavonoids: effect on invasive potential of human carcinoma cells, 2103
- Inverse agonism**
Inverse agonist properties of atypical antipsychotic drugs, 2039
- Inverse agonists**
Investigation of the mechanism of agonist and inverse agonist action at D₂ dopamine receptors, 1657
- IP₃ receptor**
Effect of hydrogen peroxide on Ca²⁺ mobilisation in human platelets through sulphhydryl oxidation dependent and independent mechanisms, 491
- Iron**
Role of zinc and iron chelation in apoptosis mediated by tachpyridine, an anti-cancer iron chelator, 1677
- Iron cytotoxicity**
Polyamine modulation of iron uptake in CHO cells, 1629
- Iron overload**
Polyamine modulation of iron uptake in CHO cells, 1629

- Isatin**
Inhibition of brain mitochondrial monoamine oxidases by the endogenous compound 5-hydroxyoxindole, 977
- Ischemia**
Preservation of mitochondrial function during ischemia as a possible mechanism for cardioprotection of diltiazem against ischemia/reperfusion injury, 565
- Islet metabolism**
Similar effects of succinic acid dimethyl ester and glucose on islet calcium oscillations and insulin release, 981
- Isorhapontigenin**
Isorhapontigenin and resveratrol suppress oxLDL-induced proliferation and activation of ERK1/2 mitogen-activated protein kinases of bovine aortic smooth muscle cells, 777
- Isothiocyanate**
Diisothiocyanate derivatives as potent, insurmountable antagonists of P2Y₆ nucleotide receptors, 1763
- Ivermectin receptor**
Agonist enhancement of macrocyclic lactone activity at a glutamate-gated chloride channel subunit from *Haemonchus contortus*, 1019
- JNK**
Tetrandrine-induced apoptosis is mediated by activation of caspases and PKC- δ in U937 cells, 1819
- JNK phosphorylation**
Apoptosis by 6-*O*-palmitoyl-L-ascorbic acid coincides with JNK-phosphorylation and inhibition of Mg²⁺-dependent phosphatase activity, 919
- JNK/SAPK**
Inhibitory mechanisms of YC-1 and PMC in the induction of iNOS expression by lipoteichoic acid in RAW 264.7 macrophages, 1411
- JNK-inhibitor SP600125**
Apoptosis by 6-*O*-palmitoyl-L-ascorbic acid coincides with JNK-phosphorylation and inhibition of Mg²⁺-dependent phosphatase activity, 919
- K562**
Regulation of glutathione *S*-transferase P1-1 gene expression by NF- κ B in tumor necrosis factor α -treated K562 leukemia cells, 1227
- K_{ATP} channel**
Fluorescence microscopy studies with a fluorescent glibenclamide derivative, a high-affinity blocker of pancreatic β -cell ATP-sensitive K⁺ currents, 1437
- K_{ATP} channels**
Selective expression of Kir6.1 protein in different vascular and non-vascular tissues, 147
- KCL**
Pharmacological characterization of a human-specific peroxisome proliferator-activated receptor α (PPAR α) agonist in dogs, 2057
- Ketone**
Role of CYP2E1 in ketone-stimulated insulin release in pancreatic B-cells, 875
- Kidney**
Indomethacin-induced renal damage: role of oxygen free radicals, 587
Cross talk of cAMP and flavone in regulation of cystic fibrosis transmembrane conductance regulator (CFTR) Cl⁻ channel and Na⁺/K⁺/2Cl⁻ cotransporter in renal epithelial A6 cells, 795
- Kringles**
Inhibition of plasmin-mediated prostromelysin-1 activation by interaction of long chain unsaturated fatty acids with kringle 5, 643
- Kupffer cell**
Gene expression changes in rat liver following exposure to liver growth agents: role of Kupffer cells in xenobiotic-mediated liver growth, 107
Inverse gene expression patterns for macrophage activating hepatotoxins and peroxisome proliferators in rat liver, 2141
- LAAM**
N-Demethylation of levo- α -acetylmetadol by human placental aromatase, 885
- Lactacystin**
A new structural class of proteasome inhibitors identified by microbial screening using yeast-based assay, 227
- Laser-scanning confocal microscopy**
Fluorescence microscopy studies with a fluorescent glibenclamide derivative, a high-affinity blocker of pancreatic β -cell ATP-sensitive K⁺ currents, 1437
- LDL oxidation**
Polyhydroxylated 2-styrylchromones as potent antioxidants, 2207
- LDL receptor up-regulation**
Up-regulation of low-density lipoprotein receptor in human hepatocytes is induced by sequestration of free cholesterol in the endosomal/lysosomal compartment, 2281
- Leukemia**
Relationship between daunorubicin concentration and apoptosis induction in leukemic cells, 1047
Regulation of glutathione *S*-transferase P1-1 gene expression by NF- κ B in tumor necrosis factor α -treated K562 leukemia cells, 1227
- Leukemic cell differentiation**
Novel Gemini analogs of 1 α ,25-dihydroxyvitamin D₃ with enhanced transcriptional activity, 1327
- Leukotriene B₄**
Role of sodium in intracellular calcium elevation and leukotriene B₄ formation by receptor-mediated activation of human neutrophils, 385
- Lidocaine**
Characterization of mexiletine as an antagonist of β -adrenoceptor in Chinese hamster ovary cells expressing cloned human β -adrenoceptors, 815
- Ligand binding**
Investigation of the mechanism of agonist and inverse agonist action at D₂ dopamine receptors, 1657
- Lipid homeostasis**
Nuclear receptor signaling in macrophages, 201
- Lipid peroxidation**
Flavin-dependent antioxidant properties of a new series of *meso-N,N'*-dialkyl-imidazolium substituted manganese(III) porphyrins, 77
- Lipopolysaccharide**
Induction of tumour necrosis factor and interferon- γ in cultured murine splenocytes by the antivascular agent DMXAA and its metabolites, 937
Hepatic expression of multiple acute phase proteins and down-regulation of nuclear receptors after acute endotoxin exposure, 1389
- 5-Lipoxygenase**
Mechanisms of the influence of magnolol on eicosanoid metabolism in neutrophils, 831
- 15-Lipoxygenase**
Enzymatically modified low-density lipoprotein upregulates CD36 in low-differentiated monocytic cells in a peroxisome proliferator-activated receptor- γ -dependent way, 841
- Liver**
Molecular cloning and characterization of a glutathione *S*-transferase from largemouth bass (*Micropterus salmoides*) liver that is involved in the detoxification of 4-hydroxynonenal, 1219
- Liver enlargement**
Gene expression changes in rat liver following exposure to liver growth agents: role of Kupffer cells in xenobiotic-mediated liver growth, 107
- Liver gene expression**
Hepatic expression of multiple acute phase proteins and down-regulation of nuclear receptors after acute endotoxin exposure, 1389
- Liver injury**
WIF-B cells as a model for alcohol-induced hepatocyte injury, 2167
- Liver metastases**
Immunohistochemical detection of melphalan-DNA adducts in colon cancer cells in vitro and human colorectal liver tumours in vivo, 1771
- Liver microsomes**
Inhibition of carcinogen-bioactivating cytochrome P450 1 isoforms by amiloride derivatives, 1711

- Liver-enriched transcription factor
Differentiation of human hepatoma cells during confluence as revealed by gene expression profiling, 1249
- L-Leucovorin
Folate concentration dependent transport activity of the Multidrug Resistance Protein 1 (ABCC1), 1541
- LPS
Inverse gene expression patterns for macrophage activating hepatotox-
icants and peroxisome proliferators in rat liver, 2141
- LTA
Inhibitory mechanisms of YC-1 and PMC in the induction of iNOS
expression by lipoteichoic acid in RAW 264.7 macrophages, 1411
- L-type voltage-sensitive Ca^{2+} channel
Protective effects of a selective L-type voltage-sensitive calcium chan-
nel blocker, *S*-312-*d*, on neuronal cell death, 1153
- Lung cells
Reduction of androgen receptor expression by benzo[*a*]pyrene and 7,8-
dihydro-9,10-epoxy-7,8,9,10-tetrahydrobenzo[*a*]pyrene in human lung
cells, 1523
- LY379196
Reduction of high glucose and phorbol-myristate-acetate-induced
endothelial cell permeability by protein kinase C inhibitors
LY379196 and hypocrellin A, 855
- LY475776
Evaluation of the binding of the tricyclic isoxazole photoaffinity label
LY475776 to multidrug resistance associated protein 1 (MRP1) ortho-
logs and several ATP-binding cassette (ABC) drug transporters, 1111
- β -Lyase
Acivicin-induced alterations in renal and hepatic glutathione concen-
trations and in γ -glutamyltransferase activities, 1421
- Lymphocytes
Regulation of inosine monophosphate dehydrogenase type I and type II
isoforms in human lymphocytes, 767
- Lysosome
Inhibition of glycogen breakdown by imino sugars *in vitro* and *in vivo*,
697
Up-regulation of low-density lipoprotein receptor in human hepatocytes
is induced by sequestration of free cholesterol in the endosomal/
lysosomal compartment, 2281
- Mac-1 (CD11b/CD18)
Prevention of macrophage adhesion molecule-1 (Mac-1)-dependent
neutrophil firm adhesion by taxifolin through impairment of protein
kinase-dependent NADPH oxidase activation and antagonism of G
protein-mediated calcium influx, 2251
- Macrophage
Macrophages
Nuclear receptor signaling in macrophages, 201
Dietary compounds prevent oxidative damage and nitric oxide produc-
tion by cells involved in demyelinating disease, 967
Inverse gene expression patterns for macrophage activating hepatotox-
icants and peroxisome proliferators in rat liver, 2141
- Magnolol
Mechanisms of the influence of magnolol on eicosanoid metabolism in
neutrophils, 831
- Mahanine
Mechanism of mahanine-induced apoptosis in human leukemia cells
(HL-60), 41
- Malaria
Synergistic interaction of a chloroquine metabolite with chloroquine
against drug-resistant malaria parasites, 1347
- MALDI-TOF-MS
Isolation and identification of heterogeneous nuclear ribonucleoproteins
(hnRNP) from purified plasma membranes of human tumour cell lines
as albumin-binding proteins, 655
- MAP kinase
Daphnetin induced differentiation of human renal carcinoma cells and
its mediation by p38 mitogen-activated protein kinase, 1779
- MAP kinase inhibitors
Roles of p38 and JNK mitogen-activated protein kinase pathways during
cantharidin-induced apoptosis in U937 cells, 1811
- MAPK
The p38 pathway partially mediates caspase-3 activation induced by
reactive oxygen species in Fanconi anemia C cells, 539
CysLT₁ signal transduction in differentiated U937 cells involves the
activation of the small GTP-binding protein Ras, 1569
Cell cycle- and protein kinase C-specific effects of resiniferatoxin and
resiniferonol 9,13,14-*ortho*-phenylacetate in intestinal epithelial cells,
1873
- Mast cells
The biphasic effects of cyclopentenone prostaglandins, prostaglandin J₂
and 15-deoxy- $\Delta^{12,14}$ -prostaglandin J₂ on proliferation and apoptosis in
rat basophilic leukemia (RBL-2H3) cells, 1259
- Matrix metalloprotease
Activation of latent transforming growth factor beta 1 and inhibition of
matrix metalloprotease activity by a thrombospondin-like tripeptide
linked to elaidic acid, 2013
- Matrix metalloproteinase
Inhibitors of gelatinase B/matrix metalloproteinase-9 activity. Compar-
ison of a peptidomimetic and polyhistidine with single-chain derivatives
of a neutralizing monoclonal antibody, 1001
Transinactivation of the epidermal growth factor receptor tyrosine
kinase and focal adhesion kinase phosphorylation by dietary flavonoids:
effect on invasive potential of human carcinoma cells, 2103
- Matrix metalloproteinases
Inhibition of plasmin-mediated prostromelysin-1 activation by interac-
tion of long chain unsaturated fatty acids with kringle 5, 643
- MDMA
Role of reactive oxygen species, glutathione and NF- κ B in apoptosis
induced by 3,4-methylenedioxymethamphetamine ("Ecstasy") on
hepatic stellate cells, 1025
- Mechanism
Inverse agonist properties of atypical antipsychotic drugs, 2039
- Medetomidine
Medetomidine analogs as selective agonists for the human α_2 -adreno-
ceptors, 87
- Melanogenesis
Benzylamide derivative compound attenuates the ultraviolet B-induced
hyperpigmentation in the brownish guinea pig skin, 707
- Melatonin
Molecular pharmacology of the ovine melatonin receptor: comparison
with recombinant human MT₁ and MT₂ receptors, 667
Melatonin-mediated regulation of human MT₁ melatonin receptors
expressed in mammalian cells, 2023
- Melphalan
Immunohistochemical detection of melphalan-DNA adducts in colon
cancer cells *in vitro* and human colorectal liver tumours *in vivo*,
1771
- Melphalan-DNA adducts
Immunohistochemical detection of melphalan-DNA adducts in colon
cancer cells *in vitro* and human colorectal liver tumours *in vivo*,
1771
- Membrane depolarisation/repolarisation
Counteracting effects of NADPH oxidase and the $\text{Na}^+/\text{Ca}^{2+}$ exchanger
on membrane repolarisation and store-operated uptake of Ca^{2+} by
chemoattractant-activated human neutrophils, 2263
- Mercapturic acid pathway
Acivicin-induced alterations in renal and hepatic glutathione concen-
trations and in γ -glutamyltransferase activities, 1421
- Metabolism
Cytochrome P450 dependent metabolism of the new designer drug 1-(3-
trifluoromethylphenyl)piperazine (TFMPP). *In vivo* studies in Wistar
and Dark Agouti rats as well as *in vitro* studies in human liver
microsomes, 235
N-Demethylation of levo- α -acetylmethadol by human placental aroma-
tase, 885

- Metalloporphyrins**
 Flavin-dependent antioxidant properties of a new series of *meso-N,N'*-dialkyl-imidazolium substituted manganese(III) porphyrins, 77
- Methionine dependence**
 Analysis of cell-cycle kinetics and sulfur amino acid metabolism in methionine-dependent tumor cell lines; the effect of homocysteine supplementation, 1587
- Methotrexate**
 Folate concentration dependent transport activity of the Multidrug Resistance Protein 1 (ABCC1), 1541
- Methyl pocket**
 Medetomidine analogs as selective agonists for the human α_2 -adrenoceptors, 87
- 3-Methylcholanthrene**
 Inhibition of osteoclast formation by 3-methylcholanthrene, a ligand for arylhydrocarbon receptor: suppression of osteoclast differentiation factor in osteogenic cells, 119
- Methylselenol**
 Methioninase and selenomethionine but not Se-methylselenocysteine generate methylselenol and superoxide in an *in vitro* chemiluminescent assay: implications for the nutritional carcinostatic activity of selenoamino acids, 547
- 4-Methylumbelliferone glucuronidation**
 Evidence that unsaturated fatty acids are potent inhibitors of renal UDP-glucuronosyltransferases (UGT): kinetic studies using human kidney cortical microsomes and recombinant UGT1A9 and UGT2B7, 191
- Mexiletine**
 Characterization of mexiletine as an antagonist of β -adrenoceptor in Chinese hamster ovary cells expressing cloned human β -adrenoceptors, 815
- MG63**
 Effect of celecoxib on Ca^{2+} movement and cell proliferation in human osteoblasts, 1123
- Micelles**
 Polyhydroxylated 2-styrylchromones as potent antioxidants, 2207
- Microarray**
 Differentiation of human hepatoma cells during confluence as revealed by gene expression profiling, 1249
 Nuclear factor Y regulation and promoter transactivation of human ribonucleotide reductase subunit M2 gene in a Gemcitabine resistant KB clone, 1499
 Inverse gene expression patterns for macrophage activating hepatotoxins and peroxisome proliferators in rat liver, 2141
- Microarray analysis**
 Comparison of gene expression profiles between white and brown adipose tissues of rat by microarray analysis, 555
- Microarrays**
 Hepatic expression of multiple acute phase proteins and down-regulation of nuclear receptors after acute endotoxin exposure, 1389
- Microcirculation**
 Rosiglitazone increases extravasation of macromolecules and endothelial nitric oxide synthase in skeletal muscles of the fructose-fed rat model, 1997
- Microdialysis**
 Effects of phosphodiesterase inhibition on cortical spreading depression and associated changes in extracellular cyclic GMP, 1619
- Microglia**
 Inhibition of inducible nitric oxide synthase expression by baicalein in endotoxin/cytokine-stimulated microglia, 957
- Microtubules**
 Disorazol A₁, a highly effective antimetabolic agent acting on tubulin polymerization and inducing apoptosis in mammalian cells, 927
- Migration**
 Pancreatic stellate cell migration: role of the phosphatidylinositol 3-kinase (PI3-kinase) pathway, 1215
- Mitochondria**
 Disruption of mitochondria during tocotrienol-induced apoptosis in MDA-MB-231 human breast cancer cells, 315
 Usnic acid-induced necrosis of cultured mouse hepatocytes: inhibition of mitochondrial function and oxidative stress, 439
 Preservation of mitochondrial function during ischemia as a possible mechanism for cardioprotection of diltiazem against ischemia/reperfusion injury, 565
 Mitochondria permeability transition-dependent *tert*-butyl hydroperoxide-induced apoptosis in hepatoma HepG2 cells, 611
 Andrographolide suppresses endothelial cell apoptosis via activation of phosphatidylinositol-3-kinase/Akt pathway, 1337
 Cisplatin-induced apoptosis in Hep3B cells: mitochondria-dependent and -independent pathways, 1459
 Diazoxide affects the IF₁ inhibitor protein binding to F₁ sector of beef heart F₀F₁ATP synthase, 1843
 Involvement of tyrosine kinase p56/Lck in apoptosis induction by anticancer drugs, 1859
- Mitochondrial biogenesis**
 Mitochondrial biogenesis as a cellular signaling framework, 1
- Mitochondrial membrane potential**
 Disruption of mitochondria during tocotrienol-induced apoptosis in MDA-MB-231 human breast cancer cells, 315
 Investigation of ouabain-induced anticancer effect in human androgen-independent prostate cancer PC-3 cells, 727
- Mitochondrial permeability transition**
 Disruption of mitochondria during tocotrienol-induced apoptosis in MDA-MB-231 human breast cancer cells, 315
 Mitochondrial thioredoxin reductase inhibition by gold(I) compounds and concurrent stimulation of permeability transition and release of cytochrome *c*, 689
 Non-toxic concentrations of peroxynitrite commit U937 cells to mitochondrial permeability transition-dependent necrosis that is however prevented by endogenous arachidonic acid, 1077
- Mitogen-activated protein kinase**
 Adenosine A₃ receptor-mediated regulation of p38 and extracellular-regulated kinase ERK1/2 via phosphatidylinositol-3'-kinase, 129
- Mitosis**
 Calpain as a multi-site regulator of cell cycle, 1513
- Modified low-density lipoprotein**
 Enzymatically modified low-density lipoprotein upregulates CD36 in low-differentiated monocytic cells in a peroxisome proliferator-activated receptor- γ -dependent way, 841
- Molecular classification**
 A cell-based system to identify and characterize the molecular mechanism of drug-metabolizing enzyme (DME) modulators, 1897
- Molecular mechanisms**
 Intrinsic activity and comparative molecular dynamics of buspirone analogues at the 5-HT_{1A} receptors, 2219
- Molecular modelling**
 Site-directed mutagenesis at the human B₂ receptor and molecular modelling to define the pharmacophore of non-peptide bradykinin receptor antagonists, 601
- Molecular pharmacology**
 Molecular pharmacology of the ovine melatonin receptor: comparison with recombinant human MT₁ and MT₂ receptors, 667
- Monoacylglycerol lipase**
 Monoacylglycerol lipase-like enzymatic activity is responsible for hydrolysis of 2-arachidonoylglycerol in rat cerebellar membranes, 1381
- Monoclonal antibody**
 Inhibitors of gelatinase B/matrix metalloproteinase-9 activity. Comparison of a peptidomimetic and polyhistidine with single-chain derivatives of a neutralizing monoclonal antibody, 1001
- Monocytes**
 Statins upregulate CD36 expression in human monocytes, an effect strengthened when combined with PPAR- γ ligands Putative contribution of Rho GTPases in statin-induced CD36 expression, 303
- Monocytic cells**
 Enzymatically modified low-density lipoprotein upregulates CD36 in low-differentiated monocytic cells in a peroxisome proliferator-activated receptor- γ -dependent way, 841

- Monoglyceride lipase**
 Monoglyceride lipase-like enzymatic activity is responsible for hydrolysis of 2-arachidonoylglycerol in rat cerebellar membranes, 1381
- Morphiceptin analogues**
 Synthesis and electrophysiological characterization of cyclic morphiceptin analogues, 1887
- Morphine**
 The development of morphine antinociceptive tolerance in nitric oxide synthase-deficient mice, 735
- 3-Morpholiniosydnonimine**
 Modulation of A₁ adenosine receptor signaling by peroxynitrite, 375
- Mouse**
 Effects of triaryl phosphates on mouse and human nuclear receptors, 97
- Moxidectin**
 Agonist enhancement of macrocyclic lactone activity at a glutamate-gated chloride channel subunit from *Haemonchus contortus*, 1019
- MPP+**
 Effects of enhancing mitochondrial oxidative phosphorylation with reducing equivalents and ubiquinone on 1-methyl-4-phenylpyridinium toxicity and complex I–IV damage in neuroblastoma cells, 1167
- MRP1**
 Folate concentration dependent transport activity of the Multidrug Resistance Protein 1 (ABCC1), 1541
 Structural requirements for the flavonoid-mediated modulation of glutathione S-transferase P1-1 and GS-X pump activity in MCF7 breast cancer cells, 1607
- MRP2**
 Structural requirements for the flavonoid-mediated modulation of glutathione S-transferase P1-1 and GS-X pump activity in MCF7 breast cancer cells, 1607
- MRP1 ortholog**
 Evaluation of the binding of the tricyclic isoxazole photoaffinity label LY475776 to multidrug resistance associated protein 1 (MRP1) orthologs and several ATP-binding cassette (ABC) drug transporters, 1111
- MT₁ melatonin receptor**
 Melatonin-mediated regulation of human MT₁ melatonin receptors expressed in mammalian cells, 2023
- Multi-drug resistance**
 Selenite-induced apoptosis in doxorubicin-resistant cells and effects on the thioredoxin system, 513
- Multidrug resistance**
 Folate concentration dependent transport activity of the Multidrug Resistance Protein 1 (ABCC1), 1541
 Effect of stereo and regiochemistry towards wild and multidrug resistant HIV-1 virus: viral potency of chiral PETT derivatives, 1933
- Multinucleate cells**
 Disorazol A₁, a highly effective antimitotic agent acting on tubulin polymerization and inducing apoptosis in mammalian cells, 927
- Mycophenolic acid**
 Regulation of inosine monophosphate dehydrogenase type I and type II isoforms in human lymphocytes, 767
- Myeloperoxidase**
 Interference of the polyphenol epicatechin with the biological chemistry of nitric oxide- and peroxynitrite-mediated reactions, 1285
- Na⁺ channels**
 Preservation of mitochondrial function during ischemia as a possible mechanism for cardioprotection of diltiazem against ischemia/reperfusion injury, 565
- Na⁺ overload**
 Preservation of mitochondrial function during ischemia as a possible mechanism for cardioprotection of diltiazem against ischemia/reperfusion injury, 565
- Na⁺/Ca²⁺ exchanger**
 Counteracting effects of NADPH oxidase and the Na⁺/Ca²⁺ exchanger on membrane repolarisation and store-operated uptake of Ca²⁺ by chemoattractant-activated human neutrophils, 2263
- NADPH oxidase**
 Inhibition of formyl-methionyl-leucyl-phenylalanine-stimulated respiratory burst in human neutrophils by adrenaline: inhibition of Phospholipase A₂ activity but not p47phox phosphorylation and translocation, 183
 Prevention of macrophage adhesion molecule-1 (Mac-1)-dependent neutrophil firm adhesion by taxifolin through impairment of protein kinase-dependent NADPH oxidase activation and antagonism of G protein-mediated calcium influx, 2251
 Counteracting effects of NADPH oxidase and the Na⁺/Ca²⁺ exchanger on membrane repolarisation and store-operated uptake of Ca²⁺ by chemoattractant-activated human neutrophils, 2263
- Naproxen**
 Differential activation of CYP2C9 variants by dapsone, 1831
- Native immunoblot**
 Activation of deoxycytidine kinase in lymphocytes is calcium dependent and involves a conformational change detectable by native immunostaining, 947
- NBD peptide**
 Evidence that activation of nuclear factor-κB is essential for the cytotoxic effects of doxorubicin and its analogues, 353
- Necrosis**
 β-Cell toxicity of ATP-sensitive K⁺ channel-blocking insulin secretagogues, 1733
- Neuropathic pain**
 Relationship between the antinociceptive response to desipramine and changes in GABA_B receptor function and subunit expression in the dorsal horn of the rat spinal cord, 743
- Neurotoxicity**
 Dopamine toxicity involves mitochondrial complex I inhibition: implications to dopamine-related neuropsychiatric disorders, 1965
- Neutrophil**
 Inhibition of formyl-methionyl-leucyl-phenylalanine-stimulated respiratory burst in human neutrophils by adrenaline: inhibition of Phospholipase A₂ activity but not p47phox phosphorylation and translocation, 183
- Neutrophils**
 Role of sodium in intracellular calcium elevation and leukotriene B₄ formation by receptor-mediated activation of human neutrophils, 385
 Mechanisms of the influence of magnolol on eicosanoid metabolism in neutrophils, 831
 Resveratrol, a polyphenol found in grapes, suppresses oxidative damage and stimulates apoptosis during early colonic inflammation in rats, 1399
 Counteracting effects of NADPH oxidase and the Na⁺/Ca²⁺ exchanger on membrane repolarisation and store-operated uptake of Ca²⁺ by chemoattractant-activated human neutrophils, 2263
- NF-κB**
 Evidence that activation of nuclear factor-κB is essential for the cytotoxic effects of doxorubicin and its analogues, 353
 Role of reactive oxygen species, glutathione and NF-κB in apoptosis induced by 3,4-methylenedioxymethamphetamine ("Ecstasy") on hepatic stellate cells, 1025
 Effects of intracellular reactive oxygen species generated by 6-formylpterin on T cell functions, 1185
 Regulation of glutathione S-transferase P1-1 gene expression by NF-κappaB in tumor necrosis factor alpha-treated K562 leukemia cells, 1227
 Inhibition of osteoclast differentiation and bone resorption by a novel lysophosphatidylcholine derivative, SCOH, 1239
 Inhibitory mechanisms of YC-1 and PMC in the induction of iNOS expression by lipoteichoic acid in RAW 264.7 macrophages, 1411
 Cisplatin-induced apoptosis in Hep3B cells: mitochondria-dependent and -independent pathways, 1459
 Inhibition of lipopolysaccharide-induced expression of inducible nitric oxide synthase and tumor necrosis factor-α by 2'-hydroxychalcone derivatives in RAW 264.7 cells, 1549
 Inhibition of osteoclast differentiation and bone resorption by tanshinone IIA isolated from *Salvia miltiorrhiza* Bunge, 1647

- NF- κ B/Rel
Protection against lipopolysaccharide-induced sepsis and inhibition of interleukin-1 β and prostaglandin E2 synthesis by silymarin, 175
- NF-IL6
Inhibition of inducible nitric oxide synthase expression by baicalein in endotoxin/cytokine-stimulated microglia, 957
- S-(–)-Nicotine
Nicotine-related alkaloids and metabolites as inhibitors of human cytochrome P-450 2A6, 751
- Nicotinic acid
Stimulation of CD36 and the key effector of reverse cholesterol transport ATP-binding cassette A1 in monocytoid cells by niacin, 411
- β -Nicotyrine
Nicotine-related alkaloids and metabolites as inhibitors of human cytochrome P-450 2A6, 751
- Nitric oxide
Modulation of A₁ adenosine receptor signaling by peroxynitrite, 375
Indomethacin-induced renal damage: role of oxygen free radicals, 587
The development of morphine antinociceptive tolerance in nitric oxide synthase-deficient mice, 735
Inhibition of nitric oxide/cyclic GMP-mediated relaxation by purified flavonoids, baicalin and baicalein, in rat aortic rings, 787
Inhibition of inducible nitric oxide synthase expression by baicalein in endotoxin/cytokine-stimulated microglia, 957
Dietary compounds prevent oxidative damage and nitric oxide production by cells involved in demyelinating disease, 967
Relaxant effect of oxime derivatives in isolated rat aorta: role of nitric oxide (NO) formation in smooth muscle, 1203
Interference of the polyphenol epicatechin with the biological chemistry of nitric oxide- and peroxynitrite-mediated reactions, 1285
Down-regulation of cytochrome P450 proteins and its activities by Shiga-like toxin II from *Escherichia coli* O157:H7, 1427
Inhibition of lipopolysaccharide-induced expression of inducible nitric oxide synthase and tumor necrosis factor- α by 2'-hydroxychalcone derivatives in RAW 264.7 cells, 1549
Native human nitric oxide sensitive guanylyl cyclase: purification and characterization, 1579
Effects of phosphodiesterase inhibition on cortical spreading depression and associated changes in extracellular cyclic GMP, 1619
Reduced basal nitric oxide bioavailability and platelet activation in young spontaneously hypertensive rats, 2273
- Nitric oxide synthase
Interference of the polyphenol epicatechin with the biological chemistry of nitric oxide- and peroxynitrite-mediated reactions, 1285
Rosiglitazone increases extravasation of macromolecules and endothelial nitric oxide synthase in skeletal muscles of the fructose-fed rat model, 1997
- Nitrobenzylthioinosine
Glycine 154 of the equilibrative nucleoside transporter, hENT1, is important for nucleoside transport and for conferring sensitivity to the inhibitors nitrobenzylthioinosine, dipyridamole, and dilazep, 453
- NO formation
Mechanisms involved in the antiplatelet activity of 8-methyl-4-(1-piperazinyl)-7-(3-pyridinylmethoxy)-2H-1-benzopyran-2-one (RC414), 911
- NO synthase activity
Mechanisms involved in the antiplatelet activity of 8-methyl-4-(1-piperazinyl)-7-(3-pyridinylmethoxy)-2H-1-benzopyran-2-one (RC414), 911
- Nociception
Relationship between the antinociceptive response to desipramine and changes in GABA_B receptor function and subunit expression in the dorsal horn of the rat spinal cord, 743
- NO-donating NSAIDs
NO-donating nonsteroidal antiinflammatory drugs (NSAIDs) inhibit colon cancer cell growth more potently than traditional NSAIDs: a general pharmacological property?, 2197
- Noncapacitative Ca entry
Ca²⁺ influx is not involved in acute cytotoxicity of arachidonic acid, 903
- Non-nucleoside
Potent, selective and cell-mediated inhibition of human herpesvirus 6 at an early stage of viral replication by the non-nucleoside compound CMV423, 325
- Non-nucleoside inhibitors
Effect of stereo and regiochemistry towards wild and multidrug resistant HIV-1 virus: viral potency of chiral PETT derivatives, 1933
- Non-peptide antagonists
Site-directed mutagenesis at the human B₂ receptor and molecular modelling to define the pharmacophore of non-peptide bradykinin receptor antagonists, 601
- Nonselective cation channels
Ca²⁺ influx is not involved in acute cytotoxicity of arachidonic acid, 903
- Nonsteroidal anti-inflammatory drugs
Indomethacin-induced renal damage: role of oxygen free radicals, 587
- Non-transferin-bound-iron
Polyamine modulation of iron uptake in CHO cells, 1629
- NOS-deficient mice
The development of morphine antinociceptive tolerance in nitric oxide synthase-deficient mice, 735
- NOVOstarTM
Functional characterisation of the human α 1 glycine receptor in a fluorescence-based membrane potential assay, 1789
- NSAIDs
Role of direct cytotoxic effects of NSAIDs in the induction of gastric lesions, 575
Cyclooxygenase-2 (COX-2)-dependent and -independent anticarcinogenic effects of celecoxib in human colon carcinoma cells, 1469
NO-donating nonsteroidal antiinflammatory drugs (NSAIDs) inhibit colon cancer cell growth more potently than traditional NSAIDs: a general pharmacological property?, 2197
- NTPDase3
Cloning and characterization of mouse nucleoside triphosphate diphosphohydrolase-3, 1917
- NU/ICRF 505
Glucuronidation as a mechanism of intrinsic drug resistance in colon cancer cells: contribution of drug transport proteins, 31
- Nuclear factor κ B
Chronic hypoxia up-regulates expression of adenosine A₁ receptors in DDT₁-MF2 cells, 421
- Nuclear factor Y (NF-Y)
Nuclear factor Y regulation and promoter transactivation of human ribonucleotide reductase subunit M2 gene in a Gemcitabine resistant KB clone, 1499
- Nuclear receptor
Effects of triaryl phosphates on mouse and human nuclear receptors, 97
Pharmacological characterization of a human-specific peroxisome proliferator-activated receptor α (PPAR α) agonist in dogs, 2057
- Nuclear receptors
Nuclear receptor signaling in macrophages, 201
Hepatic expression of multiple acute phase proteins and down-regulation of nuclear receptors after acute endotoxin exposure, 1389
- Nucleoside
Glycine 154 of the equilibrative nucleoside transporter, hENT1, is important for nucleoside transport and for conferring sensitivity to the inhibitors nitrobenzylthioinosine, dipyridamole, and dilazep, 453
- Nucleosides
Structural determinants of efficacy at A₃ adenosine receptors: modification of the ribose moiety, 893
- Nucleotide binding domain
Diazoxide affects the IF₁ inhibitor protein binding to F₁ sector of beef heart F₀F₁ATP synthase, 1843
- Nymphaeol-A
Propolin C from propolis induces apoptosis through activating caspases, Bid and cytochrome *c* release in human melanoma cells, 53

- Okadaic acid
Induction of tumour necrosis factor and interferon- γ in cultured murine splenocytes by the antivascular agent DMXAA and its metabolites, 937
- Old age
Lack of hypotriglyceridemic effect of gemfibrozil as a consequence of age-related changes in rat liver PPAR α , 157
- Oligodendrocytes
Dietary compounds prevent oxidative damage and nitric oxide production by cells involved in demyelinating disease, 967
- Olopatadine
Differential regulation of IL-4 expression and degranulation by anti-allergic olopatadine in rat basophilic leukemia (RBL-2H3) cells, 1315
- Opiate addict
N-Demethylation of levo- α -acetylmethadol by human placental aromatase, 885
- Opioids
Variable modulation of opioid brain uptake by P-glycoprotein in mice, 269
- Organophosphates
Effects of triaryl phosphates on mouse and human nuclear receptors, 97
- Orphan
Discovery of novel peptide/receptor interactions: identification of PHM-27 as a potent agonist of the human calcitonin receptor, 1279
- Osteoblasts
Effect of celecoxib on Ca²⁺ movement and cell proliferation in human osteoblasts, 1123
Stimulatory effect of naturally occurring flavonols quercetin and kaempferol on alkaline phosphatase activity in MG-63 human osteoblasts through ERK and estrogen receptor pathway, 1307
- Osteoclast
Inhibition of osteoclast formation by 3-methylcholanthrene, a ligand for arylhydrocarbon receptor: suppression of osteoclast differentiation factor in osteogenic cells, 119
Inhibition of osteoclast differentiation and bone resorption by a novel lysophosphatidylcholine derivative, SCOH, 1239
Inhibition of osteoclast differentiation and bone resorption by tanshinone IIA isolated from *Salvia miltiorrhiza* Bunge, 1647
- Osteoclast differentiation
Inhibitory effect of β -cryptoxanthin on osteoclast-like cell formation in mouse marrow cultures, 1297
- Ototoxicity
Protection against cisplatin ototoxicity by adenosine agonists, 1801
- Ouabain
Investigation of ouabain-induced anticancer effect in human androgen-independent prostate cancer PC-3 cells, 727
- Oxidative damage
Dietary compounds prevent oxidative damage and nitric oxide production by cells involved in demyelinating disease, 967
- Oxidative stress
Usnic acid-induced necrosis of cultured mouse hepatocytes: inhibition of mitochondrial function and oxidative stress, 439
Indomethacin-induced renal damage: role of oxygen free radicals, 587
A novel mechanism for pergolide-induced neuroprotection: inhibition of NF- κ B nuclear translocation, 1743
Protection against cisplatin ototoxicity by adenosine agonists, 1801
- Oxidized indoles
Inhibition of brain mitochondrial monoamine oxidases by the endogenous compound 5-hydroxyoxindole, 977
- Oxime derivatives
Relaxant effect of oxime derivatives in isolated rat aorta: role of nitric oxide (NO) formation in smooth muscle, 1203
- oxLDL
Isorhapontigenin and resveratrol suppress oxLDL-induced proliferation and activation of ERK1/2 mitogen-activated protein kinases of bovine aortic smooth muscle cells, 777
- p21
Anti-proliferation effect of 5,5-diphenyl-2-thiohydantoin (DPTH) in human vascular endothelial cells, 67
- Anti-proliferation effect of 3-amino-2-imino-3,4-dihydro-2H-1,3-benzothiazin-4-one (BJ-601) on human vascular endothelial cells: G0/G1 p21-associated cell cycle arrest, 1907
- p53
Anti-proliferation effect of 5,5-diphenyl-2-thiohydantoin (DPTH) in human vascular endothelial cells, 67
Genistein arrests hepatoma cells at G2/M phase: involvement of ATM activation and upregulation of p21^{waf1/cip1} and Wee1, 717
Acacetin inhibits the proliferation of Hep G2 by blocking cell cycle progression and inducing apoptosis, 823
Disorazol A₁, a highly effective antimitotic agent acting on tubulin polymerization and inducing apoptosis in mammalian cells, 927
Roles of p38 and JNK mitogen-activated protein kinase pathways during cantharidin-induced apoptosis in U937 cells, 1811
Anti-proliferation effect of 3-amino-2-imino-3,4-dihydro-2H-1,3-benzothiazin-4-one (BJ-601) on human vascular endothelial cells: G0/G1 p21-associated cell cycle arrest, 1907
- p73
Cisplatin-induced apoptosis in Hep3B cells: mitochondria-dependent and -independent pathways, 1459
- p38 MAP kinase
Inhibition of RANTES expression by indirubin in influenza virus-infected human bronchial epithelial cells, 167
- p38 Mitogen-activated protein kinase
Prevention of macrophage adhesion molecule-1 (Mac-1)-dependent neutrophil firm adhesion by taxifolin through impairment of protein kinase-dependent NADPH oxidase activation and antagonism of G protein-mediated calcium influx, 2251
- P2 receptors
Cloning and characterization of mouse nucleoside triphosphate diphosphohydrolase-3, 1917
- p56/Lck
Involvement of tyrosine kinase p56/Lck in apoptosis induction by anticancer drugs, 1859
- Paclitaxel
Genistein inversely affects tubulin-binding agent-induced apoptosis in human breast cancer cells, 2031
- 6-O-Palmitoyl ascorbic acid
Apoptosis by 6-O-palmitoyl-L-ascorbic acid coincides with JNK-phosphorylation and inhibition of Mg²⁺-dependent phosphatase activity, 919
- Pancreatic β -cell
Role of CYP2E1 in ketone-stimulated insulin release in pancreatic B-cells, 875
Inhibition of ATP-sensitive K⁺ channels by taurine through a benzamido-binding site on sulfonylurea receptor 1, 1089
Fluorescence microscopy studies with a fluorescent glibenclamide derivative, a high-affinity blocker of pancreatic β -cell ATP-sensitive K⁺ currents, 1437
- Pancreatic islets
 β -Cell toxicity of ATP-sensitive K⁺ channel-blocking insulin secretagogues, 1733
- Pancreatic stellate cells
Pancreatic stellate cell migration: role of the phosphatidylinositol 3-kinase (PI3-kinase) pathway, 1215
- Parkinson's disease
Effects of enhancing mitochondrial oxidative phosphorylation with reducing equivalents and ubiquinone on 1-methyl-4-phenylpyridinium toxicity and complex I-IV damage in neuroblastoma cells, 1167
A novel mechanism for pergolide-induced neuroprotection: inhibition of NF- κ B nuclear translocation, 1743
Dopamine toxicity involves mitochondrial complex I inhibition: implications to dopamine-related neuropsychiatric disorders, 1965
- PARP
Mechanism of mahanine-induced apoptosis in human leukemia cells (HL-60), 41
- Pars tuberalis*
Molecular pharmacology of the ovine melatonin receptor: comparison with recombinant human MT₁ and MT₂ receptors, 667

- Partial agonist
Structural determinants of efficacy at A₃ adenosine receptors: modification of the ribose moiety, 893
- PBR
Peripheral-type benzodiazepine receptor (PBR) and PBR drug ligands in fibroblast and fibrosarcoma cell proliferation: role of ERK, c-Jun and ligand-activated PBR-independent pathways, 1927
- PC-3
Investigation of ouabain-induced anticancer effect in human androgen-independent prostate cancer PC-3 cells, 727
- PC12 cells
2-CIATP exerts anti-tumoural actions not mediated by P2 receptors in neuronal and glial cell lines, 621
- PCA analysis
Differentiation of human hepatoma cells during confluence as revealed by gene expression profiling, 1249
- PD 150606
Calpain as a multi-site regulator of cell cycle, 1513
- Peptidomimetic
Inhibitors of gelatinase B/matrix metalloproteinase-9 activity. Comparison of a peptidomimetic and polyhistidine with single-chain derivatives of a neutralizing monoclonal antibody, 1001
- Peripheral benzodiazepine receptor
Enhancement of peripheral benzodiazepine receptor ligand-induced apoptosis and cell cycle arrest of esophageal cancer cells by simultaneous inhibition of MAPK/ERK kinase, 1701
- Permeabilisation
Effect of saponin and filipin on antagonist binding to AT₁ receptors in intact cells, 1601
- Permeability
Variable modulation of opioid brain uptake by P-glycoprotein in mice, 269
- Permeability transition pore
Mitochondria permeability transition-dependent *tert*-butyl hydroperoxide-induced apoptosis in hepatoma HepG2 cells, 611
- Peroxisome proliferation
Gene expression changes in rat liver following exposure to liver growth agents: role of Kupffer cells in xenobiotic-mediated liver growth, 107
- Peroxisome proliferator
Inverse gene expression patterns for macrophage activating hepatotoxicants and peroxisome proliferators in rat liver, 2141
- Peroxisome proliferator-activated receptor- γ
Enzymatically modified low-density lipoprotein upregulates CD36 in low-differentiated monocytic cells in a peroxisome proliferator-activated receptor- γ -dependent way, 841
- Peroxisome proliferator-activated receptor γ
Inhibition of 3T3-L1 adipocyte differentiation by 6-ethoxyzolamide: repressed peroxisome proliferator-activated receptor γ mRNA and enhanced CCAAT/enhancer binding protein β mRNA levels, 1667
- Peroxisome proliferators
Opposite regulation of the rat and human cytosolic aspartate aminotransferase genes by fibrates, 213
- Peroxyinitrite
Modulation of A₁ adenosine receptor signaling by peroxyinitrite, 375
Non-toxic concentrations of peroxyinitrite commit U937 cells to mitochondrial permeability transition-dependent necrosis that is however prevented by endogenous arachidonic acid, 1077
- P-glycoprotein
Variable modulation of opioid brain uptake by P-glycoprotein in mice, 269
Influence of lipid lowering fibrates on P-glycoprotein activity *in vitro*, 285
Evaluation of the binding of the tricyclic isoxazole photoaffinity label LY475776 to multidrug resistance associated protein 1 (MRP1) orthologs and several ATP-binding cassette (ABC) drug transporters, 1111
Daphnetin induced differentiation of human renal carcinoma cells and its mediation by p38 mitogen-activated protein kinase, 1779
- Phorbol myristate acetate
Induction of tumour necrosis factor and interferon- γ in cultured murine splenocytes by the antivascular agent DMXAA and its metabolites, 937
- Phosphatase inhibition
Apoptosis by 6-*O*-palmitoyl-L-ascorbic acid coincides with JNK-phosphorylation and inhibition of Mg²⁺-dependent phosphatase activity, 919
- Phosphatidylcholine (PC) biosynthesis
COX-2-mediated PGD₂ synthesis regulates phosphatidylcholine biosynthesis in rat renal papillary tissue, 245
- Phosphatidylinositol 3-kinase
Reactive blue 2 inhibition of cyclic AMP-dependent differentiation of rat C6 glioma cells by purinergic receptor-independent inactivation of phosphatidylinositol 3-kinase, 1489
- Phosphodiesterase
Control of platelet activation by cyclic AMP turnover and cyclic nucleotide phosphodiesterase type-3, 1559
- Phosphodiesterase inhibition
Effects of phosphodiesterase inhibition on cortical spreading depression and associated changes in extracellular cyclic GMP, 1619
- Phospholipase A2
Enzymatically modified low-density lipoprotein upregulates CD36 in low-differentiated monocytic cells in a peroxisome proliferator-activated receptor- γ -dependent way, 841
- Phospholipase C
Structural determinants of efficacy at A₃ adenosine receptors: modification of the ribose moiety, 893
Suppression of receptor-mediated Ca²⁺ mobilization and functional leukocyte responses by hyperforin, 1531
- Phosphotyrosine
Metformin (Glucophage) inhibits tyrosine phosphatase activity to stimulate the insulin receptor tyrosine kinase, 2081
- Photoaffinity label
Evaluation of the binding of the tricyclic isoxazole photoaffinity label LY475776 to multidrug resistance associated protein 1 (MRP1) orthologs and several ATP-binding cassette (ABC) drug transporters, 1111
- PI-3 kinase
Effect of vascular endothelial growth factor and epidermal growth factor on iatrogenic apoptosis in human endothelial cells, 277
- R-PIA
Protection against cisplatin ototoxicity by adenosine agonists, 1801
- PI3-kinase
Pancreatic stellate cell migration: role of the phosphatidylinositol 3-kinase (PI3-kinase) pathway, 1215
Induction of cyclooxygenase-2 by bovine type I collagen in macrophages via C/EBP and CREB activation by multiple cell signaling pathways, 2239
- PK 11195
Peripheral-type benzodiazepine receptor (PBR) and PBR drug ligands in fibroblast and fibrosarcoma cell proliferation: role of ERK, c-Jun and ligand-activated PBR-independent pathways, 1927
- PKA
Inhibition of formyl-methionyl-leucyl-phenylalanine-stimulated respiratory burst in human neutrophils by adrenaline: inhibition of Phospholipase A₂ activity but not p47phox phosphorylation and translocation, 183
- PKC- δ
Tetrandrine-induced apoptosis is mediated by activation of caspases and PKC- δ in U937 cells, 1819
- p38-kinase
Induction of cyclooxygenase-2 by bovine type I collagen in macrophages via C/EBP and CREB activation by multiple cell signaling pathways, 2239
- PLA₂
Inhibition of formyl-methionyl-leucyl-phenylalanine-stimulated respiratory burst in human neutrophils by adrenaline: inhibition of Phospholipase A₂ activity but not p47phox phosphorylation and translocation, 183

- Plasmin**
Inhibition of plasmin-mediated prostromelysin-1 activation by interaction of long chain unsaturated fatty acids with kringle 5, 643
- Plasmodium**
Synergistic interaction of a chloroquine metabolite with chloroquine against drug-resistant malaria parasites, 1347
- Platelet derived growth factor**
Pancreatic stellate cell migration: role of the phosphatidylinositol 3-kinase (PI3-kinase) pathway, 1215
- Platelets**
Control of platelet activation by cyclic AMP turnover and cyclic nucleotide phosphodiesterase type-3, 1559
Native human nitric oxide sensitive guanylyl cyclase: purification and characterization, 1579
Reduced basal nitric oxide bioavailability and platelet activation in young spontaneously hypertensive rats, 2273
- Platinum drugs**
Comparative efficacy of novel platinum(IV) compounds with established chemotherapeutic drugs in solid tumour models, 17
- PMC**
Inhibitory mechanisms of YC-1 and PMC in the induction of iNOS expression by lipoteichoic acid in RAW 264.7 macrophages, 1411
- Poly(ADP-ribose) polymerase-1**
Synthetic 1,4-anthracenedione analogs induce cytochrome *c* release, caspase-9, -3, and -8 activities, poly(ADP-ribose) polymerase-1 cleavage and internucleosomal DNA fragmentation in HL-60 cells by a mechanism which involves caspase-2 activation but not Fas signaling, 523
- Polyamine transport system**
Polyamine modulation of iron uptake in CHO cells, 1629
- Polyglutamylolation**
Folate concentration dependent transport activity of the Multidrug Resistance Protein 1 (ABCC1), 1541
- Polyhistidine**
Inhibitors of gelatinase B/matrix metalloproteinase-9 activity. Comparison of a peptidomimetic and polyhistidine with single-chain derivatives of a neutralizing monoclonal antibody, 1001
- Polymorphism**
Cloning, characterisation and identification of several polymorphisms in the promoter region of the human α_{2B} -adrenergic receptor gene, 469
Pharmacology of polymorphic variants of the human 5-HT_{1A} receptor, 479
- Polyphenols**
Dietary compounds prevent oxidative damage and nitric oxide production by cells involved in demyelinating disease, 967
- Polyunsaturated fatty acid**
Arachidonic and eicosapentaenoic acid metabolism by human CYP1A1: highly stereoselective formation of 17(*R*),18(*S*)-epoxyeicosatetraenoic acid, 1445
- PPAR α**
Lack of hypotriglyceridemic effect of gemfibrozil as a consequence of age-related changes in rat liver PPAR α , 157
Opposite regulation of the rat and human cytosolic aspartate aminotransferase genes by fibrates, 213
Pharmacological characterization of a human-specific peroxisome proliferator-activated receptor α (PPAR α) agonist in dogs, 2057
- PPAR γ**
Stimulation of CD36 and the key effector of reverse cholesterol transport ATP-binding cassette A1 in monocytoid cells by niacin, 411
- PPAR**
The biphasic effects of cyclopentenone prostaglandins, prostaglandin J₂ and 15-deoxy- $\Delta^{12,14}$ -prostaglandin J₂ on proliferation and apoptosis in rat basophilic leukemia (RBL-2H3) cells, 1259
- Pre- and post-synaptic activity**
Intrinsic activity and comparative molecular dynamics of buspirone analogues at the 5-HT_{1A} receptors, 2219
- Preconditioning**
Diazoxide affects the IF₁ inhibitor protein binding to F₁ sector of beef heart F₀F₁ATP synthase, 1843
- Pregnane X receptor (PXR)**
The induction of human UDP-glucuronosyltransferase 1A1 mediated through a distal enhancer module by flavonoids and xenobiotics, 989
- Proliferation**
Isorhapontigenin and resveratrol suppress oxLDL-induced proliferation and activation of ERK1/2 mitogen-activated protein kinases of bovine aortic smooth muscle cells, 777
The biphasic effects of cyclopentenone prostaglandins, prostaglandin J₂ and 15-deoxy- $\Delta^{12,14}$ -prostaglandin J₂ on proliferation and apoptosis in rat basophilic leukemia (RBL-2H3) cells, 1259
Peripheral-type benzodiazepine receptor (PBR) and PBR drug ligands in fibroblast and fibrosarcoma cell proliferation: role of ERK, c-Jun and ligand-activated PBR-independent pathways, 1927
- Promoter**
Cloning, characterisation and identification of several polymorphisms in the promoter region of the human α_{2B} -adrenergic receptor gene, 469
Nuclear factor Y regulation and promoter transactivation of human ribonucleotide reductase subunit M2 gene in a Gemcitabine resistant KB clone, 1499
- Promoter region**
Functional characterization of genetic polymorphisms identified in the human cytochrome P450 4F12 (CYP4F12) promoter region, 2231
- Promyelocytic leukemia cells**
Induction of apoptosis in two human leukemia cell lines as well as differentiation in human promyelocytic cells by cyanidin-3-*O*- β -glucopyranoside, 2047
- Propolin C**
Propolin C from propolis induces apoptosis through activating caspases, Bid and cytochrome *c* release in human melanoma cells, 53
- Prostacyclin**
Gene expression profile of the G_s-coupled prostacyclin receptor in human vascular smooth muscle cells, 757
- Prostaglandin (PG)**
Resveratrol, a polyphenol found in grapes, suppresses oxidative damage and stimulates apoptosis during early colonic inflammation in rats, 1399
- Prostaglandin D₂ (PGD₂) synthesis**
COX-2-mediated PGD₂ synthesis regulates phosphatidylcholine biosynthesis in rat renal papillary tissue, 245
- Prostaglandin E2**
Protection against lipopolysaccharide-induced sepsis and inhibition of interleukin-1 β and prostaglandin E2 synthesis by silymarin, 175
- Prostaglandin E₂**
Role of direct cytotoxic effects of NSAIDs in the induction of gastric lesions, 575
- Prostaglandin J₂**
The biphasic effects of cyclopentenone prostaglandins, prostaglandin J₂ and 15-deoxy- $\Delta^{12,14}$ -prostaglandin J₂ on proliferation and apoptosis in rat basophilic leukemia (RBL-2H3) cells, 1259
- Prostate apoptosis response-4**
Investigation of ouabain-induced anticancer effect in human androgen-independent prostate cancer PC-3 cells, 727
- Proteasome**
A new structural class of proteasome inhibitors identified by microbial screening using yeast-based assay, 227
- Proteasome inhibitors**
Organic copper complexes as a new class of proteasome inhibitors and apoptosis inducers in human cancer cells, 1139
- S-312-d**
Protective effects of a selective L-type voltage-sensitive calcium channel blocker, S-312-d, on neuronal cell death, 1153
- Protein degradation**
Functional characterization of aryl hydrocarbon receptor (zAHR2) localization and degradation in zebrafish (*Danio rerio*), 1363

- Protein disulfide isomerase
 Reductive activation of ricin and ricin A-chain immunotoxins by protein disulfide isomerase and thioredoxin reductase, 1721
- Protein kinase C
 Reduction of high glucose and phorbol-myristate-acetate-induced endothelial cell permeability by protein kinase C inhibitors LY379196 and hypocrellin A, 855
 Dopaminergic D₁-like receptor-dependent inhibition of tyrosine hydroxylase mRNA expression and catecholamine production in human lymphocytes, 865
 Human α_{1D} -adrenoceptor phosphorylation and desensitization, 1853
 Cell cycle- and protein kinase C-specific effects of resiniferatoxin and resiniferonol 9,13,14-*ortho*-phenylacetate in intestinal epithelial cells, 1873
 Prevention of macrophage adhesion molecule-1 (Mac-1)-dependent neutrophil firm adhesion by taxifolin through impairment of protein kinase-dependent NADPH oxidase activation and antagonism of G protein-mediated calcium influx, 2251
- Protein tyrosine kinase
 Potent, selective and cell-mediated inhibition of human herpesvirus 6 at an early stage of viral replication by the non-nucleoside compound CMV423, 325
- Protein tyrosine phosphatase
 Metformin (Glucophage) inhibits tyrosine phosphatase activity to stimulate the insulin receptor tyrosine kinase, 2081
- Pulse radiolysis
 Polyhydroxylated 2-styrylchromones as potent antioxidants, 2207
- Purinergic receptor antagonists
 Reactive blue 2 inhibition of cyclic AMP-dependent differentiation of rat C6 glioma cells by purinergic receptor-independent inactivation of phosphatidylinositol 3-kinase, 1489
- Purines
 Diisothiocyanate derivatives as potent, insurmountable antagonists of P2Y₆ nucleotide receptors, 1763
- p21^{waf1/cip1}
 Genistein arrests hepatoma cells at G2/M phase: involvement of ATM activation and upregulation of p21^{waf1/cip1} and Wee1, 717
- p21^{Waf1/Cip1}
 Cell cycle- and protein kinase C-specific effects of resiniferatoxin and resiniferonol 9,13,14-*ortho*-phenylacetate in intestinal epithelial cells, 1873
- P2Y₆ nucleotide receptor
 Diisothiocyanate derivatives as potent, insurmountable antagonists of P2Y₆ nucleotide receptors, 1763
- P2Y₁₂ receptor
 Reactive blue 2 inhibition of cyclic AMP-dependent differentiation of rat C6 glioma cells by purinergic receptor-independent inactivation of phosphatidylinositol 3-kinase, 1489
- Pyrimidines
 Diisothiocyanate derivatives as potent, insurmountable antagonists of P2Y₆ nucleotide receptors, 1763
- Radioligand binding assay
 Medetomidine analogs as selective agonists for the human α_2 -adrenoceptors, 87
- RANKL
 Inhibition of osteoclast formation by 3-methylcholanthrene, a ligand for arylhydrocarbon receptor: suppression of osteoclast differentiation factor in osteogenic cells, 119
 Inhibitory effect of β -cryptoxanthin on osteoclast-like cell formation in mouse marrow cultures, 1297
 Inhibition of osteoclast differentiation and bone resorption by tanshinone IIA isolated from *Salvia miltiorrhiza* Bunge, 1647
- RANTES
 Inhibition of RANTES expression by indirubin in influenza virus-infected human bronchial epithelial cells, 167
- Ras
 Dual effect of hydrogen peroxide on store-mediated calcium entry in human platelets, 1065
 CysLT₁ signal transduction in differentiated U937 cells involves the activation of the small GTP-binding protein Ras, 1569
- Rat
 Mediation of annexin 1 secretion by a probenecid-sensitive ABC-transporter in rat inflamed mucosa, 1195
 Down-regulation of cytochrome P450 proteins and its activities by Shiga-like toxin II from *Escherichia coli* O157:H7, 1427
- Rat aorta
 Relaxant effect of oxime derivatives in isolated rat aorta: role of nitric oxide (NO) formation in smooth muscle, 1203
- Rat C6 glioma
 Reactive blue 2 inhibition of cyclic AMP-dependent differentiation of rat C6 glioma cells by purinergic receptor-independent inactivation of phosphatidylinositol 3-kinase, 1489
- Rat liver
 Lack of hypotriglyceridemic effect of gemfibrozil as a consequence of age-related changes in rat liver PPAR α , 157
- RBL-2H3
 Differential regulation of IL-4 expression and degranulation by anti-allergic olopatadine in rat basophilic leukemia (RBL-2H3) cells, 1315
- Reactive oxygen species
 Investigation of ouabain-induced anticancer effect in human androgen-independent prostate cancer PC-3 cells, 727
 Role of reactive oxygen species, glutathione and NF- κ B in apoptosis induced by 3,4-methylenedioxymethamphetamine ("Ecstasy") on hepatic stellate cells, 1025
 Effects of intracellular reactive oxygen species generated by 6-formylpterin on T cell functions, 1185
 Suppression of receptor-mediated Ca²⁺ mobilization and functional leukocyte responses by hyperforin, 1531
- Receptor endocytosis
 Receptor endocytosis *via* ubiquitin-dependent and -independent pathways, 1013
- Receptor internalization
 Receptor endocytosis *via* ubiquitin-dependent and -independent pathways, 1013
- Receptor phosphorylation
 Human α_{1D} -adrenoceptor phosphorylation and desensitization, 1853
- Recombinant human melatonin receptors
 Molecular pharmacology of the ovine melatonin receptor: comparison with recombinant human MT₁ and MT₂ receptors, 667
- Recombinant ovine melatonin receptor
 Molecular pharmacology of the ovine melatonin receptor: comparison with recombinant human MT₁ and MT₂ receptors, 667
- Rectocolitis
 Mediation of annexin 1 secretion by a probenecid-sensitive ABC-transporter in rat inflamed mucosa, 1195
- Redox reactions
 Polyhydroxylated 2-styrylchromones as potent antioxidants, 2207
- Regiochemistry
 Effect of stereo and regiochemistry towards wild and multidrug resistant HIV-1 virus: viral potency of chiral PETT derivatives, 1933
- Regioisomers
 Antitumor AZA-anthrapyrazoles: biophysical and biochemical studies on 8- and 9-aza regioisomers, 631
- Regulation
 Regulation of Hedgehog signaling: a complex story, 805
 Functional characterization of genetic polymorphisms identified in the human cytochrome P450 4F12 (CYP4F12) promoter region, 2231
- Relative activity factor
 Uridine diphosphate sugar-selective conjugation of an aldose reductase inhibitor (AS-3201) by UDP-glucuronosyltransferase 2B subfamily in human liver microsomes, 1269
- Relative efficacy
 Investigation of the mechanism of agonist and inverse agonist action at D₂ dopamine receptors, 1657

- Renal cell carcinoma**
Daphnetin induced differentiation of human renal carcinoma cells and its mediation by p38 mitogen-activated protein kinase, 1779
- Renal papilla**
COX-2-mediated PGD₂ synthesis regulates phosphatidylcholine biosynthesis in rat renal papillary tissue, 245
- Repair**
DNA interactions of new antitumor platinum complexes with *trans* geometry activated by a 2-methylbutylamine or *sec*-butylamine ligand, 1097
- Resiniferatoxin**
Cell cycle- and protein kinase C-specific effects of resiniferatoxin and resiniferonol 9,13,14-*ortho*-phenylacetate in intestinal epithelial cells, 1873
- Resiniferonol 9,13,14-*ortho*-phenylacetate**
Cell cycle- and protein kinase C-specific effects of resiniferatoxin and resiniferonol 9,13,14-*ortho*-phenylacetate in intestinal epithelial cells, 1873
- Resistance**
Subcellular localization of the camptothecin analogues, topotecan and gimatecan, 1035
- Respiratory burst**
Inhibition of formyl-methionyl-leucyl-phenylalanine-stimulated respiratory burst in human neutrophils by adrenaline: inhibition of Phospholipase A₂ activity but not p47phox phosphorylation and translocation, 183
- Resveratrol**
Isorhapontigenin and resveratrol suppress oxLDL-induced proliferation and activation of ERK1/2 mitogen-activated protein kinases of bovine aortic smooth muscle cells, 777
Resveratrol, a polyphenol found in grapes, suppresses oxidative damage and stimulates apoptosis during early colonic inflammation in rats, 1399
- Reverse cholesterol transport**
Stimulation of CD36 and the key effector of reverse cholesterol transport ATP-binding cassette A1 in monocytoid cells by niacin, 411
- RGS**
Synthesis and electrophysiological characterization of cyclic morphine analogues, 1887
- Rho**
Statins upregulate CD36 expression in human monocytes, an effect strengthened when combined with PPAR- γ ligands Putative contribution of Rho GTPases in statin-induced CD36 expression, 303
- Rho GTPases**
Adenosine A₃ receptor-mediated regulation of p38 and extracellular-regulated kinase ERK1/2 *via* phosphatidylinositol-3'-kinase, 129
- Riboflavin**
Effects of enhancing mitochondrial oxidative phosphorylation with reducing equivalents and ubiquinone on 1-methyl-4-phenylpyridinium toxicity and complex I-IV damage in neuroblastoma cells, 1167
- Ribonucleotide reductase**
Nuclear factor Y regulation and promoter transactivation of human ribonucleotide reductase subunit M2 gene in a Gemcitabine resistant KB clone, 1499
- Ricin**
Reductive activation of ricin and ricin A-chain immunotoxins by protein disulfide isomerase and thioredoxin reductase, 1721
- RIP**
Evidence that activation of nuclear factor- κ B is essential for the cytotoxic effects of doxorubicin and its analogues, 353
- RNA damage**
Antiproliferative activity and mechanism of action of fatty acid derivatives of arabinofuranosylcytosine in leukemia and solid tumor cell lines, 503
- ROS**
The p38 pathway partially mediates caspase-3 activation induced by reactive oxygen species in Fanconi anemia C cells, 539
Tetradrine-induced apoptosis is mediated by activation of caspases and PKC- δ in U937 cells, 1819
- Rosiglitazone**
Rosiglitazone increases extravasation of macromolecules and endothelial nitric oxide synthase in skeletal muscles of the fructose-fed rat model, 1997
- R-SAT**
Discovery of novel peptide/receptor interactions: identification of PHM-27 as a potent agonist of the human calcitonin receptor, 1279
- Ryanodine receptor**
Selenium compounds modulate the calcium release channel/ryanodine receptor of rabbit skeletal muscle by oxidizing functional thiols, 2071
- S phase**
Calpain as a multi-site regulator of cell cycle, 1513
- 26S proteasome**
Functional characterization of aryl hydrocarbon receptor (zAHR2) localization and degradation in zebrafish (*Danio rerio*), 1363
- Salvia miltiorrhiza Bunge**
Inhibition of osteoclast differentiation and bone resorption by tanshinone IIA isolated from *Salvia miltiorrhiza* Bunge, 1647
- Saponin**
Effect of saponin and filipin on antagonist binding to AT₁ receptors in intact cells, 1601
- Sarcoplasmic reticulum**
Selenium compounds modulate the calcium release channel/ryanodine receptor of rabbit skeletal muscle by oxidizing functional thiols, 2071
- Scavenger receptors**
Stimulation of CD36 and the key effector of reverse cholesterol transport ATP-binding cassette A1 in monocytoid cells by niacin, 411
- Schizophrenia**
Dopamine toxicity involves mitochondrial complex I inhibition: implications to dopamine-related neuropsychiatric disorders, 1965
- SCOH**
Inhibition of osteoclast differentiation and bone resorption by a novel lysophosphatidylcholine derivative, SCOH, 1239
- Scutellaria baicalensis**
Inhibition of nitric oxide/cyclic GMP-mediated relaxation by purified flavonoids, baicalin and baicalein, in rat aortic rings, 787
- Secretion**
Mediation of annexin 1 secretion by a probenecid-sensitive ABC-transporter in rat inflamed mucosa, 1195
- Secretory phospholipase A₂**
Protective effects of a selective L-type voltage-sensitive calcium channel blocker, S-312-d, on neuronal cell death, 1153
- Selective cyclooxygenase-2 inhibitors**
Role of direct cytotoxic effects of NSAIDs in the induction of gastric lesions, 575
- Selenium**
Selenite-induced apoptosis in doxorubicin-resistant cells and effects on the thioredoxin system, 513
Methioninase and selenomethionine but not Se-methylselenocysteine generate methylselenol and superoxide in an *in vitro* chemiluminescent assay: implications for the nutritional carcinostatic activity of selenoamino acids, 547
Selenium compounds modulate the calcium release channel/ryanodine receptor of rabbit skeletal muscle by oxidizing functional thiols, 2071
- Selenomethionine**
Methioninase and selenomethionine but not Se-methylselenocysteine generate methylselenol and superoxide in an *in vitro* chemiluminescent assay: implications for the nutritional carcinostatic activity of selenoamino acids, 547
- Se-methylselenocysteine**
Methioninase and selenomethionine but not Se-methylselenocysteine generate methylselenol and superoxide in an *in vitro* chemiluminescent assay: implications for the nutritional carcinostatic activity of selenoamino acids, 547
- Sepsis**
Protection against lipopolysaccharide-induced sepsis and inhibition of interleukin-1 β and prostaglandin E2 synthesis by silymarin, 175

SERCA

Effect of hydrogen peroxide on Ca^{2+} mobilisation in human platelets through sulphhydryl oxidation dependent and independent mechanisms, 491

Serotonin

Pharmacology of polymorphic variants of the human 5-HT_{1A} receptor, 479

Sevoflurane

Acivicin-induced alterations in renal and hepatic glutathione concentrations and in γ -glutamyltransferase activities, 1421

SH-SY5Y cells

2-ClATP exerts anti-tumoural actions not mediated by P2 receptors in neuronal and glial cell lines, 621

Signal transduction

Rapid tyrosine phosphorylation of focal adhesion kinase, paxillin, and p130^{Cas} by gastrin in human colon cancer cells, 135

Regulation of Hedgehog signaling: a complex story, 805

CysLT₁ signal transduction in differentiated U937 cells involves the activation of the small GTP-binding protein Ras, 1569

Activation of nuclear factor kappa B by diesel exhaust particles in mouse epidermal cells through phosphatidylinositol 3-kinase/Akt signaling pathway, 1975

Metformin (Glucophage) inhibits tyrosine phosphatase activity to stimulate the insulin receptor tyrosine kinase, 2081

Signaling

Regulation of Hedgehog signaling: a complex story, 805

Signature sequences

The cystic fibrosis mutation G1349D within the signature motif LSHGH of NBD2 abolishes the activation of CFTR chloride channels by genistein, 2187

Sildenafil

Effects of phosphodiesterase inhibition on cortical spreading depression and associated changes in extracellular cyclic GMP, 1619

Silymarin

Protection against lipopolysaccharide-induced sepsis and inhibition of interleukin-1 β and prostaglandin E₂ synthesis by silymarin, 175

siRNA

Peripheral-type benzodiazepine receptor (PBR) and PBR drug ligands in fibroblast and fibrosarcoma cell proliferation: role of ERK, c-Jun and ligand-activated PBR-independent pathways, 1927

Site-directed mutagenesis

Pharmacology of polymorphic variants of the human 5-HT_{1A} receptor, 479

Site-directed mutagenesis at the human B₂ receptor and molecular modelling to define the pharmacophore of non-peptide bradykinin receptor antagonists, 601

Skeletal muscle

Rosiglitazone increases extravasation of macromolecules and endothelial nitric oxide synthase in skeletal muscles of the fructose-fed rat model, 1997

Skin

Activation of nuclear factor kappa B by diesel exhaust particles in mouse epidermal cells through phosphatidylinositol 3-kinase/Akt signaling pathway, 1975

Sleeping sickness

Interaction of substituted hexose analogues with the *Trypanosoma brucei* hexose transporter, 459

SLT-II

Down-regulation of cytochrome P450 proteins and its activities by Shiga-like toxin II from *Escherichia coli* O157:H7, 1427

Small molecule inhibitor

Combination treatment of glioblastoma multiforme cell lines with the anti-malarial artesunate and the epidermal growth factor receptor tyrosine kinase inhibitor OSI-774, 1689

SN-38

Glucuronidation as a mechanism of intrinsic drug resistance in colon cancer cells: contribution of drug transport proteins, 31

Sodium ion

Role of sodium in intracellular calcium elevation and leukotriene B₄ formation by receptor-mediated activation of human neutrophils, 385

Sodium ion sensitivity

Inverse agonist properties of atypical antipsychotic drugs, 2039

Sodium selenite

Selenium compounds modulate the calcium release channel/ryanodine receptor of rabbit skeletal muscle by oxidizing functional thiols, 2071

Solid tumour models

Comparative efficacy of novel platinum(IV) compounds with established chemotherapeutic drugs in solid tumour models, 17

Species difference

Pharmacological characterization of a human-specific peroxisome proliferator-activated receptor α (PPAR α) agonist in dogs, 2057

Splenocytes

Induction of tumour necrosis factor and interferon- γ in cultured murine splenocytes by the antivascular agent DMXAA and its metabolites, 937

Src-like tyrosine kinase

Involvement of tyrosine kinase p56/Lck in apoptosis induction by anticancer drugs, 1859

SREBP

Indinavir alters sterol and fatty acid homeostatic mechanisms in primary rat hepatocytes by increasing levels of activated sterol regulatory element-binding proteins and decreasing cholesterol 7 α -hydroxylase mRNA levels, 255

ST2 cells

Inhibition of osteoclast formation by 3-methylcholanthrene, a ligand for arylhydrocarbon receptor: suppression of osteoclast differentiation factor in osteogenic cells, 119

Statins

Statins upregulate CD36 expression in human monocytes, an effect strengthened when combined with PPAR- γ ligands Putative contribution of Rho GTPases in statin-induced CD36 expression, 303

Staurosporine

Effect of vascular endothelial growth factor and epidermal growth factor on iatrogenic apoptosis in human endothelial cells, 277

Stereochemistry

Effect of stereo and regiochemistry towards wild and multidrug resistant HIV-1 virus: viral potency of chiral PETT derivatives, 1933

Store-operated calcium channels

Counteracting effects of NADPH oxidase and the Na⁺/Ca²⁺ exchanger on membrane repolarisation and store-operated uptake of Ca²⁺ by chemoattractant-activated human neutrophils, 2263

Stress-activated protein kinase

Adenosine A₃ receptor-mediated regulation of p38 and extracellular-regulated kinase ERK1/2 via phosphatidylinositol-3'-kinase, 129

Stromelysin-1

Inhibition of plasmin-mediated prostromelysin-1 activation by interaction of long chain unsaturated fatty acids with kringle 5, 643

Structure-function studies

Histidine residues in human phenol sulfotransferases, 1355

Subcellular localization

Subcellular localization of the camptothecin analogues, topotecan and gimatecan, 1035

Succinic and malonic acid

Similar effects of succinic acid dimethyl ester and glucose on islet calcium oscillations and insulin release, 981

Sulfonylurea

Inhibition of ATP-sensitive K⁺ channels by taurine through a benzamido-binding site on sulfonylurea receptor 1, 1089

Sulfonylurea receptor

Fluorescence microscopy studies with a fluorescent glibenclamide derivative, a high-affinity blocker of pancreatic β -cell ATP-sensitive K⁺ currents, 1437

Sulfotransferase

Tamoxifen cytotoxicity in hepatoblastoma cells stably transfected with human CYP3A4, 1057

- Sulfotransferases**
 Histidine residues in human phenol sulfotransferases, 1355
- Sulfur amino acids**
 Analysis of cell-cycle kinetics and sulfur amino acid metabolism in methionine-dependent tumor cell lines; the effect of homocysteine supplementation, 1587
- Superoxide**
 Methioninase and selenomethionine but not Se-methylselenocysteine generate methylselenol and superoxide in an *in vitro* chemiluminescent assay: implications for the nutritional carcinostatic activity of selenoamino acids, 547
- Superoxide radical**
 Polyhydroxylated 2-styrylchromones as potent antioxidants, 2207
- Suppression subtractive hybridisation**
 Gene expression changes in rat liver following exposure to liver growth agents: role of Kupffer cells in xenobiotic-mediated liver growth, 107
- [35S]GTPγS binding**
 Relationship between the antinociceptive response to desipramine and changes in GABA_B receptor function and subunit expression in the dorsal horn of the rat spinal cord, 743
 Investigation of the mechanism of agonist and inverse agonist action at D₂ dopamine receptors, 1657
- T- and B-lymphocytes**
 Dopaminergic D₁-like receptor-dependent inhibition of tyrosine hydroxylase mRNA expression and catecholamine production in human lymphocytes, 865
- T cells**
 Effects of intracellular reactive oxygen species generated by 6-formylpterin on T cell functions, 1185
- Taiwanese propolis**
 Propolis C from propolis induces apoptosis through activating caspases, Bid and cytochrome *c* release in human melanoma cells, 53
- Tamoxifen**
 Tamoxifen cytotoxicity in hepatoblastoma cells stably transfected with human CYP3A4, 1057
 Quaternary ammonium-linked glucuronidation of tamoxifen by human liver microsomes and UDP-glucuronosyltransferase 1A4, 2093
- Tanshinone IIA**
 Inhibition of osteoclast differentiation and bone resorption by tanshinone IIA isolated from *Salvia miltiorrhiza* Bunge, 1647
- TAR-RNA**
 Binding of hybrid molecules containing pyrrolo [2,1-*c*] [1,4]benzodiazepine (PBD) and oligopyrrole carriers to the human immunodeficiency type 1 virus TAR-RNA, 401
- Taurine**
 Inhibition of ATP-sensitive K⁺ channels by taurine through a benzamide-binding site on sulfonylurea receptor 1, 1089
- Taxifolin**
 Prevention of macrophage adhesion molecule-1 (Mac-1)-dependent neutrophil firm adhesion by taxifolin through impairment of protein kinase-dependent NADPH oxidase activation and antagonism of G protein-mediated calcium influx, 2251
- TBARS**
 Flavin-dependent antioxidant properties of a new series of *meso-N,N'*-dialkyl-imidazolium substituted manganese(III) porphyrins, 77
- TCDD**
 Functional characterization of aryl hydrocarbon receptor (zAHR2) localization and degradation in zebrafish (*Danio rerio*), 1363
- Tetrandrine**
 Tetrandrine-induced apoptosis is mediated by activation of caspases and PKC-δ in U937 cells, 1819
- TFMPP**
 Cytochrome P450 dependent metabolism of the new designer drug 1-(3-trifluoromethylphenyl)piperazine (TFMPP). *In vivo* studies in Wistar and Dark Agouti rats as well as *in vitro* studies in human liver microsomes, 235
- Thiazolidinediones**
 Statins upregulate CD36 expression in human monocytes, an effect strengthened when combined with PPAR-γ ligands Putative contribution of Rho GTPases in statin-induced CD36 expression, 303
 Rosiglitazone increases extravasation of macromolecules and endothelial nitric oxide synthase in skeletal muscles of the fructose-fed rat model, 1997
- Thimerosal**
 Effect of hydrogen peroxide on Ca²⁺ mobilisation in human platelets through sulphhydryl oxidation dependent and independent mechanisms, 491
- Thiol groups**
 Mitochondrial thioredoxin reductase inhibition by gold(I) compounds and concurrent stimulation of permeability transition and release of cytochrome *c*, 689
- Thiol oxidation**
 Selenium compounds modulate the calcium release channel/ryanodine receptor of rabbit skeletal muscle by oxidizing functional thiols, 2071
- N*-thiolated β-lactam**
 Novel *N*-thiolated β-lactam antibiotics selectively induce apoptosis in human tumor and transformed, but not normal or nontransformed, cells, 365
- Thioredoxin**
 Selenite-induced apoptosis in doxorubicin-resistant cells and effects on the thioredoxin system, 513
 Reductive activation of ricin and ricin A-chain immunotoxins by protein disulfide isomerase and thioredoxin reductase, 1721
- Thioredoxin reductase**
 Selenite-induced apoptosis in doxorubicin-resistant cells and effects on the thioredoxin system, 513
 Mitochondrial thioredoxin reductase inhibition by gold(I) compounds and concurrent stimulation of permeability transition and release of cytochrome *c*, 689
 Reductive activation of ricin and ricin A-chain immunotoxins by protein disulfide isomerase and thioredoxin reductase, 1721
- Thiourea**
 Effect of stereo and regiochemistry towards wild and multidrug resistant HIV-1 virus: viral potency of chiral PETT derivatives, 1933
- Thrombospondin-1**
 Activation of latent transforming growth factor beta 1 and inhibition of matrix metalloprotease activity by a thrombospondin-like tripeptide linked to elaidic acid, 2013
- Tissue inhibitor of metalloprotease**
 Activation of latent transforming growth factor beta 1 and inhibition of matrix metalloprotease activity by a thrombospondin-like tripeptide linked to elaidic acid, 2013
- TNBS (trinitrobenzenesulphonic acid)**
 Resveratrol, a polyphenol found in grapes, suppresses oxidative damage and stimulates apoptosis during early colonic inflammation in rats, 1399
- TNFα**
 Regulation of glutathione *S*-transferase P1-1 gene expression by NF-κappaB in tumor necrosis factor alpha-treated K562 leukemia cells, 1227
- Tocotrienols**
 Disruption of mitochondria during tocotrienol-induced apoptosis in MDA-MB-231 human breast cancer cells, 315
- Tolbutamide**
 β-Cell toxicity of ATP-sensitive K⁺ channel-blocking insulin secretagogues, 1733
- Tolerance**
 The development of morphine antinociceptive tolerance in nitric oxide synthase-deficient mice, 735
- Topoisomerase II**
 Antitumor AZA-anthrapyrazoles: biophysical and biochemical studies on 8- and 9-aza regioisomers, 631
- Transaminases**
 Opposite regulation of the rat and human cytosolic aspartate aminotransferase genes by fibrates, 213

Transcription

- Binding of hybrid molecules containing pyrrolo [2,1-*c*][1,4]benzodiazepine (PBD) and oligopyrrole carriers to the human immunodeficiency type 1 virus TAR-RNA, 401
- Novel Gemini analogs of 1 α ,25-dihydroxyvitamin D₃ with enhanced transcriptional activity, 1327

Transcription factor

- Evidence that activation of nuclear factor- κ B is essential for the cytotoxic effects of doxorubicin and its analogues, 353
- Activation of nuclear factor kappa B by diesel exhaust particles in mouse epidermal cells through phosphatidylinositol 3-kinase/Akt signaling pathway, 1975

Transforming growth factor beta 1

- Activation of latent transforming growth factor beta 1 and inhibition of matrix metalloproteinase activity by a thrombospondin-like tripeptide linked to elaidic acid, 2013

Transplatin

- DNA interactions of new antitumor platinum complexes with *trans* geometry activated by a 2-methylbutylamine or *sec*-butylamine ligand, 1097

Transporter

- Glycine 154 of the equilibrative nucleoside transporter, hENT1, is important for nucleoside transport and for conferring sensitivity to the inhibitors nitrobenzylthioinosine, dipyridamole, and dilazep, 453

Transsulfuration

- Analysis of cell-cycle kinetics and sulfur amino acid metabolism in methionine-dependent tumor cell lines; the effect of homocysteine supplementation, 1587

Triaryl phosphates

- Effects of triaryl phosphates on mouse and human nuclear receptors, 97

Tricyclic antidepressants

- Relationship between the antinociceptive response to desipramine and changes in GABA_B receptor function and subunit expression in the dorsal horn of the rat spinal cord, 743

1-(3-Trifluoromethylphenyl)piperazine

- Cytochrome P450 dependent metabolism of the new designer drug 1-(3-trifluoromethylphenyl)piperazine (TFMPP). *In vivo* studies in Wistar and Dark Agouti rats as well as *in vitro* studies in human liver microsomes, 235

Triglyceride

- Pharmacological characterization of a human-specific peroxisome proliferator-activated receptor α (PPAR α) agonist in dogs, 2057

Triglycerides

- WIF-B cells as a model for alcohol-induced hepatocyte injury, 2167
- 2,6,9-Trisubstituted purines
- Roscovitine, olomoucine, purvalanol: inducers of apoptosis in maturing cerebellar granule neurons, 1947

Tryptophan

- Polyhydroxylated 2-styrylchromones as potent antioxidants, 2207

Tubulin

- Disorazol A₁, a highly effective antimetabolic agent acting on tubulin polymerization and inducing apoptosis in mammalian cells, 927

Tumor necrosis factor

- Inhibition of lipopolysaccharide-induced expression of inducible nitric oxide synthase and tumor necrosis factor- α by 2'-hydroxychalcone derivatives in RAW 264.7 cells, 1549

Tumour suppressor protein p53

- A novel mechanism for pergolide-induced neuroprotection: inhibition of NF- κ B nuclear translocation, 1743

Type I collagen

- Induction of cyclooxygenase-2 by bovine type I collagen in macrophages via C/EBP and CREB activation by multiple cell signaling pathways, 2239

Tyrosine hydroxylase

- Dopaminergic D₁-like receptor-dependent inhibition of tyrosine hydroxylase mRNA expression and catecholamine production in human lymphocytes, 865

Tyrosine kinases

- Dual effect of hydrogen peroxide on store-mediated calcium entry in human platelets, 1065

Tyrosine nitration

- Interference of the polyphenol epicatechin with the biological chemistry of nitric oxide- and peroxynitrite-mediated reactions, 1285

Tyrosine phosphorylation

- Rapid tyrosine phosphorylation of focal adhesion kinase, paxillin, and p130^{Cas} by gastrin in human colon cancer cells, 135

U937

- CysLT₁ signal transduction in differentiated U937 cells involves the activation of the small GTP-binding protein Ras, 1569

U18666

- Up-regulation of low-density lipoprotein receptor in human hepatocytes is induced by sequestration of free cholesterol in the endosomal/lysosomal compartment, 2281

U87, U373 cells

- 2-ClATP exerts anti-tumoural actions not mediated by P2 receptors in neuronal and glial cell lines, 621

Ubiquitin

- Receptor endocytosis *via* ubiquitin-dependent and -independent pathways, 1013

UDP-glucose

- Uridine diphosphate sugar-selective conjugation of an aldose reductase inhibitor (AS-3201) by UDP-glucuronosyltransferase 2B subfamily in human liver microsomes, 1269

UDP-glucuronosyltransferase

- Uridine diphosphate sugar-selective conjugation of an aldose reductase inhibitor (AS-3201) by UDP-glucuronosyltransferase 2B subfamily in human liver microsomes, 1269

- Quaternary ammonium-linked glucuronidation of tamoxifen by human liver microsomes and UDP-glucuronosyltransferase 1A4, 2093

UDP-glucuronosyltransferase 1A1 (UGT1A1)

- The induction of human UDP-glucuronosyltransferase 1A1 mediated through a distal enhancer module by flavonoids and xenobiotics, 989

UDP-glucuronosyltransferases

- Evidence that unsaturated fatty acids are potent inhibitors of renal UDP-glucuronosyltransferases (UGT): kinetic studies using human kidney cortical microsomes and recombinant UGT1A9 and UGT2B7, 191

UGT1A9

- Evidence that unsaturated fatty acids are potent inhibitors of renal UDP-glucuronosyltransferases (UGT): kinetic studies using human kidney cortical microsomes and recombinant UGT1A9 and UGT2B7, 191

UGT2B7

- Evidence that unsaturated fatty acids are potent inhibitors of renal UDP-glucuronosyltransferases (UGT): kinetic studies using human kidney cortical microsomes and recombinant UGT1A9 and UGT2B7, 191

Up-regulation

- Chronic hypoxia up-regulates expression of adenosine A₁ receptors in DDT₁-MF2 cells, 421

Usnic acid

- Usnic acid-induced necrosis of cultured mouse hepatocytes: inhibition of mitochondrial function and oxidative stress, 439

UTP

- Cloning and characterization of mouse nucleoside triphosphate diphosphohydrolase-3, 1917

Vascular cells

- 4-Hydroxy tempol-induced impairment of mitochondrial function and augmentation of glucose transport in vascular endothelial and smooth muscle cells, 1985

Vascular permeability

- Rosiglitazone increases extravasation of macromolecules and endothelial nitric oxide synthase in skeletal muscles of the fructose-fed rat model, 1997

Vascular smooth muscle

Selective expression of Kir6.1 protein in different vascular and non-vascular tissues, 147

Gene expression profile of the G_s-coupled prostacyclin receptor in human vascular smooth muscle cells, 757

Vasoactive metabolite

Arachidonic and eicosapentaenoic acid metabolism by human CYP1A1: highly stereoselective formation of 17(*R*),18(*S*)-epoxyeicosatetraenoic acid, 1445

Vasorelaxation

Relaxant effect of oxime derivatives in isolated rat aorta: role of nitric oxide (NO) formation in smooth muscle, 1203

VEGF

Effect of vascular endothelial growth factor and epidermal growth factor on iatrogenic apoptosis in human endothelial cells, 277

Vincristine

Genistein inversely affects tubulin-binding agent-induced apoptosis in human breast cancer cells, 2031

Viral inhibitors

The use of a new in vitro reaction substrate reproducing both U3 and U5 regions of the HIV-1 3'-ends increases the correlation between the in vitro and in vivo effects of the HIV-1 integrase inhibitors, 1751

Vitamin C

Cell cycle arrest and autschizis in a human bladder carcinoma cell line following Vitamin C and Vitamin K₃ treatment, 337

Vitamin D

Novel Gemini analogs of 1 α ,25-dihydroxyvitamin D₃ with enhanced transcriptional activity, 1327

Vitamin K₃

Cell cycle arrest and autschizis in a human bladder carcinoma cell line following Vitamin C and Vitamin K₃ treatment, 337

Voltage clamp

Synthesis and electrophysiological characterization of cyclic morphiceptin analogues, 1887

VX-497

Regulation of inosine monophosphate dehydrogenase type I and type II isoforms in human lymphocytes, 767

Wee1

Genistein arrests hepatoma cells at G2/M phase: involvement of ATM activation and upregulation of p21^{waf1/cip1} and Wee1, 717

White adipose tissue

Comparison of gene expression profiles between white and brown adipose tissues of rat by microarray analysis, 555

Whitening agents

Benzylamide derivative compound attenuates the ultraviolet B-induced hyperpigmentation in the brownish guinea pig skin, 707

WIF-B cells

WIF-B cells as a model for alcohol-induced hepatocyte injury, 2167

Wistar rats

Cytochrome P450 dependent metabolism of the new designer drug 1-(3-trifluoromethylphenyl)piperazine (TFMPP). *In vivo* studies in Wistar and Dark Agouti rats as well as *in vitro* studies in human liver microsomes, 235

Wnt signaling

Differentiation of human hepatoma cells during confluence as revealed by gene expression profiling, 1249

Wortmannin

Adenosine A₃ receptor-mediated regulation of p38 and extracellular-regulated kinase ERK1/2 *via* phosphatidylinositol-3'-kinase, 129

Pancreatic stellate cell migration: role of the phosphatidylinositol 3-kinase (PI3-kinase) pathway, 1215

Xenobiotic response element

A cell-based system to identify and characterize the molecular mechanism of drug-metabolizing enzyme (DME) modulators, 1897

Xenobiotics

The induction of human UDP-glucuronosyltransferase 1A1 mediated through a distal enhancer module by flavonoids and xenobiotics, 989

Xenopus oocytes

Synthesis and electrophysiological characterization of cyclic morphiceptin analogues, 1887

YC-1

Inhibitory mechanisms of YC-1 and PMC in the induction of iNOS expression by lipoteichoic acid in RAW 264.7 macrophages, 1411

Zebrafish

Functional characterization of aryl hydrocarbon receptor (zfAHR2) localization and degradation in zebrafish (*Danio rerio*), 1363

ZFL cell line

Functional characterization of aryl hydrocarbon receptor (zfAHR2) localization and degradation in zebrafish (*Danio rerio*), 1363

Zinc

Role of zinc and iron chelation in apoptosis mediated by tachpyridine, an anti-cancer iron chelator, 1677