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| Supplemental Online Table 1. List of plasma metabolites and biologic pathways which were assayed by mass-spectrometry-based metabolomics in hospitalized subjects on enteral and parenteral nutrition, and healthy volunteers.  |
| **Compound (Metabolite)**  | **Metabolic Pathway** |
| Acetoacetate  | Ketone  |
| Acetylcarnitine | Fatty acid Oxidation |
| Acetylcholine  | Lipids/phospholipids, ligand |
| Aconitate | TCA Cycle |
| Adenine  | Nucleotide/Purine metabolism |
| Adenosine  | Nucleotide/Purine metabolism |
| Adenosine 3 phosphate (ATP) | Nucleotide |
| Adenosine diphosphate (ADP)  | Nucleotide/Purine metabolism |
| Adenosine monophosphate (AMP) | Nucleotide |
| Adenylosuccinate  | Nucleotide/Purine metabolism |
| Adipic Acid  | Caprolactam degradation |
| Agmatine | Polyamine metabolism  |
| Alanine (Ala) | Amino Acid |
| Allantoin  | Nucleotide Degredation |
| Allopurinol |  Nucleotide metabolism (Drug) |
| Alpha-Ketoglutaric Acid | TCA Cycle |
| Aminoisobutyrate  | Amino acids metabolism/Val, Leu, iso-Leu |
| Aminolevulinate | Amino acids metabolism/Gly, Thr,Ser |
| 2-Aminoadipate  | Amino acids metabolism/Lys |
| 5-Aminovalerate | Amino Acid |
| Anthranilate  | Amino Acid metabolism/Trp, Phe, Tyr |
| Arachidonate | Lipids/phospholipids, ligand |
| Arginine  | Amino Acid |
| Ascorbate | Vitamins |
| Ascorbic Acid (Vit. C)  | Vitamin, Cofactor |
| Asparagine (Asp) | Amino Acid |
| Aspartic Acid  | Amino Acids |
| Azelaic Acid  | Fatty Acids and Conjugates |
| Benzoic acid  | Amino Acid (Phenylalanine Metabolism, others) |
| Betaine  | Amino acids metabolism/Gly,Ser, Thr metabolism |
| Biotin  | Vitamins |
| Cadaverine | Amino Acid |
| Carnitine  | Amino acids metabolism/Lys |
| Chenodeoxycholate  | Bile acid metabolism |
| Choline  | Vitamins |
| Citraconic Acid  | Amino Acid metabolism/Val, Leu, IL |
| Citric Acid | TCA Cycle |
| Citrulline  | Urea Cycle  |
| Creatine  | Amino acids metabolism/Arg, Gly |
| Creatinine  | Amino acids metabolism/Arg, Gly |
| Cystamine (Cys) | Amino acids metabolism/Cys |
| Cystathionine  | Amino acids metabolism/cys |
| Cysteine | Amino Acid |
| Cystine  | Amino acids metabolism |
| Cytidine  |  Nucleotide/Pyrimidine metabolism |
| Cytidine 5 monophosphate (CMP)  |  Nucleotide/Pyrimidine metabolism |
| Cytosine (Cyt) | Nucleotide |
| Deoxycarnitine | Lipids/phospholipids, ligand |
| 2-Deoxycytidine Diphosphate (DCDP)  |  Nucleotide/Pyrimidine metabolism |
| Deoxycytidylic acid (DCMP)  | Nucleotide/pyrimidine |
| 2-Deoxyuridine  |  Nucleotide/Pyrimidine metabolism |
| Deoxyuridine 3 phosphate (DUTP) | Nucleotide/pyrimidine |
| Deoxyuridylic acid (DUMP) | Nucleotide/pyrimidine |
| D-Glyceraldehyde-3-phosphate (D-GA3P) | Glycolysis/Glycogenesis |
| Dihydroxy acetone phosphate (DHAP) | Glycolysis/phospholipid |
| Dimethylglycine  | Vitamins |
| Dopamine | Adrenaline Metabolism  |
| D-Leucic Acid  | Amino Acid metabolism/Leu |
| D-Thymidine monophosphate (DTMP) | Nucleic Acid  |
| Epinephrine  | Amino Acid metabolism/Tyr,ligand |
| Erythrose  | Sugar |
| Folic Acid  | One carbon pool by folate |
| Fructose  | Sugar |
| Fructose 1 phosphate (F1P)  | Glycolosis |
| Fructose 1,6 bi-phosphate (F16BP)  | Glycolysis |
| Fructose 2,6 bi-phosphate (F26BP)  | Glycolosis |
| Fructose 6 phosphate (F6P)  | Glycolosis |
| Fumaric Acid  | TCA Cycle |
| Galactose | Sugars |
| gama-Aminobutyrate  | Amino Acid metabolism/Ala, Glu, Asp |
| Geranyl Pyrophosphate |  Ubiquinone and other terpenoid-quinone biosynthesis  |
| Gibberellin  |  Diterpenoid biosynthesis  |
| Glucoronate  | Amino sugar and nucleotide sugar metabolism  |
| Glucosamine  | Amino sugar and nucleotide sugar metabolism |
| Glucose  | Glycolysis/sugar |
| Glucose 1,6 biphosphate (G16BP)  | Glycolysis/Glycogenesis |
| Glucose 1-phosphate (G1P)  | Glycolysis |
| Glucose 6-phosphate (G6P)  | Glycolosis/PPP |
| Glutamic acid (Glu A) | Amino Acid |
| Glutamine (Glu) | Amino Acid |
| Glutaric Acid  | Amino Acids/lys, trp, fatty acids |
| Glyceraldehyde  | Sugar |
| Glycerate | Amino Acid metabolism/Gly, Ser |
| Glycerol-3-P  | Lipids/Glycerollipid |
| Glycine (Gly)  | Amino Acid |
| Glycochenodeoxycholate  | Bile acid metabolism |
| Glycocholate  | Bile acid metabolism |
| Guanidinoacetate  | Amino Acid metabolism/Gly, Ser,Thr |
| Guanosine  | Nucleotide/Purine metabolism |
| Guanosine 3,5 cyclic monophosphate (cGMP)  | Nucleotide/Purine metabolism |
| Guanosine 5 diphosphate (GDP) | Nucleotide/Purine metabolism |
| Guanosine 5 triphosphate (GTP)  | Nucleotide/Purine metabolism |
| Guanosine-5'-monophosphate (GMP) | Nucleotide/Purine metabolism |
| 12-HETE | Lipids/phospholipids, ligand |
| 13-HODE | Lipids/phospholipids, ligand |
| Hippuric Acid | Amino Acid (Phenylalanine Metabolism |
| Hippuric Acid  | Gut flora metabolism  |
| Histamine  | Nucleotide |
| Histidine (His) | Amino Acid |
| Homocysteine  | Amino acids metabolism/Cys, Met |
| Homogentisate  | Amino Acid metabolism/Tyr |
| Homoserine  | Amino acids metabolism/Thr, Met, Asp |
| Homovanillate  | Amino acids metabolism/Tyr,ligand |
| 2-Hydroxyglutarate | Amino-acid metabolism & Glycine/Serine/Threonine metabolism |
| 3-Hydroxybutyric Acid (3HBA ) | TCA Cycle |
| 4-Hydroxybutyric Acid (4HBA) | Lipids/phospholipids, ligand |
| 3-Hydroxyisovaleric Acid | Amino Acid |
| 3-Hydroxykynurenine  | Tryptophan Cycle |
| Hydroxyphenylpyruvate  | Amino acids metabolites/phe, tyr |
| Hydroxyproline | Amino acids metabolism/Pro |
| 5-Hydroxytryptophan  | Tryptophan Cycle |
| 8-Hydroxyguanosine | Nucleotide/Purine metabolism |
| Hypoxanthine  | Nucleotide |
| Inosine  | Nucleotide/Purine metabolism |
| Inosine monophosphate (IMP)  | Nucleotide/Purine metabolism |
| Inositol | Glucose/inositol metabolism |
| isoButyric Acid (2-methylpropanoic acid) | Fatty acid metabolism |
| *iso*-Leucine (*iso*-Leu)  | Amino Acid |
| isoValeric Acid | Amino Acid  |
| Kynurenate  | Amino Acid metabolism/Try |
| lactate  | Glycolysis/TCA |
| Lactose  | Sugar/Galactose |
| Leucine (Leu) | Amino Acid |
| Linoleic Acid  | Fatty acid metabolism |
| Linolenic Acid  | Fatty acid metabolism |
| L-Kynurenine  | Tryptophan Cycle |
| Lysine (Lys) | Amino Acid |
| Malate  | TCA Cycle |
| Maleic Acid  | TCA Cycle |
| Malonic Acid | TCA Cycle |
| Mannose | Sugar/Galactose Metabolism |
| Margaric Acid  | Fatty acid metabolism |
| Melatonin  | Neuroactive ligand |
| Methionine (Met) | Amino Acid |
| 1-Methyladenosine  | Nucleotide/Purine metabolism |
| 1-Methylguanosine  | Nucleotide/Purine metabolism |
| 1-Methylhistamine  | Amino acids metabolism/His |
| 1/3-Methylhistidine  | Amino Acid (Histidine Metabolism) |
| Methyl-OH-isobyturate | Fatty acid metabolism |
| 3-Methyl-2-Oxovaleric Acid | Amino Acid |
| Methylmalonate  | Vitamins |
| MethylSuccinate | Amino Acid metabolism/Isoleu |
| Mevalonate  |  Terpenoid backbone biosynthesis  |
| Myristic Acid  | Fatty acid metabolism |
| N-Carbamoyl-B-Alanine  | Urea cycle |
| N2,N2-Dimethylguanosine | Nucleotide/Purine metabolism |
| N-AcetylGlycine  | Amino Acid metabolism |
| N-acetylneuraminate | Sugars |
| N-acetylputrescine | Polyamine metabolism  |
| Niacinamide  | Vitamins |
| Nicotinate (Niacin)  |  Nicotinate and nicotinamide metabolism  |
| 3-Nitro-tyrosine  | Oxidative Damage |
| Normetanephrin  | Amino Acid metabolism/Tyr,ligand |
| OH-Phenylpyruvate (4-Hydroxyphenylpyruvate) | Amino Acid / Tyrosine metabolism |
| Ornithine  | Urea cycle |
| Orotate  |  Nucleotide/Pyrimidine metabolism |
| Orotidylic acid (OMP) |  Nucleotide/Pyrimidine metabolism |
| Oxalic Acid  |  Glyoxylate and dicarboxylate metabolism  |
| Oxaloacetate  | TCA Cycle |
| Oxidized glutathione  | Oxidative Damage |
| 8-Oxo-2'-deoxyguanosine | Nucleotide/Purine metabolism |
| Oxypurinol |  Nucleotide metabolism |
| Pantothenate  | Amino acids metabolism/alanine, CoA |
| PGE  | Lipids/Arachidonic acid metabolism  |
| Phenylalanine  | Amino Acid |
| Phenylpyruvic acid (PPA) | Amino acids metabolism/Phe |
| Phosphoenolpyruvic Acid (PEP)  | Glycolosis |
| Phosphoribosyl pyrophosphate (PRPP) | Nucleotide/Purine metabolism |
| Phosphotyrosine  | Amino acids metabolism |
| 2-Phosphoglyceric Acid | Glycolosis |
| 3-Phosphoglyceric Acid  | Glycolosis |
| Pipecolate | Amino Acid |
| Proline (Pro) | Amino Acid |
| Propionate  |  Nicotinate and nicotinamide metabolism  |
| Putrescine | Polyamine metabolism  |
| Pyridoxal-5-P | Vitamins/B6 |
| 4-Pyridoxic acid  | Vitamins/B6 |
| Pyroglutamic Acid  | Amino acids/Glu |
| Pyruvate  | Glycolysis/amino acids metabolism |
| Quinolinate | Amino Acid/ Tryptophan, bela alanine metabolism |
| Reduced glutathione | Oxidative Damage |
| Ribose-5-P  | Pentose phosphate pathway |
| Salicylurate  | Amino Acid metabolism/Gly |
| Sarcosine  | Amino Acid  |
| Serine (Ser) | Amino Acid |
| Shikimic Acid  | Amino Acid metabolism/Phe, Tyr,Trp |
| Sorbitol  | Sugar |
| Spermidine | Polyamine metabolism  |
| Spermine | Polyamine metabolism  |
| Succinate  | TCA Cycle |
| Sucrose  | Sugar |
| Taurine (Tau) | Amino acids metabolism/Sulfur metabolism  |
| Taurocholate | Conjugated bile acid biosynthesis |
| Threonine (Thr) | Amino Acid |
| Thymidine 5 phosphate (DTMP)  | Nucleotide/pyrimidine |
| Trimethylamine (TMA) | Gut flora metabolism / Redox |
| Trimethylamine-N-oxide  | Gut flora metabolism / Redox |
| Tryptamine | Amino Acid |
| Tryptophan (Try) | Tryptophan Cycle |
| Tyramine | Amino Acid |
| Tyrosine (Tyr) | Amino Acid |
| Uracil  |  Nucleotide/Pyrimidine metabolism |
| Urate | Nucleotide/Purine metabolism |
| Uridine  |  Nucleotide/Pyrimidine metabolism |
| Uridine diphosphate (UDP) |  Nucleotide/Pyrimidine metabolism |
| Valine (Val)  | Amino Acid |
| Xanthine  | Nucleotide |
| Xanthosine  | Nucleotide/Purine metabolism |
| Xanthurenate  | Amino acids metabolism |
| Cysteinyl-Glycine (Cys-Gly) | Amino acids degradation |
| Glycerol | Fatty acid metabolism |
| Malondialdehyde  | Oxidative Damage |