

Subject index Volume 64

- α A domain
Divalent cations and the relationship between α A and β A domains in integrins, 805
- A₃ effector coupling
Effector coupling of stably transfected human A₃ adenosine receptors in CHO cells, 61
- A_{2A} adenosine receptors
Up-regulation of A_{2A} adenosine receptors by proinflammatory cytokines in rat PC12 cells, 625
- A_{2A} AR radioligand binding
Up-regulation of A_{2A} adenosine receptors by proinflammatory cytokines in rat PC12 cells, 625
- Acetaminophen
Cell culture model for acetaminophen-induced hepatocyte death *in vivo*, 413
- Acetylation
Diversity of acetylation targets and roles in transcriptional regulation: the human immunodeficiency virus type 1 promoter as a model system, 925
- Acidic phospholipase A₂
Structural and functional characterization of an acidic platelet aggregation inhibitor and hypotensive phospholipase A₂ from *Bothrops jararacussu* snake venom, 723
- Acipimox
G protein-coupled receptor for nicotinic acid in mouse macrophages, 645
- Acridine derivatives
Mechanism of action of non-cisplatin type DNA-targeted platinum anticancer agents: DNA interactions of novel acridinylthioureas and their platinum conjugates, 191
- Actin polymerization
Differential effect of simvastatin on activation of Rac₁ vs. activation of the heat shock protein 27-mediated pathway upon oxidative stress, in human smooth muscle cells, 1483
- Adenosine
Effector coupling of stably transfected human A₃ adenosine receptors in CHO cells, 61
Characterization of the cAMP binding site of purified S-adenosyl-homocysteine hydrolase from bovine kidney, 1201
Modulation of agonist responses at the A₁ adenosine receptor by an irreversible antagonist, receptor–G protein uncoupling and by the G protein activation state, 1251
- Adenosine A_{2b} receptor
Induction of interleukin 8 release from the HMC-1 mast cell line: Synergy between stem cell factor and activators of the adenosine A_{2b} receptor, 317
- Adenosine analogues
Characterization of the cAMP binding site of purified S-adenosyl-homocysteine hydrolase from bovine kidney, 1201
- Adenosine receptor
Effector coupling of stably transfected human A₃ adenosine receptors in CHO cells, 61
- S-Adenosyl-homocysteine hydrolase
Characterization of the cAMP binding site of purified S-adenosyl-homocysteine hydrolase from bovine kidney, 1201
- Adenylyl cyclase
Similarities and differences in the coupling of human β_1 - and β_2 -adrenoceptors to Gs α splice variants, 9
Identification of two C-terminal amino acids, Ser³⁵⁵ and Thr³⁵⁷, required for short-term homologous desensitization of μ -opioid receptors, 257
Inhibition of platelet P2Y₁₂ and α_2 A receptor signaling by cGMP-dependent protein kinase, 433
Distinct interactions of G_{s α -long}, G_{s α -short}, and G_{zolf} with GTP, ITP, and XTP, 583
- Adenylyl cyclase assay
Up-regulation of A_{2A} adenosine receptors by proinflammatory cytokines in rat PC12 cells, 625
- Adipocyte
Is there a single mechanism for fatty acid regulation of gene transcription?, 893
- ADME modeling
Predicting plasma protein binding of drugs: a new approach, 1355
- Adrenergic signaling
Inhibition of platelet P2Y₁₂ and α_2 A receptor signaling by cGMP-dependent protein kinase, 433
- β A domain
Divalent cations and the relationship between α A and β A domains in integrins, 805
- β_1 -Adrenoceptor
Similarities and differences in the coupling of human β_1 - and β_2 -adrenoceptors to Gs α splice variants, 9
- β_2 -Adrenoceptor
Similarities and differences in the coupling of human β_1 - and β_2 -adrenoceptors to Gs α splice variants, 9
Distinct interactions of G_{s α -long}, G_{s α -short}, and G_{zolf} with GTP, ITP, and XTP, 583
- Affinity chromatography
Identifying *in vivo* targets of cyclin-dependent kinase inhibitors by affinity chromatography, 819
- Ageing
Age-related decline in cellular response to oxidative stress: links to growth factor signaling pathways with common defects, 999
Stress-induced premature senescence and tissue ageing, 1007
Stress-induced premature senescence and replicative senescence are different phenotypes, proteomic evidence, 1011
- Agonist-induced phosphorylation
Identification of two C-terminal amino acids, Ser³⁵⁵ and Thr³⁵⁷, required for short-term homologous desensitization of μ -opioid receptors, 257
- Ah receptor
Activation of mitogen-activated protein kinases (MAPKs) by aromatic hydrocarbons: role in the regulation of aryl hydrocarbon receptor (AHR) function, 771
- AHR-dependent gene transcription
Activation of mitogen-activated protein kinases (MAPKs) by aromatic hydrocarbons: role in the regulation of aryl hydrocarbon receptor (AHR) function, 771
- Akt
Regulation of p53: intricate loops and delicate balances, 865

- Albumin binding prediction
Predicting plasma protein binding of drugs: a new approach, 1355
- ALDH1
Novel competitive irreversible inhibitors of aldehyde dehydrogenase (ALDH1): restoration of chemosensitivity of L1210 cells overexpressing ALDH1 and induction of apoptosis in BAF₃ cells overexpressing bcl₂, 1279
- Algae
Use of *Chlamydomonas reinhardtii* mutants for anticancer drug screening, 1125
- ALIMTA
Effects of antifolates on the binding of 5-fluoro-2'-deoxyuridine monophosphate to thymidylate synthase, 669
- Allergy
Role of mast cell chymase in allergen-induced biphasic skin reaction, 1187
- All-*trans* retinoic acid
Retinoic acid binding properties of the lipocalin member β -lactoglobulin studied by circular dichroism, electronic absorption spectroscopy and molecular modeling methods, 1651
- Alveolar epithelial cells
Oxidative stress, transcription factors and chromatin remodelling in lung inflammation, 935
- Amino acids
Effects of *in vivo* treatment of rats with trimethyltin chloride on respiratory properties of rat liver mitochondria, 657
- Aminoxypermethyl
Insufficiently charged isosteric analogue of spermine: interaction with polyamine uptake, and effect on Caco-2 cell growth, 649
- AMPA
Glutamate antagonists limit tumor growth, 1195
- Amphotericin B
Cholesteryl ester transfer protein facilitates the movement of water-insoluble drugs between lipoproteins: a novel biological function for a well-characterized lipid transfer protein, 1669
- Anandamide
Regulation of anandamide tissue levels by *N*-arachidonylglycine, 1147
- Anesthetics
Effects of nitrosopropofol on mitochondrial energy-converting system, 1133
- Angiogenesis
Identification of cytokine-induced nuclear factor- κ B target genes in ovarian and breast cancer cells, 873
- Angiotensin II
Sodium tanshinone IIA sulfonate derived from Danshen (*Salvia miltiorrhiza*) attenuates hypertrophy induced by angiotensin II in cultured neonatal rat cardiac cells, 745
Antagonist interaction with endogenous AT₁ receptors in human cell lines, 1207
- Antagonist
Antagonist interaction with endogenous AT₁ receptors in human cell lines, 1207
- Anti-apoptotic
Is HIF-1 α a pro- or an anti-apoptotic protein?, 889
- Antifolate
Effects of antifolates on the binding of 5-fluoro-2'-deoxyuridine monophosphate to thymidylate synthase, 669
- Anti-inflammatory drugs
Anti-inflammatory drugs modulate C1q secretion in human peritoneal macrophages *in vitro*, 457
- Antioxidant
Antioxidant properties of ursodeoxycholic acid, 1661
- Antioxidant vitamins
Inhibition of phosphate transport in rat heart mitochondria by 3'-azido-3'-deoxythymidine due to stimulation of superoxide anion mitochondrial production, 201
- Antioxidants
Antioxidants inhibit endothelin-1 (1-31)-induced proliferation of vascular smooth muscle cells via the inhibition of mitogen-activated protein (MAP) kinase and activator protein-1 (AP-1), 1521
Role of antioxidants in the *O*-hydroxyethyl-D-(Ser)⁸-cyclosporine A (SDZ IMM125)-induced apoptosis in rat hepatocytes, 1725
- Antiproliferative
Glutamate antagonists limit tumor growth, 1195
- Anti-sense oligonucleotides
Quercetin, apoptosis, heat shock, 1591
- Anti-trypanosomal drug
Cytotoxic and genotoxic effects of megazol, an anti-Chagas' disease drug, assessed by different short-term tests, 1617
- Antitumor
Use of *Chlamydomonas reinhardtii* mutants for anticancer drug screening, 1125
- Antitumor agents
A novel stereo-selective sulfonylurea, 1-[1-(4-aminobenzoyl)-2,3-dihydro-1*H*-indol-6-sulfonyl]-4-phenyl-imidazolidin-2-one, has antitumor efficacy in *in vitro* and *in vivo* tumor models, 473
- Anxiolytic
Anxiolytic effect of wogonin, a benzodiazepine receptor ligand isolated from *Scutellaria baicalensis* Georgi, 1415
- AP-1
Characterization of glomerular cell phenotypes following repeated cycles of benzo[*a*]pyrene injury *in vitro*, 31
- AP2
Induction of cyclooxygenase-2 by staurosporine through the activation of nuclear factor for IL-6 (NF-IL6) and activator protein 2 (AP2) in an osteoblast-like cell line, 177
- AP-1
Relationship between the activation of heat shock factor and the suppression of nuclear factor- κ B activity in rat hepatocyte cultures treated with cyclosporine A, 247
Oxidative stress, transcription factors and chromatin remodelling in lung inflammation, 935
Function of AP-1 target genes in mesenchymal-epithelial cross-talk in skin, 949
Glutathione catabolism as a signaling mechanism, 1027
- Apoptosis
Modulation of tamoxifen-induced apoptosis by peripheral benzodiazepine receptor ligands in breast cancer cells, 99
Cell culture model for acetaminophen-induced hepatocyte death *in vivo*, 413
Inhibition of mitochondrial permeability transition and release of cytochrome *c* by anti-apoptotic nucleoside analogues, 441
Analysis of oxidative processes and of myelin figures formation before and after the loss of mitochondrial transmembrane potential during 7 β -hydroxycholesterol and 7-ketocholesterol-induced apoptosis: comparison with various pro-apoptotic chemicals, 527
Antioxidants and oxidants regulated signal transduction pathways, 765
Independent contribution of three different pathways to ultraviolet-B-induced apoptosis, 837
Prospects for targeting the Bcl-2 family of proteins to develop novel cytotoxic drugs, 851
Regulation of p53: intricate loops and delicate balances, 865
Is HIF-1 α a pro- or an anti-apoptotic protein?, 889
Contribution of apoptosis in the cytotoxicity of the oxaliplatin-irinotecan combination in the HT29 human colon adenocarcinoma cell line, 1215
Novel competitive irreversible inhibitors of aldehyde dehydrogenase (ALDH1): restoration of chemosensitivity of L1210 cells overexpressing ALDH1 and induction of apoptosis in BAF₃ cells overexpressing bcl₂, 1279
Role of the Fas/Fas ligand system in female reproductive organs: survival and apoptosis, 1305
Pro-apoptotic actions of exisulind and CP461 in SW480 colon tumor cells involve β -catenin and cyclin D1 down-regulation, 1325
The antiproliferative activity of resveratrol results in apoptosis in MCF-7 but not in MDA-MB-231 human breast cancer cells: cell-specific alteration of the cell cycle, 1375

- Differential effect of simvastatin on activation of Rac₁ vs. activation of the heat shock protein 27-mediated pathway upon oxidative stress, in human smooth muscle cells, 1483
- Cellular energetics and glutathione status in NRK-52E cells: toxicological implications, 1533
- Quercetin, apoptosis, heat shock, 1591
- Carbazolequinone induction of caspase-dependent cell death in Src-overexpressing cells, 1605
- Down-regulation of telomerase activity via protein phosphatase 2A activation in salivine-induced human leukemia HL-60 cell apoptosis, 1677
- Emodin induces apoptosis in human promyeloleukemic HL-60 cells accompanied by activation of caspase 3 cascade but independent of reactive oxygen species production, 1713
- Role of antioxidants in the *O*-hydroxyethyl-D-(Ser)⁸-cyclosporine A (SDZ IMM125)-induced apoptosis in rat hepatocytes, 1725
- Ap₅As**
- Inhibition by adenine dinucleotides of ATP-induced prostacyclin release by bovine aortic endothelial cells, 405
- Aqueous extract**
- NMR and pattern recognition studies on liver extracts and intact livers from rats treated with α -naphthylisothiocyanate, 67
- Ara-C**
- Trimidox, an inhibitor of ribonucleotide reductase, synergistically enhances the inhibition of colony formation by Ara-C in HL-60 human promyelocytic leukemia cells, 481
- Arachidonic acid**
- Arachidonic acid release and prostaglandin F_{2x} formation induced by phenylarsine oxide in PC12 cells: possible involvement of secretory phospholipase A₂ activity, 117
- Diverse functional coupling of cyclooxygenase 1 and 2 with final prostanoid synthases in liver macrophages, 1227
- Arachidonic acid release**
- Endothelin-1-induced arachidonic acid release by cytosolic phospholipase A₂ activation in rat vascular smooth muscle via extracellular signal-regulated kinases pathway, 425
- N*-Arachidonylglycine**
- Regulation of anandamide tissue levels by *N*-arachidonylglycine, 1147
- ARF**
- Regulation of p53: intricate loops and delicate balances, 865
- Arginine**
- Indomethacin-induced mitochondrial dysfunction and oxidative stress in villus enterocytes, 339
- ARNT**
- Analysis of rainbow trout Ah receptor protein isoforms in cell culture reveals conservation of function in Ah receptor-mediated signal transduction, 49
- Aromatase**
- Expression and purification of a recombinant form of human aromatase from *Escherichia coli*, 1317
- Aromatase inhibitors**
- Expression and purification of a recombinant form of human aromatase from *Escherichia coli*, 1317
- Artemisinin**
- Membrane heme as a host factor in reducing effectiveness of dihydroartemisinin, 91
- Aryl hydrocarbon receptor**
- Analysis of rainbow trout Ah receptor protein isoforms in cell culture reveals conservation of function in Ah receptor-mediated signal transduction, 49
- Ascorbate free radicals**
- Paramagnetic species in the plasma of dogs with lymphoma prior to and after treatment with doxorubicin. An ESR study, 1737
- Ascorbic acid**
- Enhancement of glutathione-dependent haemin degradation by ascorbic acid, 565
- Asthma**
- Cysteinyl leukotriene receptors, 1549
- Atherosclerosis**
- Reduction of bFGF-induced smooth muscle cell proliferation and endothelin receptor mRNA expression by mevastatin and atorvastatin, 497
- Atopic dermatitis**
- Role of mast cell chymase in allergen-induced biphasic skin reaction, 1187
- ATP hydrolysis**
- Modulation of P-glycoprotein expression and function by curcumin in multidrug-resistant human KB cells, 573
- ATP synthesis**
- Effects of *in vivo* treatment of rats with trimethyltin chloride on respiratory properties of rat liver mitochondria, 657
- Effects of nitrosopropofol on mitochondrial energy-converting system, 1133
- ATP-dependent transport**
- Inhibition of transport across the hepatocyte canalicular membrane by the antibiotic fusidate, 151
- Autophagic vacuoles**
- Analysis of oxidative processes and of myelin figures formation before and after the loss of mitochondrial transmembrane potential during 7 β -hydroxycholesterol and 7-ketocholesterol-induced apoptosis: comparison with various pro-apoptotic chemicals, 527
- Autophagy**
- Inhibition of mitochondrial permeability transition and release of cytochrome *c* by anti-apoptotic nucleoside analogues, 441
- 3'-Azido-3'-deoxythymidine**
- Inhibition of phosphate transport in rat heart mitochondria by 3'-azido-3'-deoxythymidine due to stimulation of superoxide anion mitochondrial production, 201
- Azodicarbonamide**
- Ribonucleotide reductase and thymidine phosphorylation: two potential targets of azodicarbonamide, 451
- AZT toxicity**
- Inhibition of phosphate transport in rat heart mitochondria by 3'-azido-3'-deoxythymidine due to stimulation of superoxide anion mitochondrial production, 201
- Bacterial endotoxin**
- Down-regulation of phenobarbital-induced cytochrome P450B mRNAs and proteins by endotoxin in mice: independence from nitric oxide production by inducible nitric oxide synthase, 1703
- Baculovirus**
- Molecular cloning and characterization of mouse CYP2J6, an unstable cytochrome P450 isoform, 1447
- Basic fibroblast growth factor**
- Reduction of bFGF-induced smooth muscle cell proliferation and endothelin receptor mRNA expression by mevastatin and atorvastatin, 497
- Chemosensitization by fibroblast growth factor-2 is not dependent upon proliferation, S-phase accumulation, or p53 status, 1111
- Bcl-2**
- Cell-specific regulation of apoptosis by glucocorticoids: implication to their anti-inflammatory action, 843
- Prospects for targeting the Bcl-2 family of proteins to develop novel cytotoxic drugs, 851
- bcl₂**
- Novel competitive irreversible inhibitors of aldehyde dehydrogenase (ALDH1): restoration of chemosensitivity of L1210 cells overexpressing ALDH1 and induction of apoptosis in BAF₃ cells overexpressing bcl₂, 1279
- Benzodiazepine**
- Anxiolytic effect of wogonin, a benzodiazepine receptor ligand isolated from *Scutellaria baicalensis* Georgi, 1415
- Benzo[a]pyrene**
- Characterization of glomerular cell phenotypes following repeated cycles of benzo[a]pyrene injury *in vitro*, 31
- Benzphetamine**
- Molecular cloning and characterization of mouse CYP2J6, an unstable cytochrome P450 isoform, 1447

- Beta catenin
Regulation of p53: intricate loops and delicate balances, 865
- BH3
Prospects for targeting the Bcl-2 family of proteins to develop novel cytotoxic drugs, 851
- Bile canaliculi
Influence of isolation procedure, extracellular matrix and dexamethasone on the regulation of membrane transporters gene expression in rat hepatocytes, 1637
- Bile salt transport
Inhibition of transport across the hepatocyte canalicular membrane by the antibiotic fusidate, 151
- Binding constant
Mechanism of action of non-cisplatin type DNA-targeted platinum anticancer agents: DNA interactions of novel acridinylthioureas and their platinum conjugates, 191
- Bioluminescence Resonance Energy Transfer
A homogenous assay to monitor the activity of the insulin receptor using Bioluminescence Resonance Energy Transfer, 813
- Biphasic reaction
Role of mast cell chymase in allergen-induced biphasic skin reaction, 1187
- Biliverdin IX
Biliverdin IX is an endogenous inhibitor of soluble guanylyl cyclase, 109
- Bothrops jararacussu*
Structural and functional characterization of an acidic platelet aggregation inhibitor and hypotensive phospholipase A₂ from *Bothrops jararacussu* snake venom, 723
- Bovine β -lactoglobulin
Retinoic acid binding properties of the lipocalin member β -lactoglobulin studied by circular dichroism, electronic absorption spectroscopy and molecular modeling methods, 1651
- Bowel disease
GPI 6150, a PARP inhibitor, reduces the colon injury caused by dinitrobenzene sulfonic acid in the rat, 327
- Brain injury
Brain mitochondrial uncoupling protein 2 (UCP2): a protective stress signal in neuronal injury, 363
- Breast cancer
Modulation of tamoxifen-induced apoptosis by peripheral benzodiazepine receptor ligands in breast cancer cells, 99
Quantitation of estradiol receptors alpha and beta and progesterone receptors in human breast tumors by real-time reverse transcription-polymerase chain reaction. Correlation with protein assays, 507
Growth signaling in breast cancer cells: outcomes and promises of proteomics, 797
ErbB-2-induced mammary tumor growth: the role of cyclin D1 and p27Kip1, 827
Chemosensitization by fibroblast growth factor-2 is not dependent upon proliferation, S-phase accumulation, or p53 status, 1111
- Breast cancer cells
The antiproliferative activity of resveratrol results in apoptosis in MCF-7 but not in MDA-MB-231 human breast cancer cells: cell-specific alteration of the cell cycle, 1375
- BT-20
Modulation of tamoxifen-induced apoptosis by peripheral benzodiazepine receptor ligands in breast cancer cells, 99
- Bufuralol
Complementary DNA cloning and characterization of cytochrome P450 2D29 from Japanese monkey liver, 1101
The molecular and enzyme kinetic basis for the diminished activity of the cytochrome P450 2D6.17 (CYP2D6.17) variant. Potential implications for CYP2D6 phenotyping studies and the clinical use of CYP2D6 substrate drugs in some African populations, 1387
- Butyrate
Activation of the γ -glutamyltransferase promoter 2 in the rat colon carcinoma cell line CC531 by histone deacetylase inhibitors is mediated through the Sp1 binding motif, 307
- Ca²⁺
Role of antioxidants in the *O*-hydroxyethyl-D-(Ser)⁸-cyclosporine A (SDZ IMM125)-induced apoptosis in rat hepatocytes, 1725
- Ca²⁺ channels
Phorbol ester-induced contractility and Ca²⁺ influx in human cultured prostatic stromal cells, 385
- Ca²⁺ mobilization
Inhibition by adenine dinucleotides of ATP-induced prostacyclin release by bovine aortic endothelial cells, 405
- Ca²⁺ signal
Effector coupling of stably transfected human A₃ adenosine receptors in CHO cells, 61
- Calcein-assay
Covalent binding of the anticancer drug ellipticine to DNA in V79 cells transfected with human cytochrome P450 enzymes, 289
- Calcium
Identification of a signaling cascade for interleukin-8 production by *Helicobacter pylori* in human gastric epithelial cells, 21
Novel effect of carvedilol on Ca²⁺ movement in renal tubular cells, 1777
- Calorie restriction
Age-related decline in cellular response to oxidative stress: links to growth factor signaling pathways with common defects, 999
- CaMKIV
Cyclic AMP differentially modulates CD40L expression on human naïve and memory CD4⁺ T cells, 1169
- cAMP binding protein
Characterization of the cAMP binding site of purified *S*-adenosylhomocysteine hydrolase from bovine kidney, 1201
- cAMP binding site
Characterization of the cAMP binding site of purified *S*-adenosylhomocysteine hydrolase from bovine kidney, 1201
- Camptothecin
DNA structural alterations induced by bis-netropsins modulate human DNA topoisomerase I cleavage activity and poisoning by camptothecin, 79
- Cancer
Prospects for targeting the Bcl-2 family of proteins to develop novel cytotoxic drugs, 851
Identification of cytokine-induced nuclear factor-kappaB target genes in ovarian and breast cancer cells, 873
Paramagnetic species in the plasma of dogs with lymphoma prior to and after treatment with doxorubicin. An ESR study, 1737
Inhibition of zinc finger protein-DNA interactions by sodium selenite, 1757
- Cannabinoid receptor
Lack of correlation between NF- κ B activation and induction of programmed cell death in PC12 pheochromocytoma cells treated with 6-hydroxydopamine or the cannabinoid receptor 1-agonist CP55,940, 487
- Carbazolequinones
Carbazolequinone induction of caspase-dependent cell death in Src-overexpressing cells, 1605
- Carbonyl reductase
Carbonyl reduction of the potential cytostatic drugs benfluron and 3,9-dimethoxybenfluron in human *in vitro*, 297
- Cardiac collapse
Role of poly(ADP-ribose) polymerase activation in endotoxin-induced cardiac collapse in rodents, 1785
- Cardiac function
Role of poly(ADP-ribose) polymerase activation in endotoxin-induced cardiac collapse in rodents, 1785
- Cardiac hypertrophy
Sodium tanshinone IIA sulfonate derived from Danshen (*Salvia miltiorrhiza*) attenuates hypertrophy induced by angiotensin II in cultured neonatal rat cardiac cells, 745
- Carvedilol
Novel effect of carvedilol on Ca²⁺ movement in renal tubular cells, 1777

- Caspase
Carbazolequinone induction of caspase-dependent cell death in Src-overexpressing cells, 1605
- Caspase 3
Emodin induces apoptosis in human promyeloleukemic HL-60 cells accompanied by activation of caspase 3 cascade but independent of reactive oxygen species production, 1713
- Caspase-independent
Cell culture model for acetaminophen-induced hepatocyte death *in vivo*, 413
- Caspases
Antioxidants and oxidants regulated signal transduction pathways, 765
- Catalase
Novel mechanism of Vitamin E protection against cyclosporine A cytotoxicity in cultured rat hepatocytes, 267
Emodin induces apoptosis in human promyeloleukemic HL-60 cells accompanied by activation of caspase 3 cascade but independent of reactive oxygen species production, 1713
- CD26
A kinetic study of glucagon-like peptide-1 and glucagon-like peptide-2 truncation by dipeptidyl peptidase IV, *in vitro*, 1753
- CD4⁺ T cells
Inflammatory signal transduction in Crohn's disease and novel therapeutic approaches, 789
- CD40L
Cyclic AMP differentially modulates CD40L expression on human naïve and memory CD4⁺ T cells, 1169
- Cell culture
Analysis of rainbow trout Ah receptor protein isoforms in cell culture reveals conservation of function in Ah receptor-mediated signal transduction, 49
- Cell cycle
Contribution of apoptosis in the cytotoxicity of the oxaliplatin-irinotecan combination in the HT29 human colon adenocarcinoma cell line, 1215
- Cell cycle blockade
The antiproliferative activity of resveratrol results in apoptosis in MCF-7 but not in MDA-MB-231 human breast cancer cells: cell-specific alteration of the cell cycle, 1375
- Cell differentiation
Potentiation of 1,25-dihydroxyvitamin D₃-induced differentiation of human promyelocytic leukemia cells into monocytes by costunolide, a germacranolide sesquiterpene lactone, 1233
- Cell lines
Endogenous drug transporters in *in vitro* and *in vivo* models for the prediction of drug disposition in man, 1569
- Cell signalling
Cell signalling and the glutathione redox system, 1057
- Cell surface molecules
Cyclic AMP differentially modulates CD40L expression on human naïve and memory CD4⁺ T cells, 1169
- Cell trafficking
Fidelity and spatio-temporal control in MAPkinase (ERKs) signalling, 755
- Cellular activation
Cyclic AMP differentially modulates CD40L expression on human naïve and memory CD4⁺ T cells, 1169
- Cellular energetics
Cellular energetics and glutathione status in NRK-52E cells: toxicological implications, 1533
- Cellular resistance
3'-Azido-2',3'-dideoxythymidine induced deficiency of thymidine kinases 1, 2 and deoxycytidine kinase in H9 T-lymphoid cells, 239
- Central nervous system
Uncoupling protein 2 (UCP2) lowers alcohol sensitivity and pain threshold, 369
- Cephaloridine
Enhancement of protein kinase C activity and chemiluminescence intensity in mitochondria isolated from the kidney cortex of rats treated with cephaloridine, 543
- Ceruloplasmin
Paramagnetic species in the plasma of dogs with lymphoma prior to and after treatment with doxorubicin. An ESR study, 1737
- c-Fos
Evasion from proteasomal degradation by mutated Fos proteins expressed from FBJ-MSV and FBR-MSV osteosarcomatogenic retroviruses, 957
- cGMP
Modulation of L-arginine transport and nitric oxide production by gabexate mesylate, 277
Pro-apoptotic actions of exisulind and CP461 in SW480 colon tumor cells involve β -catenin and cyclin D1 down-regulation, 1325
- cGMP-dependent protein kinase
Inhibition of platelet P2Y₁₂ and α 2A receptor signaling by cGMP-dependent protein kinase, 433
- Chemiluminescence
Enhancement of protein kinase C activity and chemiluminescence intensity in mitochondria isolated from the kidney cortex of rats treated with cephaloridine, 543
- Chemoprevention
Nuclear factor-kappa B and cancer: its role in prevention and therapy, 883
The antiproliferative activity of resveratrol results in apoptosis in MCF-7 but not in MDA-MB-231 human breast cancer cells: cell-specific alteration of the cell cycle, 1375
- Chemoresistance
Novel competitive irreversible inhibitors of aldehyde dehydrogenase (ALDH1): restoration of chemosensitivity of L1210 cells overexpressing ALDH1 and induction of apoptosis in BAF₃ cells overexpressing bcl₂, 1279
- Chemosensitization
Nuclear factor-kappa B and cancer: its role in prevention and therapy, 883
- Chemosensitizers
Modulation of P-glycoprotein expression and function by curcumin in multidrug-resistant human KB cells, 573
- Chemotherapeutic anticancer drugs
Cell-specific regulation of apoptosis by glucocorticoids: implication to their anti-inflammatory action, 843
- Chemotherapy
Carbonyl reduction of the potential cytostatic drugs benfluron and 3,9-dimethoxybenfluron in human *in vitro*, 297
mRNA expression profiles for the response of human tumor cell lines to the antimalarial drugs artesunate, arteether, and artemether, 617
Chemosensitization by fibroblast growth factor-2 is not dependent upon proliferation, S-phase accumulation, or p53 status, 1111
- Chimeric construction
Renal organic cation and nucleoside transport, 185
- Chip
Influence of isolation procedure, extracellular matrix and dexamethasone on the regulation of membrane transporters gene expression in rat hepatocytes, 1637
- Chlamydomonas*
Use of *Chlamydomonas reinhardtii* mutants for anticancer drug screening, 1125
- 5-Chloro-2'-deoxycytidine
Analytical and pharmacokinetic studies with 5-chloro-2'-deoxycytidine, 1493
- Chloroform/methanol extract
NMR and pattern recognition studies on liver extracts and intact livers from rats treated with α -naphthylisothiocyanate, 67
- Chloroquine
Haem polymerase as a novel target of antimalarial action of cyproheptadine, 1399
- Chlorzoxazone
Inhibition of cytochrome P450 2E1 by propofol in human and porcine liver microsomes, 1151

CHO cells

A physiological threshold for protection against menadione toxicity by human NAD(P)H:quinone oxidoreductase (NQO1) in Chinese hamster ovary (CHO) cells, 1597

Cholestasis

Inhibition of transport across the hepatocyte canalicular membrane by the antibiotic fusidate, 151

Cholesterol

Alterations in membrane-bound and cytoplasmic K-ras protein levels in mouse lung induced by treatment with lovastatin, cholestyramine, or niacin: effects are highly mouse strain dependent, 41

Cholesteryl ester transfer protein

Cholesteryl ester transfer protein facilitates the movement of water-insoluble drugs between lipoproteins: a novel biological function for a well-characterized lipid transfer protein, 1669

Cholestyramine

Alterations in membrane-bound and cytoplasmic K-ras protein levels in mouse lung induced by treatment with lovastatin, cholestyramine, or niacin: effects are highly mouse strain dependent, 41

Chromatin

Diversity of acetylation targets and roles in transcriptional regulation: the human immunodeficiency virus type 1 promoter as a model system, 925

Chymase

Role of mast cell chymase in allergen-induced biphasic skin reaction, 1187

Circular dichroism

Retinoic acid binding properties of the lipocalin member β -lactoglobulin studied by circular dichroism, electronic absorption spectroscopy and molecular modeling methods, 1651

Cisplatin

Chemosensitization by fibroblast growth factor-2 is not dependent upon proliferation, S-phase accumulation, or p53 status, 1111

Cisplatin resistance

Enhanced resistance of HeLa cells to cisplatin by overexpression of γ -glutamyltransferase, 207

c-jun

Characterization of glomerular cell phenotypes following repeated cycles of benzo[a]pyrene injury *in vitro*, 31

c-Jun

The c-Jun N-terminal kinases in cerebral microglia: immunological functions in the brain, 781

c-Jun N-terminal kinases

The c-Jun N-terminal kinases in cerebral microglia: immunological functions in the brain, 781

Clofibrate

Effects of *in vivo* treatment of rats with trimethyltin chloride on respiratory properties of rat liver mitochondria, 657

Cloning

Cysteinyl leukotriene receptors, 1549

Clostridial toxin

Reduction of tumor necrosis factor- α (TNF- α) related nuclear factor- κ B (NF- κ B) translocation but not inhibitor κ B (Ik-B)-degradation by Rho protein inhibition in human endothelial cells, 971

Cold preservation

Role of temperature on protein and mRNA cytochrome P450 3A (CYP3A) isozymes expression and midazolam oxidation by cultured rat precision-cut liver slices, 633

Collagen metabolism

Effect of free iron on collagen synthesis, cell proliferation and MMP-2 expression in rat hepatic stellate cells, 1139

Colon cancer

The activity profile of the hexacyclic camptothecin derivative DX-8951f in experimental human colon cancer and ovarian cancer, 1267
Pro-apoptotic actions of exisulind and CP461 in SW480 colon tumor cells involve β -catenin and cyclin D1 down-regulation, 1325

Combination chemotherapy

Trimidox, an inhibitor of ribonucleotide reductase, synergistically enhances the inhibition of colony formation by Ara-C in HL-60 human promyelocytic leukemia cells, 481

Comet assay

Cytotoxic and genotoxic effects of megazol, an anti-Chagas' disease drug, assessed by different short-term tests, 1617

Complement

In vivo anti-complement effect of bilirubin-IX α , 741

Complement system

Anti-inflammatory drugs modulate C1q secretion in human peritoneal macrophages *in vitro*, 457

Compound 48/80

Inhibition of heparin synthesis by methotrexate in rats *in vivo*, 169

Constitutive activity

Similarities and differences in the coupling of human β_1 - and β_2 -adrenoceptors to Gs α splice variants, 9

Coregulator

Differential activity by DNA-induced quarternary structures of POU transcription factors, 979

Costunolide

Potential of 1,25-dihydroxyvitamin D₃-induced differentiation of human promyelocytic leukemia cells into monocytes by costunolide, a germacranolide sesquiterpene lactone, 1233

(–)-Cotinine

Effects of (–)-nicotine and (–)-cotinine on 6-hydroxydopamine-induced oxidative stress and neurotoxicity: relevance for Parkinson's disease, 125

C1q

Anti-inflammatory drugs modulate C1q secretion in human peritoneal macrophages *in vitro*, 457

Crohn's disease

Inflammatory signal transduction in Crohn's disease and novel therapeutic approaches, 789

Crystal structure

Divalent cations and the relationship between α A and β A domains in integrins, 805

CsA

Relationship between the activation of heat shock factor and the suppression of nuclear factor- κ B activity in rat hepatocyte cultures treated with cyclosporine A, 247

Novel mechanism of Vitamin E protection against cyclosporine A cytotoxicity in cultured rat hepatocytes, 267

Curcumin

Modulation of P-glycoprotein expression and function by curcumin in multidrug-resistant human KB cells, 573

CuZnSOD

Novel mechanism of Vitamin E protection against cyclosporine A cytotoxicity in cultured rat hepatocytes, 267

Cyclic AMP

Agents that elevate cyclic AMP induce receptor phosphorylation primarily at serine 331 in HEK 293 cells overexpressing human thromboxane receptor α , 375

Cyclin

SU9516, a cyclin-dependent kinase 2 inhibitor, promotes accumulation of high molecular weight E2F complexes in human colon carcinoma cells, 1091

Cyclin D1

ErbB-2-induced mammary tumor growth: the role of cyclin D1 and p27Kip1, 827

Pro-apoptotic actions of exisulind and CP461 in SW480 colon tumor cells involve β -catenin and cyclin D1 down-regulation, 1325

Cyclin-dependent kinase

SU9516, a cyclin-dependent kinase 2 inhibitor, promotes accumulation of high molecular weight E2F complexes in human colon carcinoma cells, 1091

Cyclin-dependent kinase inhibitor

SU9516, a cyclin-dependent kinase 2 inhibitor, promotes accumulation of high molecular weight E2F complexes in human colon carcinoma cells, 1091

Cyclin-dependent kinases (CDKs)

Identifying *in vivo* targets of cyclin-dependent kinase inhibitors by affinity chromatography, 819

- Cyclooxygenase-2
Induction of cyclooxygenase-2 by staurosporine through the activation of nuclear factor for IL-6 (NF-IL6) and activator protein 2 (AP2) in an osteoblast-like cell line, 177
- Cyclooxygenase
Contribution of different phospholipases and arachidonic acid metabolites in the response of gallbladder smooth muscle to cholecystokinin, 1157
Diverse functional coupling of cyclooxygenase 1 and 2 with final prostanoid synthases in liver macrophages, 1227
Hyperforin is a dual inhibitor of cyclooxygenase-1 and 5-lipoxygenase, 1767
- Cyclooxygenase activity
Inhibition of prostaglandin E₂ production by taiwanin C isolated from the root of *Acanthopanax chiisanensis* and the mechanism of action, 1345
- Cyclosporine A
Cholesteryl ester transfer protein facilitates the movement of water-insoluble drugs between lipoproteins: a novel biological function for a well-characterized lipid transfer protein, 1669
Role of antioxidants in the *O*-hydroxyethyl-D-(Ser)⁸-cyclosporine A (SDZ IMM125)-induced apoptosis in rat hepatocytes, 1725
- CYP activities
Modulations of P450 mRNA in liver and mammary gland and P450 activities and metabolism of estrogen in liver by treatment of rats with indole-3-carbinol, 393
- CYP3A
Role of temperature on protein and mRNA cytochrome P450 3A (CYP3A) isozymes expression and midazolam oxidation by cultured rat precision-cut liver slices, 633
- CYP1A1 induction
Activation of mitogen-activated protein kinases (MAPKs) by aromatic hydrocarbons: role in the regulation of aryl hydrocarbon receptor (AHR) function, 771
- CYP2B and CYP3A inducer
Gene expression profiling of drug metabolism and toxicology markers using a low-density DNA microarray, 137
- CYP2C8
CYP2C8 polymorphisms in Caucasians and their relationship with paclitaxel 6 α -hydroxylase activity in human liver microsomes, 1579
- CYP2D29
Complementary DNA cloning and characterization of cytochrome P450 2D29 from Japanese monkey liver, 1101
- CYP2D6
Complementary DNA cloning and characterization of cytochrome P450 2D29 from Japanese monkey liver, 1101
- CYP2D6*17
The molecular and enzyme kinetic basis for the diminished activity of the cytochrome P450 2D6.17 (CYP2D6.17) variant. Potential implications for CYP2D6 phenotyping studies and the clinical use of CYP2D6 substrate drugs in some African populations, 1387
- Cyproheptadine
Haem polymerase as a novel target of antimalarial action of cyproheptadine, 1399
- Cysteinyl leukotriene
Cysteinyl leukotriene receptors, 1549
- Cytarabine
3'-Azido-2',3'-dideoxythymidine induced deficiency of thymidine kinases 1, 2 and deoxycytidine kinase in H9 T-lymphoid cells, 239
- Cytidine deaminase
Analytical and pharmacokinetic studies with 5-chloro-2'-deoxycytidine, 1493
- Cytochrome *c* release
Inhibition of mitochondrial permeability transition and release of cytochrome *c* by anti-apoptotic nucleoside analogues, 441
- Cytochrome P450
Molecular cloning and characterization of mouse CYP2J6, an unstable cytochrome P450 isoform, 1447
- CYP2C8 polymorphisms in Caucasians and their relationship with paclitaxel 6 α -hydroxylase activity in human liver microsomes, 1579
Down-regulation of phenobarbital-induced cytochrome P4502B mRNAs and proteins by endotoxin in mice: independence from nitric oxide production by inducible nitric oxide synthase, 1703
- Cytochrome P450 2D6
The molecular and enzyme kinetic basis for the diminished activity of the cytochrome P450 2D6.17 (CYP2D6.17) variant. Potential implications for CYP2D6 phenotyping studies and the clinical use of CYP2D6 substrate drugs in some African populations, 1387
- Cytochrome P450 2E1
Inhibition of cytochrome P450 2E1 by propofol in human and porcine liver microsomes, 1151
- Cytochrome P450 expression and purification
Expression and purification of a recombinant form of human aromatase from *Escherichia coli*, 1317
- Cytochromes P450
PXR-dependent induction of human *CYP3A4* gene expression by organochlorine pesticides, 1513
- Cytosine arabinoside
Inhibition of mitochondrial permeability transition and release of cytochrome *c* by anti-apoptotic nucleoside analogues, 441
- Cytosolic PLA₂
Endothelin-1-induced arachidonic acid release by cytosolic phospholipase A₂ activation in rat vascular smooth muscle via extracellular signal-regulated kinases pathway, 425
- Cytostatic
Glutamate antagonists limit tumor growth, 1195
- Cytotoxicity
Cytotoxicity of dopamine-derived tetrahydroisoquinolines on melanoma cells, 1503
A physiological threshold for protection against menadione toxicity by human NAD(P)H:quinone oxidoreductase (NQO1) in Chinese hamster ovary (CHO) cells, 1597
Carbazolequinone induction of caspase-dependent cell death in Src-overexpressing cells, 1605
- DAMGO
Identification of two C-terminal amino acids, Ser³⁵⁵ and Thr³⁵⁷, required for short-term homologous desensitization of μ -opioid receptors, 257
- Deacetylases
Oxidative stress, transcription factors and chromatin remodelling in lung inflammation, 935
- Death receptor activation
Independent contribution of three different pathways to ultraviolet-B-induced apoptosis, 837
- Debrisoquine
Complementary DNA cloning and characterization of cytochrome P450 2D29 from Japanese monkey liver, 1101
The molecular and enzyme kinetic basis for the diminished activity of the cytochrome P450 2D6.17 (CYP2D6.17) variant. Potential implications for CYP2D6 phenotyping studies and the clinical use of CYP2D6 substrate drugs in some African populations, 1387
- Decoy
Cationic liposomes as delivery systems for double-stranded PNA-DNA chimeras exhibiting decoy activity against NF- κ B transcription factors, 609
- Delivery
Cationic liposomes as delivery systems for double-stranded PNA-DNA chimeras exhibiting decoy activity against NF- κ B transcription factors, 609
- Deoxycytidine kinase
3'-Azido-2',3'-dideoxythymidine induced deficiency of thymidine kinases 1, 2 and deoxycytidine kinase in H9 T-lymphoid cells, 239
Identification of residues involved in the substrate specificity of human and murine dCK, 1559

- 2-Deoxy-D-glucose
Hypoxia increases tumor cell sensitivity to glycolytic inhibitors: a strategy for solid tumor therapy (Model C), 1745
- Deoxytubercidin
Renal organic cation and nucleoside transport, 185
- Desensitization
Agents that elevate cyclic AMP induce receptor phosphorylation primarily at serine 331 in HEK 293 cells overexpressing human thromboxane receptor α , 375
- Dexamethasone
Cell-specific regulation of apoptosis by glucocorticoids: implication to their anti-inflammatory action, 843
- Dextromethorphan
The molecular and enzyme kinetic basis for the diminished activity of the cytochrome P450 2D6.17 (CYP2D6.17) variant. Potential implications for CYP2D6 phenotyping studies and the clinical use of CYP2D6 substrate drugs in some African populations, 1387
- 2DGE
Stress-induced premature senescence and replicative senescence are different phenotypes, proteomic evidence, 1011
- Diabetes
A homogenous assay to monitor the activity of the insulin receptor using Bioluminescence Resonance Energy Transfer, 813
- S-(1,2-Dichlorovinyl)-L-cysteine
Toxic, halogenated cysteine S-conjugates and targeting of mitochondrial enzymes of energy metabolism, 553
Cellular energetics and glutathione status in NRK-52E cells: toxicological implications, 1533
- Dicoumarol
A physiological threshold for protection against menadione toxicity by human NAD(P)H:quinone oxidoreductase (NQO1) in Chinese hamster ovary (CHO) cells, 1597
- Differential expression
Identification of cytokine-induced nuclear factor-kappaB target genes in ovarian and breast cancer cells, 873
- Differential function
Differential activity by DNA-induced quarternary structures of POU transcription factors, 979
- Differentiation
Function of AP-1 target genes in mesenchymal-epithelial cross-talk in skin, 949
- 1,25-Dihydroxyvitamin D₃
Potentiation of 1,25-dihydroxyvitamin D₃-induced differentiation of human promyelocytic leukemia cells into monocytes by costunolide, a germacranolide sesquiterpene lactone, 1233
- Dimethyl sulfoxide
Synergistic effect of dimethyl sulfoxide on glucagon-like peptide 1 (GLP-1)-stimulated insulin secretion and gene transcription in INS-1 cells: characterization and implications, 689
Enhanced activity of human N-myristoyltransferase by dimethyl sulfoxide and related solvents in the presence of serine/threonine-containing peptide substrates, 1461
- Dioxin
Activation of mitogen-activated protein kinases (MAPKs) by aromatic hydrocarbons: role in the regulation of aryl hydrocarbon receptor (AHR) function, 771
- Dipeptidyl peptidase IV
A kinetic study of glucagon-like peptide-1 and glucagon-like peptide-2 truncation by dipeptidyl peptidase IV, *in vitro*, 1753
- Disulfide bridge reduction
Thioredoxins and related proteins in photosynthetic organisms: molecular basis for thiol dependent regulation, 1065
- $\alpha\text{v}\beta 3$
Divalent cations and the relationship between αA and βA domains in integrins, 805
- DNA cleavage
DNA structural alterations induced by bis-netropsins modulate human DNA topoisomerase I cleavage activity and poisoning by camptothecin, 79
- DNA damage
Independent contribution of three different pathways to ultraviolet-B-induced apoptosis, 837
Cytotoxic and genotoxic effects of megazol, an anti-Chagas' disease drug, assessed by different short-term tests, 1617
- DNA gyrase
Use of *Chlamydomonas reinhardtii* mutants for anticancer drug screening, 1125
- DNA repair
Expression and activity of the DNA repair enzyme uracil DNA glycosylase during organogenesis in the rat conceptus and following methotrexate exposure *in vitro*, 711
- DNA topoisomerases
Use of *Chlamydomonas reinhardtii* mutants for anticancer drug screening, 1125
- Dopamine release
Biphasic effects of oxethazaine, a topical anesthetic, on the intracellular Ca²⁺ concentration of PC12 cells, 677
- Dopaminergic neurotoxicity
Effects of (–)-nicotine and (–)-cotinine on 6-hydroxydopamine-induced oxidative stress and neurotoxicity: relevance for Parkinson's disease, 125
- Doxorubicin
Paramagnetic species in the plasma of dogs with lymphoma prior to and after treatment with doxorubicin. An ESR study, 1737
- Drug design
Prospects for targeting the Bcl-2 family of proteins to develop novel cytotoxic drugs, 851
- Drug disposition
Endogenous drug transporters in *in vitro* and *in vivo* models for the prediction of drug disposition in man, 1569
- Drug metabolism
Gene expression profiling of drug metabolism and toxicology markers using a low-density DNA microarray, 137
- Drug movement and lipoproteins
Cholesteryl ester transfer protein facilitates the movement of water-insoluble drugs between lipoproteins: a novel biological function for a well-characterized lipid transfer protein, 1669
- Drug resistance
Carbonyl reduction of the potential cytostatic drugs benfluron and 3,9-dimethoxybenfluron in human *in vitro*, 297
- Drug screening assays
Use of *Chlamydomonas reinhardtii* mutants for anticancer drug screening, 1125
- DX-8951f
The activity profile of the hexacyclic camptothecin derivative DX-8951f in experimental human colon cancer and ovarian cancer, 1267
- E. coli* expression
Expression and purification of a recombinant form of human aromatase from *Escherichia coli*, 1317
- Edema
Biochemical and biological properties of phospholipases A₂ from *Bothrops atrox* snake venom, 1179
- E2F
SU9516, a cyclin-dependent kinase 2 inhibitor, promotes accumulation of high molecular weight E2F complexes in human colon carcinoma cells, 1091
- Efficacy
Modulation of agonist responses at the A₁ adenosine receptor by an irreversible antagonist, receptor-G protein uncoupling and by the G protein activation state, 1251
- Electron spin resonance
Paramagnetic species in the plasma of dogs with lymphoma prior to and after treatment with doxorubicin. An ESR study, 1737
- Emodin
Emodin induces apoptosis in human promyeloleukemic HL-60 cells accompanied by activation of caspase 3 cascade but independent of reactive oxygen species production, 1713

- Endothelial cells
Inhibition by adenine dinucleotides of ATP-induced prostacyclin release by bovine aortic endothelial cells, 405
- Endothelial factors
Inhibition of platelet P2Y₁₂ and α 2A receptor signaling by cGMP-dependent protein kinase, 433
- Endothelin-1
Endothelin-1-induced arachidonic acid release by cytosolic phospholipase A₂ activation in rat vascular smooth muscle via extracellular signal-regulated kinases pathway, 425
- Endothelin-1 (1–31)
Antioxidants inhibit endothelin-1 (1–31)-induced proliferation of vascular smooth muscle cells via the inhibition of mitogen-activated protein (MAP) kinase and activator protein-1 (AP-1), 1521
- Endothelin-receptors
Reduction of bFGF-induced smooth muscle cell proliferation and endothelin receptor mRNA expression by mevastatin and atorvastatin, 497
- Endothelium
Reduction of tumor necrosis factor- α (TNF- α) related nuclear factor- κ B (NF- κ B) translocation but not inhibitor κ B (I κ B)-degradation by Rho protein inhibition in human endothelial cells, 971
- Endotoxin
Role of poly(ADP-ribose) polymerase activation in endotoxin-induced cardiac collapse in rodents, 1785
- Enterocytes
Indomethacin-induced mitochondrial dysfunction and oxidative stress in villus enterocytes, 339
- Enzyme kinetics
Substrate-dependent, non-hyperbolic kinetics of pig brain prolol oligopeptidase and its tight binding inhibition by JTP-4819, 463
- EOR
Endoplasmic reticulum (ER) stress: hepatitis C virus induces an ER-nucleus signal transduction pathway and activates NF- κ B and STAT-3, 1425
- Epithelial cells
Molecular cloning and characterization of mouse CYP2J6, an unstable cytochrome P450 isoform, 1447
- Equilibrium binding
Differential binding to the α / β -tubulin dimer of vinorelbine and vinflunine revealed by nuclear magnetic resonance analyses, 733
- ER α and β
Quantitation of estradiol receptors alpha and beta and progesterone receptors in human breast tumors by real-time reverse transcription-polymerase chain reaction. Correlation with protein assays, 507
- ER stress
Endoplasmic reticulum (ER) stress: hepatitis C virus induces an ER-nucleus signal transduction pathway and activates NF- κ B and STAT-3, 1425
- Erythrocyte
Enhancement of glutathione-dependent haemin degradation by ascorbic acid, 565
- Estrogen
Role of the Fas/Fas ligand system in female reproductive organs: survival and apoptosis, 1305
- Estrogen metabolism
Modulations of P450 mRNA in liver and mammary gland and P450 activities and metabolism of estrogen in liver by treatment of rats with indole-3-carbinol, 393
- Estrogen synthetase
Expression and purification of a recombinant form of human aromatase from *Escherichia coli*, 1317
- Ethanol tolerance
Uncoupling protein 2 (UCP2) lowers alcohol sensitivity and pain threshold, 369
- Experimental colitis
Interleukin-1 β converting enzyme (caspase-1) in intestinal inflammation, 1
- Expression
Cysteinyl leukotriene receptors, 1549
- Expression profile
Comparative analysis of human and rat S1P₅ (edg8): differential expression profiles and sensitivities to antagonists, 1243
- Expression profiling
Endogenous drug transporters in *in vitro* and *in vivo* models for the prediction of drug disposition in man, 1569
- Extracellular matrix
Influence of isolation procedure, extracellular matrix and dexamethasone on the regulation of membrane transporters gene expression in rat hepatocytes, 1637
- Extracellular signal-regulated kinase
Identification of a signaling cascade for interleukin-8 production by *Helicobacter pylori* in human gastric epithelial cells, 21
Potentiation of 1,25-dihydroxyvitamin D₃-induced differentiation of human promyelocytic leukemia cells into monocytes by costunolide, a germacranolide sesquiterpene lactone, 1233
- Extracellular signal-regulated kinases
Endothelin-1-induced arachidonic acid release by cytosolic phospholipase A₂ activation in rat vascular smooth muscle via extracellular signal-regulated kinases pathway, 425
- Familial adenomatous polyposis
Pro-apoptotic actions of exisulind and CP461 in SW480 colon tumor cells involve β -catenin and cyclin D1 down-regulation, 1325
- Fas
Role of the Fas/Fas ligand system in female reproductive organs: survival and apoptosis, 1305
- Fas ligand
Role of the Fas/Fas ligand system in female reproductive organs: survival and apoptosis, 1305
- Fatty acid
Is there a single mechanism for fatty acid regulation of gene transcription?, 893
- FdUMP binding
Effects of antifolates on the binding of 5-fluoro-2'-deoxyuridine monophosphate to thymidylate synthase, 669
- Fibroblasts
Function of AP-1 target genes in mesenchymal-epithelial cross-talk in skin, 949
Stress-induced premature senescence and replicative senescence are different phenotypes, proteomic evidence, 1011
- FK228
Effects of FK228, a novel histone deacetylase inhibitor, on human lymphoma U-937 cells *in vitro* and *in vivo*, 1079
- Flavonoid
Anxiolytic effect of wogonin, a benzodiazepine receptor ligand isolated from *Scutellaria baicalensis* Georgi, 1415
- 5-Fluorouracil
5-Fluorouracil inhibits nitric oxide production through the inactivation of I κ B kinase in stomach cancer cells, 1439
- Fos
Function of AP-1 target genes in mesenchymal-epithelial cross-talk in skin, 949
- Free fatty acids
Synergistic effects of troglitazone and oleate on the translatability of preproinsulin mRNA from INS-1 cells, 1629
- Free radicals
GPI 6150, a PARP inhibitor, reduces the colon injury caused by dinitrobenzene sulfonic acid in the rat, 327
- Function
Cysteinyl leukotriene receptors, 1549
- Functional genomics
Designed transcription factors as tools for therapeutics and functional genomics, 919
- Fura-2
Novel effect of carvedilol on Ca²⁺ movement in renal tubular cells, 1777

- Fusidate**
Inhibition of transport across the hepatocyte canalicular membrane by the antibiotic fusidate, 151
- Fusion protein**
Similarities and differences in the coupling of human β_1 - and β_2 -adrenoceptors to G_{sz} splice variants, 9
- Fusion proteins**
Distinct interactions of $G_{sz-long}$, $G_{sz-short}$, and G_{zolf} with GTP, ITP, and XTP, 583
- G protein-coupled receptor**
G protein-coupled receptor for nicotinic acid in mouse macrophages, 645
- GABA_A receptor**
Anxiolytic effect of wogonin, a benzodiazepine receptor ligand isolated from *Scutellaria baicalensis* Georgi, 1415
- Gabexate mesylate**
Modulation of L-arginine transport and nitric oxide production by gabexate mesylate, 277
- Gastrointestinal tract**
Molecular cloning and characterization of mouse CYP2J6, an unstable cytochrome P450 isoform, 1447
- Gelatinases**
Inhibition of matrix-proteases by polyphenols: chemical insights for anti-inflammatory and anti-invasion drug design, 229
- Gemcitabine**
3'-Azido-2',3'-dideoxythymidine induced deficiency of thymidine kinases 1, 2 and deoxycytidine kinase in H9 T-lymphoid cells, 239
- Gene**
Is there a single mechanism for fatty acid regulation of gene transcription?, 893
- Gene expression**
Antioxidants and oxidants regulated signal transduction pathways, 765
PXR-dependent induction of human *CYP3A4* gene expression by organochlorine pesticides, 1513
- Gene regulation**
Analysis of rainbow trout Ah receptor protein isoforms in cell culture reveals conservation of function in Ah receptor-mediated signal transduction, 49
Regulation of the transcriptional activity of the nuclear factor- κ B p65 subunit, 963
- Genotype-phenotype correlation analysis**
Human histamine N-methyltransferase pharmacogenetics: gene resequencing, promoter characterization, and functional studies of a common 5'-flanking region single nucleotide polymorphism (SNP), 699
- Glitazones**
Synergistic effects of troglitazone and oleate on the translatability of preproinsulin mRNA from INS-1 cells, 1629
- Glomerular cell phenotypes**
Characterization of glomerular cell phenotypes following repeated cycles of benzo[a]pyrene injury *in vitro*, 31
- GLP-1**
Synergistic effect of dimethyl sulfoxide on glucagon-like peptide 1 (GLP-1)-stimulated insulin secretion and gene transcription in INS-1 cells: characterization and implications, 689
A kinetic study of glucagon-like peptide-1 and glucagon-like peptide-2 truncation by dipeptidyl peptidase IV, *in vitro*, 1753
- GLP-2**
A kinetic study of glucagon-like peptide-1 and glucagon-like peptide-2 truncation by dipeptidyl peptidase IV, *in vitro*, 1753
- Glucagon-like peptide 1**
Synergistic effect of dimethyl sulfoxide on glucagon-like peptide 1 (GLP-1)-stimulated insulin secretion and gene transcription in INS-1 cells: characterization and implications, 689
- Glucagon-like peptides**
A kinetic study of glucagon-like peptide-1 and glucagon-like peptide-2 truncation by dipeptidyl peptidase IV, *in vitro*, 1753
- Glucocorticoids**
Effects of polysulfated glycosaminoglycan and triamcinolone acetonide on the production of proteinases and their inhibitors by IL-1 α treated articular chondrocytes, 217
- Glucose**
Signaling cross-talk between hypoxia and glucose via hypoxia-inducible factor 1 and glucose response elements, 903
- Glutamate**
Evidence for the presence of glutamatergic receptors in adult *Schistosoma mansoni*, 1337
- Glutamate cysteine ligase**
Cellular glutathione and thiols metabolism, 1019
- γ -Glutamyltransferase**
Enhanced resistance of HeLa cells to cisplatin by overexpression of γ -glutamyltransferase, 207
Activation of the γ -glutamyltransferase promoter 2 in the rat colon carcinoma cell line CC531 by histone deacetylase inhibitors is mediated through the Sp1 binding motif, 307
Glutathione catabolism as a signaling mechanism, 1027
- Glutathione**
Activation of the γ -glutamyltransferase promoter 2 in the rat colon carcinoma cell line CC531 by histone deacetylase inhibitors is mediated through the Sp1 binding motif, 307
Enhancement of glutathione-dependent haemin degradation by ascorbic acid, 565
Glutathione catabolism as a signaling mechanism, 1027
Glutathione, iron and Parkinson's disease, 1037
Cell signalling and the glutathione redox system, 1057
Cellular energetics and glutathione status in NRK-52E cells: toxicological implications, 1533
- Glutathione disulfide S-oxide (glutathione thiosulfinate)**
Glutathionylation of proteins by glutathione disulfide S-oxide, 1049
- Glutathione synthetase**
Cellular glutathione and thiols metabolism, 1019
- Glutathione-S-thiolation**
Cell signalling and the glutathione redox system, 1057
- Glutathionylation**
Glutathionylation of proteins by glutathione disulfide S-oxide, 1049
- Glycolysis**
Hypoxia increases tumor cell sensitivity to glycolytic inhibitors: a strategy for solid tumor therapy (Model C), 1745
- GPCR**
Cysteinyl leukotriene receptors, 1549
- GPI 6150**
GPI 6150, a PARP inhibitor, reduces the colon injury caused by dinitrobenzene sulfonic acid in the rat, 327
- Growth factor**
Growth signaling in breast cancer cells: outcomes and promises of proteomics, 797
Signal transduction to hypoxia-inducible factor 1, 993
- Growth factor signaling**
Age-related decline in cellular response to oxidative stress: links to growth factor signaling pathways with common defects, 999
- G_{sz} splice variants**
Similarities and differences in the coupling of human β_1 - and β_2 -adrenoceptors to G_{sz} splice variants, 9
- GSH**
Oxidative stress, transcription factors and chromatin remodelling in lung inflammation, 935
- GSH catabolism**
Enhanced resistance of HeLa cells to cisplatin by overexpression of γ -glutamyltransferase, 207
- G_s -proteins**
Distinct interactions of $G_{sz-long}$, $G_{sz-short}$, and G_{zolf} with GTP, ITP, and XTP, 583
- GTP γ S**
G protein-coupled receptor for nicotinic acid in mouse macrophages, 645

- H. pylori*
Identification of a signaling cascade for interleukin-8 production by *Helicobacter pylori* in human gastric epithelial cells, 21
- Haem polymerase
Haem polymerase as a novel target of antimalarial action of cyproheptadine, 1399
- Haemin degradation
Enhancement of glutathione-dependent haemin degradation by ascorbic acid, 565
- Haemozoin
Haem polymerase as a novel target of antimalarial action of cyproheptadine, 1399
- Han–Wistar rat
NMR and pattern recognition studies on liver extracts and intact livers from rats treated with α -naphthylisothiocyanate, 67
- Haplo-insufficiency
ErbB-2-induced mammary tumor growth: the role of cyclin D1 and p27Kip1, 827
- HCV
Endoplasmic reticulum (ER) stress: hepatitis C virus induces an ER-nucleus signal transduction pathway and activates NF- κ B and STAT-3, 1425
- HEK 293 cells
Identification of two C-terminal amino acids, Ser³⁵⁵ and Thr³⁵⁷, required for short-term homologous desensitization of μ -opioid receptors, 257
- Heme
Membrane heme as a host factor in reducing effectiveness of dihydroartemisinin, 91
- Heme oxygenase
Biliverdin IX is an endogenous inhibitor of soluble guanylyl cyclase, 109
- Hemoglobinuria
In vivo anti-complement effect of bilirubin-IX α , 741
- Heparin synthesis
Inhibition of heparin synthesis by methotrexate in rats *in vivo*, 169
- Hepatic stellate cells
Effect of free iron on collagen synthesis, cell proliferation and MMP-2 expression in rat hepatic stellate cells, 1139
- Heterologous receptor regulation
Up-regulation of A_{2A} adenosine receptors by proinflammatory cytokines in rat PC12 cells, 625
- Hierarchical cluster analysis
mRNA expression profiles for the response of human tumor cell lines to the antimalarial drugs artesunate, arteether, and artemether, 617
- HIF-1 α
Is HIF-1 α a pro- or an anti-apoptotic protein?, 889
- HIF-1
Signaling cross-talk between hypoxia and glucose via hypoxia-inducible factor 1 and glucose response elements, 903
- High-throughput screening
A homogenous assay to monitor the activity of the insulin receptor using Bioluminescence Resonance Energy Transfer, 813
- Hippocampus
Brain mitochondrial uncoupling protein 2 (UCP2): a protective stress signal in neuronal injury, 363
- Histamine
Human histamine N-methyltransferase pharmacogenetics: gene resequencing, promoter characterization, and functional studies of a common 5'-flanking region single nucleotide polymorphism (SNP), 699
- Histamine N-methyltransferase
Human histamine N-methyltransferase pharmacogenetics: gene resequencing, promoter characterization, and functional studies of a common 5'-flanking region single nucleotide polymorphism (SNP), 699
- Histone acetylation
Oxidative stress, transcription factors and chromatin remodelling in lung inflammation, 935
- Histone deacetylase inhibitor
Activation of the γ -glutamyltransferase promoter 2 in the rat colon carcinoma cell line CC531 by histone deacetylase inhibitors is mediated through the Sp1 binding motif, 307
Effects of FK228, a novel histone deacetylase inhibitor, on human lymphoma U-937 cells *in vitro* and *in vivo*, 1079
- Histone modification
Regulation of the transcriptional activity of the nuclear factor- κ B p65 subunit, 963
- HIV-1
Diversity of acetylation targets and roles in transcriptional regulation: the human immunodeficiency virus type 1 promoter as a model system, 925
- HL-60
Trimidox, an inhibitor of ribonucleotide reductase, synergistically enhances the inhibition of colony formation by Ara-C in HL-60 human promyelocytic leukemia cells, 481
- HMC-1
Induction of interleukin 8 release from the HMC-1 mast cell line: Synergy between stem cell factor and activators of the adenosine A_{2b} receptor, 317
- hMDR1* gene
Transcriptional regulators of the human multidrug resistance 1 gene: recent views, 943
- HNMT
Human histamine N-methyltransferase pharmacogenetics: gene resequencing, promoter characterization, and functional studies of a common 5'-flanking region single nucleotide polymorphism (SNP), 699
- Homologous desensitization
Identification of two C-terminal amino acids, Ser³⁵⁵ and Thr³⁵⁷, required for short-term homologous desensitization of μ -opioid receptors, 257
- Hormone receptors
Quantitation of estradiol receptors alpha and beta and progesterone receptors in human breast tumors by real-time reverse transcription-polymerase chain reaction. Correlation with protein assays, 507
- HSF1
Relationship between the activation of heat shock factor and the suppression of nuclear factor- κ B activity in rat hepatocyte cultures treated with cyclosporine A, 247
- HSP70
Relationship between the activation of heat shock factor and the suppression of nuclear factor- κ B activity in rat hepatocyte cultures treated with cyclosporine A, 247
- HSP27
Differential effect of simvastatin on activation of Rac₁ vs. activation of the heat shock protein 27-mediated pathway upon oxidative stress, in human smooth muscle cells, 1483
- Hsp27
Quercetin, apoptosis, heat shock, 1591
- Hsp72
Quercetin, apoptosis, heat shock, 1591
- Human
Inhibition of cytochrome P450 2E1 by propofol in human and porcine liver microsomes, 1151
CYP2C8 polymorphisms in Caucasians and their relationship with paclitaxel 6 α -hydroxylase activity in human liver microsomes, 1579
- Human AT₁ receptor
Antagonist interaction with endogenous AT₁ receptors in human cell lines, 1207
- Human chymase
Antioxidants inhibit endothelin-1 (1–31)-induced proliferation of vascular smooth muscle cells via the inhibition of mitogen-activated protein (MAP) kinase and activator protein-1 (AP-1), 1521
- Human cytochrome P450
Covalent binding of the anticancer drug ellipticine to DNA in V79 cells transfected with human cytochrome P450 enzymes, 289

- Human hepatocytes
Carbonyl reduction of the potential cytostatic drugs benfluron and 3,9-dimethoxybenfluron in human *in vitro*, 297
- Human platelets
Modulation of L-arginine transport and nitric oxide production by gabexate mesylate, 277
- Human prostate stromal cells
Phorbol ester-induced contractility and Ca²⁺ influx in human cultured prostatic stromal cells, 385
- Human serum albumin
Predicting plasma protein binding of drugs: a new approach, 1355
- Human smooth muscle cells
Differential effect of simvastatin on activation of Rac₁ vs. activation of the heat shock protein 27-mediated pathway upon oxidative stress, in human smooth muscle cells, 1483
- Human tumor xenografts
The activity profile of the hexacyclic camptothecin derivative DX-8951f in experimental human colon cancer and ovarian cancer, 1267
- Hydrogen peroxide
Enhancement of glutathione-dependent haemin degradation by ascorbic acid, 565
Cellular glutathione and thiols metabolism, 1019
Glutathione catabolism as a signaling mechanism, 1027
- 6-Hydroxydopamine
Effects of (–)-nicotine and (–)-cotinine on 6-hydroxydopamine-induced oxidative stress and neurotoxicity: relevance for Parkinson's disease, 125
Lack of correlation between NF-κB activation and induction of programmed cell death in PC12 pheochromocytoma cells treated with 6-hydroxydopamine or the cannabinoid receptor 1-agonist CP55,940, 487
- Hydroxyl radical
Antioxidant properties of ursodeoxycholic acid, 1661
- 4-Hydroxynonenal
Cellular glutathione and thiols metabolism, 1019
- 11β-Hydroxysteroid dehydrogenase
Carbonyl reduction of the potential cytostatic drugs benfluron and 3,9-dimethoxybenfluron in human *in vitro*, 297
- Hyperbilirubinemia
Inhibition of transport across the hepatocyte canalicular membrane by the antibiotic fusidate, 151
- Hyperekplexia mutation
Hyperekplexia mutation of glycine receptors: decreased gating efficacy with altered binding thermodynamics, 285
- Hyperforin
Hyperforin is a dual inhibitor of cyclooxygenase-1 and 5-lipoxygenase, 1767
- Hypericum perforatum*
Hyperforin is a dual inhibitor of cyclooxygenase-1 and 5-lipoxygenase, 1767
- Hyperplasia
Sodium tanshinone IIA sulfonate derived from Danshen (*Salvia miltiorrhiza*) attenuates hypertrophy induced by angiotensin II in cultured neonatal rat cardiac cells, 745
- Hypotensive effect
Structural and functional characterization of an acidic platelet aggregation inhibitor and hypotensive phospholipase A₂ from *Bothrops jararacussu* snake venom, 723
- Hypoxia
Is HIF-1α a pro- or an anti-apoptotic protein?, 889
Hypoxia increases tumor cell sensitivity to glycolytic inhibitors: a strategy for solid tumor therapy (Model C), 1745
- IκB-α
Relationship between the activation of heat shock factor and the suppression of nuclear factor-κB activity in rat hepatocyte cultures treated with cyclosporine A, 247
- IκB
Lack of correlation between NF-κB activation and induction of programmed cell death in PC12 pheochromocytoma cells treated with 6-hydroxydopamine or the cannabinoid receptor 1-agonist CP55,940, 487
- IκBα
5-Fluorouracil inhibits nitric oxide production through the inactivation of IκB kinase in stomach cancer cells, 1439
- IL-1β
Interleukin-1β converting enzyme (caspase-1) in intestinal inflammation, 1
- IL-18
Interleukin-1β converting enzyme (caspase-1) in intestinal inflammation, 1
- Immediate early gene
Sodium tanshinone IIA sulfonate derived from Danshen (*Salvia miltiorrhiza*) attenuates hypertrophy induced by angiotensin II in cultured neonatal rat cardiac cells, 745
- Immune cells
The c-Jun N-terminal kinases in cerebral microglia: immunological functions in the brain, 781
- Immune regulation
Lysophosphatidylcholine as a ligand for immunoregulation, 161
- In situ* hybridization
Molecular cloning and characterization of mouse CYP2J6, an unstable cytochrome P450 isoform, 1447
- In vitro* and *in vivo* tumor models
A novel stereo-selective sulfonylurea, 1-[1-(4-aminobenzoyl)-2,3-dihydro-1H-indol-6-sulfonyl]-4-phenyl-imidazolidin-2-one, has antitumor efficacy in *in vitro* and *in vivo* tumor models, 473
- In vitro* translation
Synergistic effects of troglitazone and oleate on the translatability of preproinsulin mRNA from INS-1 cells, 1629
- Incretins
A kinetic study of glucagon-like peptide-1 and glucagon-like peptide-2 truncation by dipeptidyl peptidase IV, *in vitro*, 1753
- Indole-3-carbinol (I3C)/Female rats
Modulations of P450 mRNA in liver and mammary gland and P450 activities and metabolism of estrogen in liver by treatment of rats with indole-3-carbinol, 393
- Indomethacin
Indomethacin-induced mitochondrial dysfunction and oxidative stress in villus enterocytes, 339
- Induced chirality
Retinoic acid binding properties of the lipocalin member β-lactoglobulin studied by circular dichroism, electronic absorption spectroscopy and molecular modeling methods, 1651
- Inflammation
Lysophosphatidylcholine as a ligand for immunoregulation, 161
Inhibition of heparin synthesis by methotrexate in rats *in vivo*, 169
Inhibition of matrix-proteases by polyphenols: chemical insights for anti-inflammatory and anti-invasion drug design, 229
GPI 6150, a PARP inhibitor, reduces the colon injury caused by dinitrobenzene sulfonic acid in the rat, 327
Enhanced activity of liposomal polymyxin B against *Pseudomonas aeruginosa* in a rat model of lung infection, 1407
Down-regulation of phenobarbital-induced cytochrome P450B mRNAs and proteins by endotoxin in mice: independence from nitric oxide production by inducible nitric oxide synthase, 1703
- Inflammatory bowel disease
Interleukin-1β converting enzyme (caspase-1) in intestinal inflammation, 1
- Inhibitors
Identifying *in vivo* targets of cyclin-dependent kinase inhibitors by affinity chromatography, 819
- INS-1
Synergistic effect of dimethyl sulfoxide on glucagon-like peptide 1 (GLP-1)-stimulated insulin secretion and gene transcription in INS-1 cells: characterization and implications, 689
- INS-1 cells
Synergistic effects of troglitazone and oleate on the translatability of preproinsulin mRNA from INS-1 cells, 1629

- Insulin**
 Synergistic effect of dimethyl sulfoxide on glucagon-like peptide 1 (GLP-1)-stimulated insulin secretion and gene transcription in INS-1 cells: characterization and implications, 689
- Insulin biosynthesis**
 Synergistic effects of troglitazone and oleate on the translatability of preproinsulin mRNA from INS-1 cells, 1629
- Insulin receptor**
 A homogenous assay to monitor the activity of the insulin receptor using Bioluminescence Resonance Energy Transfer, 813
- Insurmountable**
 Antagonist interaction with endogenous AT₁ receptors in human cell lines, 1207
- Integrin**
 Divalent cations and the relationship between α A and β A domains in integrins, 805
- Intercalation**
 Mechanism of action of non-cisplatin type DNA-targeted platinum anticancer agents: DNA interactions of novel acridinylthioureas and their platinum conjugates, 191
- Interferon**
 Multiple signaling pathways leading to the activation of interferon regulatory factor 3, 985
- Interferon- γ**
 UVB light suppresses nitric oxide production by murine keratinocytes and macrophages, 1469
- Interleukin-8**
 Identification of a signaling cascade for interleukin-8 production by *Helicobacter pylori* in human gastric epithelial cells, 21
 Oxidative stress, transcription factors and chromatin remodelling in lung inflammation, 935
- Interleukin 8**
 Induction of interleukin 8 release from the HMC-1 mast cell line: Synergy between stem cell factor and activators of the adenosine A_{2b} receptor, 317
- Interleukin-1 β converting enzyme**
 Interleukin-1 β converting enzyme (caspase-1) in intestinal inflammation, 1
- Intracellular Ca²⁺**
 Biphasic effects of oxethazaine, a topical anesthetic, on the intracellular Ca²⁺ concentration of PC12 cells, 677
- Intrathecal injection**
 Degradation of nociceptin (orphanin FQ) by mouse spinal cord synaptic membranes is triggered by endopeptidase-24.11: an *in vitro* and *in vivo* study, 1293
- Intravascular hemolysis**
In vivo anti-complement effect of bilirubin-IX α , 741
- Intrinsic activity**
 Modulation of agonist responses at the A₁ adenosine receptor by an irreversible antagonist, receptor-G protein uncoupling and by the G protein activation state, 1251
- Invasion**
 Inhibition of matrix-proteases by polyphenols: chemical insights for anti-inflammatory and anti-invasion drug design, 229
- IRF-3**
 Multiple signaling pathways leading to the activation of interferon regulatory factor 3, 985
- Irinotecan**
 Contribution of apoptosis in the cytotoxicity of the oxaliplatin-irinotecan combination in the HT29 human colon adenocarcinoma cell line, 1215
- Iron**
 Glutathione, iron and Parkinson's disease, 1037
 Antioxidant properties of ursodeoxycholic acid, 1661
- Iron chelates**
 Effect of free iron on collagen synthesis, cell proliferation and MMP-2 expression in rat hepatic stellate cells, 1139
- Iron overload**
 Effect of free iron on collagen synthesis, cell proliferation and MMP-2 expression in rat hepatic stellate cells, 1139
- Iron-chelators**
 Mobilization of intracellular iron by analogs of pyridoxal isonicotinoyl hydrazone (PIH) is determined by the membrane permeability of the iron-chelator complexes, 1689
- Japanese monkey**
 Complementary DNA cloning and characterization of cytochrome P450 2D29 from Japanese monkey liver, 1101
- Jun**
 Function of AP-1 target genes in mesenchymal-epithelial cross-talk in skin, 949
- Kainic acid**
 Evidence for the presence of glutamatergic receptors in adult *Schistosoma mansoni*, 1337
- KB-V1 cells**
 Modulation of P-glycoprotein expression and function by curcumin in multidrug-resistant human KB cells, 573
- Keratinocytes**
 Function of AP-1 target genes in mesenchymal-epithelial cross-talk in skin, 949
- Kidney**
 Cellular energetics and glutathione status in NRK-52E cells: toxicological implications, 1533
- Kidney cortical mitochondria**
 Enhancement of protein kinase C activity and chemiluminescence intensity in mitochondria isolated from the kidney cortex of rats treated with cephaloridine, 543
- Kidney fibrosis**
 Effect of pirfenidone against vanadate-induced kidney fibrosis in rats, 517
- Kinetics**
 Renal organic cation and nucleoside transport, 185
- Knockout animals**
 Uncoupling protein 2 (UCP2) lowers alcohol sensitivity and pain threshold, 369
- Knockout mice**
 Renal organic cation and nucleoside transport, 185
- K-ras**
 Alterations in membrane-bound and cytoplasmic K-ras protein levels in mouse lung induced by treatment with lovastatin, cholestyramine, or niacin: effects are highly mouse strain dependent, 41
- Kupffer cell**
 Diverse functional coupling of cyclooxygenase 1 and 2 with final prostanoid synthases in liver macrophages, 1227
- L-Arginine uptake**
 Modulation of L-arginine transport and nitric oxide production by gabexate mesylate, 277
- Leukocyte elastase**
 Inhibition of matrix-proteases by polyphenols: chemical insights for anti-inflammatory and anti-invasion drug design, 229
- Leukocyte infiltration**
 Role of mast cell chymase in allergen-induced biphasic skin reaction, 1187
- Leukotriene**
 Hyperforin is a dual inhibitor of cyclooxygenase-1 and 5-lipoxygenase, 1767
- Lewy bodies**
 Glutathione, iron and Parkinson's disease, 1037
- Ligand binding**
 Retinoic acid binding properties of the lipocalin member β -lactoglobulin studied by circular dichroism, electronic absorption spectroscopy and molecular modeling methods, 1651
- Lignans**
 Inhibition of prostaglandin E₂ production by taiwanin C isolated from the root of *Acanthopanax chiisanensis* and the mechanism of action, 1345

Lipid library

Comparative analysis of human and rat S1P₅ (edg8): differential expression profiles and sensitivities to antagonists, 1243

Lipid peroxidation

Analysis of oxidative processes and of myelin figures formation before and after the loss of mitochondrial transmembrane potential during 7 β -hydroxycholesterol and 7-ketocholesterol-induced apoptosis: comparison with various pro-apoptotic chemicals, 527

Antioxidant properties of ursodeoxycholic acid, 1661

Lipid transfer protein I

Cholesteryl ester transfer protein facilitates the movement of water-insoluble drugs between lipoproteins: a novel biological function for a well-characterized lipid transfer protein, 1669

Lipophilicity

Predicting plasma protein binding of drugs: a new approach, 1355

Lipopolysaccharide

Diverse functional coupling of cyclooxygenase 1 and 2 with final prostanoïd synthases in liver macrophages, 1227

Liposomes

Cationic liposomes as delivery systems for double-stranded PNA-DNA chimeras exhibiting decoy activity against NF- κ B transcription factors, 609

Enhanced activity of liposomal polymyxin B against *Pseudomonas aeruginosa* in a rat model of lung infection, 1407

5-Lipoxygenase

Contribution of different phospholipases and arachidonic acid metabolites in the response of gallbladder smooth muscle to cholecystokinin, 1157

Hyperforin is a dual inhibitor of cyclooxygenase-1 and 5-lipoxygenase, 1767

Liver

NMR and pattern recognition studies on liver extracts and intact livers from rats treated with α -naphthylisothiocyanate, 67

CYP2C8 polymorphisms in Caucasians and their relationship with paclitaxel 6 α -hydroxylase activity in human liver microsomes, 1579

Liver fibrosis

Effect of free iron on collagen synthesis, cell proliferation and MMP-2 expression in rat hepatic stellate cells, 1139

Liver metabolism

PXR-dependent induction of human *CYP3A4* gene expression by organochlorine pesticides, 1513

Liver microsomes

Inhibition of cytochrome P450 2E1 by propofol in human and porcine liver microsomes, 1151

Liver mitochondria

Effects of *in vivo* treatment of rats with trimethyltin chloride on respiratory properties of rat liver mitochondria, 657

Liver slices

Role of temperature on protein and mRNA cytochrome P450 3A (CYP3A) isozymes expression and midazolam oxidation by cultured rat precision-cut liver slices, 633

Liver/Mammary gland P450 (CYP) mRNA expression

Modulations of P450 mRNA in liver and mammary gland and P450 activities and metabolism of estrogen in liver by treatment of rats with indole-3-carbinol, 393

Lovastatin

Alterations in membrane-bound and cytoplasmic K-ras protein levels in mouse lung induced by treatment with lovastatin, cholestyramine, or niacin: effects are highly mouse strain dependent, 41

Low-density microarray

Gene expression profiling of drug metabolism and toxicology markers using a low-density DNA microarray, 137

L-type Ca²⁺ channel

Role of noradrenaline on the expression of the Na⁺/K⁺-ATPase α ₂ isoform and the contractility of cultured rat vas deferens, 1431

L-type Ca²⁺ channels

Biphasic effects of oxethazaine, a topical anesthetic, on the intracellular Ca²⁺ concentration of PC12 cells, 677

Lung infection

Enhanced activity of liposomal polymyxin B against *Pseudomonas aeruginosa* in a rat model of lung infection, 1407

Lung injury

Enhanced activity of liposomal polymyxin B against *Pseudomonas aeruginosa* in a rat model of lung infection, 1407

Lymphoma

Effects of FK228, a novel histone deacetylase inhibitor, on human lymphoma U-937 cells *in vitro* and *in vivo*, 1079

Lysophosphatidylcholine

Lysophosphatidylcholine as a ligand for immunoregulation, 161

Macrophage

Anti-inflammatory drugs modulate C1q secretion in human peritoneal macrophages *in vitro*, 457

G protein-coupled receptor for nicotinic acid in mouse macrophages, 645

Diverse functional coupling of cyclooxygenase 1 and 2 with final prostanoïd synthases in liver macrophages, 1227

Role of the Fas/Fas ligand system in female reproductive organs: survival and apoptosis, 1305

Inhibition of prostaglandin E₂ production by taiwanin C isolated from the root of *Acanthopanax chiisanensis* and the mechanism of action, 1345

Magic angle spinning

NMR and pattern recognition studies on liver extracts and intact livers from rats treated with α -naphthylisothiocyanate, 67

Malaria

Membrane heme as a host factor in reducing effectiveness of dihydroartemisinin, 91

Haem polymerase as a novel target of antimalarial action of cyproheptadine, 1399

Mammal

Designed transcription factors as tools for therapeutics and functional genomics, 919

Mammalian target of rapamycin (mTOR)

A novel pathway regulating the mammalian target of rapamycin (mTOR) signaling, 1071

MAP kinase

Signal transduction to hypoxia-inducible factor 1, 993

MAP kinase activation

Activation of mitogen-activated protein kinases (MAPKs) by aromatic hydrocarbons: role in the regulation of aryl hydrocarbon receptor (AHR) function, 771

MAP kinases

Fidelity and spatio-temporal control in MAP kinase (ERKs) signalling, 755

Inflammatory signal transduction in Crohn's disease and novel therapeutic approaches, 789

MAPK-phosphatases

Fidelity and spatio-temporal control in MAP kinase (ERKs) signalling, 755

MAS 1H NMR spectroscopy

NMR and pattern recognition studies on liver extracts and intact livers from rats treated with α -naphthylisothiocyanate, 67

Mass spectrometry

Regulation of anandamide tissue levels by *N*-arachidonylglycine, 1147

Mast cell

Induction of interleukin 8 release from the HMC-1 mast cell line: Synergy between stem cell factor and activators of the adenosine A_{2b} receptor, 317

Role of mast cell chymase in allergen-induced biphasic skin reaction, 1187

Inhibition of heparin synthesis by methotrexate in rats *in vivo*, 169

Matrix metalloproteinases

Effects of polysulfated glycosaminoglycan and triamcinolone acetonide on the production of proteinases and their inhibitors by IL-1 α treated articular chondrocytes, 217

- MCF-7
Modulation of tamoxifen-induced apoptosis by peripheral benzodiazepine receptor ligands in breast cancer cells, 99
- MDCK cells
Novel effect of carvedilol on Ca^{2+} movement in renal tubular cells, 1777
- Mdm2
Regulation of p53: intricate loops and delicate balances, 865
- Melanoma cells
Cytotoxicity of dopamine-derived tetrahydroisoquinolines on melanoma cells, 1503
- Membrane permeability of iron chelates
Mobilization of intracellular iron by analogs of pyridoxal isonicotinoyl hydrazone (PIH) is determined by the membrane permeability of the iron-chelator complexes, 1689
- Menadione
A physiological threshold for protection against menadione toxicity by human NAD(P)H:quinone oxidoreductase (NQO1) in Chinese hamster ovary (CHO) cells, 1597
- Metabolic pathway
Degradation of nociceptin (orphanin FQ) by mouse spinal cord synaptic membranes is triggered by endopeptidase-24.11: an *in vitro* and *in vivo* study, 1293
- Metabolic zonation
Signaling cross-talk between hypoxia and glucose via hypoxia-inducible factor 1 and glucose response elements, 903
- Metabolons
Toxic, halogenated cysteine S-conjugates and targeting of mitochondrial enzymes of energy metabolism, 553
- Metabonomics
NMR and pattern recognition studies on liver extracts and intact livers from rats treated with α -naphthylisothiocyanate, 67
- Metalloproteases
Effect of free iron on collagen synthesis, cell proliferation and MMP-2 expression in rat hepatic stellate cells, 1139
- Metastasis
Glutamate antagonists limit tumor growth, 1195
- Methotrexate
Inhibition of heparin synthesis by methotrexate in rats *in vivo*, 169
Expression and activity of the DNA repair enzyme uracil DNA glycosylase during organogenesis in the rat conceptus and following methotrexate exposure *in vitro*, 711
- 3-Methyladenine
Inhibition of mitochondrial permeability transition and release of cytochrome *c* by anti-apoptotic nucleoside analogues, 441
- Methylation
Human histamine N-methyltransferase pharmacogenetics: gene resequencing, promoter characterization, and functional studies of a common 5'-flanking region single nucleotide polymorphism (SNP), 699
- Metoprolol
The molecular and enzyme kinetic basis for the diminished activity of the cytochrome P450 2D6.17 (CYP2D6.17) variant. Potential implications for CYP2D6 phenotyping studies and the clinical use of CYP2D6 substrate drugs in some African populations, 1387
- Microarray analysis
mRNA expression profiles for the response of human tumor cell lines to the antimalarial drugs artesunate, arteether, and artemether, 617
- Microglia
Brain mitochondrial uncoupling protein 2 (UCP2): a protective stress signal in neuronal injury, 363
The c-Jun N-terminal kinases in cerebral microglia: immunological functions in the brain, 781
- Micronutrients
Genomic responses to herbal extracts: lessons from *in vitro* and *in vivo* studies with an extract of *Ginkgo biloba*, 913
- Midazolam oxidation
Role of temperature on protein and mRNA cytochrome P450 3A (CYP3A) isozymes expression and midazolam oxidation by cultured rat precision-cut liver slices, 633
- Migration
Glutamate antagonists limit tumor growth, 1195
- Mitochondria
Indomethacin-induced mitochondrial dysfunction and oxidative stress in villus enterocytes, 339
Inhibition of mitochondrial permeability transition and release of cytochrome *c* by anti-apoptotic nucleoside analogues, 441
Hypoxia increases tumor cell sensitivity to glycolytic inhibitors: a strategy for solid tumor therapy (Model C), 1745
- Mitochondrial dysfunction
Glutathione, iron and Parkinson's disease, 1037
- Mitochondrial toxicants
Toxic, halogenated cysteine S-conjugates and targeting of mitochondrial enzymes of energy metabolism, 553
- Mitochondrial uncoupling proteins
Brain mitochondrial uncoupling protein 2 (UCP2): a protective stress signal in neuronal injury, 363
- Mitogen-activated protein kinase
Antioxidants and oxidants regulated signal transduction pathways, 765
Age-related decline in cellular response to oxidative stress: links to growth factor signaling pathways with common defects, 999
- Mitogen-activated protein kinases
Antioxidants inhibit endothelin-1 (1–31)-induced proliferation of vascular smooth muscle cells via the inhibition of mitogen-activated protein (MAP) kinase and activator protein-1 (AP-1), 1521
- Mitogenic signaling
Characterization of glomerular cell phenotypes following repeated cycles of benzo[a]pyrene injury *in vitro*, 31
- Mixed-lineage kinases
The c-Jun N-terminal kinases in cerebral microglia: immunological functions in the brain, 781
- MKN45 cells
Identification of a signaling cascade for interleukin-8 production by *Helicobacter pylori* in human gastric epithelial cells, 21
- MnSOD
Novel mechanism of Vitamin E protection against cyclosporine A cytotoxicity in cultured rat hepatocytes, 267
- Mobilization of iron from cells
Mobilization of intracellular iron by analogs of pyridoxal isonicotinoyl hydrazone (PIH) is determined by the membrane permeability of the iron-chelator complexes, 1689
- Mouse liver
Down-regulation of phenobarbital-induced cytochrome P4502B mRNAs and proteins by endotoxin in mice: independence from nitric oxide production by inducible nitric oxide synthase, 1703
- Mouse lung
Alterations in membrane-bound and cytoplasmic K-ras protein levels in mouse lung induced by treatment with lovastatin, cholestyramine, or niacin: effects are highly mouse strain dependent, 41
- mRNA expression levels
Up-regulation of $\text{A}_{2\text{A}}$ adenosine receptors by proinflammatory cytokines in rat PC12 cells, 625
- MSK
Regulation of the transcriptional activity of the nuclear factor- κB p65 subunit, 963
- Multidrug resistance
Modulation of P-glycoprotein expression and function by curcumin in multidrug-resistant human KB cells, 573
Transcriptional regulators of the human multidrug resistance 1 gene: recent views, 943
- Multi-drug resistance protein
Inhibition of transport across the hepatocyte canalicular membrane by the antibiotic fusidate, 151
- Mutagenicity
Cytotoxic and genotoxic effects of megazol, an anti-Chagas' disease drug, assessed by different short-term tests, 1617

Myelin figures

Analysis of oxidative processes and of myelin figures formation before and after the loss of mitochondrial transmembrane potential during 7 β -hydroxycholesterol and 7-ketocholesterol-induced apoptosis: comparison with various pro-apoptotic chemicals, 527

Myotoxin

Biochemical and biological properties of phospholipases A₂ from *Bothrops atrox* snake venom, 1179

N-Myristoyltransferase

Enhanced activity of human N-myristoyltransferase by dimethyl sulfoxide and related solvents in the presence of serine/threonine-containing peptide substrates, 1461

Na⁺/K⁺-exchanging ATPase

Role of noradrenaline on the expression of the Na⁺/K⁺-ATPase α_2 isoform and the contractility of cultured rat vas deferens, 1431

NAD(P)H:quinone oxidoreductase

A physiological threshold for protection against menadione toxicity by human NAD(P)H:quinone oxidoreductase (NQO1) in Chinese hamster ovary (CHO) cells, 1597

NAD⁺/NADH ratio

Characterization of the cAMP binding site of purified S-adenosylhomocysteine hydrolase from bovine kidney, 1201

 α -Naphthylisothiocyanate

NMR and pattern recognition studies on liver extracts and intact livers from rats treated with α -naphthylisothiocyanate, 67

NCI-h295

Antagonist interaction with endogenous AT₁ receptors in human cell lines, 1207

Necrosis

Cell culture model for acetaminophen-induced hepatocyte death *in vivo*, 413

Carbazolequinone induction of caspase-dependent cell death in Src-overexpressing cells, 1605

Nephrotoxicity

Enhancement of protein kinase C activity and chemiluminescence intensity in mitochondria isolated from the kidney cortex of rats treated with cephaloridine, 543

Neprilysin

Degradation of nociceptin (orphanin FQ) by mouse spinal cord synaptic membranes is triggered by endopeptidase-24.11: an *in vitro* and *in vivo* study, 1293

Netropsin

DNA structural alterations induced by bis-netropsins modulate human DNA topoisomerase I cleavage activity and poisoning by camptothecin, 79

Neurodegeneration

The c-Jun N-terminal kinases in cerebral microglia: immunological functions in the brain, 781

Neurogranin

Glutathionylation of proteins by glutathione disulfide S-oxide, 1049

Neuronal cell death

Lack of correlation between NF- κ B activation and induction of programmed cell death in PC12 pheochromocytoma cells treated with 6-hydroxydopamine or the cannabinoid receptor 1-agonist CP55,940, 487

Neuronal degeneration

Brain mitochondrial uncoupling protein 2 (UCP2): a protective stress signal in neuronal injury, 363

Neutral endopeptidase

Degradation of nociceptin (orphanin FQ) by mouse spinal cord synaptic membranes is triggered by endopeptidase-24.11: an *in vitro* and *in vivo* study, 1293

NF023

Comparative analysis of human and rat S1P₅ (edg8): differential expression profiles and sensitivities to antagonists, 1243

NF- κ B

Identification of a signaling cascade for interleukin-8 production by *Helicobacter pylori* in human gastric epithelial cells, 21

Relationship between the activation of heat shock factor and the suppression of nuclear factor- κ B activity in rat hepatocyte cultures treated with cyclosporine A, 247

Lack of correlation between NF- κ B activation and induction of programmed cell death in PC12 pheochromocytoma cells treated with 6-hydroxydopamine or the cannabinoid receptor 1-agonist CP55,940, 487

Diversity of acetylation targets and roles in transcriptional regulation: the human immunodeficiency virus type 1 promoter as a model system, 925

Oxidative stress, transcription factors and chromatin remodelling in lung inflammation, 935

Regulation of the transcriptional activity of the nuclear factor- κ B p65 subunit, 963

Reduction of tumor necrosis factor- α (TNF- α) related nuclear factor-kappaB (NF- κ B) translocation but not inhibitor kappa-B (Ik-B)-degradation by Rho protein inhibition in human endothelial cells, 971

Glutathione catabolism as a signaling mechanism, 1027

Endoplasmic reticulum (ER) stress: hepatitis C virus induces an ER-nucleus signal transduction pathway and activates NF- κ B and STAT-3, 1425

5-Fluorouracil inhibits nitric oxide production through the inactivation of IkB kinase in stomach cancer cells, 1439

NF- κ B transcription

Identification of cytokine-induced nuclear factor-kappaB target genes in ovarian and breast cancer cells, 873

NF-IL6

Induction of cyclooxygenase-2 by staurosporine through the activation of nuclear factor for IL-6 (NF-IL6) and activator protein 2 (AP2) in an osteoblast-like cell line, 177

Niacin

Alterations in membrane-bound and cytoplasmic K-ras protein levels in mouse lung induced by treatment with lovastatin, cholestyramine, or niacin: effects are highly mouse strain dependent, 41

(–)-Nicotine

Effects of (–)-nicotine and (–)-cotinine on 6-hydroxydopamine-induced oxidative stress and neurotoxicity: relevance for Parkinson's disease, 125

Nicotinic acid

G protein-coupled receptor for nicotinic acid in mouse macrophages, 645

Nitric oxide

GPI 6150, a PARP inhibitor, reduces the colon injury caused by dinitrobenzene sulfonic acid in the rat, 327

5-Fluorouracil inhibits nitric oxide production through the inactivation of IkB kinase in stomach cancer cells, 1439

UVB light suppresses nitric oxide production by murine keratinocytes and macrophages, 1469

Down-regulation of phenobarbital-induced cytochrome P4502B mRNAs and proteins by endotoxin in mice: independence from nitric oxide production by inducible nitric oxide synthase, 1703

Nitroimidazole

Cytotoxic and genotoxic effects of megalol, an anti-Chagas' disease drug, assessed by different short-term tests, 1617

Nitrosopropofol

Effects of nitrosopropofol on mitochondrial energy-converting system, 1133

NMDA

Glutamate antagonists limit tumor growth, 1195

NMR

Differential binding to the α/β -tubulin dimer of vinorelbine and vinflunine revealed by nuclear magnetic resonance analyses, 733

NO formation

Modulation of L-arginine transport and nitric oxide production by gabexate mesylate, 277

NO synthase activity

Modulation of L-arginine transport and nitric oxide production by gabexate mesylate, 277

- Nociceptin-induced behavioral response
 Degradation of nociceptin (orphanin FQ) by mouse spinal cord synaptic membranes is triggered by endopeptidase-24.11: an *in vitro* and *in vivo* study, 1293
- Nociception
 Uncoupling protein 2 (UCP2) lowers alcohol sensitivity and pain threshold, 369
- Non-genomic effect
 Activation of mitogen-activated protein kinases (MAPKs) by aromatic hydrocarbons: role in the regulation of aryl hydrocarbon receptor (AHR) function, 771
- Non-steroidal anti-inflammatory agent
 Designer glucocorticoids, 355
- Noradrenaline
 Endothelin-1-induced arachidonic acid release by cytosolic phospholipase A₂ activation in rat vascular smooth muscle via extracellular signal-regulated kinases pathway, 425
 Role of noradrenaline on the expression of the Na⁺/K⁺-ATPase α_2 isoform and the contractility of cultured rat vas deferens, 1431
- NRK-52E cells
 Cellular energetics and glutathione status in NRK-52E cells: toxicological implications, 1533
- NS5A
 Endoplasmic reticulum (ER) stress: hepatitis C virus induces an ER-nucleus signal transduction pathway and activates NF- κ B and STAT-3, 1425
- NSAIDs
 Indomethacin-induced mitochondrial dysfunction and oxidative stress in villus enterocytes, 339
- N-terminal sequence
 Structural and functional characterization of an acidic platelet aggregation inhibitor and hypotensive phospholipase A₂ from *Bothrops jararacussu* snake venom, 723
- Nuclear factor- κ B
 Nuclear factor-kappa B and cancer: its role in prevention and therapy, 883
 Potentiation of 1,25-dihydroxyvitamin D₃-induced differentiation of human promyelocytic leukemia cells into monocytes by costunolide, a germacranolide sesquiterpene lactone, 1233
- Nuclear magnetic resonance
 Mechanism of action of non-cisplatin type DNA-targeted platinum anticancer agents: DNA interactions of novel acridinylthioureas and their platinum conjugates, 191
- Nucleoside analog
 Renal organic cation and nucleoside transport, 185
- Nucleus
 Fidelity and spatio-temporal control in MAP kinase (ERKs) signalling, 755
- Obesity
 A homogenous assay to monitor the activity of the insulin receptor using Bioluminescence Resonance Energy Transfer, 813
- Oligonucleotide arrays
 Genomic responses to herbal extracts: lessons from *in vitro* and *in vivo* studies with an extract of *Ginkgo biloba*, 913
- Olomoucine
 Inhibition of mitochondrial permeability transition and release of cytochrome *c* by anti-apoptotic nucleoside analogues, 441
- Oncogene
 Growth signaling in breast cancer cells: outcomes and promises of proteomics, 797
 Evasion from proteasomal degradation by mutated Fos proteins expressed from FBJ-MSV and FBR-MSV osteosarcomatogenic retroviruses, 957
- μ -Opioid receptor
 Identification of two C-terminal amino acids, Ser³⁵⁵ and Thr³⁵⁷, required for short-term homologous desensitization of μ -opioid receptors, 257
- Organ culture
 Role of noradrenaline on the expression of the Na⁺/K⁺-ATPase α_2 isoform and the contractility of cultured rat vas deferens, 1431
- Organic cation transporter
 Renal organic cation and nucleoside transport, 185
- Organochlorine pesticides
 PXR-dependent induction of human *CYP3A4* gene expression by organochlorine pesticides, 1513
- Organogenesis
 Expression and activity of the DNA repair enzyme uracil DNA glycosylase during organogenesis in the rat conceptus and following methotrexate exposure *in vitro*, 711
- Osteoarthritis
 Effects of polysulfated glycosaminoglycan and triamcinolone acetonide on the production of proteinases and their inhibitors by IL-1 α treated articular chondrocytes, 217
- Ovarian cancer
 The activity profile of the hexacyclic camptothecin derivative DX-8951f in experimental human colon cancer and ovarian cancer, 1267
- Ovarian carcinoma
 Chemosensitization by fibroblast growth factor-2 is not dependent upon proliferation, S-phase accumulation, or p53 status, 1111
- Ovary
 Cell-specific regulation of apoptosis by glucocorticoids: implication to their anti-inflammatory action, 843
- Oxaliplatin
 Contribution of apoptosis in the cytotoxicity of the oxaliplatin-irinotecan combination in the HT29 human colon adenocarcinoma cell line, 1215
- Oxamate
 Hypoxia increases tumor cell sensitivity to glycolytic inhibitors: a strategy for solid tumor therapy (Model C), 1745
- Oxethazaine
 Biphasic effects of oxethazaine, a topical anesthetic, on the intracellular Ca²⁺ concentration of PC12 cells, 677
- Oxidant
 Oxidative stress, transcription factors and chromatin remodelling in lung inflammation, 935
- Oxidative and nitrosative stress
 Glutathionylation of proteins by glutathione disulfide S-oxide, 1049
- Oxidative stress
 Effects of (–)-nicotine and (–)-cotinine on 6-hydroxydopamine-induced oxidative stress and neurotoxicity: relevance for Parkinson's disease, 125
 Indomethacin-induced mitochondrial dysfunction and oxidative stress in villus enterocytes, 339
 Glutathione, iron and Parkinson's disease, 1037
 Differential effect of simvastatin on activation of Rac₁ vs. activation of the heat shock protein 27-mediated pathway upon oxidative stress, in human smooth muscle cells, 1483
 Antioxidant properties of ursodeoxycholic acid, 1661
- Oxidized low density lipoprotein
 Lysophosphatidylcholine as a ligand for immunoregulation, 161
- Oxygen
 Signaling cross-talk between hypoxia and glucose via hypoxia-inducible factor 1 and glucose response elements, 903
- Oxysterol
 Analysis of oxidative processes and of myelin figures formation before and after the loss of mitochondrial transmembrane potential during 7 β -hydroxycholesterol and 7-ketocholesterol-induced apoptosis: comparison with various pro-apoptotic chemicals, 527
- p27
 ErbB-2-induced mammary tumor growth: the role of cyclin D1 and p27Kip1, 827
- p53
 Regulation of p53: intricate loops and delicate balances, 865

p38

Differential effect of simvastatin on activation of Rac₁ vs. activation of the heat shock protein 27-mediated pathway upon oxidative stress, in human smooth muscle cells, 1483

Paclitaxel

CYP2C8 polymorphisms in Caucasians and their relationship with paclitaxel 6 α -hydroxylase activity in human liver microsomes, 1579

Pancreatic β -cell

Synergistic effect of dimethyl sulfoxide on glucagon-like peptide 1 (GLP-1)-stimulated insulin secretion and gene transcription in INS-1 cells: characterization and implications, 689

Pancreatic β -cells

Synergistic effects of troglitazone and oleate on the translatability of preproinsulin mRNA from INS-1 cells, 1629

Parkinson's disease

Effects of (–)-nicotine and (–)-cotinine on 6-hydroxydopamine-induced oxidative stress and neurotoxicity: relevance for Parkinson's disease, 125

Glutathione, iron and Parkinson's disease, 1037

Partial agonists

Hyperkplexia mutation of glycine receptors: decreased gating efficacy with altered binding thermodynamics, 285

Patch-clamp

Inhibition of the activity of T lymphocyte Kv1.3 channels by extracellular zinc, 595

Paullone

Identifying *in vivo* targets of cyclin-dependent kinase inhibitors by affinity chromatography, 819

PBR

Modulation of tamoxifen-induced apoptosis by peripheral benzodiazepine receptor ligands in breast cancer cells, 99

PC12 cells

Arachidonic acid release and prostaglandin F_{2 α} formation induced by phenylarsine oxide in PC12 cells: possible involvement of secretory phospholipase A₂ activity, 117

Lack of correlation between NF- κ B activation and induction of programmed cell death in PC12 pheochromocytoma cells treated with 6-hydroxydopamine or the cannabinoid receptor 1-agonist CP55,940, 487

Biphasic effects of oxethazaine, a topical anesthetic, on the intracellular Ca²⁺ concentration of PC12 cells, 677

PC-PLC

Contribution of different phospholipases and arachidonic acid metabolites in the response of gallbladder smooth muscle to cholecystokinin, 1157

Peptide substrates

Enhanced activity of human *N*-myristoyltransferase by dimethyl sulfoxide and related solvents in the presence of serine/threonine-containing peptide substrates, 1461

Peroxisome proliferator activated receptor

Is there a single mechanism for fatty acid regulation of gene transcription?, 893

Peroxisomes

Effects of *in vivo* treatment of rats with trimethyltin chloride on respiratory properties of rat liver mitochondria, 657

P-glycoprotein

Modulation of P-glycoprotein expression and function by curcumin in multidrug-resistant human KB cells, 573

Transcriptional regulators of the human multidrug resistance 1 gene: recent views, 943

Pharmacokinetics

Analytical and pharmacokinetic studies with 5-chloro-2'-deoxycytidine, 1493

Phase I metabolism

Role of temperature on protein and mRNA cytochrome P450 3A (CYP3A) isozymes expression and midazolam oxidation by cultured rat precision-cut liver slices, 633

Phenobarbital

Down-regulation of phenobarbital-induced cytochrome P4502B mRNAs and proteins by endotoxin in mice: independence from nitric oxide production by inducible nitric oxide synthase, 1703

Phenolic antioxidants

Antioxidants and oxidants regulated signal transduction pathways, 765

Phenylarsine oxide

Arachidonic acid release and prostaglandin F_{2 α} formation induced by phenylarsine oxide in PC12 cells: possible involvement of secretory phospholipase A₂ activity, 117

Phorbol esters

Phorbol ester-induced contractility and Ca²⁺ influx in human cultured prostatic stromal cells, 385

Phosphate donor

Identification of residues involved in the substrate specificity of human and murine dCK, 1559

Phosphatidic acid

A novel pathway regulating the mammalian target of rapamycin (mTOR) signaling, 1071

Phosphatidylinositol 3-kinase

Signal transduction to hypoxia-inducible factor 1, 993

Phosphatidylinositol 3-kinase (PI3K)

A novel pathway regulating the mammalian target of rapamycin (mTOR) signaling, 1071

Phosphodiesterase

Inhibition of platelet P2Y₁₂ and α 2A receptor signaling by cGMP-dependent protein kinase, 433

Phosphoenolpyruvate carboxykinase

Is there a single mechanism for fatty acid regulation of gene transcription?, 893

Phospholipase A₂

Lysophosphatidylcholine as a ligand for immunoregulation, 161

Biochemical and biological properties of phospholipases A₂ from *Bothrops atrox* snake venom, 1179

Phospholipase D (PLD)

A novel pathway regulating the mammalian target of rapamycin (mTOR) signaling, 1071

Phosphorylation

Agents that elevate cyclic AMP induce receptor phosphorylation primarily at serine 331 in HEK 293 cells overexpressing human thromboxane receptor α , 375

Regulation of the transcriptional activity of the nuclear factor- κ B p65 subunit, 963

P_i transport inhibition

Inhibition of phosphate transport in rat heart mitochondria by 3'-azido-3'-deoxythymidine due to stimulation of superoxide anion mitochondrial production, 201

Pig

Inhibition of cytochrome P450 2E1 by propofol in human and porcine liver microsomes, 1151

PIH analogs

Mobilization of intracellular iron by analogs of pyridoxal isonicotinoyl hydrazone (PIH) is determined by the membrane permeability of the iron-chelator complexes, 1689

PI3-K/Akt

Age-related decline in cellular response to oxidative stress: links to growth factor signaling pathways with common defects, 999

PI-PLC

Contribution of different phospholipases and arachidonic acid metabolites in the response of gallbladder smooth muscle to cholecystokinin, 1157

Pirfenidone

Effect of pirfenidone against vanadate-induced kidney fibrosis in rats, 517

PLA₂

Contribution of different phospholipases and arachidonic acid metabolites in the response of gallbladder smooth muscle to cholecystokinin, 1157

- Plasma protein binding
Predicting plasma protein binding of drugs: a new approach, 1355
- Plasmid unwinding
Mechanism of action of non-cisplatin type DNA-targeted platinum anticancer agents: DNA interactions of novel acridinylthioureas and their platinum conjugates, 191
- Plasminogen activator inhibitor
Effects of polysulfated glycosaminoglycan and triamcinolone acetonide on the production of proteinases and their inhibitors by IL-1 α treated articular chondrocytes, 217
- Plasminogen activators
Effects of polysulfated glycosaminoglycan and triamcinolone acetonide on the production of proteinases and their inhibitors by IL-1 α treated articular chondrocytes, 217
- Plasmodium yoelii nigeriensis*
Haem polymerase as a novel target of antimalarial action of cyproheptadine, 1399
- Platelet aggregation inhibition
Structural and functional characterization of an acidic platelet aggregation inhibitor and hypotensive phospholipase A₂ from *Bothrops jararacussu* snake venom, 723
- Platinum drugs
Mechanism of action of non-cisplatin type DNA-targeted platinum anticancer agents: DNA interactions of novel acridinylthioureas and their platinum conjugates, 191
- Platyhelminths
Evidence for the presence of glutamatergic receptors in adult *Schistosoma mansoni*, 1337
- PLD
Contribution of different phospholipases and arachidonic acid metabolites in the response of gallbladder smooth muscle to cholecystokinin, 1157
- PNA
Cationic liposomes as delivery systems for double-stranded PNA–DNA chimeras exhibiting decoy activity against NF- κ B transcription factors, 609
- Poly (ADP-ribose) synthetase
GPI 6150, a PARP inhibitor, reduces the colon injury caused by dinitrobenzene sulfonic acid in the rat, 327
- Poly(ADP-ribose) polymerase
Contribution of apoptosis in the cytotoxicity of the oxaliplatin–irinotecan combination in the HT29 human colon adenocarcinoma cell line, 1215
Role of poly(ADP-ribose) polymerase activation in endotoxin-induced cardiac collapse in rodents, 1785
- Polyamine transport
Insufficiently charged isosteric analogue of spermine: interaction with polyamine uptake, and effect on Caco-2 cell growth, 649
- Polyglutamylation
Effects of antifolates on the binding of 5-fluoro-2'-deoxyuridine monophosphate to thymidylate synthase, 669
- Polymorphism
CYP2C8 polymorphisms in Caucasians and their relationship with paclitaxel 6 α -hydroxylase activity in human liver microsomes, 1579
- Polymyxin B
Enhanced activity of liposomal polymyxin B against *Pseudomonas aeruginosa* in a rat model of lung infection, 1407
- Polyphenols
Inhibition of matrix-proteases by polyphenols: chemical insights for anti-inflammatory and anti-invasion drug design, 229
- Polysulfated polysaccharides
Effects of polysulfated glycosaminoglycan and triamcinolone acetonide on the production of proteinases and their inhibitors by IL-1 α treated articular chondrocytes, 217
- Potassium channel
Inhibition of the activity of T lymphocyte Kv1.3 channels by extracellular zinc, 595
- Potency
Modulation of agonist responses at the A₁ adenosine receptor by an irreversible antagonist, receptor–G protein uncoupling and by the G protein activation state, 1251
- POU transcription factor
Differential activity by DNA-induced quarternary structures of POU transcription factors, 979
- 32P-Postlabelling
Covalent binding of the anticancer drug ellipticine to DNA in V79 cells transfected with human cytochrome P450 enzymes, 289
- PR
Quantitation of estradiol receptors alpha and beta and progesterone receptors in human breast tumors by real-time reverse transcription-polymerase chain reaction. Correlation with protein assays, 507
- Pro-apoptotic
Is HIF-1 α a pro- or an anti-apoptotic protein?, 889
- Proinflammatory cytokines
Up-regulation of A_{2A} adenosine receptors by proinflammatory cytokines in rat PC12 cells, 625
- Proliferation
Reduction of bFGF-induced smooth muscle cell proliferation and endothelin receptor mRNA expression by mevastatin and atorvastatin, 497
Function of AP-1 target genes in mesenchymal–epithelial cross-talk in skin, 949
Age-related decline in cellular response to oxidative stress: links to growth factor signaling pathways with common defects, 999
- Prolyl hydroxylase
Signal transduction to hypoxia-inducible factor 1, 993
- Prolyl oligopeptidase
Substrate-dependent, non-hyperbolic kinetics of pig brain prolyl oligopeptidase and its tight binding inhibition by JTP-4819, 463
- Promoter
Activation of the γ -glutamyltransferase promoter 2 in the rat colon carcinoma cell line CC531 by histone deacetylase inhibitors is mediated through the Sp1 binding motif, 307
- Prooxidants
Role of antioxidants in the O-hydroxyethyl-D-(Ser)⁸-cyclosporine A (SDZ IMM125)-induced apoptosis in rat hepatocytes, 1725
- Propofol
Inhibition of cytochrome P450 2E1 by propofol in human and porcine liver microsomes, 1151
- Prostacyclin
Inhibition by adenine dinucleotides of ATP-induced prostacyclin release by bovine aortic endothelial cells, 405
- Prostaglandin
Diverse functional coupling of cyclooxygenase 1 and 2 with final prostanoid synthases in liver macrophages, 1227
Hyperforin is a dual inhibitor of cyclooxygenase-1 and 5-lipoxygenase, 1767
- Prostaglandin E₁
Agents that elevate cyclic AMP induce receptor phosphorylation primarily at serine 331 in HEK 293 cells overexpressing human thromboxane receptor α , 375
- Prostaglandin E₂
Inhibition of prostaglandin E₂ production by taiwanin C isolated from the root of *Acanthopanax chiisanensis* and the mechanism of action, 1345
- Prostaglandin F_{2 α}
Arachidonic acid release and prostaglandin F_{2 α} formation induced by phenylarsine oxide in PC12 cells: possible involvement of secretory phospholipase A₂ activity, 117
- Proteasome
Cell culture model for acetaminophen-induced hepatocyte death *in vivo*, 413
Evasion from proteasomal degradation by mutated Fos proteins expressed from FBJ-MSV and FBR-MSV osteosarcomatogenic retroviruses, 957

- Protein degradation
Evasion from proteasomal degradation by mutated Fos proteins expressed from FBJ-MSV and FBR-MSV osteosarcomatogenic retroviruses, 957
- Protein dephosphorylation
Down-regulation of telomerase activity via protein phosphatase 2A activation in salivine-induced human leukemia HL-60 cell apoptosis, 1677
- Protein kinase A
Agents that elevate cyclic AMP induce receptor phosphorylation primarily at serine 331 in HEK 293 cells overexpressing human thromboxane receptor α , 375
- Protein kinase C
Phorbol ester-induced contractility and Ca^{2+} influx in human cultured prostatic stromal cells, 385
Enhancement of protein kinase C activity and chemiluminescence intensity in mitochondria isolated from the kidney cortex of rats treated with cephaloridine, 543
Potentiation of 1,25-dihydroxyvitamin D_3 -induced differentiation of human promyelocytic leukemia cells into monocytes by costunolide, a germacranolide sesquiterpene lactone, 1233
- Protein thiols
Glutathione catabolism as a signaling mechanism, 1027
- Proteoglycans
Inhibition of heparin synthesis by methotrexate in rats *in vivo*, 169
- Proteomics
Growth signaling in breast cancer cells: outcomes and promises of proteomics, 797
Stress-induced premature senescence and replicative senescence are different phenotypes, proteomic evidence, 1011
- Pseudomonas aeruginosa*
Enhanced activity of liposomal polymyxin B against *Pseudomonas aeruginosa* in a rat model of lung infection, 1407
- Psoriasis
UVB light suppresses nitric oxide production by murine keratinocytes and macrophages, 1469
- Public health
Genomic responses to herbal extracts: lessons from *in vitro* and *in vivo* studies with an extract of *Ginkgo biloba*, 913
- Purine nucleotides
Distinct interactions of $\text{G}_{\text{sz-long}}$, $\text{G}_{\text{sz-short}}$, and G_{zolf} with GTP, ITP, and XTP, 583
- Purinergic signaling
Inhibition of platelet P2Y₁₂ and α 2A receptor signaling by cGMP-dependent protein kinase, 433
- Purvalanol
Identifying *in vivo* targets of cyclin-dependent kinase inhibitors by affinity chromatography, 819
- Putrescine
Insufficiently charged isosteric analogue of spermine: interaction with polyamine uptake, and effect on Caco-2 cell growth, 649
- PXR
PXR-dependent induction of human *CYP3A4* gene expression by organochlorine pesticides, 1513
- Pyridoxal isonicotinoyl hydrazone (PIH)
Mobilization of intracellular iron by analogs of pyridoxal isonicotinoyl hydrazone (PIH) is determined by the membrane permeability of the iron-chelator complexes, 1689
- Pyrimidine nucleoside metabolism
Analytical and pharmacokinetic studies with 5-chloro-2'-deoxycytidine, 1493
- Pyruvate kinase
Signaling cross-talk between hypoxia and glucose via hypoxia-inducible factor 1 and glucose response elements, 903
- Quantitative assay
Gene expression profiling of drug metabolism and toxicology markers using a low-density DNA microarray, 137
- Quantitative RT-PCR
Quantitation of estradiol receptors alpha and beta and progesterone receptors in human breast tumors by real-time reverse transcription-polymerase chain reaction. Correlation with protein assays, 507
- Quaternary arrangement
Differential activity by DNA-induced quaternary structures of POU transcription factors, 979
- Quercetin
Quercetin, apoptosis, heat shock, 1591
- Quinones
Cytotoxicity of dopamine-derived tetrahydroisoquinolines on melanoma cells, 1503
- Rac₁
Differential effect of simvastatin on activation of Rac₁ vs. activation of the heat shock protein 27-mediated pathway upon oxidative stress, in human smooth muscle cells, 1483
- Radiation sensitization
Analytical and pharmacokinetic studies with 5-chloro-2'-deoxycytidine, 1493
- Rainbow trout
Analysis of rainbow trout Ah receptor protein isoforms in cell culture reveals conservation of function in Ah receptor-mediated signal transduction, 49
- Raltitrexed
Effects of antifolates on the binding of 5-fluoro-2'-deoxyuridine monophosphate to thymidylate synthase, 669
- Rapamycin
A novel pathway regulating the mammalian target of rapamycin (mTOR) signaling, 1071
- Rat aortic smooth muscle cell
Antioxidants inhibit endothelin-1 (1–31)-induced proliferation of vascular smooth muscle cells via the inhibition of mitogen-activated protein (MAP) kinase and activator protein-1 (AP-1), 1521
- Rat conceptus
Expression and activity of the DNA repair enzyme uracil DNA glycosylase during organogenesis in the rat conceptus and following methotrexate exposure *in vitro*, 711
- Rat heart mitochondria
Inhibition of phosphate transport in rat heart mitochondria by 3'-azido-3'-deoxythymidine due to stimulation of superoxide anion mitochondrial production, 201
- Rat liver
Gene expression profiling of drug metabolism and toxicology markers using a low-density DNA microarray, 137
- Rat liver mitochondria
Effects of nitrosopropofol on mitochondrial energy-converting system, 1133
- Rat PC12 cells
Up-regulation of A_{2A} adenosine receptors by proinflammatory cytokines in rat PC12 cells, 625
- Rats
Effect of pirfenidone against vanadate-induced kidney fibrosis in rats, 517
Effects of *in vivo* treatment of rats with trimethyltin chloride on respiratory properties of rat liver mitochondria, 657
Regulation of anandamide tissue levels by *N*-arachidonylethanolamine, 1147
- RAW 264.7
G protein-coupled receptor for nicotinic acid in mouse macrophages, 645
- RAW cells
Regulation of anandamide tissue levels by *N*-arachidonylethanolamine, 1147
- Reactive oxygen species
Enhancement of protein kinase C activity and chemiluminescence intensity in mitochondria isolated from the kidney cortex of rats treated with cephaloridine, 543
Independent contribution of three different pathways to ultraviolet-B-induced apoptosis, 837

- Age-related decline in cellular response to oxidative stress: links to growth factor signaling pathways with common defects, 999
- Antioxidants inhibit endothelin-1 (1–31)-induced proliferation of vascular smooth muscle cells via the inhibition of mitogen-activated protein (MAP) kinase and activator protein-1 (AP-1), 1521
- Receptor**
- Agents that elevate cyclic AMP induce receptor phosphorylation primarily at serine 331 in HEK 293 cells overexpressing human thromboxane receptor α , 375
- Cysteinyl leukotriene receptors, 1549
- Receptor reserve**
- Modulation of agonist responses at the A₁ adenosine receptor by an irreversible antagonist, receptor–G protein uncoupling and by the G protein activation state, 1251
- Receptor tyrosine kinase**
- Signal transduction to hypoxia-inducible factor 1, 993
- Recombinant glycine receptors**
- Hyperplexia mutation of glycine receptors: decreased gating efficacy with altered binding thermodynamics, 285
- Recombinant models**
- Endogenous drug transporters in *in vitro* and *in vivo* models for the prediction of drug disposition in man, 1569
- Redox regulation**
- Cell signalling and the glutathione redox system, 1057
- Thioredoxins and related proteins in photosynthetic organisms: molecular basis for thiol dependent regulation, 1065
- Redox transcription factors**
- Cell signalling and the glutathione redox system, 1057
- Regulation**
- Differential activity by DNA-induced quaternary structures of POU transcription factors, 979
- Enhanced activity of human *N*-myristoyltransferase by dimethyl sulfoxide and related solvents in the presence of serine/threonine-containing peptide substrates, 1461
- Influence of isolation procedure, extracellular matrix and dexamethasone on the regulation of membrane transporters gene expression in rat hepatocytes, 1637
- Renal**
- Novel effect of carvedilol on Ca²⁺ movement in renal tubular cells, 1777
- Respiration**
- Effects of *in vivo* treatment of rats with trimethyltin chloride on respiratory properties of rat liver mitochondria, 657
- Effects of nitrosopropofol on mitochondrial energy-converting system, 1133
- Resveratrol**
- The antiproliferative activity of resveratrol results in apoptosis in MCF-7 but not in MDA-MB-231 human breast cancer cells: cell-specific alteration of the cell cycle, 1375
- Retinoblastoma protein**
- SU9516, a cyclin-dependent kinase 2 inhibitor, promotes accumulation of high molecular weight E2F complexes in human colon carcinoma cells, 1091
- Retrovirus**
- Evasion from proteasomal degradation by mutated Fos proteins expressed from FBJ-MSV and FBR-MSV osteosarcomatogenic retroviruses, 957
- Rheumatoid arthritis**
- Effects of polysulfated glycosaminoglycan and triamcinolone acetonide on the production of proteinases and their inhibitors by IL-1 α treated articular chondrocytes, 217
- Rho proteins**
- Reduction of tumor necrosis factor- α (TNF- α) related nuclear factor-kappaB (NF- κ B) translocation but not inhibitor kappa-B (Ik-B)-degradation by Rho protein inhibition in human endothelial cells, 971
- Ribonucleotide reductase**
- Ribonucleotide reductase and thymidine phosphorylation: two potential targets of azodicarbonamide, 451
- Trimidox, an inhibitor of ribonucleotide reductase, synergistically enhances the inhibition of colony formation by Ara-C in HL-60 human promyelocytic leukemia cells, 481
- The antiproliferative activity of resveratrol results in apoptosis in MCF-7 but not in MDA-MB-231 human breast cancer cells: cell-specific alteration of the cell cycle, 1375
- ROS**
- Novel mechanism of Vitamin E protection against cyclosporine A cytotoxicity in cultured rat hepatocytes, 267
- Cytotoxicity of dopamine-derived tetrahydroisoquinolines on melanoma cells, 1503
- Emodin induces apoptosis in human promyeloleukemic HL-60 cells accompanied by activation of caspase 3 cascade but independent of reactive oxygen species production, 1713
- Saccharomyces cerevisiae*
- Complementary DNA cloning and characterization of cytochrome P450 2D29 from Japanese monkey liver, 1101
- Salvia miltiorrhiza*
- Sodium tanshinone IIA sulfonate derived from Danshen (*Salvia miltiorrhiza*) attenuates hypertrophy induced by angiotensin II in cultured neonatal rat cardiac cells, 745
- Salvicine**
- Down-regulation of telomerase activity via protein phosphatase 2A activation in salvicine-induced human leukemia HL-60 cell apoptosis, 1677
- Sandwich culture**
- Influence of isolation procedure, extracellular matrix and dexamethasone on the regulation of membrane transporters gene expression in rat hepatocytes, 1637
- Scaffolding proteins**
- Fidelity and spatio-temporal control in MAP kinase (ERKs) signalling, 755
- Schistosoma mansoni*
- Evidence for the presence of glutamatergic receptors in adult *Schistosoma mansoni*, 1337
- Scutellaria baicalensis* Georgi
- Anxiolytic effect of wogonin, a benzodiazepine receptor ligand isolated from *Scutellaria baicalensis* Georgi, 1415
- SDZ IMM125**
- Role of antioxidants in the *O*-hydroxyethyl-D-(Ser)⁸-cyclosporine A (SDZ IMM125)-induced apoptosis in rat hepatocytes, 1725
- Second messenger**
- Effector coupling of stably transfected human A₃ adenosine receptors in CHO cells, 61
- Cyclic AMP differentially modulates CD40L expression on human naïve and memory CD4⁺ T cells, 1169
- Secondary iron overload**
- Mobilization of intracellular iron by analogs of pyridoxal isonicotinoyl hydrazone (PIH) is determined by the membrane permeability of the iron–chelator complexes, 1689
- Secretory phospholipase A₂**
- Arachidonic acid release and prostaglandin F_{2 α} formation induced by phenylarsine oxide in PC12 cells: possible involvement of secretory phospholipase A₂ activity, 117
- Selective glucocorticoid receptor modulators**
- Designer glucocorticoids, 355
- Selectivity**
- Identifying *in vivo* targets of cyclin-dependent kinase inhibitors by affinity chromatography, 819
- Selenium**
- Inhibition of zinc finger protein–DNA interactions by sodium selenite, 1757
- Senescence**
- Stress-induced premature senescence and tissue ageing, 1007
- Sequence specificity**
- DNA structural alterations induced by bis-netropsins modulate human DNA topoisomerase I cleavage activity and poisoning by camptothecin, 79

- Serine protease
Substrate-dependent, non-hyperbolic kinetics of pig brain prolyl oligopeptidase and its tight binding inhibition by JTP-4819, 463
- Sf9 insect cells
Distinct interactions of $G_{sz-long}$, $G_{sz-short}$, and G_{zolf} with GTP, ITP, and XTP, 583
- Shock
Role of poly(ADP-ribose) polymerase activation in endotoxin-induced cardiac collapse in rodents, 1785
- Signal transduction
Independent contribution of three different pathways to ultraviolet-B-induced apoptosis, 837
Cellular glutathione and thiols metabolism, 1019
Glutathione catabolism as a signaling mechanism, 1027
Glutathionylation of proteins by glutathione disulfide S-oxide, 1049
Chemosensitization by fibroblast growth factor-2 is not dependent upon proliferation, S-phase accumulation, or p53 status, 1111
- Signaling pathways
Growth signaling in breast cancer cells: outcomes and promises of proteomics, 797
- Simvastatin
Differential effect of simvastatin on activation of Rac₁ vs. activation of the heat shock protein 27-mediated pathway upon oxidative stress, in human smooth muscle cells, 1483
- Single nucleotide polymorphism
Human histamine *N*-methyltransferase pharmacogenetics: gene resequencing, promoter characterization, and functional studies of a common 5'-flanking region single nucleotide polymorphism (SNP), 699
- SIPS
Stress-induced premature senescence and replicative senescence are different phenotypes, proteomic evidence, 1011
- Site-directed mutagenesis
Identification of residues involved in the substrate specificity of human and murine dCK, 1559
- Skin
UVB light suppresses nitric oxide production by murine keratinocytes and macrophages, 1469
- Small molecule inhibitors
Inhibition of zinc finger protein–DNA interactions by sodium selenite, 1757
- Smooth muscle cells
Reduction of bFGF-induced smooth muscle cell proliferation and endothelin receptor mRNA expression by mevastatin and atorvastatin, 497
- Snake venom
Biochemical and biological properties of phospholipases A₂ from *Bothrops atrox* snake venom, 1179
- S-Nitrosoglutathione
Glutathionylation of proteins by glutathione disulfide S-oxide, 1049
- SNPs
Human histamine *N*-methyltransferase pharmacogenetics: gene resequencing, promoter characterization, and functional studies of a common 5'-flanking region single nucleotide polymorphism (SNP), 699
- SOD
Emodin induces apoptosis in human promyeloleukemic HL-60 cells accompanied by activation of caspase 3 cascade but independent of reactive oxygen species production, 1713
- Sodium tanshinone IIA sulfonate
Sodium tanshinone IIA sulfonate derived from Danshen (*Salvia miltiorrhiza*) attenuates hypertrophy induced by angiotensin II in cultured neonatal rat cardiac cells, 745
- Soluble guanylyl cyclase
Biliverdin IX is an endogenous inhibitor of soluble guanylyl cyclase, 109
- S1P₅ receptor
Comparative analysis of human and rat S1P₅ (edg8): differential expression profiles and sensitivities to antagonists, 1243
- Sp1 transcription factor site
Activation of the γ -glutamyltransferase promoter 2 in the rat colon carcinoma cell line CC531 by histone deacetylase inhibitors is mediated through the Sp1 binding motif, 307
- Spermidine
Insufficiently charged isosteric analogue of spermine: interaction with polyamine uptake, and effect on Caco-2 cell growth, 649
- Spermine
Insufficiently charged isosteric analogue of spermine: interaction with polyamine uptake, and effect on Caco-2 cell growth, 649
- Sphingosine 1-phosphate
Comparative analysis of human and rat S1P₅ (edg8): differential expression profiles and sensitivities to antagonists, 1243
- STAT-3
Endoplasmic reticulum (ER) stress: hepatitis C virus induces an ER-nucleus signal transduction pathway and activates NF- κ B and STAT-3, 1425
- Statins
Reduction of bFGF-induced smooth muscle cell proliferation and endothelin receptor mRNA expression by mevastatin and atorvastatin, 497
- Staurosporine
Induction of cyclooxygenase-2 by staurosporine through the activation of nuclear factor for IL-6 (NF-IL6) and activator protein 2 (AP2) in an osteoblast-like cell line, 177
- Stem cell factor
Induction of interleukin 8 release from the HMC-1 mast cell line: Synergy between stem cell factor and activators of the adenosine A_{2b} receptor, 317
- Stereo-selective
A novel stereo-selective sulfonylurea, 1-[1-(4-aminobenzoyl)-2,3-dihydro-1*H*-indol-6-sulfonyl]-4-phenyl-imidazolidin-2-one, has antitumor efficacy in *in vitro* and *in vivo* tumor models, 473
- Steroid receptor ligand
Designer glucocorticoids, 355
- Stomach cancer
5-Fluorouracil inhibits nitric oxide production through the inactivation of I κ B kinase in stomach cancer cells, 1439
- Stress
Stress-induced premature senescence and tissue ageing, 1007
Stress-induced premature senescence and replicative senescence are different phenotypes, proteomic evidence, 1011
- Structure–metabolism relationship
Carbonyl reduction of the potential cytostatic drugs benfluron and 3,9-dimethoxybenfluron in human *in vitro*, 297
- Strychnine
Hyperekplexia mutation of glycine receptors: decreased gating efficacy with altered binding thermodynamics, 285
- Substrate channeling
Toxic, halogenated cysteine *S*-conjugates and targeting of mitochondrial enzymes of energy metabolism, 553
- Substrate inhibition
Substrate-dependent, non-hyperbolic kinetics of pig brain prolyl oligopeptidase and its tight binding inhibition by JTP-4819, 463
- Substrate specificity
Identification of residues involved in the substrate specificity of human and murine dCK, 1559
- Sulfonylureas
A novel stereo-selective sulfonylurea, 1-[1-(4-aminobenzoyl)-2,3-dihydro-1*H*-indol-6-sulfonyl]-4-phenyl-imidazolidin-2-one, has antitumor efficacy in *in vitro* and *in vivo* tumor models, 473
- Sulindac sulfone
Pro-apoptotic actions of exisulind and CP461 in SW480 colon tumor cells involve β -catenin and cyclin D1 down-regulation, 1325
- Superoxide anion
Inhibition of phosphate transport in rat heart mitochondria by 3'-azido-3'-deoxythymidine due to stimulation of superoxide anion mitochondrial production, 201

- Superoxide anions**
Analysis of oxidative processes and of myelin figures formation before and after the loss of mitochondrial transmembrane potential during 7 β -hydroxycholesterol and 7-ketocholesterol-induced apoptosis: comparison with various pro-apoptotic chemicals, 527
- Supersensitivity**
Role of noradrenaline on the expression of the Na⁺/K⁺-ATPase α_2 isoform and the contractility of cultured rat vas deferens, 1431
- Suramin**
Comparative analysis of human and rat S1P₅ (edg8): differential expression profiles and sensitivities to antagonists, 1243
- Synaptic membranes**
Degradation of nociceptin (orphanin FQ) by mouse spinal cord synaptic membranes is triggered by endopeptidase-24.11: an *in vitro* and *in vivo* study, 1293
- Synergetic effects**
Cytotoxic and genotoxic effects of megazol, an anti-Chagas' disease drug, assessed by different short-term tests, 1617
- Synergism**
Contribution of apoptosis in the cytotoxicity of the oxaliplatin–irinotecan combination in the HT29 human colon adenocarcinoma cell line, 1215
- Systemic autoimmune disease**
Lysophosphatidylcholine as a ligand for immunoregulation, 161
- T lymphocyte**
Inhibition of the activity of T lymphocyte Kv1.3 channels by extracellular zinc, 595
- T lymphocytes**
Cyclic AMP differentially modulates CD40L expression on human naïve and memory CD4⁺ T cells, 1169
- Taiwanin C**
Inhibition of prostaglandin E₂ production by taiwanin C isolated from the root of *Acanthopanax chiisanensis* and the mechanism of action, 1345
- Tamoxifen**
Modulation of tamoxifen-induced apoptosis by peripheral benzodiazepine receptor ligands in breast cancer cells, 99
- Tanford transition**
Retinoic acid binding properties of the lipocalin member β -lactoglobulin studied by circular dichroism, electronic absorption spectroscopy and molecular modeling methods, 1651
- Target genes**
Function of AP-1 target genes in mesenchymal–epithelial cross-talk in skin, 949
- Taurine**
Hyperkplexia mutation of glycine receptors: decreased gating efficacy with altered binding thermodynamics, 285
- TCDD**
Analysis of rainbow trout Ah receptor protein isoforms in cell culture reveals conservation of function in Ah receptor-mediated signal transduction, 49
- Telomerase**
Down-regulation of telomerase activity via protein phosphatase 2A activation in salivine-induced human leukemia HL-60 cell apoptosis, 1677
- Teratogen**
Expression and activity of the DNA repair enzyme uracil DNA glycosylase during organogenesis in the rat conceptus and following methotrexate exposure *in vitro*, 711
- Tetrachloroethylene**
Toxic, halogenated cysteine S-conjugates and targeting of mitochondrial enzymes of energy metabolism, 553
- S-(1,1,2,2-Tetrafluoroethyl)-L-cysteine**
Toxic, halogenated cysteine S-conjugates and targeting of mitochondrial enzymes of energy metabolism, 553
- Tetrafluoroethylene**
Toxic, halogenated cysteine S-conjugates and targeting of mitochondrial enzymes of energy metabolism, 553
- Tetrahydroisoquinolines**
Cytotoxicity of dopamine-derived tetrahydroisoquinolines on melanoma cells, 1503
- Tetrahydrouridine**
Analytical and pharmacokinetic studies with 5-chloro-2'-deoxycytidine, 1493
- Thalassemia**
Membrane heme as a host factor in reducing effectiveness of dihydroartemisinin, 91
- Thapsigargin**
Novel effect of carvedilol on Ca²⁺ movement in renal tubular cells, 1777
- Theories**
Stress-induced premature senescence and replicative senescence are different phenotypes, proteomic evidence, 1011
- Therapeutic drugs**
Predicting plasma protein binding of drugs: a new approach, 1355
- Therapeutics**
Designed transcription factors as tools for therapeutics and functional genomics, 919
- Therapy**
Inflammatory signal transduction in Crohn's disease and novel therapeutic approaches, 789
- Thermodynamics of binding**
Hyperkplexia mutation of glycine receptors: decreased gating efficacy with altered binding thermodynamics, 285
- Thiazolidinediones**
Synergistic effects of troglitazone and oleate on the translatability of preproinsulin mRNA from INS-1 cells, 1629
- Thiolester inhibitors**
Novel competitive irreversible inhibitors of aldehyde dehydrogenase (ALDH1): restoration of chemosensitivity of L1210 cells overexpressing ALDH1 and induction of apoptosis in BAF₃ cells overexpressing bcl₂, 1279
- Thiols**
Cell signalling and the glutathione redox system, 1057
- Thioredoxin**
Cellular glutathione and thiols metabolism, 1019
Thioredoxins and related proteins in photosynthetic organisms: molecular basis for thiol dependent regulation, 1065
- Threshold**
A physiological threshold for protection against menadione toxicity by human NAD(P)H:quinone oxidoreductase (NQO1) in Chinese hamster ovary (CHO) cells, 1597
- Thromboxane A₂**
Agents that elevate cyclic AMP induce receptor phosphorylation primarily at serine 331 in HEK 293 cells overexpressing human thromboxane receptor α , 375
- Thymidine kinase 1**
3'-Azido-2',3'-dideoxythymidine induced deficiency of thymidine kinases 1, 2 and deoxycytidine kinase in H9 T-lymphoid cells, 239
- Thymidine phosphorylation**
Ribonucleotide reductase and thymidine phosphorylation: two potential targets of azodicarbonamide, 451
- Thymidylate synthase**
Effects of antifolates on the binding of 5-fluoro-2'-deoxyuridine monophosphate to thymidylate synthase, 669
- Tight binding inhibition**
Substrate-dependent, non-hyperbolic kinetics of pig brain prolol oligopeptidase and its tight binding inhibition by JTP-4819, 463
- Tissue inhibitor of metalloproteinases**
Effects of polysulfated glycosaminoglycan and triamcinolone acetonide on the production of proteinases and their inhibitors by IL-1 α treated articular chondrocytes, 217
- TNF- α**
Oxidative stress, transcription factors and chromatin remodelling in lung inflammation, 935
Reduction of tumor necrosis factor- α (TNF- α) related nuclear factor-kappaB (NF- κ B) translocation but not inhibitor kappa-B

- (I κ -B)-degradation by Rho protein inhibition in human endothelial cells, 971
- Toll-like receptors
 - Multiple signaling pathways leading to the activation of interferon regulatory factor 3, 985
- Topoisomerase I
 - DNA structural alterations induced by bis-netropsins modulate human DNA topoisomerase I cleavage activity and poisoning by camptothecin, 79
- Topoisomerase I inhibitor
 - The activity profile of the hexacyclic camptothecin derivative DX-8951f in experimental human colon cancer and ovarian cancer, 1267
- Toxicogenomics
 - Gene expression profiling of drug metabolism and toxicology markers using a low-density DNA microarray, 137
- Transcription
 - Designed transcription factors as tools for therapeutics and functional genomics, 919
 - Diversity of acetylation targets and roles in transcriptional regulation: the human immunodeficiency virus type 1 promoter as a model system, 925
 - Multiple signaling pathways leading to the activation of interferon regulatory factor 3, 985
- Transcription factor
 - Is there a single mechanism for fatty acid regulation of gene transcription?, 893
- Transcription factor–DNA interactions
 - Inhibition of zinc finger protein–DNA interactions by sodium selenite, 1757
- Transcription factors
 - Reduction of tumor necrosis factor- α (TNF- α) related nuclear factor- κ B (NF- κ B) translocation but not inhibitor κ B (I κ -B)-degradation by Rho protein inhibition in human endothelial cells, 971
- Transcriptional activity
 - Regulation of the transcriptional activity of the nuclear factor- κ B p65 subunit, 963
- Transcriptional regulation
 - Transcriptional regulators of the human multidrug resistance 1 gene: recent views, 943
- Transferrin
 - Paramagnetic species in the plasma of dogs with lymphoma prior to and after treatment with doxorubicin. An ESR study, 1737
- Transformation
 - Carbazolequinone induction of caspase-dependent cell death in Src-overexpressing cells, 1605
- Transgenic animals
 - Uncoupling protein 2 (UCP2) lowers alcohol sensitivity and pain threshold, 369
- Transgenic mice
 - ErbB-2-induced mammary tumor growth: the role of cyclin D1 and p27Kip1, 827
- Transmembrane potential
 - Effects of nitrosopropofol on mitochondrial energy-converting system, 1133
- Transport
 - Influence of isolation procedure, extracellular matrix and dexamethasone on the regulation of membrane transporters gene expression in rat hepatocytes, 1637
- Trichloroethylene
 - Toxic, halogenated cysteine S-conjugates and targeting of mitochondrial enzymes of energy metabolism, 553
- Trichostatin A
 - Diversity of acetylation targets and roles in transcriptional regulation: the human immunodeficiency virus type 1 promoter as a model system, 925
- Trimethyltin chloride
 - Effects of *in vivo* treatment of rats with trimethyltin chloride on respiratory properties of rat liver mitochondria, 657
- TRNOE
 - Differential binding to the α/β -tubulin dimer of vinorelbine and vinflunine revealed by nuclear magnetic resonance analyses, 733
- Troglitazone
 - Synergistic effects of troglitazone and oleate on the translatability of preproinsulin mRNA from INS-1 cells, 1629
- Tubulin
 - Differential binding to the α/β -tubulin dimer of vinorelbine and vinflunine revealed by nuclear magnetic resonance analyses, 733
- Tumor
 - Glutamate antagonists limit tumor growth, 1195
- Tumorigenesis
 - Function of AP-1 target genes in mesenchymal–epithelial cross-talk in skin, 949
- Two-state model
 - Modulation of agonist responses at the A₁ adenosine receptor by an irreversible antagonist, receptor–G protein uncoupling and by the G protein activation state, 1251
- U-937
 - Effects of FK228, a novel histone deacetylase inhibitor, on human lymphoma U-937 cells *in vitro* and *in vivo*, 1079
- Ubiquitin
 - Evasion from proteasomal degradation by mutated Fos proteins expressed from FBJ-MSV and FBR-MSV osteosarcomatogenic retroviruses, 957
- Ubiquitination
 - Regulation of p53: intricate loops and delicate balances, 865
- Ultraviolet light
 - UVB light suppresses nitric oxide production by murine keratinocytes and macrophages, 1469
- Unconjugated bilirubin
 - In vivo* anti-complement effect of bilirubin-IX α , 741
- Uncoupling proteins
 - Uncoupling protein 2 (UCP2) lowers alcohol sensitivity and pain threshold, 369
- Uracil DNA glycosylase
 - Expression and activity of the DNA repair enzyme uracil DNA glycosylase during organogenesis in the rat conceptus and following methotrexate exposure *in vitro*, 711
- Ursodeoxycholic acid
 - Antioxidant properties of ursodeoxycholic acid, 1661
- UVB radiation
 - Independent contribution of three different pathways to ultraviolet-B-induced apoptosis, 837
- V79 Chinese hamster fibroblasts
 - Covalent binding of the anticancer drug ellipticine to DNA in V79 cells transfected with human cytochrome P450 enzymes, 289
- Vanadate
 - Effect of pirfenidone against vanadate-induced kidney fibrosis in rats, 517
- Vas deferens
 - Role of noradrenaline on the expression of the Na⁺/K⁺-ATPase α_2 isoform and the contractility of cultured rat vas deferens, 1431
- Vascular smooth muscle
 - Endothelin-1-induced arachidonic acid release by cytosolic phospholipase A₂ activation in rat vascular smooth muscle via extracellular signal-regulated kinases pathway, 425
 - Antagonist interaction with endogenous AT₁ receptors in human cell lines, 1207
- Vinflunine
 - Differential binding to the α/β -tubulin dimer of vinorelbine and vinflunine revealed by nuclear magnetic resonance analyses, 733
- Vinorelbine
 - Differential binding to the α/β -tubulin dimer of vinorelbine and vinflunine revealed by nuclear magnetic resonance analyses, 733

Vitamin E

Novel mechanism of Vitamin E protection against cyclosporine A cytotoxicity in cultured rat hepatocytes, 267

v-src

Carbazolequinone induction of caspase-dependent cell death in Src-overexpressing cells, 1605

Wogonin

Anxiolytic effect of wogonin, a benzodiazepine receptor ligand isolated from *Scutellaria baicalensis* Georgi, 1415

Wound healing

Function of AP-1 target genes in mesenchymal–epithelial cross-talk in skin, 949

Xenobiotic

PXR-dependent induction of human *CYP3A4* gene expression by organochlorine pesticides, 1513

X-ray crystallography

Structural and functional characterization of an acidic platelet aggregation inhibitor and hypotensive phospholipase A₂ from *Bothrops jararacussu* snake venom, 723

Yeast

Cytotoxic and genotoxic effects of megazol, an anti-Chagas' disease drug, assessed by different short-term tests, 1617

Zidovudine

3'-Azido-2',3'-dideoxythymidine induced deficiency of thymidine kinases 1, 2 and deoxycytidine kinase in H9 T-lymphoid cells, 239

Zinc

Indomethacin-induced mitochondrial dysfunction and oxidative stress in villus enterocytes, 339

Inhibition of the activity of T lymphocyte Kv1.3 channels by extracellular zinc, 595

Zinc finger protein

Designed transcription factors as tools for therapeutics and functional genomics, 919

Zinc finger proteins

Inhibition of zinc finger protein–DNA interactions by sodium selenite, 1757