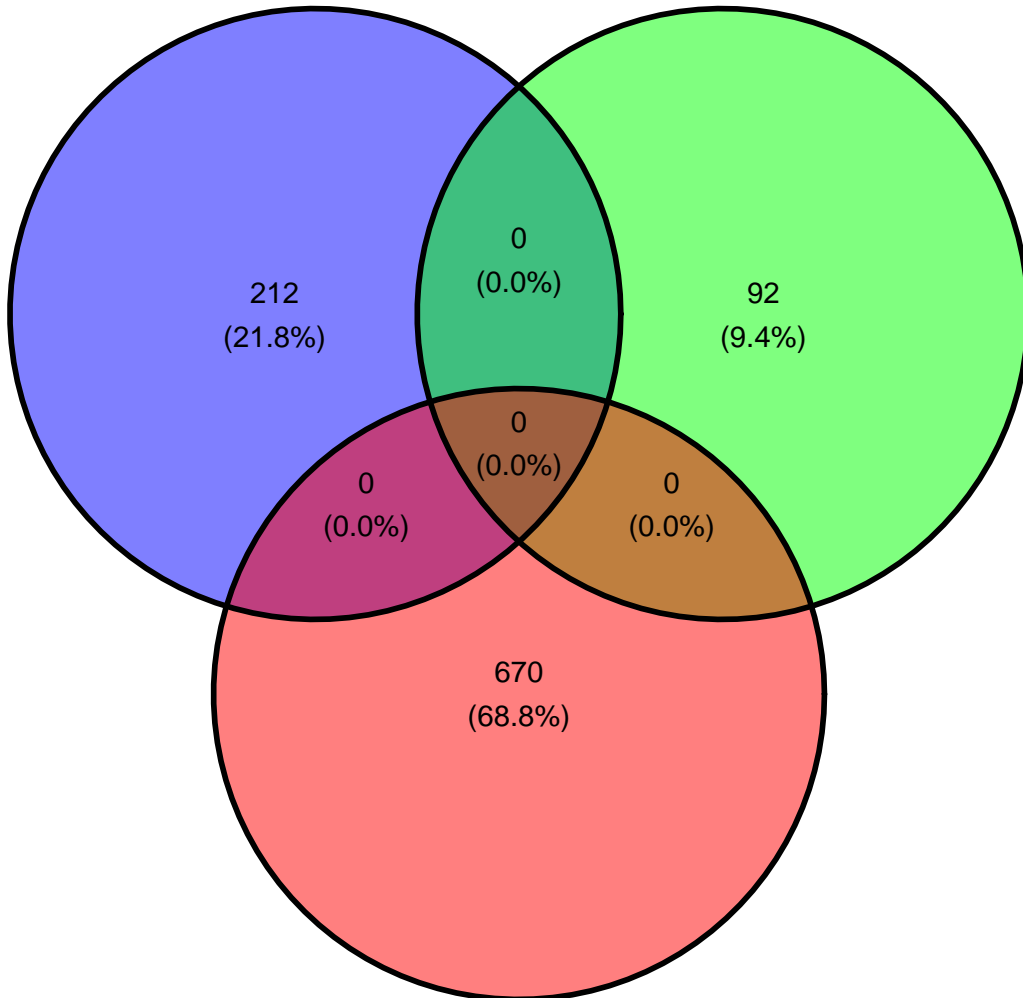


BD\_Lumped

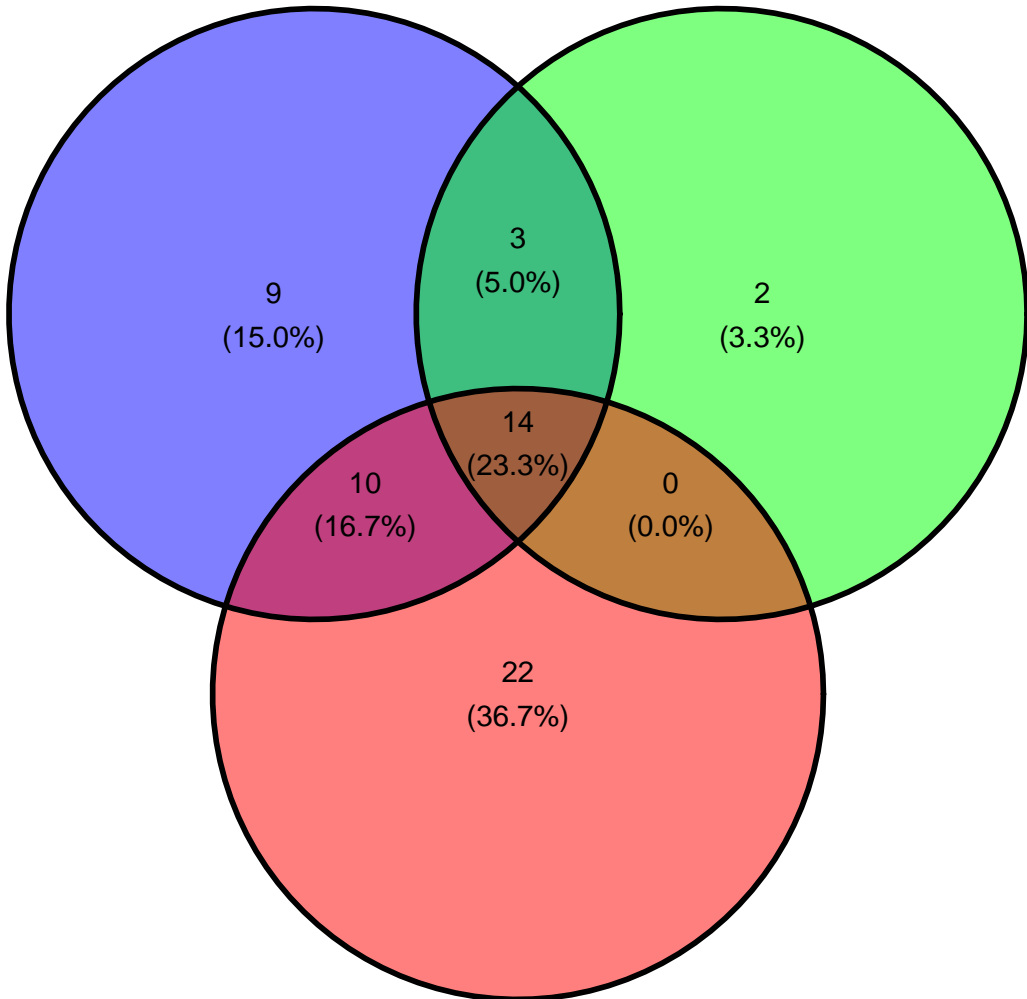
BD\_Responder



BD\_NonResponder

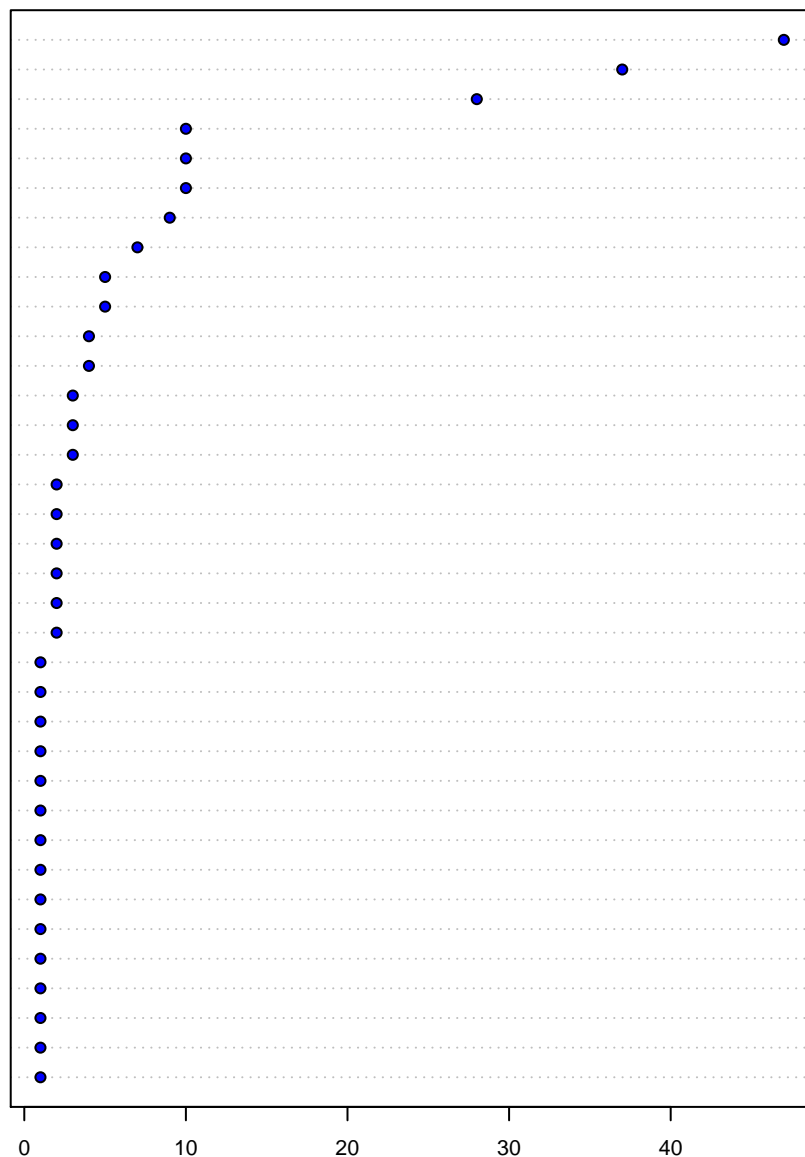
BD\_Lumped

BD\_Responder



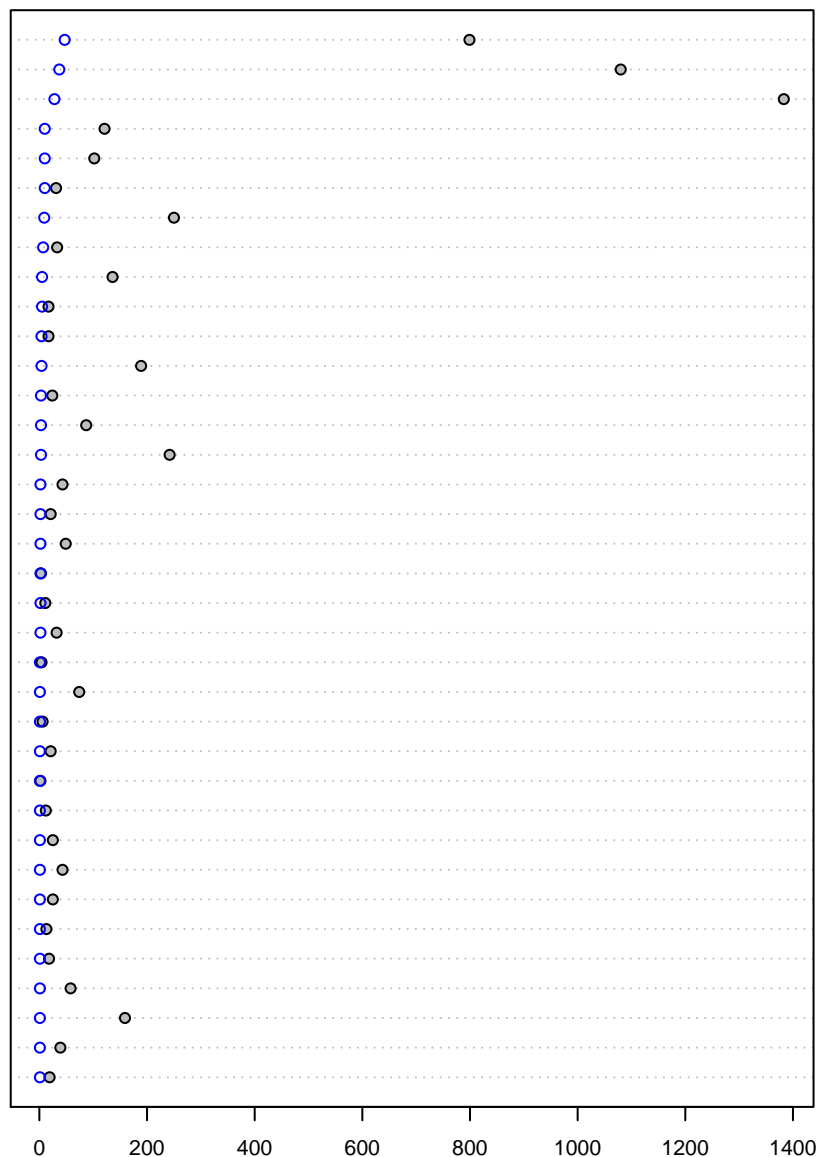
BD\_NonResponder

Fatty acid oxidation  
 Exchange/demand reaction  
 Transport, extracellular  
 Transport, endoplasmic reticular  
 Miscellaneous  
 Methionine and cysteine metabolism  
 Transport, mitochondrial  
 Valine, leucine, and isoleucine metabolism  
 Nucleotide interconversion  
 Fructose and mannose metabolism  
 Lysine metabolism  
 Fatty acid synthesis  
 Urea cycle  
 Transport, peroxisomal  
 Peptide metabolism  
 Tyrosine metabolism  
 Tryptophan metabolism  
 Transport, nuclear  
 Taurine and hypotaurine metabolism  
 Purine synthesis  
 Phosphatidylinositol phosphate metabolism  
 Triacylglycerol synthesis  
 Transport, lysosomal  
 Tetrahydrobiopterin metabolism  
 Steroid metabolism  
 R group synthesis  
 Pyrimidine synthesis  
 Purine catabolism  
 Inositol phosphate metabolism  
 Glycolysis/gluconeogenesis  
 Glutathione metabolism  
 Exchange  
 Eicosanoid metabolism  
 Cholesterol metabolism  
 Bile acid synthesis  
 Arachidonic acid metabolism



# of disrupted rxns (n=212, bd\_lumped) per subSystem

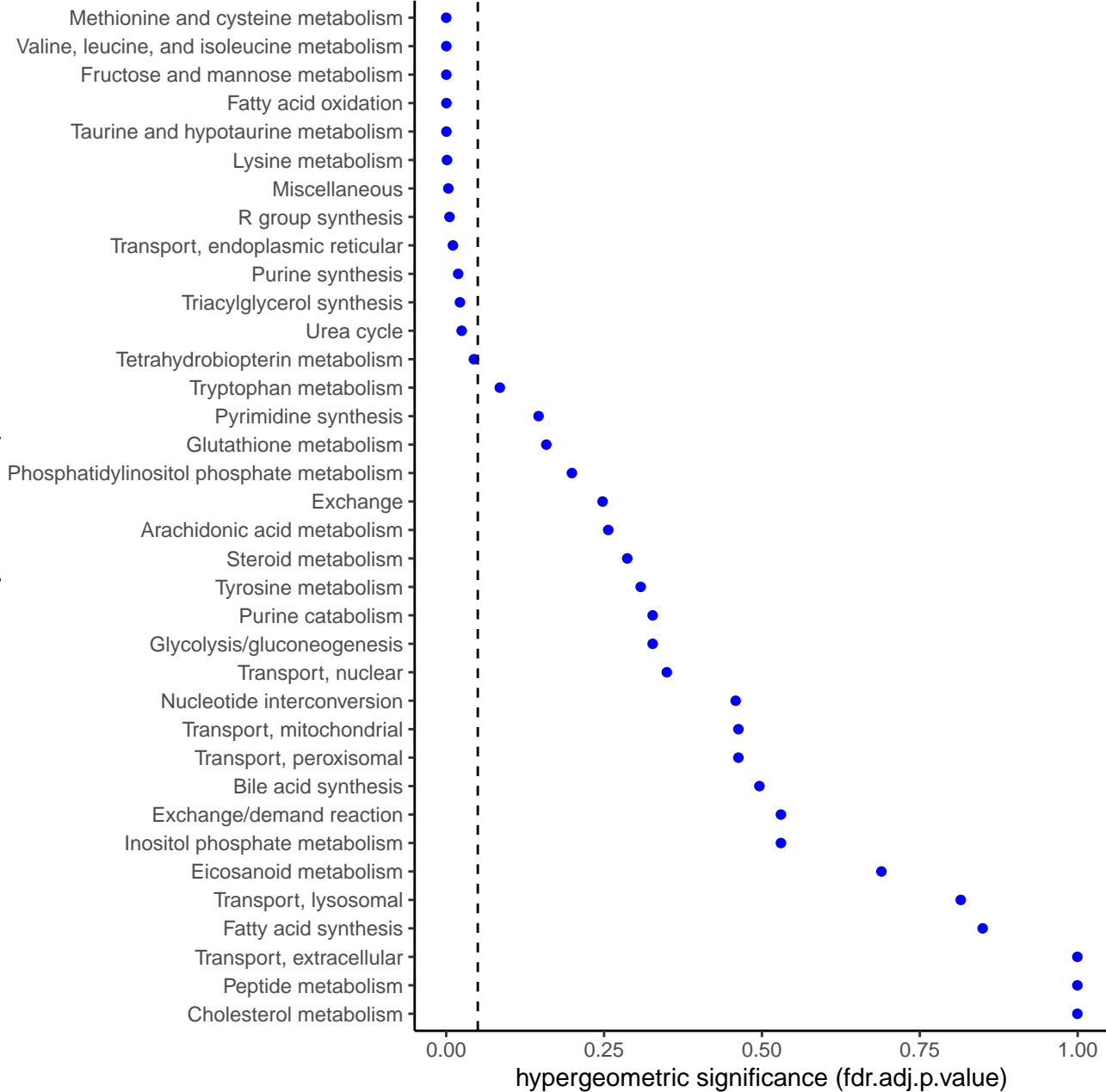
Fatty acid oxidation  
 Exchange/demand reaction  
 Transport, extracellular  
 Transport, endoplasmic reticular  
 Miscellaneous  
 Methionine and cysteine metabolism  
 Transport, mitochondrial  
 Valine, leucine, and isoleucine metabolism  
 Nucleotide interconversion  
 Fructose and mannose metabolism  
 Lysine metabolism  
 Fatty acid synthesis  
 Urea cycle  
 Transport, peroxisomal  
 Peptide metabolism  
 Tyrosine metabolism  
 Tryptophan metabolism  
 Transport, nuclear  
 Taurine and hypotaurine metabolism  
 Purine synthesis  
 Phosphatidylinositol phosphate metabolism  
 Triacylglycerol synthesis  
 Transport, lysosomal  
 Tetrahydrobiopterin metabolism  
 Steroid metabolism  
 R group synthesis  
 Pyrimidine synthesis  
 Purine catabolism  
 Inositol phosphate metabolism  
 Glycolysis/gluconeogenesis  
 Glutathione metabolism  
 Exchange  
 Eicosanoid metabolism  
 Cholesterol metabolism  
 Bile acid synthesis  
 Arachidonic acid metabolism



# of disrupted rxns (n=212, bd\_lumped) per subSystem

# BD\_Lumped metabolic model

Subsystems disrupted



Fatty acid oxidation

Exchange/demand reaction

Transport, extracellular

Nucleotide interconversion

Transport, nuclear

Transport, mitochondrial

Transport, endoplasmic reticular

Vitamin A metabolism

Transport, peroxisomal

Purine catabolism

Miscellaneous

Methionine and cysteine metabolism

Tyrosine metabolism

Steroid metabolism

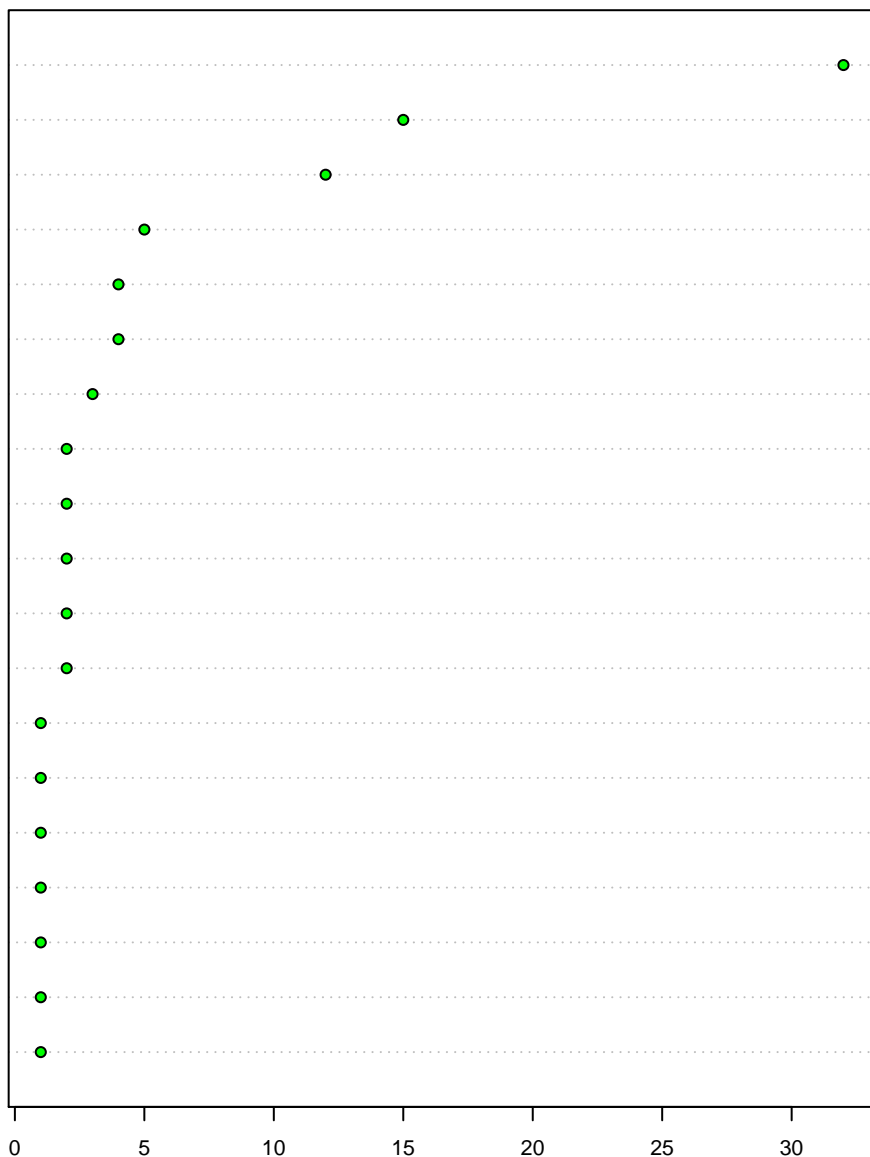
Pyrimidine synthesis

Inositol phosphate metabolism

Exchange

Eicosanoid metabolism

Beta-Alanine metabolism



# of disrupted rxns (n=92, bd\_responder) per subSystem

Fatty acid oxidation

Exchange/demand reaction

Transport, extracellular

Nucleotide interconversion

Transport, nuclear

Transport, mitochondrial

Transport, endoplasmic reticular

Vitamin A metabolism

Transport, peroxisomal

Purine catabolism

Miscellaneous

Methionine and cysteine metabolism

Tyrosine metabolism

Steroid metabolism

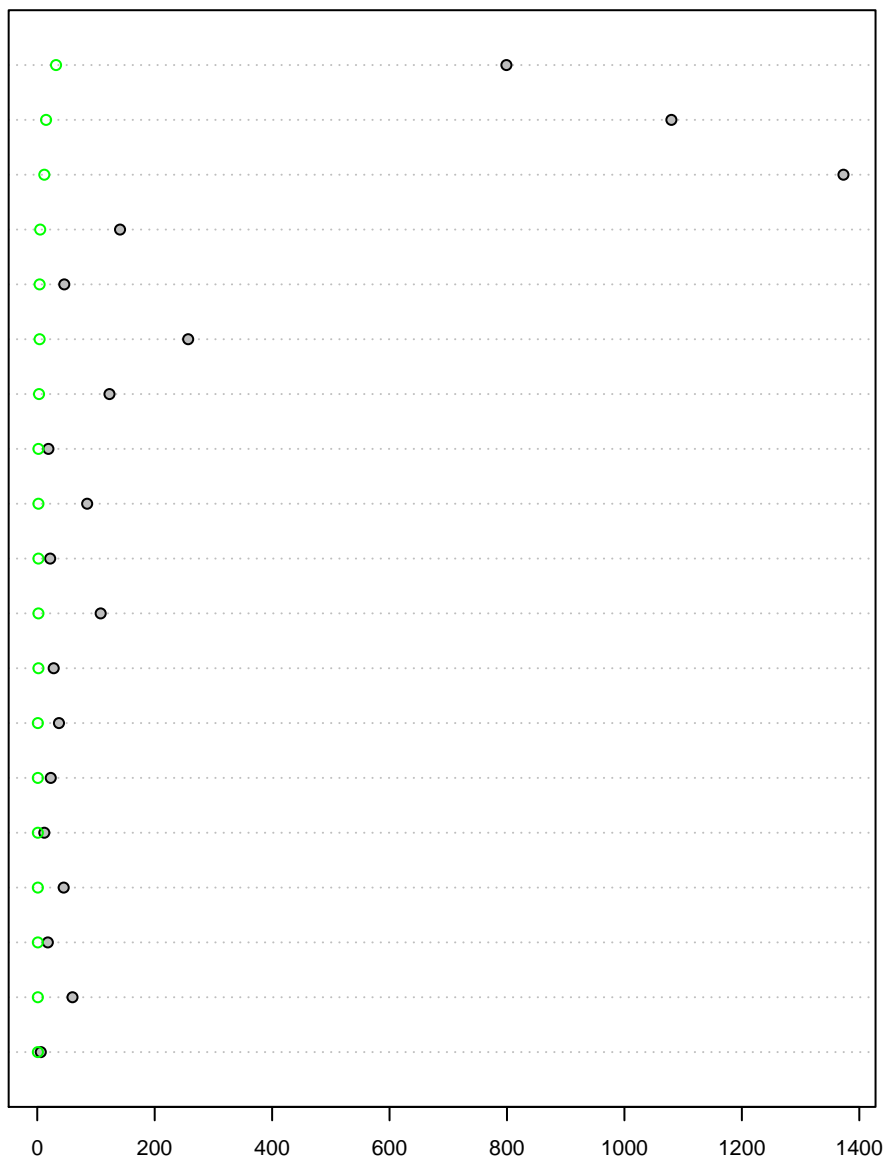
Pyrimidine synthesis

Inositol phosphate metabolism

Exchange

Eicosanoid metabolism

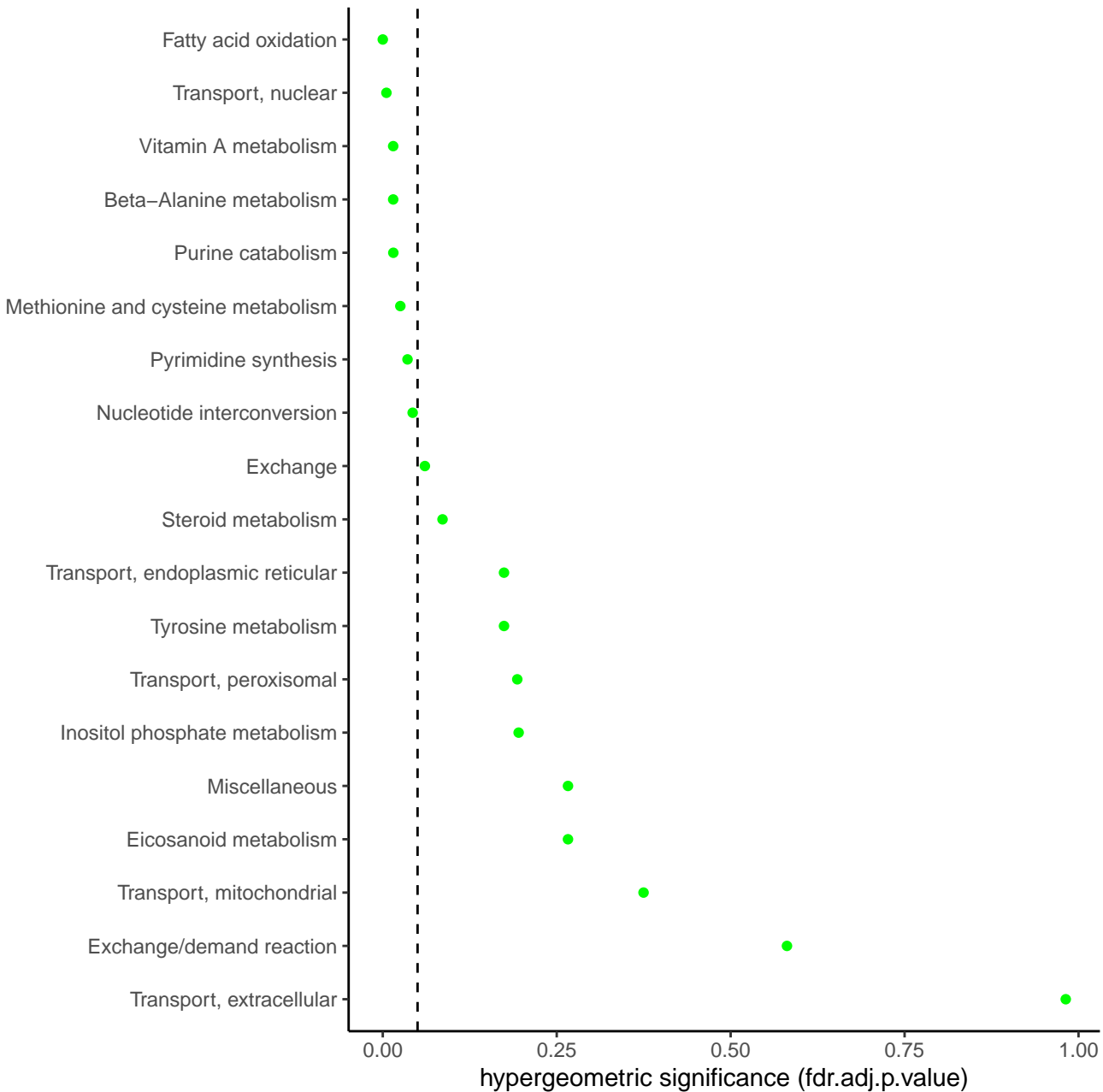
Beta-Alanine metabolism



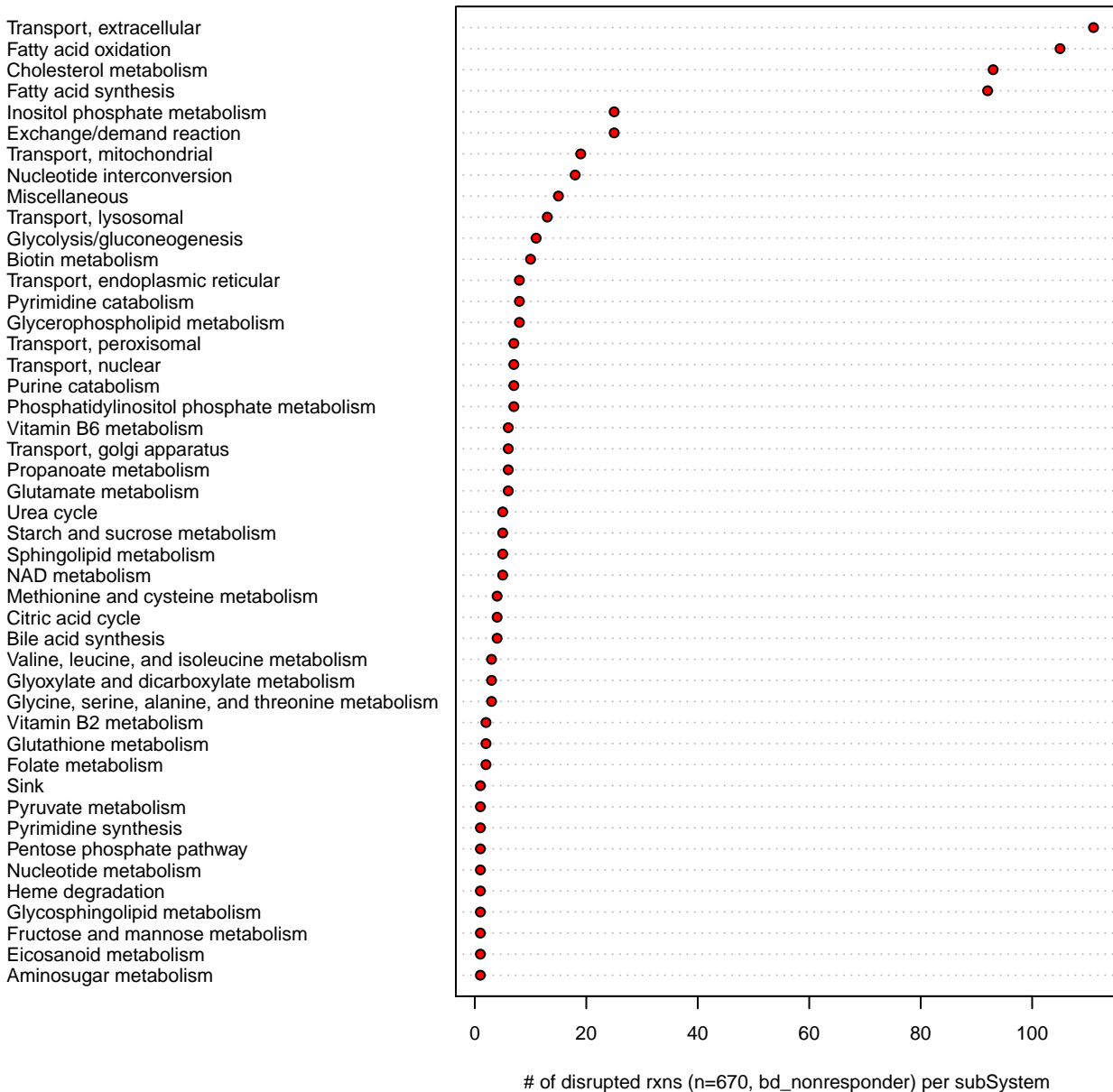
# of disrupted rxns (n=92, bd\_responder) per subSystem

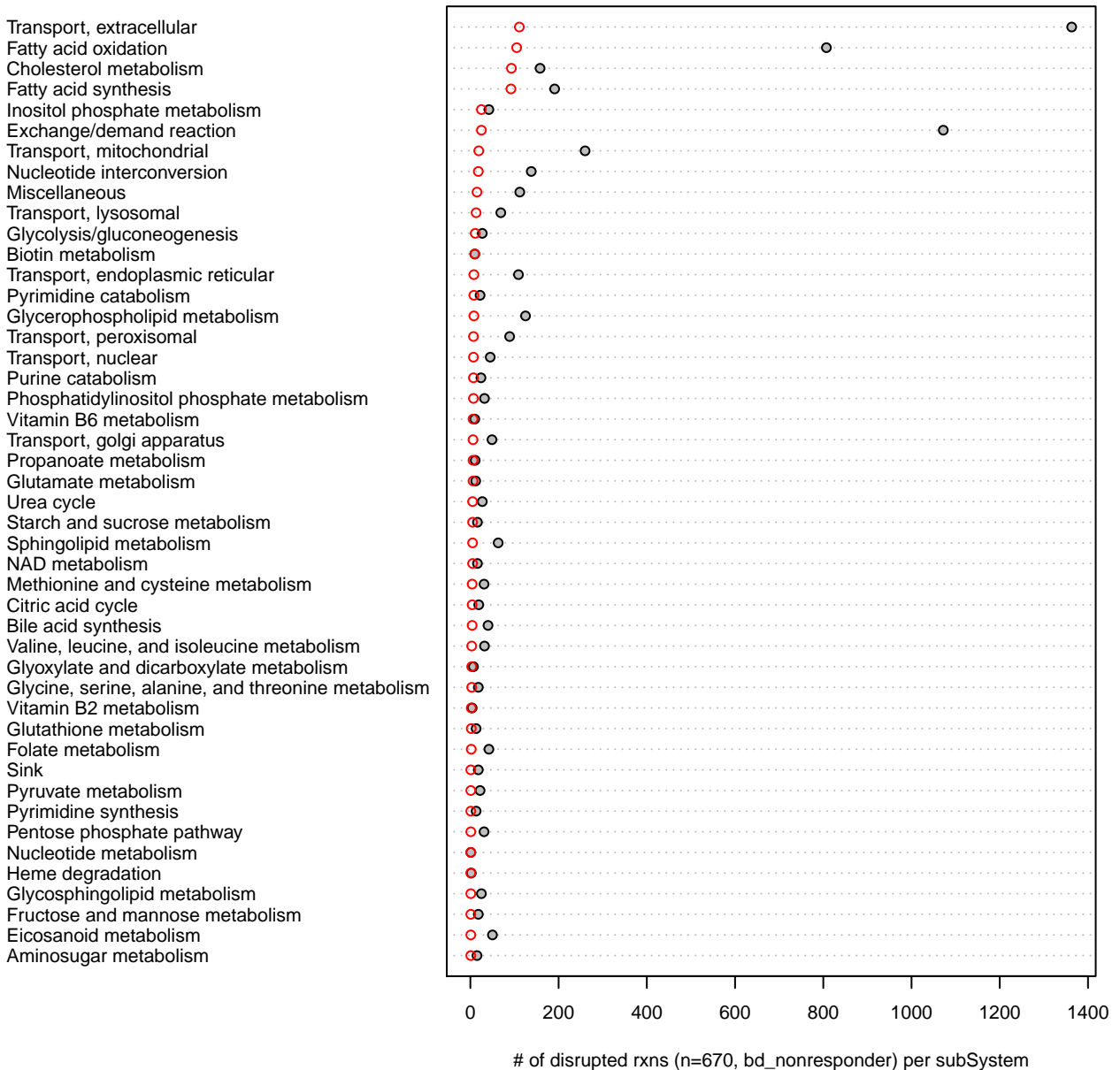
# BD\_Responder metabolic model

Subsystems disrupted









# BD\_Non-responder metabolic model

Subsystems disrupted

