

SUBJECT INDEX

A

- Abies grandis*, variation of monoterpene biosynthesis in 577
Acacia tortuosa, polysaccharide gum from 53
 Acanthaceae 1331
 Acetates, racemic, biotransformation of by potato and artichoke tubers 1531
 Acetogenin precursors, from *Annona* 749
 Acetogenins, from *Annona* 803, 811, 1057
 Acylcyclohexanediones, inhibition of gibberellin 3 β -hydroxylase by 679
 ADP-glucose pyrophosphorylase, substrate-binding mutants of 621
 Agavaceae 79, 1351
Aglaia ferruginaea, revision of structure of ferrugin from 1163
Agrostophyllum, dimeric phenanthrenes from 855
 Aizoaceae 707
Ajuga pyramidalis, neo-clerodane diterpene from 303
A. reptans, insect-antifeedant neo-clerodane diterpenoid from 1227
Alberta magna, enolic iridolactone and other iridoids from 991
 Algae 177, 363, 761, 1111, 1465, 1463
 Alkaloid biosynthesis, in *Lunaria* seeds 375
 Alkaloids,
 antifungal, from *Dictamnus* 7
 cyclopeptide, from *Scutia* 125
 diterpenoid, from *Delphinium* 1141
 from *Boronia*, *Eriostemon* and *Phebalium* 163
 from *Kopsia* 145
 from *Sanguinaria*, structure and transformations of 879
 from *Solanum*, effect of on insect larvae 203
 in *Ricinus* phloem sap 1461
 indole, from *Vinca* 149
 monoterpene, from *Osmanthus* 825
 naphthylisoquinoline, from *Ancistrocladus* 31, 37
 pyrrolizidine,
 from *Ipomoea* 1551
 incorporation of chirally deuterated putrescines into 1017
 steroidal, from *Veratrum*, reassignment of stereochemistry of 887
 tetrahydropyrotuberberine, from *Croton* 1445
 Alkanes, in *Salix*, changes to during frost-hardening 1501
 Alkyl esters, very-long-chain, from *Cereus* wax 1145
n-Alkyl glycosides, from *Crescentia* fruits 259
 Alkylresorcinols, from etiolated rice seedlings 1247
 Allelopathic substance, growth-promoting, from germinating *Arabidopsis* seeds 1
 Alliaceae 281
Alliaria petiolata, insect feeding-deterrent flavone glycoside from 1237
Allium cepa, flavonols and dihydroflavonols from 281
Aloe barbadensis, tetrahydroanthracene glucosides from 1267
Alpinia katsumadai, stilbenes, terpenoids, diaryl heptanoids and flavonoids from 1117
Ambrosia artemisiifolia, pollen proteolytic enzymes from 593
 Amygdalin, in *Prunus* leaves 1537
 Amylase inhibitors, of pigeon pea seeds 197
 Anacardiaceae 715
Anacardium occidentale, similarity of mono-, oligo- and polysaccharides in gum exudate of 715
Anadenanthera colubrina, gum mono-, oligo- and polysaccharides from 1207
 Ancistrocladaceae 31, 37
Ancistrocladus guineensis, naphthylisoquinoline alkaloids from 37
A. robertsoniorum, naphthylisoquinoline alkaloids from 31
 Androstane glycosides, from *Vernonia* 73
Anemia mexicana, gibberellins from culture extract of 1449
Annona, early acetogenin precursors from 749
A. glabra,
 cyclopeptides from 1293
 mono- and bis-tetrahydrofuranic acetogenins from 811
A. reticulata, acetogenins from 1057
A. squamosa, acetogenins with mono-tetrahydrofuran ring from 803
 Annonaceae 131, 749, 803, 811, 1057, 1063, 1293, 1375, 1387, 1393
 Antheridiogen, gibberellin-like, from *Lygodium* 1177
 Anthocyanins,
 acylated,
 from *Pelargonium* flowers 355
 from *Pulsatilla* 105
 from red potatoes 109
 diacylated, from *Petunia* flowers 1409
 from *Crocus* flowers 861
 pyruvic acid derivatives of, in grape pomace 1401
 Anthranilate, antifungal, from *Gentiana* 1223
 Anthraquinones, from *Rhynchocheum* 315
 Apocynaceae 145, 149, 1261
Arabidopsis thaliana,
 growth-promoting allelopathic substance from 1
 probarley lectin-processing aspartic protease from 1453
 redox-sensitive enolases from 707
 Araceae 979
 Araliaceae 397, 451
 Aroma precursor, from rose flowers 1527
Artemisia capillaris, phenylalkynes from 1645
A. fragrans, germacranolides and monoterpene cyclic peroxide from 1417
Arthrobacter, biotransformation of isoflavones by 1045
Artocarpus elasticus, prenylflavonoids from 875
A. incisa, lectin from 1183
 Asclepiadaceae 1297
 Aspartic proteinase, lectin-processing, from *Arabidopsis* seeds 1453
Aspergillus niger, biotransformation of linalool by 1029
 Asphodelaceae 1267
Atropa belladonna, co-culture of transformed roots of, to produce scopolamine 17
 Australifungin, phytotoxicity of to *Lemna* 1509
Arena sativa, induction of hydroxyanthranilate hydroxycinnamoyl transferase activity in 969
Azadirachta excelsa, limonoids from 1283
A. indica, tetracyclic triterpenoids from 1631
 Azaphilones, hydrogenated, from *Emericella* 1131

B

- Bacteria 1045, 1289
 Basidiomycetes, distribution of diacylglycerotrimethylhomoserine and phosphatidylcholine in 755

- Bazzania trilobata*, chlorinated macrocyclic bisbenzyls from 89
- Becium grandiflorum*, 8-hydroxylated flavones from 779
- Benzoquinones,
antifungal, from etiolated sorghum seedlings 997
from *Lithospermum* hairy root cultures 1037
- Benzothiadiazole, inhibition of catalase and ascorbate peroxidase in *Nicotiana* by 651
- Bergenia ligulata*, paashaanolactone from 907
- Bibenzyls, from *Pleione* 1637
- bisBenzyls, macrocyclic, chlorinated, from *Bazzania* 89
- Biflavanoids, biphenyl-linked, from grape pomace 1137
- Biflavonoid, from *Cycas* 319
- Bignoniaceae 259
- Biologically active compounds,
allergenic proteolytic enzymes, from ragweed pollen 593
antibacterial sesquiterpene lactones, from *Centipeda* 631
anticancer promoting ellagitannin, from *Terminalia* 1567
anticomplementary saponins, from ginseng 397
antidiabetic isoflavones, from Kudzu root 499
antifungal
alkaloids, from *Dictamnus* 7
anthranilate, from *Gentiana* 1223
benzoquinone, from etiolated sorghum seedlings 997
coumarin, from *Citrus* 1521
essential oils, from *Thymus*, controlling strawberry decay 1515
lignans, from *Viola* arils 1003
limonoids, from *Dictamnus* 7
meroterpenoid naphthoquinones, from *Cordia* roots 729
antioxidant naphthalenes, from *Hibiscus* root bark 799
antiviral protein, from *Bougainvillea* roots 1561
cytotoxic
acetogenins, from *Annona* seeds 1057
limonoids, from *Azadirachta* 1283
naphthalene, from *Hibiscus* root bark 799
oxidized phytosterols, from *Chenopodium* cell cultures 789
feeding-deterrent diterpenoids, from *Laurencia* 363
haemolytic glycolipids, from *Gymnodinium* 783
infection-inhibiting caffeoylquinic acid, from *Alternaria*-infected *Pyrus* 371
insect-antifeedant
diterpenoid, from *Ajuga* 1227
flavonoid glycoside, from *Alliaria* 1237
insect growth inhibiting alkaloids, from *Solanum* 203
larvicidal meroterpenoid naphthoquinones, from *Cordia* roots 729
mosquito-repellent iridoids, from *Alberta* 991
phytoalexins, furanocoumarins, from *Glehnia* 13
phytotoxic fungal metabolites, inhibiting ceramide synthase 1509
signalling octadecanoids, in higher plant mechanotransduction 539
- Biologically active pentacyclic oxylipins, in angiosperms 527
- Biosynthesis,
of acetogenins, from Annonaceae, early precursors in 749
of alkaloids,
in *Lunaria* seeds 375
pyrrolizidine, in *Senecio* 1017
of 5-*n*-alkylresorcinols, in rice seedlings 1247
of chalcones, in *Dahlia* petals 1013
of citronellol, in rose flowers 1527
of diterpenoid, in *Croton* 1241
of (+)-eudesmin, in *Magnolia* 665
of iridoids, in *Nuxia* 1007
of lignans, antioxidant, in *Sesamum* seeds 583
of monoterpenes, constitutive and induced, individual variation of in *Abies* 577
of oxylipins, pentacyclic, in angiosperms 527
- Biotransformation,
of 3-demethylthiocolchicine, by *Centella* suspension cultures 743
of digitoxigenin, by cultured *Strophanthus* cells 1261
of (2*Z*,6*Z*)-farnesol, by *Glomerella* 1025
of isoflavones, by tempe bacteria 1045
of linalool, to linalool oxides, by *Aspergillus* 1029
of 9-*epi-ent*-pimaradiene diterpene, by *Gibberella* 211
of racemic acetates, by potato and topinambur tubers 1531
of silybin, by *Papaver* cultures 217
of 13-thiaoleic acid, by *Chlorella* 1465
- Biphenyl, from *Kielmeyera* 1367
- Boraginaceae 729, 1037
- Boronia*, phytochemistry of 163
- Botryococcus braunii*, carotenoids from 1111
- Bougainvillea spectabilis*, antiviral protein from 1561
- Brassica napus*, effect of heat shock on lipid biosynthesis in 1195
- Brosimopsis acutifolium*, (-)-epicatechin glycoside from 1165
- Brosimum rubescens*, chalcone-prenylcoumarin Diels-Alder adducts from 1381
- Bryonia dioica*, quantitation of 12-oxo-phytodienoic acid in 539
- Buddlejaceae 1007
- C**
- Cactaceae 1145
- Caesalpinia bonducella*, cassane diterpenes from 1153
- Caffeine formation, by *Camellia* tissue cultures 1535
- Caffeoyl phenylethanoid glycoside, from *Plantago* 1161
- 3,5-di-*O*-Caffeoylquinic acid, induced in black spot infected *Pyrus* leaves 371
- Caffeoyltryptophan, inhibition of linoleic acid peroxidation and haemolysis by 1215
- Cajanus cajan*, amylase inhibitors in seeds of 197
- Calophyllum teysmannii*, coumarins from 773, 1051
- Camellia sinensis*, caffeine and theobromine formation by tissue cultures of 1535
- Caprifoliaceae 1101, 1337
- Carotenoids, from *Botryococcus* 1111
- Caryophyllaceae 143, 1233, 1343
- Celastraceae 265
- Cell-wall biosynthesis, in differentiating cells of *Pinus* root tips 1201
- Centella asiatica*, biotransformation of 3-demethylthiocolchicine by 743
- Centipeda minima*, antibacterial sesquiterpene lactones from 631
- Cephalosporium aphidicola*, diterpenoid metabolite from 423
- Ceramide synthase inhibitors, phytotoxicity of to *Lemna* 1509
- Cereus peruvianus*, very-long-chain alkyl esters from 1145
- Chalcone-prenylcoumarin Diels-Alder adducts, from *Brosimum* 1381
- Chalcones,
6'-deoxy-, from *Dahlia*, enzymatic hydroxylation of 1013
from *Milletia* bark 295
- Chaptalia nutans*, 5-methylcoumarins from 97
- Chemotaxonomic studies,
of alkaloids,
naphthylisoquinoline, in *Ancistrocladus* 31, 37
pyrrolizidine, in *Ipomoea* 1551
of coumarins, in *Calophyllum* 773, 1051
of cyanogenic glucosides, in *Prunus* leaves 1537
of cyanohydrin glycosides, in *Passiflora foetida* varieties 1049
of diacylglycerotrimethylhomoserine, in mushrooms 755
of dicarboxylic acids, very long-chain, in *Equisetum* 1539
of diterpenes, in *Halimium viscosum* 1545
of essential oils,
in *Piper* 1277
in *Thymus piperella* chemotypes 1271
of flavones, in *Becium* and *Ocimum* 779
of flavonoids, methoxylated, in *Murraya* 393

- of methoxy fatty acids, in red alga 761
 of phosphatidylcholine, in mushrooms 755
 of sesquiterpenoids, in southern *Magnolia virginiana* 221
 of volatiles, in *Zostera* 27
 of xyloglucan composition, in *Cryptomeria* 767
Chenopodiaceae 331, 641, 789
Chenopodium rubrum, cytotoxicity to mealworms of oxidized phytosterols from 789
 Chitinases, acidic, homology of banana pulp protein to 613
Chloranthaceae 231
Chloranthus japonicus, sesquiterpene dimer and trimer from 231
Chlorella sorokiniana, physiological significance of light and dark NH_4^+ metabolism in 177
C. vulgaris, sulfoxidation of 13-thiaoleic acid by 1465
 Chlorophyta 177, 1111, 1465
 Chromans, from *Evodia* 101
 Chromone, alkyl, from *Clusia* 1431
Cistaceae 1545
 Citronellyl disaccharide glycoside, as aroma precursor from rose flowers 1527
Citrus paradisi, synthesis and antifungal activity of 7-geranoxy coumarin from 1521
Cladia retipora, structural revision of rangiformic acid from 1649
Clitoria fairchildiana, rotenoid glycoside from 121
Clusia nemorosa, alkyl chromone from 1431
Combretaceae 1567
 Compositae 57, 73, 97, 227, 269, 401, 411, 415, 425, 593, 631, 723, 1013, 1017, 1085, 1093, 1417, 1441, 1489, 1531, 1645
 Coniferyl alcohol derivatives, from *Ligularia* 269
 Conrauinones, from *Millettia* stem bark 113
Convolvulaceae 695, 1551
Cordia linnaei, meroterpenoid naphthoquinones and naphthoxirene from 729
Cordyline stricta, steroidal saponins from 79
 Coumarins,
 antifungal, from *Citrus*, synthesis of 1521
 from *Boronia*, *Eriostemon* and *Phebalium* 163
 from *Calophyllum* 773, 1051
 from *Ekebergia* 1641
 from *Kielmeyera* 1363
 5-methyl-, from *Chaptalia* 97
Crescentia cujete, *n*-alkyl glycosides and *p*-hydroxybenzoyloxy glucose from 259
Crocus, anthocyanins from 861
Croton hemiargyreus, tetrahydroprotoberberine alkaloid from 1445
C. sublyratus, plaunotol biosynthetic pathway in 1241
 Cruciferae 1, 3, 375, 707, 975, 1195, 1219, 1237, 1453
Cryptomeria japonica, xyloglucan from 767
Cucurbita maxima, inhibition by acylcyclohexanediones of gibberellin 3 β -hydroxylase from 679
Cucurbitaceae 539, 679
 Cyanogenesis,
 of food plants 155
 of *Passiflora* 1049
 Cyanogenic diglucoside, from *Prunus* leaves 1537
Cycadaceae 319
Cycas beddomei, biflavonoid from 319
 Cyclitols, from *Marsdenia* leaves 1297
 Cyclohexenes, polyoxygenated, from *Uvaria* 1063
 Cyclopeptides, from *Annona* seeds 1293
Cyperaceae 1577
Cyperus rotundus, sesquiterpenoids from 1577
 Cystathionine β -lyase, from *Echinochloa* tissue cultures 189
- Dasymaschalon sootepense*, flavonol glycosides from 1393
Datura fastuosa, withanolides from 1427
Delphinium uncinatum, diterpenoid alkaloids from 1141
 3-Demethylthiocolchicine, biotransformation of by *Centella* suspension cultures 743
 Diacylglycerotrimethylhomoserine, distribution of in Basidiomycetes 755
 Diarylheptanoids,
 from *Alpinia* 1117
 from *Platycarya* wood 851
 Dicarboxylic acids, branched and long-chain, from *Equisetum* 1539
Dictamnus dasycarpus,
 antifungal alkaloids and limonoids from 7
 sesquiterpene glycosides from 63
 Digitoxigenin, biotransformation of by *Strophanthus* hybrid cells 1261
 Dihydrochalcone,
 from *Lindera* twigs 891
 retro-, from *Uvaria* bark 1387
 Dihydrophenanthropyran, from *Pleione* 1125
 Dimethoate, effect of on lipid biosynthesis in olive callus cultures 735
 Diterpene acids, from *Spirostachys* 1653
 Diterpenoid
 biosynthesis, in *Croton* 1241
 ketones, from *Hypoestes* 1331
 sulphate, from *Wedelia* 1093
 Diterpenoids.
 abietane, from *Nepeta* 251
 cassane, from *Caesalpinia* 1153
 neo-clerodane,
 from *Ajuaga* 303, 1227
 from *Scutellaria* 135
 daphnane, from *Wikstroemia* 833
 feeding-deterrent,
 from *Ajuaga* 1227
 from *Laurencia* 363
 from *Cephalosporium* 423
 from *Euphorbia* 1309, 1583, 1601, 1611, 1621
 from *Isodon* 307
 from *Salvia* 895, 899
 ent-kaurane, from *Isodon* 1089
 ent-kaurane, from *Rabdosia* 247
 labdane, from *Leonurus* 139, 1149
 9-*epi*-ent-pimarene, biotransformation of by *Gibberella* 211
 taxane, from *Taxus* 69
 tricyclic, from *Halimium* 1545
 Diynoic acid, from *Polyalthia* 131
Dracaena concinna, steroidal saponins from 1351
Dysoxylum schiffneri, sesquiterpenoids from 1421

E

D

- Dahlia variabilis*, hydroxylation of 6'-deoxychalcones by enzymes from 1013

- Ebenaceae* 311
 Ecdysteroid glycoside, from *Silene* 1233
Echinochloa colonum, cystathionine β -lyase from 189
Ekebergia capensis, limonoids from 1357
E. pterophylla, coumarins from 1641
Elaeis guineensis, gibberellin from 331
 Ellagic acid derivatives, from *Platycarya* wood 851
 Ellagitannin, anti-cancer promoting, from *Terminalia* 1567
Emericella, hydrogenated azaphilones from 1131
 Enolases, redox-sensitive, from *Arabidopsis* and *Mesembryanthemum* 707
 Enzymes,
 aspartic proteinase, lectin processing, from *Arabidopsis* seed 1453
 cystathionine β -lyase, from *Echinochloa* 189
 enolases, of *Mesembryanthemum* and *Arabidopsis*, simulated structures of 707

- glutamyl tRNA^{Glu} reductase, from barley, mutations affecting activity of 513
- polyphenol oxidase activity, wound- and methyl jasmonate-induced, in crop plants 507
- proteolytic, from ragweed pollen, involved in allergies 593
- serine protease, from suspension-cultured soybean cells 547
- (-)-Epicatechin glycoside, from *Brosimopsis* 1165
- Equisetaceae 1539
- Equisetum*, branched and long-chain dicarboxylic acids from 1539
- Ericaceae 87
- Eriostemon*, phytochemistry of 163
- Erythrina* × *bidwillii*, isoflavan from 1397
- E. orientalis*, pterocarpan from 475
- Essential oil composition, of *Smyrniun* fruits 1079
- Essential oils,
- from *Piper* leaves 1277
 - from *Thymus*, antifungal activity of against strawberry storage pathogens 1515
 - in *Thymus piperella*, variability of 1271
- Eucalyptus grandis*, phloroglucinol-monoterpene adducts from 1157
- Euclea divinorum*, pentacyclic triterpenes and naphthoquinones from 311
- (+)-Eudesmin biosynthesis, in *Magnolia* 665
- Euphorbia esula*, jatrophan diterpenoids from 1309
- E. paralias*, diterpenes from 1611
- E. peplus*, diterpenes from 1601
- E. segetalis*, diterpenes from 1583
- E. terracina*, jatrophan diterpenes from 1621
- Euphorbiaceae 183, 1241, 1309, 1445, 1461, 1583, 1601, 1611, 1621, 1653
- Evodia lepta*, chromans from 101

F

- (2Z,6Z)-Farnesol, biotransformation of by *Glomerella* 1025
- Fatty acids,
- as substrates for *in vitro* oxylipin synthesis 599
 - biotransformation of, by *Chlorella* 1465
 - in *Salix*, changes to during frost-hardening 1501
 - methoxy, from *Schizymenia* 761
- Ferrugin, from *Aglaia*, revision of structure of 1163
- Feruloyltyramine, wound-induced accumulation of, in tomato leaves 659
- Filicium decipiens*, saponins from 441
- Flavan-3-ols, from *Pleione* 1125
- Flavanones, isoprenylated, from *Morus* 273
- Flavones, 8-hydroxylated, from *Becium* 779
- Flavonoid
- aglycones, from *Helichrysum* 1441
 - glycosides,
 - acylated, from *Glycyrrhiza* 287
 - insect feeding-deterrent, from *Alliaria* 1237
- Flavonoids,
- from *Alpinia* 1117
 - from *Murraya* fruits 393
 - from *Pseudotsuga* 845
 - from red onion 281
 - from *Wedelia* 1093
 - isoprenylated, from *Glycyrrhiza* hairy root cultures 389
 - polyoxygenated, ¹³C NMR spectral assignment of A-ring of 865
 - prenylated, from *Artocarpus* 875
- Flavonol glycosides,
- acylated, from *Laurus* leaves 821
 - from *Dasymaschalon* 1393
 - from *Pteridium* 911
- Flavonols,
- monoisoprenylated, from *Vellozia* 471
 - sulphated, from *Leea* 1171

- Fragaria ananassa*, antifungal activity of *Thymus* oil against storage pathogens of 1515
- Fraxinus oxycarpa*, secoiridoid glucosides from 1569
- Fungi 211, 323, 423, 567, 755, 935, 961, 985, 1025, 1029, 1131, 1515
- naphthoquinones produced by 935
- Furanocoumarins, phytoalexins, from *Glehnia* 13

G

- Garcinia atroviridis*, xanthone from 1167
- G. cambogia*, xanthone from 1169
- Gentiana tibetica*, secoiridoid glycosides and antifungal anthranilate from 1223
- Gentianaceae 1223
- Geraniaceae 355
- Geranylgeraniol-18-hydroxylase, in *Croton* 1241
- Gesneriaceae 315
- Gibberella fujikuroi*, biotransformation of 9-*epi-ent*-pimarane diterpene by 211
- Gibberellin 3 β -hydroxylase, from pumpkin, inhibition of by acylcyclohexanediones 679
- Gibberellins,
- from *Anemia* gametophyte culture extracts 1449
 - from *Matthiola* 3
 - from spinach and oil palm 331
 - in wheat with different dwarfing alleles 671
 - metabolism of in maize 635
- Glehnia littoralis*, furanocoumarins as phytoalexins from 13
- Gliricidia sepium*, isoflavonoids and pterocarpan from 117
- Glomerella cingulata*, biotransformation of (2Z,6Z)-farnesol by 1025
- Glucosides, from *Maytenus* 265
- Glutamine supply, effect of on nitrate reductase isoforms in maize seedlings 701
- Glutamyl tRNA^{Glu} reductase, in barley, mutations of affecting activity 513
- Glycine max*, serine protease from 547
- Glycoglycerolipids, haemolytic, from *Gymnodinium* 783
- Glycoproteins, hydroxyproline-rich, in plants 483
- Glycyrrhiza glabra*, isoprenylated flavonoids from 389
- G. uralensis*, acylated flavonoid glycosides from 287
- Goniothalamus arvensis*, styryl-pyrones from 1375
- Gonocaryum calleryanum*, secoiridoid from 1073
- Gossypium barbadense*, infected with *Verticillium*, enzymatic cyclization of nerolidyl
- diphosphate in 961
- G. hirsutum*, synthesis and release of volatiles by after insect damage 521
- Gramineae 189, 513, 635, 671, 701, 969, 997, 1247
- Guttiferae 773, 1041, 1051, 1167, 1169, 1363, 1367, 1431, 1661
- Gymnodinium*, haemolytic glycoglycerolipids from 783

H

- Halimium viscosum*, tricyclic diterpenes from 1545
- Hedyotis hedyotideae*, iridoids from 1657
- Helianthus tuberosus*, biotransformation of racemic acetates by 1531
- Helichrysum cassianum*, flavonoid aglycones and thiophene from 1441
- Hepaticae 89, 237
- Hevea brasiliensis*, lectin from 183
- ³-*trans*-Hexadecanoic acid, absence of from regreened spathe thylakoid membranes
- of *Zantedeschia* 979
- Hibiscus syriacus*, naphthalenes from 799
- Hordeum vulgare*, mutations of glutamyl tRNA^{Glu} reductase from 513
- Hyacinthaceae 429

Hydroxyanthranilate hydroxycinnamoyl transferase activity, in oats 969
p-Hydroxybenzoyloxy glucose, from *Crescentia* fruits 259
Hypericum patulum, phloroglucinol derivative from 1041
Hypoestes forskalei, diterpene ketones from 1331

I

Icacinaceae 1073
 Illiciaceae 301
Illicium dunnianum, new class of sesquiterpenes from 301
 Invertase, from *Tropaeolum*, essential groups at active site of 1189
Ipomoea batatas peroxidase, overproduction of in transgenic tobacco plants 695
I. hederifolia, pyrrolizidine alkaloids from 1551
 Iridaceae 861
 Iridoid glucosides,
 from *Nepeta* 1067
 from *Nuxia*, biosynthesis of 1007
 Iridoids,
 from *Alberta* 991
 from *Hedyotis* 1657
 from *Osmanthus* 825
Isochrysis galbana, acyl lipids from 1473
Isodon eriocalyx, diterpenoids from 307
I. melissoides, diterpenoids from 1089
 Isoflavans,
 from *Erythrina* 1397
 prenylated, from *Maackia* 903
 Isoflavones,
 antidipsotropic, from *Pueraria* roots 499
 from *Millettia* bark 295
 O-geranylated, from *Millettia* bark 113
 5-hydroxy-, bacterial biotransformation of 1045
 Isoflavonoids, from *Gliricidia* 117
Iva frutescens, eudesmanes from 411

J

Jasmonic acid conjugate, from *Petunia* pollen 327
 Juglandaceae 851

K

Khaya senegalensis, tetranortriterpenoids from 1423
Kielmeyera coriacea, xanthonenes, triterpenes and biphenyl from 1367
K. reticulata, coumarins from 1363
Kopsia griffithii, alkaloids from 145

L

Labiatae 135, 139, 247, 251, 303, 307, 779, 895, 899, 1067, 1089, 1149, 1227, 1271, 1515
Lactuca sativa, leaf waxes from 1489
Laggera alata, eudesmane sesquiterpenes from 1085
 Lardizabalaceae 467
 Lauraceae 821, 891
Laurencia saitoi, diterpenoid feeding deterrents from 363
Laurus nobilis, acylated flavonol glycosides from 821
 Lectin,
 from *Artocarpus* seeds 1183
 from *Hevea* bark 183
Leea guineensis, sulphated flavonol from 1171
 Leeaceae 1171
 Leguminosae 53, 113, 117, 121, 197, 287, 295, 389, 475, 499, 539, 547, 903, 1153, 1207, 1397, 1483

Lemma paucicostata, phytotoxicity of ceramide synthase inhibitors to 1509

Lemnaceae 1509

Leonurus cardiaca, labdane diterpenoids from 139, 1149

Lepidimic acid, from germinating *Arabidopsis* seeds 1

Lichenes 1649

Lignans,

 antifungal, from *Viola* arils 1003

 antioxidant, biosynthesis of in sesame seeds 583

 7,9'-epoxy-, from *Zanthoxylum* 1437

 from *Piper* stems 1435

 furofuran, biosynthesis of in *Magnolia* 665

Lignin, from *Picea* cultures, ¹³C labelling of 1495

Ligularia duciformis, coniferyl and sinapyl alcohol derivatives from 269

Liliaceae 887

Limonoids,

 antifungal, from *Dictamnus* 7

 from *Azadirachta* 1283

 from *Ekebergia* 1357

Linalool, biotransformation of by *Aspergillus* 1029

Lindera lucida, dihydrochalcone from 891

Lipid

 biosynthesis,

 in *Brassica*, effect of heat shock on 1195

 in olive callus cultures, effect of dimethoate on 735

 peroxidation, involvement of, in salicylic acid-mediated

 induction of *PR-1* gene

 expression 555

Lipids,

 acyl-, from microalgae 1473

 in *Vigna* cells, effect of temperature on 1483

Lithospermum erythrorhizon, brown benzoquinone from

 hairy root cultures of 1037

Lunaria annua, lunarine biosynthesis in 375

Lycopersicon,

 oxidatively-coupled tyrosine trimer from cell walls of 349

 wound-signalling action of systemin analogues in 605

L. esculentum,

 optimization of extraction and immunodetection of β -tub-

 ulin from 689

 wound-induced accumulation of phenolics in 659

Lygodium circinnatum, gibberellin-like antheridiogen from

 1177

M

Maackia tenuifolia, prenylated isoflavans from 903

Magnolia kobus, (+)-eudesmin biosynthesis in 665

M. virginiana, sesquiterpenes from 221

Magnoliaceae 221, 665

Malvaceae 521, 799, 961

Mammea siamensis, xanthonenes from 1661

Marsdenia tomentosa, cyclitols and their glycosides from

 1297

Matthiola incana, gibberellin GA₁₂ from 3

Maytenus ilicifolia, glucosides from 265

Meliaceae 1163, 1283, 1357, 1421, 1423, 1631, 1641

Mesembryanthemum crystallinum, redox-sensitive enolases

 from 707

9-(Methylsulphonyl)nonanenitrile, from CuCl₂-treated *Ror-*

ippa 1219

Micrococcus, biotransformation of isoflavones by 1045

Microcystins, containing dehydrobutyrine, from *Nostoc*

 1289

Millettia conraui, *O*-geranylated isoflavones from 113

M. usaramensis, rotenoids, isoflavones and chalcones from

 295

Monosaccharides,

 from *Anadenanthera* gum 1207

 in *Anacardium* gum exudate 715

Monoterpene

biosynthesis, constitutive and induced, in *Abies*, variation of 577
 cyclic peroxide, from *Artemisia* 1417
 glucoside, from *Paeonia* roots 1303
Moraceae 273, 875, 1165, 1183, 1381
Morus cathayana, isoprenylated flavanones from 273
Murraya paniculata, flavonoids from 393
Musa acuminata, homology of protein from to acidic chitinases 613
M. sapientum, cycloartane triterpenes from 1107
Musaceae 613, 1107
Myristicaceae 1003
Myrtaceae 1157

N

Naphthalenes, from *Hibiscus* root bark 799
 Naphthoquinone metabolites, produced by fungi 935
 Naphthoquinones,
 from *Euclea* 311
 meroterpenoid, antifungal and larvicidal, from *Cordia* roots 729
 Naphthoxirene, from *Cordia* roots 729
Nepeta grandiflora, iridoid glucosides from 1067
N. teydea, abietane diterpenes from 251
 Nerolidyl diphosphate, in cotton stele tissue infected by *Verticillium*, enzymatic cyclization of 961
 NH_4^+ metabolism, in *Chlorella*, effect of light and dark on 177
 Nickel, hyperaccumulation, complexation and distribution of in *Sebertia* 339
Nicotiana tabacum,
 action of benzothiadiazole as a salicylic acid analogue in 651
 overproduction of sweet potato peroxidases in transgenic plants of 695
 Nitrate reductase isoforms, in maize seedlings, effect of glutamine supply on 701
 Nortriterpenes, spirocyclic, from *Veltheimia* bulbs 429
Nostoc, dehydrobutyrine-containing microcystins from 1289
Nuxia, biosynthesis of iridoid glucosides in 1007
Nyctaginaceae 1561

O

Oblonginine, from *Veratrum*, reassignment of stereochemistry of 887
Olea europaea,
 effect of dimethoate on lipid biosynthesis in 735
 volatiles from callus cultures of 1253
Oleaceae 735, 825, 1253, 1569
 Oligo-*N*-acetylchitoooligosaccharides, induction of hydroxyanthranilate hydroxycinnamoyl transferase activity by 969
 Oligosaccharide polyesters, from *Polygala* roots 45
 Oligosaccharides,
 from *Anadenanthera* gum 1207
 in *Anacardium* gum exudate 715
Onopordon, sesquiterpene lactones from 415
Orchidaceae 855, 1125, 1637
Oryza sativa, alkylresorcinols from 1247
Osmanthus austrocaledonica, monoterpene alkaloids, iridoids and phenylpropanoid glucosides from 825
 12-Oxo-phytodienoic acid, quantitation of in *Bryonia* and *Phaseolus* 539
 Oxylipins,
 pentacyclic, biological activity and biosynthesis of 527
 rapid assay for coupled *in vitro* synthesis of 599

P

Paashanolactone, from *Bergenia* 907
 Paclitaxel analogues, from *Taxus* 1325
Paeonia peregrina, monoterpene glucoside from 1303
Paeoniaceae 1303
Palmae 331
Panax ginseng, anticomplementary activity of saponins from 397
Papaver somniferum, glucosylation of silybin by cultures of 217
Papaveraceae 217, 879
Passiflora foetida, cyanohydrin glycosides from 1049
Passifloraceae 1049
Pedaliaceae 583
Pelargonium, pigment chemistry and flower colour of 355
Pellia epiphylla, terpenoids from 237
Penicillium,
 inhibition of by 7-geranoxycoumarin from *Citrus* 1521
 plant growth regulator from 323
P. fellutanum, release of phosphoglycopeptide by heat shock treatment of 567
 Penidienone, from *Penicillium* 323
 Peroxidases, overproduction of in transgenic tobacco plants 695
Petasites japonicus, eremophilane sesquiterpenes from 401
Petunia hybrida,
 diacylated anthocyanins from 1409
 N-[(-)-jasmonoyl]-tyramine from pollen of 327
Phaeodactylum tricornutum, acyl lipids from 1473
Phaseolus vulgaris, quantitation of 12-oxo-phytodienoic acid in 539
Phebalium, phytochemistry of 163
 Phenanthrenes, dimeric, from *Agrostophyllum* 855
 Phenolic glycoside, from *Stauntonia* 467
 Phenolics, wound-induced accumulation of, in tomato leaves 659
 Phenylalkynes, from *Artemisia* 1645
 Phenylpropanoid glycosides, from *Osmanthus* 825
 Phloracetophenone glucoside, from *Rhododendron* 87
 Phloroglucinol derivative, from *Hypericum* cultures 1041
 Phloroglucinol-monoterpene adducts, from *Eucalyptus* 1157
 Phosphatidylcholine, distribution of in Basidiomycetes 755
 Phosphoglycopeptide, from *Penicillium*, release of by heat shock treatment 567
 Photosystem II, heterogeneity of revealed by thermoluminescence technique 641
 Phytosterols, oxidized, from *Chenopodium*, cytotoxicity of to mealworms 789
Picea abies, lignin labelling in cultures of 1495
P. jezoensis, serratane triterpenes from 839
 Pigment chemistry, of *Pelargonium* flower colour 355
Pinaceae 577, 839, 845, 1201, 1495
Pinus halepensis, cell-wall biosynthesis in root tips of 1201
Piper, essential oils from 1277
P. chaba, lignan from 1435
Piperaceae 1277, 1435
 Plant growth regulator, from *Penicillium* 323
Plantaginaceae 1161, 1489
Plantago major, leaf waxes from 1489
P. myosuros, caffeoyl phenylethanoid glycoside from 1161
Platycarya strobilacea, ellagic acid derivatives and diarylheptanoid from 851
 Plaunotol biosynthesis, in *Croton* 1241
Pleione bulbocodioides,
 flavanols and dihydropheanthropyranes from 1125
 polyphenol and bibenzyls from 1637
Pluchea quitoc, eudesmane sesquiterpenoids from 227
Polyalthia erecta, diynoic acid from 131
Polygala glomerata,
 oleanane saponins from 459
 oligosaccharide polyesters from 45
Polygalaceae 45, 459
 Polyphenol, from *Pleione* 1637

Polyphenol oxidases, wound- and methyl jasmonate-induced, from crop plants 507
 Polysaccharide gum, from *Acacia* 53
 Polysaccharides,
 from *Anadenanthera* gum 1207
 in *Anacardium* gum exudate 715
Polyscias fruticosa, oleanane saponins from 451
Porphyridium cruentum, acyl lipids from 1473
 Proteins,
 antiviral, from *Bougainvillea* roots 1561
 glyco-, hydroxyproline-rich, from plants 483
Prunus, amygdalin from leaves of 1537
Pseudotsuga wilsoniana, terpenoids and flavonoids from 845
Pteridium aquilinum, kaempferol glycoside from 911
 Pteridophyta 911, 1177, 1449
 Pterocarpanes,
 from *Erythrina* 475
 from *Gliricidia* 117
Pueraria lobata, antidipsotropic isoflavones from 499
 Pulcherosine, role of in cross-link formation of tomato cell walls 349
Pulsatilla cernua, acylated pelargonidin diglycoside from 105
 Pyrones, styryl-, from *Goniotalamus* 1375
 Pyrrophyta 783
Pyrus pyrifolia, induction of 3,5-di-*O*-caffeoylquinic acid in black spot infected leaves of 371

Q

R

Rabdosa leucophylla, ent-kaurene diterpenoids from 247
 (+)-Rangiformic acid, from *Cladia*, structural revision of 1649
 Ranunculaceae 105, 437, 1141
Raphanus sativus, raphanusanin formation as an artefact in 975
 Raphanusanins, formation of by methanol extraction 975
 Rhamnaceae 125
Rhododendron ferrugineum, phloracetophenone glucoside from 87
 Rhodophyta 363, 761, 1473
Rhynchoetechum vestitum, anthraquinones from 315
Ricinus communis, ricinine in phloem sap of 1461
Rorippa sylvestris, stress metabolite from 1219
Rosa damascena, aroma precursor from 1527
 Rosaceae 371, 1515, 1527, 1537
 Rotenoid glycoside, from *Clitoria* 121
 Rotenones, from *Milletia* bark 295
 Rubiaceae 991, 1215, 1657
 Rutaceae 7, 63, 101, 163, 393, 1437, 1521
 from Australia, terpenoids, alkaloids and coumarins of 163

S

Salicaceae 1501
Salix viminalis, fatty acid and alkane changes in during frost-hardening 1501
Salvia chinopeplia, abietane diterpenoids from 895
S. multicaulis, di- and triterpenoids from 899
 Sanguilutine, structure and transformation of 879
Sanguinaria canadensis, transformation of alkaloid from 879
 Sapindaceae 441
 Sapogenins, steroidal, spirostane, ¹H NMR spectral determination of 25*R*- and 25*S*-stereochemistry of 255
 Saponins,
 from ginseng, anticomplementary activity of 397
 steroidal,

 from *Cordyline* 79
 from *Dracaena* stems 1351
 triterpenoid,
 from *Filicium* bark 441
 from *Vaccaria* 143, 1343
 oleanane,
 from *Polygala* 459
 from *Polyscias* 451
 from *Thalictrum* 437
 Sapotaceae 339
 Saxifragaceae 907
Schizymenia dubyi, methoxy fatty acids from 761
 Scopolamine, intergeneric co-culture of genetically transformed organs for production of 17
Scutellaria seleriana, neo-clerodane diterpenoid from 135
Scutia buxifolia, cyclopeptide alkaloids from 125
Sebertia acuminata, hyperaccumulation, complexation and distribution of nickel in 339
 Secoiridoid glycosides,
 from *Fraxinus* 1569
 from *Gentiana* 1223
 from *Gonocaryum* 1073
Senecio auricola, furanoterpenes and bakkenolide from 57
S. vulgaris, biosynthesis of pyrrolizidine alkaloids in 1017
 Serine protease, from suspension-cultured soybean cells 547
Sesamum indicum, biosynthesis of antioxidant lignans in 583
 Sesquiterpene dimer and trimer, from *Chloranthus* 231
 Sesquiterpene lactones,
 antibacterial, from *Centipeda* 631
 from *Onopordon* 415
 from *Vernonanthura* 425
 germacranolides, from *Artemisia* 1417
 Sesquiterpene
 glycosides, from *Dictamnus* 63
 spiro compounds, from fungus-infected potato tubers 985
 Sesquiterpenoids,
 dunniane, from *Illicium* 301
 eremophilane, from *Petasites* rhizomes 401
 eudesmane,
 from *Iva* 411
 from *Laggera* 1085
 from *Pluchea* 227
 from *Cyperus* 1577
 from *Dysoxylum* 1421
 from *Magnolia* 221
 from *Senecio* 57
Silene tatarica, phytoecdysteroid glycoside from 1233
 Silybin glucosylation, by *Papaver* cultures 217
 Sinapyl alcohol derivatives, from *Ligularia* 269
Smyrnum perfoliatum, essential oil composition of fruits of 1079
 Solanaceae 17, 109, 203, 327, 349, 599, 605, 651, 659, 689, 695, 985, 1409, 1427, 1531
Solanum, effect of alkaloids from on insect larvae 203
S. tuberosum,
 acylated pelargonidin glycosides from 109
 biotransformation of racemic acetates by 1531
 sesquiterpene spiro compounds from fungus-infected tubers of 985
Sorghum bicolor, antifungal benzoquinone from 997
Spinacia oleracea, gibberellin from 331
Spirostachys africana, diterpene acids from 1653
Stauntonia hexaphylla, phenolic glycoside and triterpenoids from 467
 Steroidal glycosides, from *Vernonia* 73
 Stilbenes, from *Alpinia* 1117
 Stress metabolite, from *Rorippa* 1219
Strophanthus, biotransformation of digitoxigenin by 1261
 Suberized tissue, macromolecular aromatic domain of 915
 Sucrose esters, from *Polygala* roots 45
 Systemic plant defence, by induction of polyphenol oxidase 507

Systemin analogues, proteolysin-resistant, wound-signalling action of 605

T

- Taxaceae 69, 817, 1315, 1325
 Taxanes, from *Taxus* bark 1315
 Taxodiaceae 767
 Taxoids, from *Taxus* 817
Taxus baccata,
 paclitaxel analogues from 1325
 taxoids from 817
T. brevifolia, taxanes from 1315
T. chinensis, taxane diterpenoid from 69
Terminalia arjuna, anti-cancer promoting ellagitannin from 1567
 Terpenoids,
 from *Alpinia* 1117
 from *Boronia*, *Eriostemon* and *Phebalium* 163
 from *Pellia* 237
 from *Pseudotsuga* 845
 Tetrahydroanthracene glucosides, from *Aloe* leaves 1267
Thalictrum minus, oleanane glycoside from 437
 Theaceae 1535
 Theobromine formation, by *Camellia* tissue cultures 1535
 Thermoluminescence technique, revealing heterogeneity in photosystem II energetics 641
 13-Thiaoleic acid, sulfoxidation of by *Chlorella* 1465
 Thiophene, from *Helichrysum* 1441
 Thylakoid membrane, in *Zantedeschia*, reorganization of 979
 Thymeliaceae 833
Thymus piperella, essential oil variability in 1271
T. vulgaris, antifungal essential oils from 1515
 Triacylglycerols, from *Vernonia* seed oil 723
 Triterpenoids,
 cycloartane, from banana peel 1107
 from *Kielmeyera* 1367
 from *Salvia* 899
 from *Stauntonia* 467
 oleanane, from *Viburnum* 1101, 1337
 pentacyclic, from *Euclea* 311
 serratane, from *Picea* stem bark 839
 tetracyclic, from *Azadirachta* fruit coats 1631
 tetrano-, from *Khaya* 1423
Triticum aestivum, gibberellins in cultivars of with different dwarfing alleles 671
 Tropaeolaceae 1189
Tropaeolum majus, essential groups at active site of invertase from 1189
 β -Tubulin, from tomato, optimization of extraction and immunodetection of 689
 Tyrosine trimer, oxidatively coupled, from *Lycopersicon* cell walls 349

U

- Umbelliferae 13, 743, 1079
Uvaria grandiflora, polyoxygenated cyclohexenes from 1063
U. mocoi, retrodihydrochalcone from 1387

V

- Vaccaria segetalis*, triterpenoid saponins from 143, 1343
Vellozia graminifolia, monoisoprenylated flavonols from 471
 Velloziaceae 471
Veltheimia viridifolia, spirocyclic nortriterpenes from 429
Veratrum oblongum, reassignment of stereochemistry of oblonginine from 887
Vernonanthura squamulosa, sesquiterpene lactones from 425
Vernonia galamensis, triacylglycerols from 723
V. kotschyana, steroidal and androstane glycosides from 73
Viburnum awabuki, oleanane triterpenes from 1101, 1337
Vigna angularis, effect of growth temperature on lipids in 1483
Vinca sardoa, indole alkaloids from 149
Virola oleifera, antifungal lignans from 1003
 Vitaceae 1137, 1401
Vitis vinifera, biphenyl-linked biflavonoids from pomace of 1137
 Volatiles,
 from olive callus cultures 1253
 from *Zostera* 27
 synthesis and release of after insect damage of *Gossypium* 521

W

- Waxes, from *Lactuca* and *Plantago* leaves 1489
Wedelia asperima, diterpenoid sulphate and flavonoids from 1093
Wikstroemia retusa, daphnane diterpenoids from 833
 Wine pigments, new class of 1401
 Withanolides, from *Datura* flowers 1427

X

- Xanthones,
 from *Garcinia* 1167, 1169
 from *Kielmeyera* 1367
 from *Mammea* twigs 1661
 Xyloglucan, from xylem-differentiating zones of *Cryptomeria* 767

Y

Z

- Zantedeschia aethiopica*, thylakoid membrane reorganization in 979
Zanthoxylum culantrillo, 7,9'-epoxy lignan from 1437
Zea mays,
 effect of glutamine supply on nitrate reductase isoforms in 701
 metabolism of gibberellin GA₃ in 635
 Zingiberaceae 1117
Zostera marina, volatiles from 27
 Zosteraceae 27