A KEGG pathway annotation

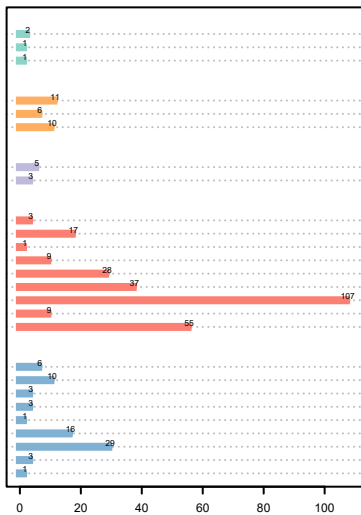Cellular Processes
- Cellular community – eukaryotes — 2
- Cell motility — 1
- Cell growth and death — 1

Environmental Information Processing
- Signaling molecules and interaction — 11
- Signal transduction — 6
- Membrane transport — 10

Genetic Information Processing
- Translation — 5
- Folding, sorting and degradation — 1

Metabolism
- Xenobiotics biodegradation and metabolism — 3
- Nucleotide metabolism — 17
- Metabolism of terpenoids and polyketides — 1
- Metabolism of other amino acids — 11
- Metabolism of cofactors and vitamins — 28
- Lipid metabolism — 37
- Global and overview maps — 107
- Carbohydrate metabolism — 8
- Amino acid metabolism — 55

Organismal Systems
- Sensory system — 6
- Nervous system — 10
- Immune system — 3
- Excretory system — 3
- Environmental adaptation — 1
- Endocrine system — 16
- Digestive system — 29
- Circulatory system — 3
- Aging — 1

B KEGG pathway annotation

Cellular Processes
- Cellular community – eukaryotes — 1
- Cell growth and death — 4

Environmental Information Processing
- Signaling molecules and interaction — 4
- Signal transduction — 5
- Membrane transport — 6

Genetic Information Processing
- Translation — 5

Metabolism
- Xenobiotics biodegradation and metabolism — 2
- Nucleotide metabolism — 15
- Metabolism of terpenoids and polyketides — 1
- Metabolism of other amino acids — 9
- Metabolism of cofactors and vitamins — 18
- Lipid metabolism — 21
- Global and overview maps — 86
- Energy metabolism — 4
- Carbohydrate metabolism — 20
- Biosynthesis of other secondary metabolites — 7
- Amino acid metabolism — 42

Organismal Systems
- Sensory system — 3
- Nervous system — 7
- Immune system — 4
- Excretory system — 2
- Environmental adaptation — 1
- Endocrine system — 10
- Digestive system — 30
- Circulatory system — 3
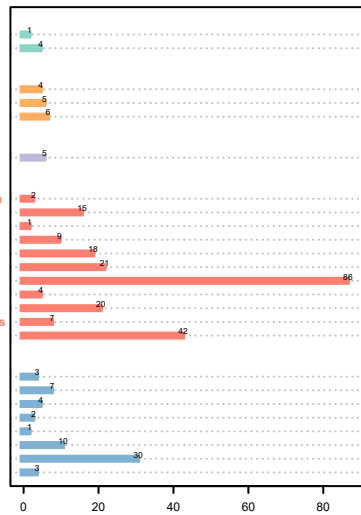
C Lipidmaps annotation

Fatty Acyls [FA]
- Octadecanoids [FA02] — 1
- Fatty esters [FA07] — 5
- Fatty amides [FA08] — 10
- Fatty alcohols [FA05] — 4
- Fatty Acids and Conjugates [FA01] — 12
- Eicosanoids [FA03] — 9

Glycerolipids [GL]
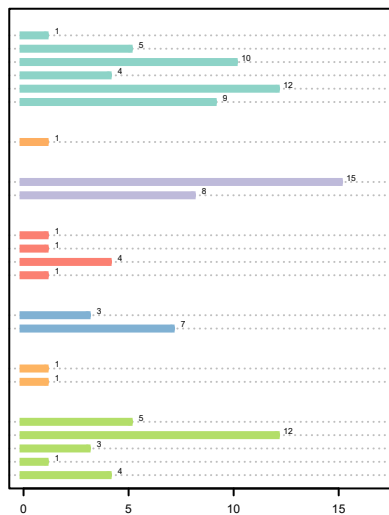- Monoradylglycerols [GL01] — 1

Glycerophospholipids [GP]
- Glycerophosphoethanolamines [GP02] — 15
- Glycerophosphocholines [GP01] — 8

Polyketides [PR]
- Linear tetracyclines [PK07] — 1
- Flavonoids [PK12] — 4
- Aromatic polyketides [PK13] — 1

Prenol Lipids [PR]
- Quinones and hydroquinones [PR02] — 3
- Isoprenoids [PR01] — 7

Sphingolipids [SP]
- Sphingoid bases [SP01] — 1
- Ceramides [SP02] — 1

Sterols [ST]
- Sterols [ST01] — 5
- Steroids [ST02] — 12
- Steroid conjugates [ST05] — 3
- Secosteroids [ST03] — 1
- Bile acids and derivatives [ST04] — 4

D Lipidmaps annotation

Fatty Acyls [FA]
- Octadecanoids [FA02] — 4
- Fatty amides [FA08] — 1
- Fatty Acids and Conjugates [FA01] — 19
- Eicosanoids [FA03] — 8
- Docosanoids [FA04] — 2

Glycerophospholipids [GP]
- Glycerophosphoserines [GP03] — 6
- Glycerophosphoinositols [GP06] — 2
- Glycerophosphoglycerols [GP04] — 9
- Glycerophosphoethanolamines [GP02] — 9
- Glycerophosphocholines [GP01] — 17
- Glycerophosphates [GP10] — 3

Polyketides [PR]
- Flavonoids [PK12] — 6
- Aromatic polyketides [PK13] — 1

Sterols [ST]
- Sterols [ST01] — 1
- Steroids [ST02] — 2
- Steroid conjugates [ST05] — 3
- Bile acids and derivatives [ST04] — 4
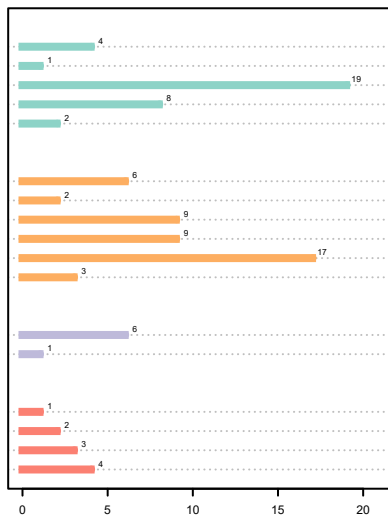
Fig S1 Functional enrichment analysis of differentially expressed metabolites. (A) KEGG pathway enrichment analysis of differential metabolites in ES+. (B) KEGG pathway enrichment analysis of differential metabolites in ES-. (C) Lipidmaps annotation of differential metabolites in ES+. (D) Lipidmaps annotation of differential metabolites in ES-. n = 6 for each group.