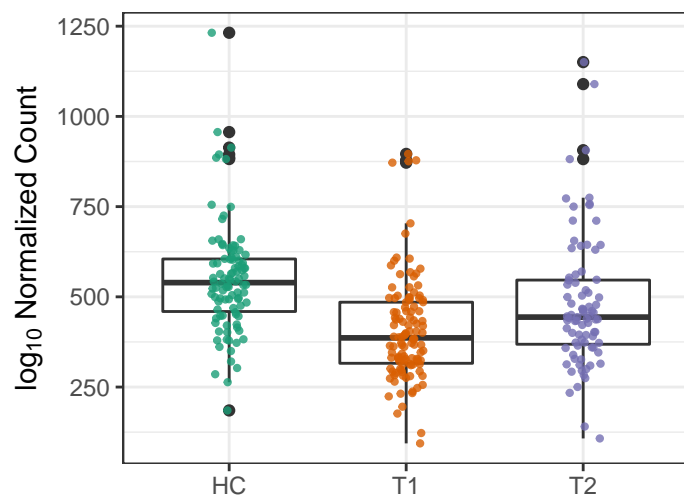


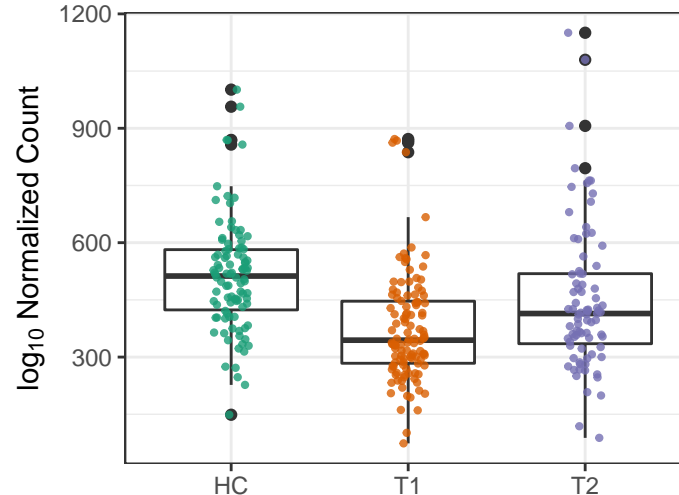
### BRANCHED-CHAIN-AA-SYN-PWY

HC vs. T1  $p = 2.3e-09$   
HC vs. T2  $p = 0.044$   
T1 vs. T2  $p = 0.0038$



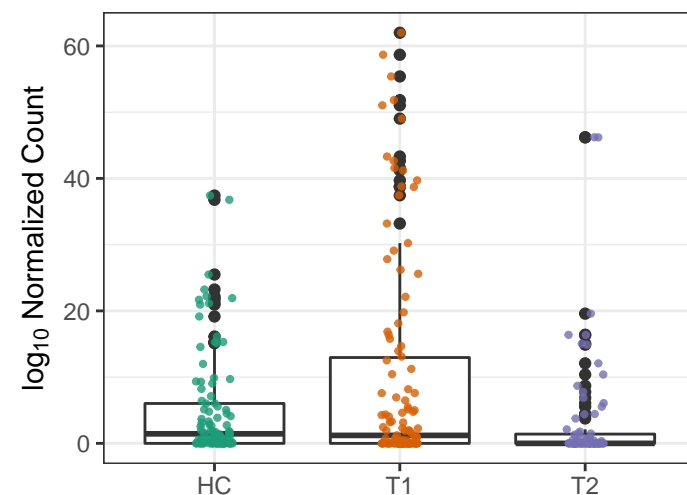
### PWY-5103: L-isoleucine biosynthesis

HC vs. T1  $p = 2.3e-09$   
HC vs. T2  $p = 0.064$   
T1 vs. T2  $p = 0.0038$



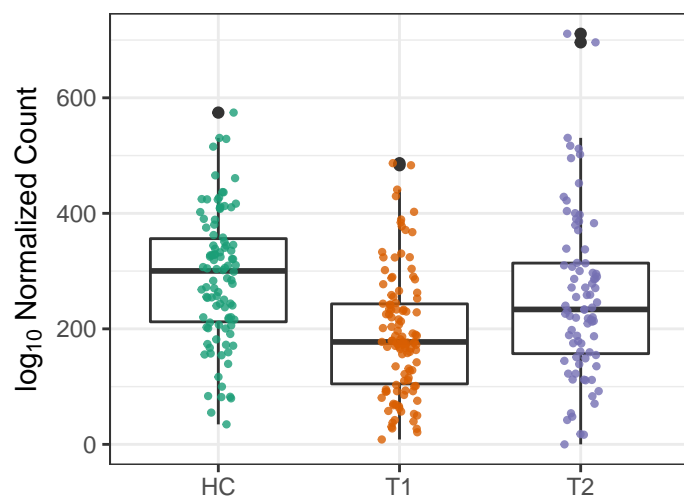
### PWY-5505: L-glutamate and L-glutamine biosynthesis

HC vs. T1  $p = 0.019$   
HC vs. T2  $p = 0.19$   
T1 vs. T2  $p = 0.0038$



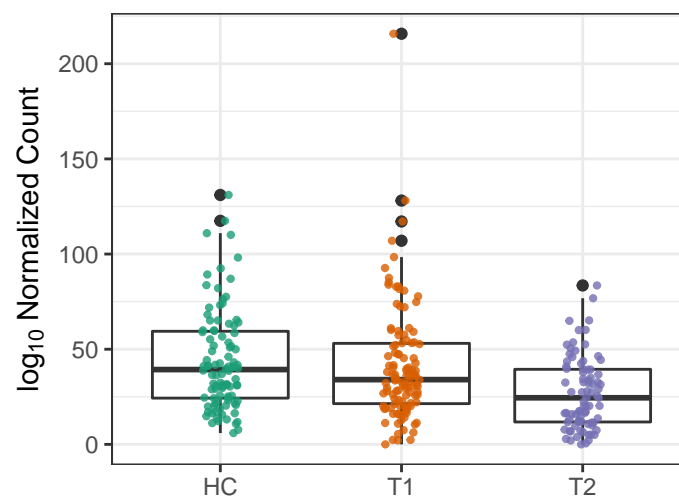
### SER-GLYSYN-PWY: superpathway of serine and glycine

HC vs. T1  $p = 7.2e-09$   
HC vs. T2  $p = 0.18$   
T1 vs. T2  $p = 0.0038$



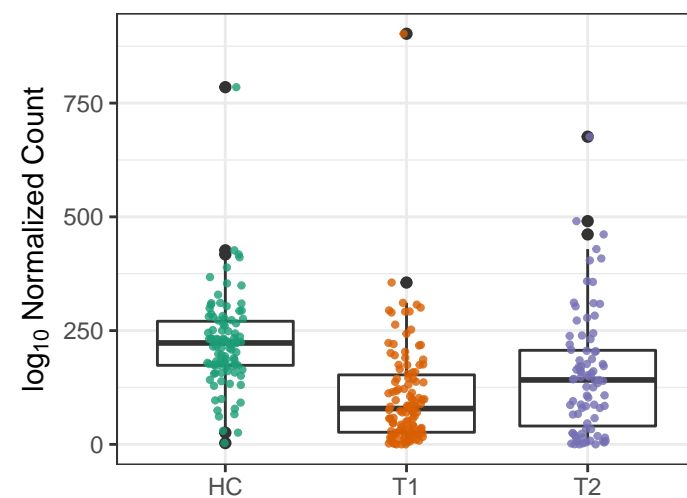
### TCA: TCA cycle I (prokaryotic)

HC vs. T1  $p = 0.58$   
HC vs. T2  $p = 5.9e-05$   
T1 vs. T2  $p = 0.0038$



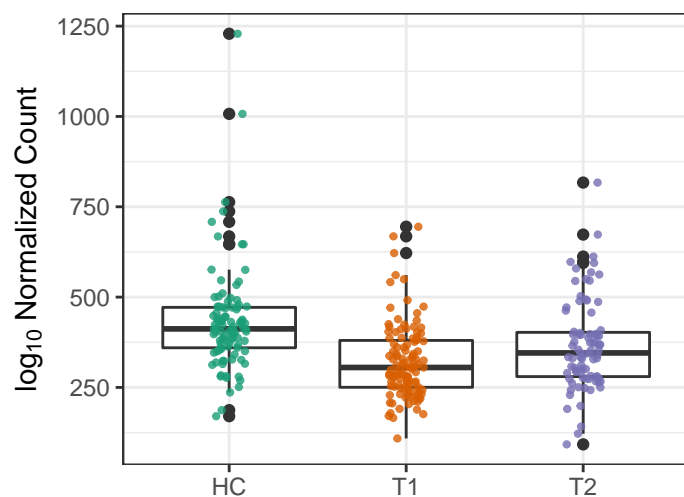
### COBALSYN-PWY: adenosylcobalamin biosynthesis

HC vs. T1  $p = 2.4e-11$   
HC vs. T2  $p = 0.003$   
T1 vs. T2  $p = 0.0057$



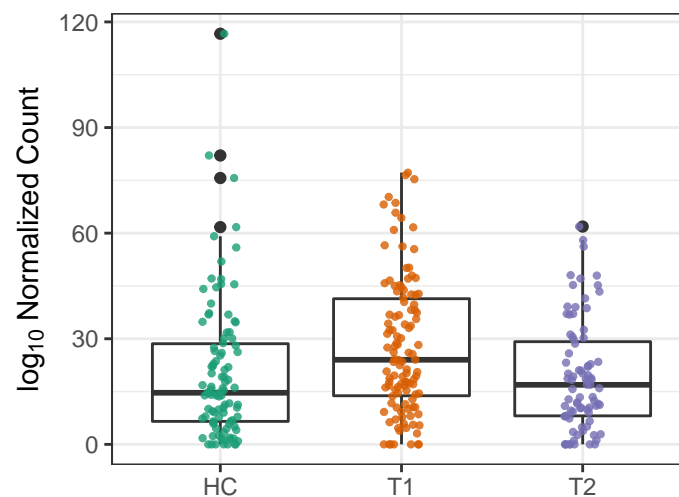
### PWY-3001: superpathway of L-isoleucine and L-valine

HC vs. T1  $p = 2.3e-08$   
HC vs. T2  $p = 0.014$   
T1 vs. T2  $p = 0.0057$



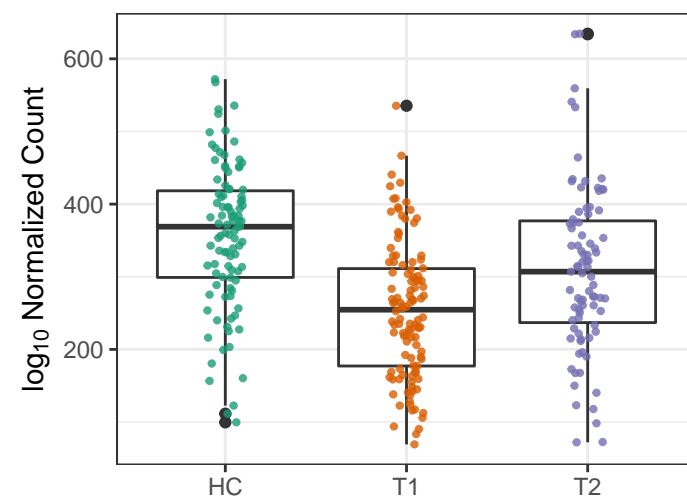
### PWY-5676: acetyl-CoA fermentation to ethanol

HC vs. T1  $p = 0.019$   
HC vs. T2  $p = 0.74$   
T1 vs. T2  $p = 0.0057$



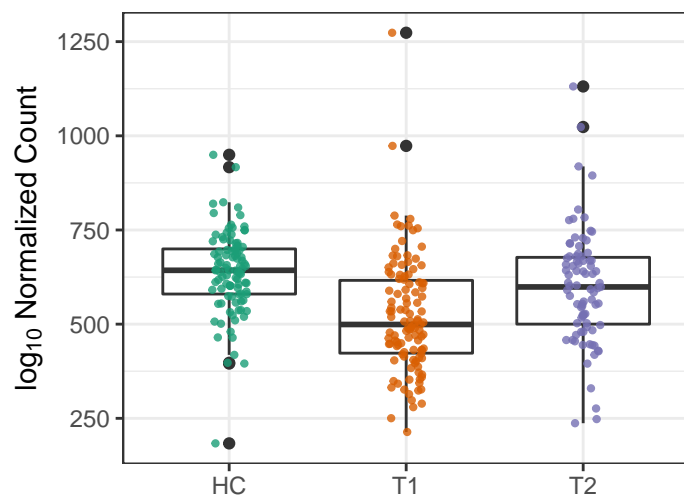
### PWY-6317: galactose degradation I (L-galactose)

HC vs. T1  $p = 3.2e-11$   
HC vs. T2  $p = 0.025$   
T1 vs. T2  $p = 0.0059$



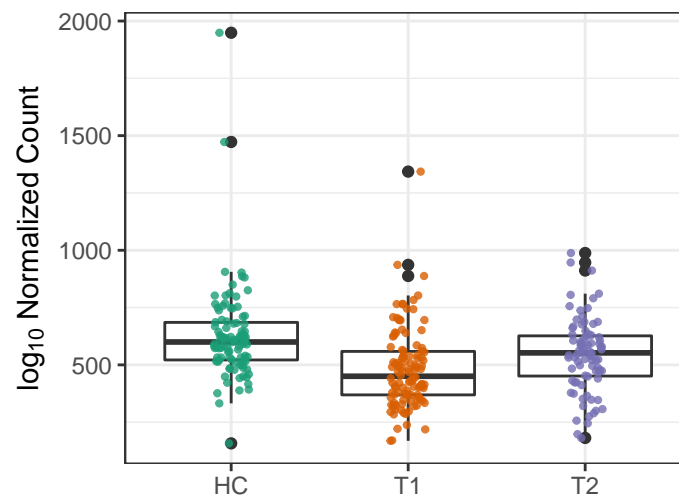
### ARO-PWY: chorismate biosynthesis I

HC vs. T1  $p = 1.4e-08$   
 HC vs. T2  $p = 0.1$   
 T1 vs. T2  $p = 0.0061$



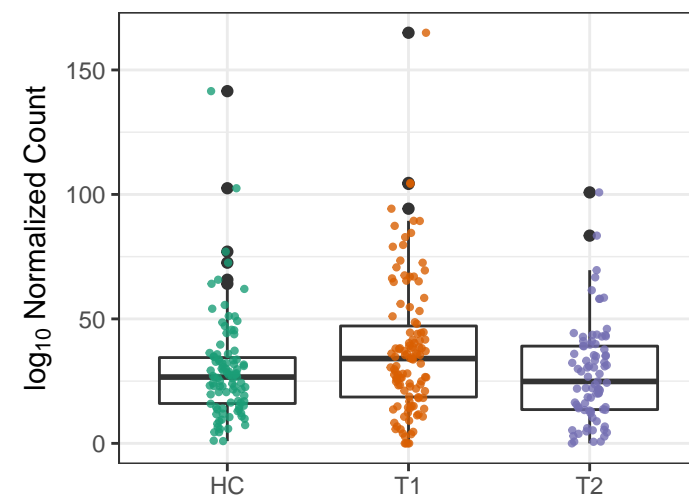
### PWY-6151: S-adenosyl-L-methionin

HC vs. T1  $p = 1.6e-06$   
 HC vs. T2  $p = 0.02$   
 T1 vs. T2  $p = 0.0062$



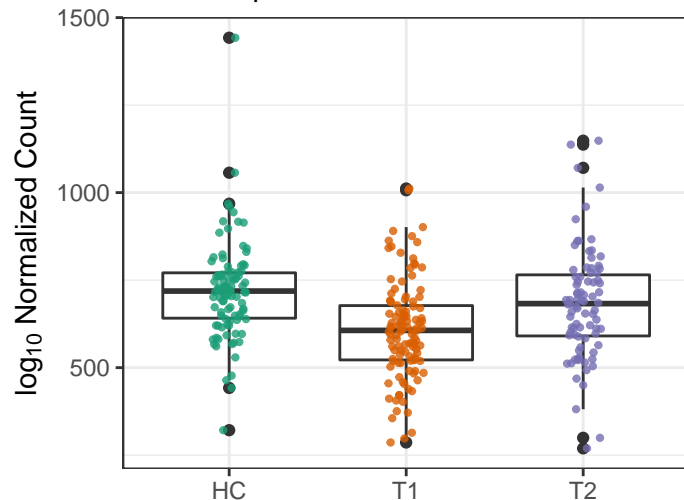
### P441-PWY: superpathway of N-acetyl

HC vs. T1  $p = 0.033$   
 HC vs. T2  $p = 0.71$   
 T1 vs. T2  $p = 0.0063$



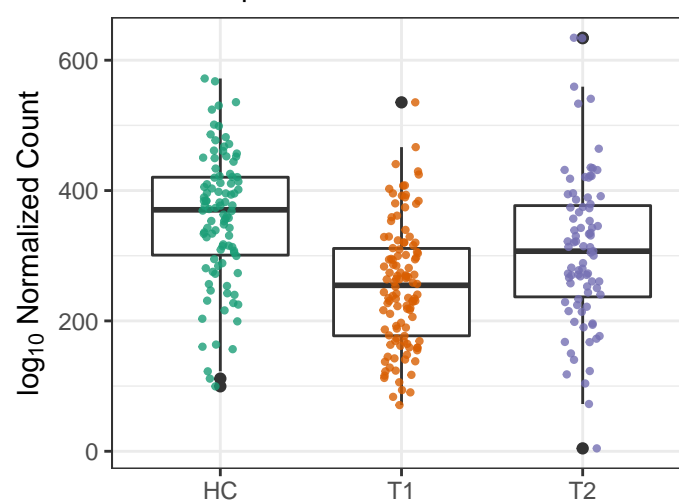
### PWY-5686: UMP biosynthesis

HC vs. T1  $p = 2.4e-07$   
 HC vs. T2  $p = 0.19$   
 T1 vs. T2  $p = 0.0063$



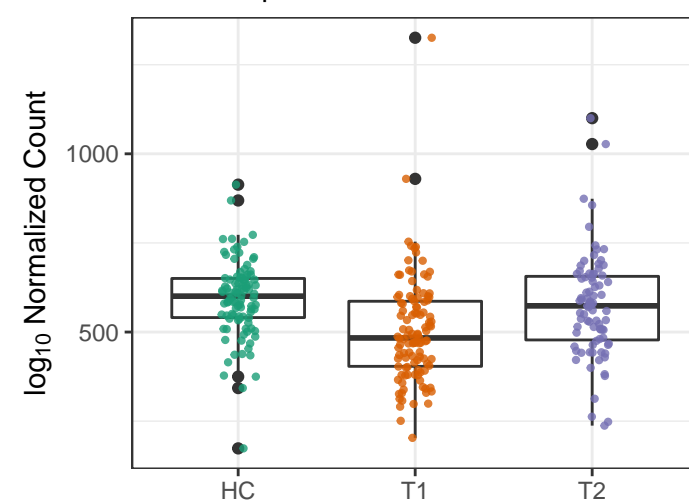
### PWY66-422: D-galactose degradator

HC vs. T1  $p = 2.5e-11$   
 HC vs. T2  $p = 0.02$   
 T1 vs. T2  $p = 0.0063$



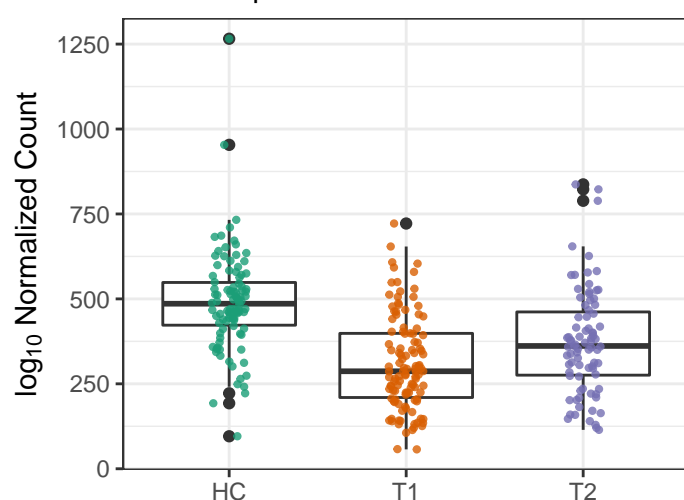
### COMPLETE-ARO-PWY: superpathw

HC vs. T1  $p = 4.6e-06$   
 HC vs. T2  $p = 0.38$   
 T1 vs. T2  $p = 0.0069$



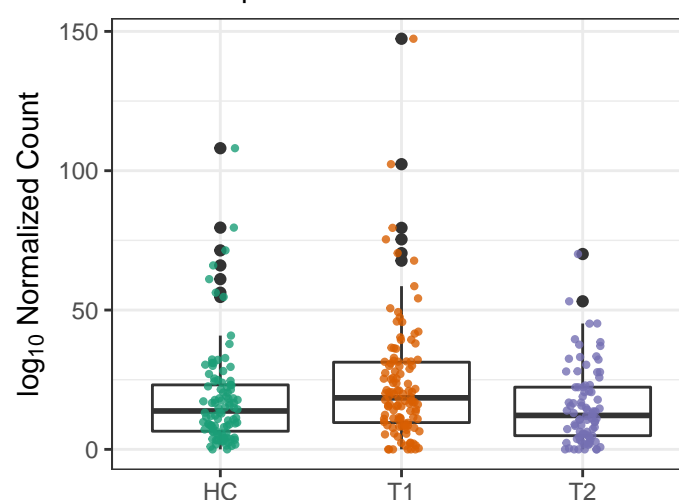
### DTDPRHAMSYN-PWY: dTDP-L-rha

HC vs. T1  $p = 6.3e-14$   
 HC vs. T2  $p = 4.8e-05$   
 T1 vs. T2  $p = 0.007$



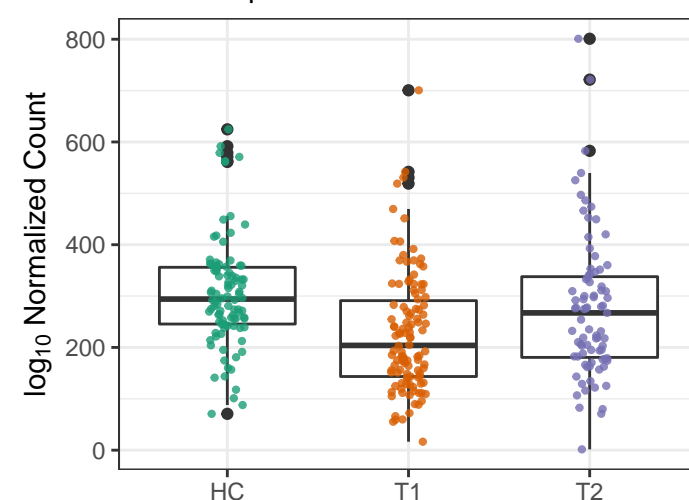
### GLYCOLYSIS-E-D: superpathway of c

HC vs. T1  $p = 0.12$   
 HC vs. T2  $p = 0.38$   
 T1 vs. T2  $p = 0.0078$



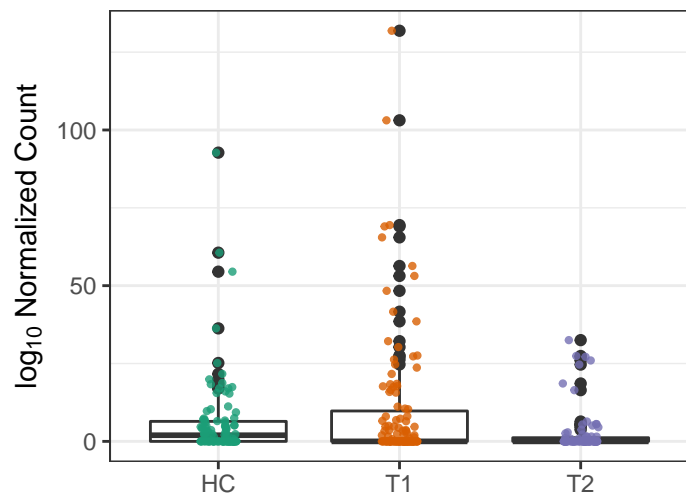
### PWY-6123: inosine-5'-phosphate bio

HC vs. T1  $p = 7.3e-06$   
 HC vs. T2  $p = 0.25$   
 T1 vs. T2  $p = 0.0078$



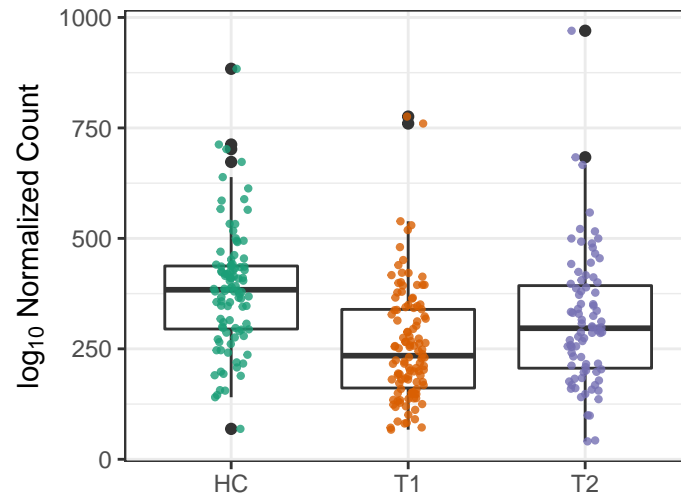
PWY-5838: superpathway of menaqui

HC vs. T1  $p = 0.22$   
 HC vs. T2  $p = 0.068$   
 T1 vs. T2  $p = 0.0083$



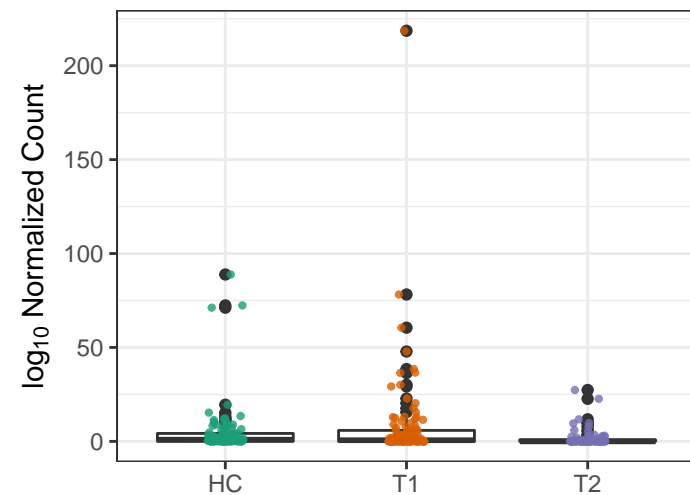
PWY-7357: thiamin formation from py

HC vs. T1  $p = 2.3e-09$   
 HC vs. T2  $p = 0.014$   
 T1 vs. T2  $p = 0.0086$



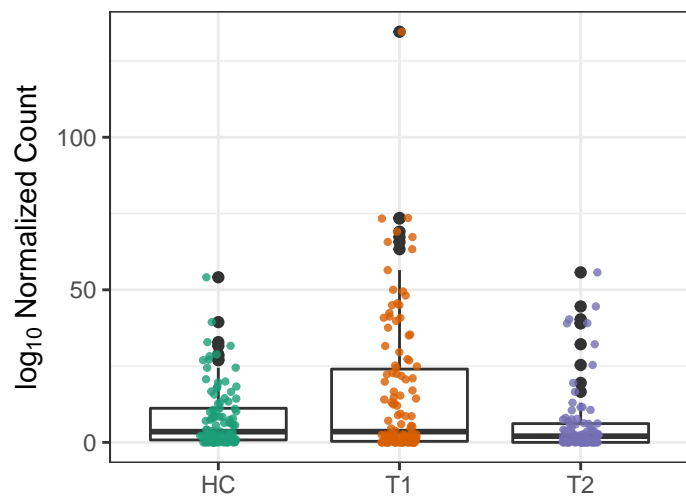
GLYOXYLATE-BYPASS: glyoxylate cyc

HC vs. T1  $p = 0.44$   
 HC vs. T2  $p = 0.07$   
 T1 vs. T2  $p = 0.0089$



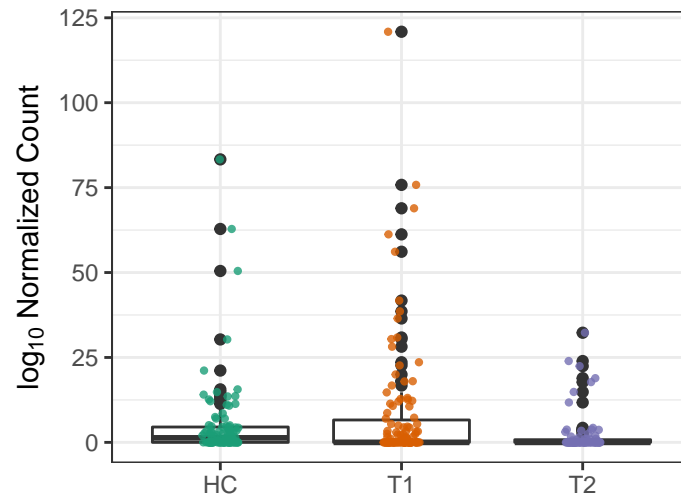
P108-PWY: pyruvate fermentation to p

HC vs. T1  $p = 0.004$   
 HC vs. T2  $p = 0.36$   
 T1 vs. T2  $p = 0.0089$



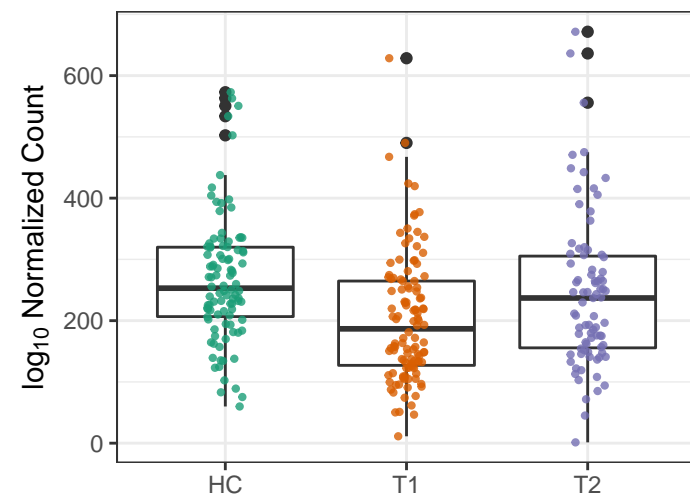
PWY-5861: superpathway of demethyl

HC vs. T1  $p = 0.29$   
 HC vs. T2  $p = 0.092$   
 T1 vs. T2  $p = 0.0089$



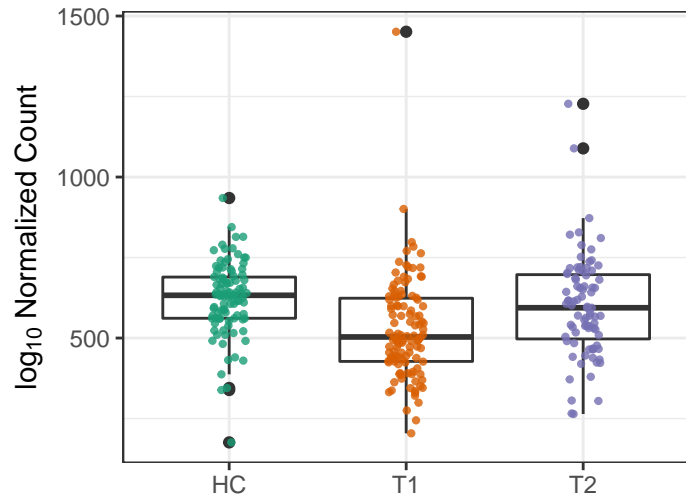
PWY-6124: inosine-5'-phosphate bio

HC vs. T1  $p = 6.5e-05$   
 HC vs. T2  $p = 0.35$   
 T1 vs. T2  $p = 0.0089$



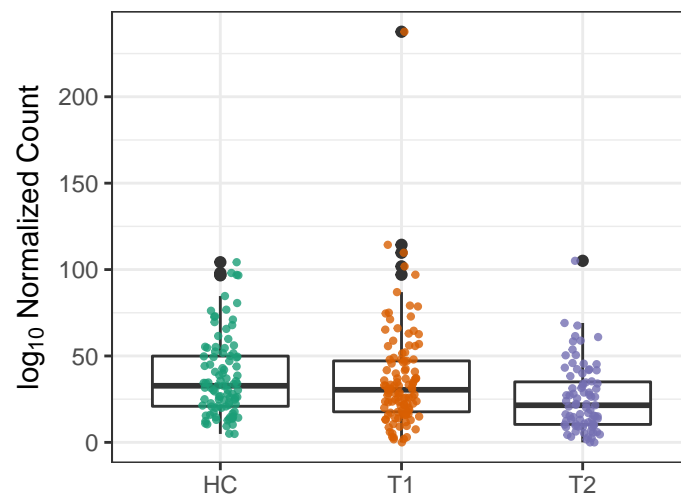
PWY-6163: chorismate biosynthesis 1

HC vs. T1  $p = 4e-06$   
 HC vs. T2  $p = 0.35$   
 T1 vs. T2  $p = 0.0089$



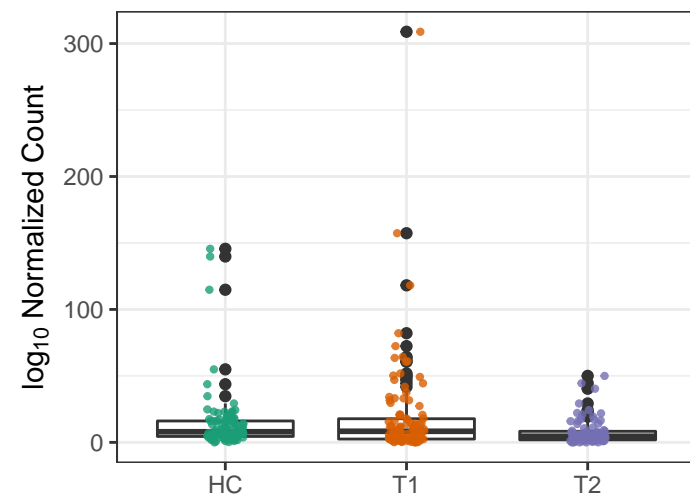
PWY-6969: TCA cycle V (2-oxoglutar:

HC vs. T1  $p = 0.8$   
 HC vs. T2  $p = 0.0024$   
 T1 vs. T2  $p = 0.0089$



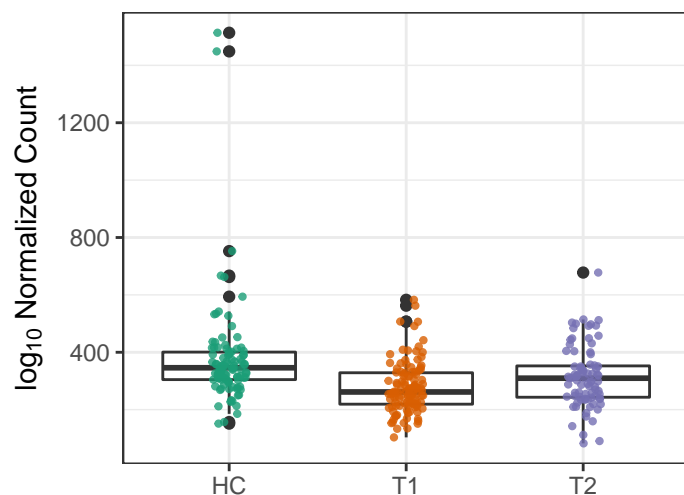
PWY0-1061: superpathway of L-alani

HC vs. T1  $p = 0.44$   
 HC vs. T2  $p = 0.041$   
 T1 vs. T2  $p = 0.0089$



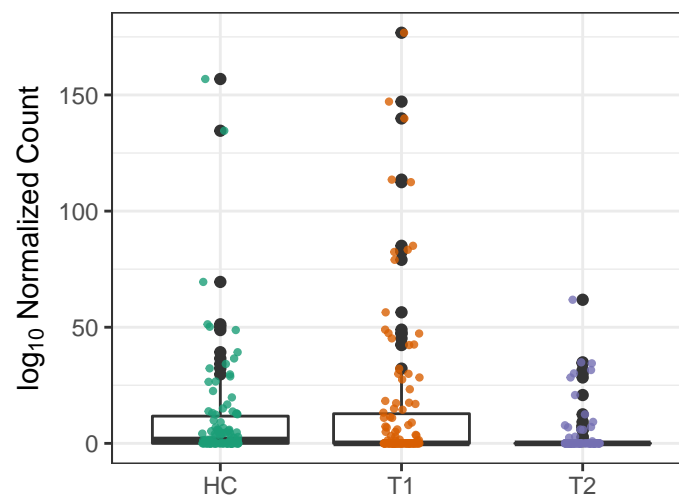
THRESYN-PWY: superpathway of L-

HC vs. T1  $p = 1.8e-05$   
 HC vs. T2  $p = 0.028$   
 T1 vs. T2  $p = 0.0089$



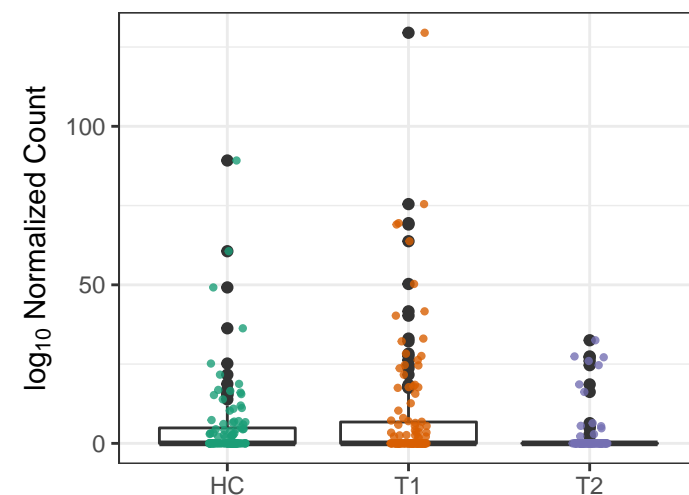
PWY-6895: superpathway of thiamin c

HC vs. T1  $p = 0.39$   
 HC vs. T2  $p = 0.041$   
 T1 vs. T2  $p = 0.0091$



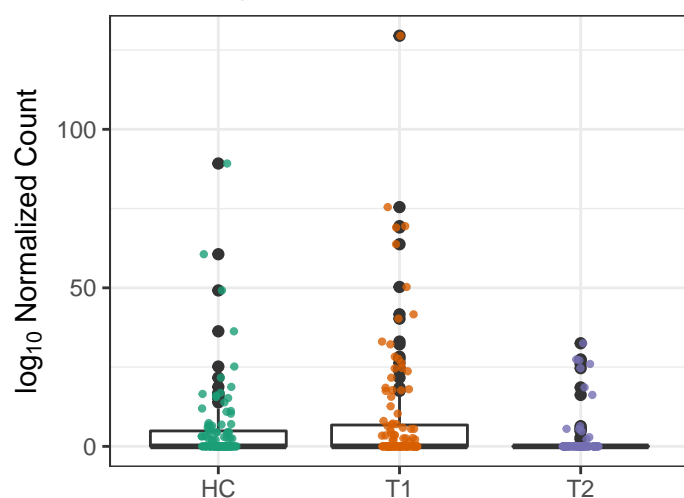
PWY-5845: superpathway of menaquin

HC vs. T1  $p = 0.25$   
 HC vs. T2  $p = 0.1$   
 T1 vs. T2  $p = 0.0093$



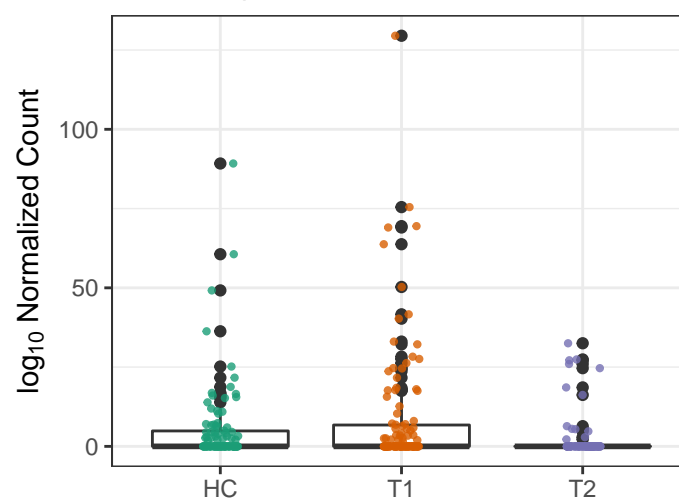
PWY-5850: superpathway of menaquin

HC vs. T1  $p = 0.25$   
 HC vs. T2  $p = 0.1$   
 T1 vs. T2  $p = 0.0093$



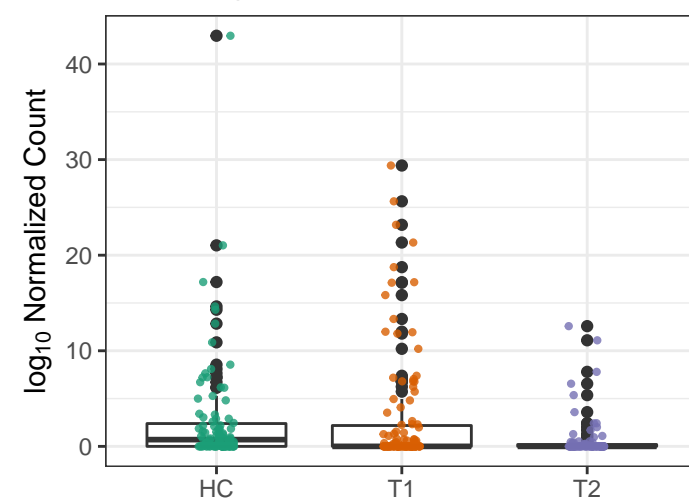
PWY-5896: superpathway of menaquin

HC vs. T1  $p = 0.25$   
 HC vs. T2  $p = 0.1$   
 T1 vs. T2  $p = 0.0093$



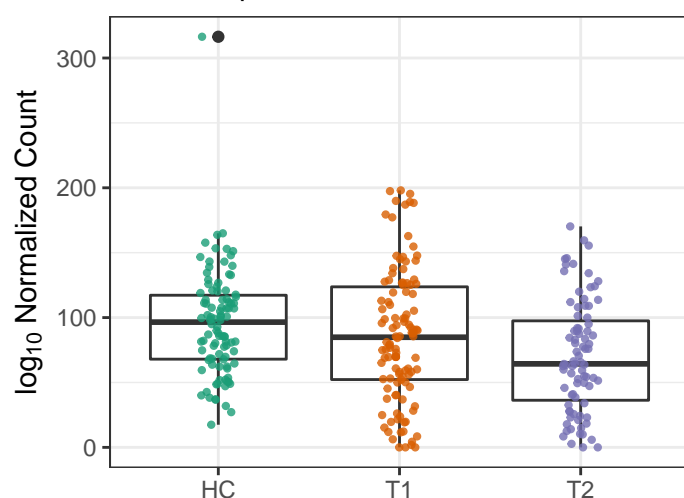
KETOGLUCONMET-PWY: ketoglucona

HC vs. T1  $p = 0.9$   
 HC vs. T2  $p = 0.017$   
 T1 vs. T2  $p = 0.01$



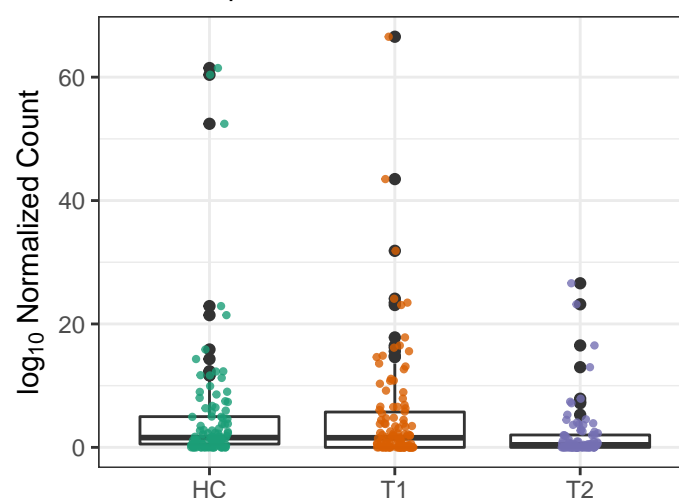
PWY-7211: superpathway of pyrimidin

HC vs. T1  $p = 0.22$   
 HC vs. T2  $p = 0.0018$   
 T1 vs. T2  $p = 0.01$



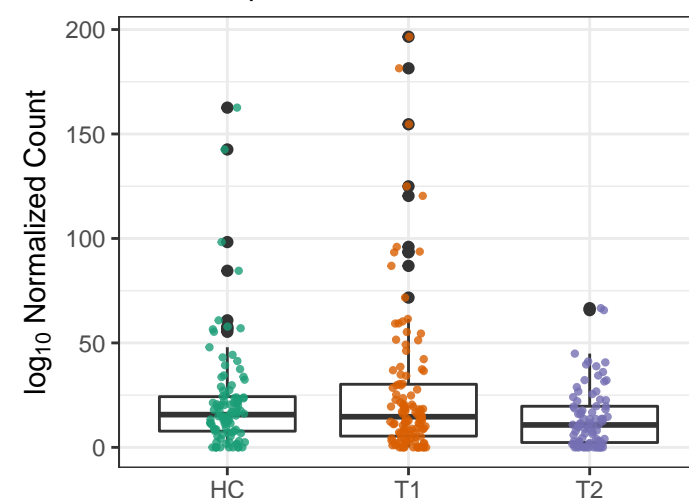
REDCITCYC: TCA cycle VIII (helicobac

HC vs. T1  $p = 0.92$   
 HC vs. T2  $p = 0.048$   
 T1 vs. T2  $p = 0.01$



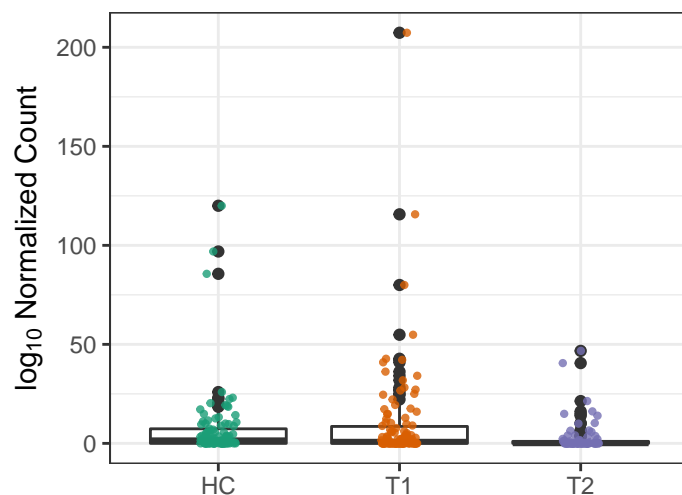
THISYN-PWY: superpathway of thiam

HC vs. T1  $p = 0.44$   
 HC vs. T2  $p = 0.048$   
 T1 vs. T2  $p = 0.01$



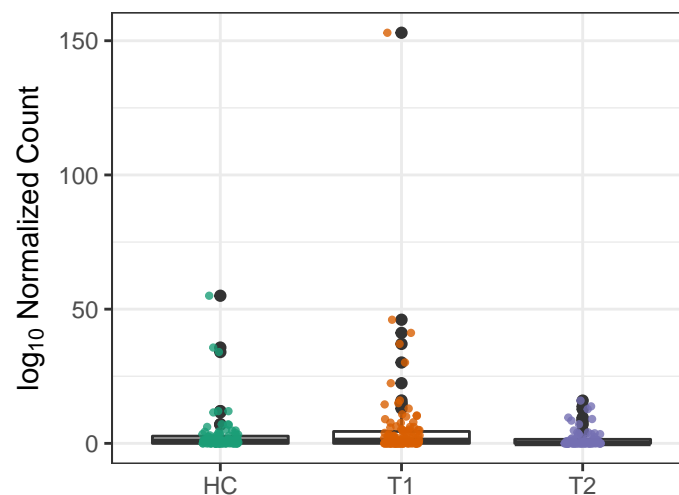
### GLYCOLYSIS-TCA-GLYOX-BYPASS:

HC vs. T1  $p = 0.56$   
 HC vs. T2  $p = 0.07$   
 T1 vs. T2  $p = 0.01$



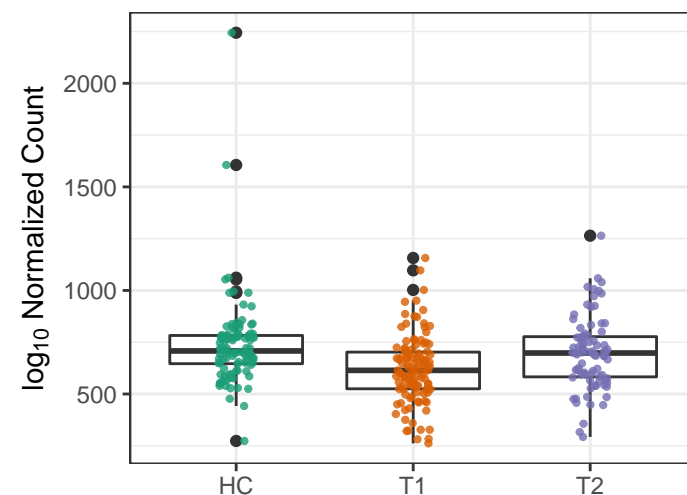
### POLYISOPRENSYN-PWY: polyisopren

HC vs. T1  $p = 0.27$   
 HC vs. T2  $p = 0.22$   
 T1 vs. T2  $p = 0.01$



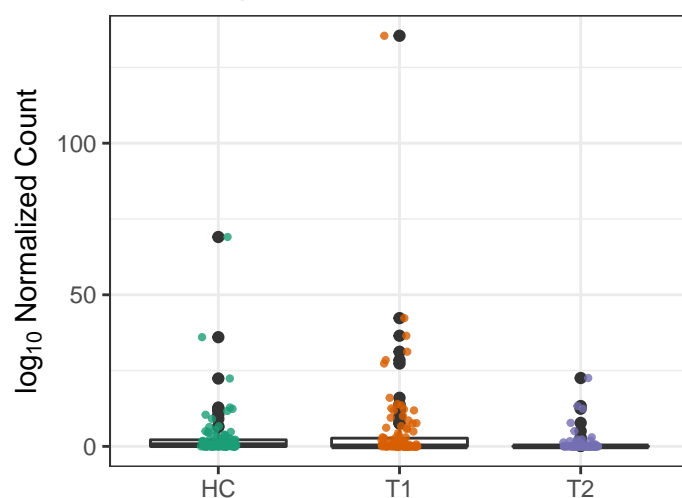
### PWY-6386: UDP-N-acetylmuramoyl-

HC vs. T1  $p = 0.00014$   
 HC vs. T2  $p = 0.27$   
 T1 vs. T2  $p = 0.01$



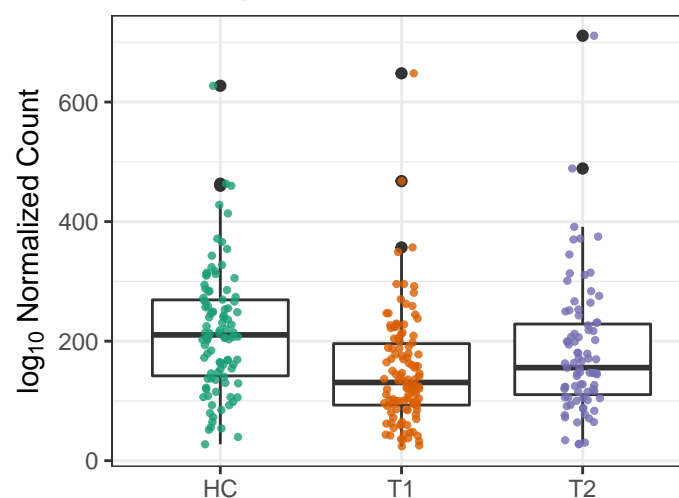
### PWY-6803: phosphatidylcholine acyl e

HC vs. T1  $p = 0.43$   
 HC vs. T2  $p = 0.1$   
 T1 vs. T2  $p = 0.01$



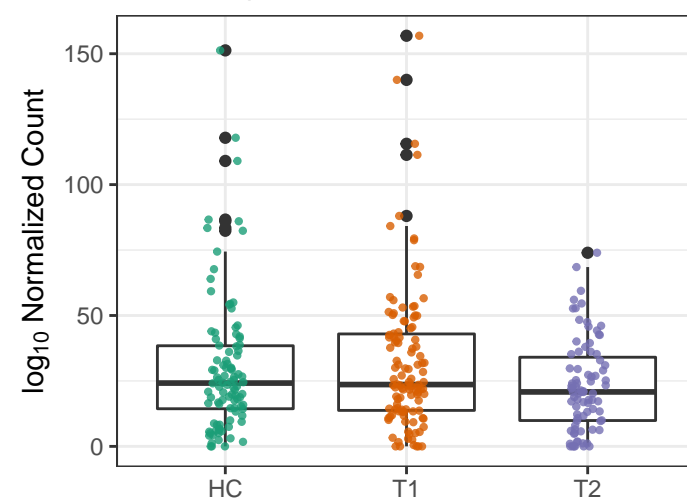
### THISYNARA-PWY: superpathway of tl

HC vs. T1  $p = 1.6e-05$   
 HC vs. T2  $p = 0.1$   
 T1 vs. T2  $p = 0.01$



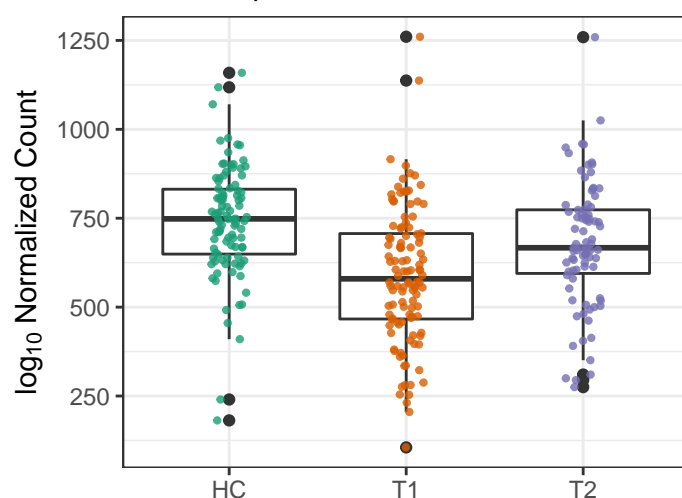
### PWY-6901: superpathway of glucose a

HC vs. T1  $p = 0.65$   
 HC vs. T2  $p = 0.1$   
 T1 vs. T2  $p = 0.011$



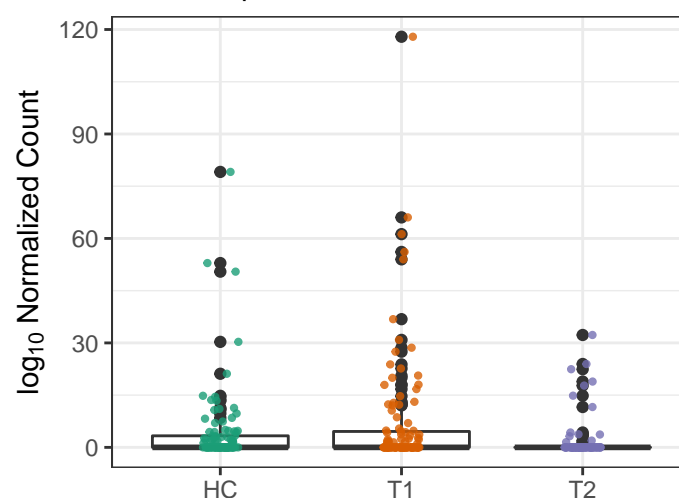
### PWY-6737: starch degradation V

HC vs. T1  $p = 1.4e-08$   
 HC vs. T2  $p = 0.044$   
 T1 vs. T2  $p = 0.012$



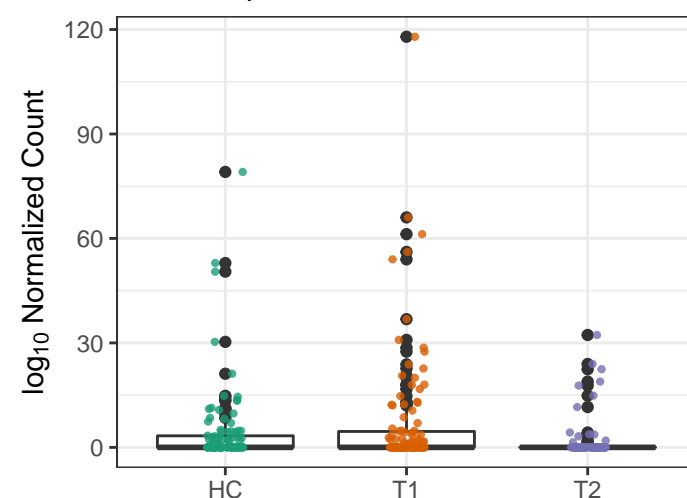
### PWY-5860: superpathway of demethyl

HC vs. T1  $p = 0.33$   
 HC vs. T2  $p = 0.13$   
 T1 vs. T2  $p = 0.012$



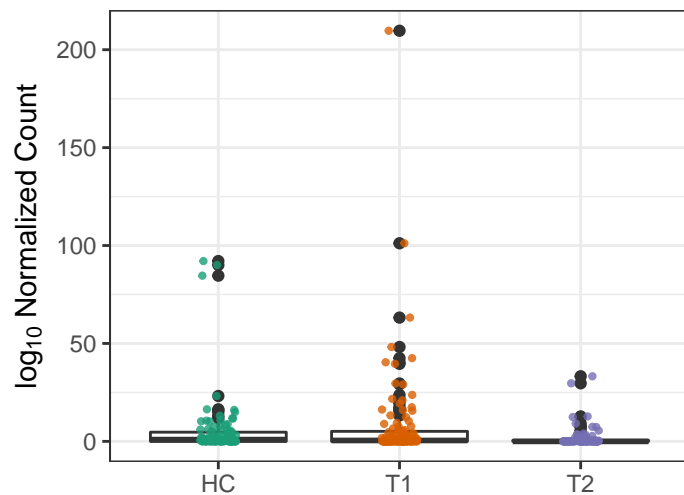
### PWY-5862: superpathway of demethyl

HC vs. T1  $p = 0.33$   
 HC vs. T2  $p = 0.13$   
 T1 vs. T2  $p = 0.012$



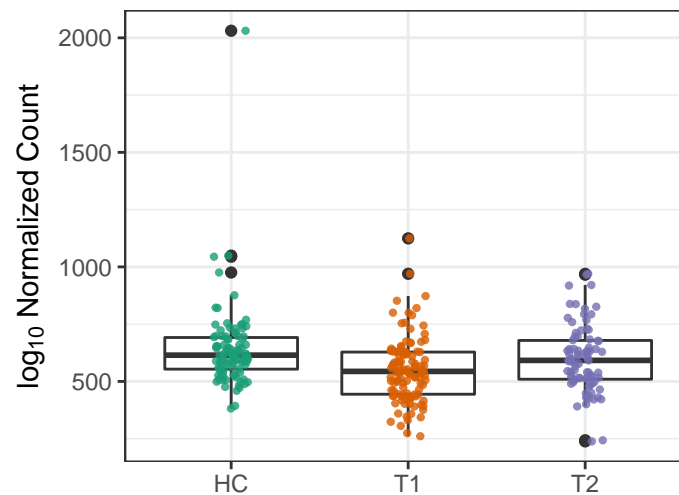
### TCA–GLYOX–BYPASS: superpathway

HC vs. T1  $p = 0.51$   
HC vs. T2  $p = 0.078$   
T1 vs. T2  $p = 0.012$



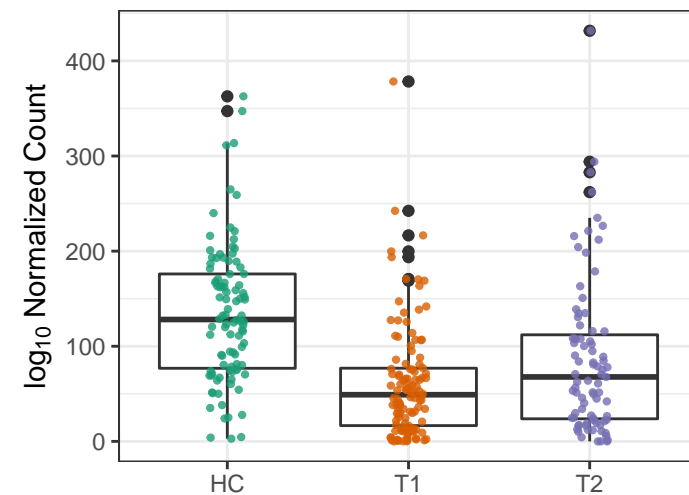
### PWY–6121: 5–aminoimidazole ribonu

HC vs. T1  $p = 0.00044$   
HC vs. T2  $p = 0.19$   
T1 vs. T2  $p = 0.012$



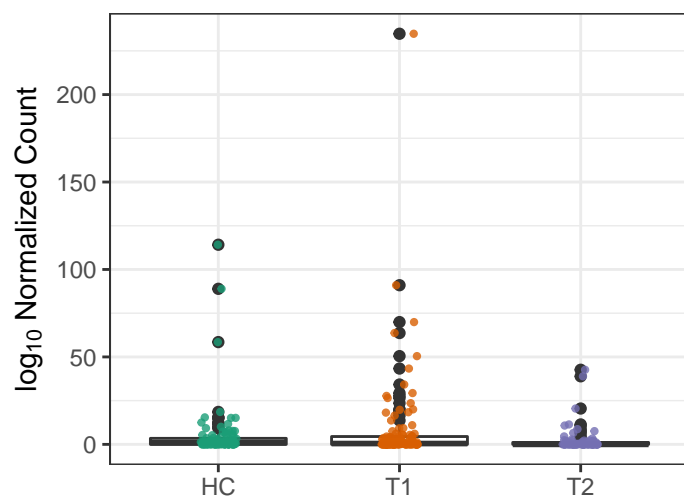
### PWY–5177: glutaryl–CoA degradation

HC vs. T1  $p = 1.8e-11$   
HC vs. T2  $p = 0.0013$   
T1 vs. T2  $p = 0.012$



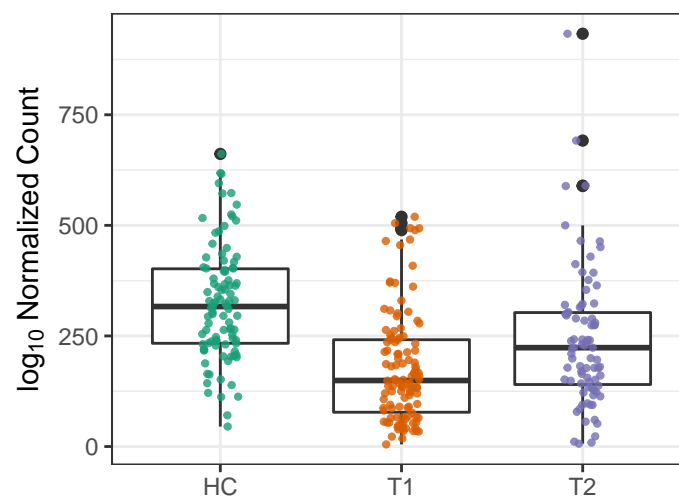
### PWY–5083: NAD/NADH phosphorylati

HC vs. T1  $p = 0.4$   
HC vs. T2  $p = 0.19$   
T1 vs. T2  $p = 0.013$



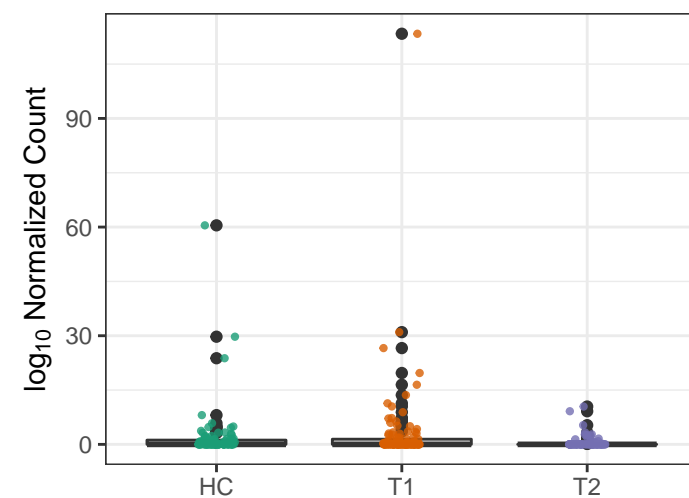
### PWY–621: sucrose degradation III (suc

HC vs. T1  $p = 1.3e-12$   
HC vs. T2  $p = 0.0027$   
T1 vs. T2  $p = 0.013$



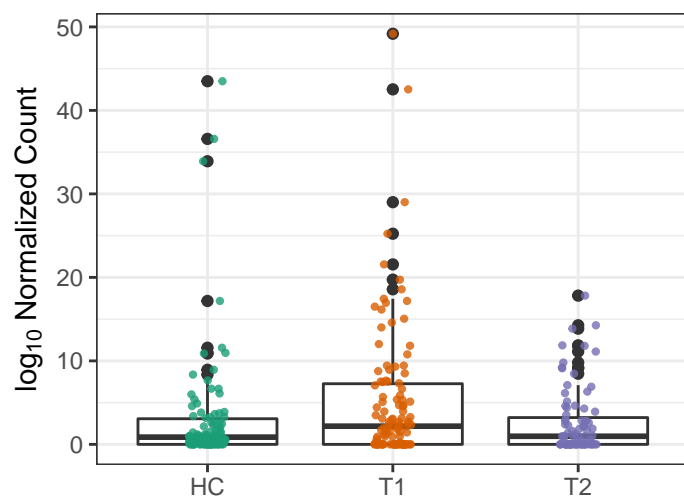
### UBISYN–PWY: superpathway of ubiquin

HC vs. T1  $p = 0.56$   
HC vs. T2  $p = 0.14$   
T1 vs. T2  $p = 0.013$



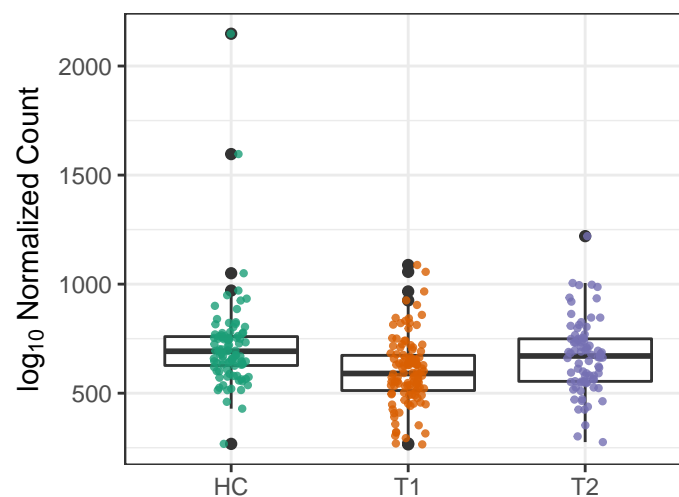
### PWY–7328: superpathway of UDP–gluc

HC vs. T1  $p = 0.093$   
HC vs. T2  $p = 0.68$   
T1 vs. T2  $p = 0.014$



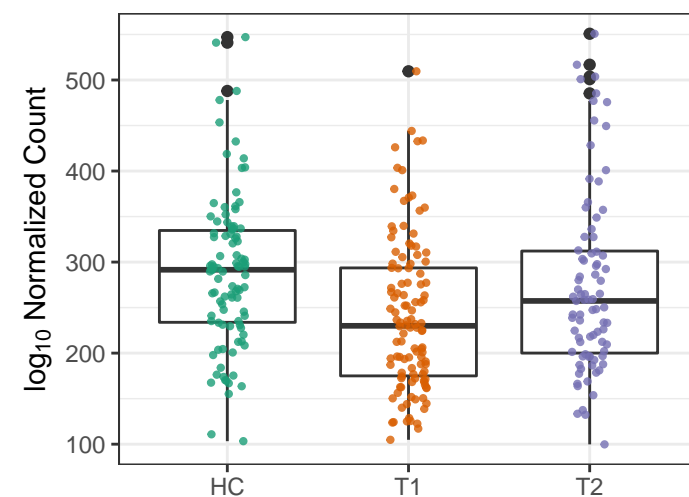
### PWY–6387: UDP–N–acetylmuramoyl-

HC vs. T1  $p = 0.00011$   
HC vs. T2  $p = 0.19$   
T1 vs. T2  $p = 0.014$



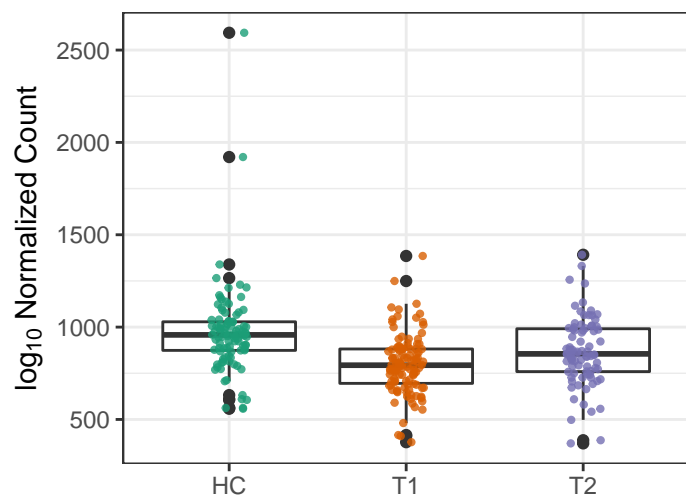
### PWY–6609: adenine and adenosine sa

HC vs. T1  $p = 0.00027$   
HC vs. T2  $p = 0.45$   
T1 vs. T2  $p = 0.014$



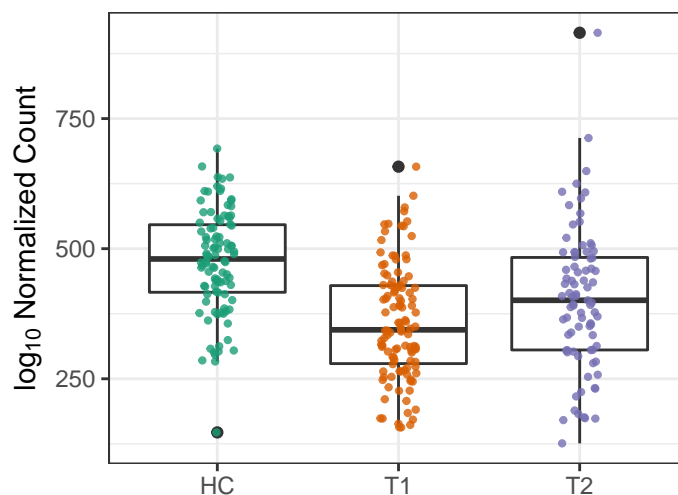
### PWY-7219: adenosine ribonucleotide

HC vs. T1  $p = 1.8e-07$   
 HC vs. T2  $p = 0.015$   
 T1 vs. T2  $p = 0.015$



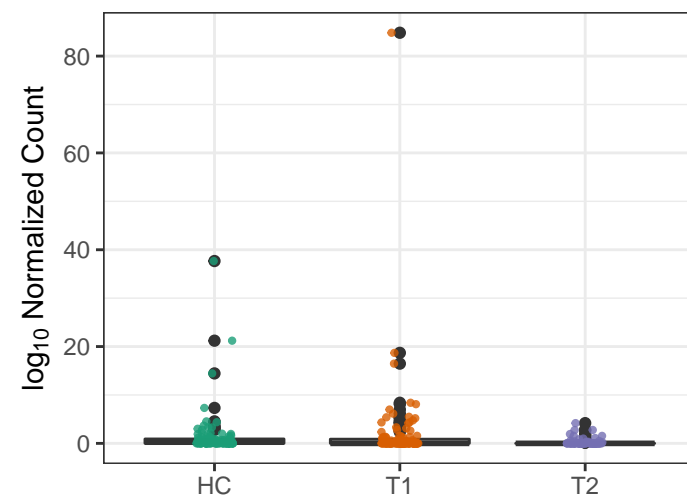
### CALVIN-PWY: Calvin-Benson-Bassh

HC vs. T1  $p = 3e-12$   
 HC vs. T2  $p = 0.0018$   
 T1 vs. T2  $p = 0.016$



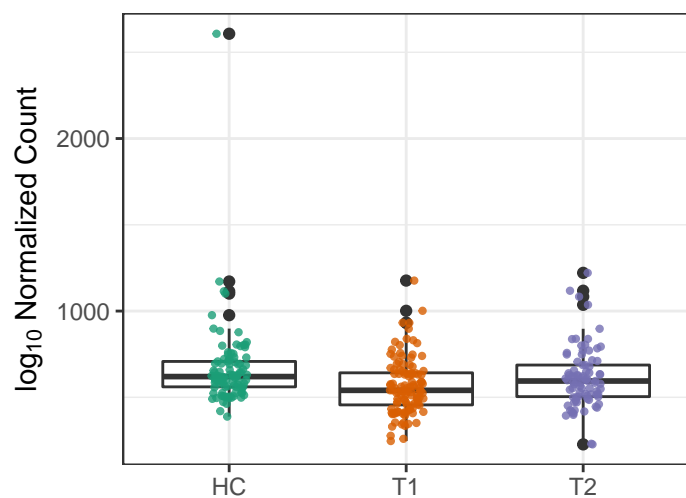
### PWY-5705: allantoin degradation to gly

HC vs. T1  $p = 0.69$   
 HC vs. T2  $p = 0.056$   
 T1 vs. T2  $p = 0.016$



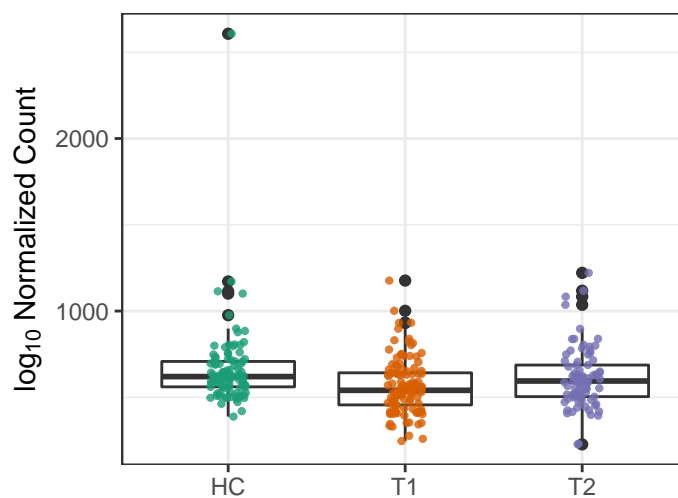
### PWY-6122: 5-aminoimidazole ribonu

HC vs. T1  $p = 0.0023$   
 HC vs. T2  $p = 0.19$   
 T1 vs. T2  $p = 0.016$



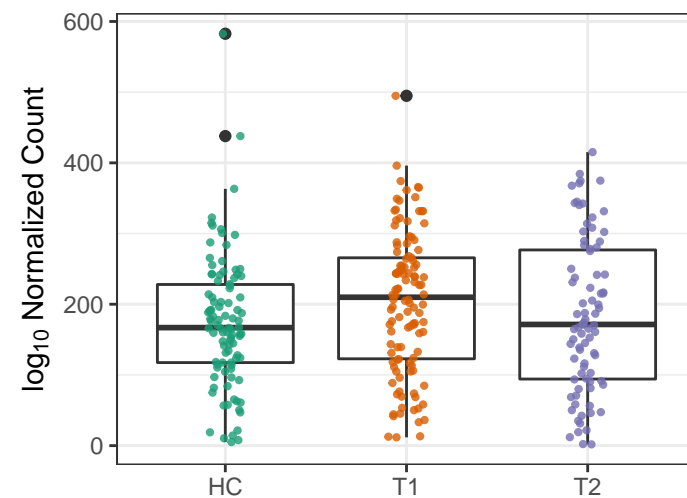
### PWY-6277: superpathway of 5-amin

HC vs. T1  $p = 0.0023$   
 HC vs. T2  $p = 0.19$   
 T1 vs. T2  $p = 0.016$



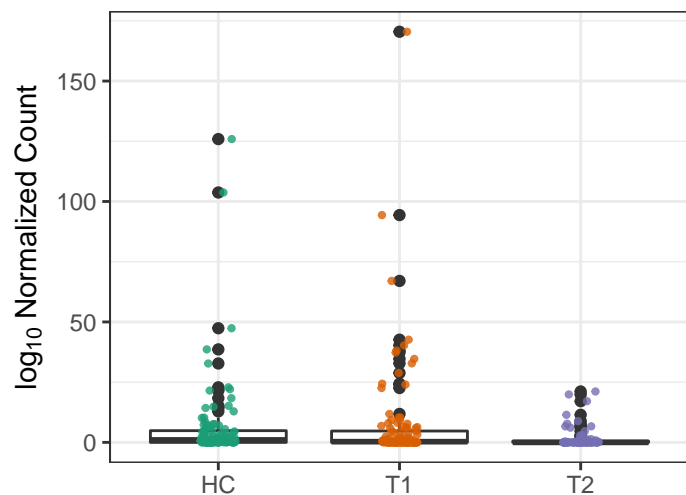
### PWY-5973: cis-vaccenate biosynthesi

HC vs. T1  $p = 0.07$   
 HC vs. T2  $p = 0.67$   
 T1 vs. T2  $p = 0.016$



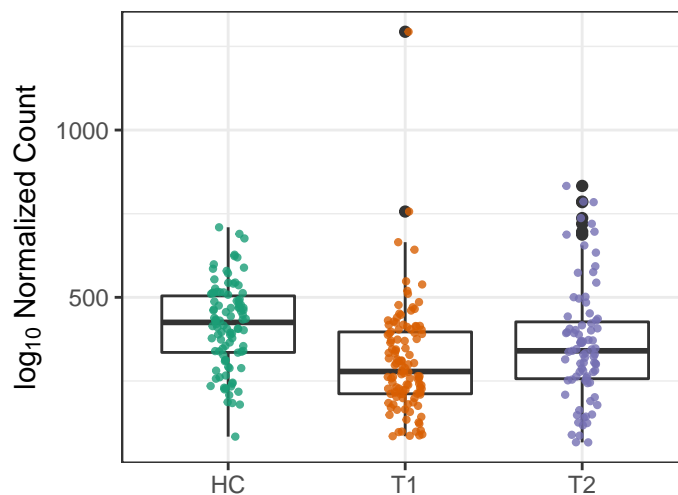
### GLUCOSE1PMETAB-PWY: glucose a

HC vs. T1  $p = 0.85$   
 HC vs. T2  $p = 0.04$   
 T1 vs. T2  $p = 0.017$



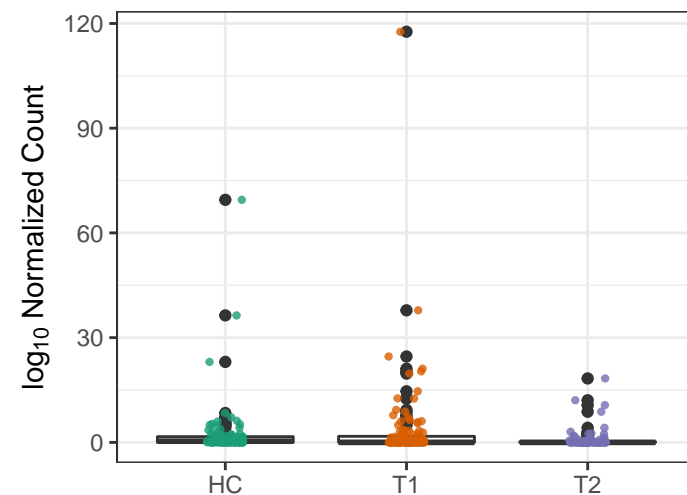
### NONOXIPENT-PWY: pentose phosph

HC vs. T1  $p = 1.7e-06$   
 HC vs. T2  $p = 0.075$   
 T1 vs. T2  $p = 0.017$



### PWY-5855: ubiquinol-7 biosynthesis (

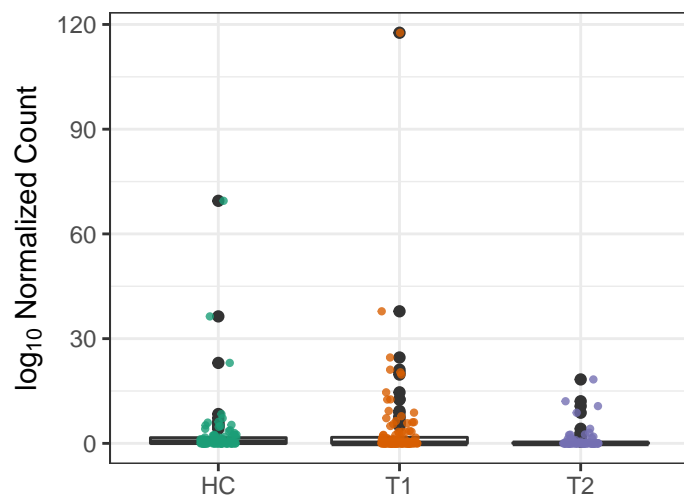
HC vs. T1  $p = 0.56$   
 HC vs. T2  $p = 0.19$   
 T1 vs. T2  $p = 0.017$





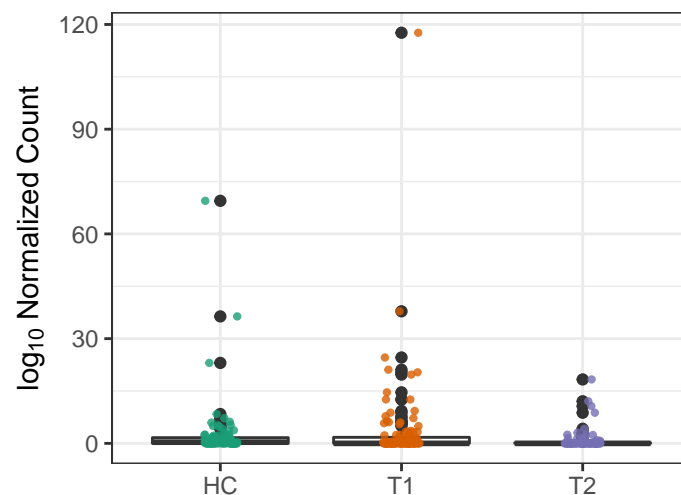
PWY-5856: ubiquinol-9 biosynthesis (

HC vs. T1  $p = 0.56$   
 HC vs. T2  $p = 0.19$   
 T1 vs. T2  $p = 0.017$



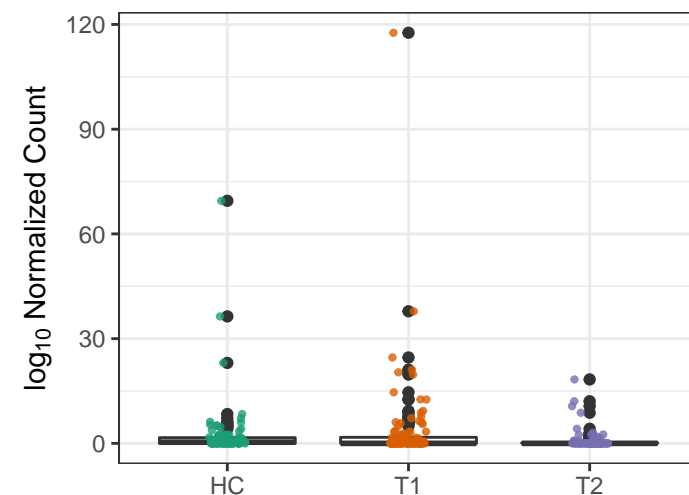
PWY-5857: ubiquinol-10 biosynthesis

HC vs. T1  $p = 0.56$   
 HC vs. T2  $p = 0.19$   
 T1 vs. T2  $p = 0.017$



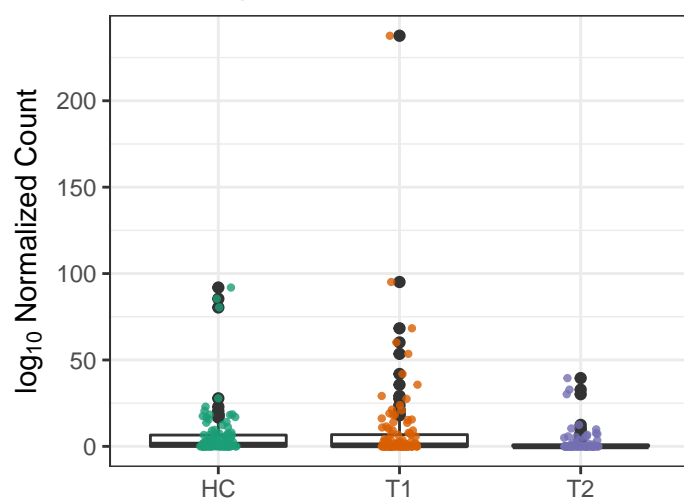
PWY-6708: ubiquinol-8 biosynthesis (

HC vs. T1  $p = 0.56$   
 HC vs. T2  $p = 0.19$   
 T1 vs. T2  $p = 0.017$



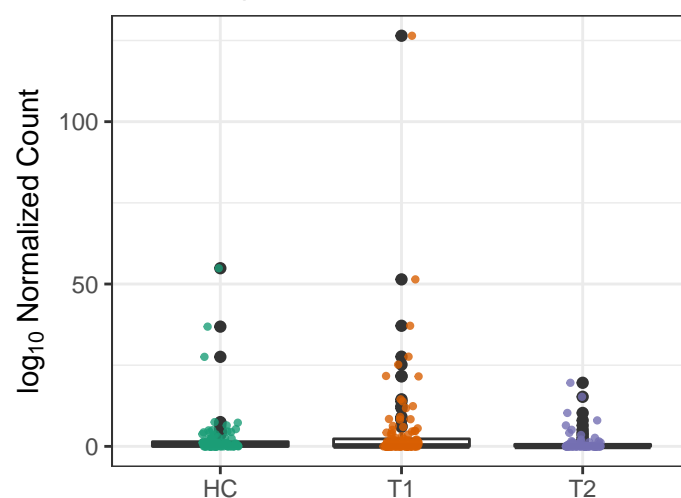
P105-PWY: TCA cycle IV (2-oxoglutar

HC vs. T1  $p = 0.58$   
 HC vs. T2  $p = 0.063$   
 T1 vs. T2  $p = 0.017$



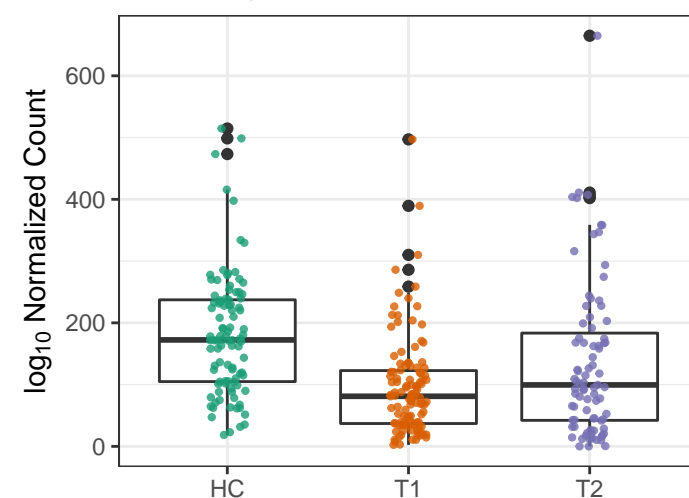
PWY0-1241: ADP-L-glycero-&beta;-

HC vs. T1  $p = 0.3$   
 HC vs. T2  $p = 0.22$   
 T1 vs. T2  $p = 0.018$



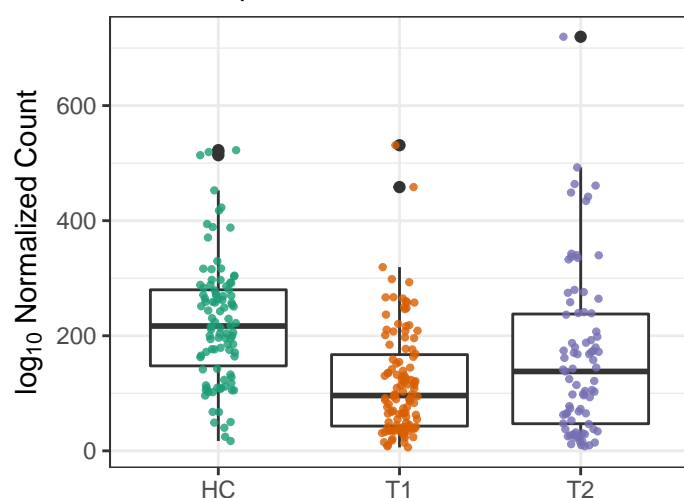
GALACTUROCAT-PWY: D-galacturon

HC vs. T1  $p = 3.2e-09$   
 HC vs. T2  $p = 0.041$   
 T1 vs. T2  $p = 0.019$



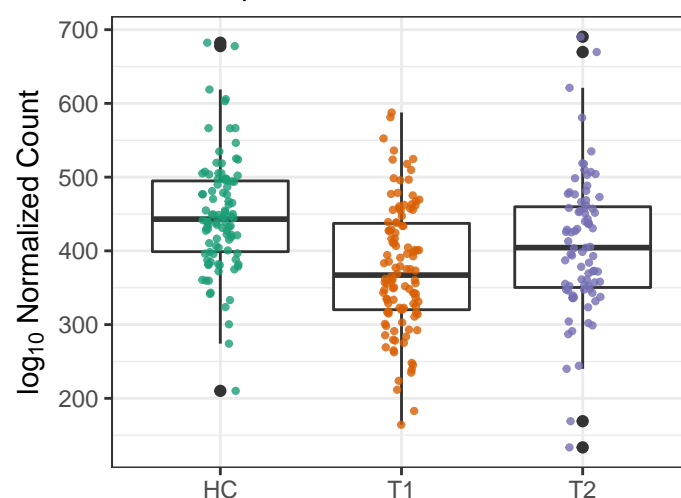
PWY-7242: D-fructuronate degradatic

HC vs. T1  $p = 8.4e-11$   
 HC vs. T2  $p = 0.014$   
 T1 vs. T2  $p = 0.019$



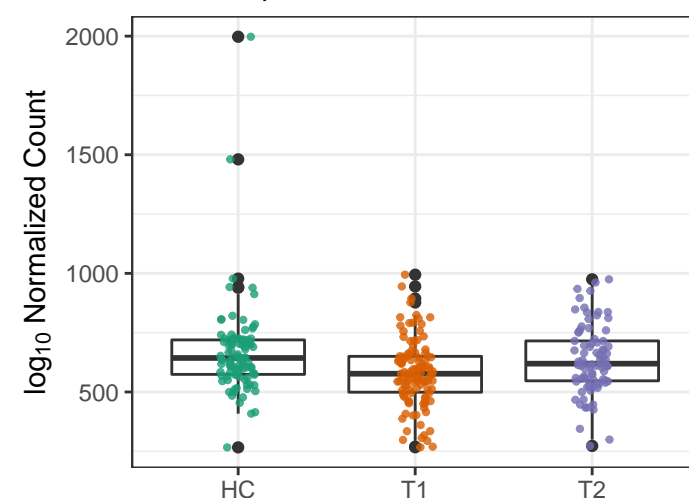
PWY-724: superpathway of L-lysine, l

HC vs. T1  $p = 8.6e-09$   
 HC vs. T2  $p = 0.018$   
 T1 vs. T2  $p = 0.019$



PEPTIDOGLYCANSYN-PWY: peptido

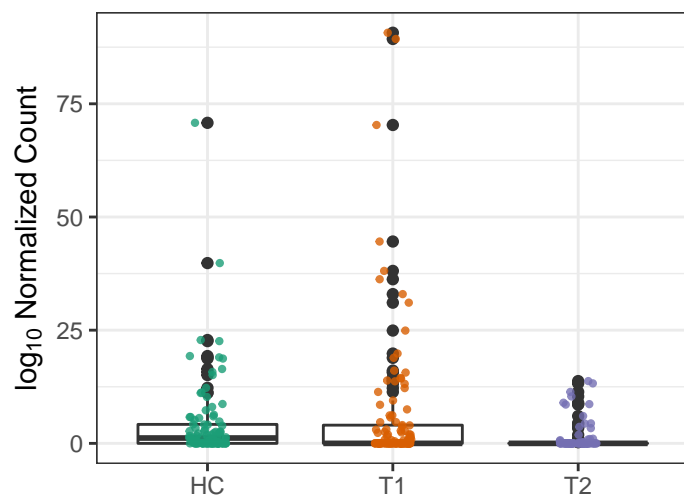
HC vs. T1  $p = 0.0014$   
 HC vs. T2  $p = 0.34$   
 T1 vs. T2  $p = 0.019$





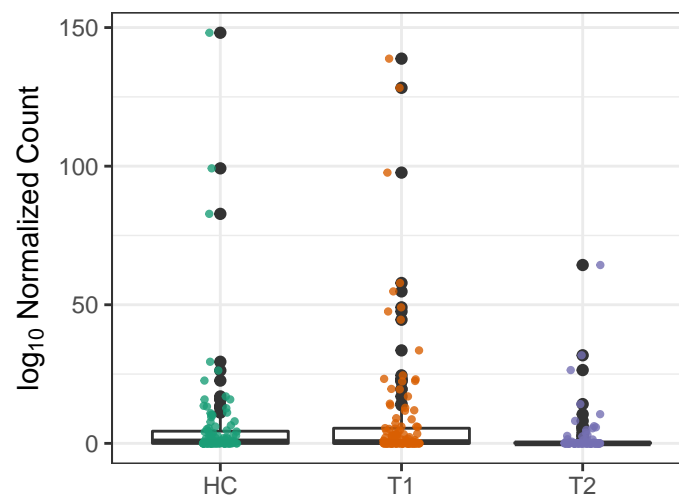
### PWY-7204: pyridoxal 5'-phosphate sal

HC vs. T1  $p = 0.4$   
 HC vs. T2  $p = 0.017$   
 T1 vs. T2  $p = 0.019$



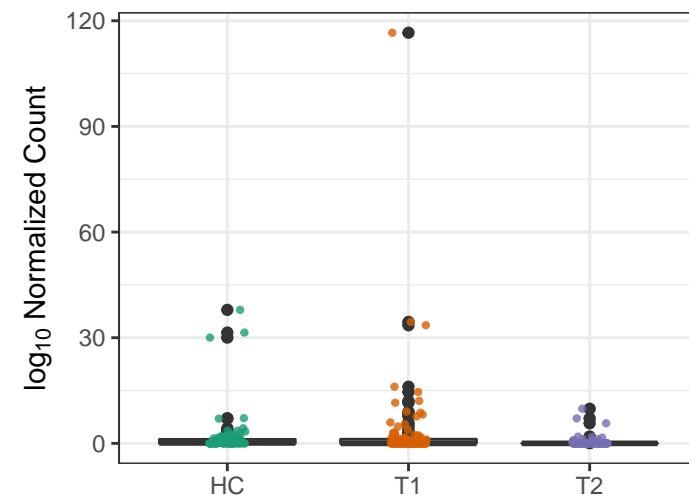
### PWY-5723: Rubisco shunt

HC vs. T1  $p = 0.56$   
 HC vs. T2  $p = 0.13$   
 T1 vs. T2  $p = 0.019$



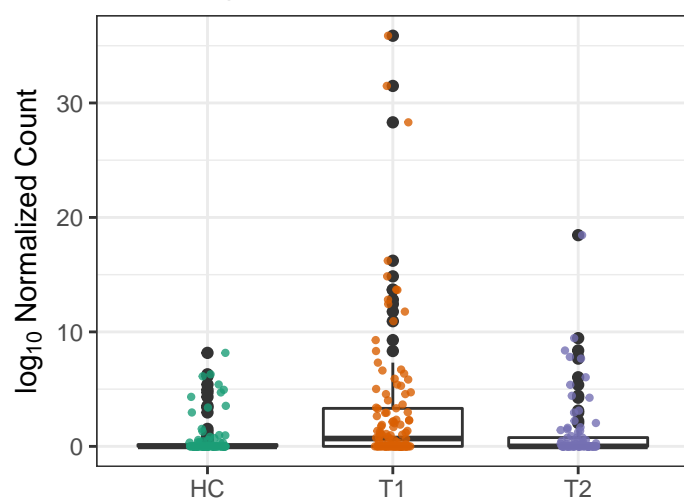
### GLYCOL-GLYOXDEG-PWY: superpat

HC vs. T1  $p = 0.49$   
 HC vs. T2  $p = 0.094$   
 T1 vs. T2  $p = 0.02$



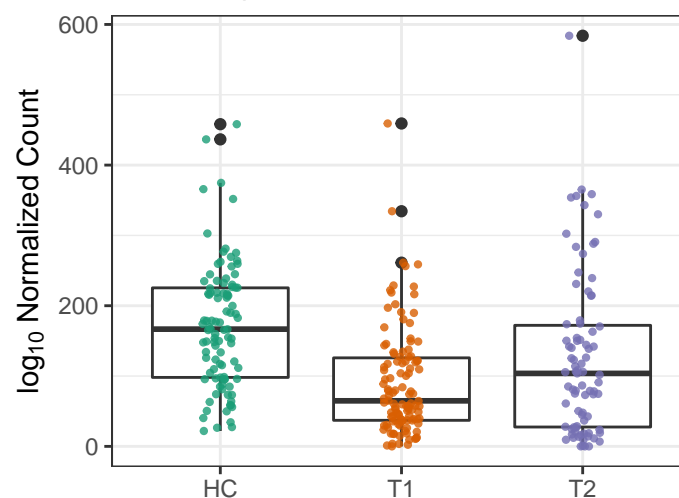
### 7ALPHADEHYDROX-PWY: cholate de

HC vs. T1  $p = 0.00021$   
 HC vs. T2  $p = 0.2$   
 T1 vs. T2  $p = 0.02$



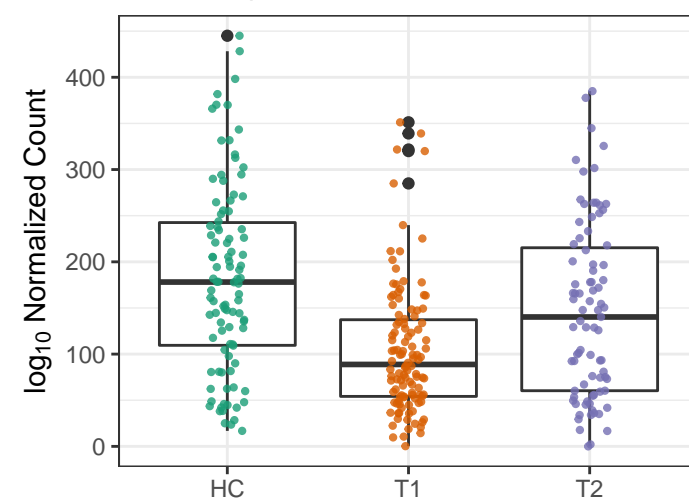
### GALACT-GLUCUROCAT-PWY: super

HC vs. T1  $p = 1.2e-09$   
 HC vs. T2  $p = 0.025$   
 T1 vs. T2  $p = 0.02$



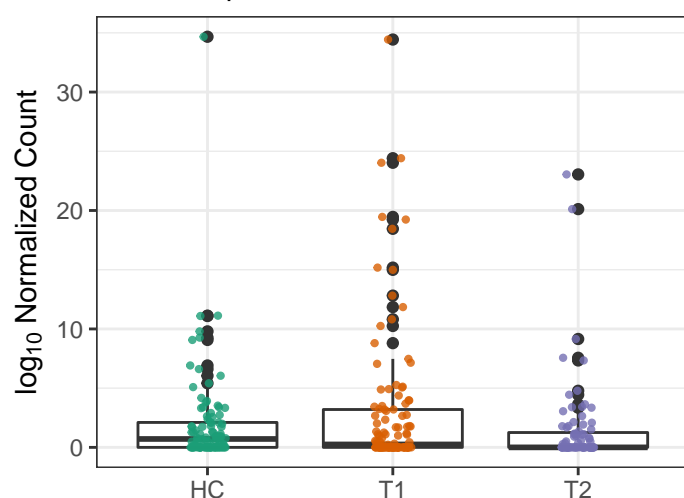
### GLYCOGENSYNTH-PWY: glycogen b

HC vs. T1  $p = 2.1e-08$   
 HC vs. T2  $p = 0.064$   
 T1 vs. T2  $p = 0.02$



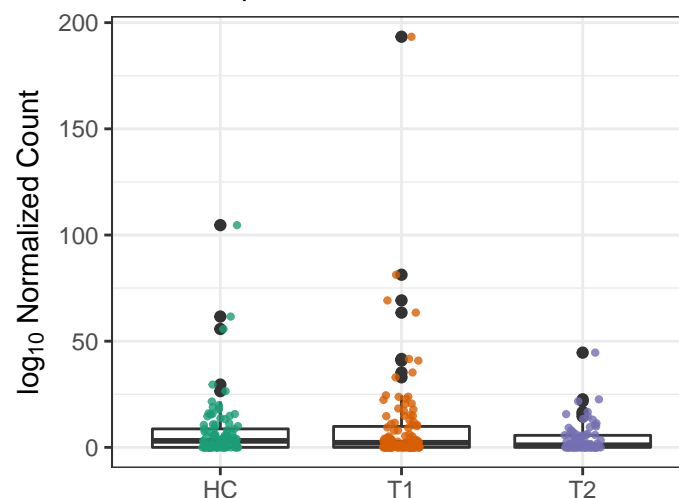
### PWY0-1415: superpathway of heme bi

HC vs. T1  $p = 0.26$   
 HC vs. T2  $p = 0.47$   
 T1 vs. T2  $p = 0.02$



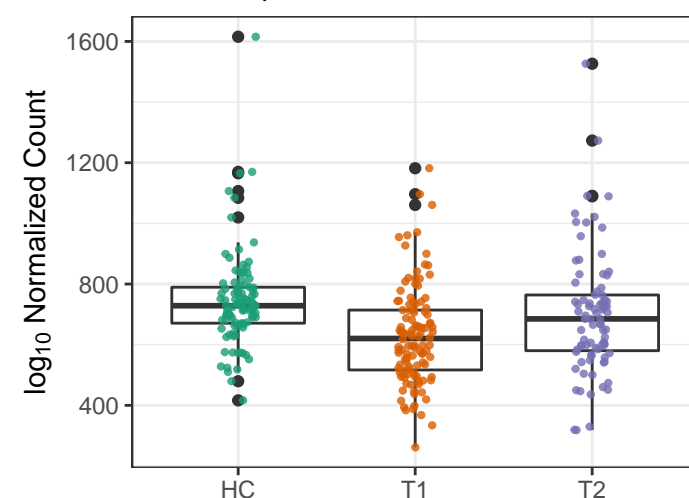
### FUC-RHAMCAT-PWY: superpathway

HC vs. T1  $p = 0.57$   
 HC vs. T2  $p = 0.097$   
 T1 vs. T2  $p = 0.02$



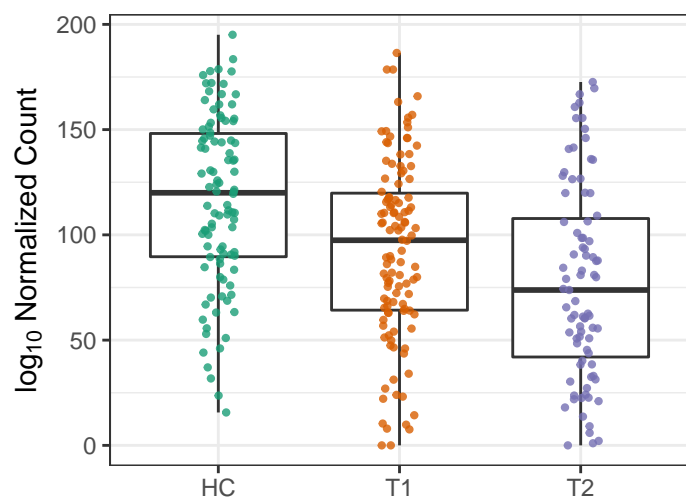
### ILEUSYN-PWY: L-isoleucine biosynt

HC vs. T1  $p = 3.6e-06$   
 HC vs. T2  $p = 0.19$   
 T1 vs. T2  $p = 0.02$



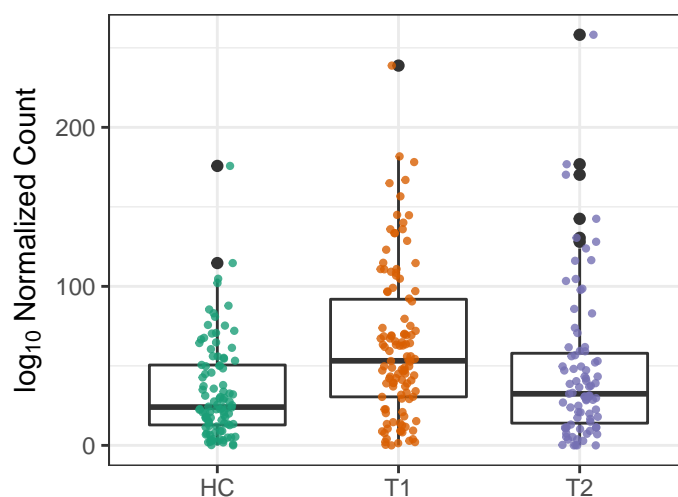
### PRPP-PWY: superpathway of histidine

HC vs. T1  $p = 0.00031$   
HC vs. T2  $p = 3.1e-06$   
T1 vs. T2  $p = 0.02$



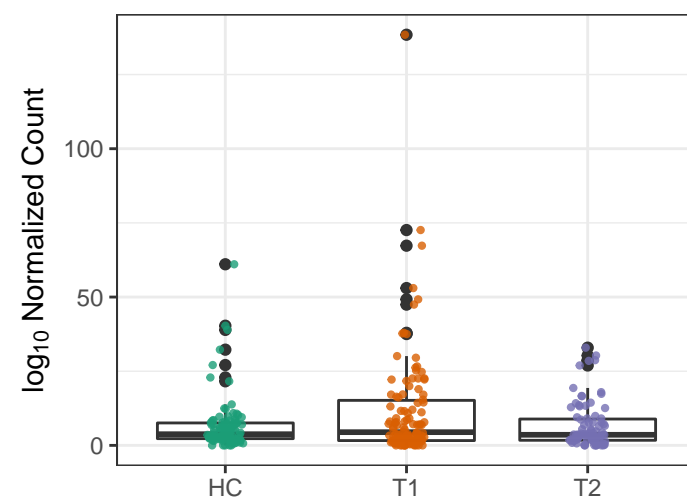
### PWY-1269: CMP-3-deoxy-D-manno

HC vs. T1  $p = 2.3e-06$   
HC vs. T2  $p = 0.1$   
T1 vs. T2  $p = 0.02$



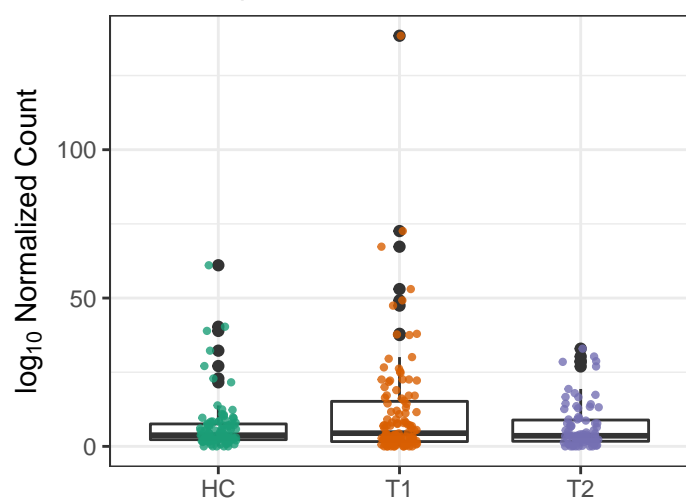
### PWY-5791: 1,4-dihydroxy-2-naphtho

HC vs. T1  $p = 0.032$   
HC vs. T2  $p = 0.96$   
T1 vs. T2  $p = 0.02$



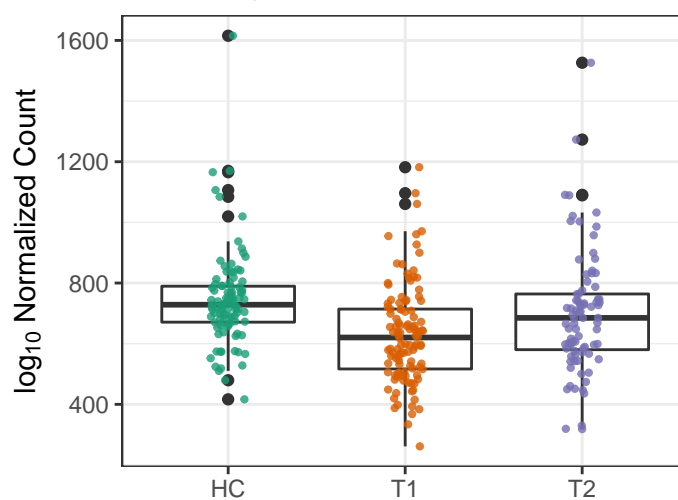
### PWY-5837: 1,4-dihydroxy-2-naphtho

HC vs. T1  $p = 0.032$   
HC vs. T2  $p = 0.96$   
T1 vs. T2  $p = 0.02$



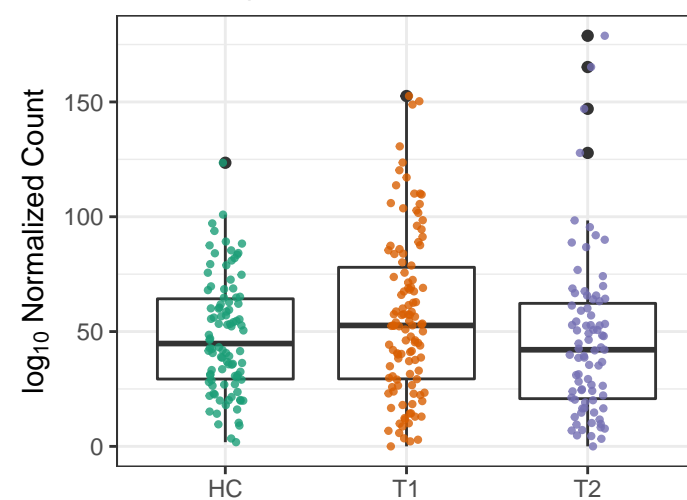
### VALSYN-PWY: L-valine biosynthesis

HC vs. T1  $p = 3.6e-06$   
HC vs. T2  $p = 0.19$   
T1 vs. T2  $p = 0.02$



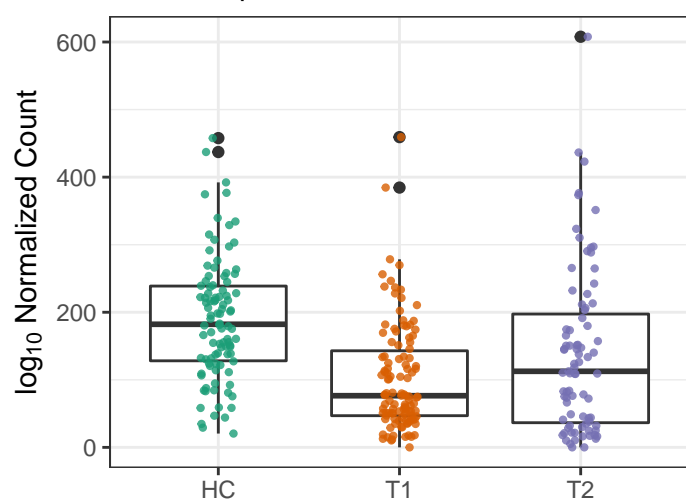
### P42-PWY: incomplete reductive TCA c

HC vs. T1  $p = 0.099$   
HC vs. T2  $p = 0.76$   
T1 vs. T2  $p = 0.021$



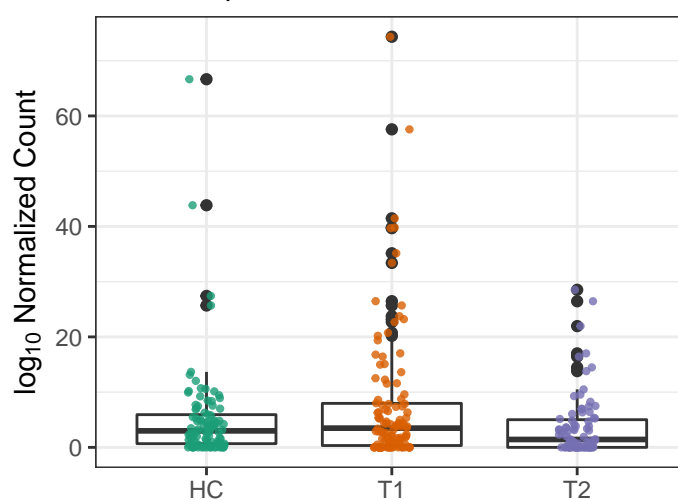
### GLUCUROCAT-PWY: superpathway c

HC vs. T1  $p = 1.6e-10$   
HC vs. T2  $p = 0.016$   
T1 vs. T2  $p = 0.021$



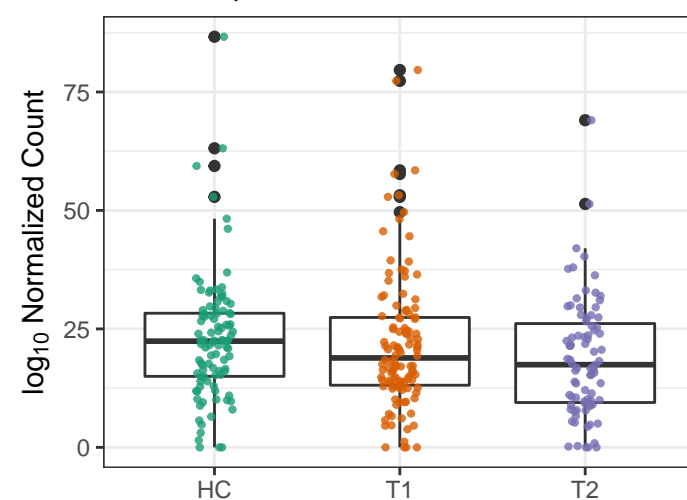
### NAGLIPASYN-PWY: lipid IVA biosynthe

HC vs. T1  $p = 0.14$   
HC vs. T2  $p = 0.34$   
T1 vs. T2  $p = 0.022$



### P164-PWY: purine nucleobases degrad

HC vs. T1  $p = 0.7$   
HC vs. T2  $p = 0.1$   
T1 vs. T2  $p = 0.022$

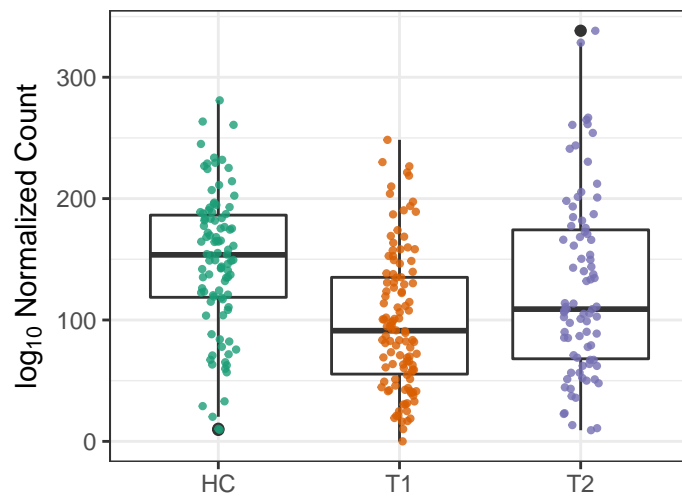


PWY-7199: pyrimidine deoxyribonucle

HC vs. T1  $p = 2.1e-08$

HC vs. T2  $p = 0.1$

T1 vs. T2  $p = 0.022$

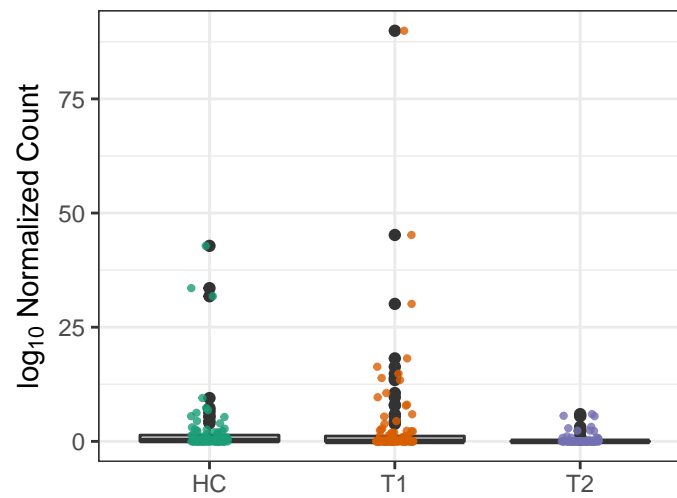


PWY-2723: trehalose degradation V

HC vs. T1  $p = 0.57$

HC vs. T2  $p = 0.063$

T1 vs. T2  $p = 0.023$

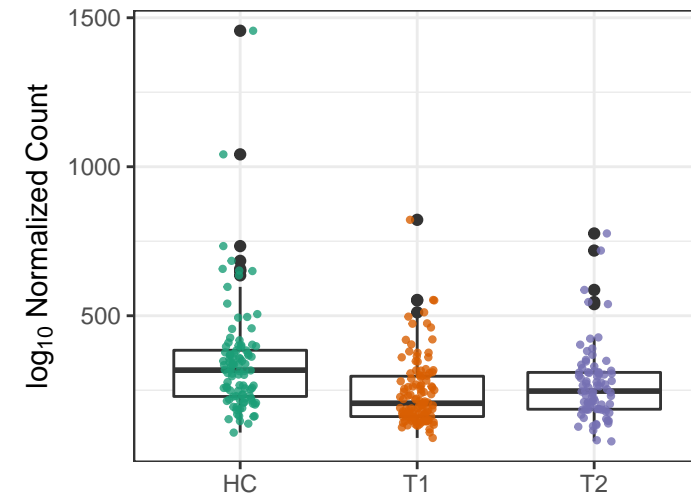


HISTSYN-PWY: L-histidine biosynthe

HC vs. T1  $p = 4e-05$

HC vs. T2  $p = 0.014$

T1 vs. T2  $p = 0.024$

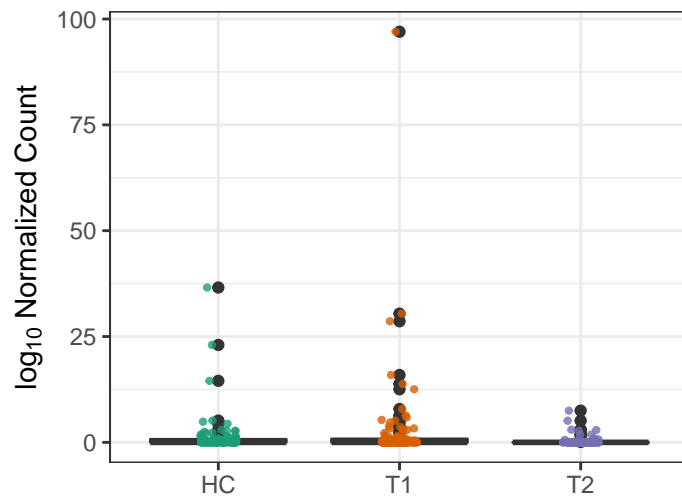


KDO-NAGLIPASYN-PWY: superpathw

HC vs. T1  $p = 0.43$

HC vs. T2  $p = 0.12$

T1 vs. T2  $p = 0.024$

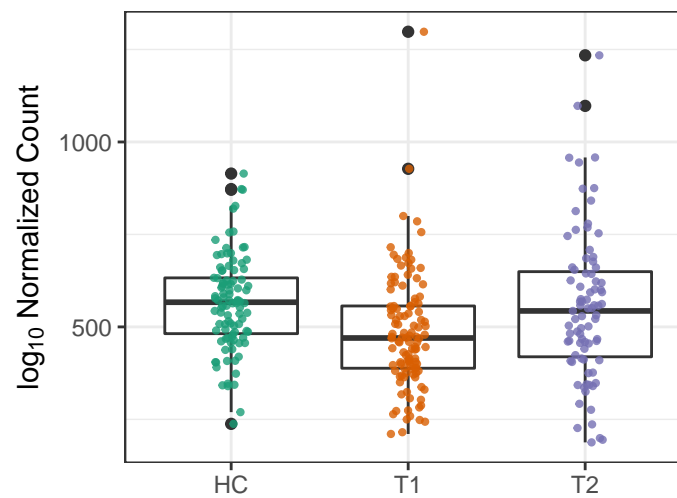


PWY-1042: glycolysis IV (plant cytos

HC vs. T1  $p = 0.00035$

HC vs. T2  $p = 0.74$

T1 vs. T2  $p = 0.024$

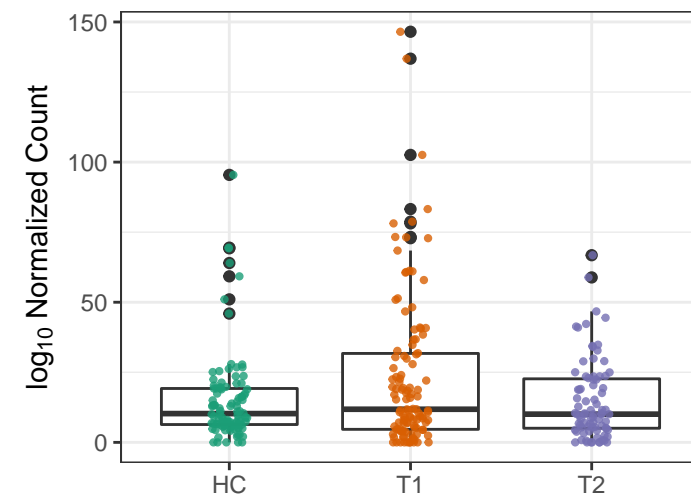


PWY-5897: superpathway of menaqui

HC vs. T1  $p = 0.024$

HC vs. T2  $p = 0.9$

T1 vs. T2  $p = 0.024$

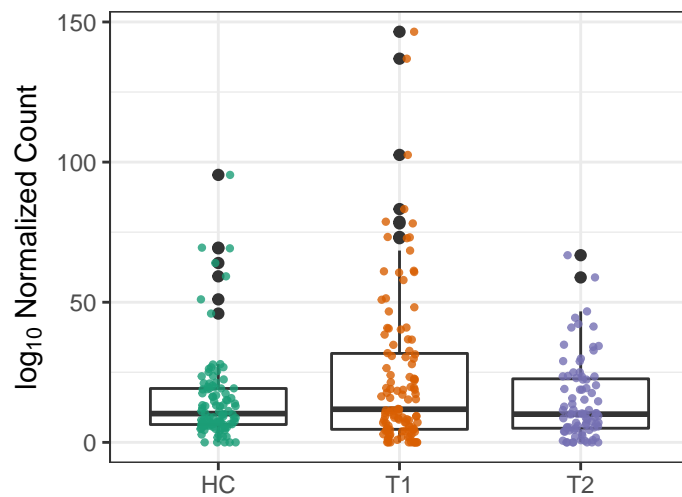


PWY-5898: superpathway of menaqui

HC vs. T1  $p = 0.024$

HC vs. T2  $p = 0.9$

T1 vs. T2  $p = 0.024$

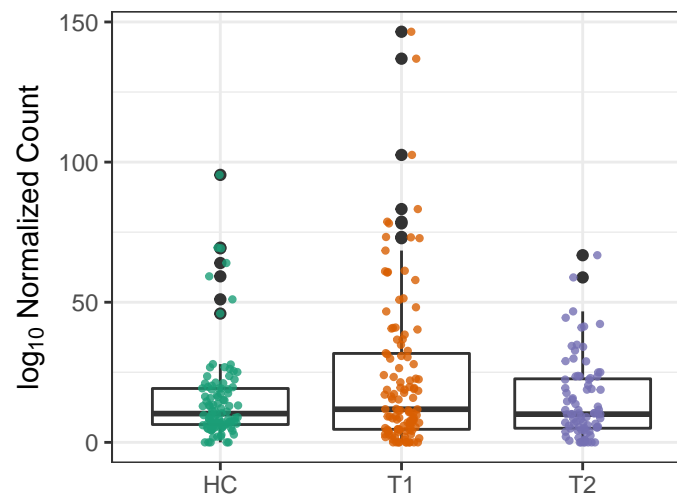


PWY-5899: superpathway of menaqui

HC vs. T1  $p = 0.024$

HC vs. T2  $p = 0.9$

T1 vs. T2  $p = 0.024$

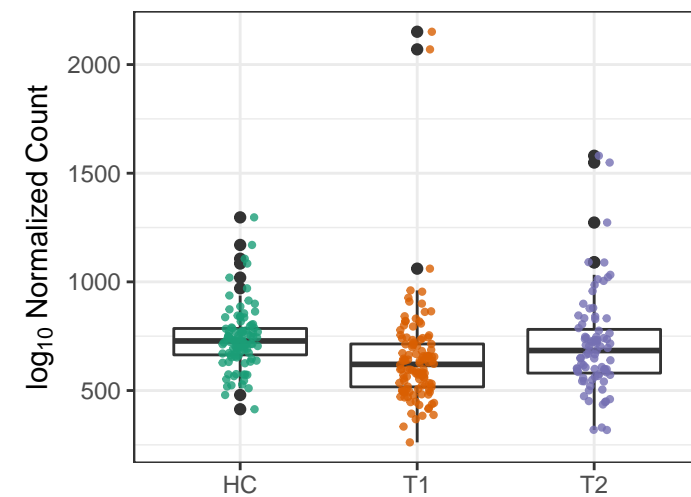


PWY-7111: pyruvate fermentation to

HC vs. T1  $p = 0.0038$

HC vs. T2  $p = 0.47$

T1 vs. T2  $p = 0.024$

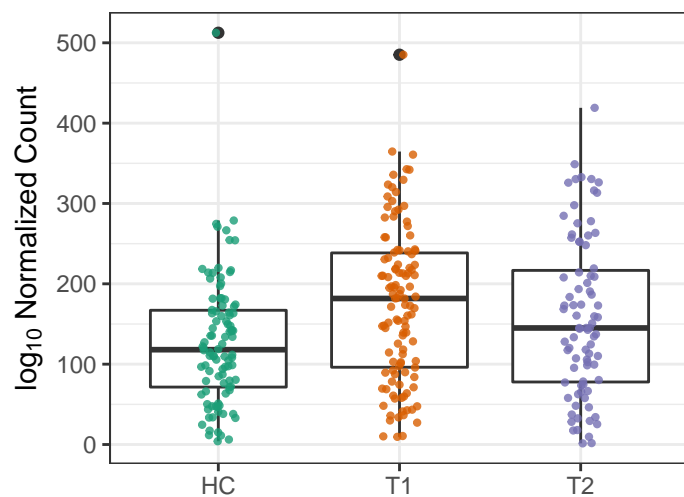


PWY-7663: gondoate biosynthesis (ar

HC vs. T1  $p = 0.00031$

HC vs. T2  $p = 0.075$

T1 vs. T2  $p = 0.024$

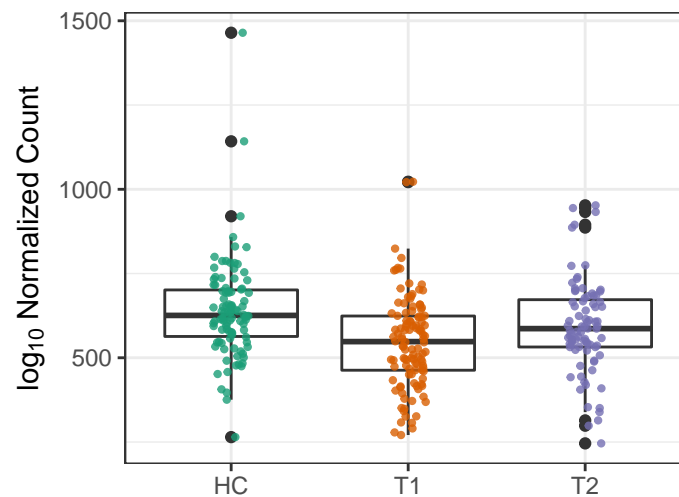


COA-PWY-1: coenzyme A biosynthe

HC vs. T1  $p = 2.2e-05$

HC vs. T2  $p = 0.08$

T1 vs. T2  $p = 0.024$

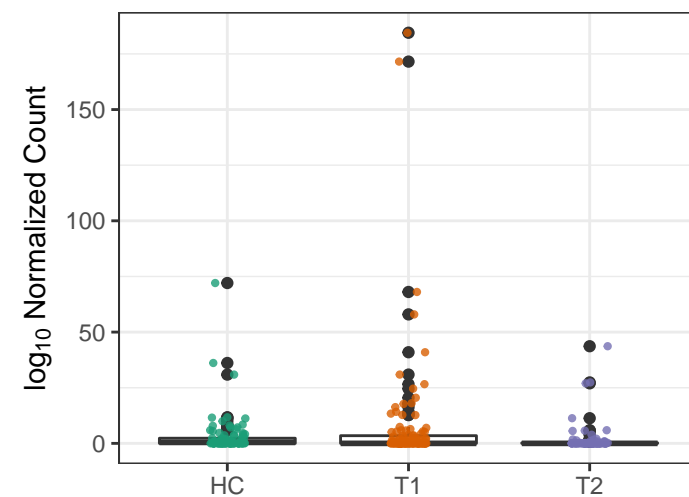


PWY-4041: &gamma;-glutamyl cycle

HC vs. T1  $p = 0.18$

HC vs. T2  $p = 0.35$

T1 vs. T2  $p = 0.027$

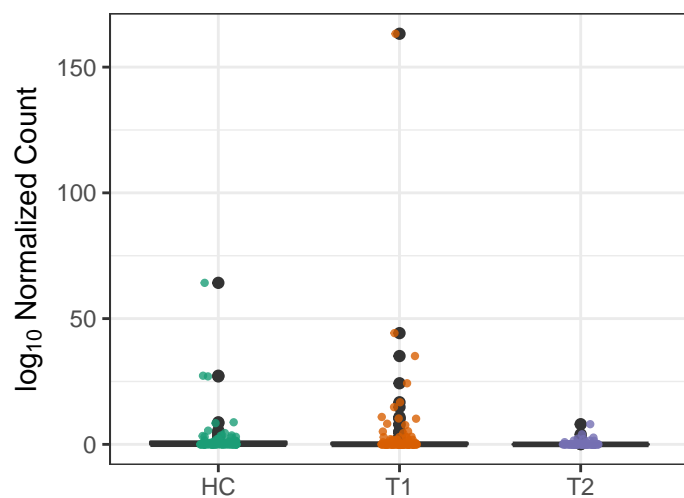


PWY-7409: phospholipid remodeling (

HC vs. T1  $p = 0.53$

HC vs. T2  $p = 0.092$

T1 vs. T2  $p = 0.027$

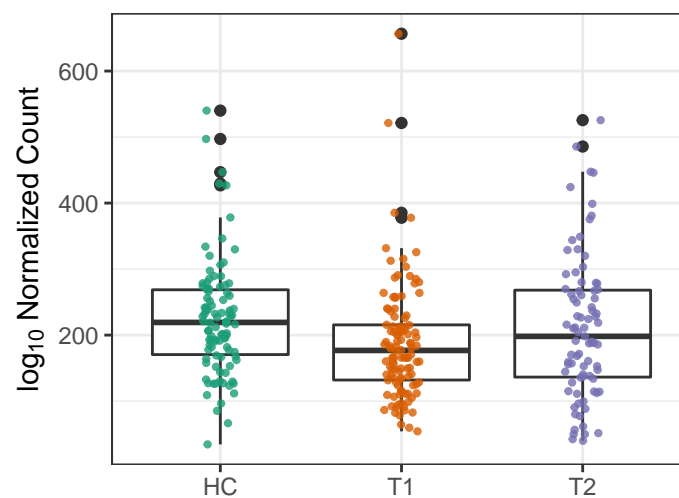


COA-PWY: coenzyme A biosynthesis

HC vs. T1  $p = 0.008$

HC vs. T2  $p = 0.47$

T1 vs. T2  $p = 0.027$

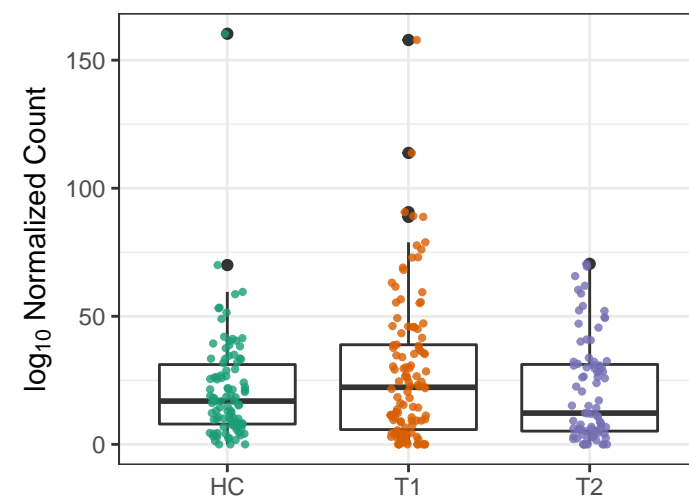


GLUCONEO-PWY: gluconeogenesis I

HC vs. T1  $p = 0.13$

HC vs. T2  $p = 0.87$

T1 vs. T2  $p = 0.027$

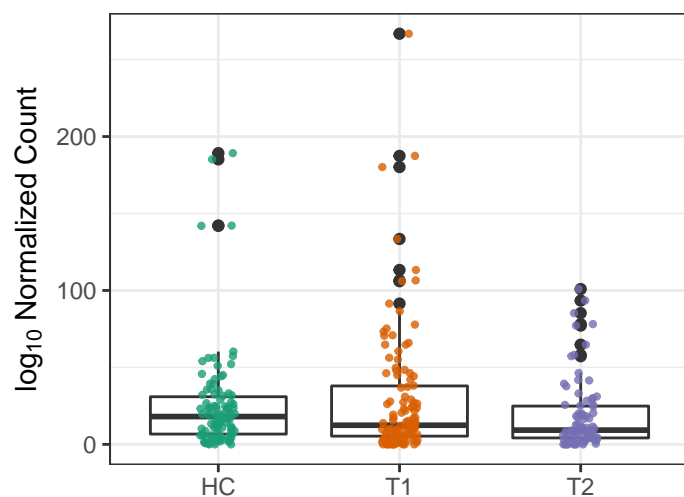


PWY-6628: superpathway of L-pheny

HC vs. T1  $p = 0.56$

HC vs. T2  $p = 0.19$

T1 vs. T2  $p = 0.027$

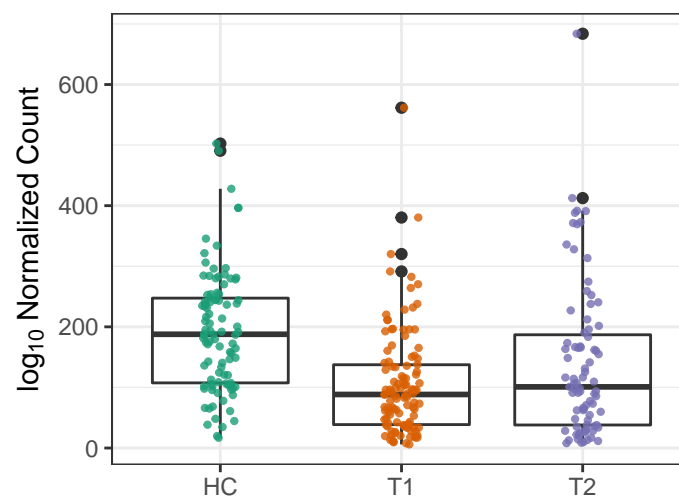


PWY-6507: 4-deoxy-L-threo-hex-4-

HC vs. T1  $p = 2.3e-09$

HC vs. T2  $p = 0.017$

T1 vs. T2  $p = 0.027$

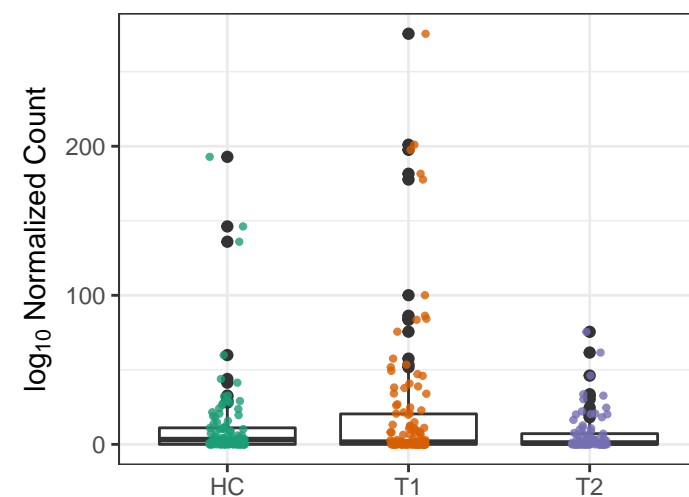


PWY-6630: superpathway of L-tyrosin

HC vs. T1  $p = 0.21$

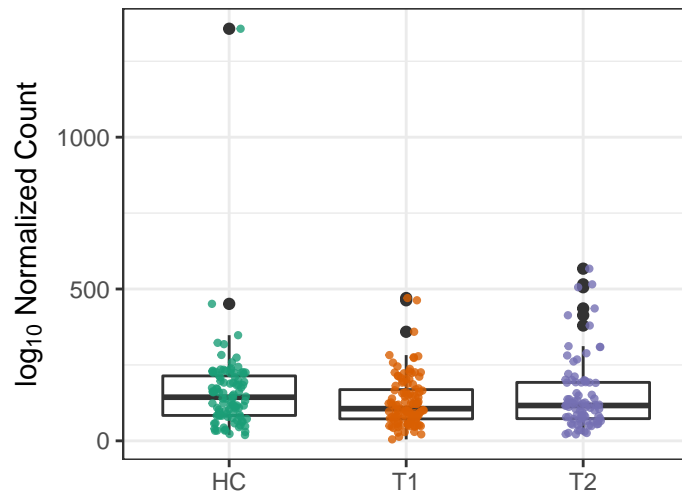
HC vs. T2  $p = 0.19$

T1 vs. T2  $p = 0.027$



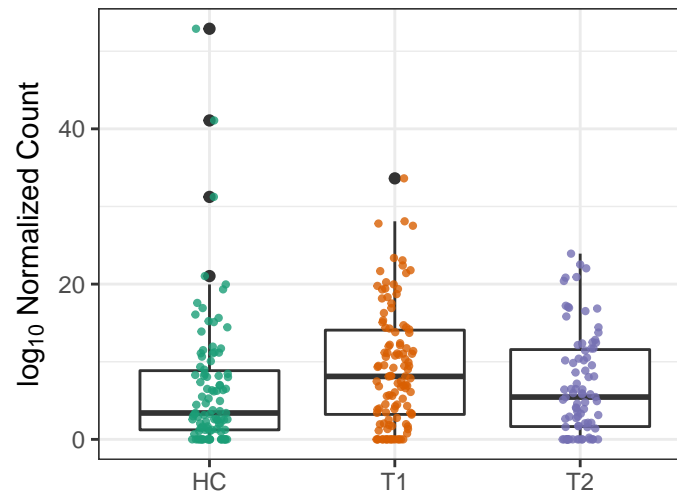
PWY0-1586: peptidoglycan maturatio

HC vs. T1  $p = 0.12$   
 HC vs. T2  $p = 0.68$   
 T1 vs. T2  $p = 0.027$



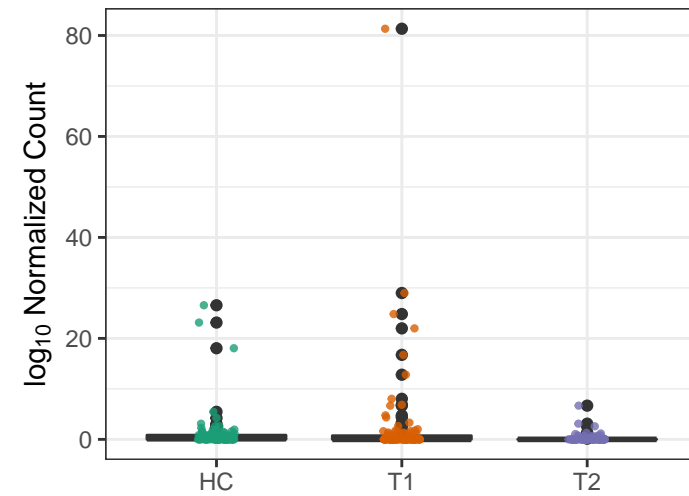
P162-PWY: L-glutamate degradation v

HC vs. T1  $p = 0.039$   
 HC vs. T2  $p = 0.74$   
 T1 vs. T2  $p = 0.028$



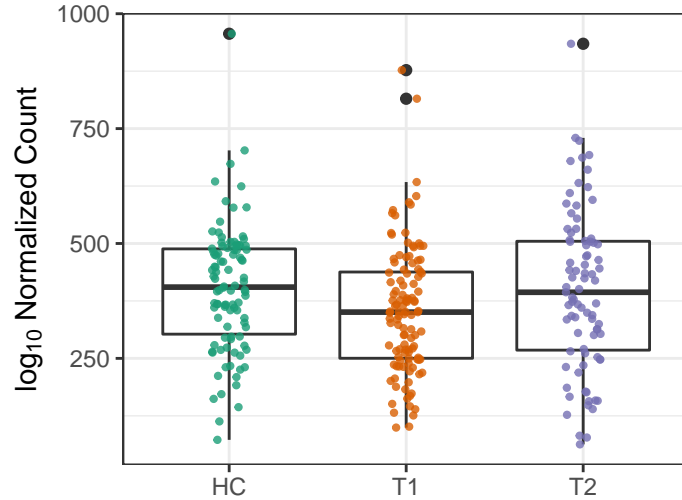
METHGLYUT-PWY: superpathway of m

HC vs. T1  $p = 0.44$   
 HC vs. T2  $p = 0.07$   
 T1 vs. T2  $p = 0.03$



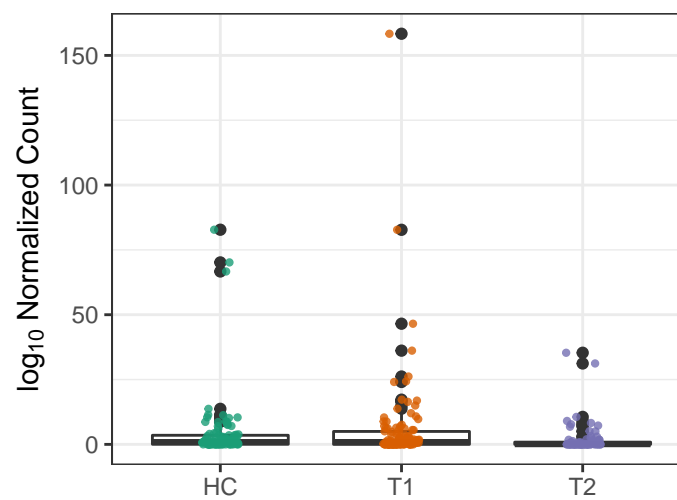
PWY-6385: peptidoglycan biosynthes

HC vs. T1  $p = 0.028$   
 HC vs. T2  $p = 0.91$   
 T1 vs. T2  $p = 0.031$



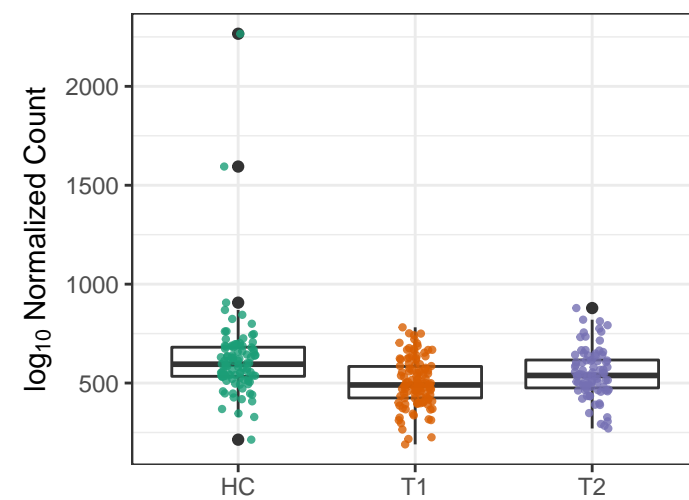
PWY-7254: TCA cycle VII (acetate-pr

HC vs. T1  $p = 0.59$   
 HC vs. T2  $p = 0.14$   
 T1 vs. T2  $p = 0.034$



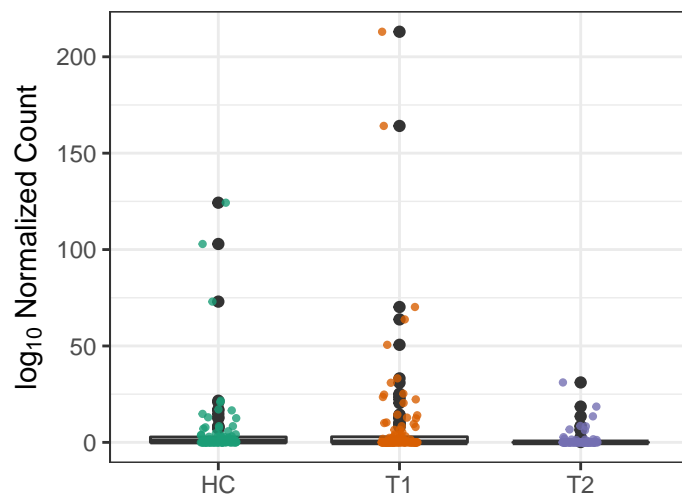
NONMEVIPP-PWY: methylerythritol p

HC vs. T1  $p = 5.1e-05$   
 HC vs. T2  $p = 0.044$   
 T1 vs. T2  $p = 0.036$



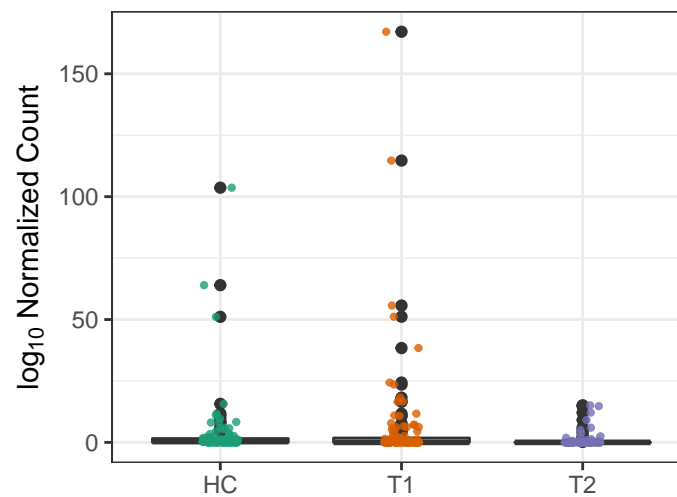
PWY-6891: thiazole biosynthesis II (B:

HC vs. T1  $p = 0.54$   
 HC vs. T2  $p = 0.094$   
 T1 vs. T2  $p = 0.038$



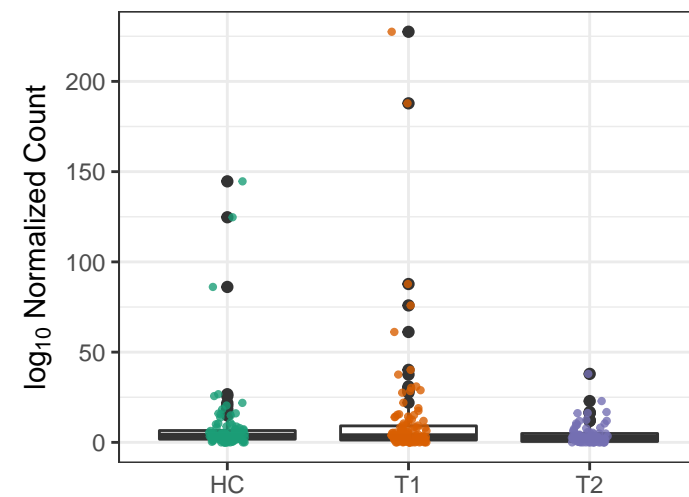
PWY-7269: NAD/NADP-NADH/NADP

HC vs. T1  $p = 0.52$   
 HC vs. T2  $p = 0.11$   
 T1 vs. T2  $p = 0.039$



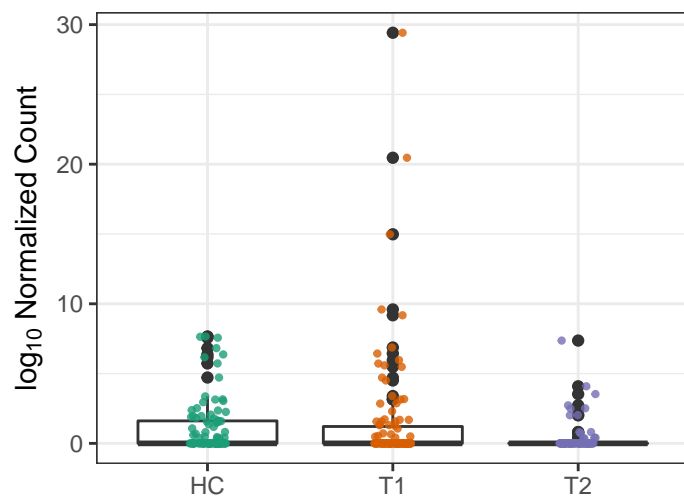
PWY-6892: thiazole biosynthesis I (E:

HC vs. T1  $p = 0.53$   
 HC vs. T2  $p = 0.1$   
 T1 vs. T2  $p = 0.04$



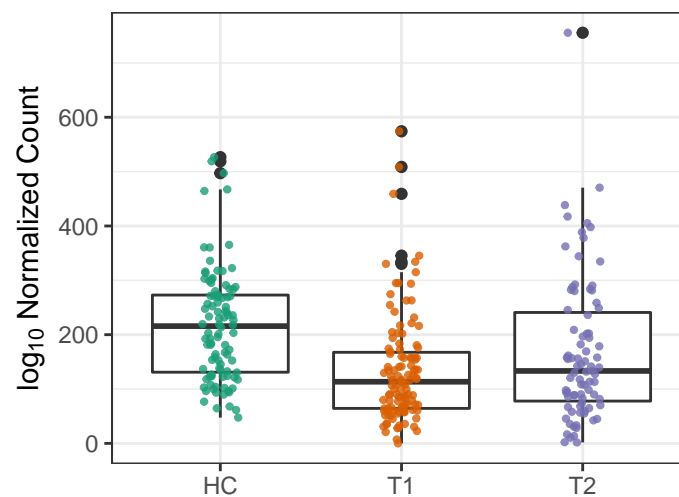
PWY-6263: superpathway of menaquin

HC vs. T1  $p = 0.52$   
 HC vs. T2  $p = 0.015$   
 T1 vs. T2  $p = 0.041$



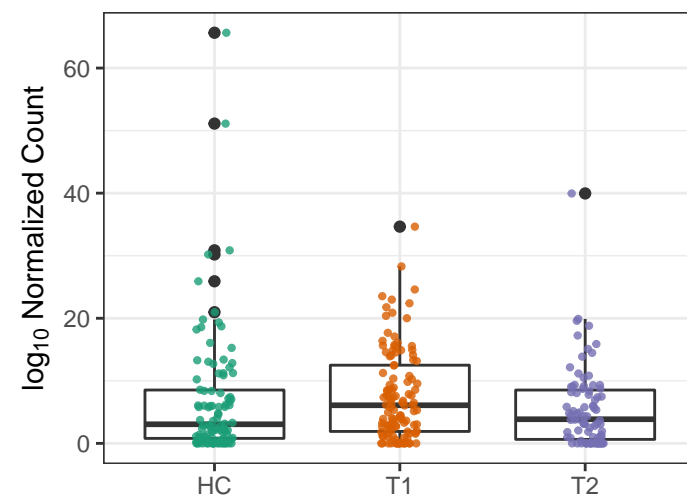
GLCMANNANAUT-PWY: superpathwa

HC vs. T1  $p = 1.8e-07$   
 HC vs. T2  $p = 0.04$   
 T1 vs. T2  $p = 0.042$



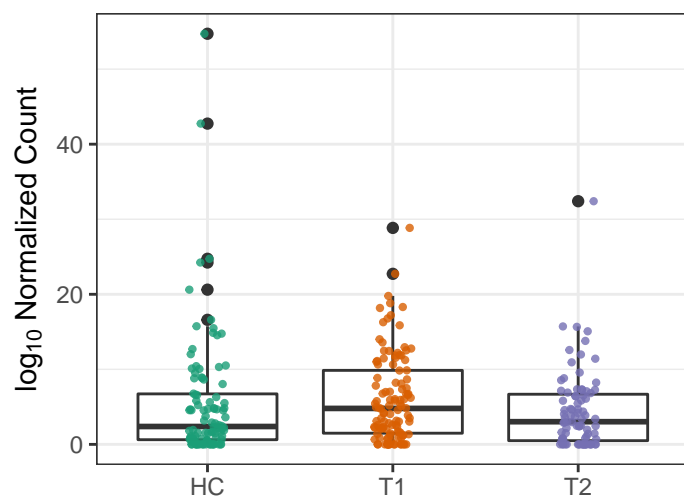
PWY-6590: superpathway of Clostridiu

HC vs. T1  $p = 0.62$   
 HC vs. T2  $p = 0.4$   
 T1 vs. T2  $p = 0.043$



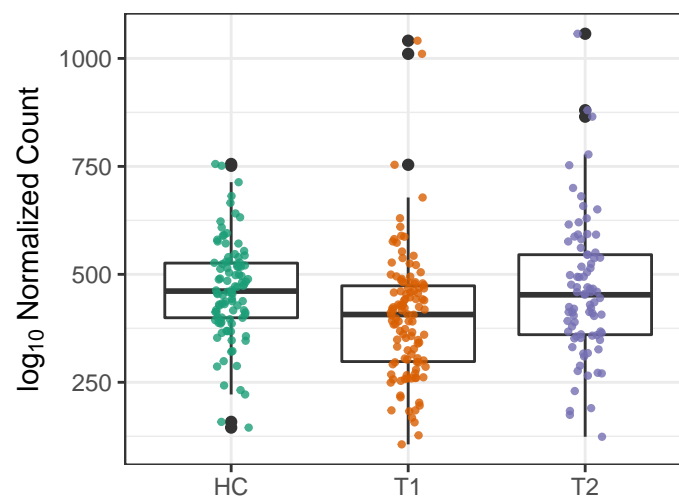
CENTFERM-PWY: pyruvate fermentati

HC vs. T1  $p = 0.64$   
 HC vs. T2  $p = 0.4$   
 T1 vs. T2  $p = 0.043$



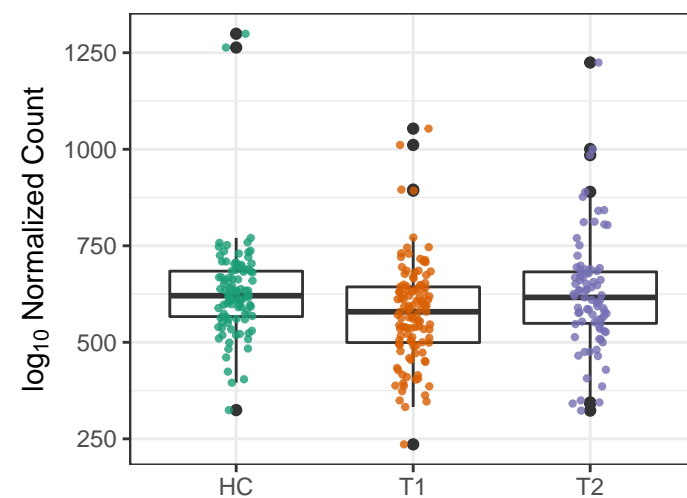
PWY0-1296: purine ribonucleosides c

HC vs. T1  $p = 0.0028$   
 HC vs. T2  $p = 0.99$   
 T1 vs. T2  $p = 0.043$



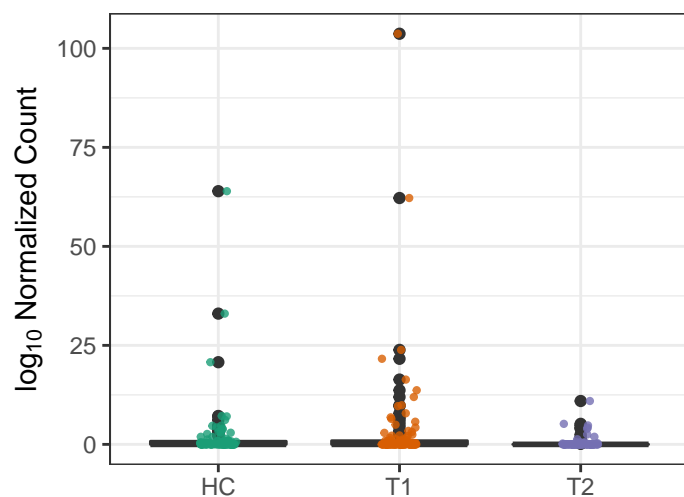
PWY-7221: guanosine ribonucleotide

HC vs. T1  $p = 0.007$   
 HC vs. T2  $p = 0.88$   
 T1 vs. T2  $p = 0.045$



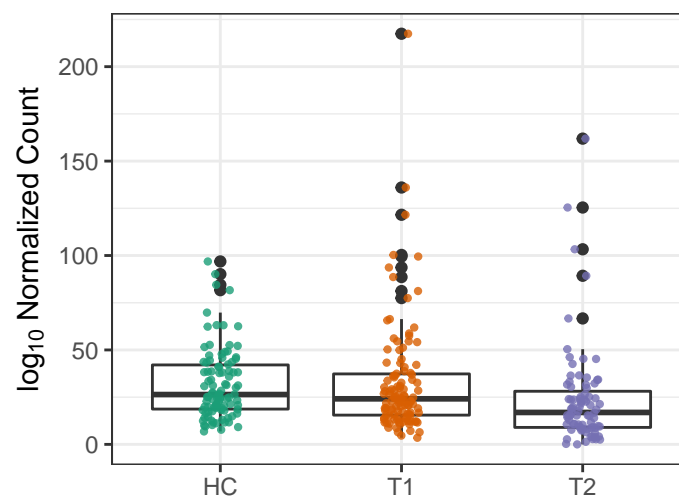
ECASYN-PWY: enterobacterial comm

HC vs. T1  $p = 0.56$   
 HC vs. T2  $p = 0.13$   
 T1 vs. T2  $p = 0.045$



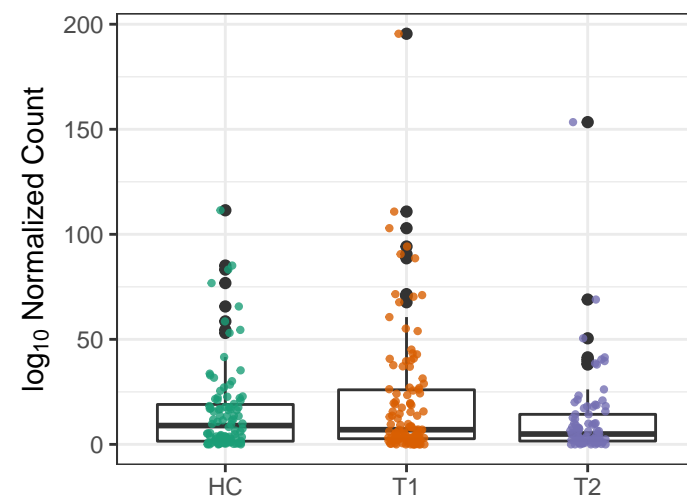
PWY-5690: TCA cycle II (plants and fu

HC vs. T1  $p = 0.83$   
 HC vs. T2  $p = 0.068$   
 T1 vs. T2  $p = 0.045$



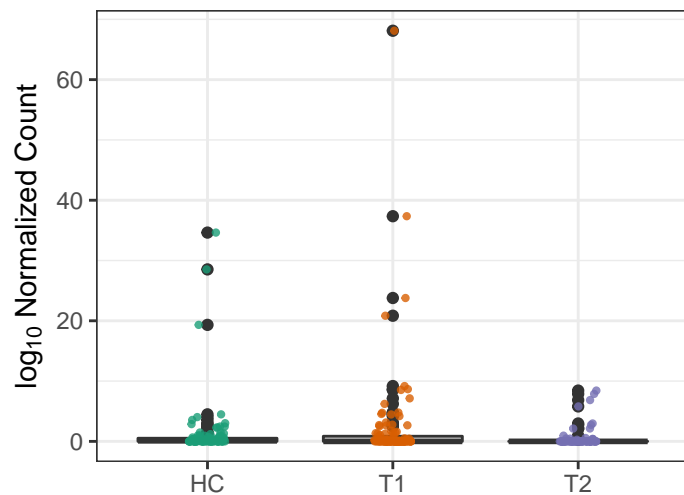
SO4ASSIM-PWY: sulfate reduction I (a

HC vs. T1  $p = 0.3$   
 HC vs. T2  $p = 0.35$   
 T1 vs. T2  $p = 0.048$



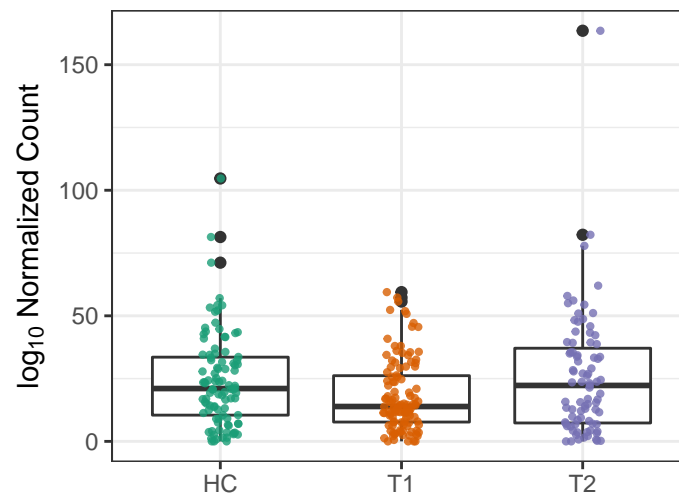
AST-PWY: L-arginine degradation II (A)

HC vs. T1  $p = 0.47$   
 HC vs. T2  $p = 0.22$   
 T1 vs. T2  $p = 0.049$



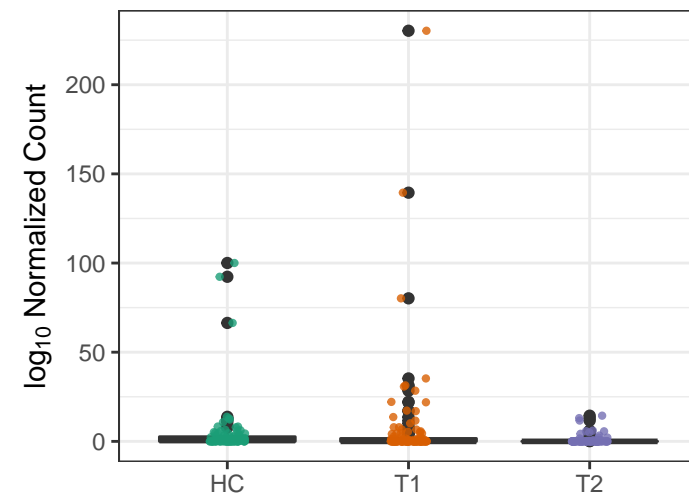
PWY-6595: superpathway of guanosin

HC vs. T1  $p = 0.024$   
 HC vs. T2  $p = 0.74$   
 T1 vs. T2  $p = 0.049$



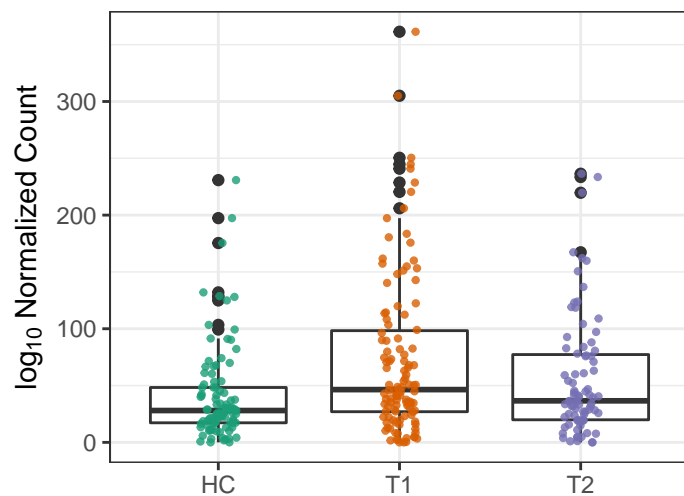
PWY-7315: dTDP-N-acetylthomosam

HC vs. T1  $p = 0.53$   
 HC vs. T2  $p = 0.089$   
 T1 vs. T2  $p = 0.049$



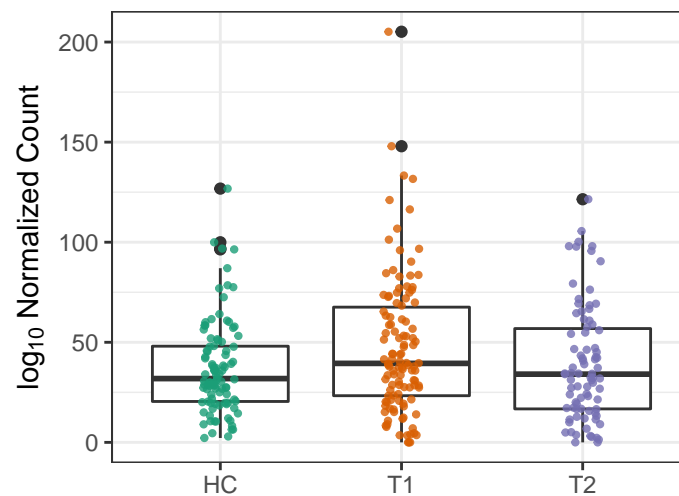
PWY66-400: glycolysis VI (metazoan)

HC vs. T1  $p = 0.00035$   
 HC vs. T2  $p = 0.1$   
 T1 vs. T2  $p = 0.049$



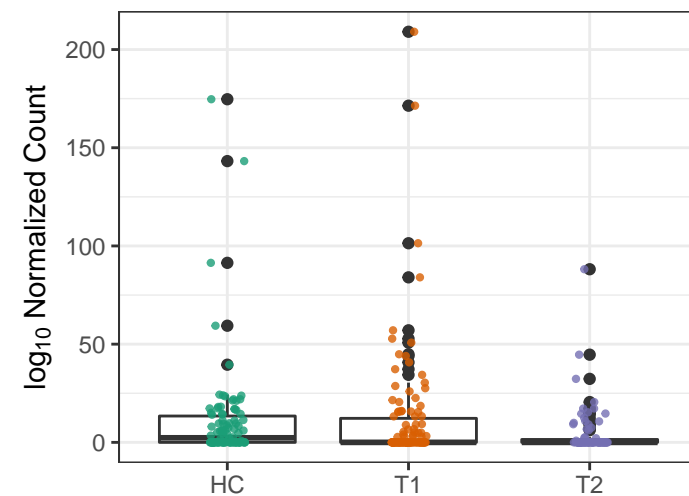
HEXITOLDEGSUPER-PWY: superpat

HC vs. T1  $p = 0.028$   
 HC vs. T2  $p = 0.73$   
 T1 vs. T2  $p = 0.049$



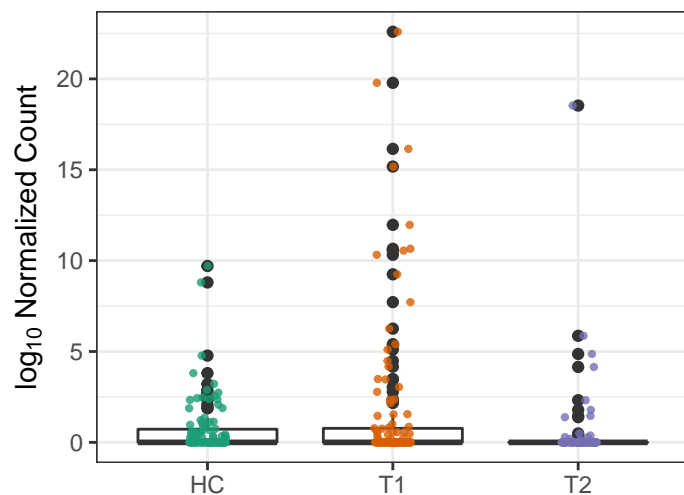
ENTBACSYN-PWY: enterobactin bios

HC vs. T1  $p = 0.84$   
 HC vs. T2  $p = 0.08$   
 T1 vs. T2  $p = 0.053$



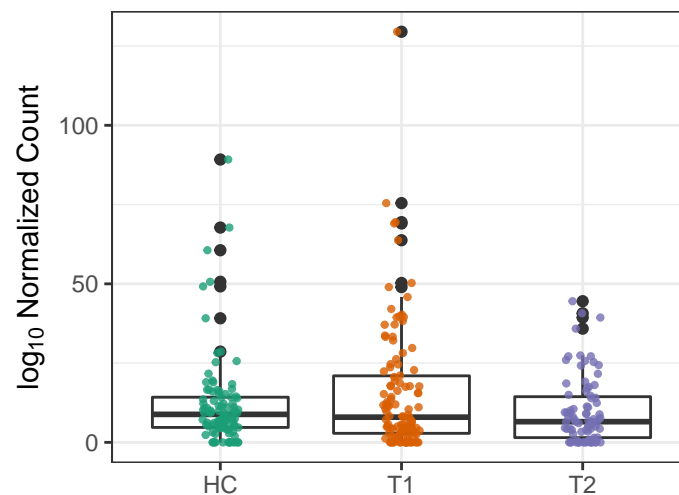
PWY-7399: methylphosphonate degra

HC vs. T1  $p = 0.056$   
 HC vs. T2  $p = 0.53$   
 T1 vs. T2  $p = 0.055$



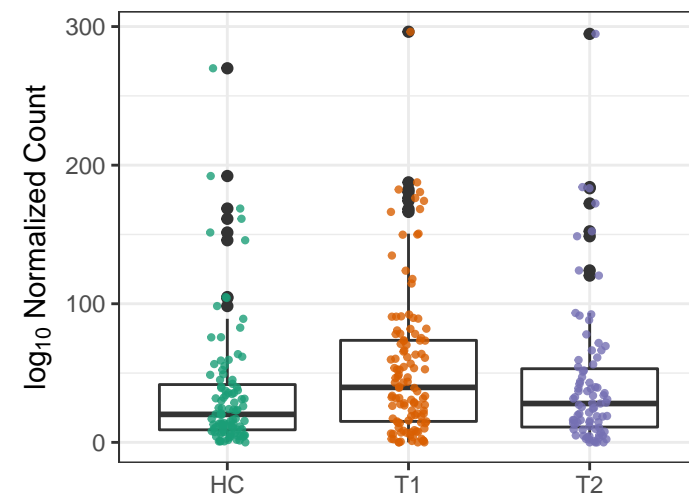
PWY-5840: superpathway of menaqui

HC vs. T1  $p = 0.25$   
 HC vs. T2  $p = 0.36$   
 T1 vs. T2  $p = 0.056$



PWY4FS-7: phosphatidylglycerol bios

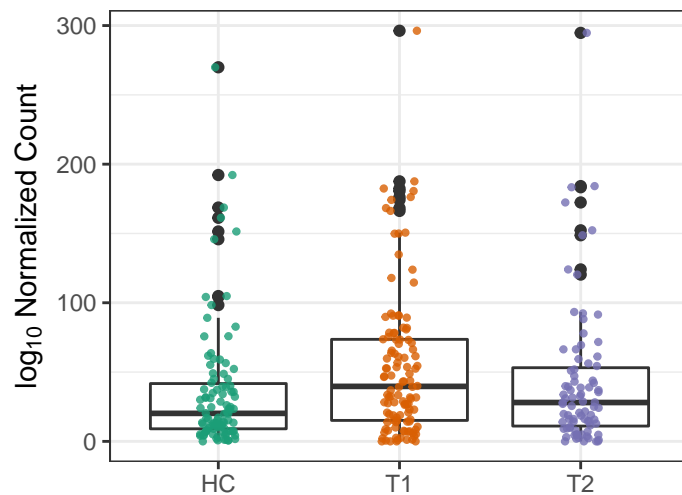
HC vs. T1  $p = 0.021$   
 HC vs. T2  $p = 0.45$   
 T1 vs. T2  $p = 0.057$





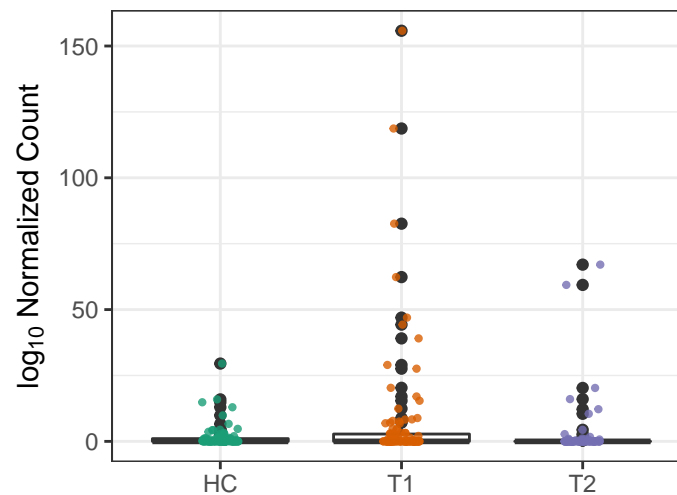
### PWY4FS-8: phosphatidylglycerol biosynthesis

HC vs. T1  $p = 0.021$   
 HC vs. T2  $p = 0.45$   
 T1 vs. T2  $p = 0.057$



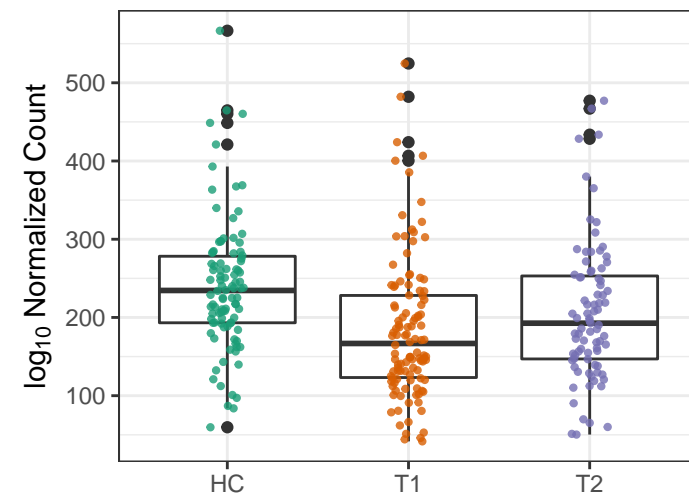
### PWY-7013: L-1,2-propanediol degradation

HC vs. T1  $p = 0.026$   
 HC vs. T2  $p = 0.55$   
 T1 vs. T2  $p = 0.059$



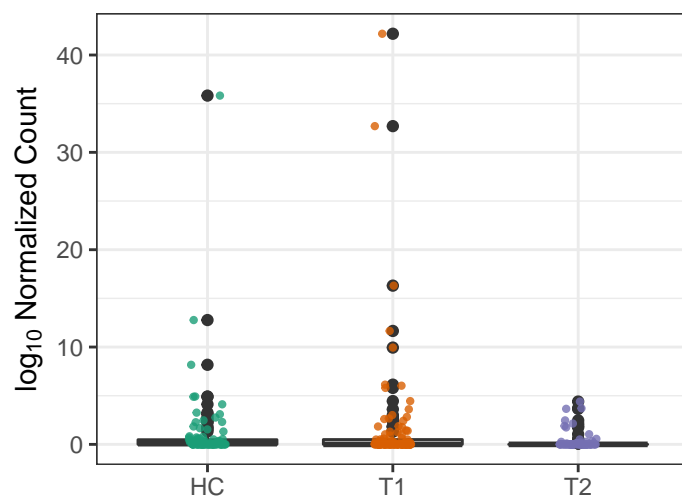
### PWY-5100: pyruvate fermentation to acetate

HC vs. T1  $p = 3.8e-05$   
 HC vs. T2  $p = 0.044$   
 T1 vs. T2  $p = 0.06$



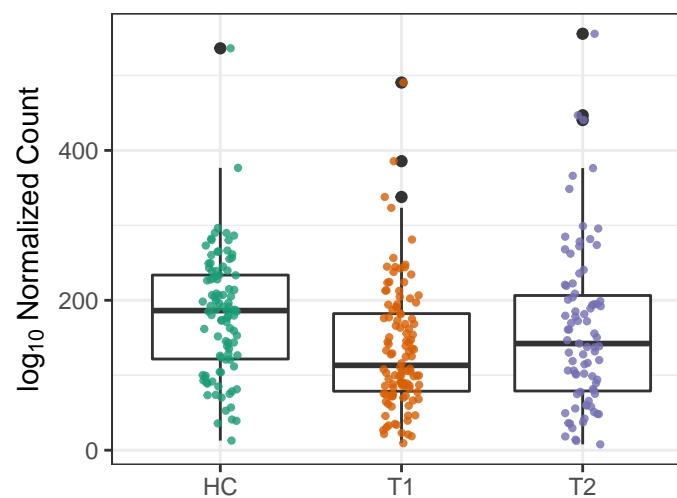
### PWY0-1338: polymyxin resistance

HC vs. T1  $p = 0.59$   
 HC vs. T2  $p = 0.14$   
 T1 vs. T2  $p = 0.06$



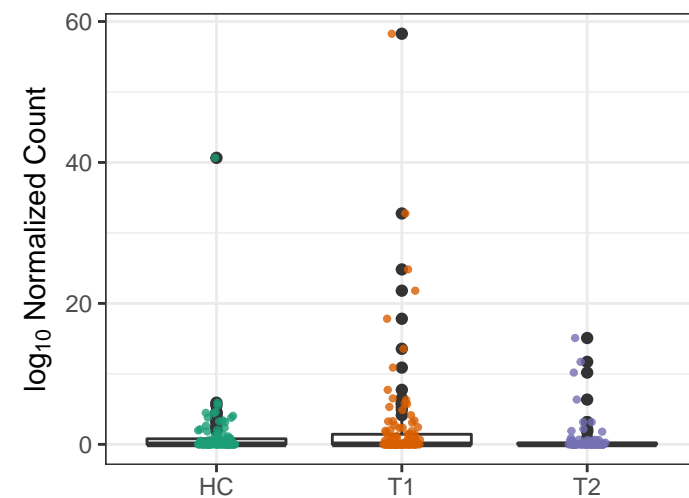
### ASPASN-PWY: superpathway of L-asparagine

HC vs. T1  $p = 0.00028$   
 HC vs. T2  $p = 0.27$   
 T1 vs. T2  $p = 0.061$



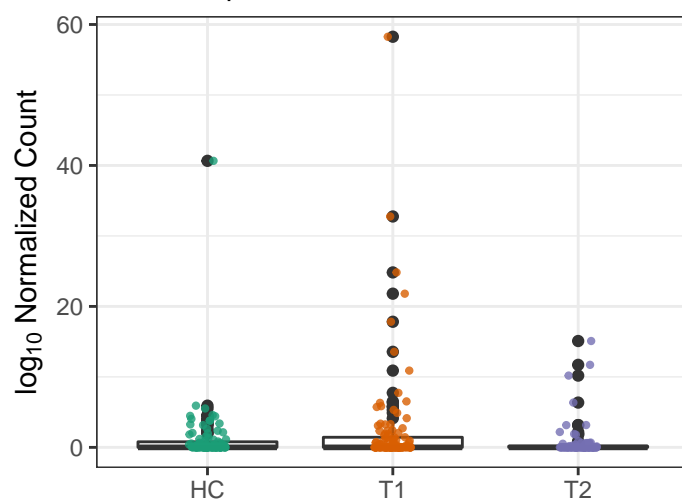
### GALACTARDEG-PWY: D-galactarate catabolism

HC vs. T1  $p = 0.22$   
 HC vs. T2  $p = 0.53$   
 T1 vs. T2  $p = 0.064$



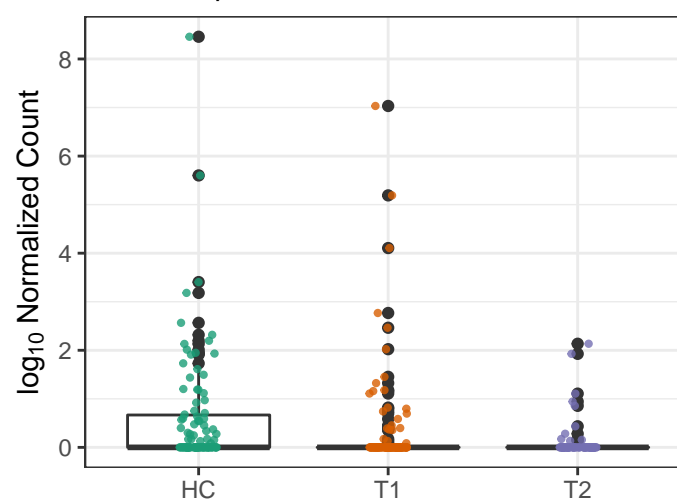
### GLUCARGALACTSUPER-PWY: superpathway of galactose

HC vs. T1  $p = 0.22$   
 HC vs. T2  $p = 0.53$   
 T1 vs. T2  $p = 0.064$



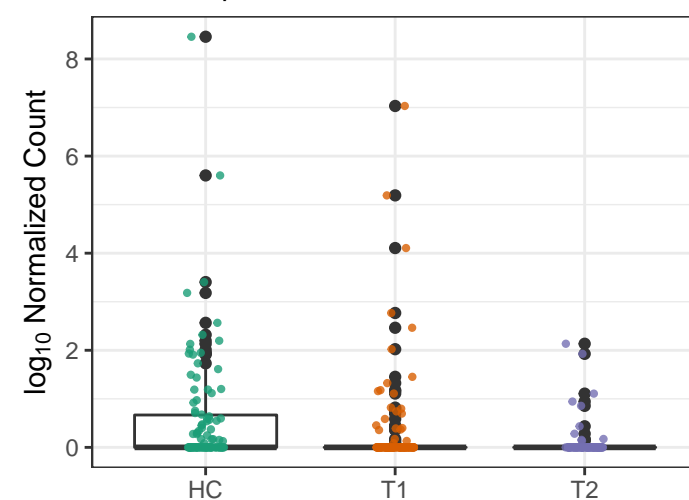
### PWY-5692: allantoin degradation to glycine

HC vs. T1  $p = 0.11$   
 HC vs. T2  $p = 0.0024$   
 T1 vs. T2  $p = 0.064$



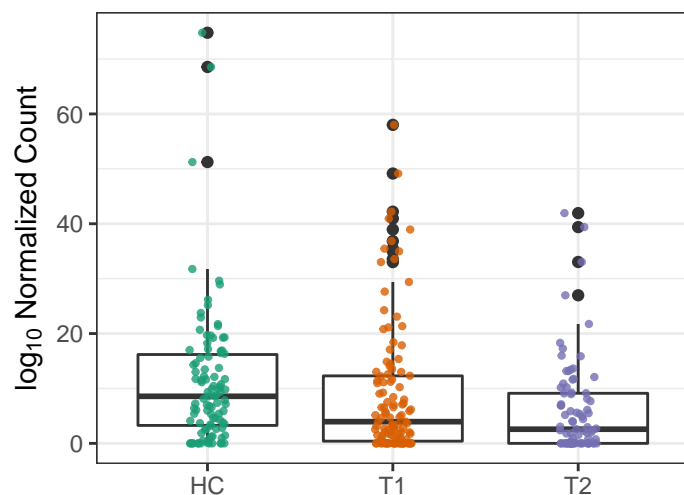
### URDEGR-PWY: superpathway of allantoin

HC vs. T1  $p = 0.11$   
 HC vs. T2  $p = 0.0024$   
 T1 vs. T2  $p = 0.064$



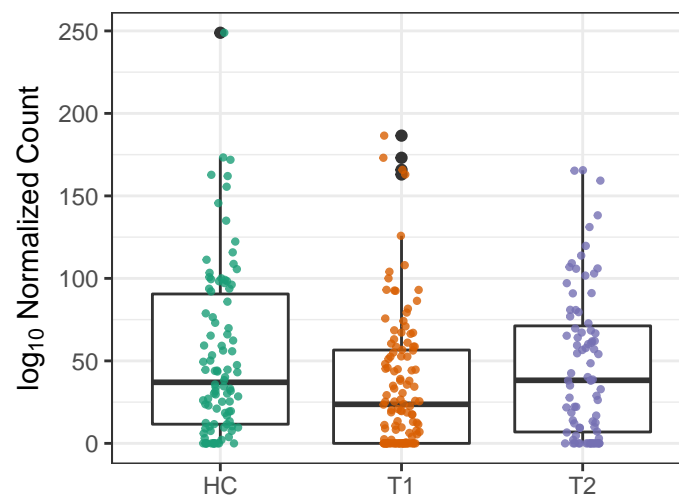
### FAO–PWY: fatty acid & beta-oxidation I

HC vs. T1  $p = 0.28$   
 HC vs. T2  $p = 0.014$   
 T1 vs. T2  $p = 0.065$



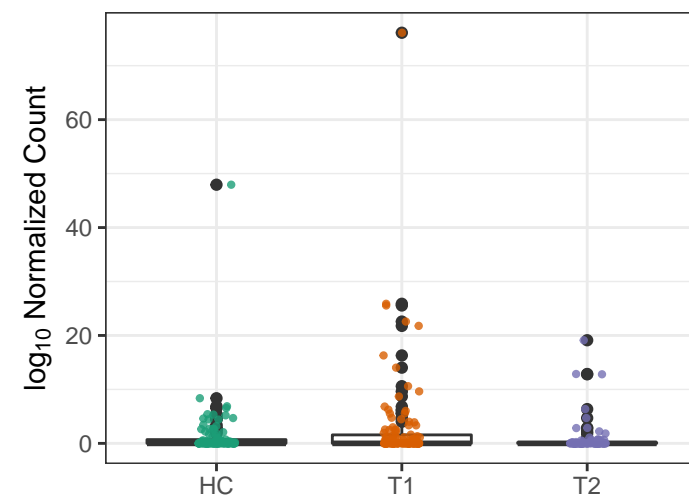
### PWY–7456: mannan degradation

HC vs. T1  $p = 0.026$   
 HC vs. T2  $p = 0.58$   
 T1 vs. T2  $p = 0.065$



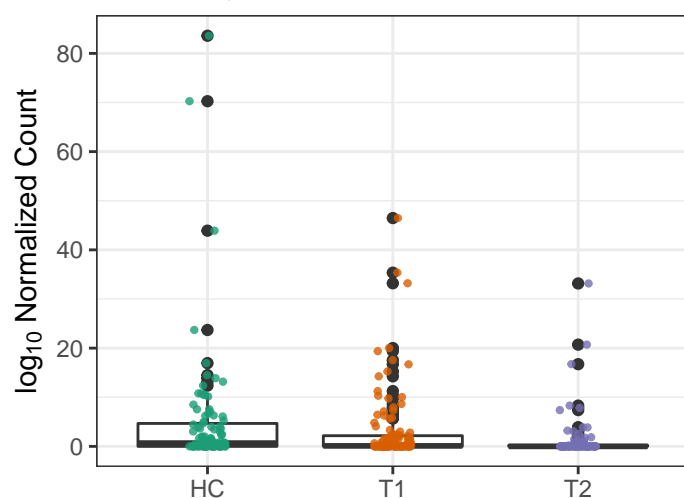
### GLUCARDEG–PWY: D-glucarate degradation

HC vs. T1  $p = 0.25$   
 HC vs. T2  $p = 0.47$   
 T1 vs. T2  $p = 0.067$



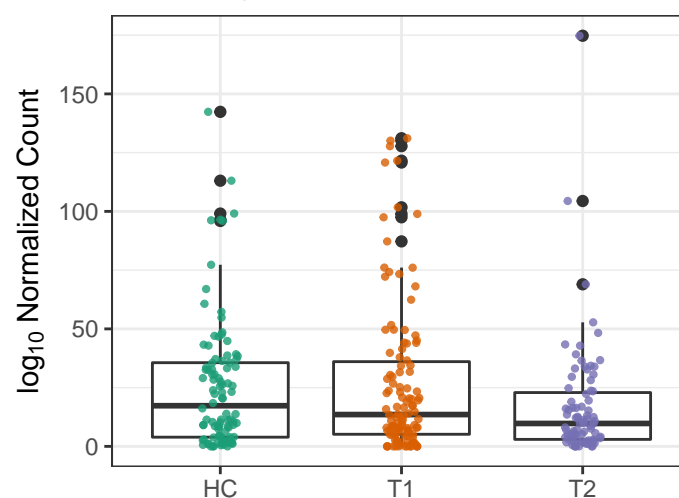
### PWY–561: superpathway of glyoxylate c

HC vs. T1  $p = 0.38$   
 HC vs. T2  $p = 0.052$   
 T1 vs. T2  $p = 0.07$



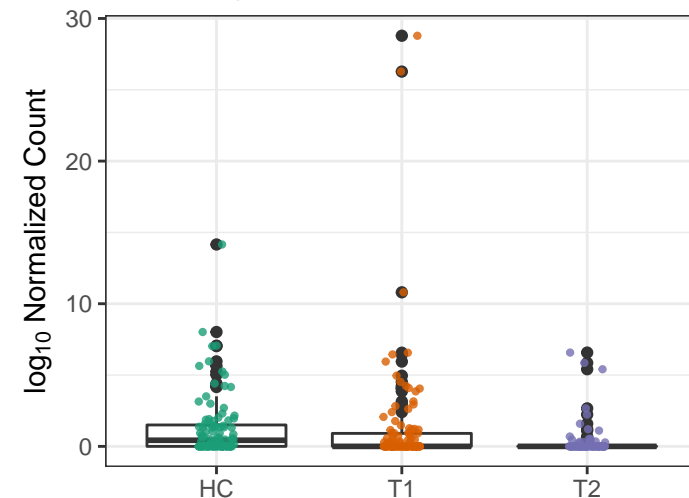
### PWY–5345: superpathway of L-methionine

HC vs. T1  $p = 0.81$   
 HC vs. T2  $p = 0.1$   
 T1 vs. T2  $p = 0.071$



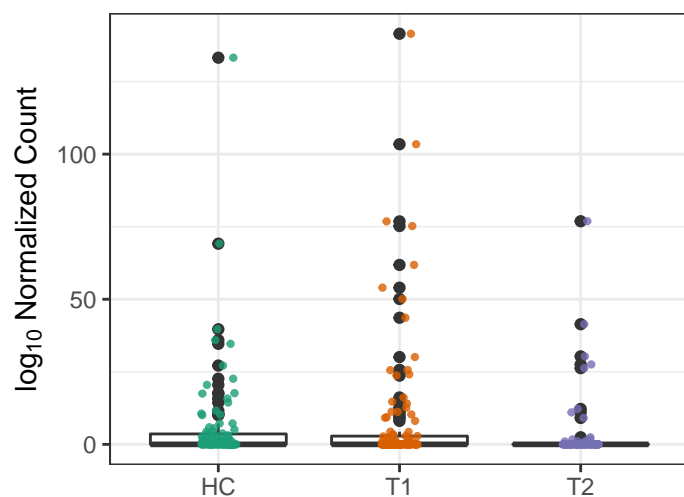
### PWY490–3: nitrate reduction VI (assimilatory)

HC vs. T1  $p = 1$   
 HC vs. T2  $p = 0.0068$   
 T1 vs. T2  $p = 0.071$



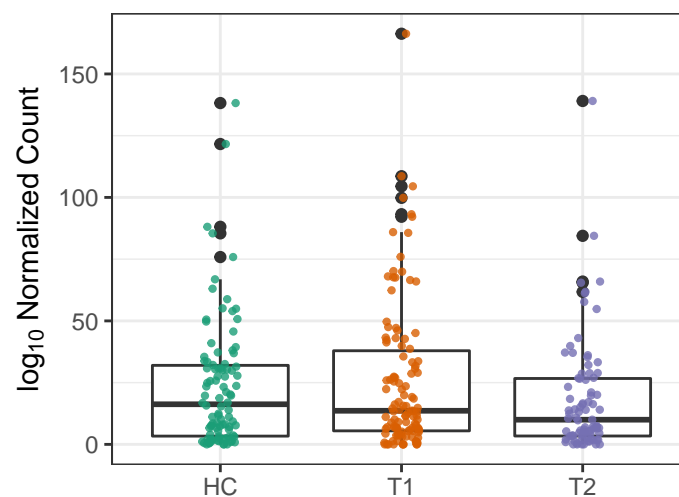
### PWY–6629: superpathway of L-tryptophan

HC vs. T1  $p = 0.56$   
 HC vs. T2  $p = 0.27$   
 T1 vs. T2  $p = 0.073$



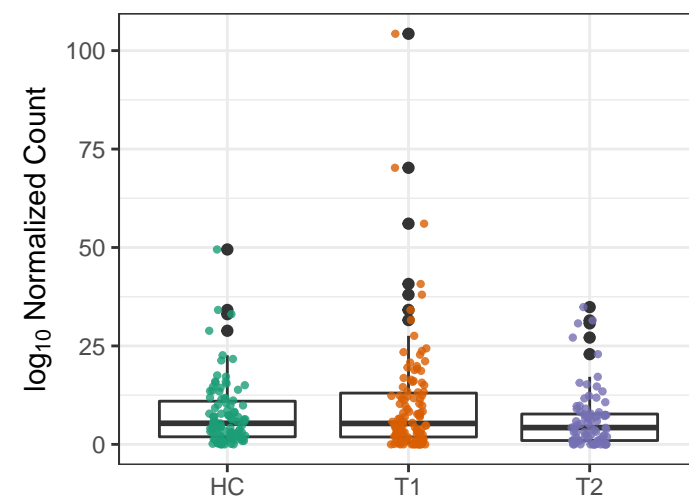
### SULFATE–CYS–PWY: superpathway c

HC vs. T1  $p = 0.59$   
 HC vs. T2  $p = 0.28$   
 T1 vs. T2  $p = 0.075$



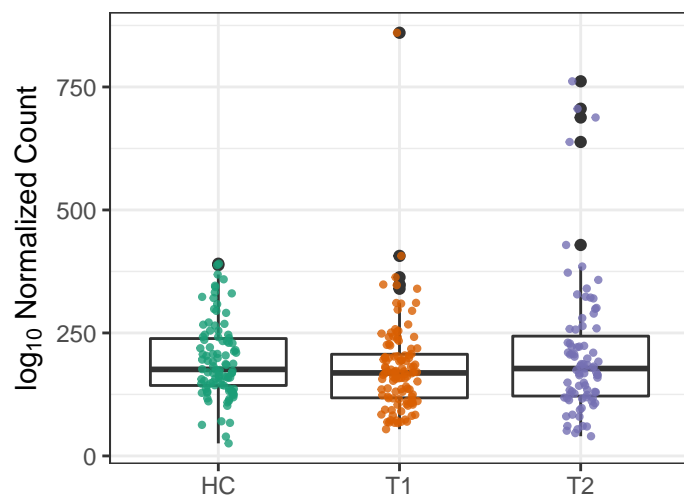
### GLUDEG–I–PWY: GABA shunt

HC vs. T1  $p = 0.22$   
 HC vs. T2  $p = 0.35$   
 T1 vs. T2  $p = 0.076$



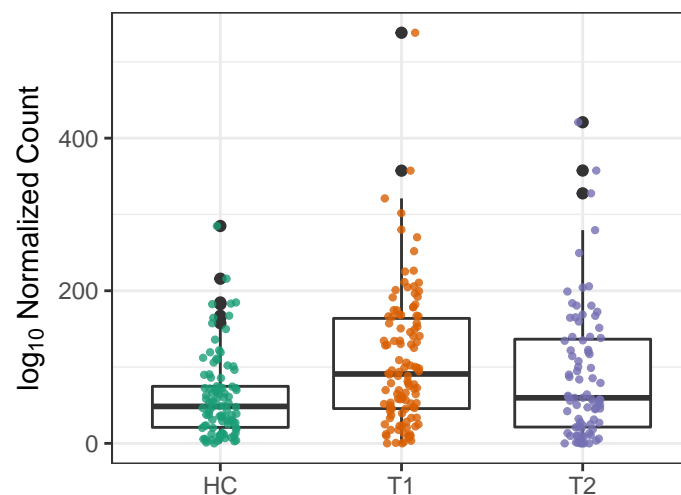
### PWY-5188: tetrapyrrole biosynthesis I

HC vs. T1  $p = 0.33$   
HC vs. T2  $p = 0.57$   
T1 vs. T2  $p = 0.076$



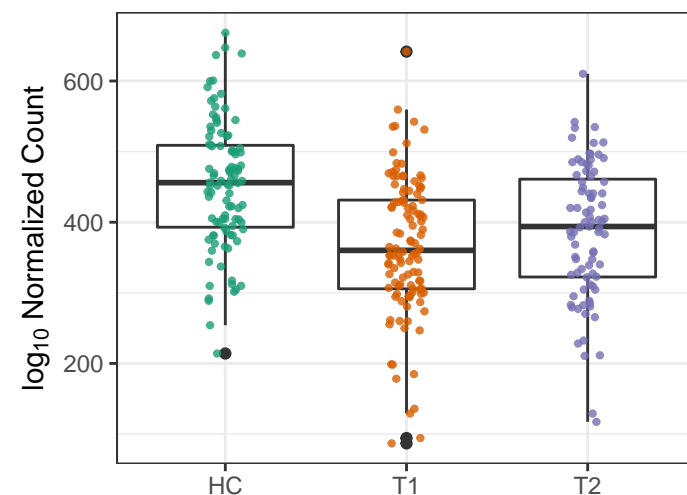
### PYRIDOXSIN-PWY: pyridoxal 5'-pho

HC vs. T1  $p = 1.6e-05$   
HC vs. T2  $p = 0.051$   
T1 vs. T2  $p = 0.076$



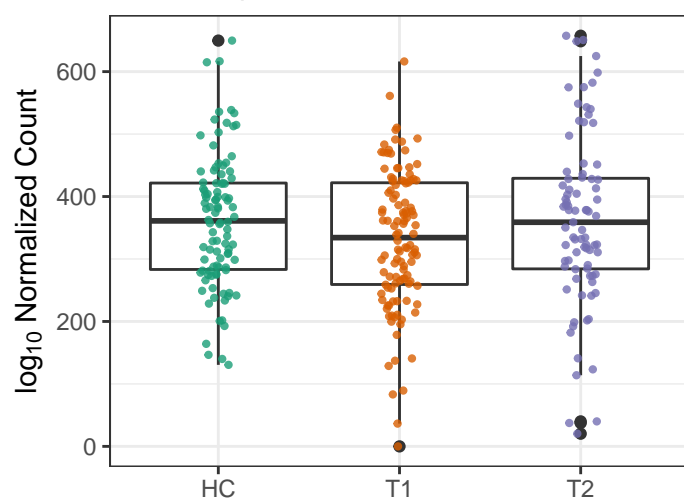
### TRNA-CHARGING-PWY: tRNA charg

HC vs. T1  $p = 4.7e-09$   
HC vs. T2  $p = 0.00019$   
T1 vs. T2  $p = 0.076$



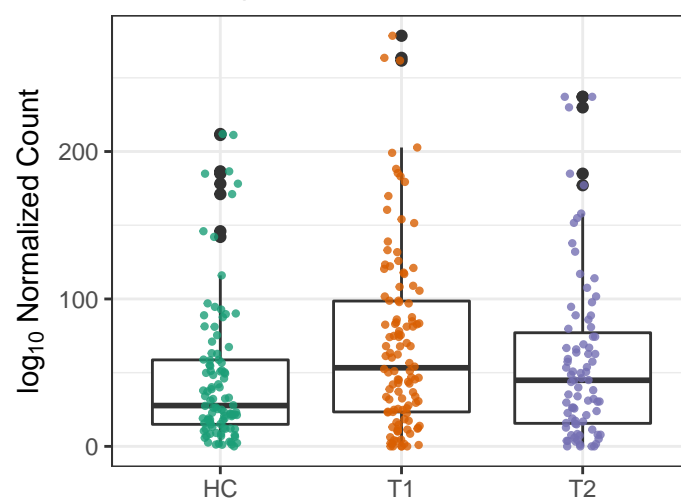
### ANAGLYCOLYSIS-PWY: glycolysis III

HC vs. T1  $p = 0.097$   
HC vs. T2  $p = 0.96$   
T1 vs. T2  $p = 0.078$



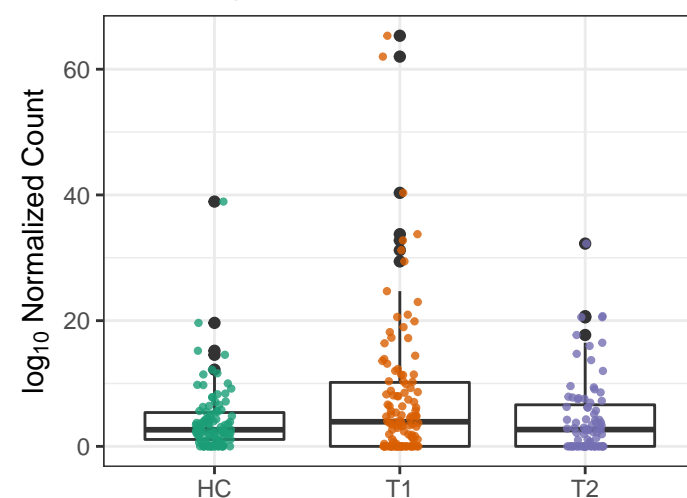
### PHOSLIPSYN-PWY: superpathway of

HC vs. T1  $p = 0.008$   
HC vs. T2  $p = 0.27$   
T1 vs. T2  $p = 0.078$



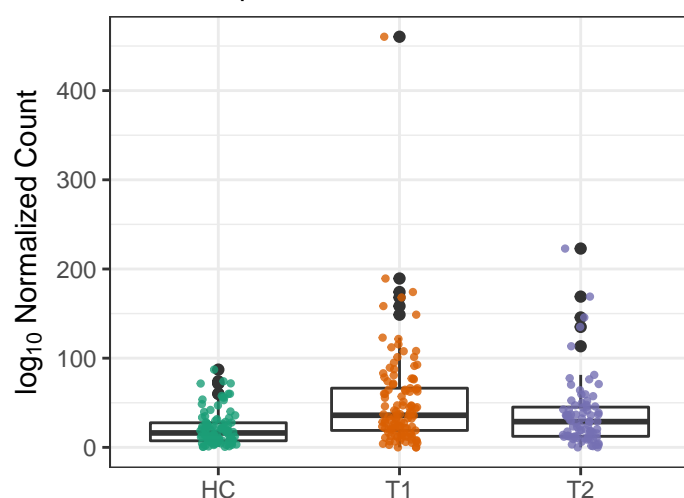
### PWY-5464: superpathway of cytosolic g

HC vs. T1  $p = 0.0072$   
HC vs. T2  $p = 0.68$   
T1 vs. T2  $p = 0.079$



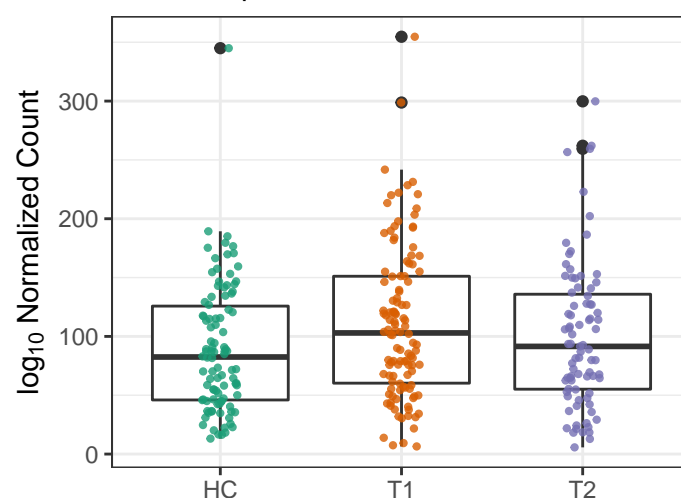
### CITRULBIO-PWY: L-citrulline biosynt

HC vs. T1  $p = 2.8e-06$   
HC vs. T2  $p = 0.014$   
T1 vs. T2  $p = 0.086$



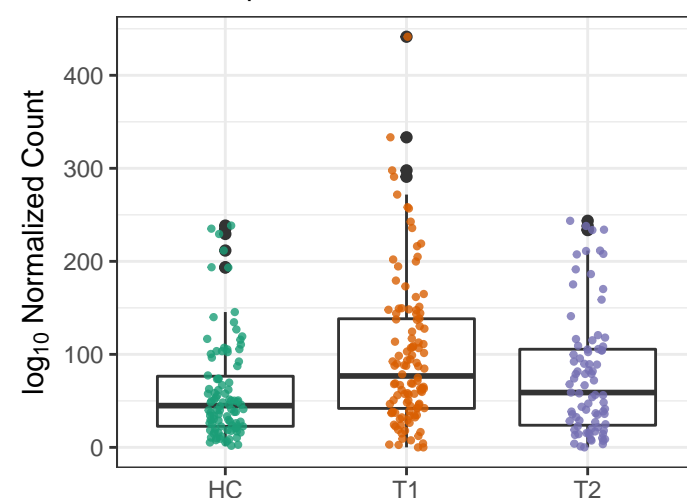
### PWY66-409: superpathway of purine r

HC vs. T1  $p = 0.025$   
HC vs. T2  $p = 0.34$   
T1 vs. T2  $p = 0.086$



### GLYCOLYSIS: glycolysis I (from glucos

HC vs. T1  $p = 0.00023$   
HC vs. T2  $p = 0.12$   
T1 vs. T2  $p = 0.087$

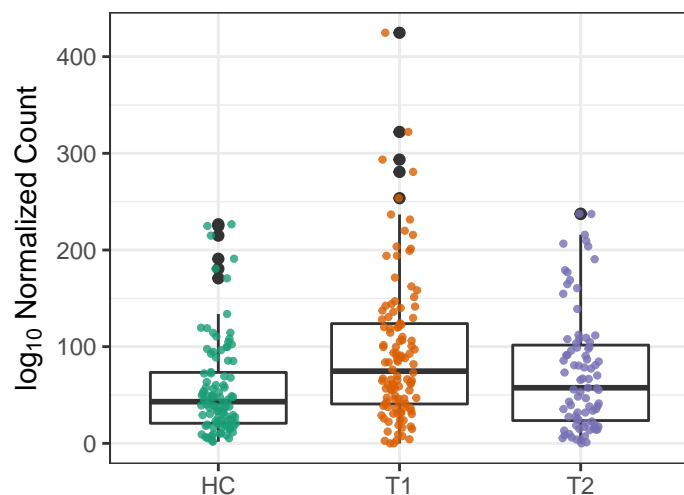


PWY-5484: glycolysis II (from fructose)

HC vs. T1  $p = 0.00018$

HC vs. T2  $p = 0.1$

T1 vs. T2  $p = 0.087$

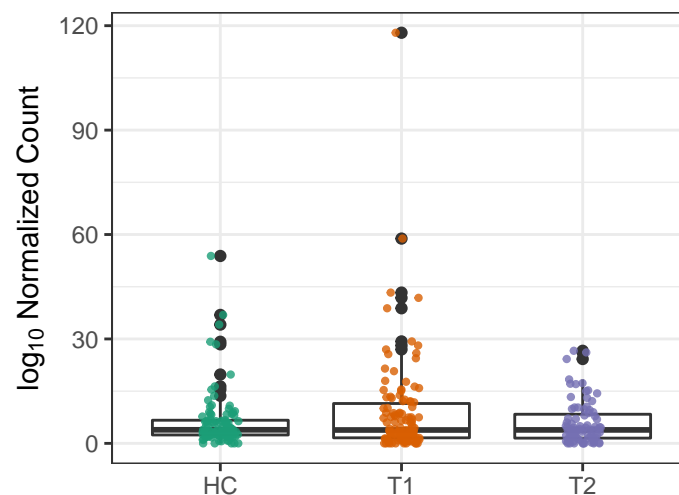


PWY-5863: superpathway of phyloqu

HC vs. T1  $p = 0.2$

HC vs. T2  $p = 0.72$

T1 vs. T2  $p = 0.088$

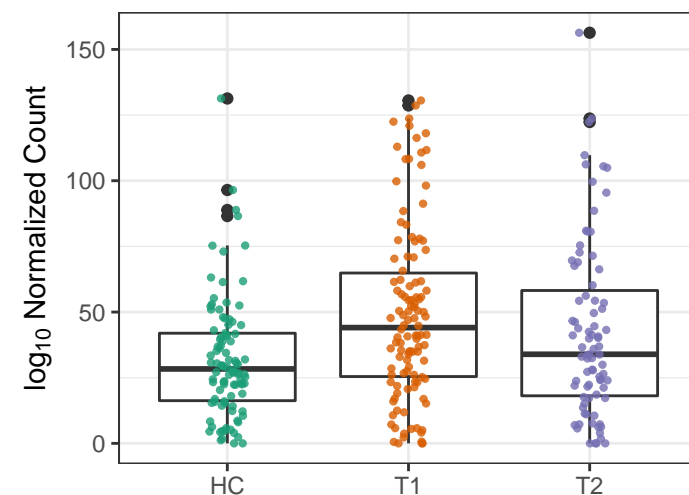


PWY66-399: gluconeogenesis III

HC vs. T1  $p = 8.5e-05$

HC vs. T2  $p = 0.065$

T1 vs. T2  $p = 0.09$

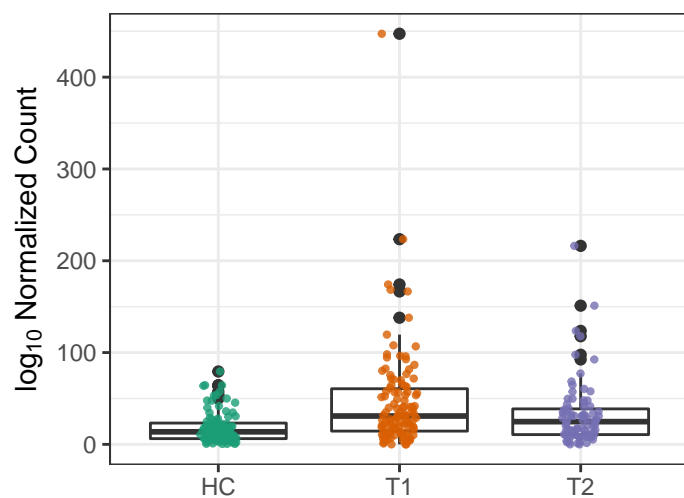


PWY-4984: urea cycle

HC vs. T1  $p = 6.9e-06$

HC vs. T2  $p = 0.014$

T1 vs. T2  $p = 0.092$

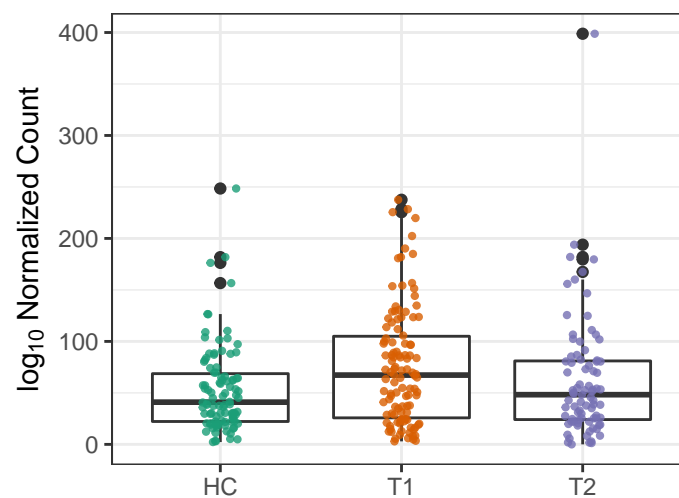


PWY-5154: L-arginine biosynthesis III

HC vs. T1  $p = 0.004$

HC vs. T2  $p = 0.36$

T1 vs. T2  $p = 0.093$

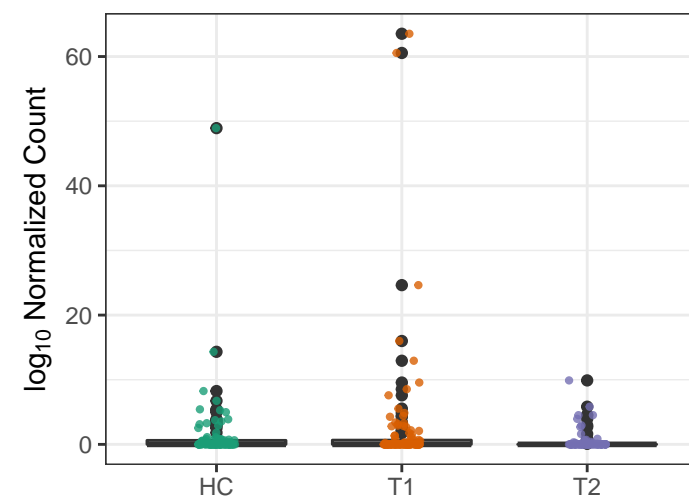


PWY-6823: molybdenum cofactor biosy

HC vs. T1  $p = 0.47$

HC vs. T2  $p = 0.22$

T1 vs. T2  $p = 0.093$

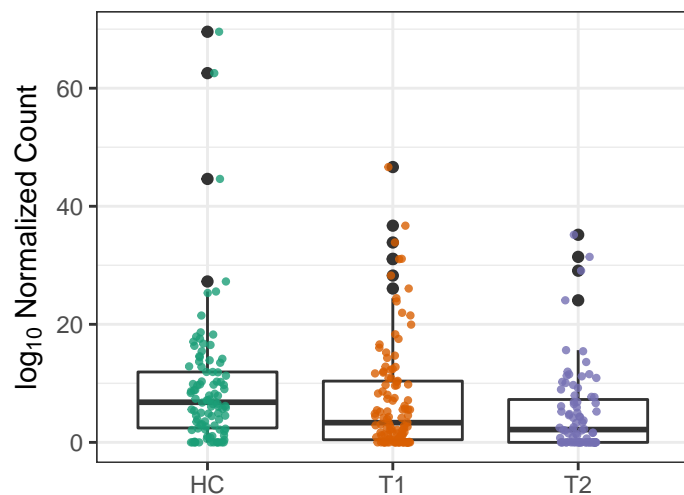


PWY-5136: fatty acid &beta;-oxidation

HC vs. T1  $p = 0.23$

HC vs. T2  $p = 0.018$

T1 vs. T2  $p = 0.094$

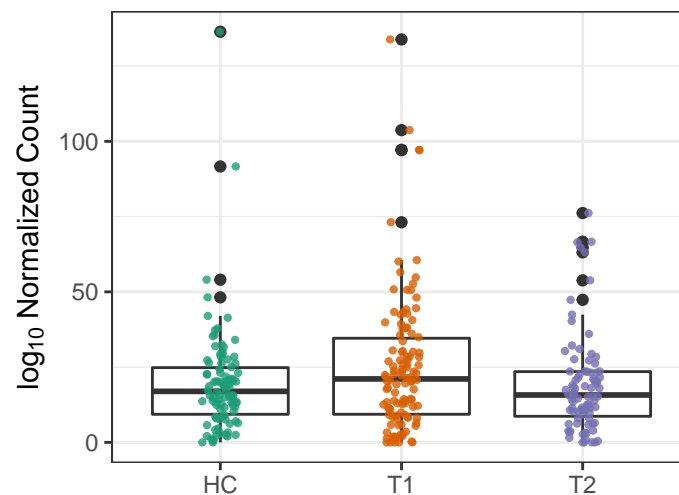


P185-PWY: formaldehyde assimilation

HC vs. T1  $p = 0.1$

HC vs. T2  $p = 0.91$

T1 vs. T2  $p = 0.096$



PWY-7560: methylerythritol phosphate

HC vs. T1  $p = 0.03$

HC vs. T2  $p = 0.74$

T1 vs. T2  $p = 0.096$

