

Table S2 Annotation of metabolite KEGG function			
Pathway_level1	Pathway_level2	Number_of_Metabolites	Metabolites
Environmental Information Processing	Membrane transport	10	L-(+)-Arginine;L-Isoleucine;Spermidine;5-Aminolevulinic acid;D-(+)-Glucose;D-(+)-Trehalose;D-(+)-Xylose;L-Aspartic acid;L-Histidine;L-
	Signal transduction	4	Indole-3-acetic acid;trans-Zeatin;Gibberellin A4;Salicylic acid
Genetic Information Processing	Folding, sorting and degradation	2	S-Adenosylmethionine;L-Cysteine
	Translation	9	L-(+)-Arginine;L-(-)-Methionine;L-Aspartic acid;L-Histidine;L-Isoleucine;L-Phenylalanine;L-Tryptophan;L-Tyrosine;L-Cysteine;
	Amino acid metabolism	38	2-Hydroxycinnamic acid;3,4-Dihydroxyphenylpropionic acid;5'-S-Methyl-5'-thioadenosine;6-Hydroxymelatonin;Indole-3-acetic acid;L-(+)-Arginine;L-(+)-Citrulline;L-(-)-Methionine;L-Aspartic acid;L-Dopa;L-Histidine;L-Isoleucine;L-Phenylalanine;L-Tryptophan;N6,N6,N6-Trimethyl-L-lysine;Pipicolinic acid;S-Adenosylmethionine;Spermidine;Spermine;Tyramine;2-Isopropylmalic acid;2-Ketobutyric acid;2-Oxoglutaric acid;3-Amino-3-(4-hydroxyphenyl)propanoic acid;3-Phenyllactic acid;4-(Acetylamino)butanoic acid;4-Coumaric acid;4-Oxoproline;5-Aminolevulinic acid;Citric acid;Fumaric acid;L-Cysteine;L-Tyrosine;N-Acetyl-L-
	Biosynthesis of other secondary metabolites	28	(+)-Magnoflorine;2-Hydroxycinnamic acid;3,4-Dihydroxybenzaldehyde;Caffeine;Coumarin;Cytisine;Ferulaldehyde;L-(+)-Arginine;L-(-)-Methionine;L-Aspartic acid;L-Dopa;L-Isoleucine;L-Phenylalanine;L-Tryptophan;L-Tyrosine;Pipicolinic acid;S-Adenosylmethionine;Spermidine;Tyramine;trans-Cinnamaldehyde;1,3,7-Trimethyluric acid;3-Phenyllactic acid;4-Coumaric acid;7-Methylxanthine;Eleutheroside B/Syringin;Ferulaldehyde;Ferulic
	Carbohydrate metabolism	19	D-(+)-Glucosamine;2-Isopropylmalic acid;2-Ketobutyric acid;2-Oxoglutaric acid;Ascorbic acid;Citric acid;D(-)-Salicin;D-(+)-Galactose;D-(+)-Glucose;D-(+)-Trehalose;D-(+)-Xylose;D-(-)-Lyxose;Fumaric acid;Gluconic acid;Isocitric acid;Mucic acid;S-Lactoylglutathione;Succinic acid;trans-
	Energy metabolism	4	L-Aspartic acid;Fumaric acid;L-Cysteine;Succinic acid

Metabolism

Global and overview maps	80	(+)-Magnoflorine; 16 α -Hydroxyestrone; 2'-Deoxyadenosine; 2-Amino-1,3,4-octadecanetriol; 2-Hydroxycinnamic acid; 4-(Acetylamino)butanoic acid; 4-Hydroxybenzoic acid; 5'-S-Methyl-5'-thioadenosine; 5,6-Dimethylbenzimidazole; 6-Ketoprostaglandin F1 α ; Adenosine; Caffeine; Corticosterone; Coumarin; Cytisine; D-(+)-Glucosamine; D-Glutamic acid; Desoxycortone; Estriol; Guanosine; Indole-3-acetic acid; L-(+)-Arginine; L-(+)-Citrulline; L-(-)-Methionine; L-Dopa; L-Isoleucine; L-Pyroglutamic acid; L-Tryptophan; Matairesinol; Prostaglandin J2; Pyridoxine; S-Adenosylmethionine; Spermidine; Spermine; Tyramine; Vindoline; Zeatin-7-N-glucoside; trans-Cinnamaldehyde; trans-Zeatin; α -Linolenic acid; 16-Hydroxyhexadecanoic acid; 2-Isopropylmalic acid; 2-Ketobutyric acid; 2-Oxoglutaric acid; 4-(Acetylamino)butanoic acid; 4-Coumaric acid; 4-Oxoproline; 5-Aminolevulinic acid; 7-Methylxanthine; Adenine; Adenosine 5'-monophosphate; Ascorbic acid; Citric acid; D-(+)-Galactose; D-(+)-Glucose; D-(+)-Trehalose; D-(+)-Xylose; D-(-)-Glutamine; Ferulaldehyde; Ferulic acid; Fumaric acid; Gibberellin A4; Gluconic acid; Isocitric acid; L-Aspartic acid; L-Cysteine; L-Histidine; L-Phenylalanine; L-Tyrosine; Loganic
Lipid metabolism	14	(+/-)12(13)-DiHOME; 12-Oxo phytodienoic acid; 13-OxoODE; 2,3-Dinor-8-epi-prostaglandin F2 α ; 2-Amino-1,3,4-octadecanetriol; 6-Ketoprostaglandin F1 α ; 9-Oxo-10(E),12(E)-octadecadienoic acid; 9-Oxo-ODE; Palmitoleic acid; Prostaglandin J2; Stearic acid; α -Linolenic acid; 13(S)-HOTrE; 16-Hydroxyhexadecanoic acid
Metabolism of cofactors and vitamins	12	4-Hydroxybenzoic acid; 5,6-Dimethylbenzimidazole; L-Aspartic acid; L-Tyrosine; Pyridoxine; Trigonelline; 4-Coumaric acid; 5-Aminolevulinic acid; Fumaric acid; L-Cysteine; Porphobilinogen; Succinic acid
Metabolism of other amino acids	11	L-Aspartic acid; L-Histidine; L-Isoleucine; L-Phenylalanine; L-Pyroglutamic acid; L-Tyrosine; Spermidine; Spermine; 2-Oxoglutaric acid; Ascorbic acid; L-
Metabolism of terpenoids and polyketides	8	5'-S-Methyl-5'-thioadenosine; Adenine; S-Adenosylmethionine; Zeatin-7-N-glucoside; trans-Zeatin; Adenosine 5'-monophosphate; Gibberellin A4; Loganic
Nucleotide metabolism	9	2'-Deoxyadenosine; 3'-Adenosine monophosphate (3'-AMP); Adenine; Adenosine; Guanosine; denosine 5'-monophosphate; Thymidine; Uridine; Xanthosine