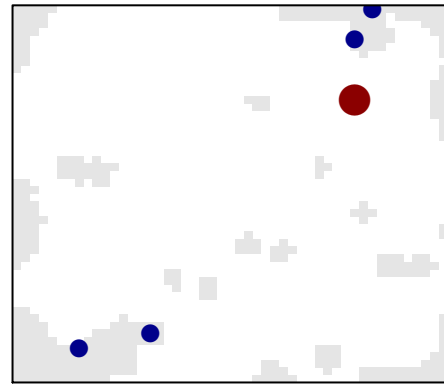
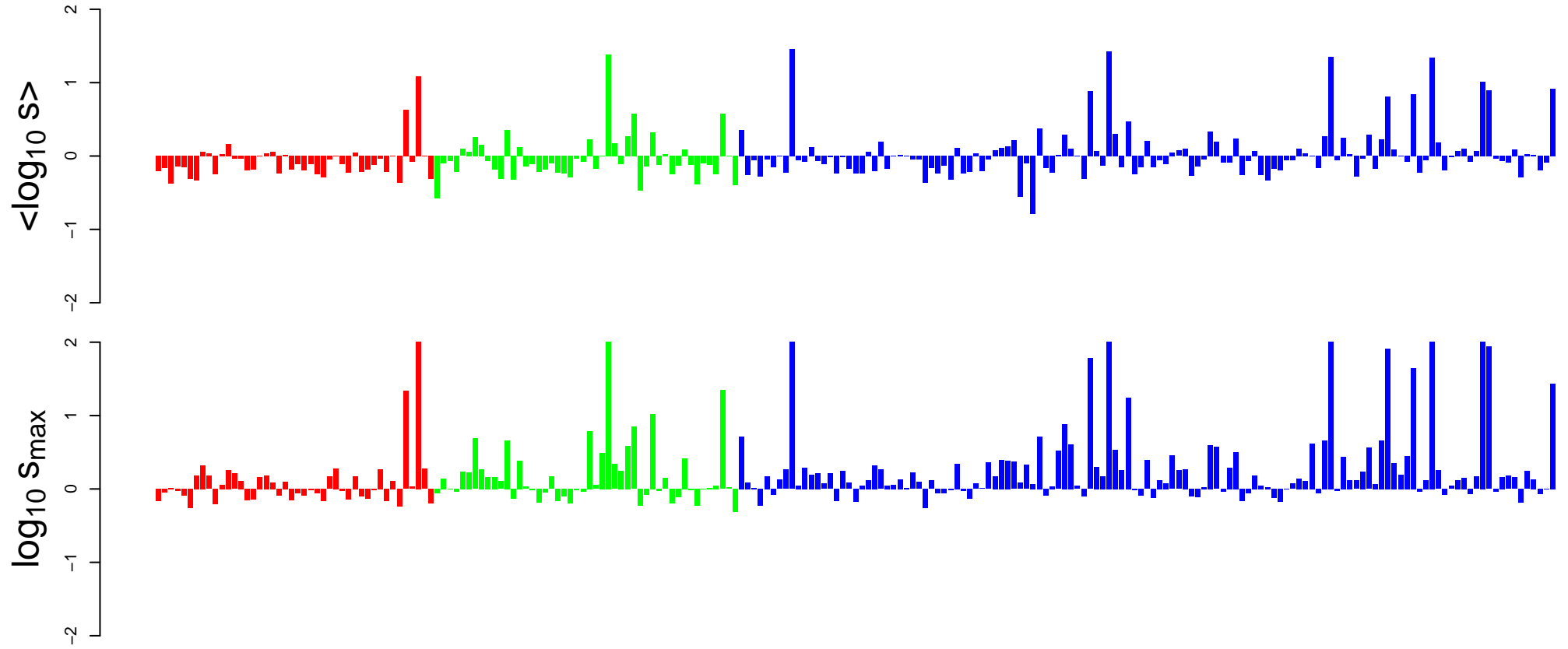


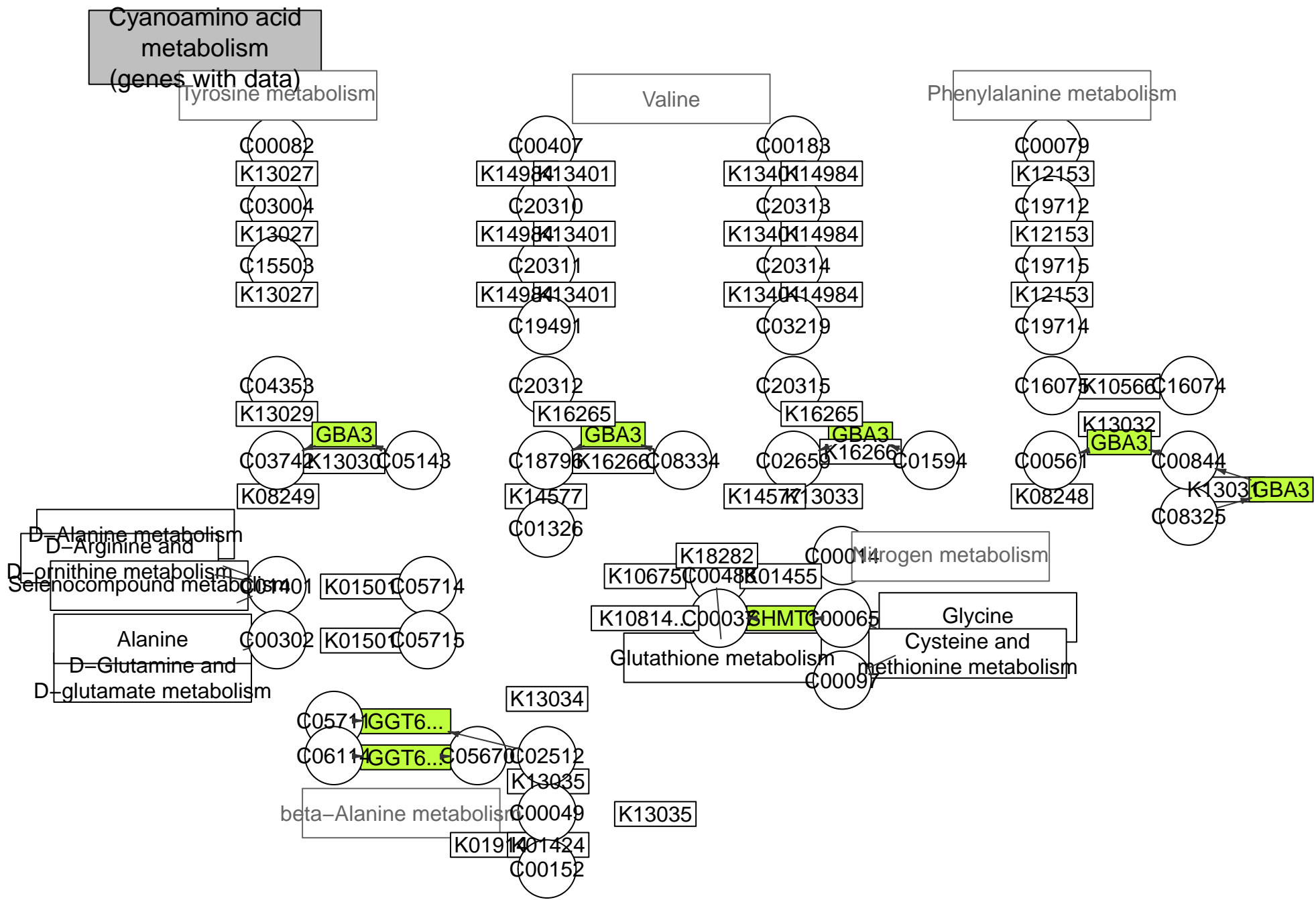
# Cyanoamino acid metabolism

all genes

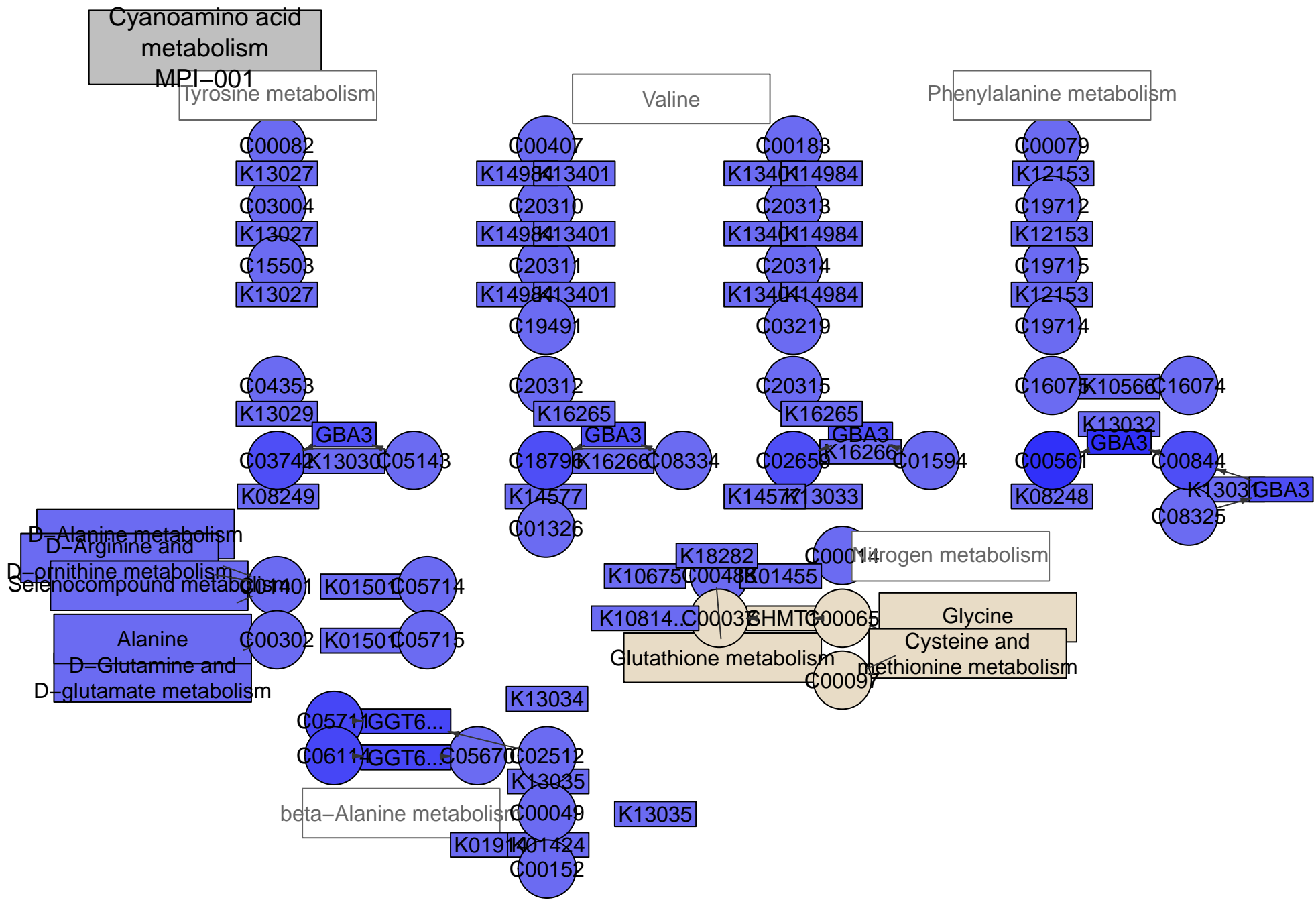


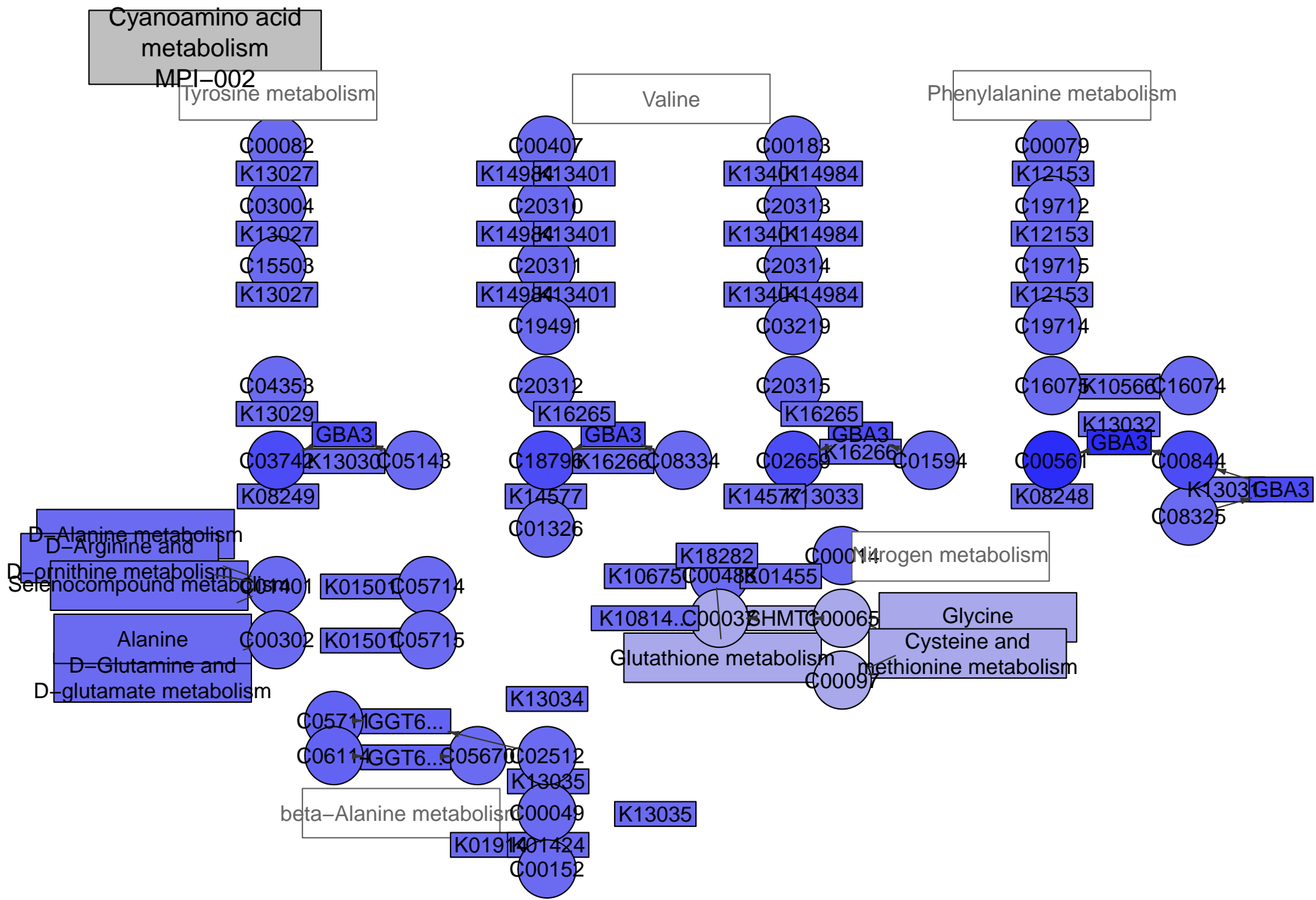
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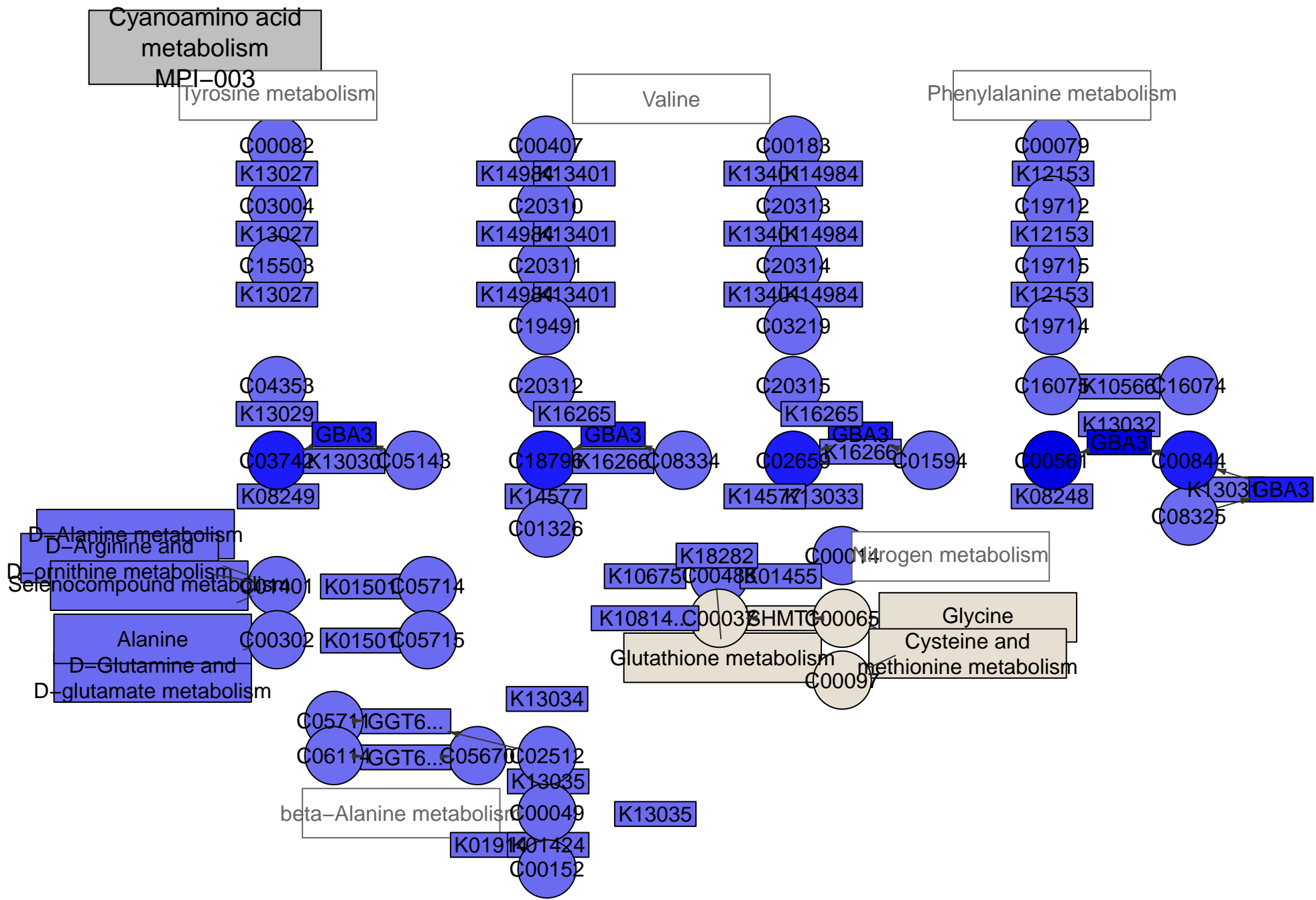


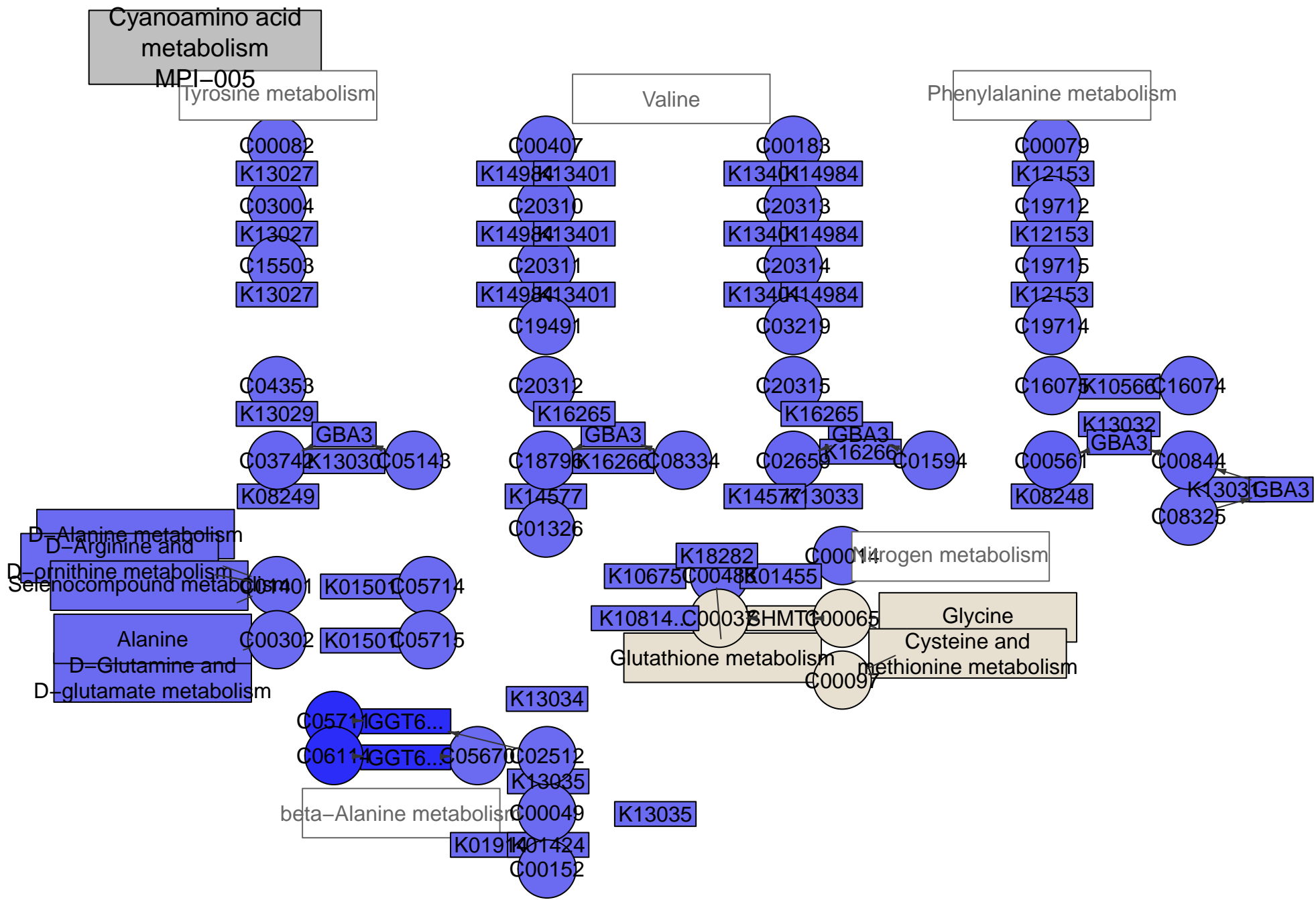






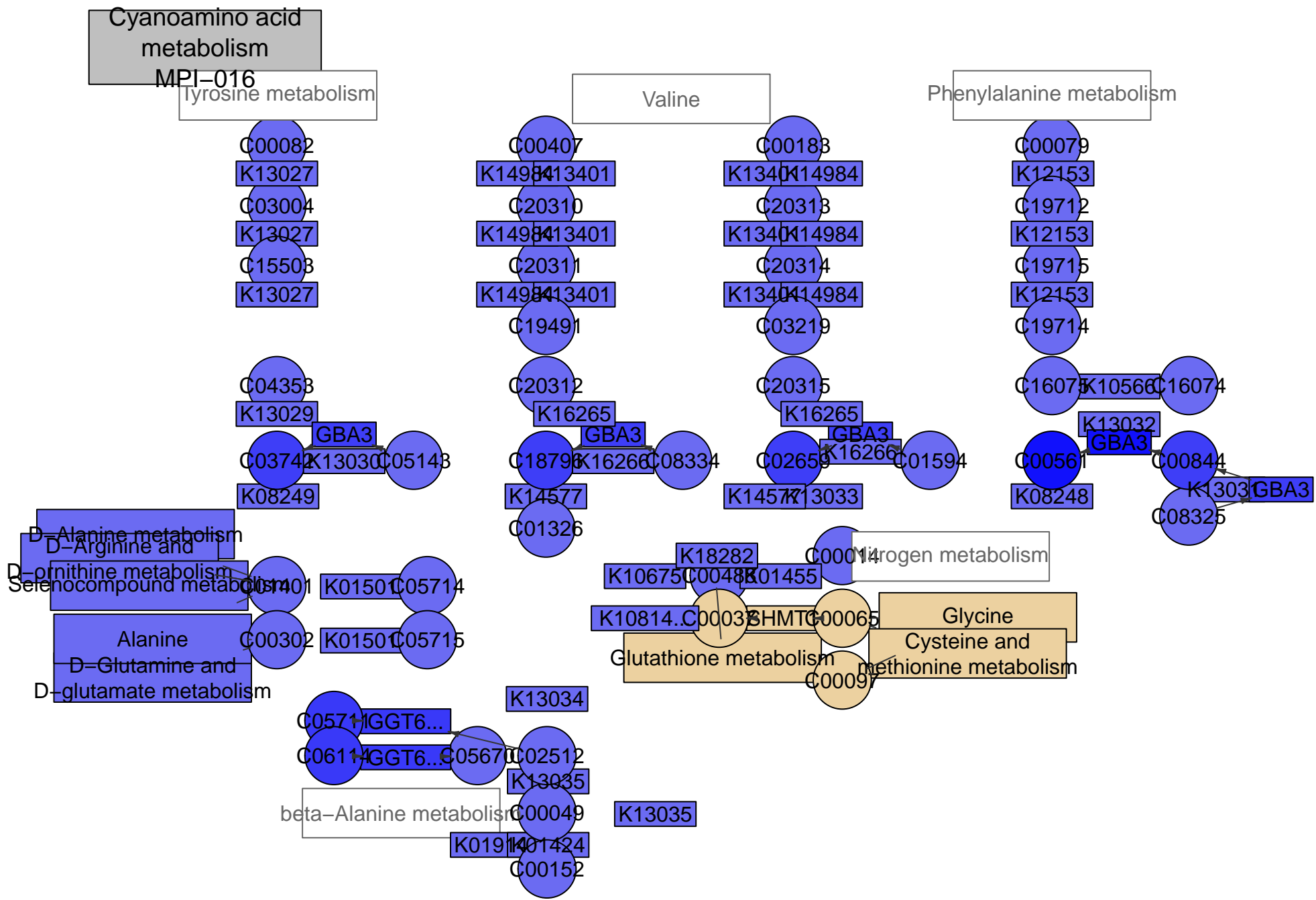


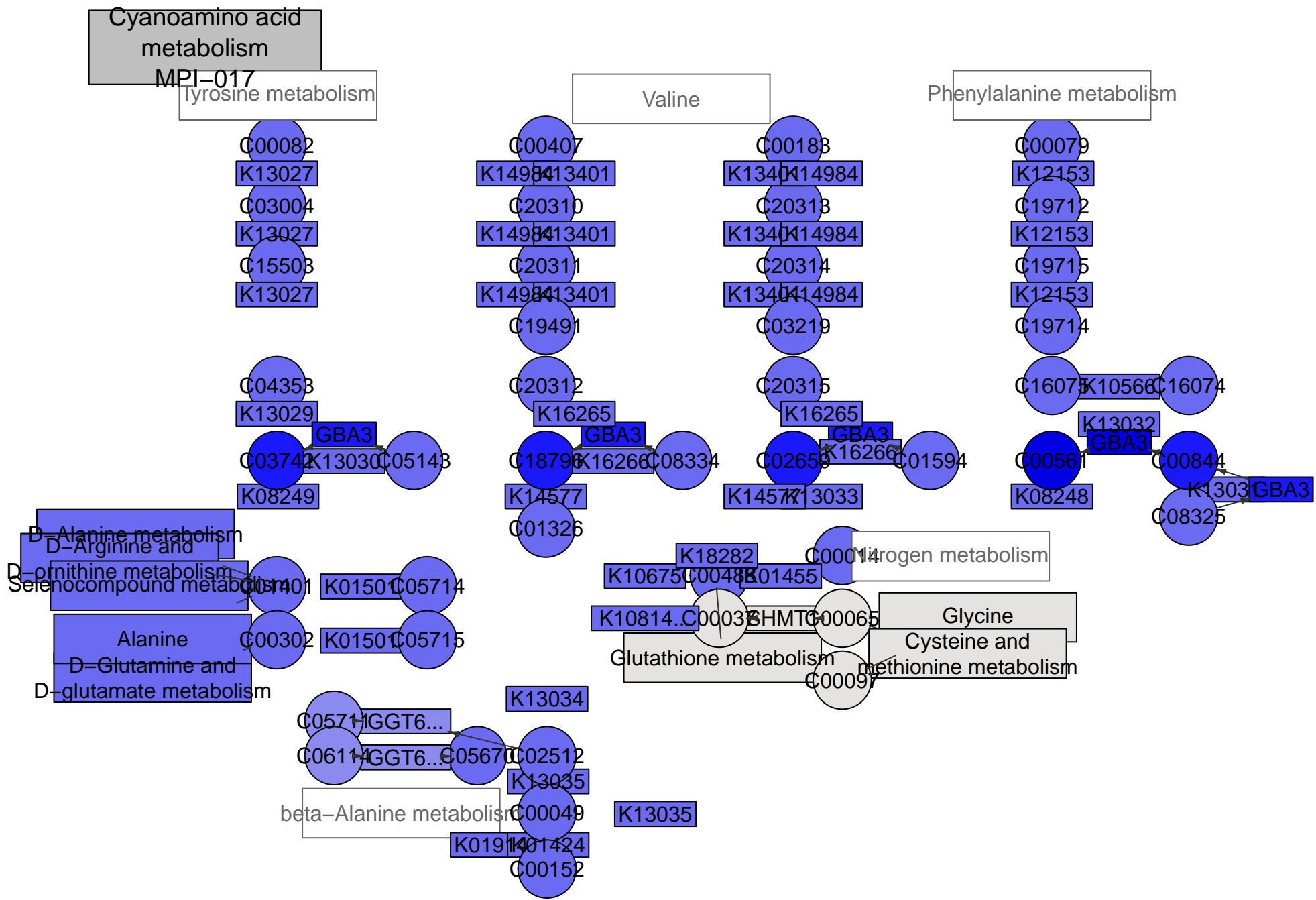












Cyanoamino acid metabolism

MPI-018

Tyrosine metabolism

Valine

Phenylalanine metabolism

C00082  
K13027  
C03004  
K13027  
C15508  
K13027

C00407  
K14984 K13401  
C20310  
K14984 K13401  
C20311  
K14984 K13401

C00188  
K13401 K14984  
C20313  
K13401 K14984  
C20314  
K13401 K14984

C00079  
K12153  
C19712  
K12153  
C19715  
K12153

C04358  
K13029

C20312  
K16265

C20315  
K16265

C16075  
K10566

C16074

C03742 K13030 C05143  
K08249

GBA3

C18796 K16266 C08334  
K14577

GBA3

C02659 K16266 C01594  
K14577 K13033

GBA3

C00561 K13032 C00844  
K08248

GBA3

K13031 GBA3

C01326

K18282

C00014

Nitrogen metabolism

D-Alanine metabolism  
D-Arginine and  
D-ornithine metabolism  
Selenocompound metabolism

C05140 K0150 C05714

K10675 C00488 K01455

C00065

Glycine

Cysteine and methionine metabolism

Alanine  
D-Glutamine and  
D-glutamate metabolism

C00302 K0150 C05715

K10814 C00033 SHMTG

Glutathione metabolism

C00097

K13034

C05714 GGT6...

C06114 GGT6...

C05670 C02512  
K13035

beta-Alanine metabolism

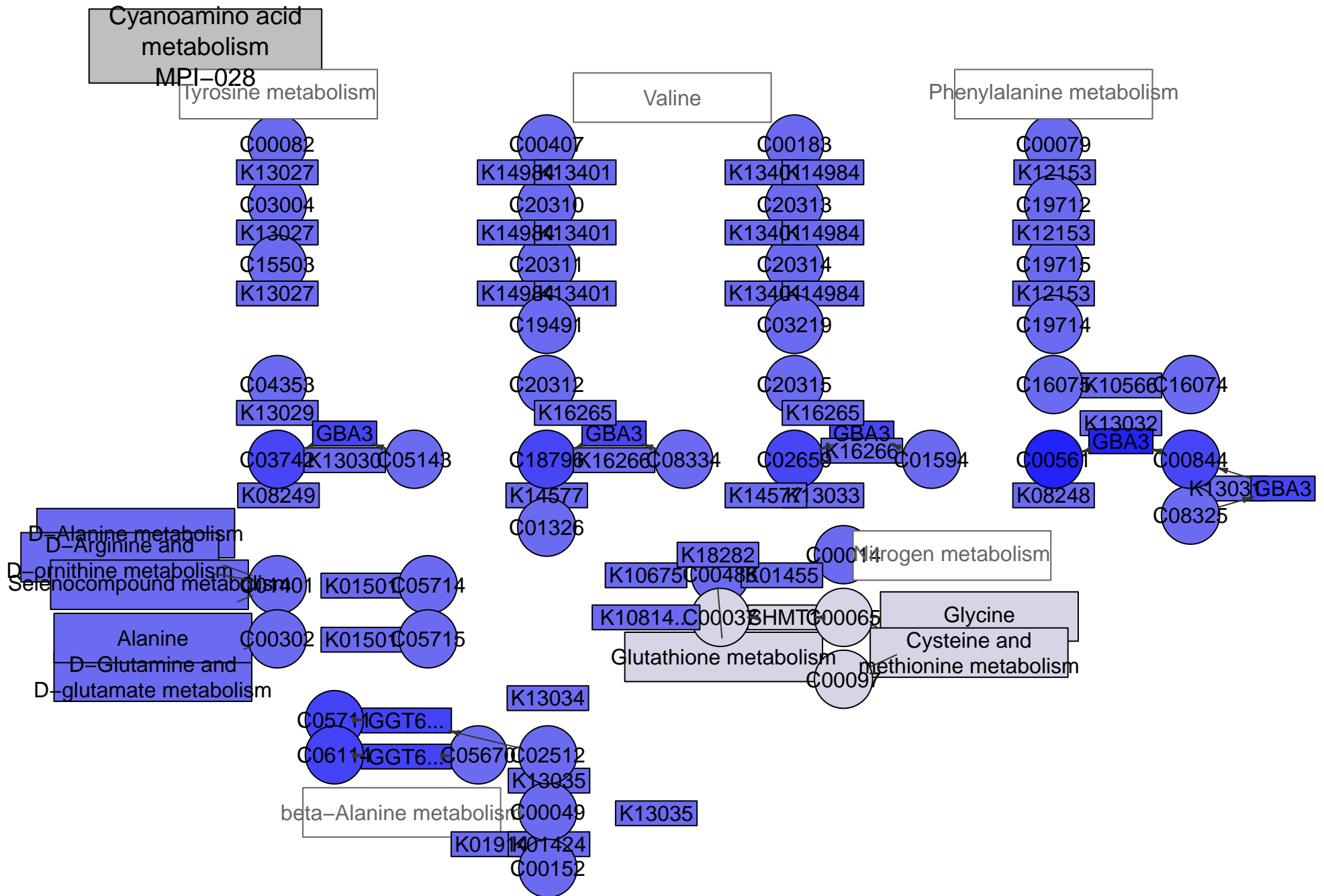
C00049

K13035

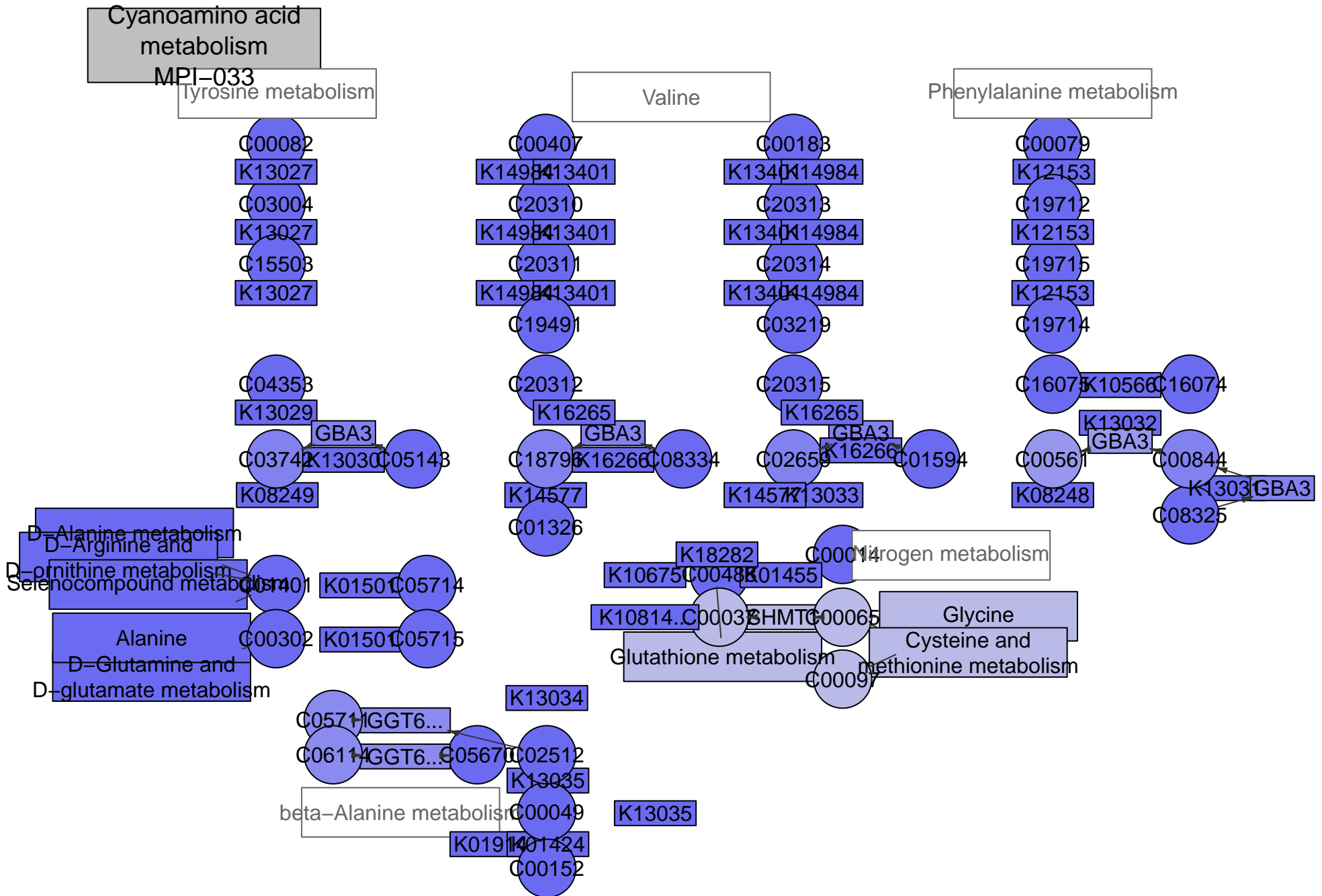
K01914 C01424

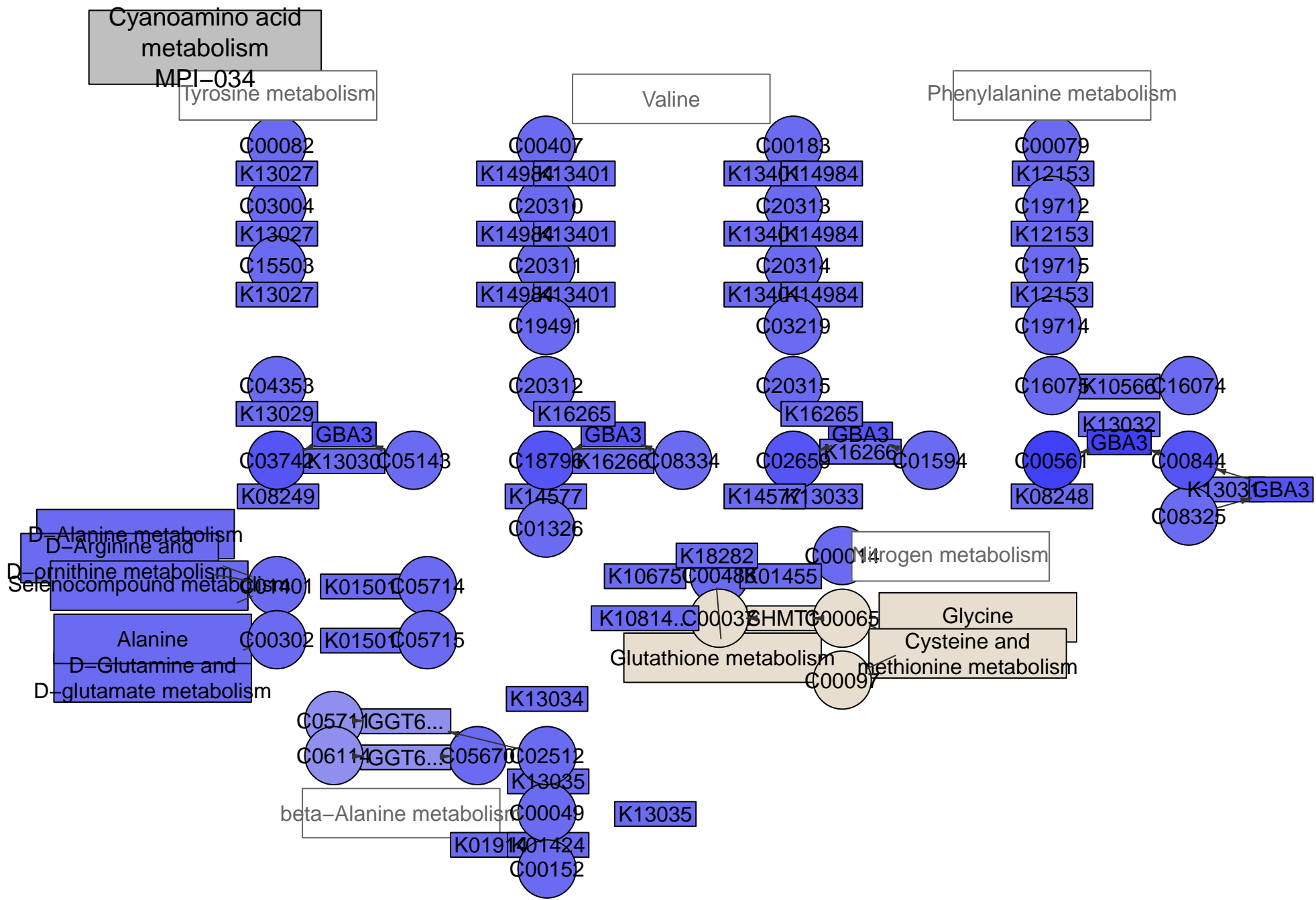
C00152



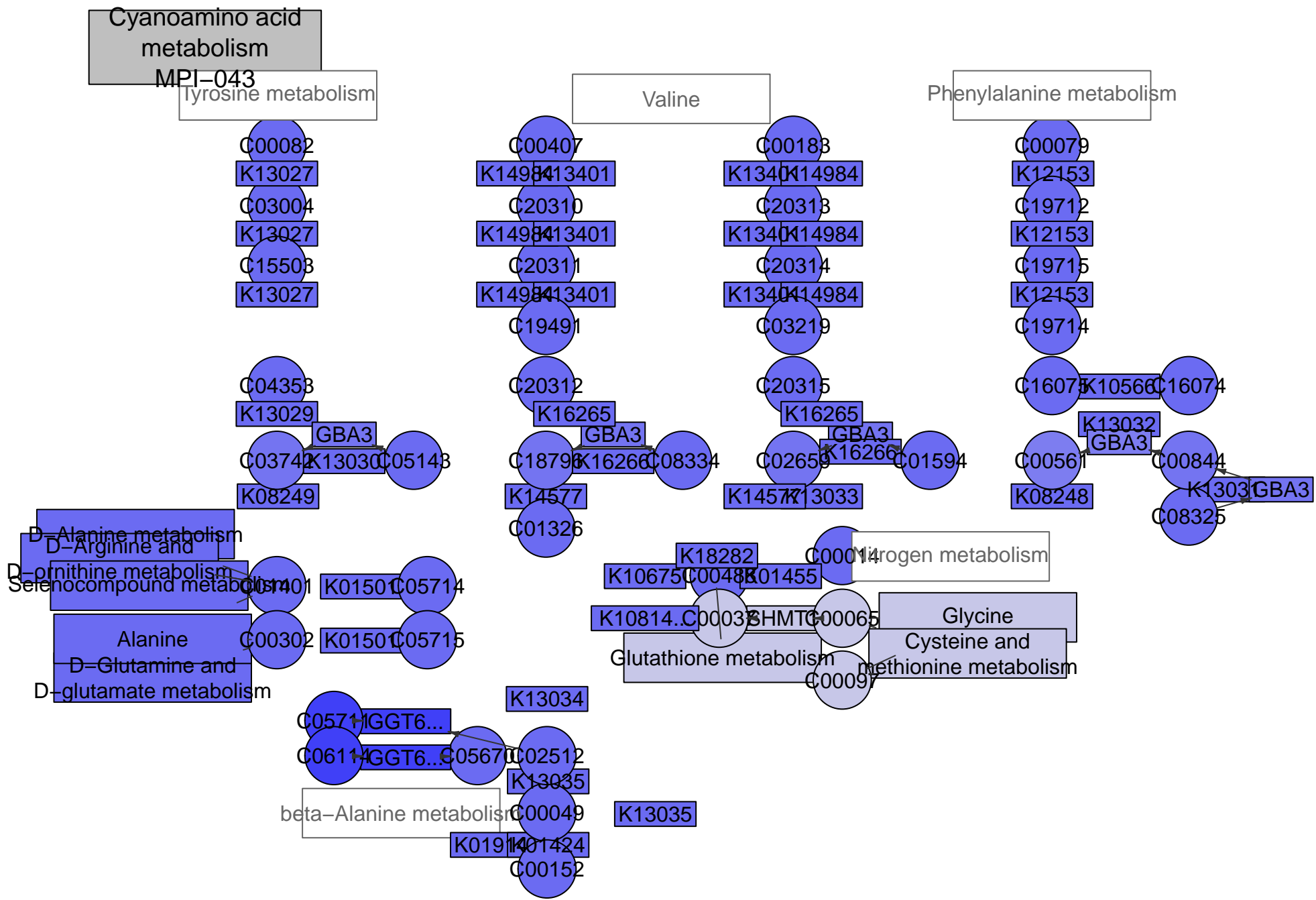




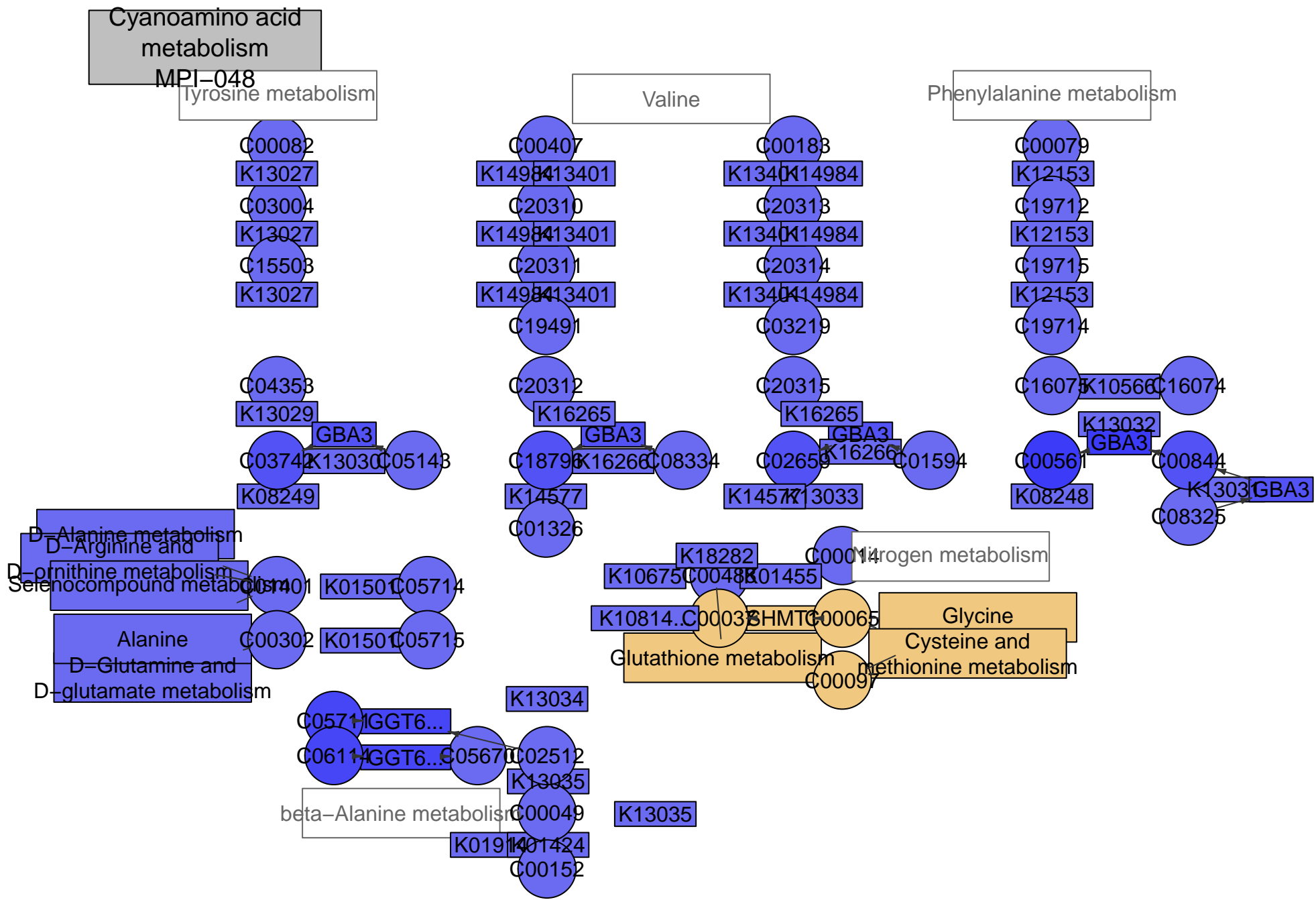






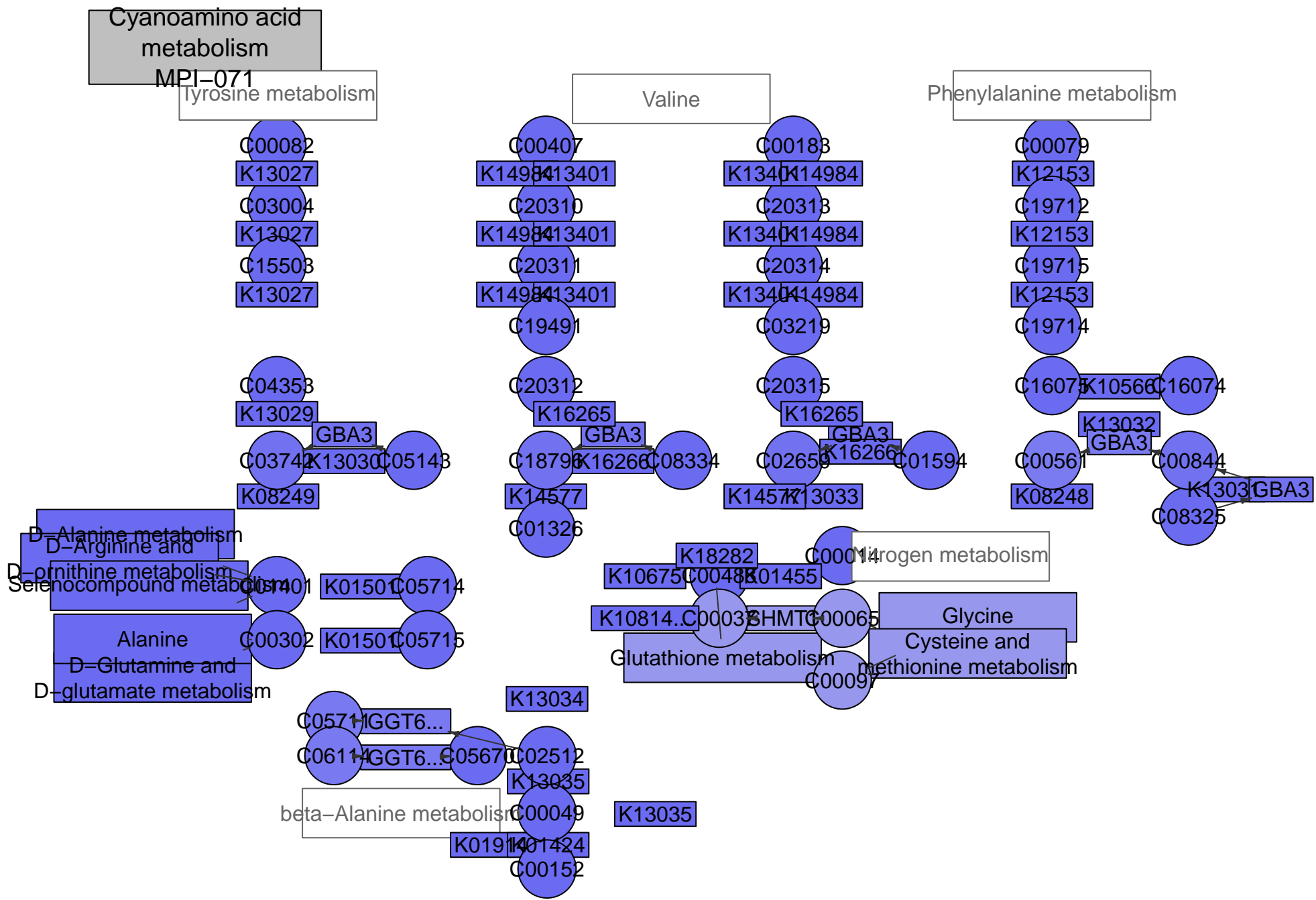


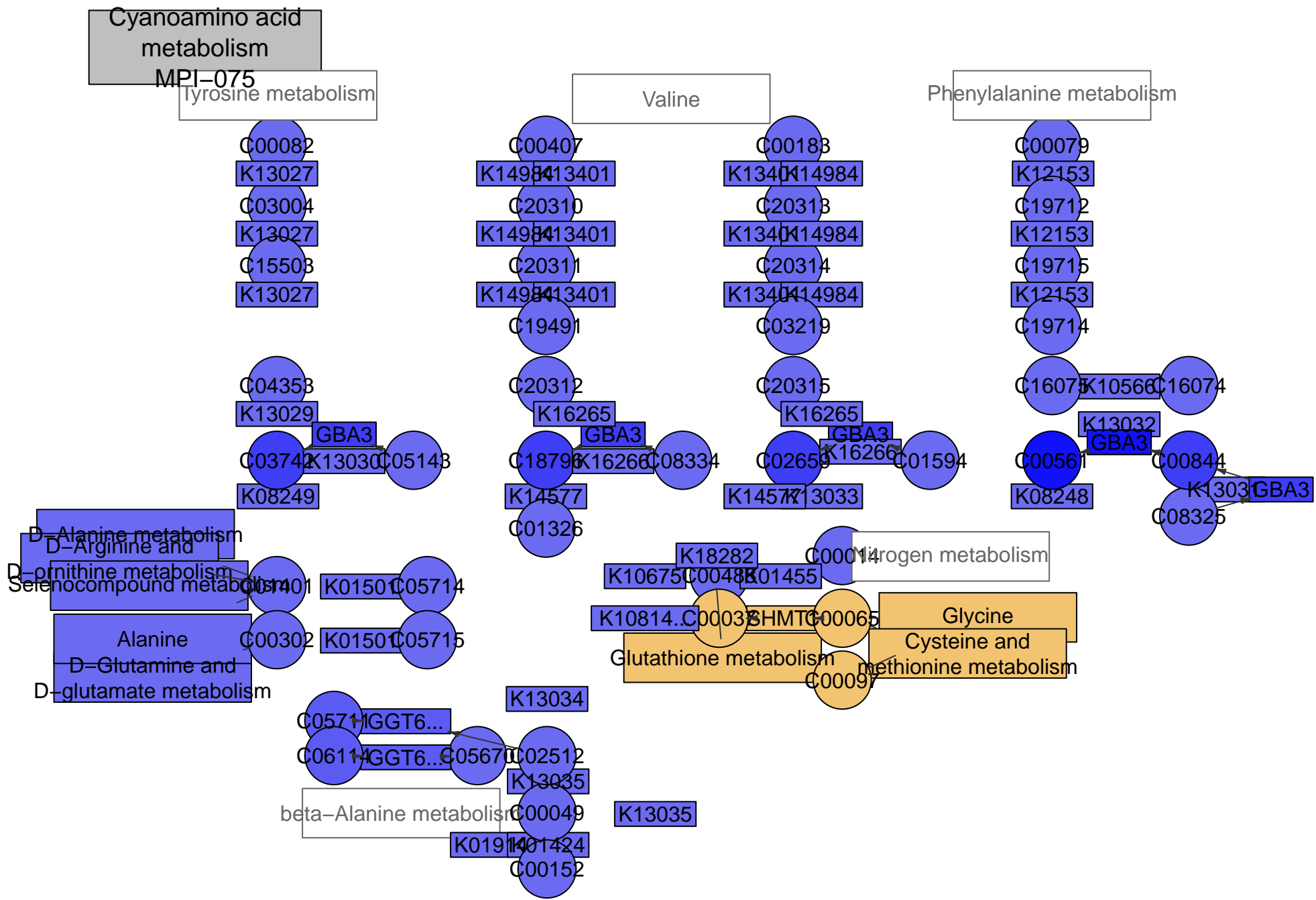












Cyanoamino acid metabolism

MPI-075

Tyrosine metabolism

Valine

Phenylalanine metabolism

C00082

K13027

C03004

K13027

C15508

K13027

C04358

K13029

GBA3

C03742

K13030

C05143

K08249

C05140

K0150

C05714

C00302

K0150

C05715

C05714 GGT6...

C06114 GGT6...

C05670

C02512

K13035

beta-Alanine metabolism

C00049

K01914

C01424

C00152

C00407

K14984

C13401

C20310

K14984

C13401

C20311

K14984

C13401

C19491

C20312

K16265

GBA3

C18796

K16266

C08334

K14577

C01326

K18282

K10675

C00488

K01455

K10814

C00033

SHMTG

Glutathione metabolism

C00097

C00188

K13401

K14984

C20313

K13401

K14984

C20314

K13401

K14984

C03219

C20315

K16265

GBA3

C02659

K16266

C01594

K14577

K13033

C00014

Nitrogen metabolism

Phenylalanine metabolism

C00079

K12153

C19712

K12153

C19715

K12153

C19714

C16075

K10566

C16074

C00561

K13032

C00844

K08248

K13031

GBA3

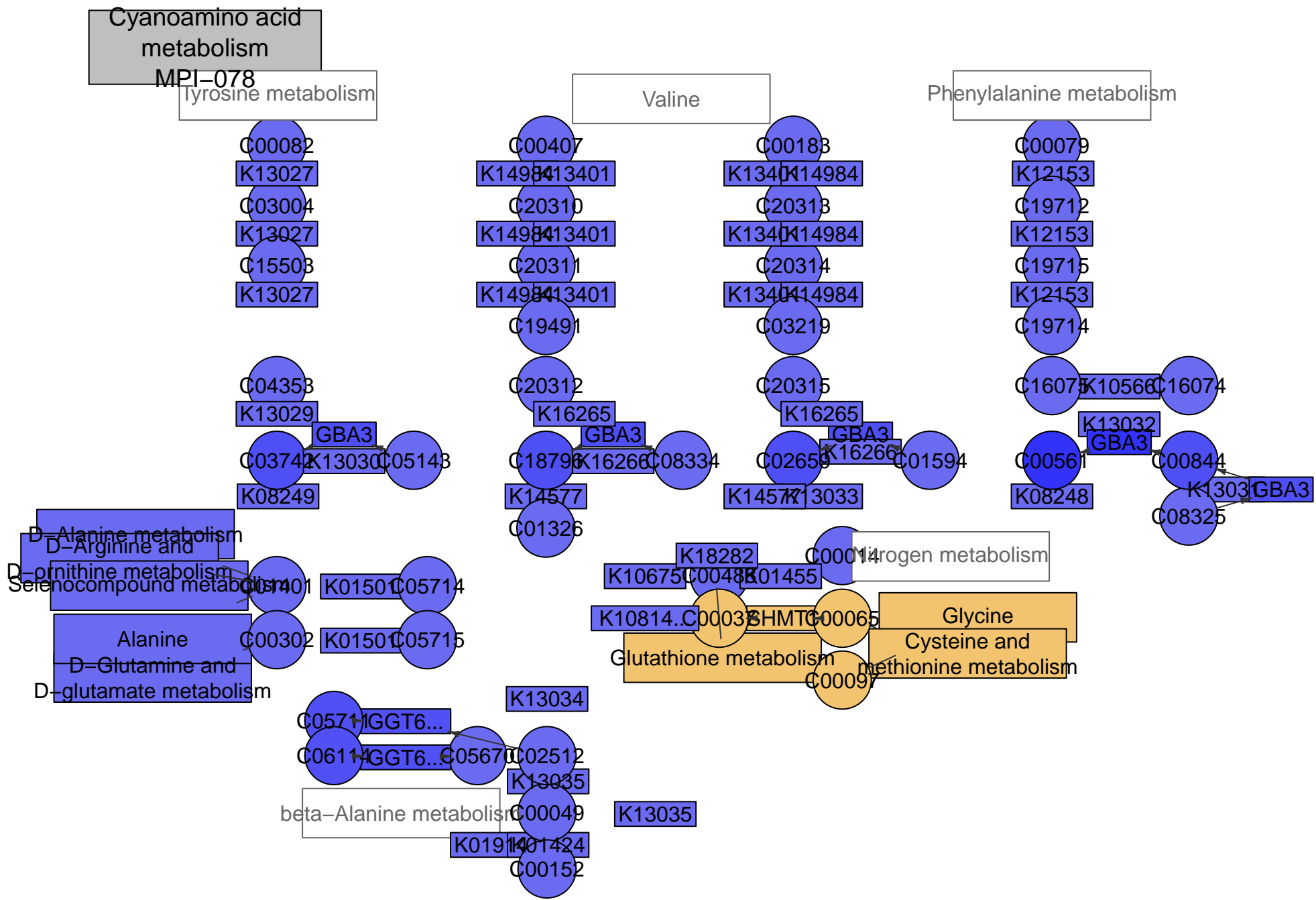
C08325

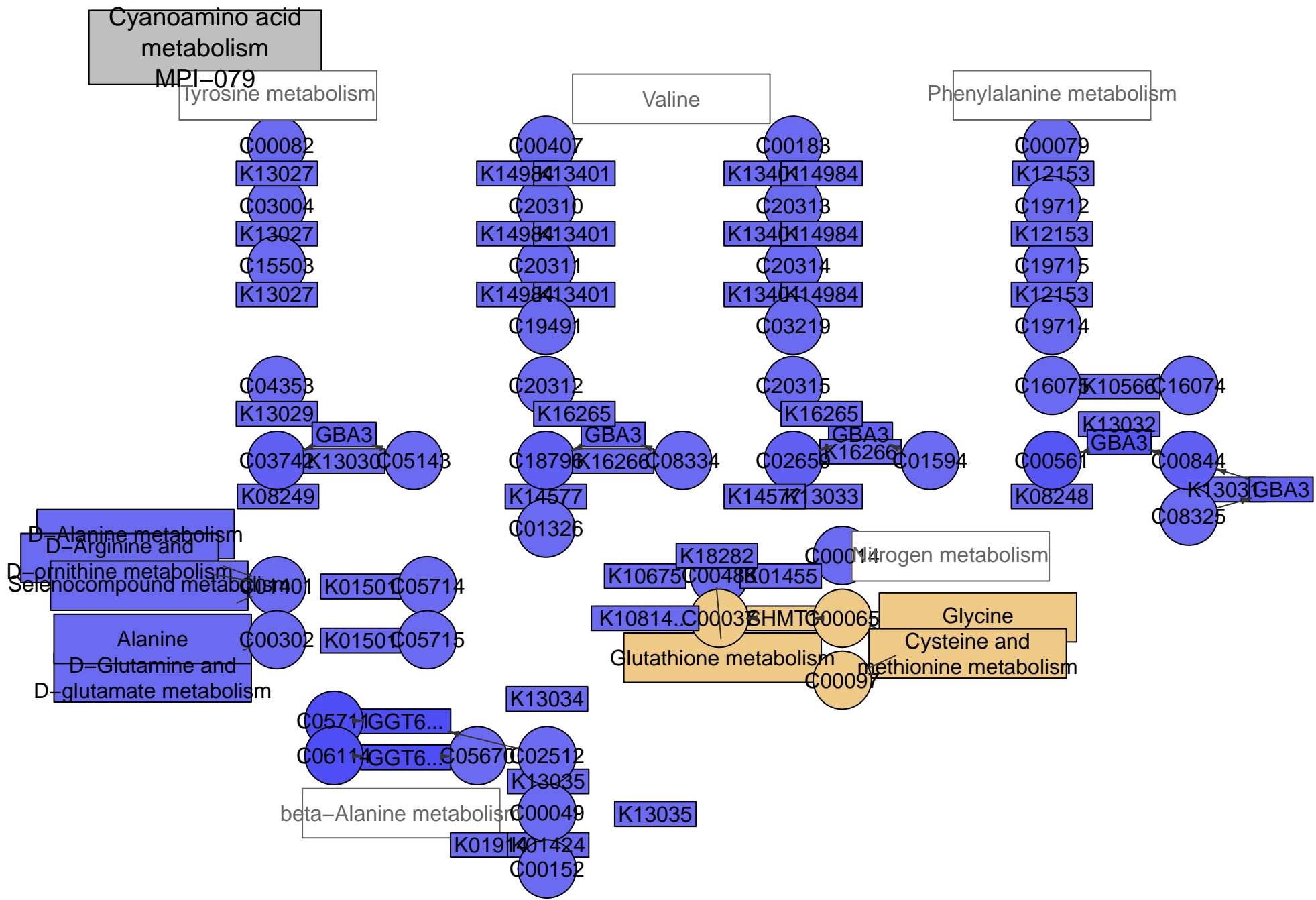
Glycine

Cysteine and methionine metabolism

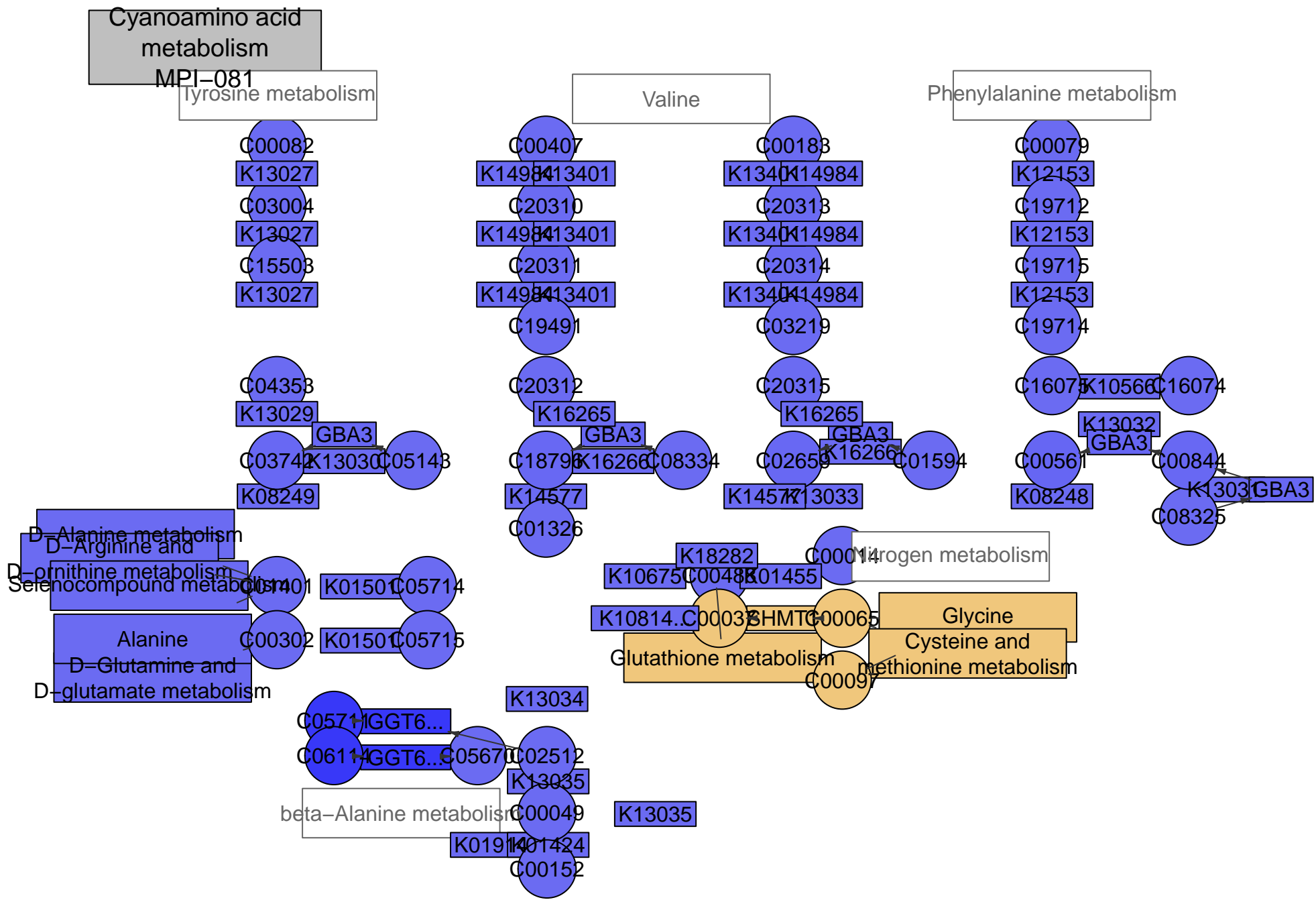












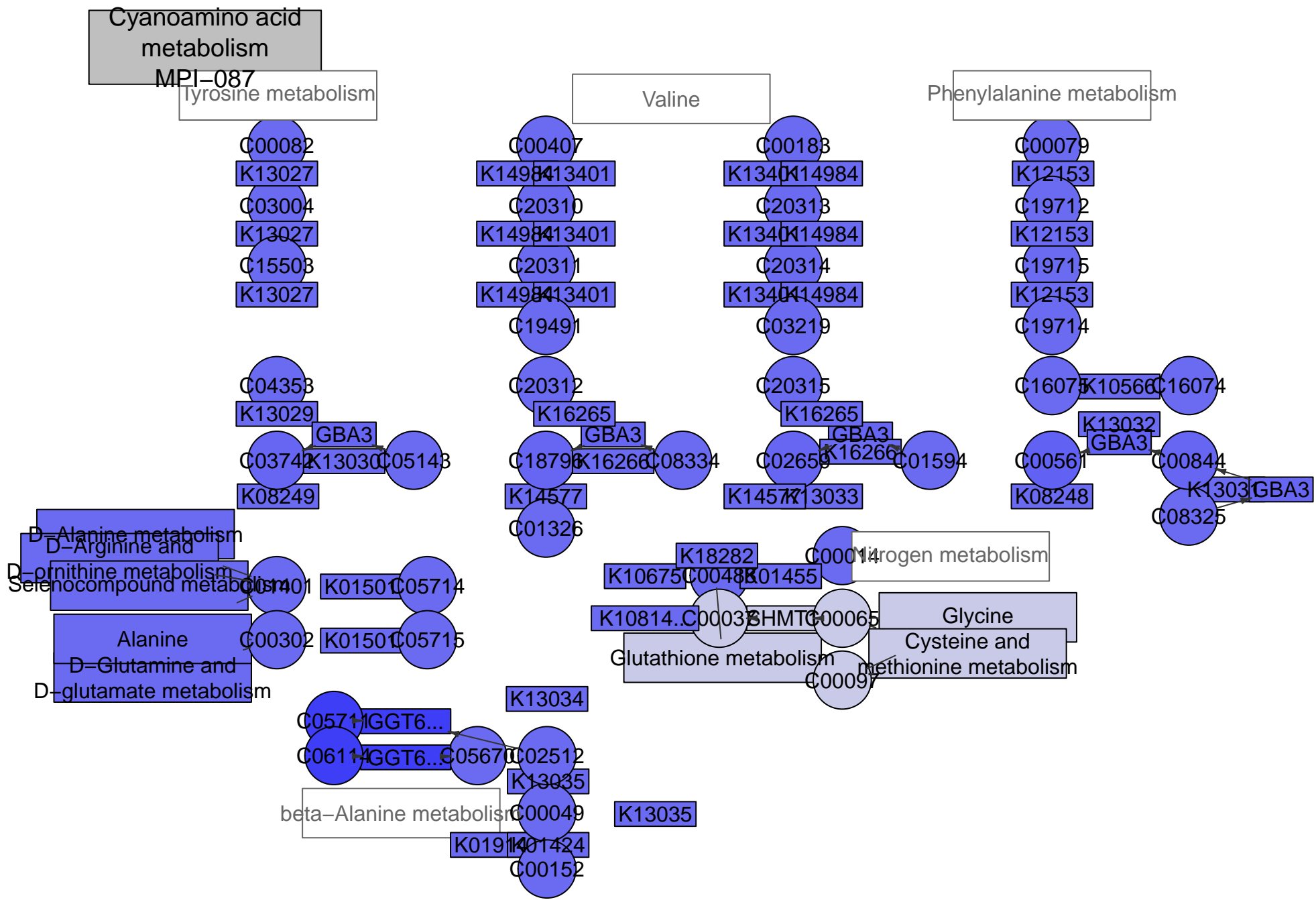


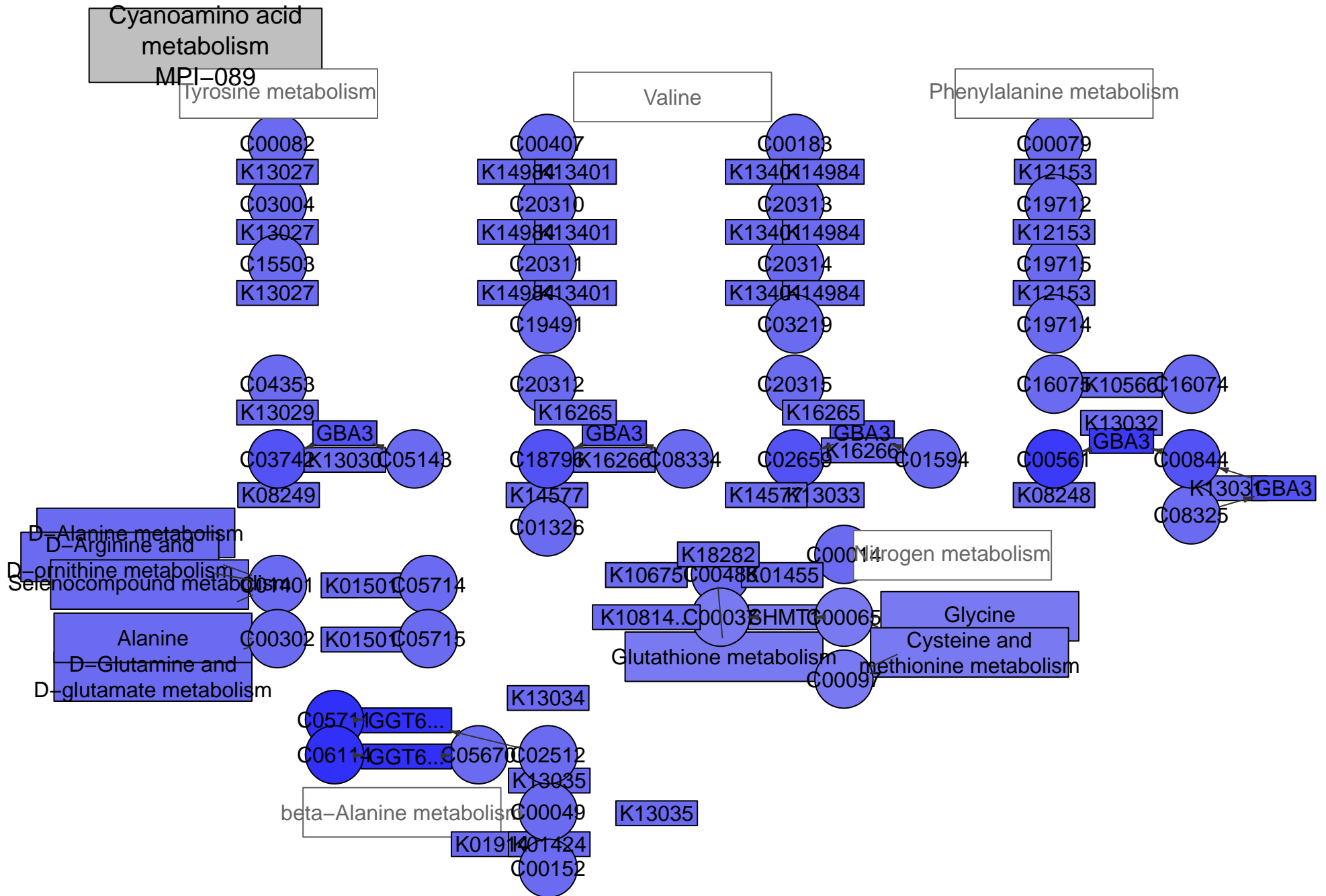


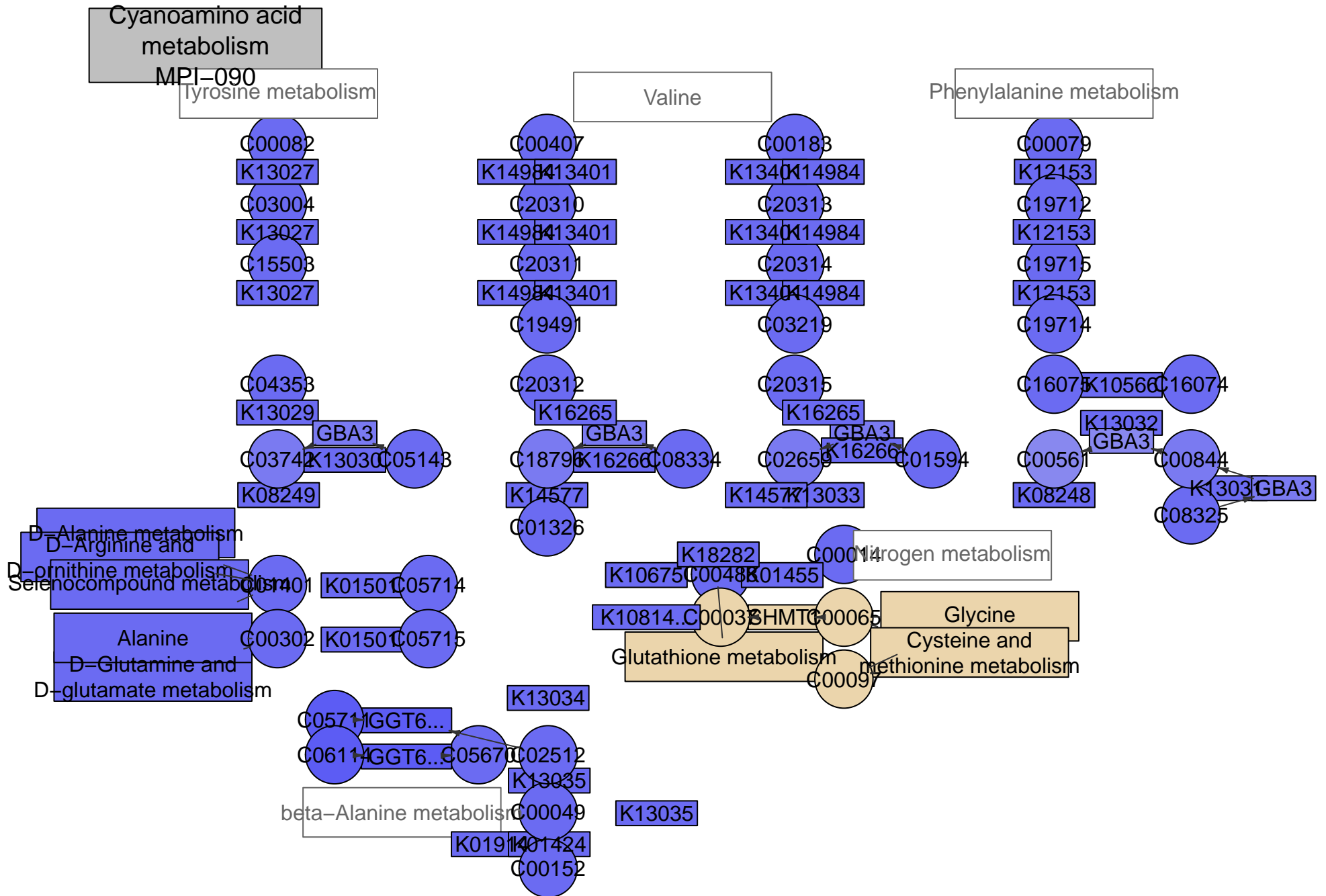




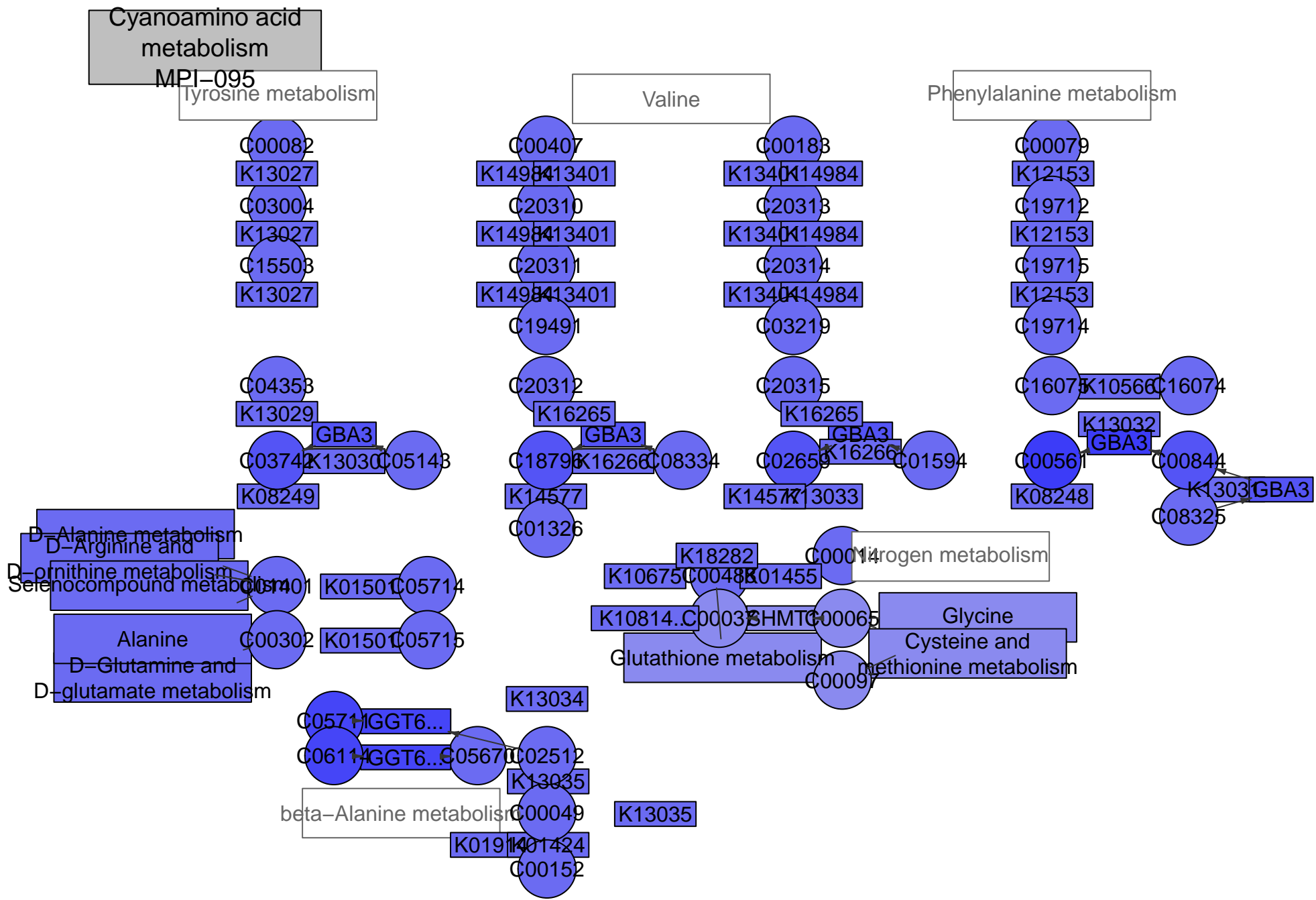


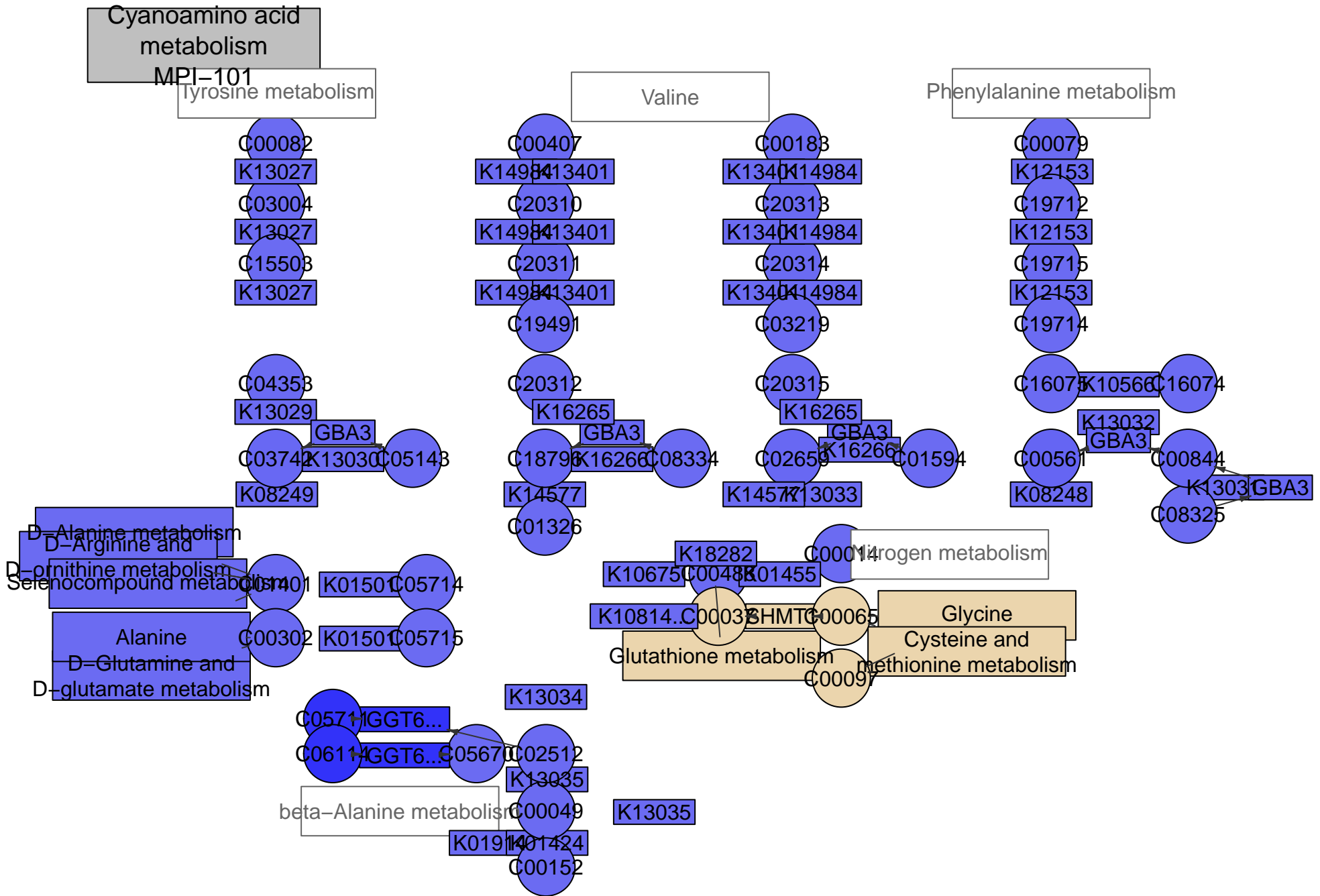




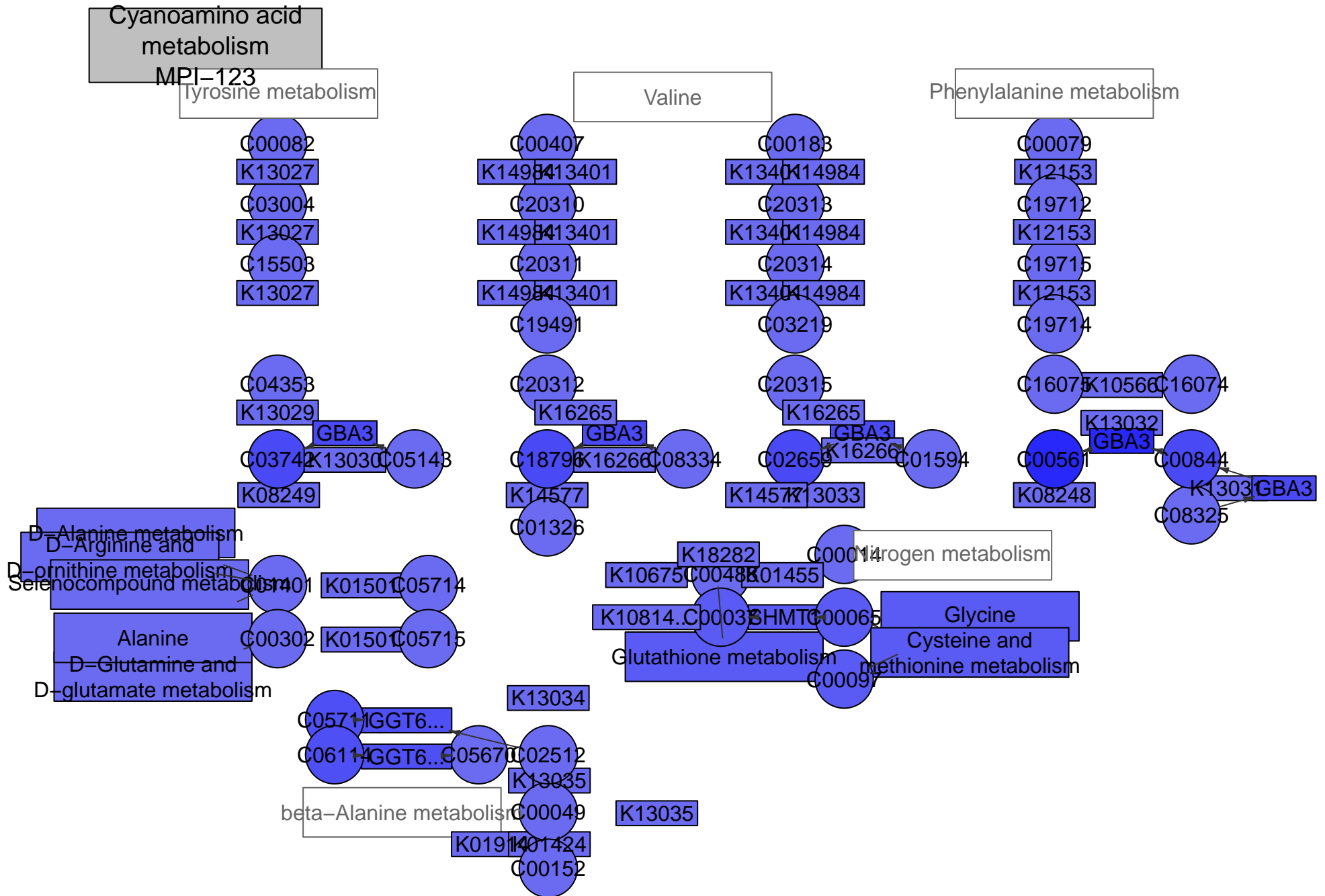




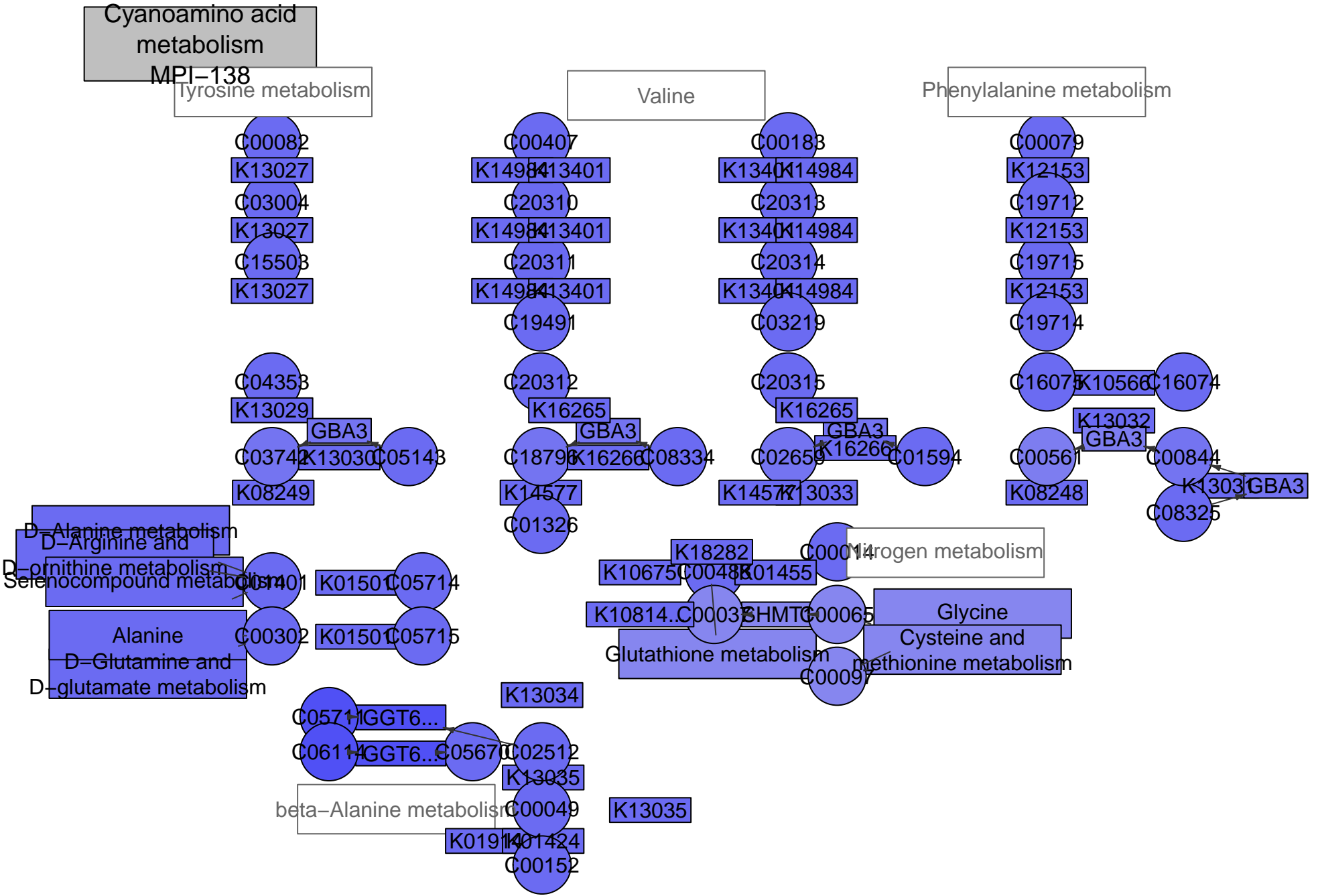




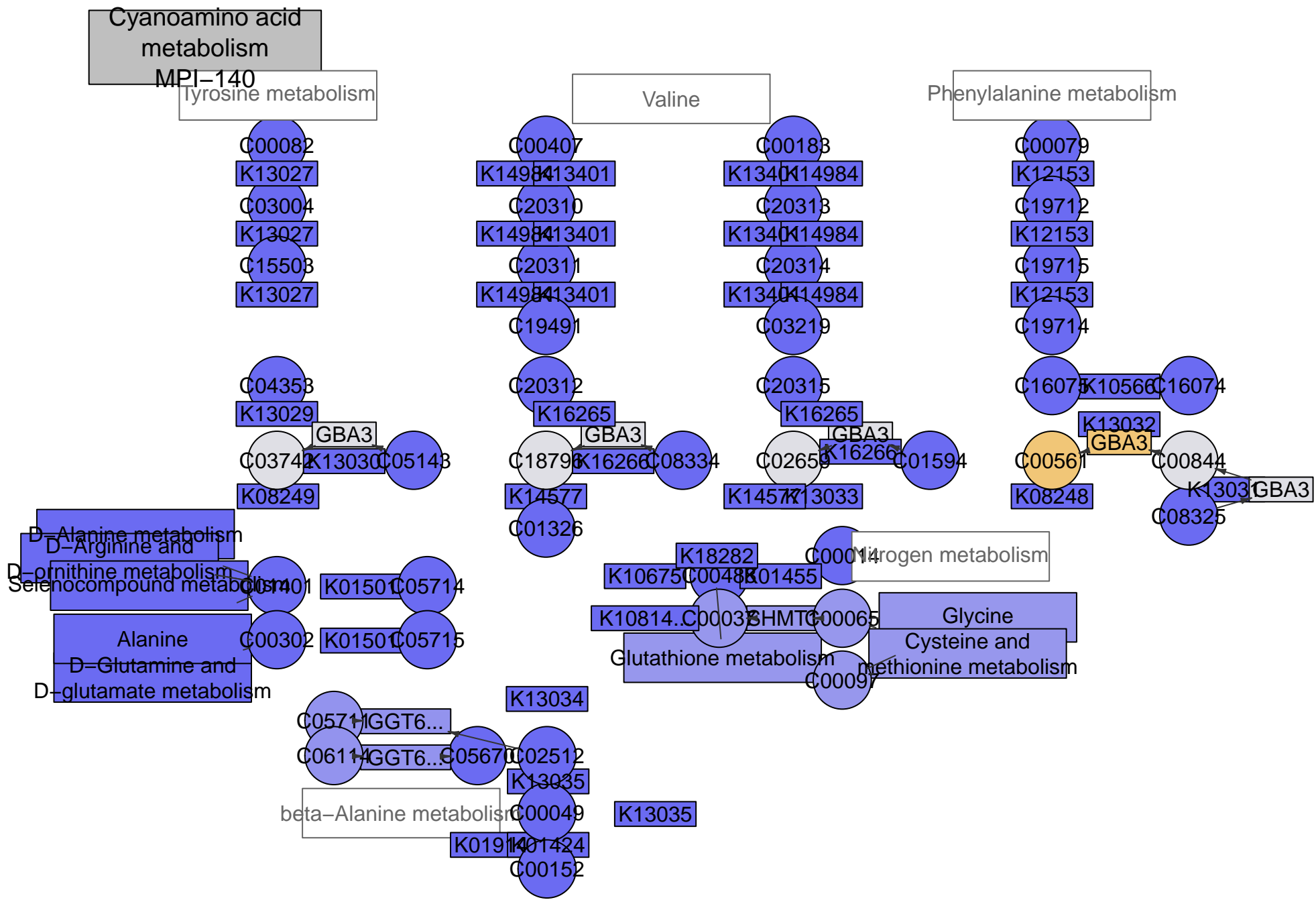


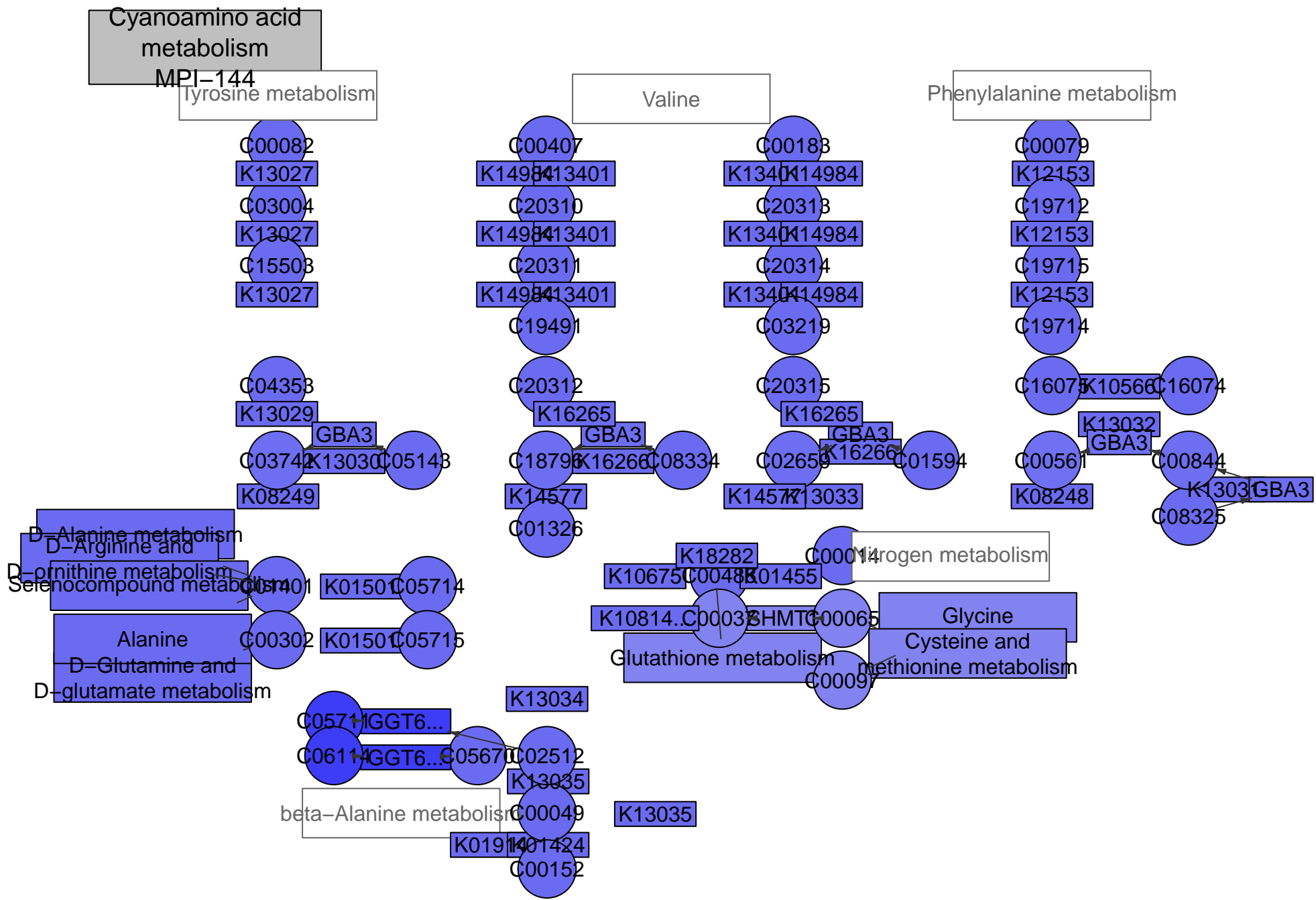


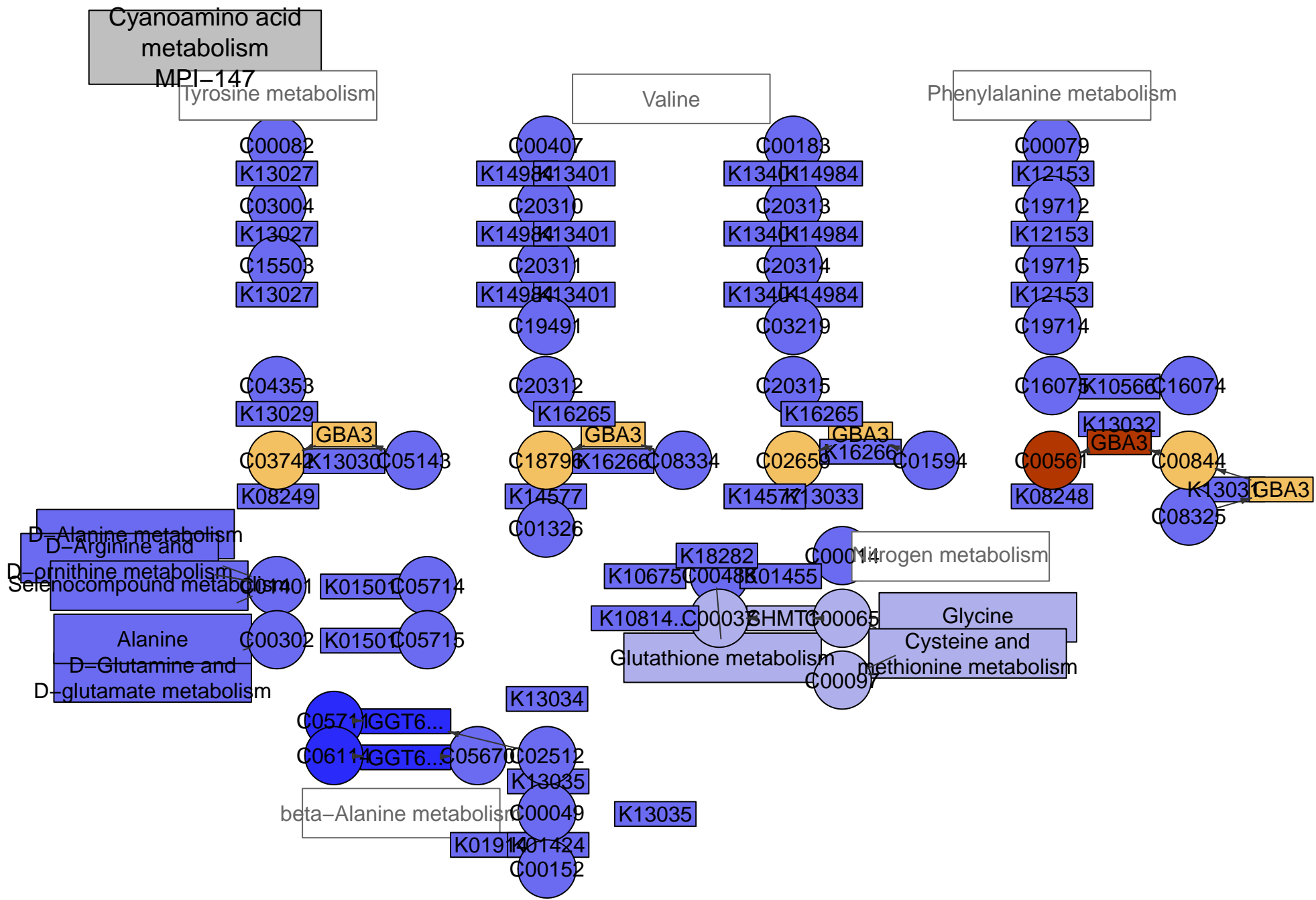


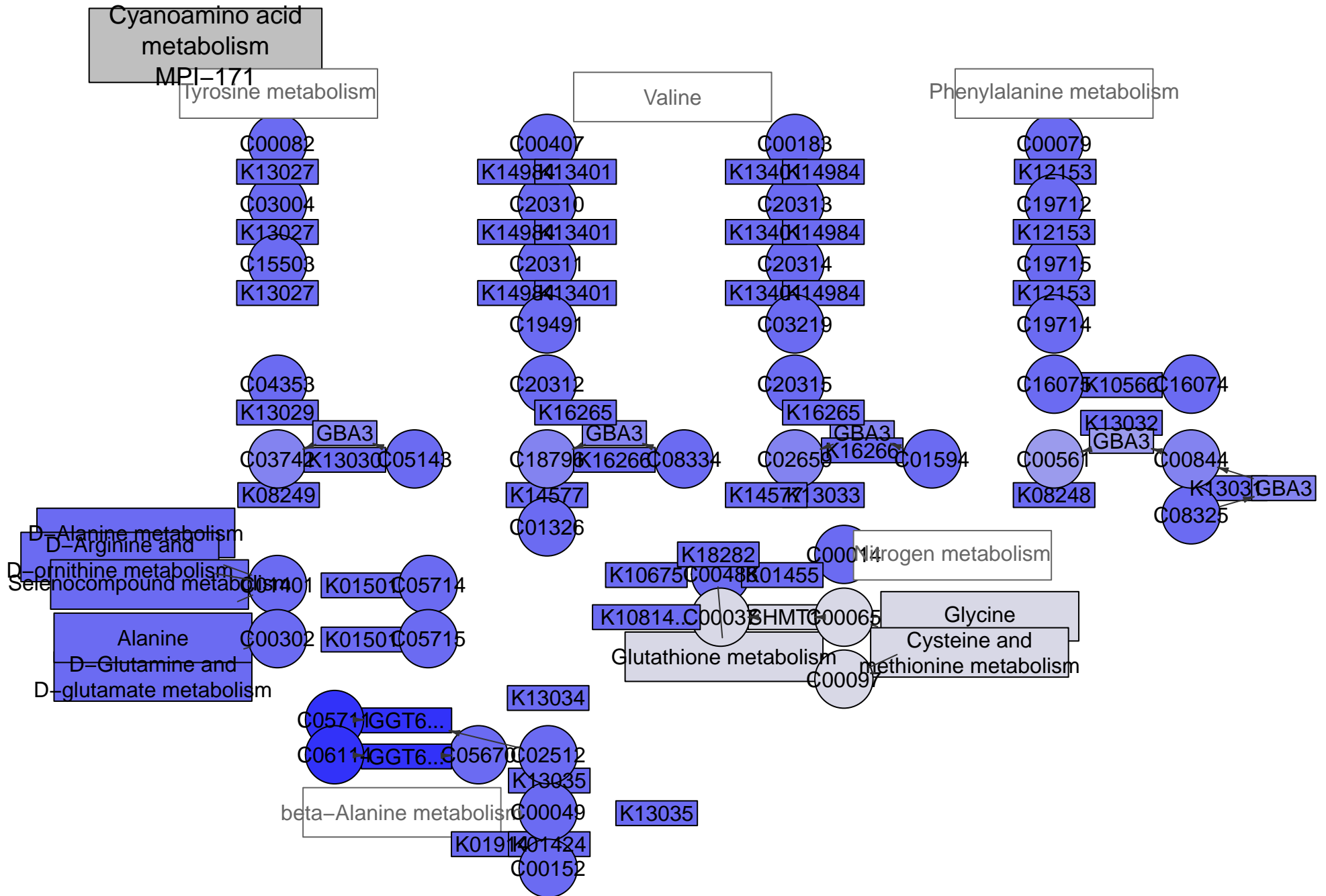












Cyanoamino acid metabolism  
MPI-172

Tyrosine metabolism

Valine

Phenylalanine metabolism

C00082  
K13027  
C03004  
K13027  
C15508  
K13027

C04358  
K13029

C03742  
K08249  
K13030  
C05143

D-Alanine metabolism  
D-Arginine and  
D-ornithine metabolism  
Selenocompound metabolism

C05140  
K0150  
C05714

C00302  
K0150  
C05715

Alanine  
D-Glutamine and  
D-glutamate metabolism

C05714  
GGT6...  
C06114  
GGT6...  
C05670

beta-Alanine metabolism  
C00049  
K01914  
C01424  
C00152

C00407  
K14984  
K13401  
C20310  
K14984  
K13401  
C20311  
K14984  
K13401  
C19491  
C20312  
K16265  
C18796  
K14577  
C01326  
K16266  
C08334

K18282  
K10675  
C00488  
K01455

K10814  
C00033  
SHMTG  
C00097

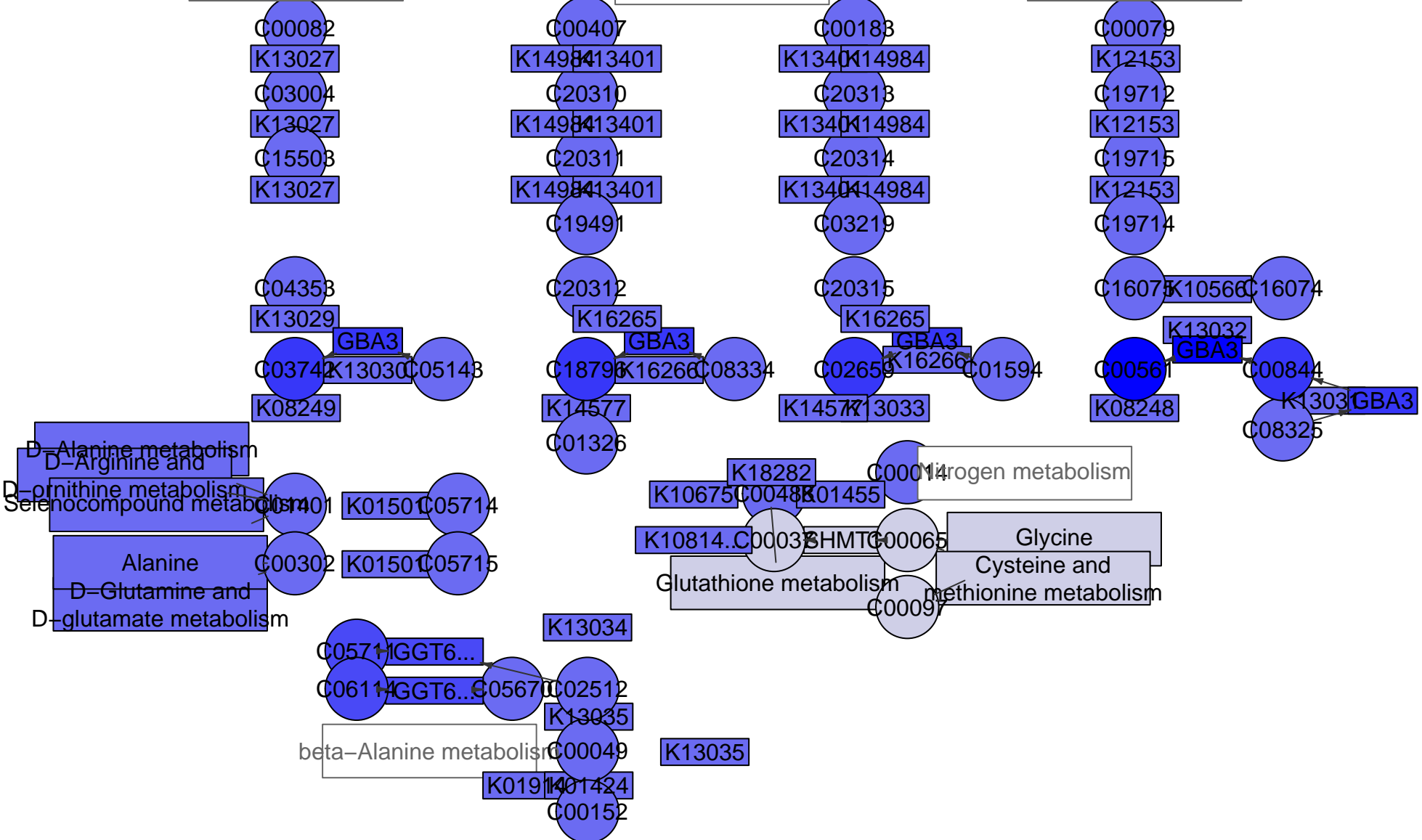
K13035

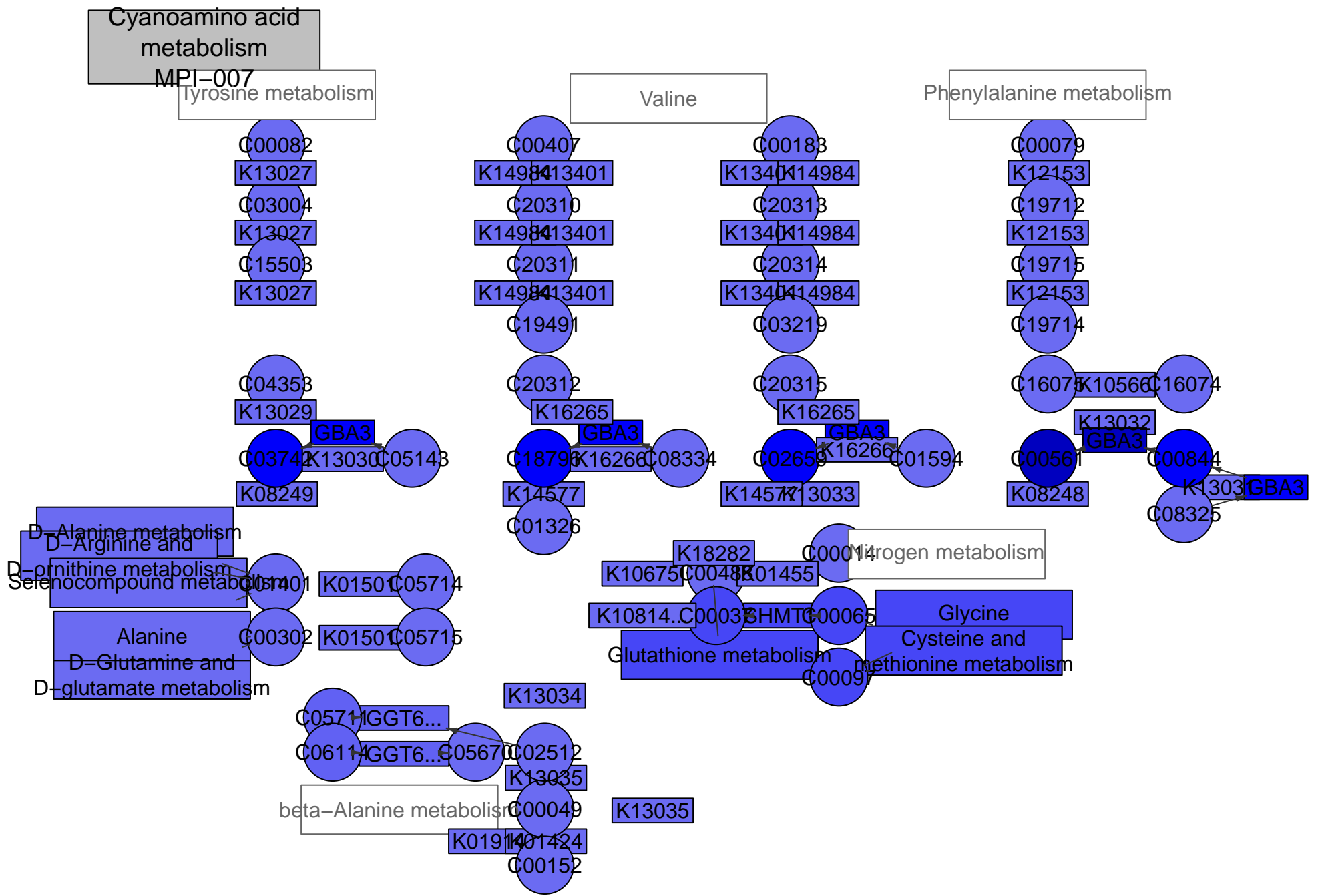
C00188  
K13401  
K14984  
C20313  
K13401  
K14984  
C20314  
K13401  
K14984  
C03219  
C20315  
K16265  
C02659  
K14577  
K13033  
C01594

Nitrogen metabolism

Glycine  
Cysteine and  
methionine metabolism

C00079  
K12153  
C19712  
K12153  
C19715  
K12153  
C19714  
C16075  
K10566  
C16074  
C00561  
K08248  
K13032  
GBA3  
C00844  
K13033  
GBA3  
C08325

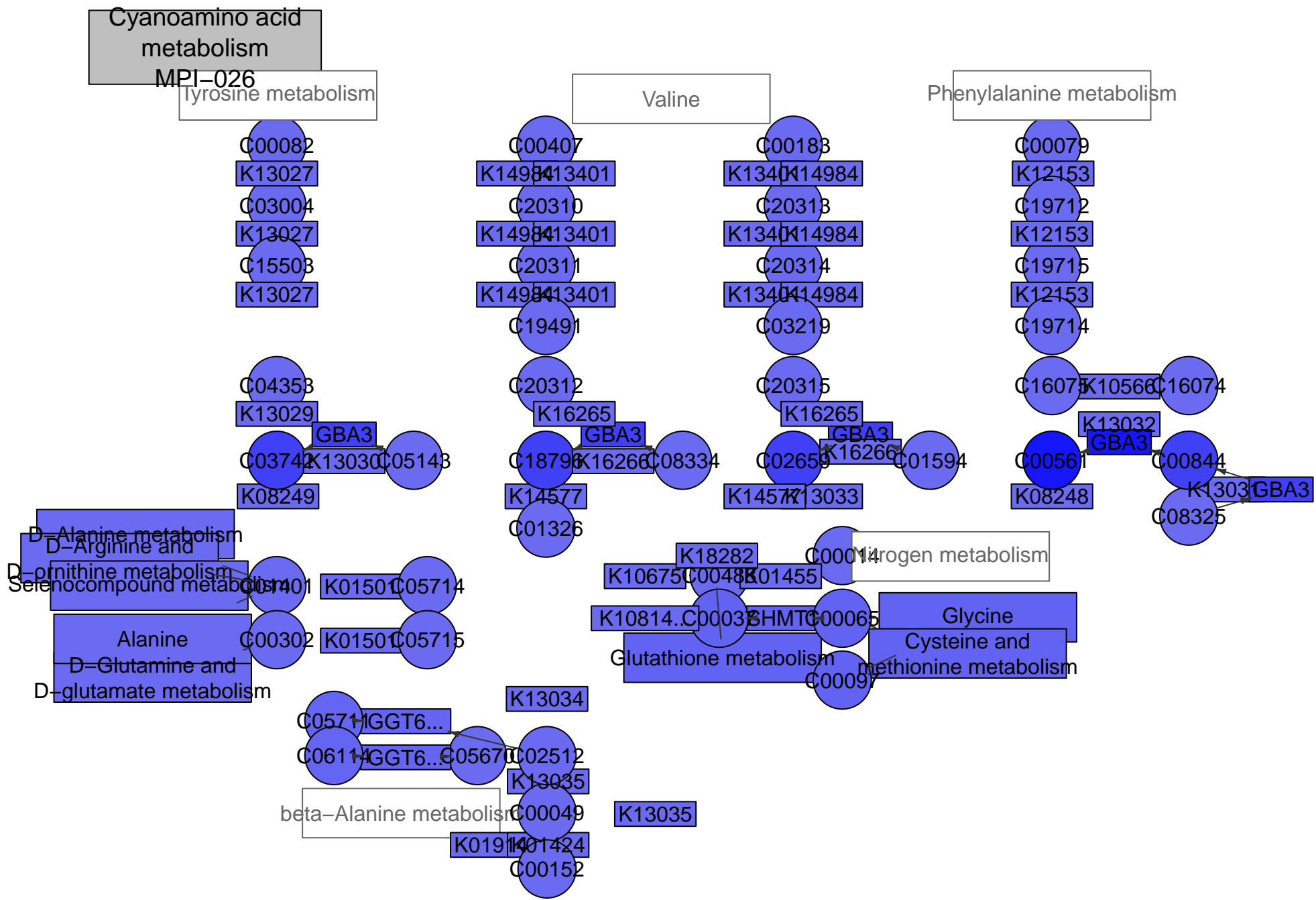


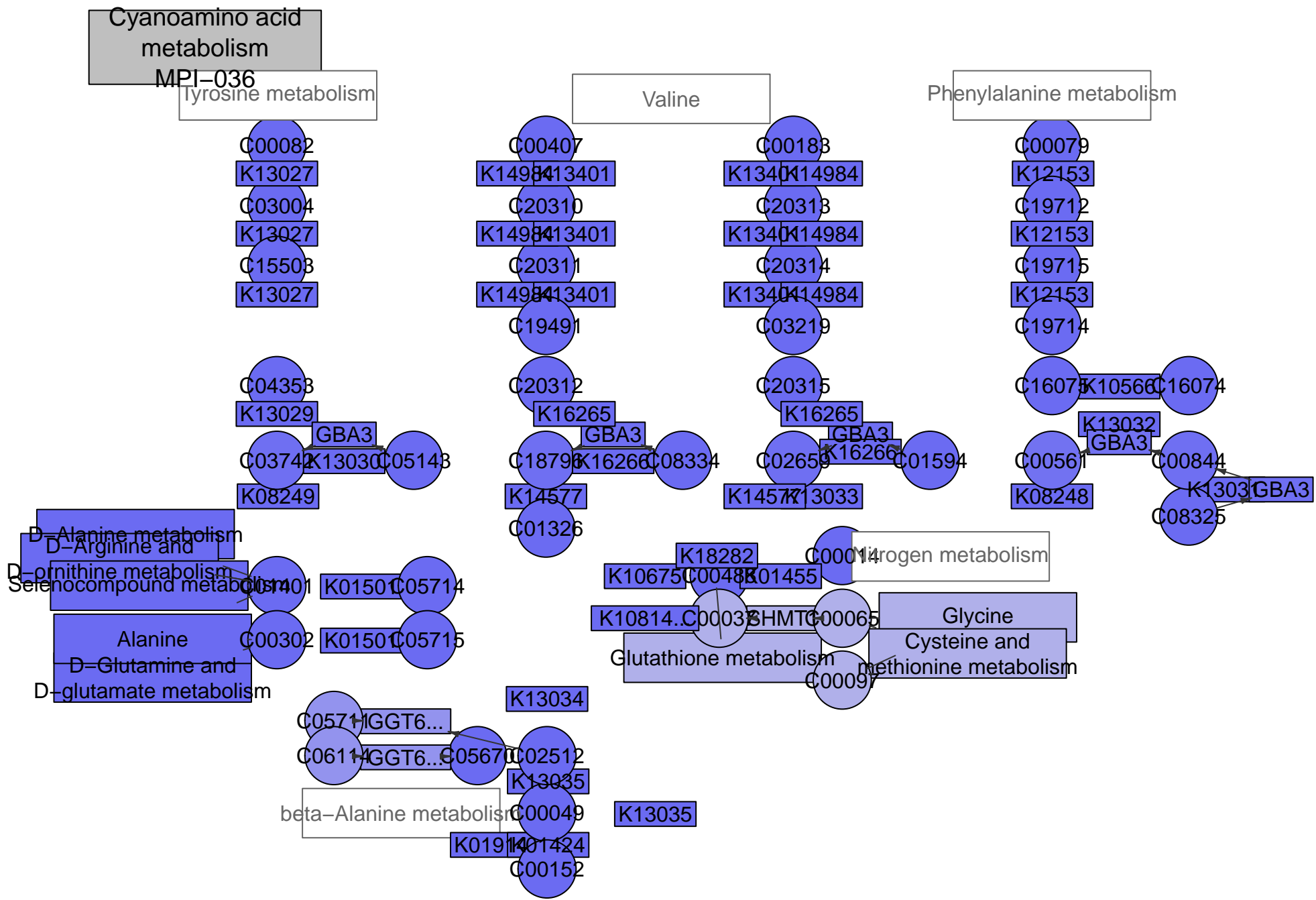


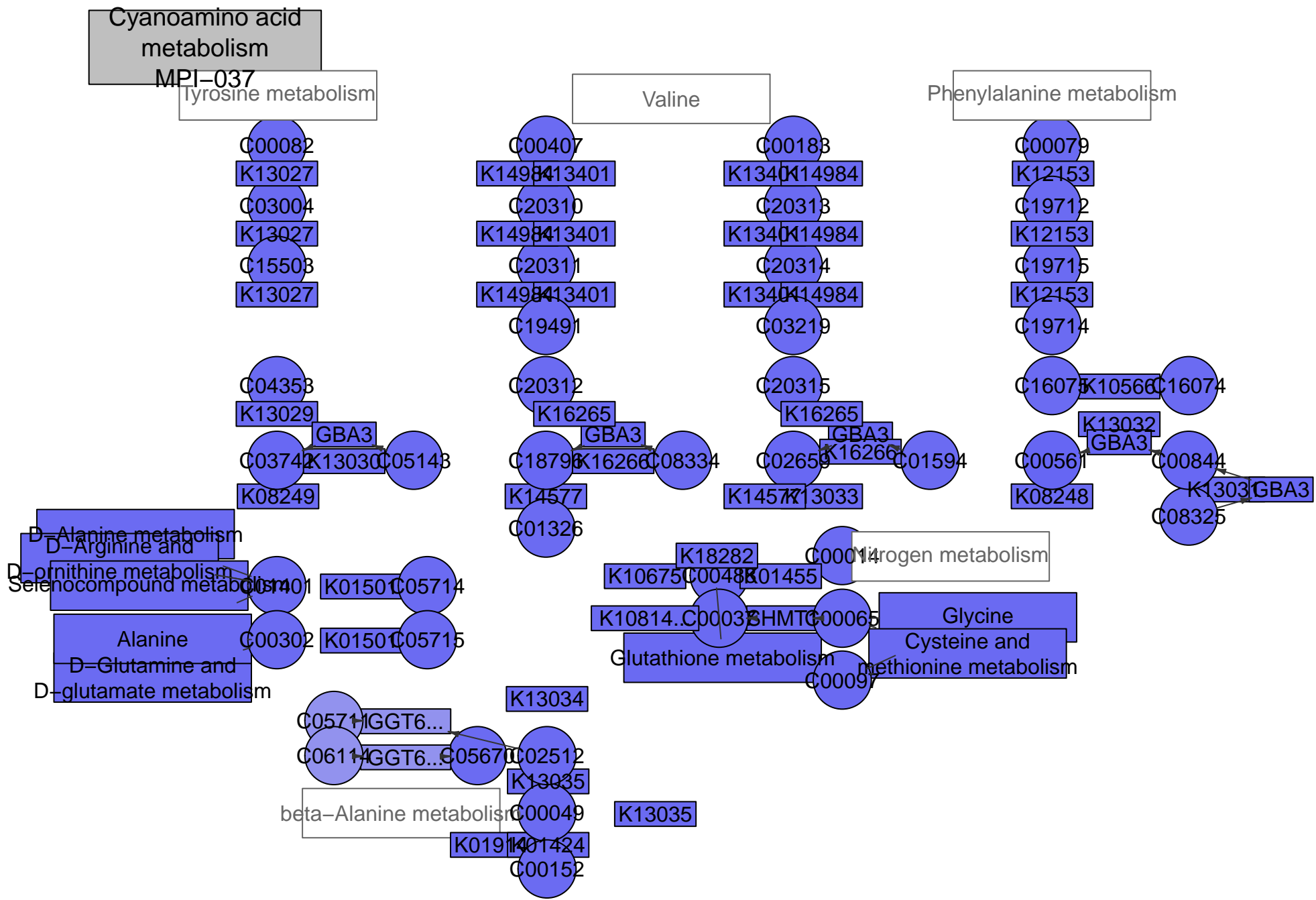


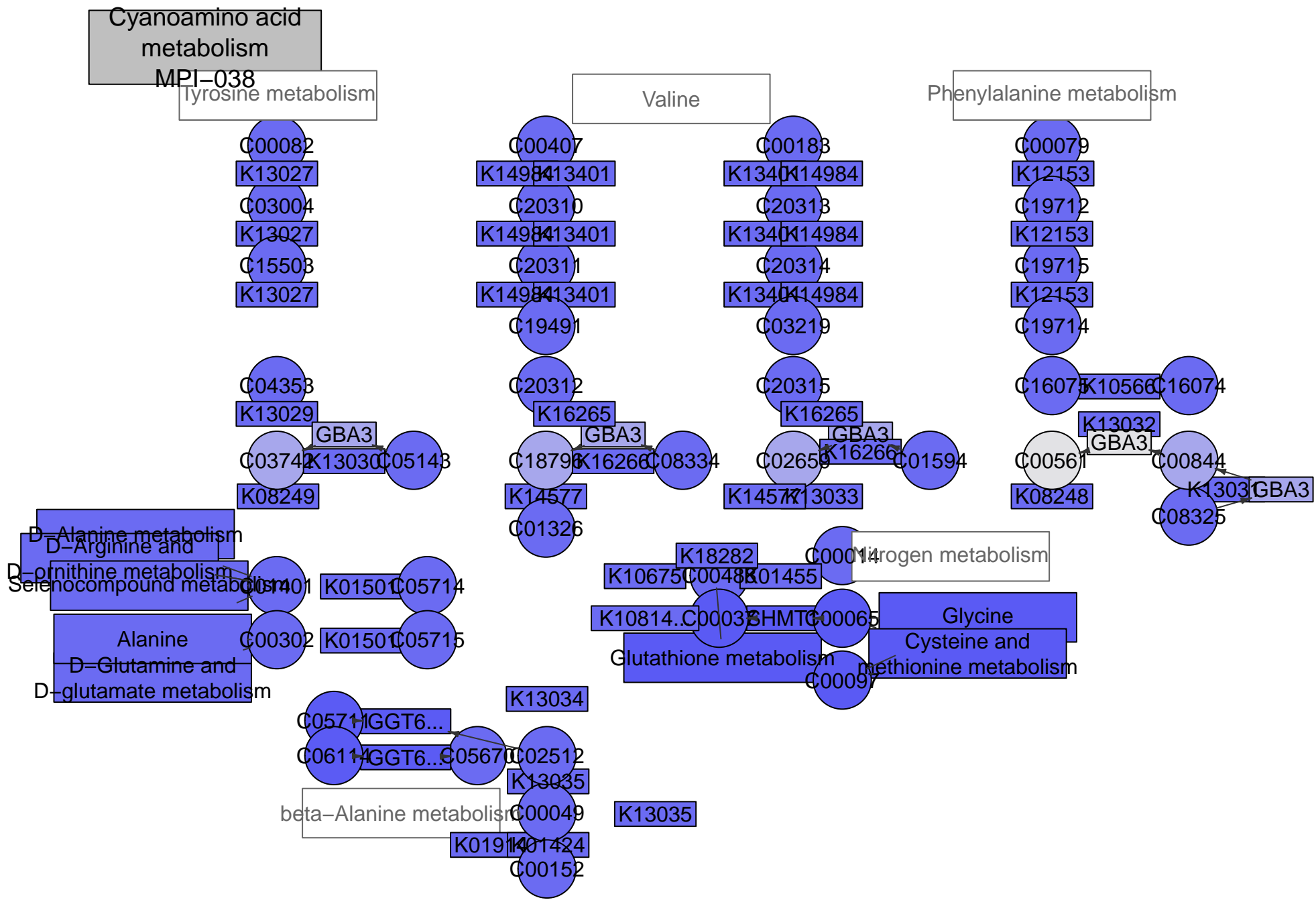


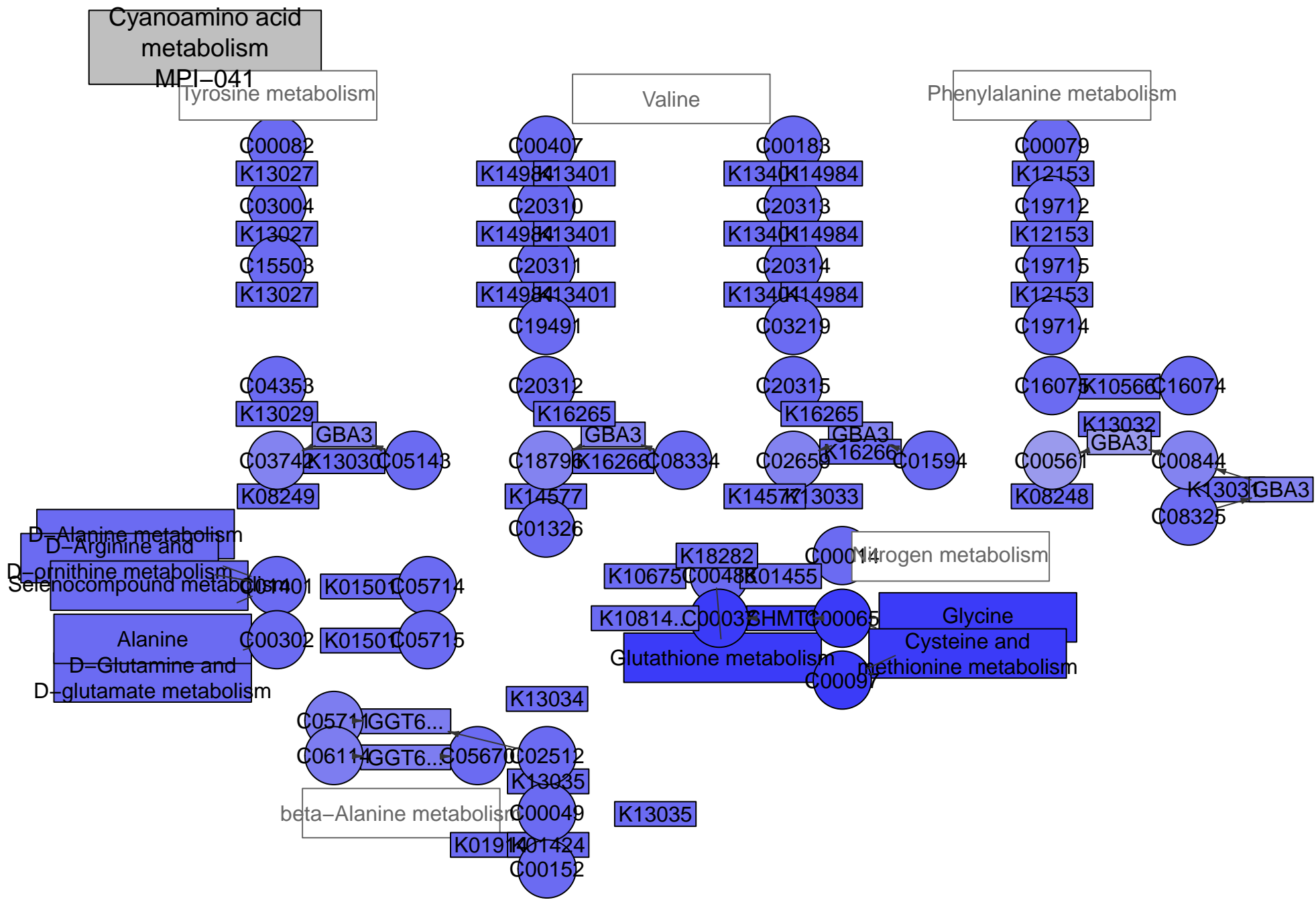


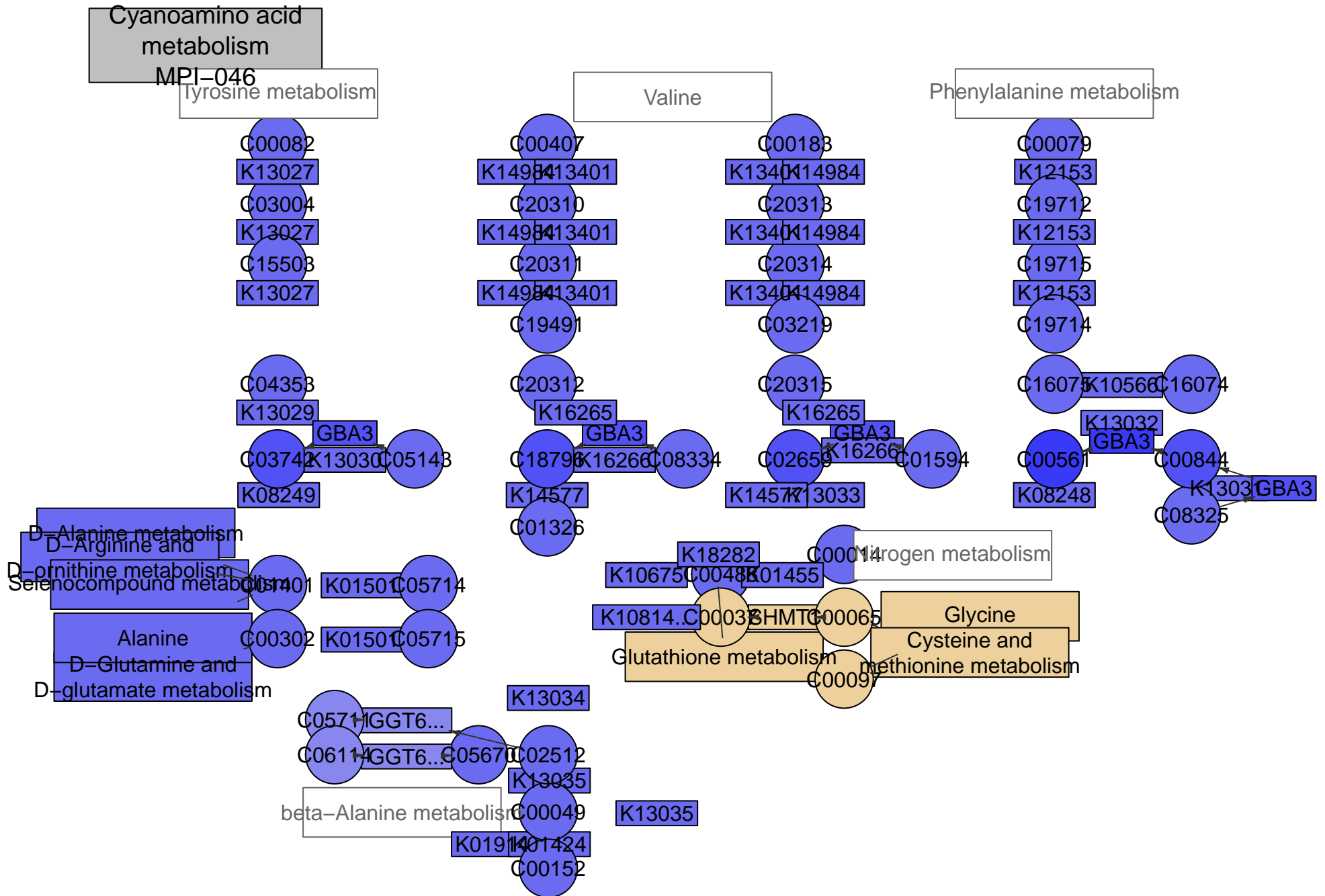




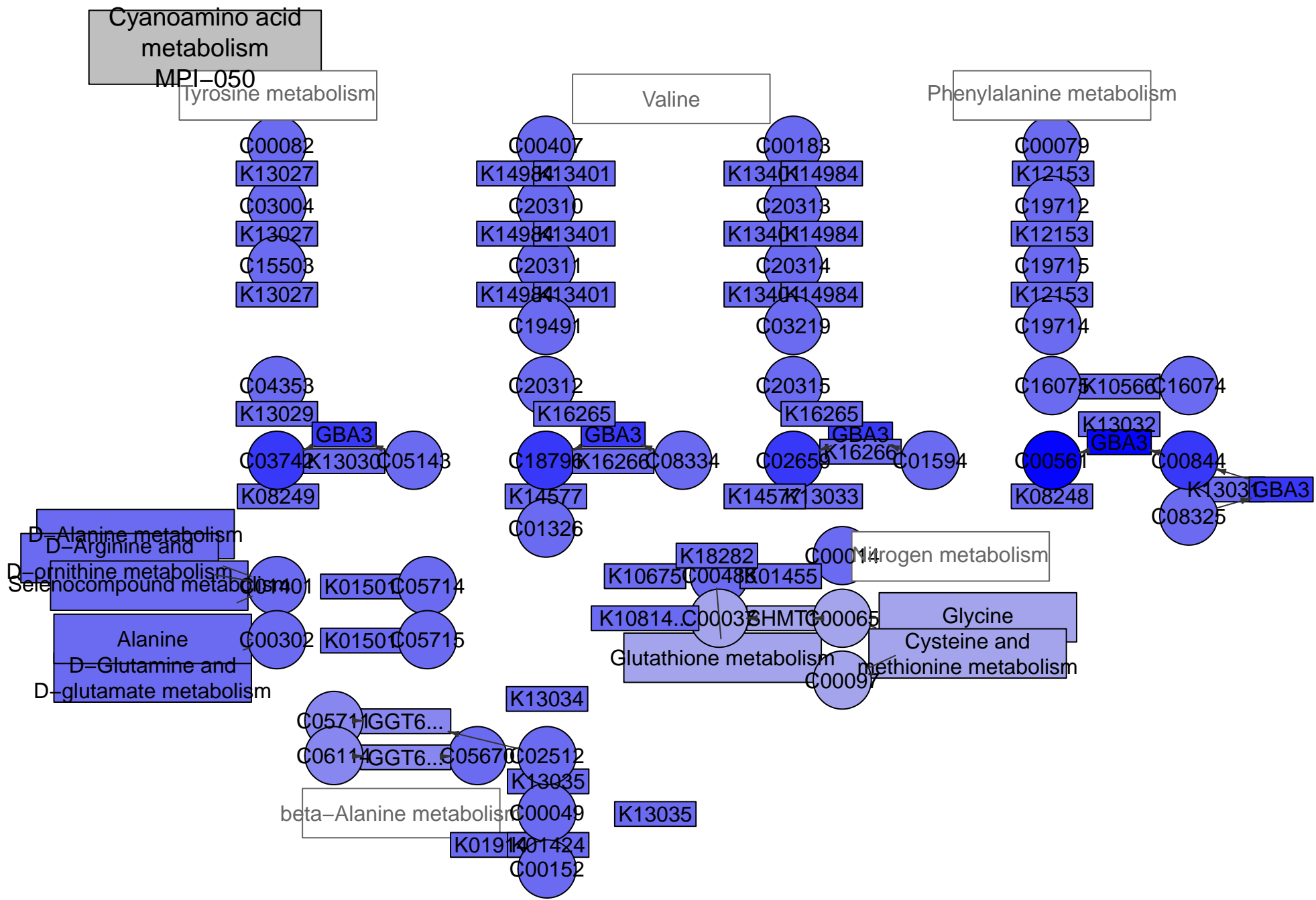


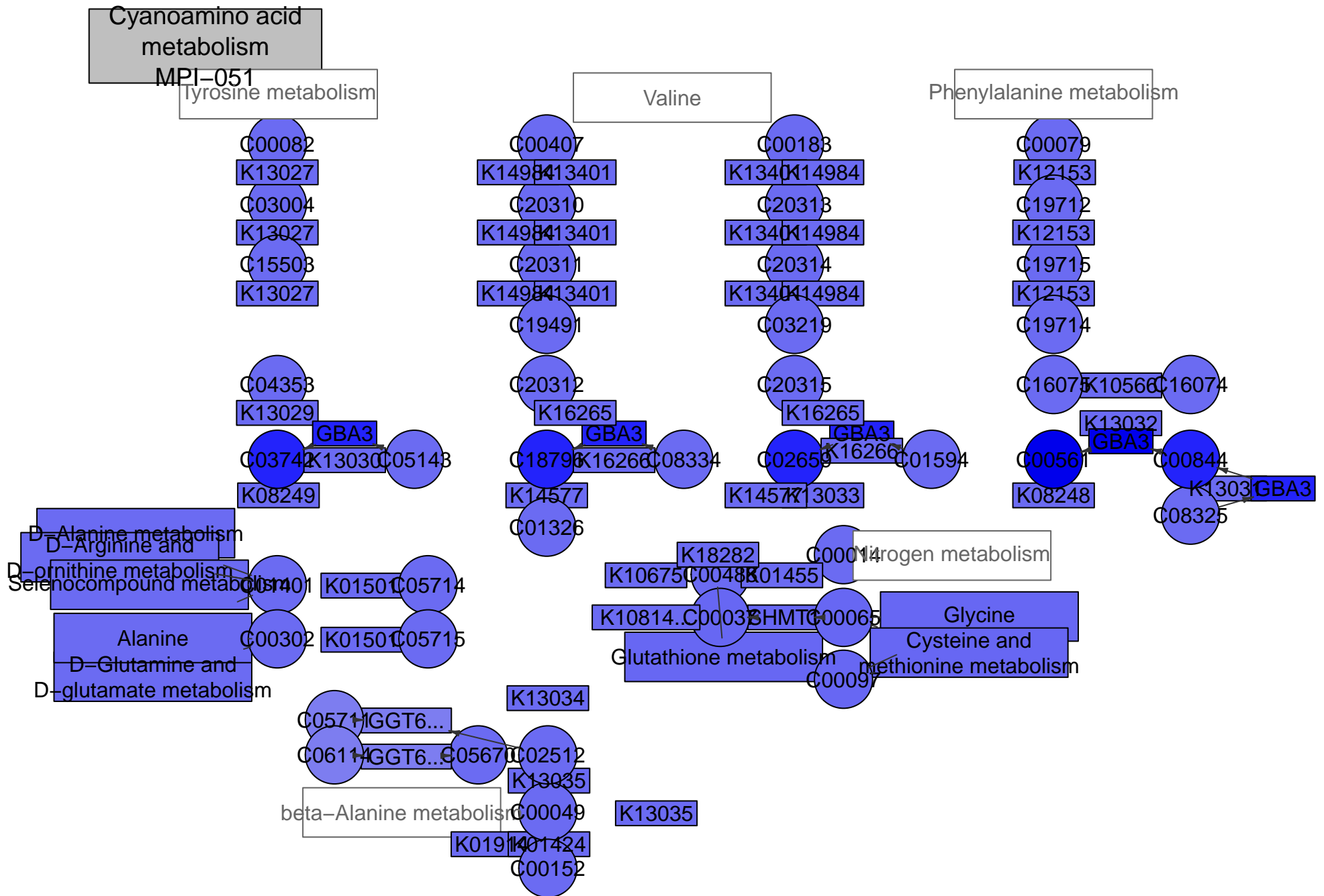


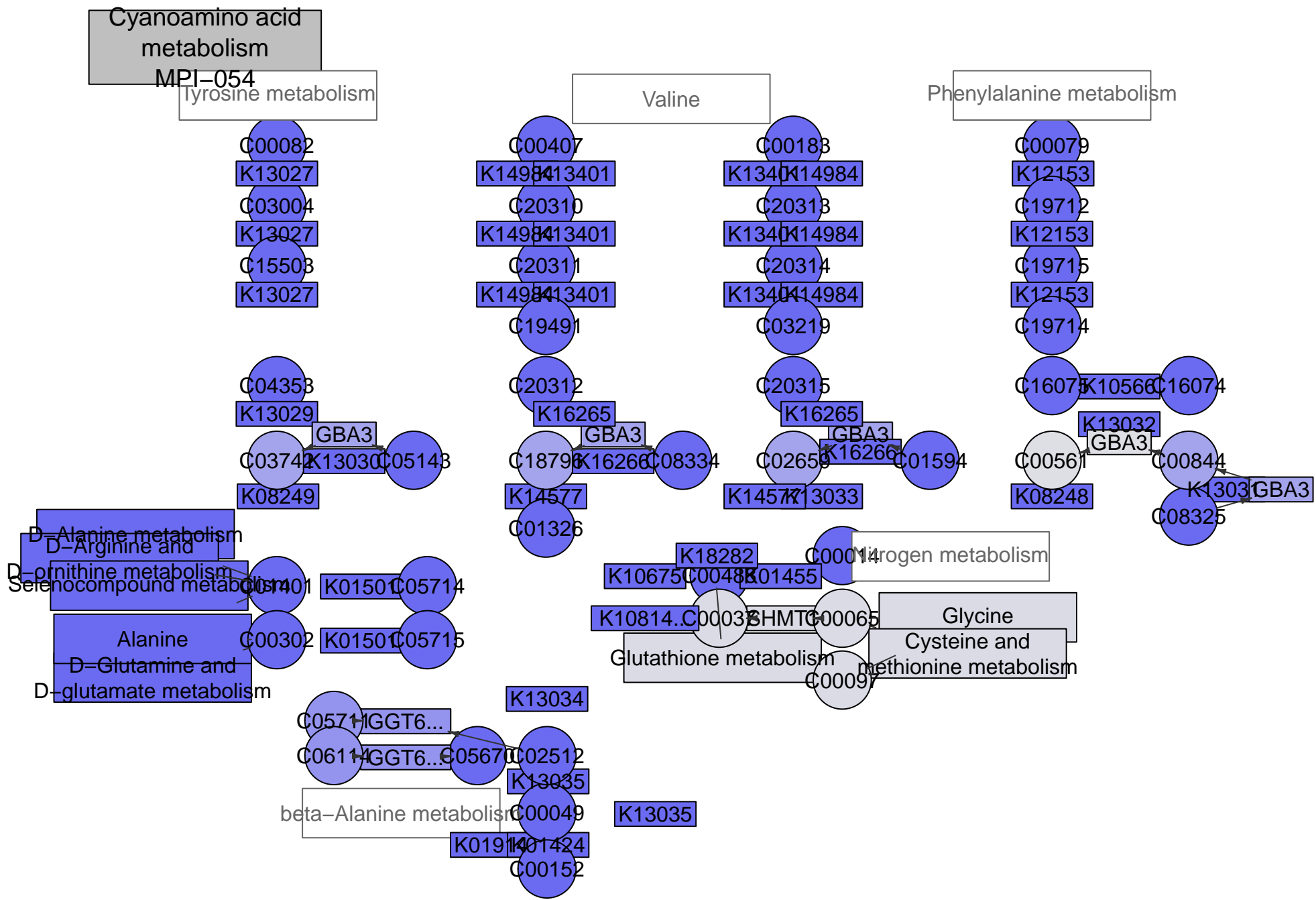












Cyanoamino acid metabolism

MPI-059

Tyrosine metabolism

Valine

Phenylalanine metabolism

C00082

K13027

C03004

K13027

C15508

K13027

C04358

K13029

GBA3

C03742

K13030

C05143

K08249

C05140

K0150

C05714

C00302

K0150

C05715

C05714

GGT6...

C06114

GGT6...

K13034

C05670

C02512

K13035

beta-Alanine metabolism

C00049

K01914

C01424

C00152

C00407

K14984

C13401

C20310

K14984

C13401

C20311

K14984

C13401

C19491

C20312

K16265

C18796

K16266

C08334

K14577

C01326

K18282

C00488

K01455

K10814

C00033

C00097

C00033

SHMTG

C00065

C00097

C00097

C00097

C00097

C00097

C00097

C00097

C00097

C00188

K13401

C14984

C20313

K13401

C14984

C20314

K13401

C14984

C03219

C20315

K16265

C02659

K16266

C01594

K14577

K13033

K18282

C00488

K01455

K10814

C00033

SHMTG

C00065

C00097

C00097

C00097

C00097

C00097

C00097

C00097

C00097

C00097

C00097

C00079

K12153

C19712

K12153

C19715

K12153

C19714

C16075

K10566

C16074

C00561

K08248

C00844

C08325

K13032

GBA3

C00844

K13033

GBA3

C08325

C08325

C08325

C08325

C08325

C08325

C08325

C08325

C08325

C08325

C08325

C08325

C08325

D-Alanine metabolism

D-Arginine and

D-ornithine metabolism

Selenocompound metabolism

Alanine

D-Glutamine and

D-glutamate metabolism

Glutathione metabolism

Glutathione metabolism

Glutathione metabolism

Glutathione metabolism

Glutathione metabolism

Glutathione metabolism

Glutathione metabolism

Glutathione metabolism

Glutathione metabolism

Glutathione metabolism

Glutathione metabolism

Glutathione metabolism

Glutathione metabolism

Glutathione metabolism

Glutathione metabolism

Glutathione metabolism

Glutathione metabolism

Glutathione metabolism

Glutathione metabolism

Nitrogen metabolism

Nitrogen metabolism

Nitrogen metabolism

Nitrogen metabolism

Nitrogen metabolism

Nitrogen metabolism

Nitrogen metabolism

Nitrogen metabolism

Nitrogen metabolism

Nitrogen metabolism

Nitrogen metabolism

Nitrogen metabolism

Nitrogen metabolism

Nitrogen metabolism

Nitrogen metabolism

Nitrogen metabolism

Nitrogen metabolism

Nitrogen metabolism

Nitrogen metabolism

Glycine

Cysteine and

methionine metabolism

Cysteine and

methionine metabolism

Cysteine and

methionine metabolism

Cysteine and

methionine metabolism

Cysteine and

methionine metabolism

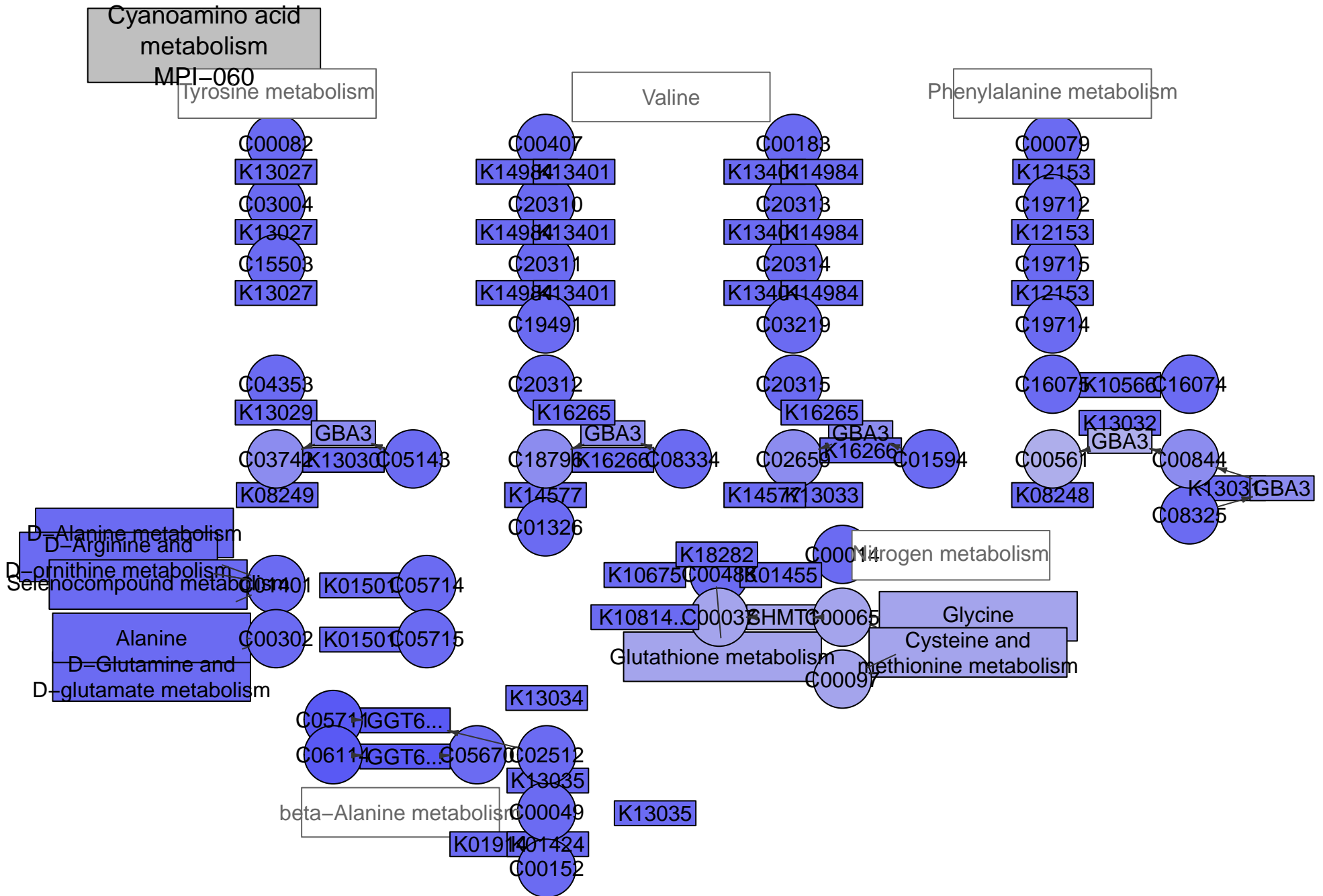
Cysteine and

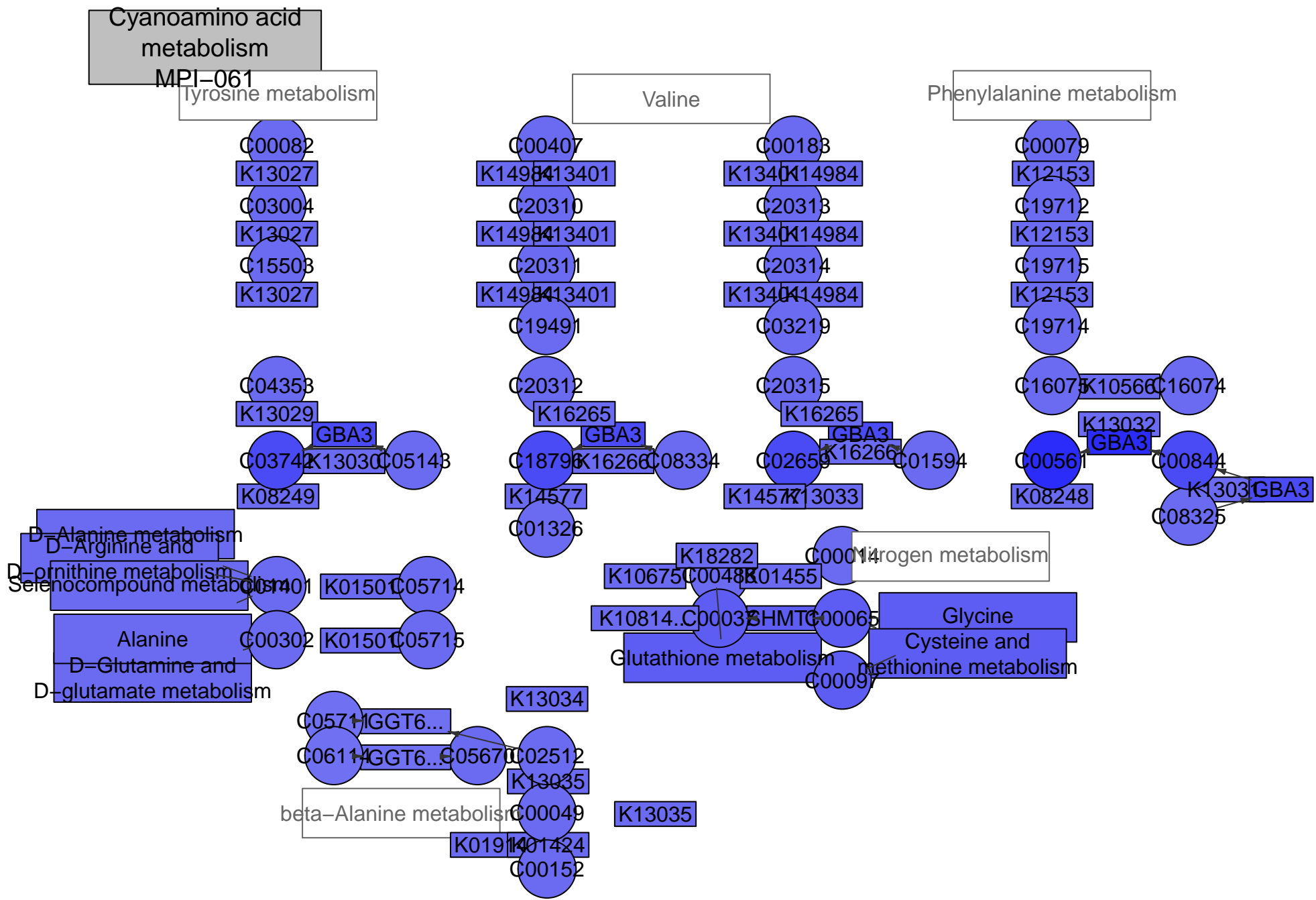
methionine metabolism

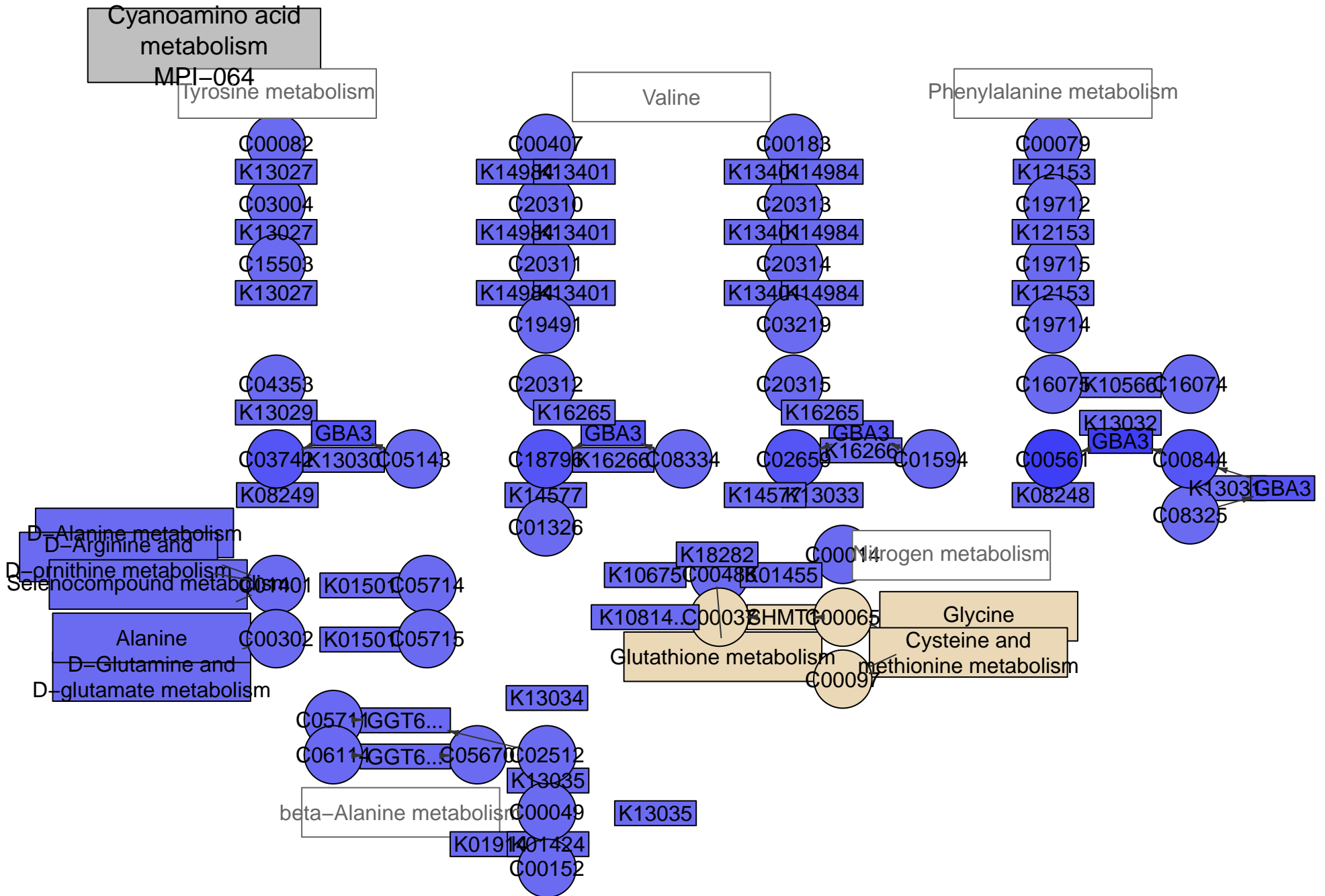
Cysteine and

methionine metabolism

Cysteine and





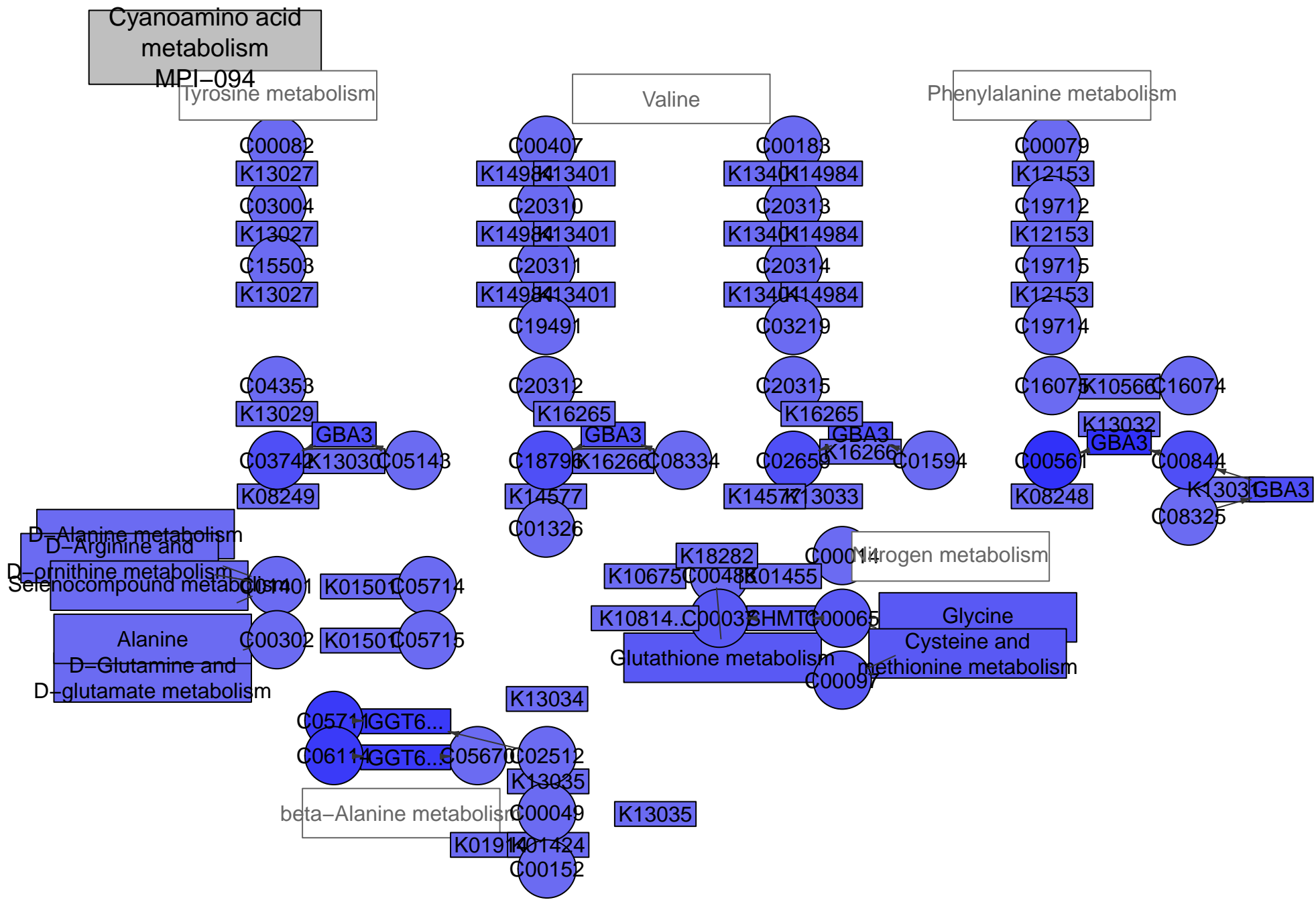














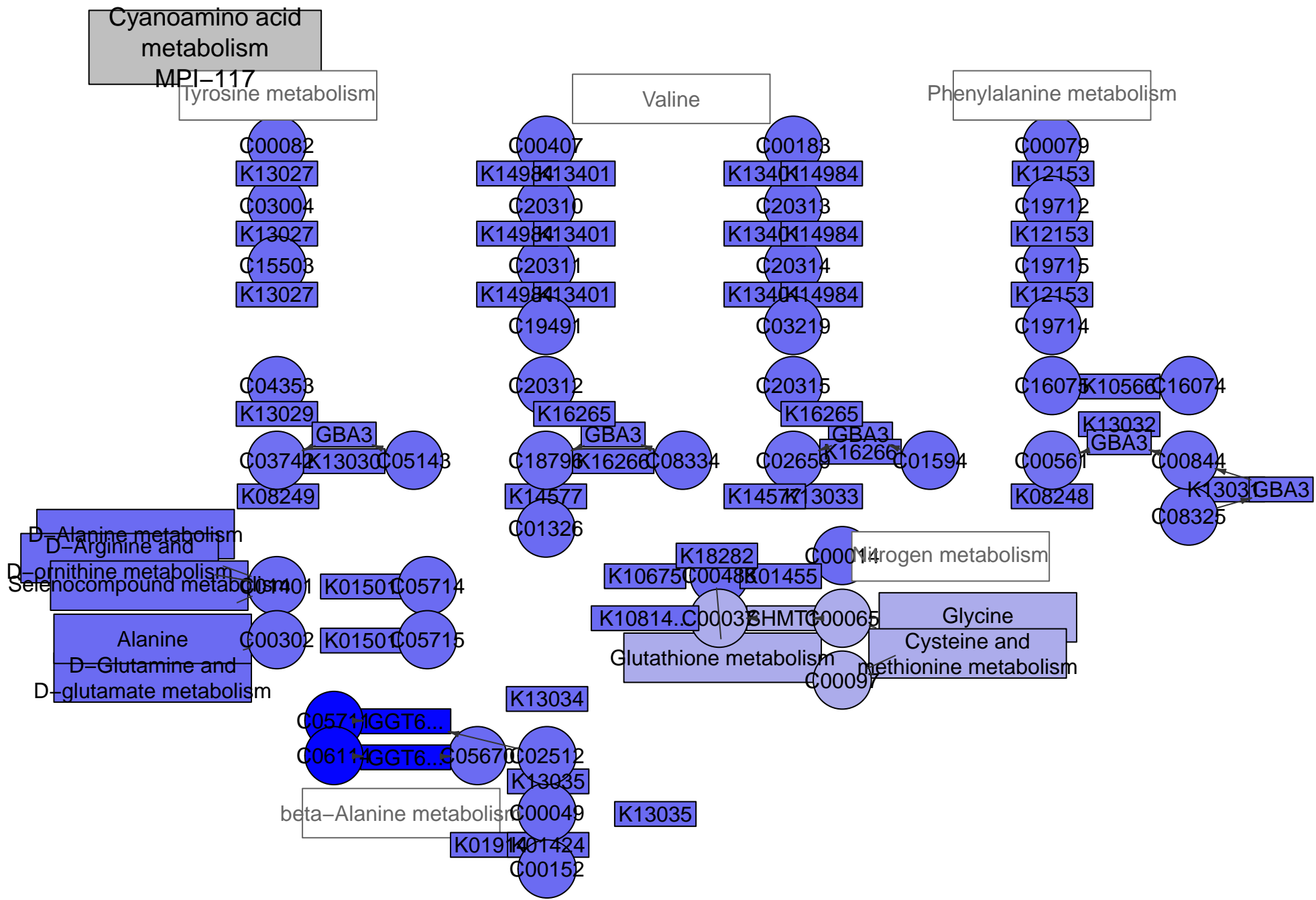












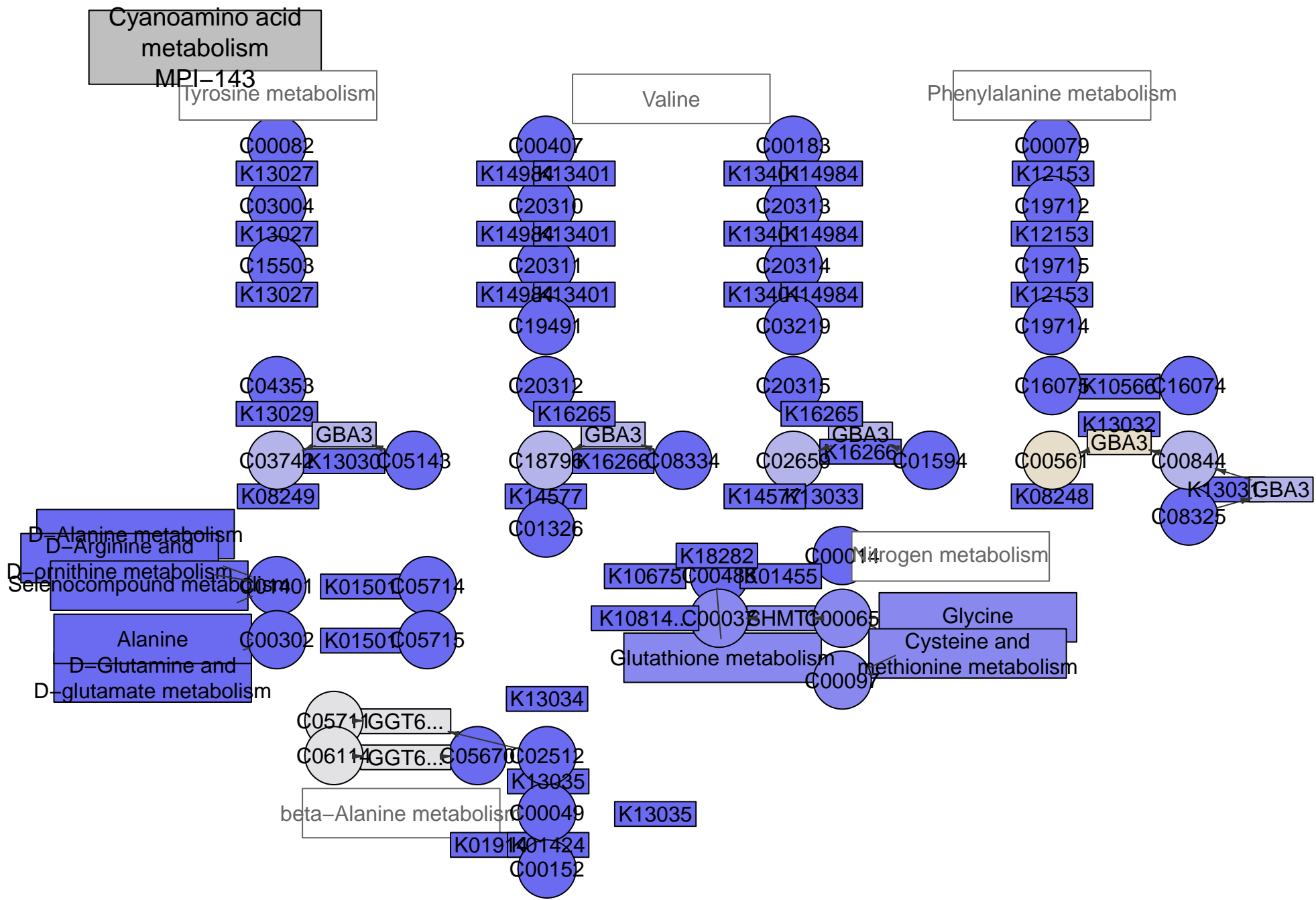


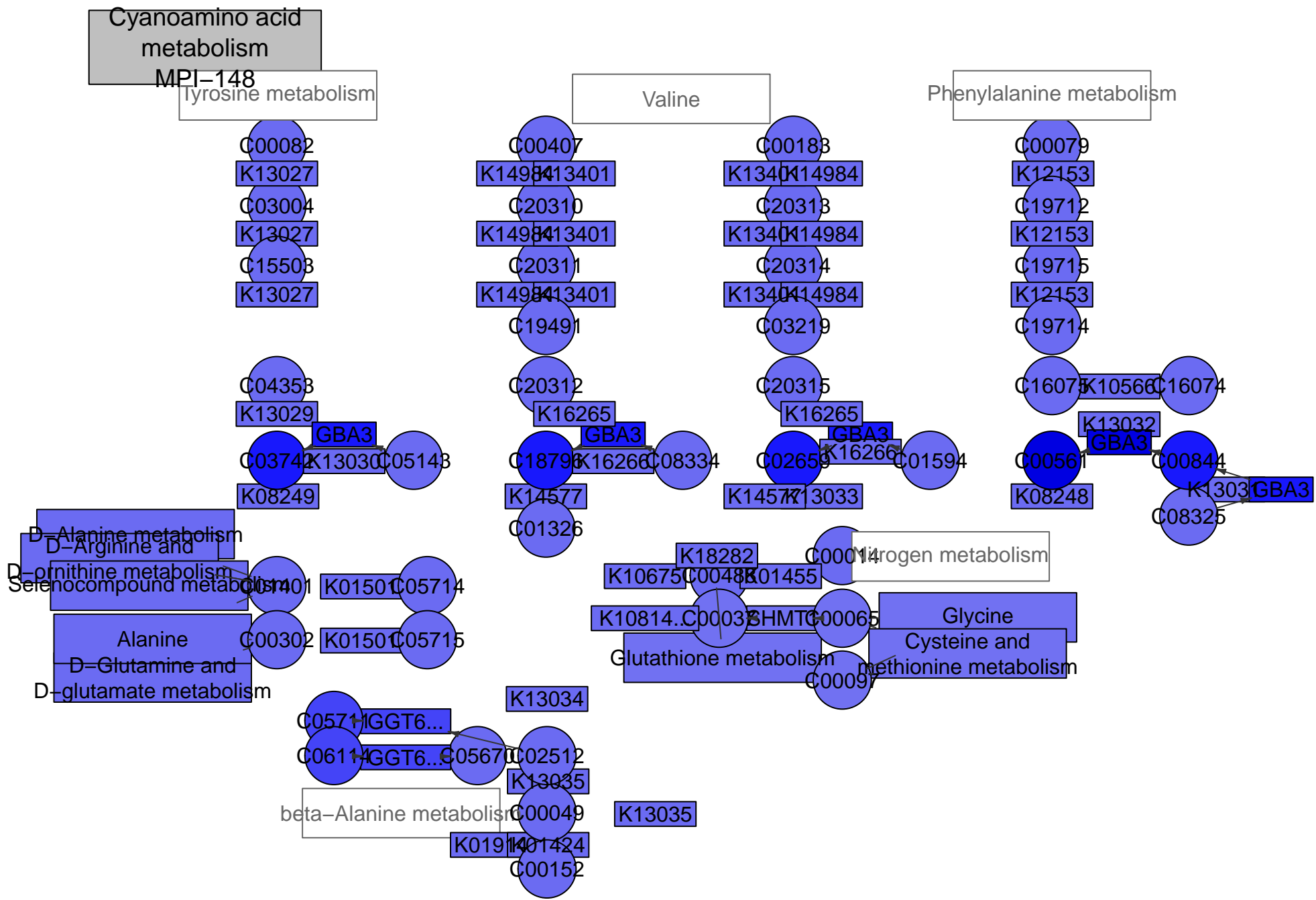












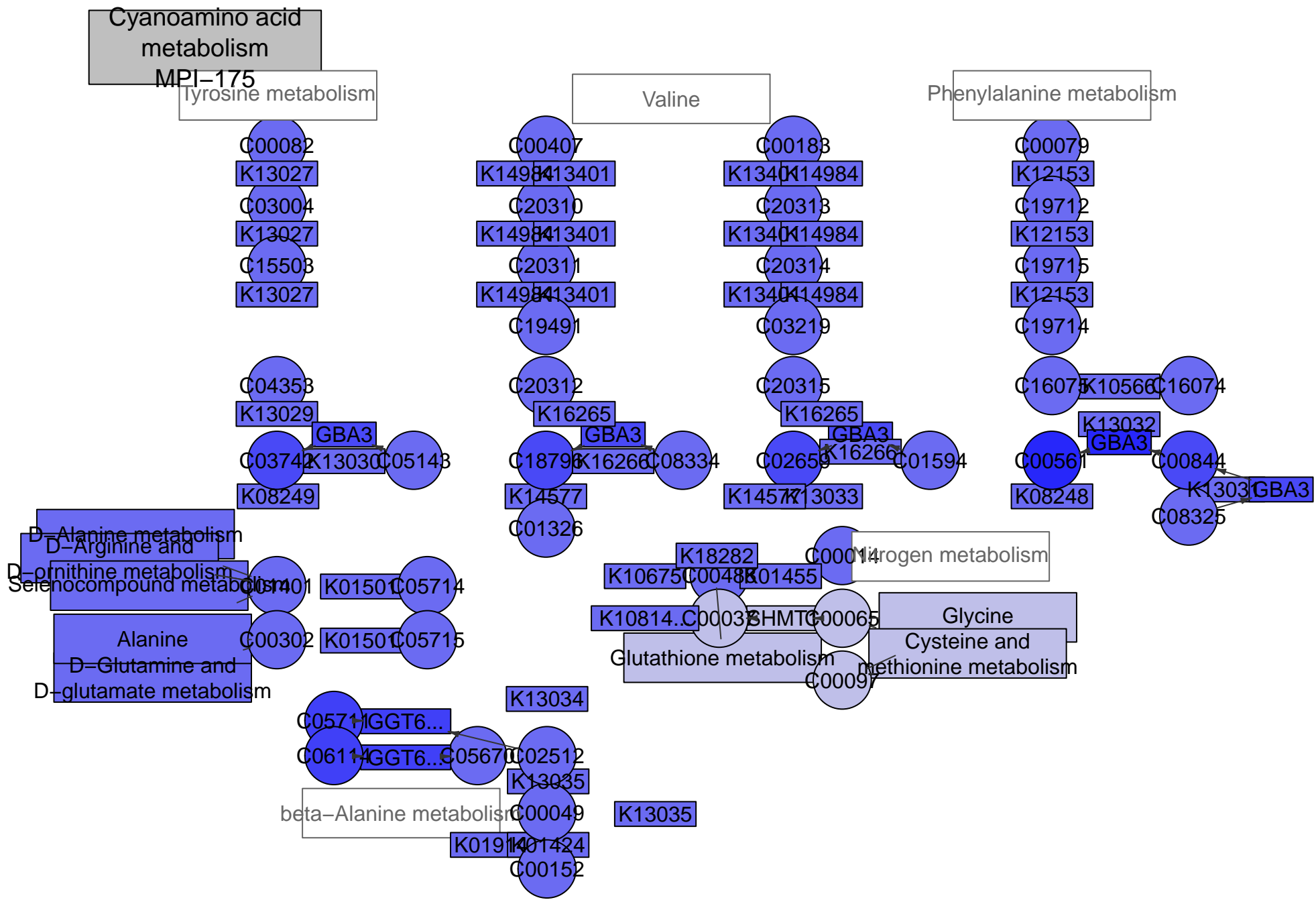






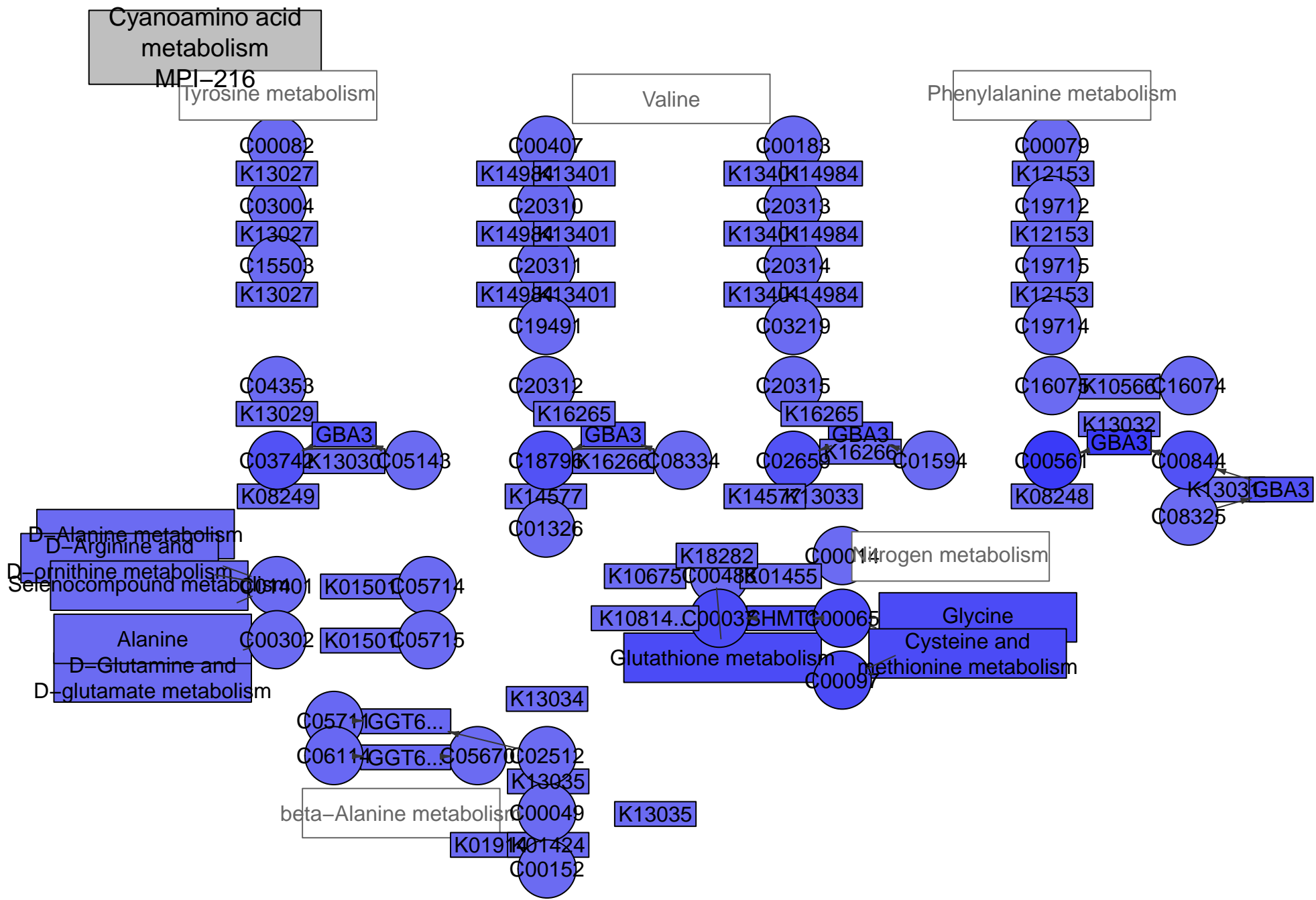




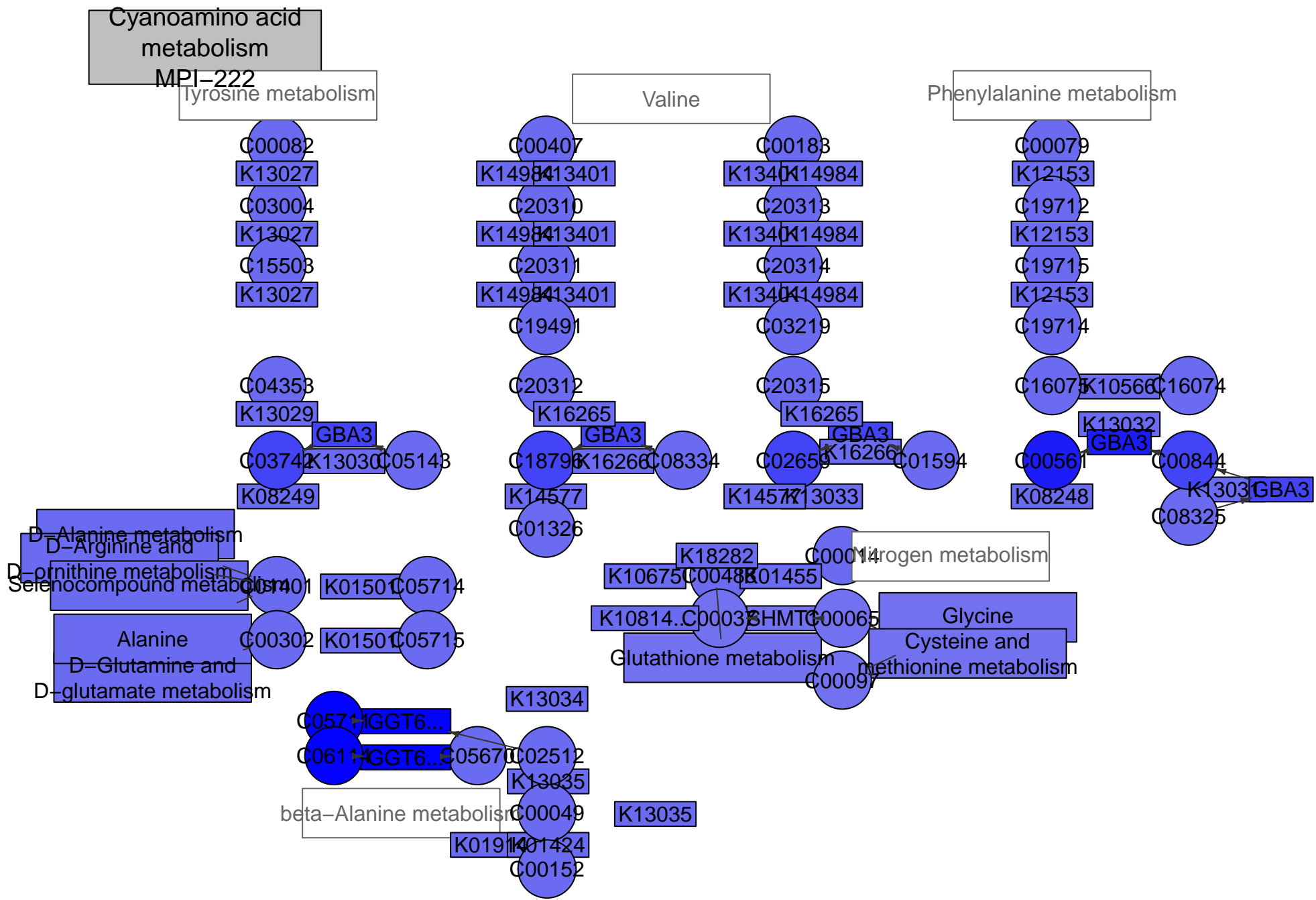


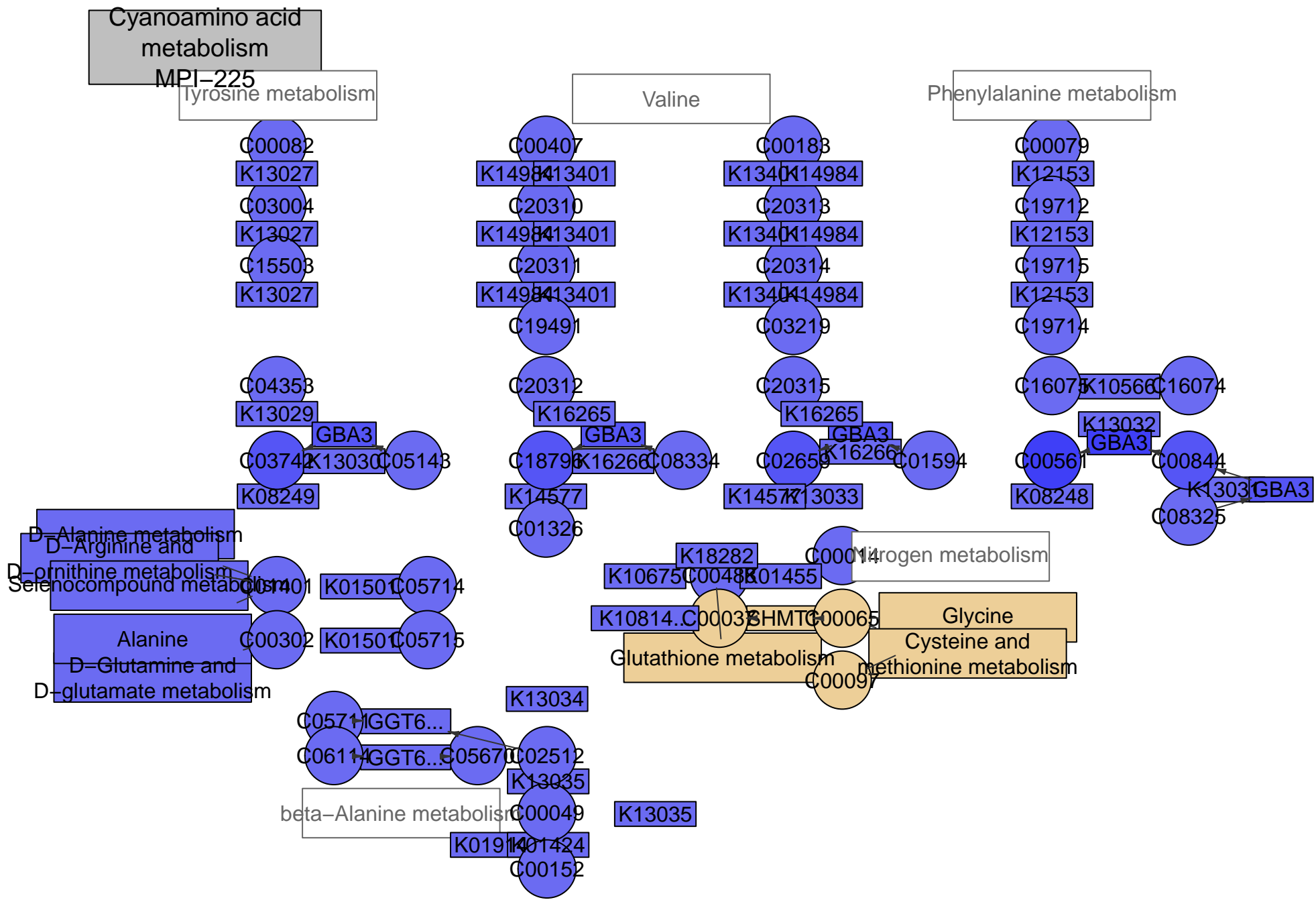










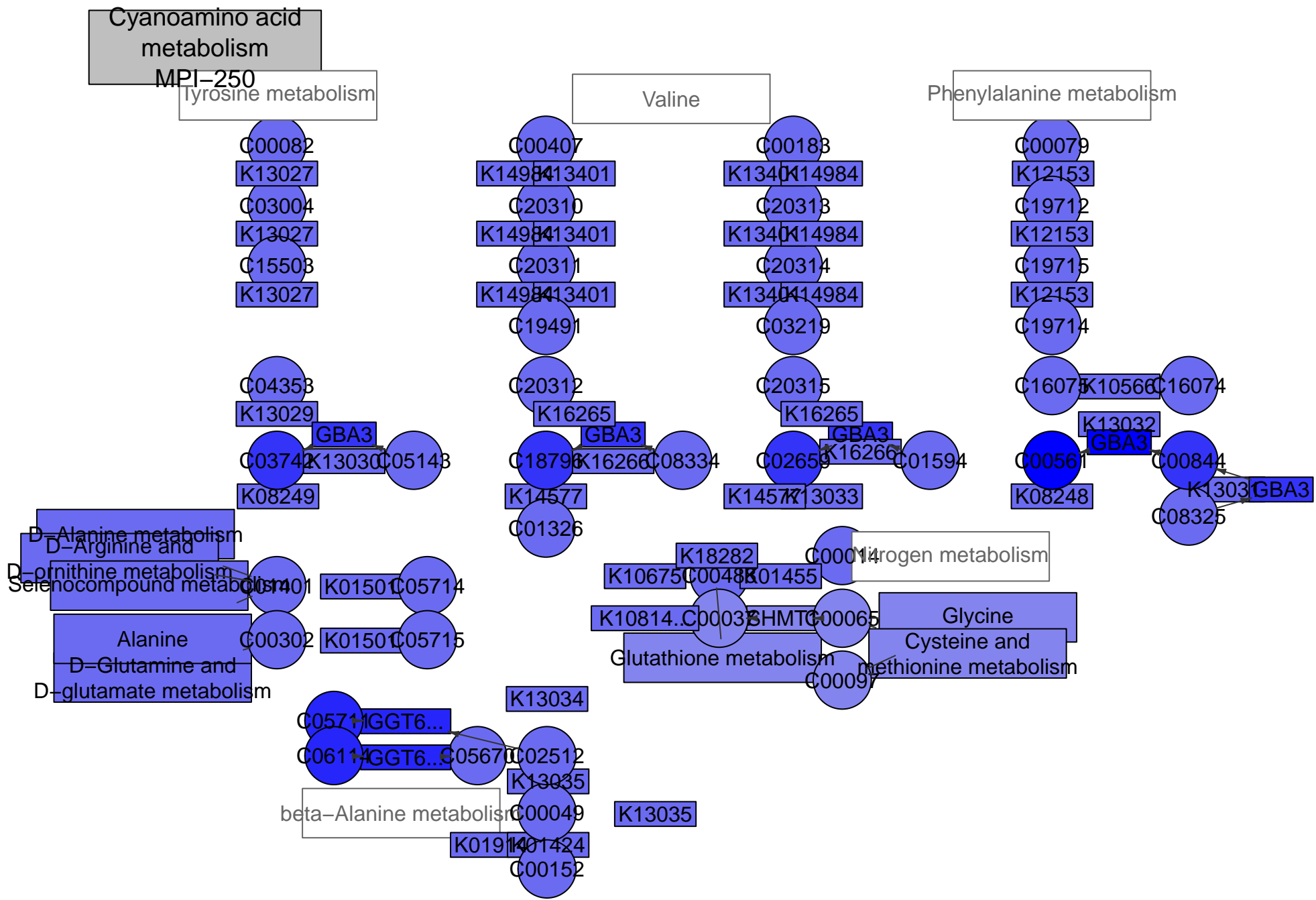








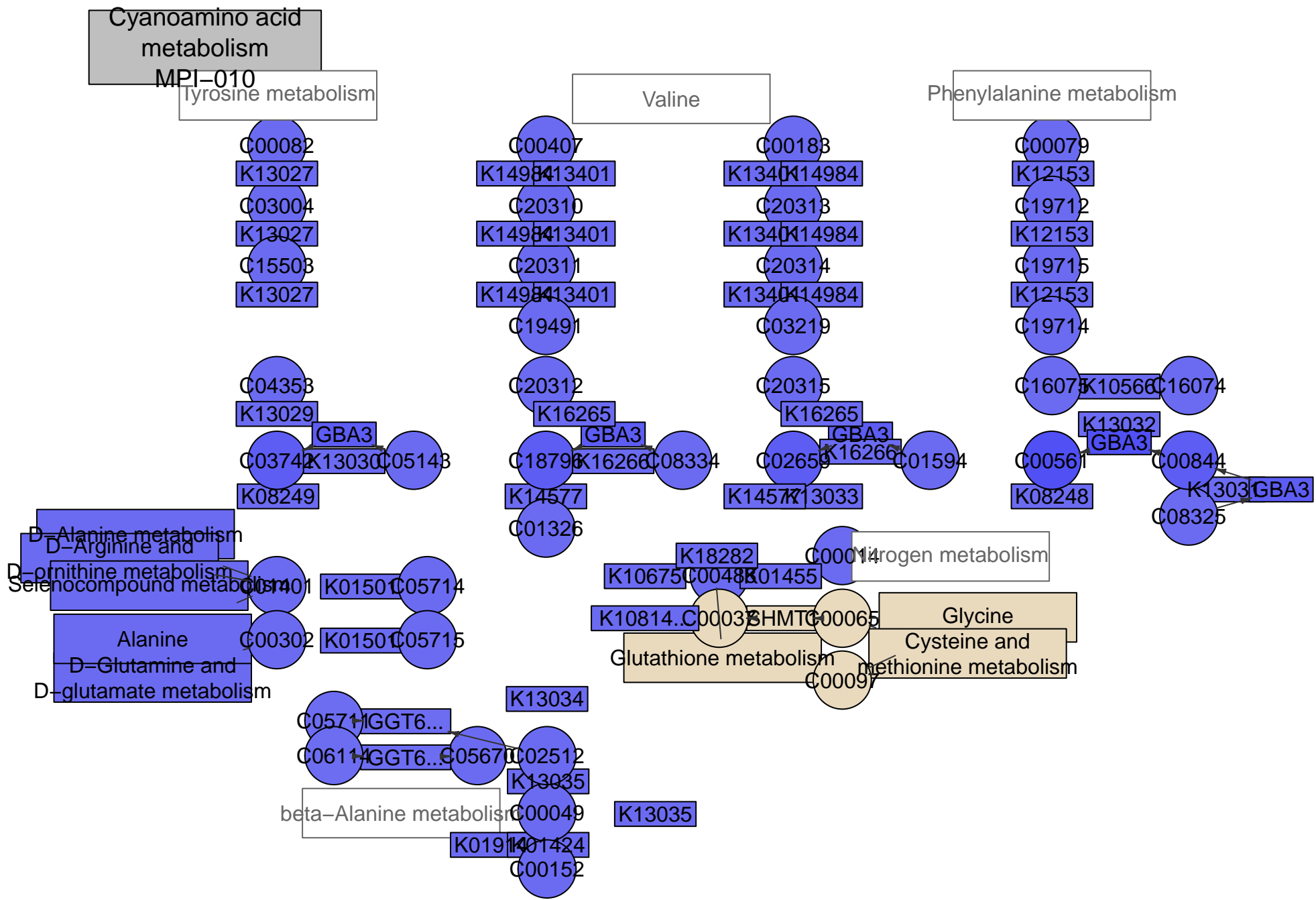










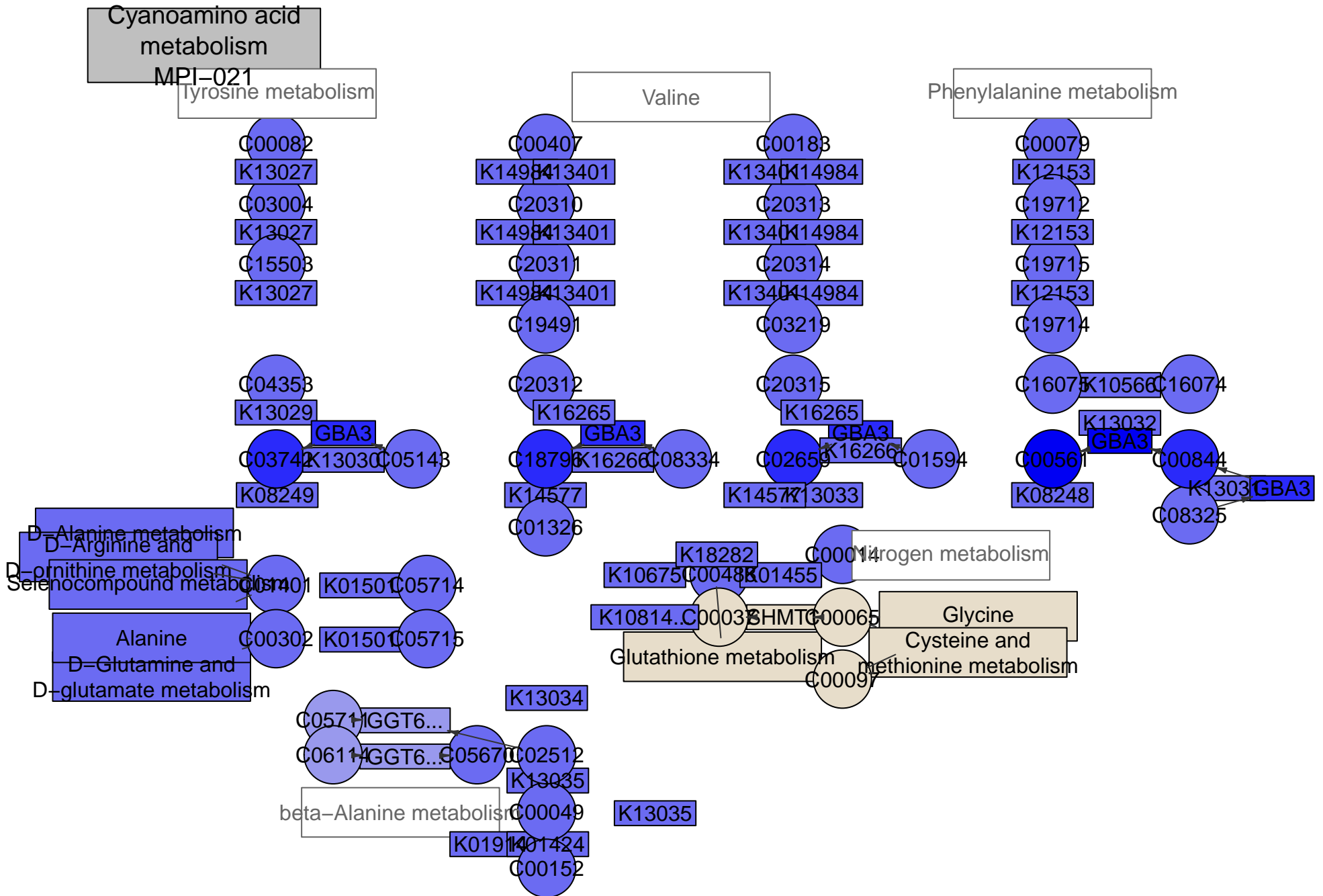


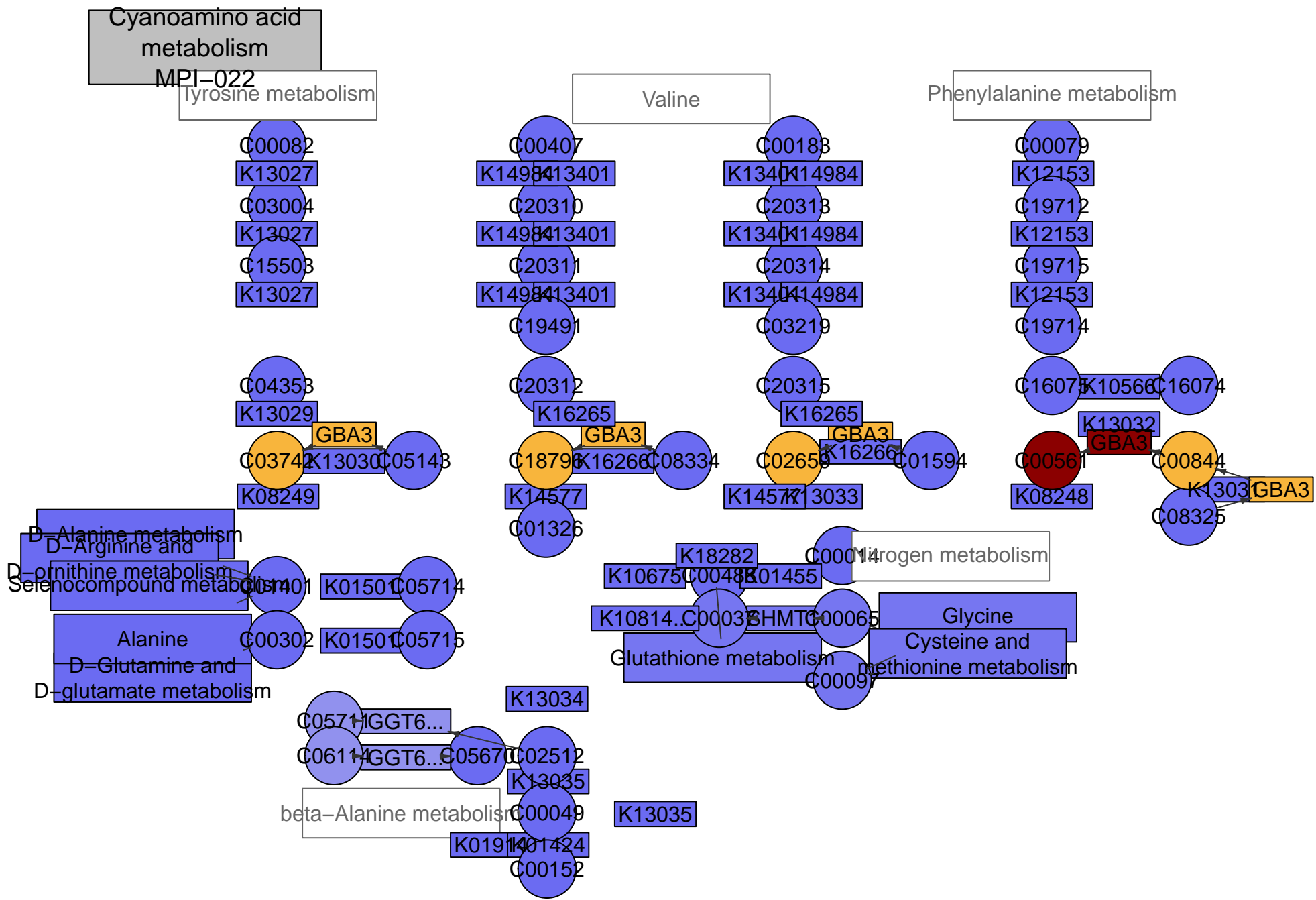




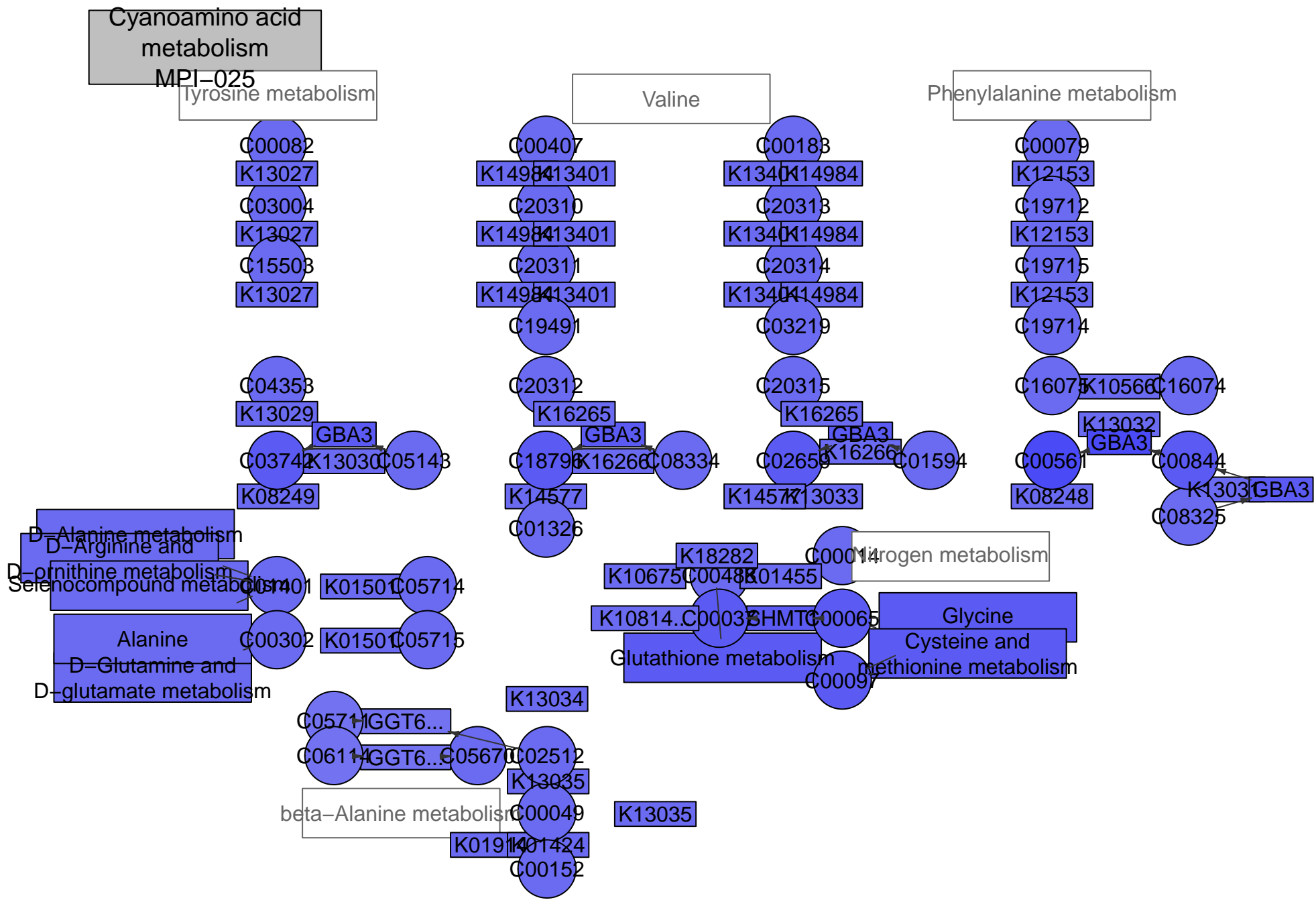


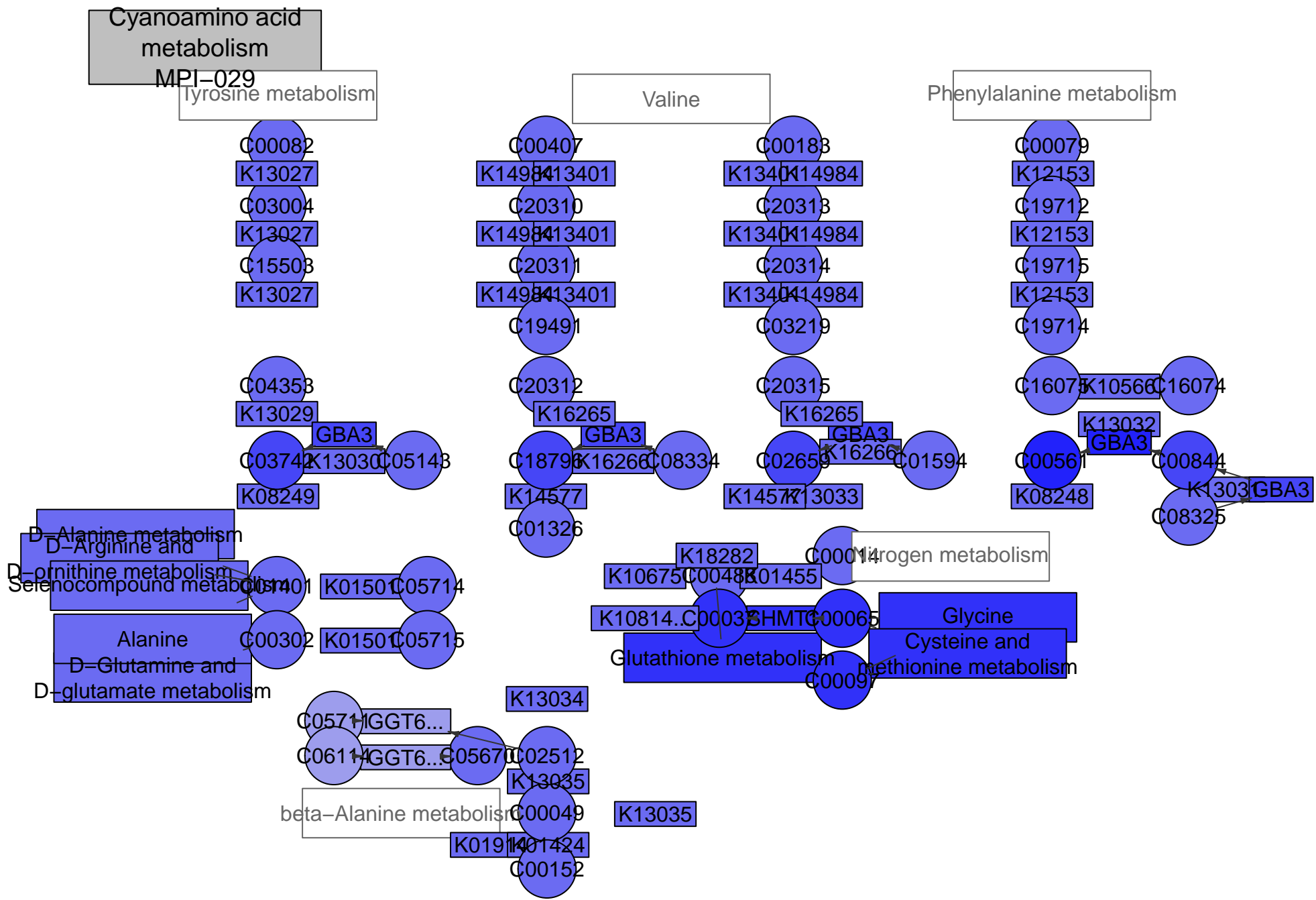


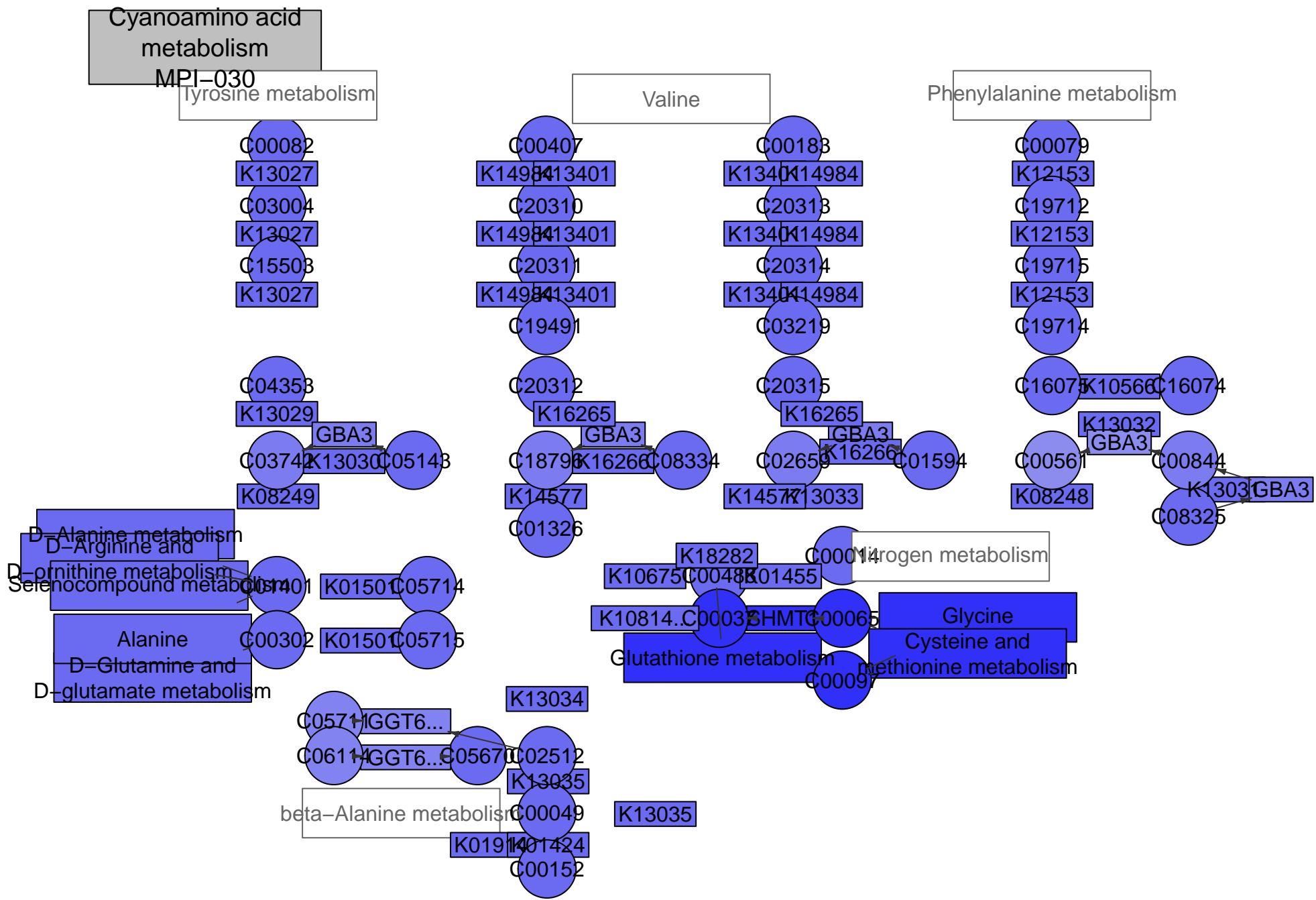




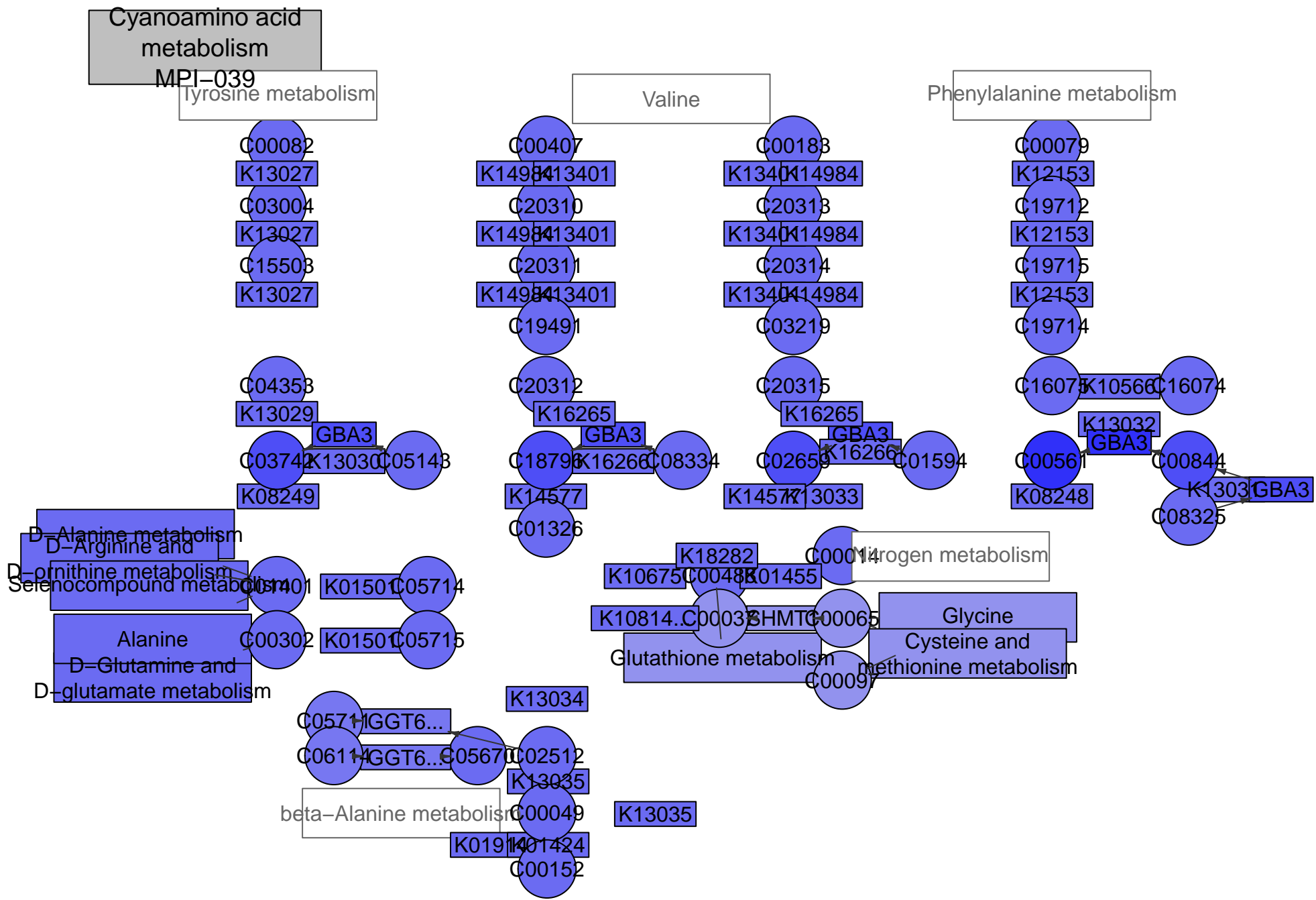




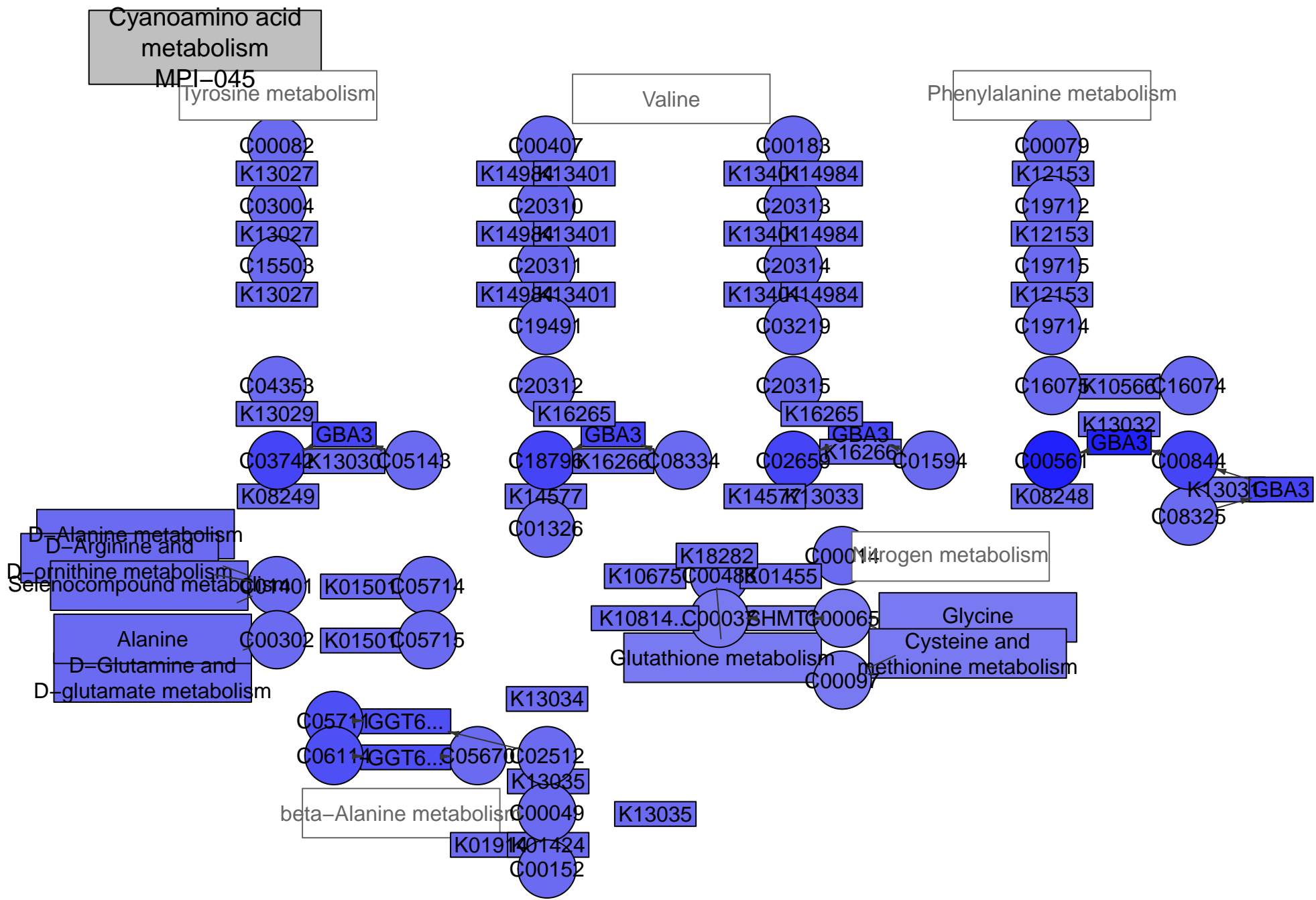


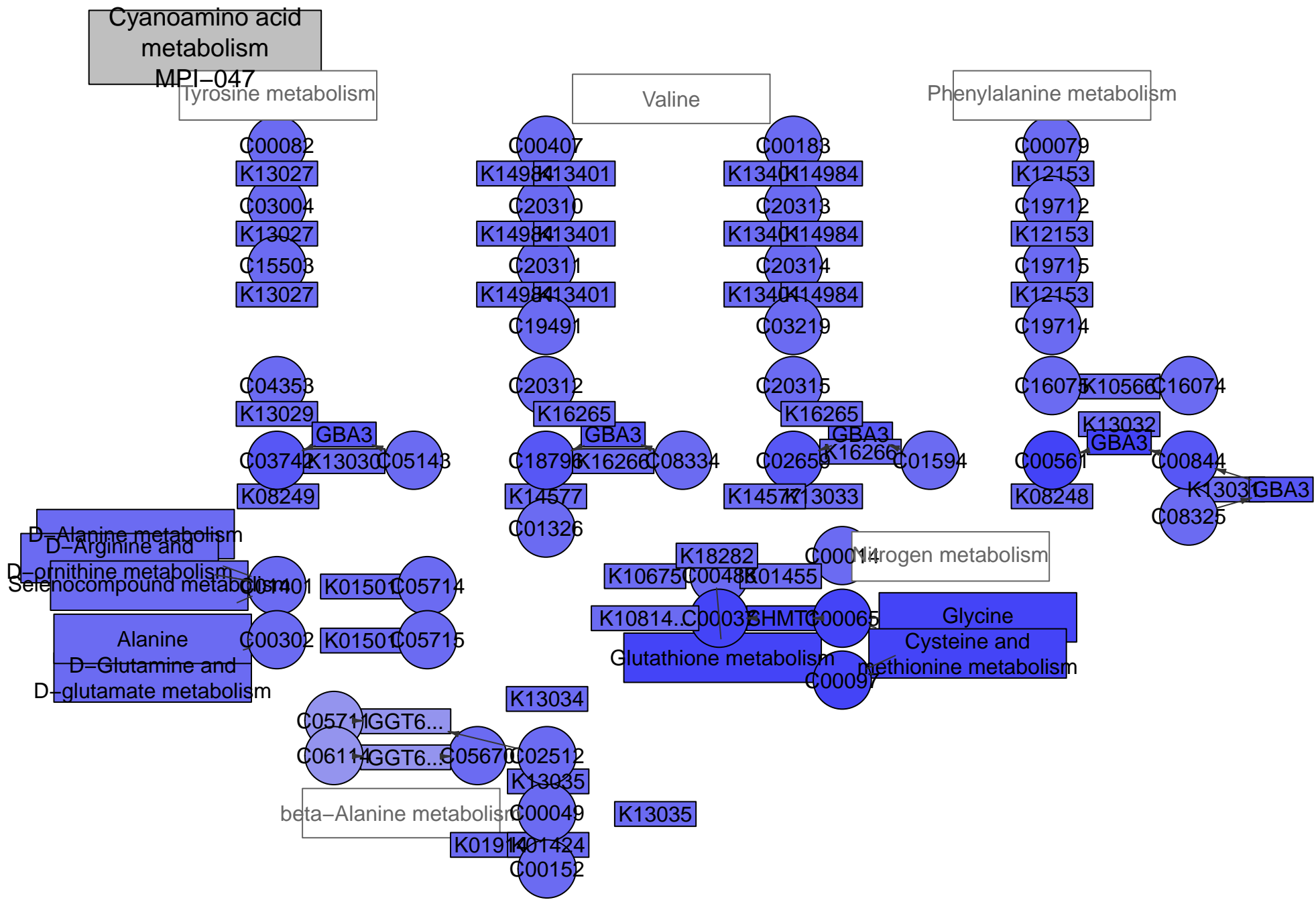




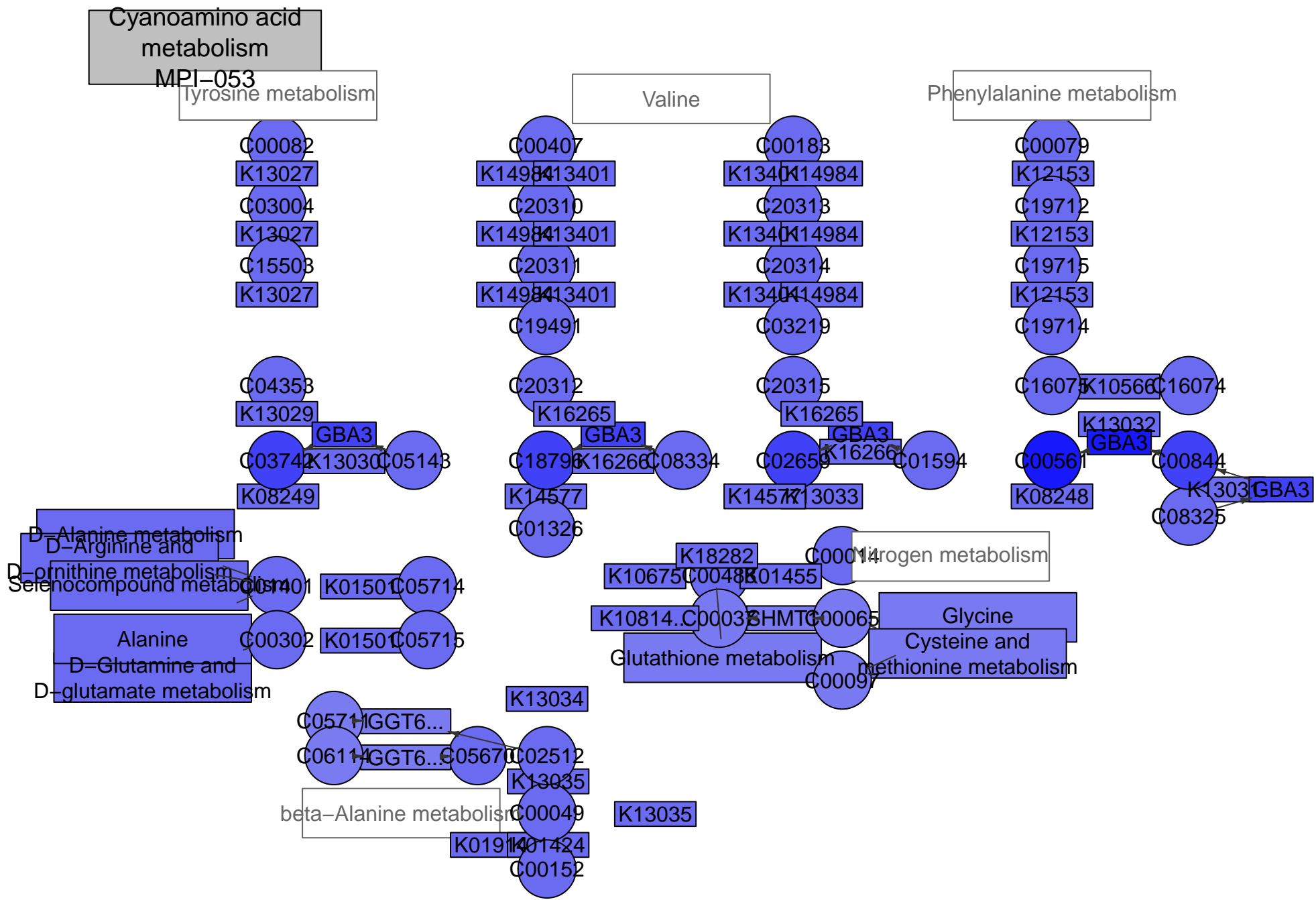


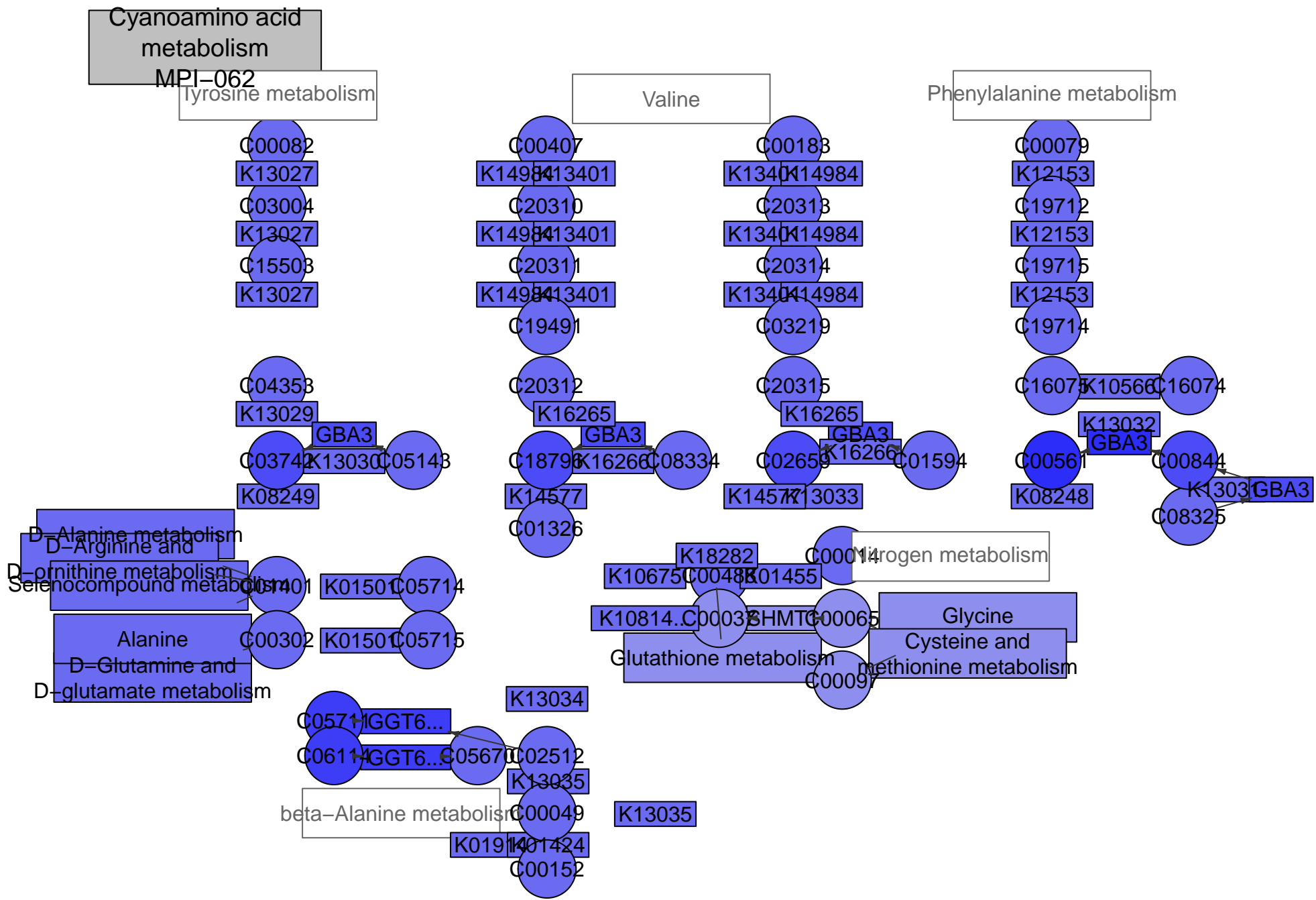








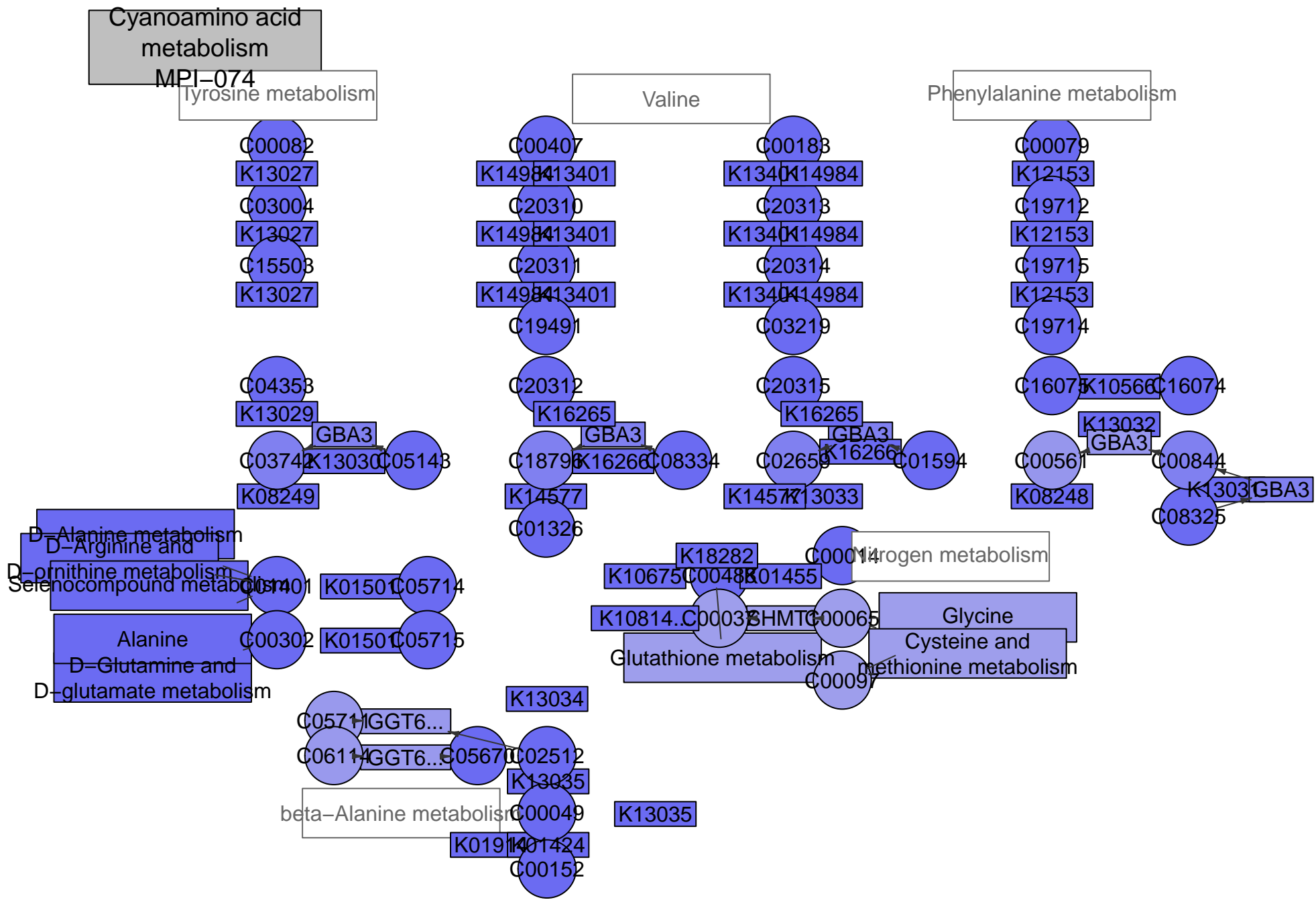




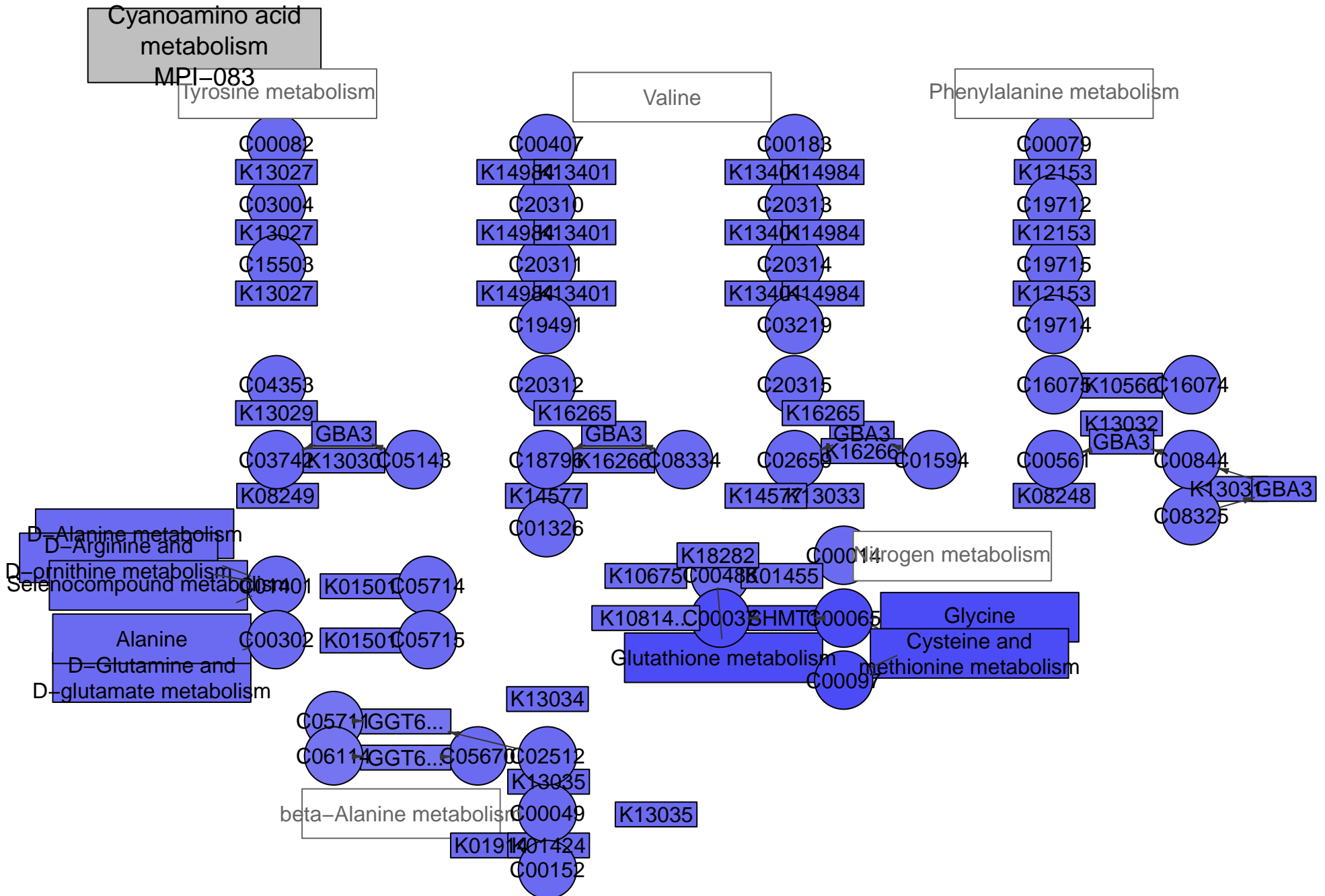




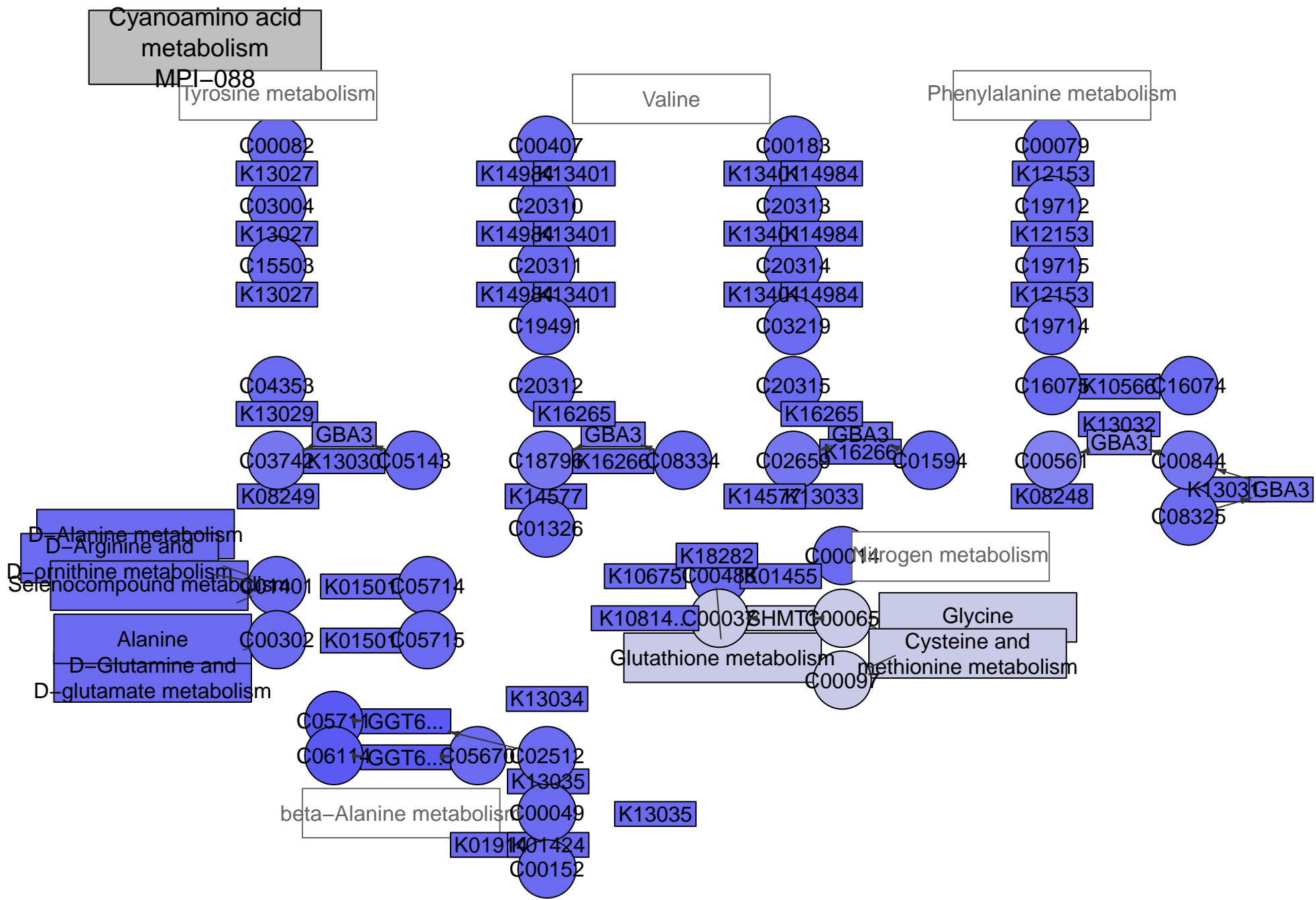




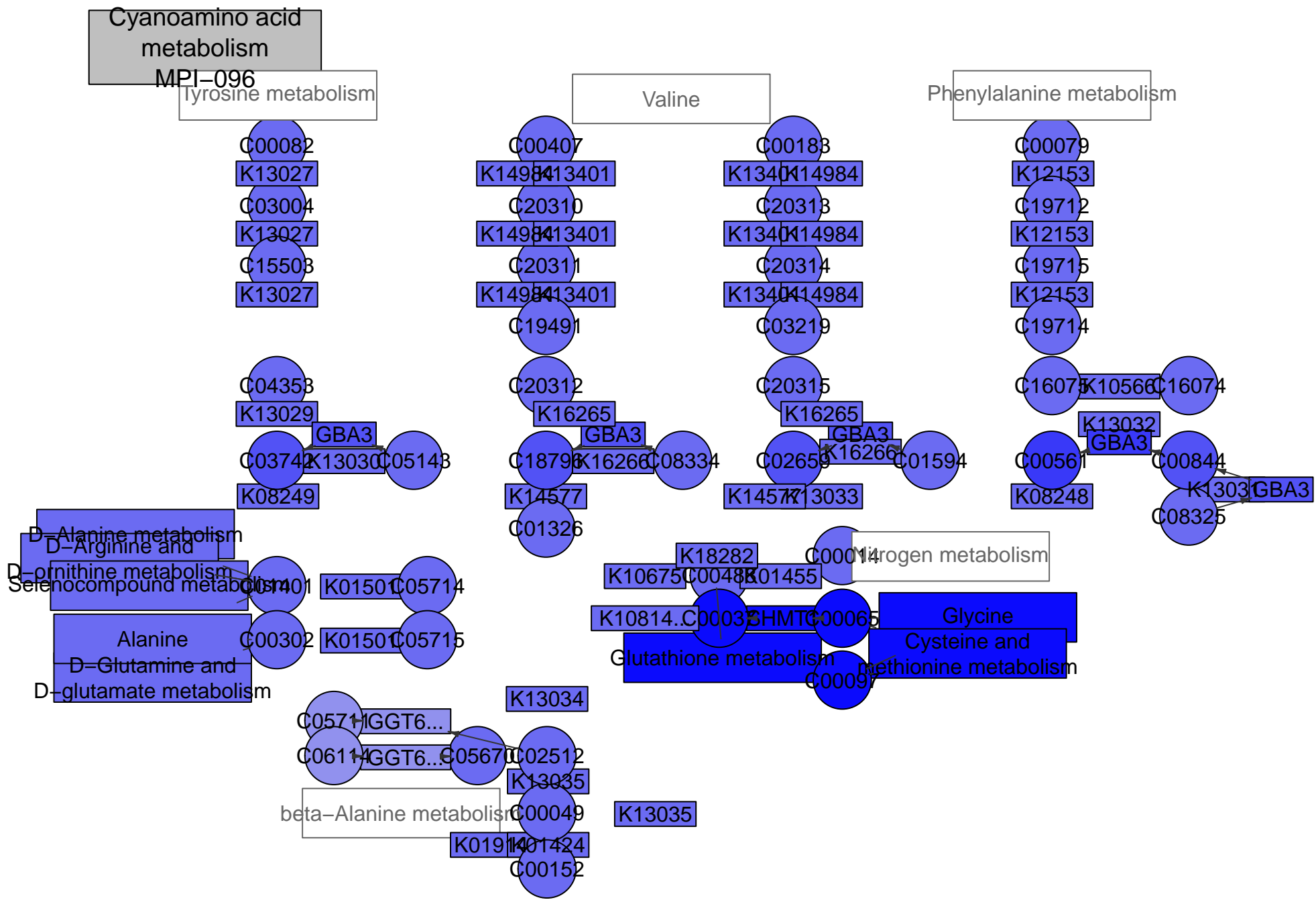


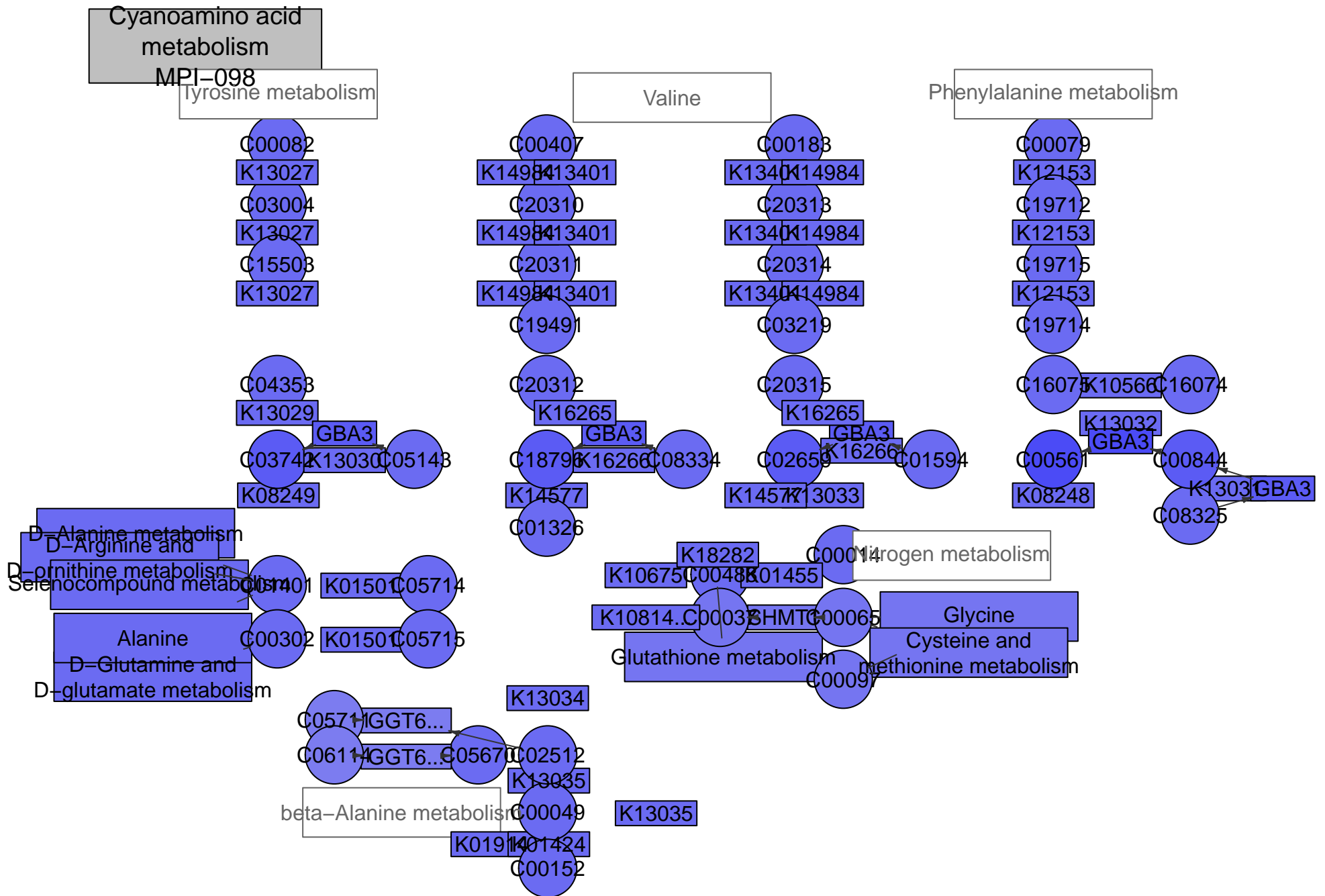




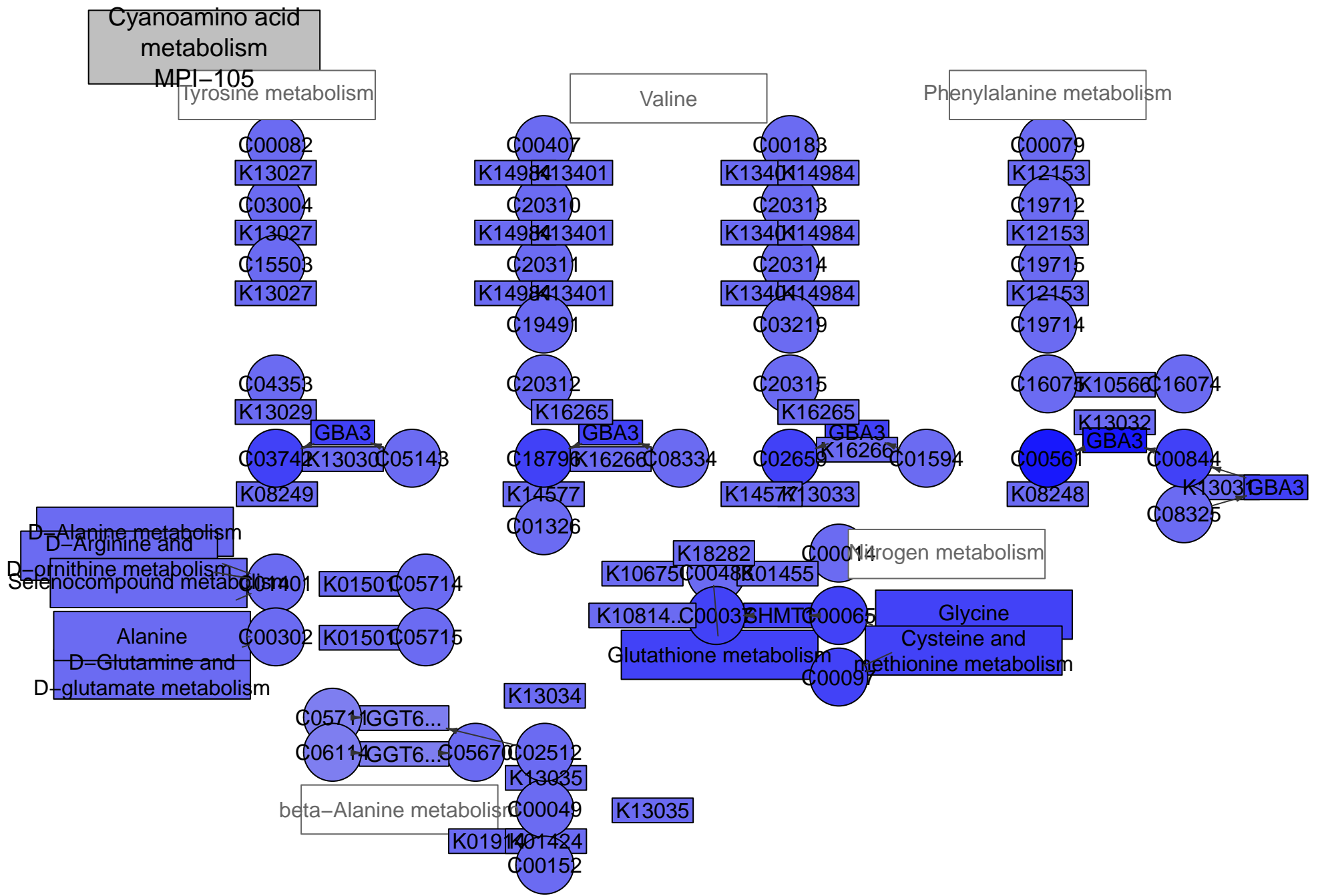


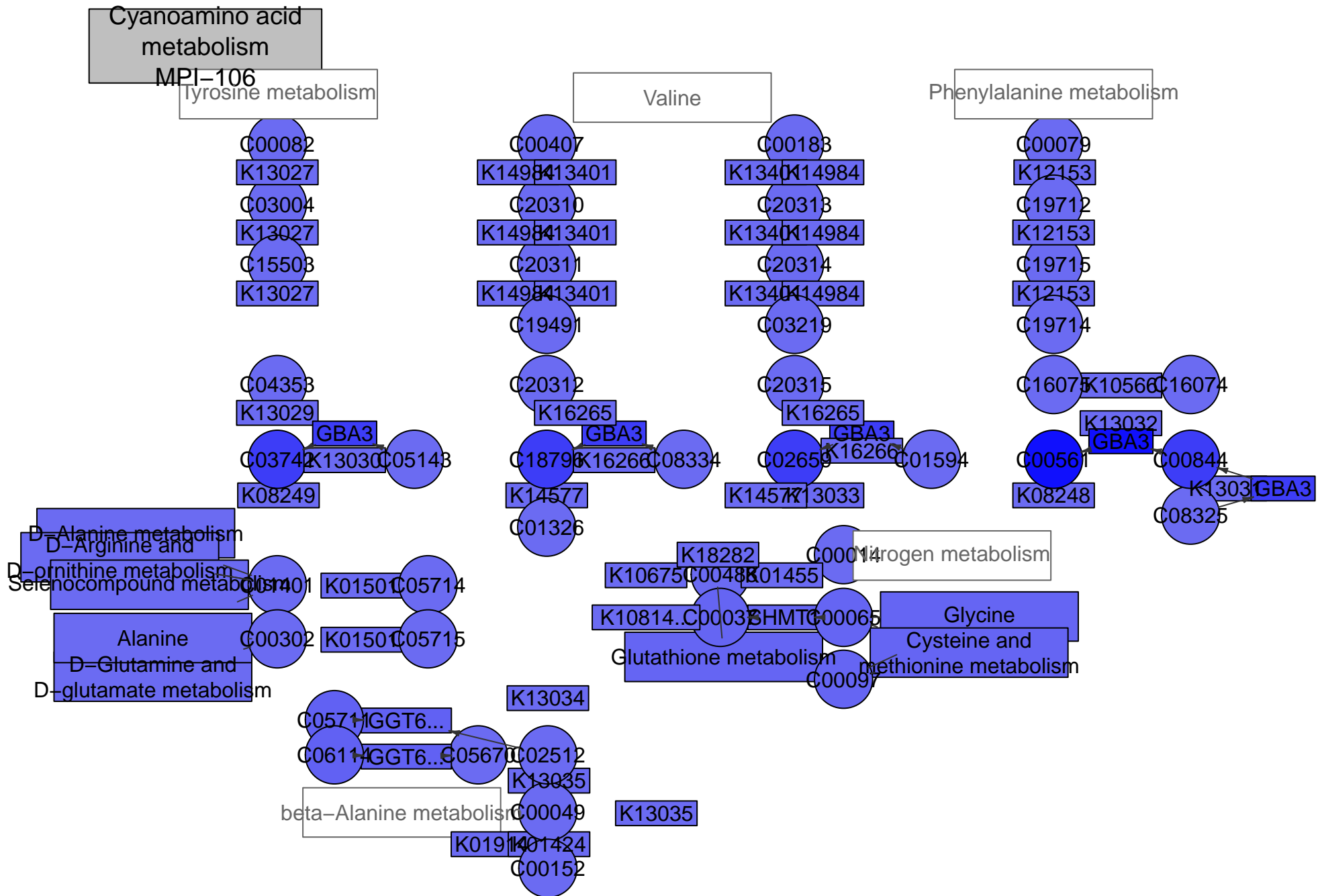


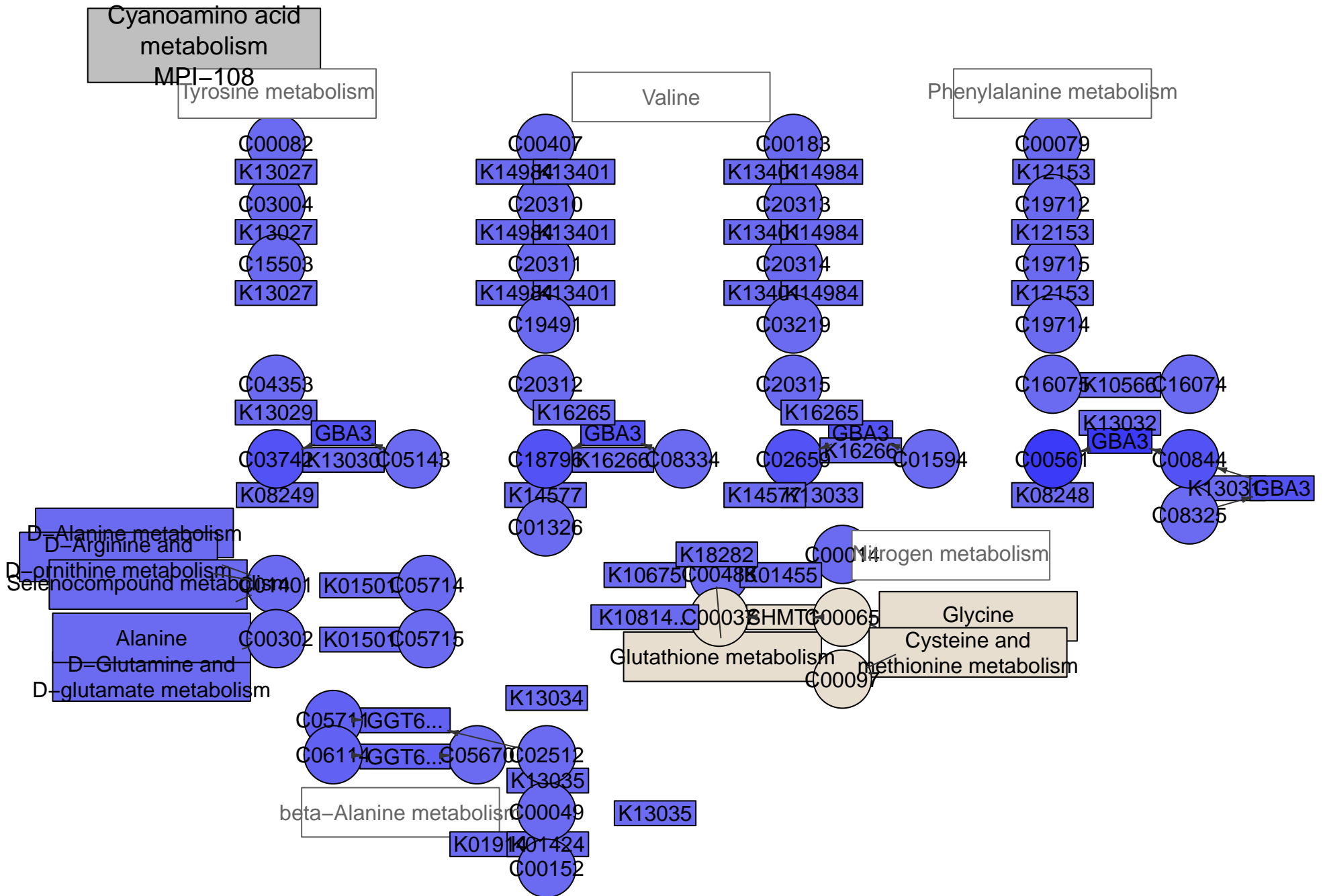




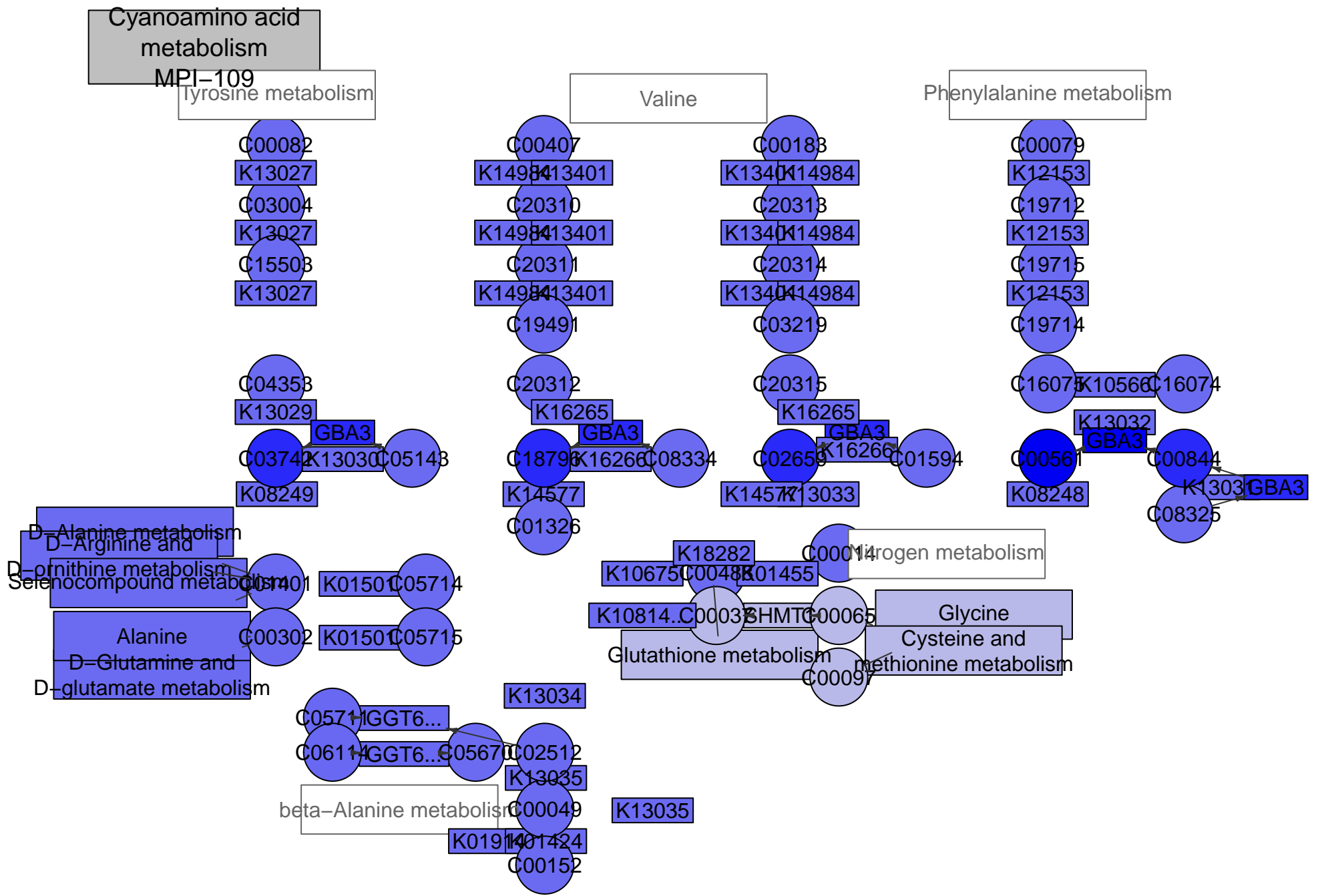


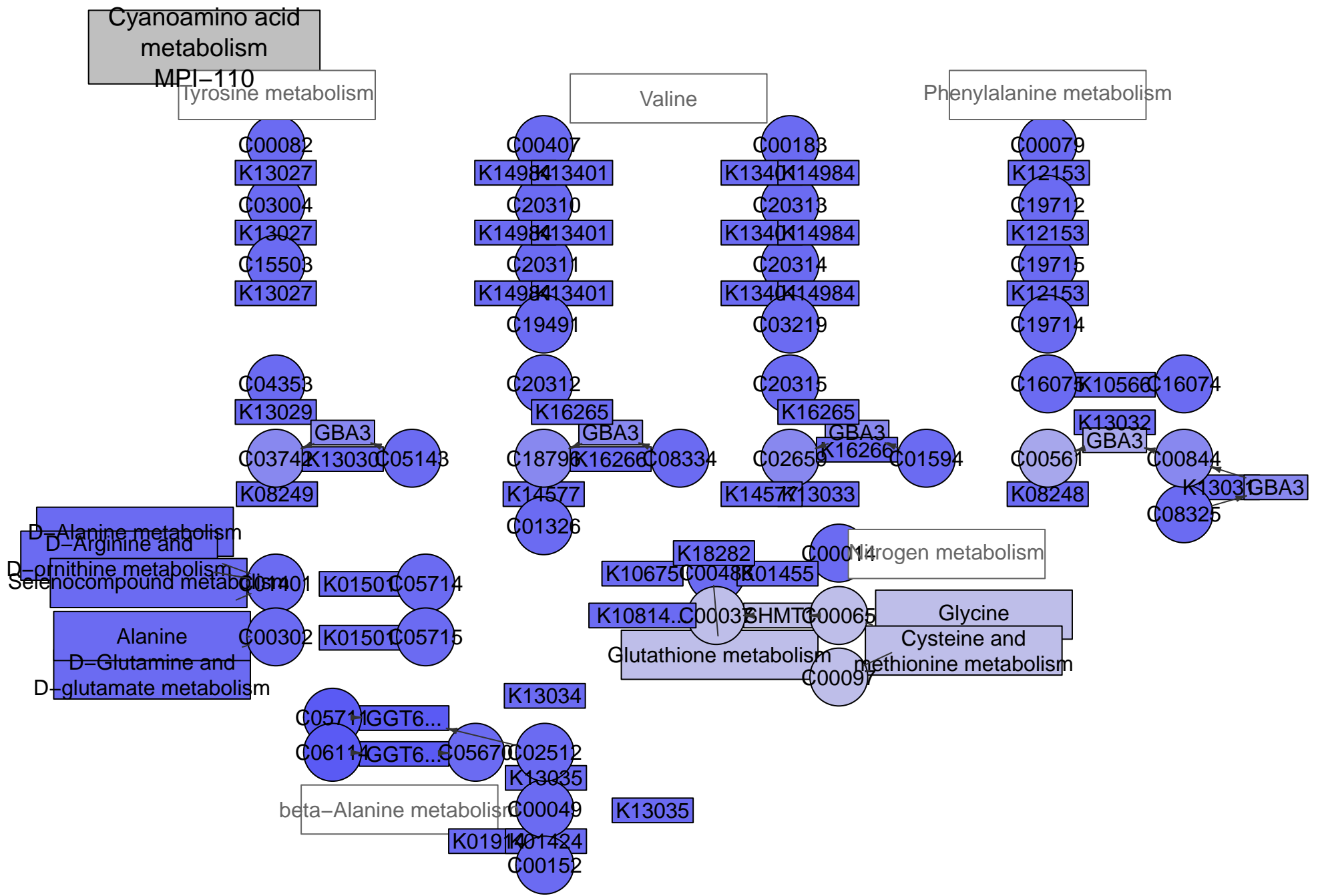


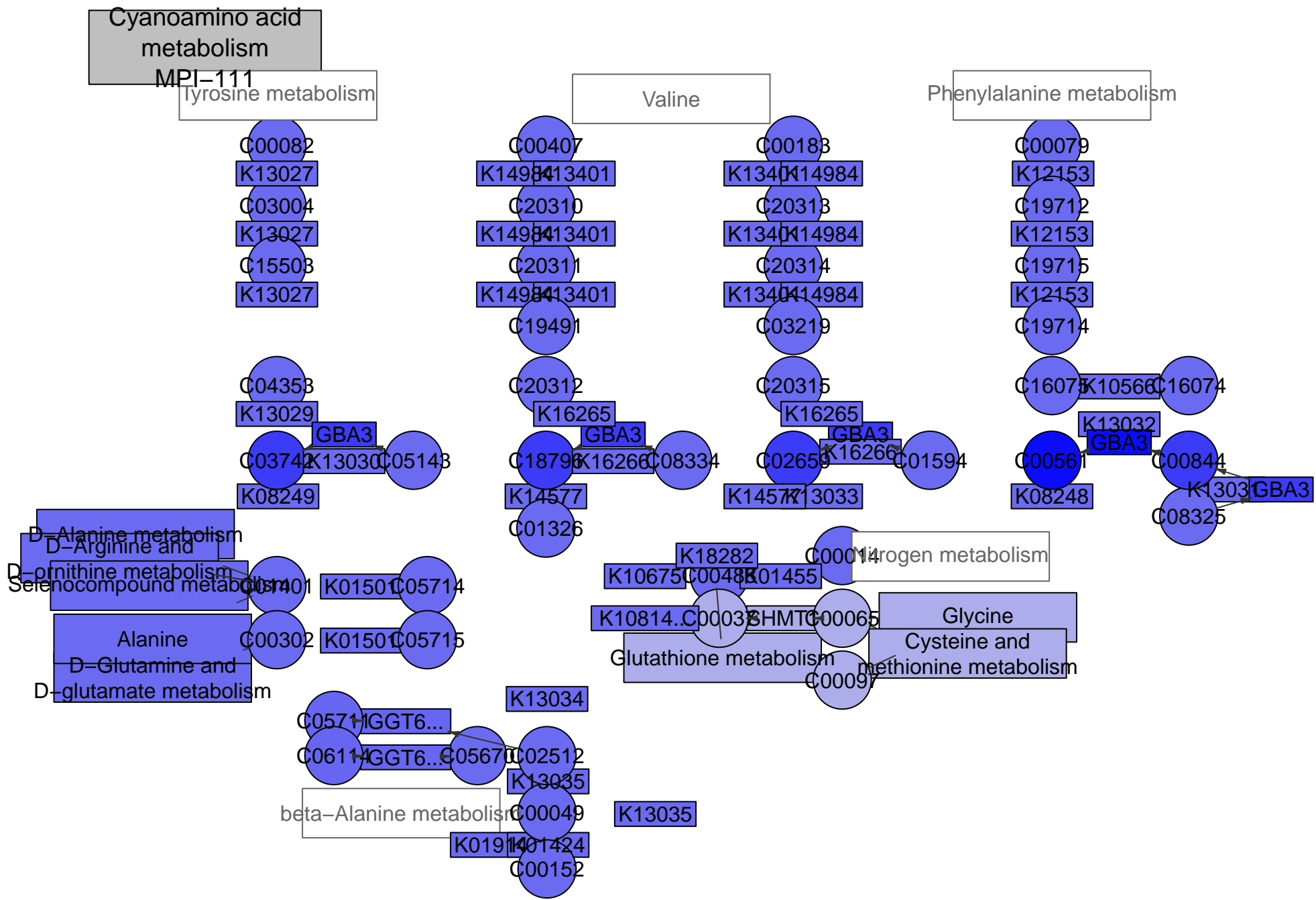


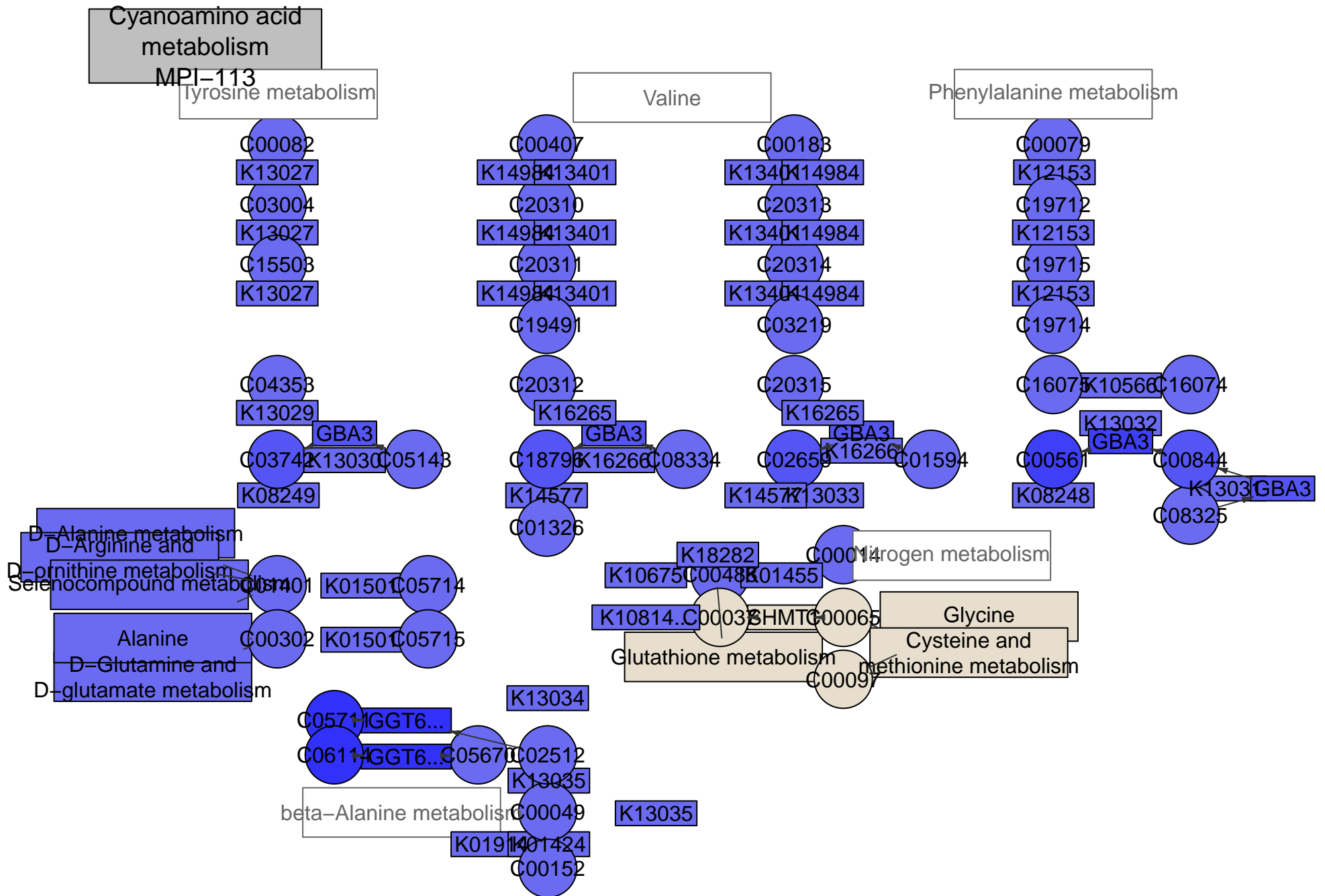


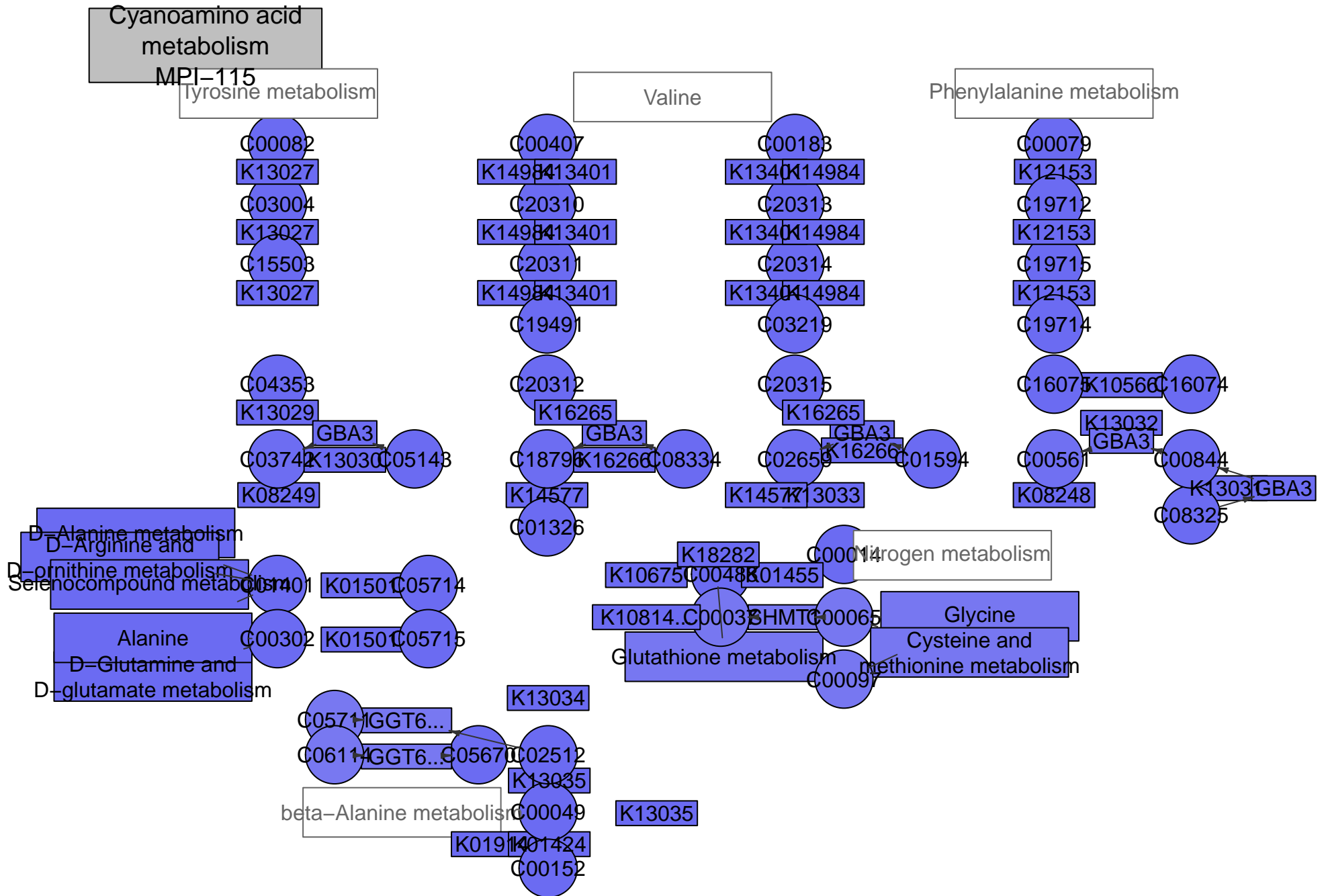


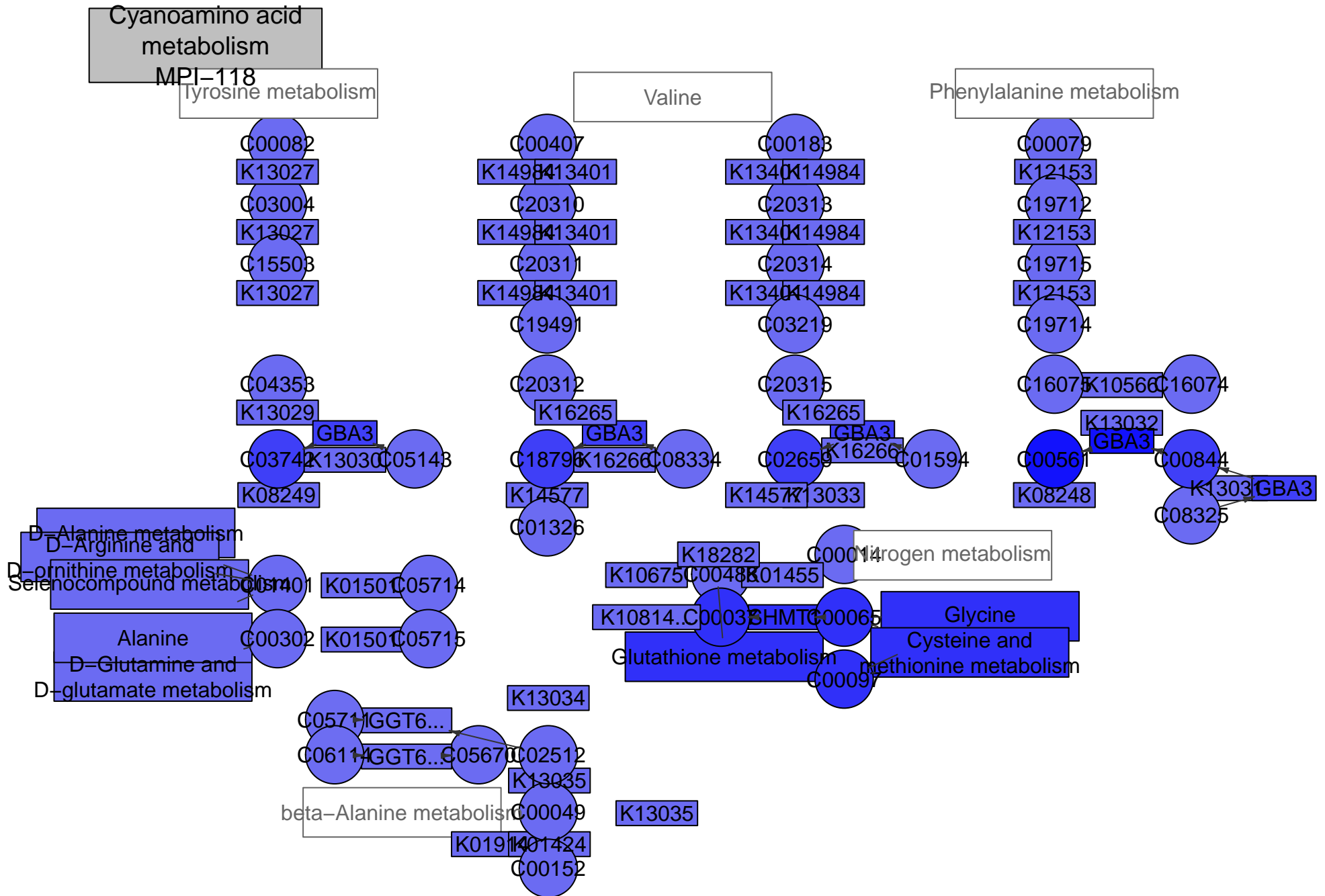


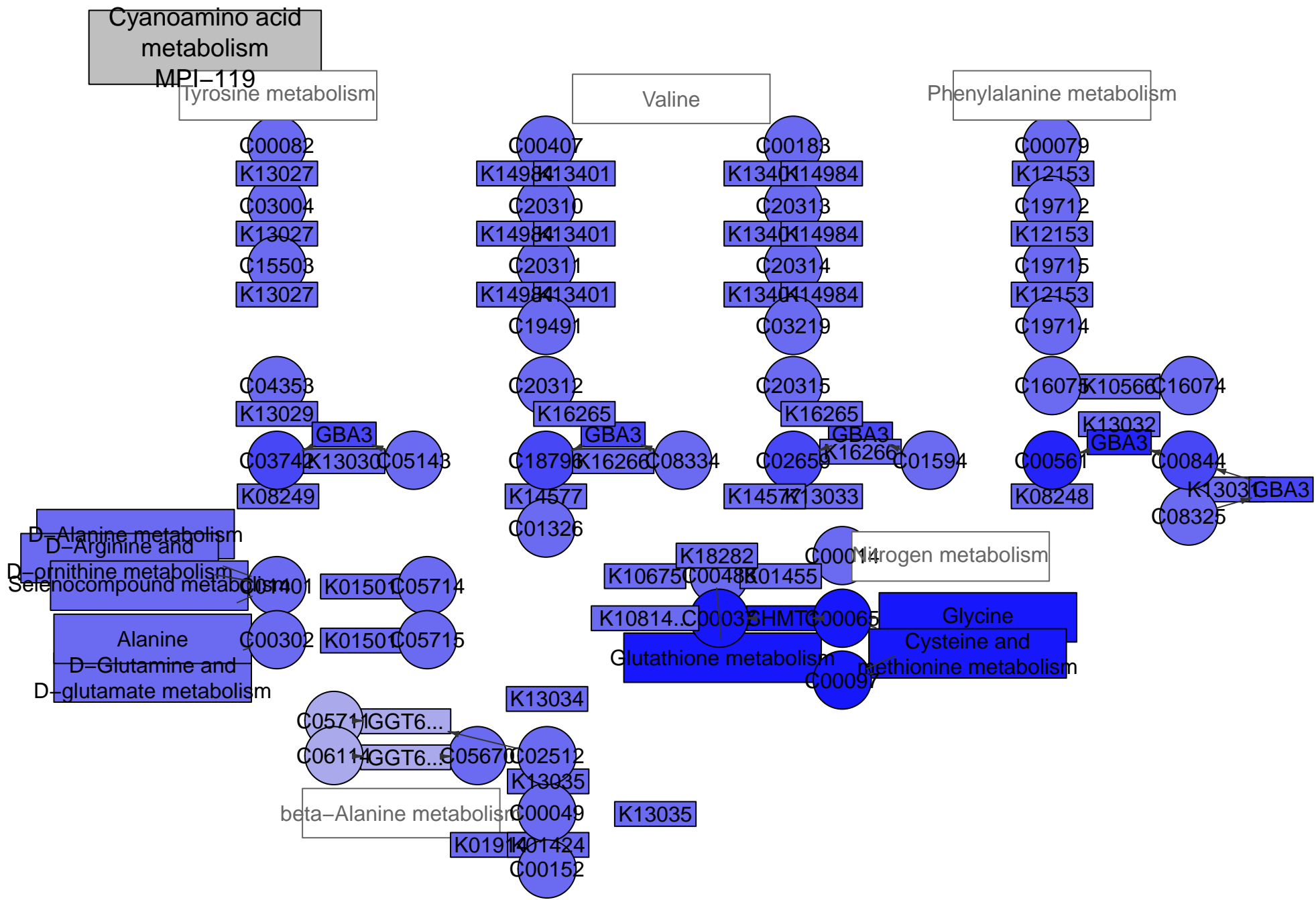


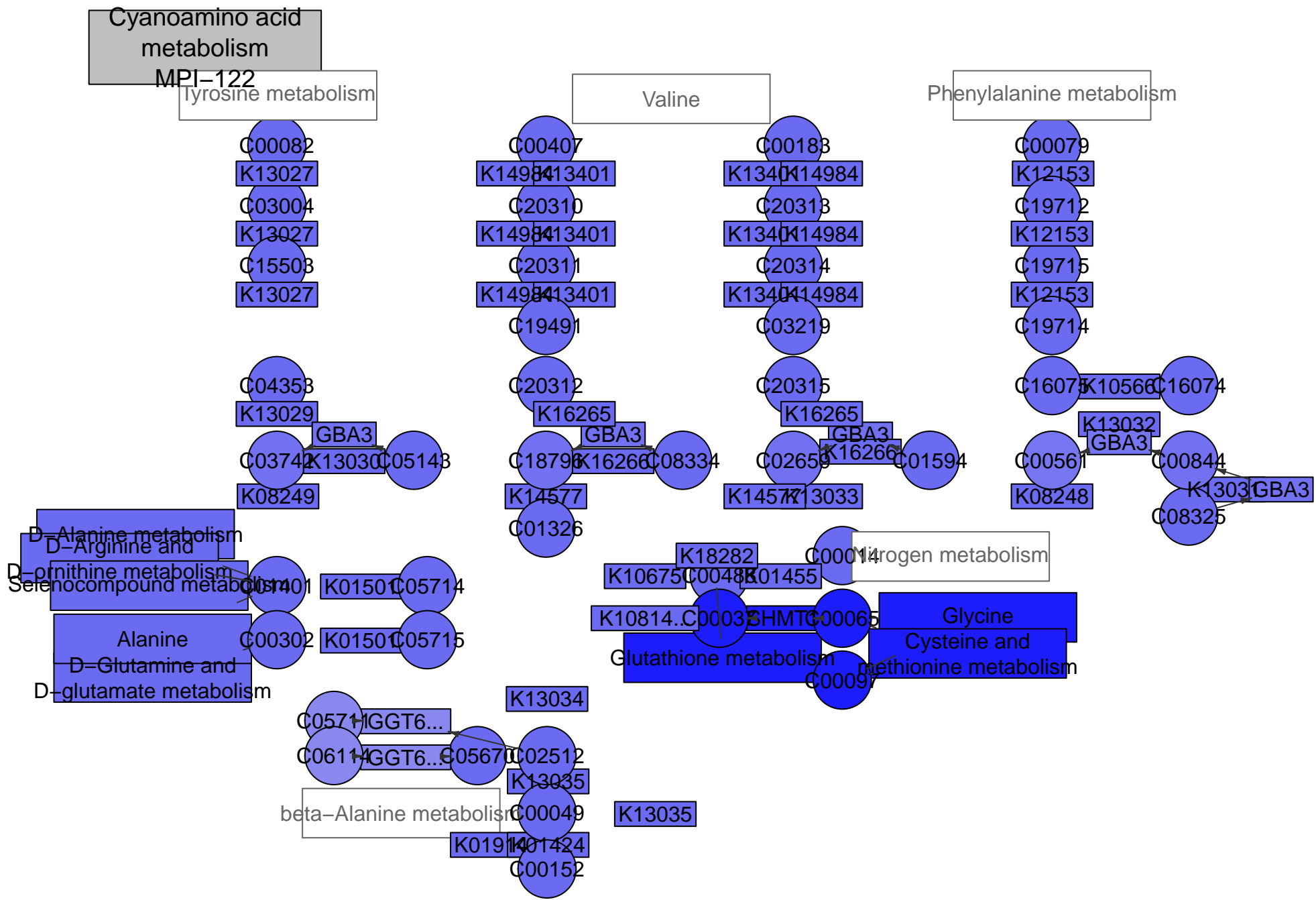














Cyanoamino acid metabolism

MPI-127

Tyrosine metabolism

Valine

Phenylalanine metabolism

C00082

K13027

C03004

K13027

C15508

K13027

C04358

K13029

GBA3

C03742

K13030

C05143

K08249

C05140

K0150

C05714

C00302

K0150

C05715

C05714GGT6...

C06114GGT6...

C05670

C02512

beta-Alanine metabolism

C00049

K01914

C01424

C00152

C00407

K14984

C13401

C20310

K14984

C13401

C20311

K14984

C13401

C19491

C20312

K16265

GBA3

C18796

K16266

C08334

K14577

C01326

K18282

K10675

C00488

K01455

K10814

C00033

SHMTG

Glutathione metabolism

C00097

C00188

K13401

K14984

C20313

K13401

K14984

C20314

K13401

K14984

C03219

C20315

K16265

GBA3

C02659

K16266

C01594

K14577

K13033

C00014

C00065

C00065

C00097

Phenylalanine metabolism

C00079

K12153

C19712

K12153

C19715

K12153

C19714

C16075

K10566

C16074

C00561

K13032

GBA3

K08248

C00844

K13031

GBA3

C08325

Nitrogen metabolism

Glycine

Cysteine and

methionine metabolism

D-Alanine metabolism

D-Arginine and

D-ornithine metabolism

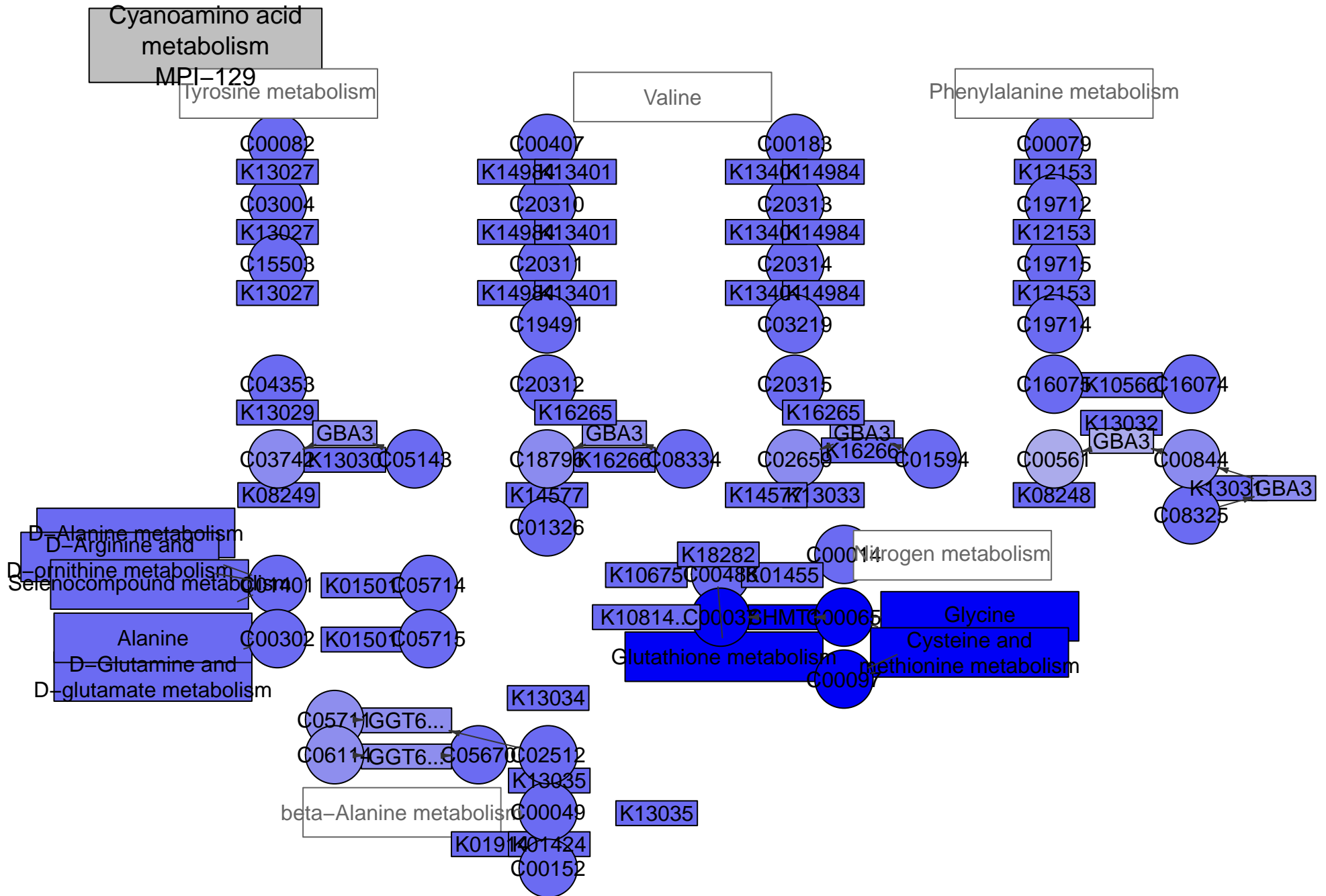
Selenocompound metabolism

Alanine

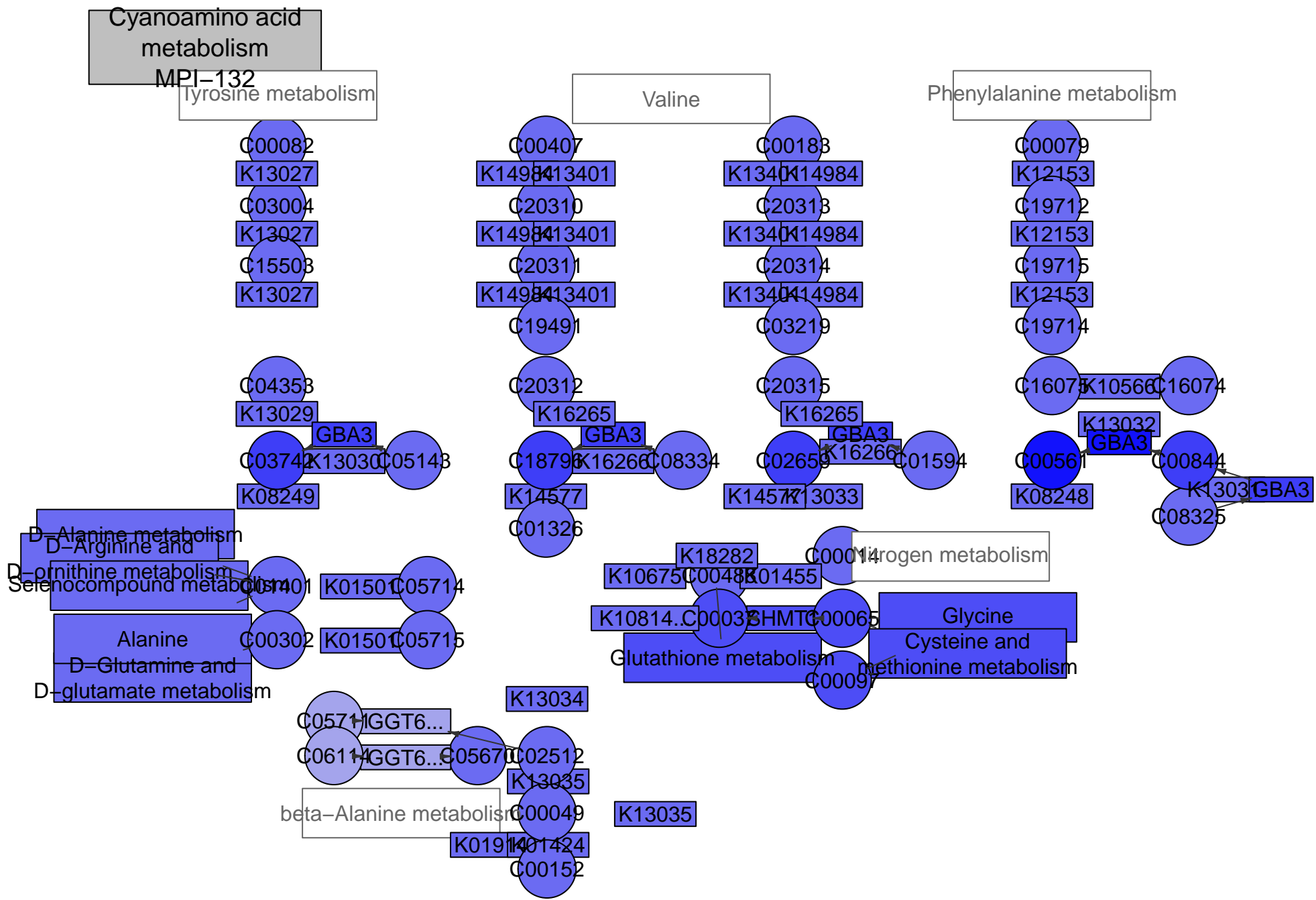
D-Glutamine and

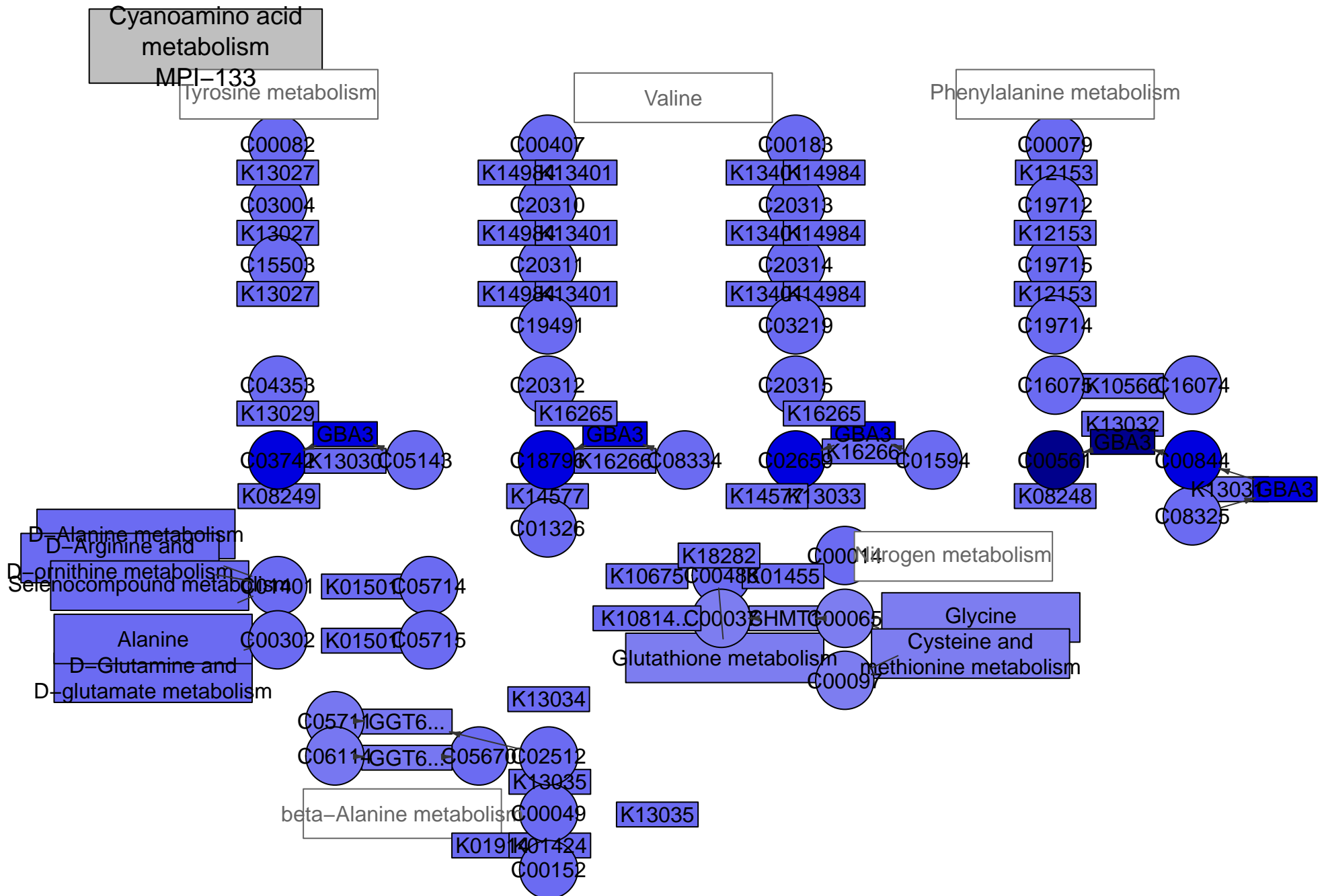
D-glutamate metabolism

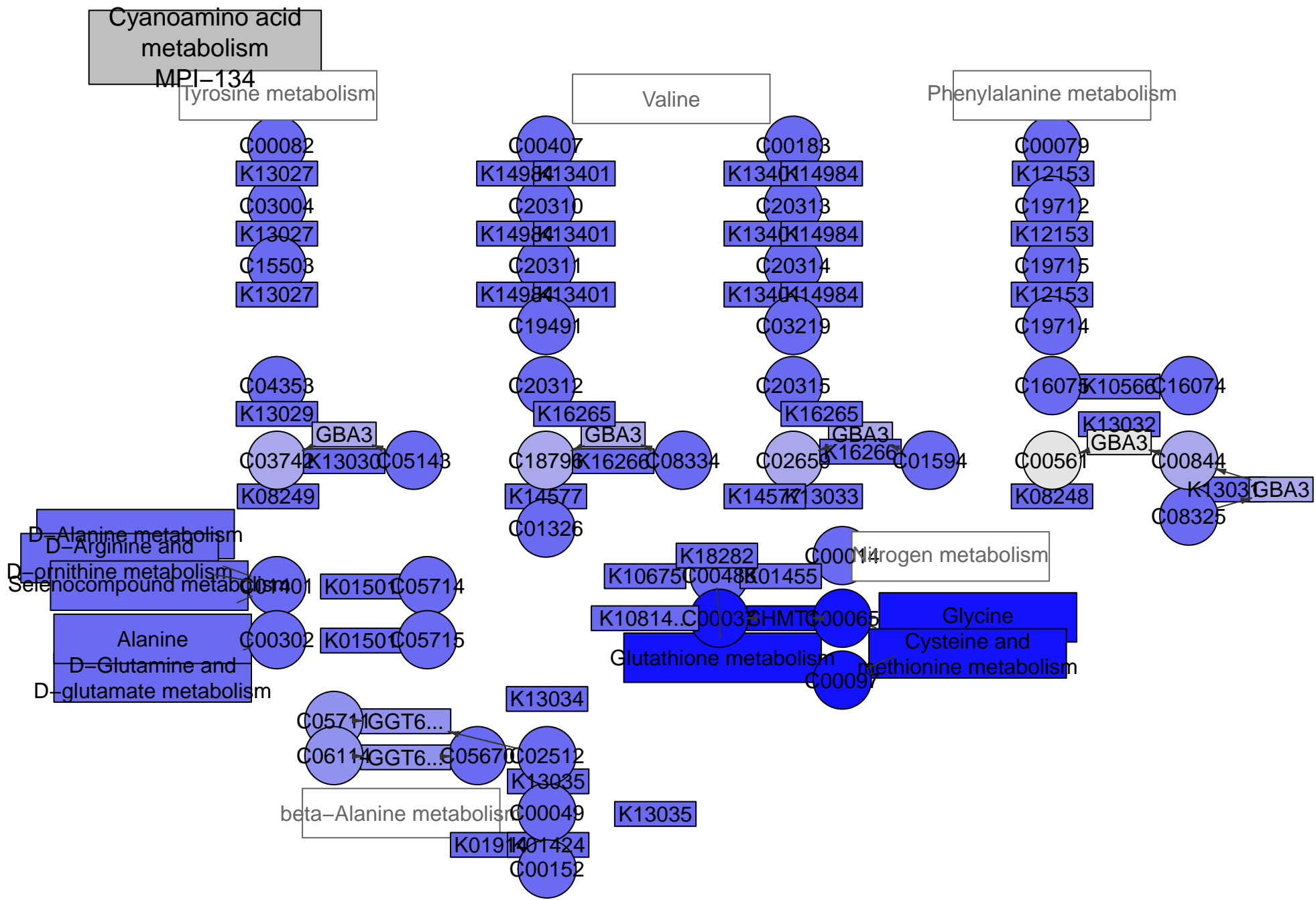


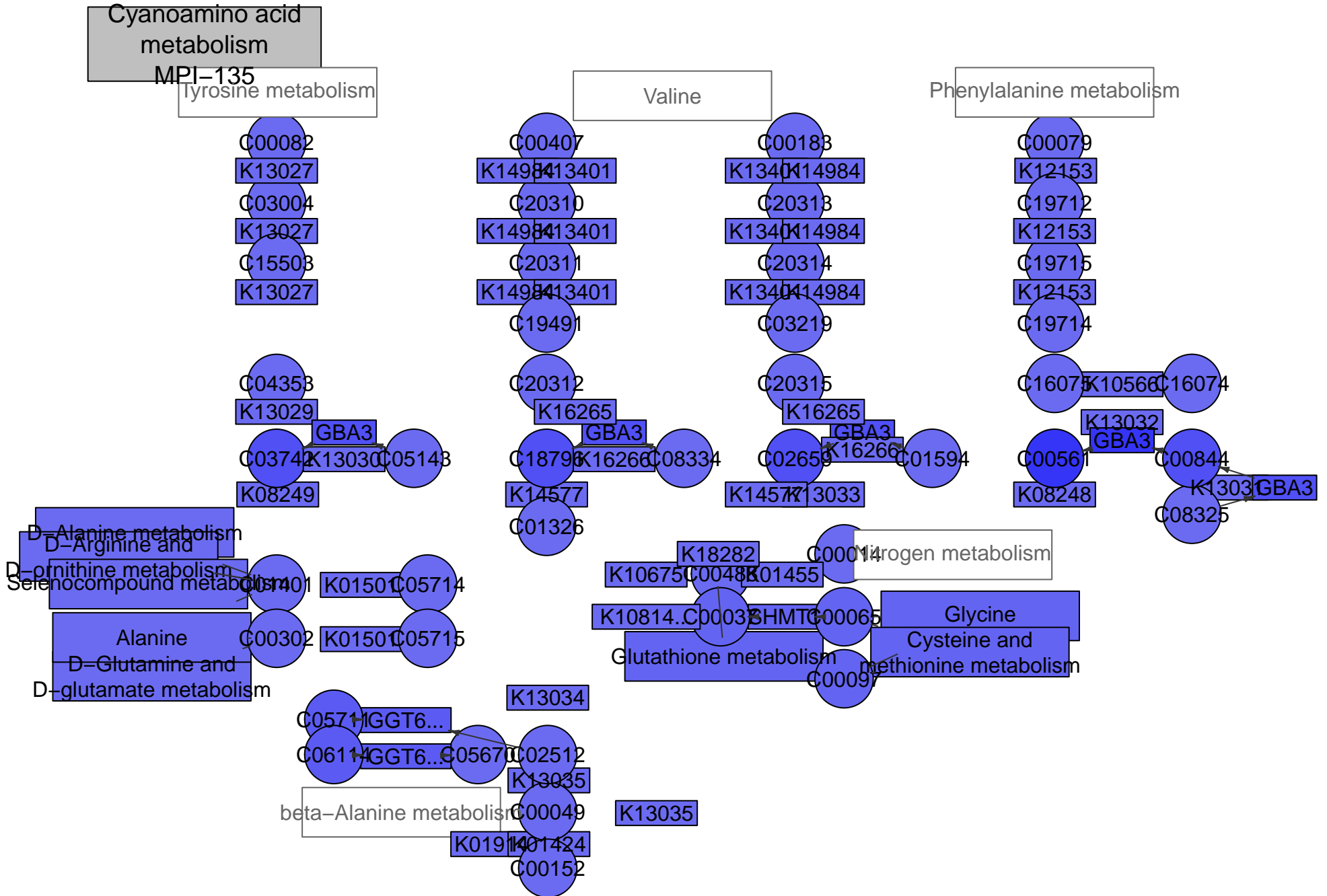






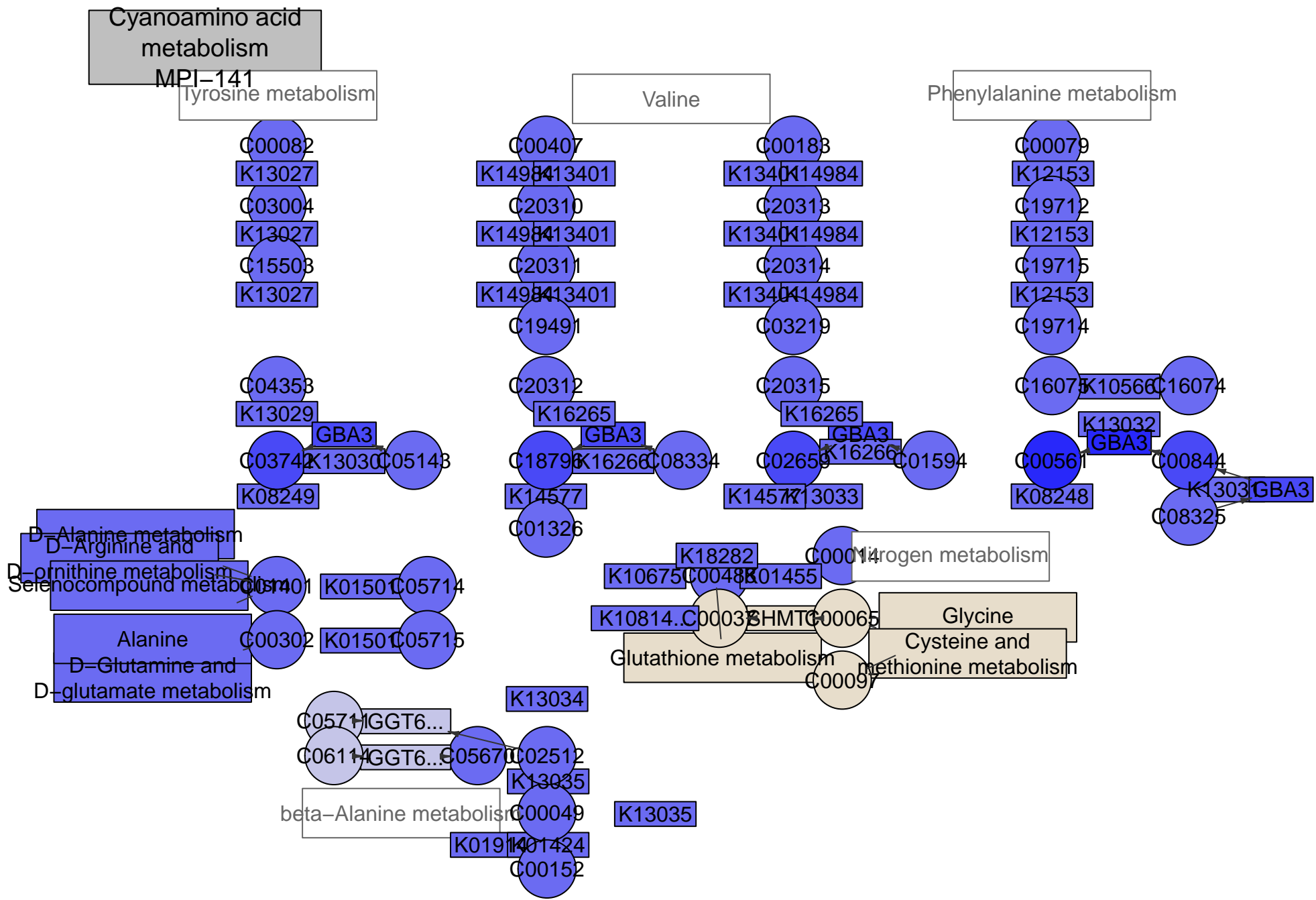




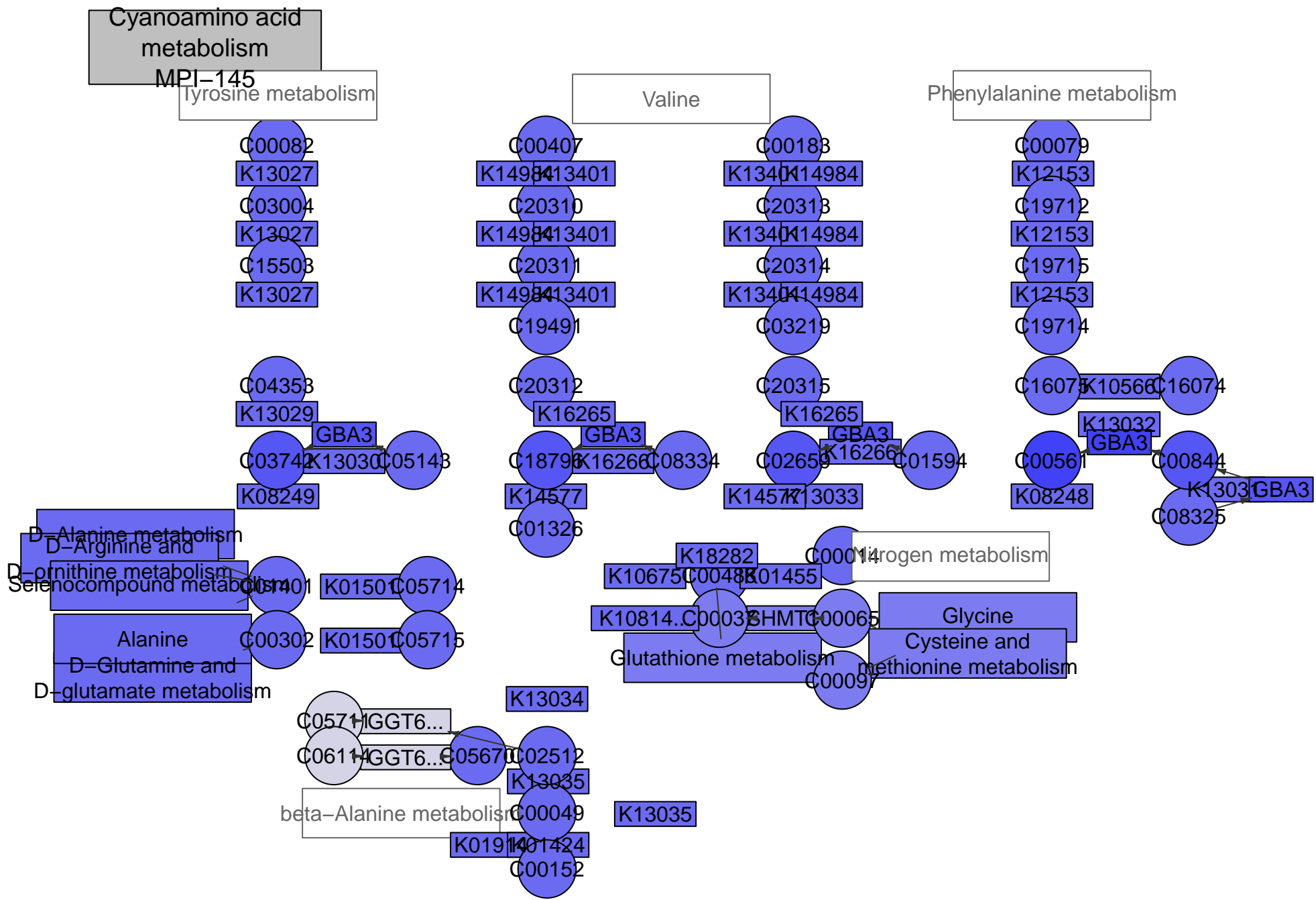


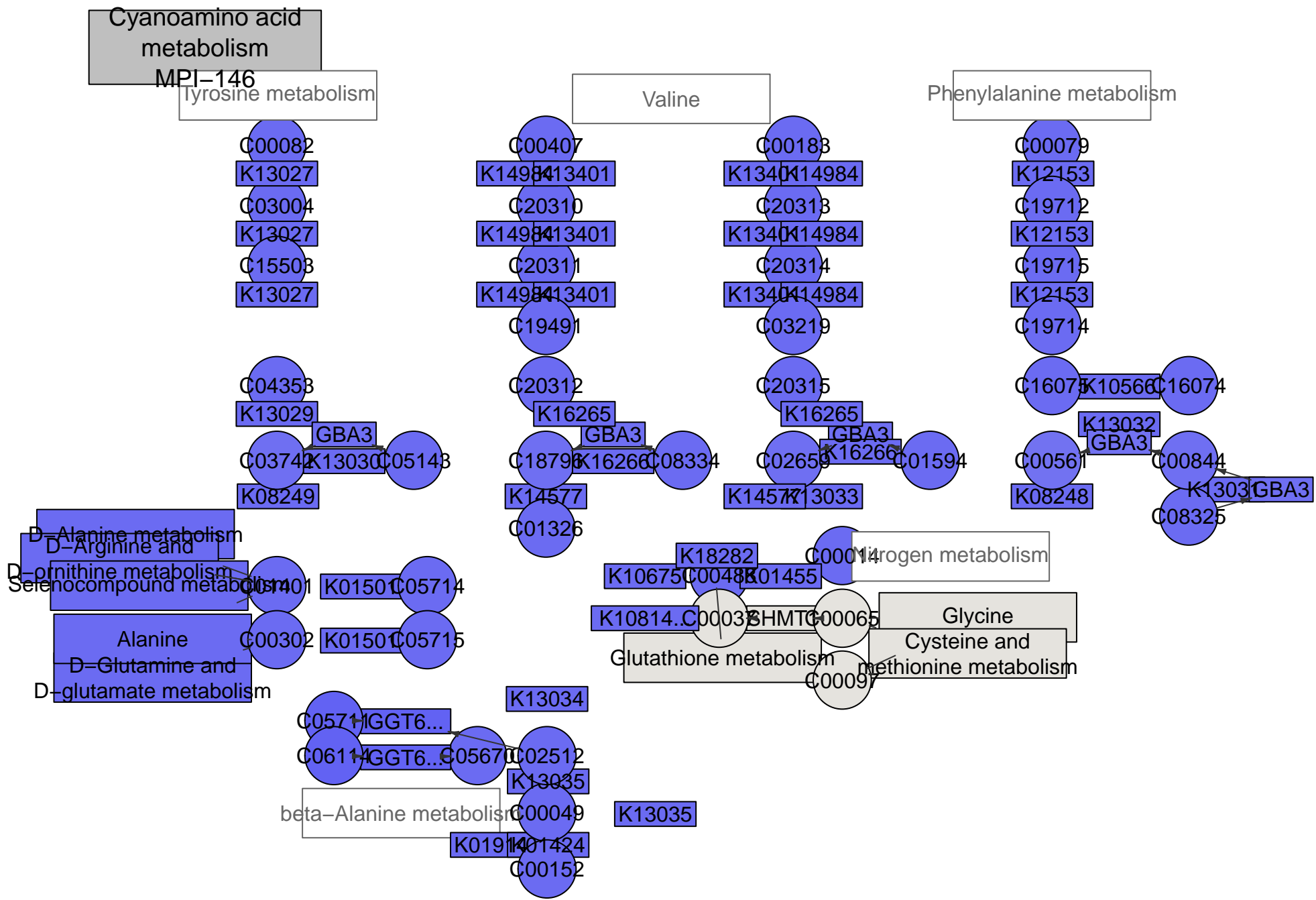


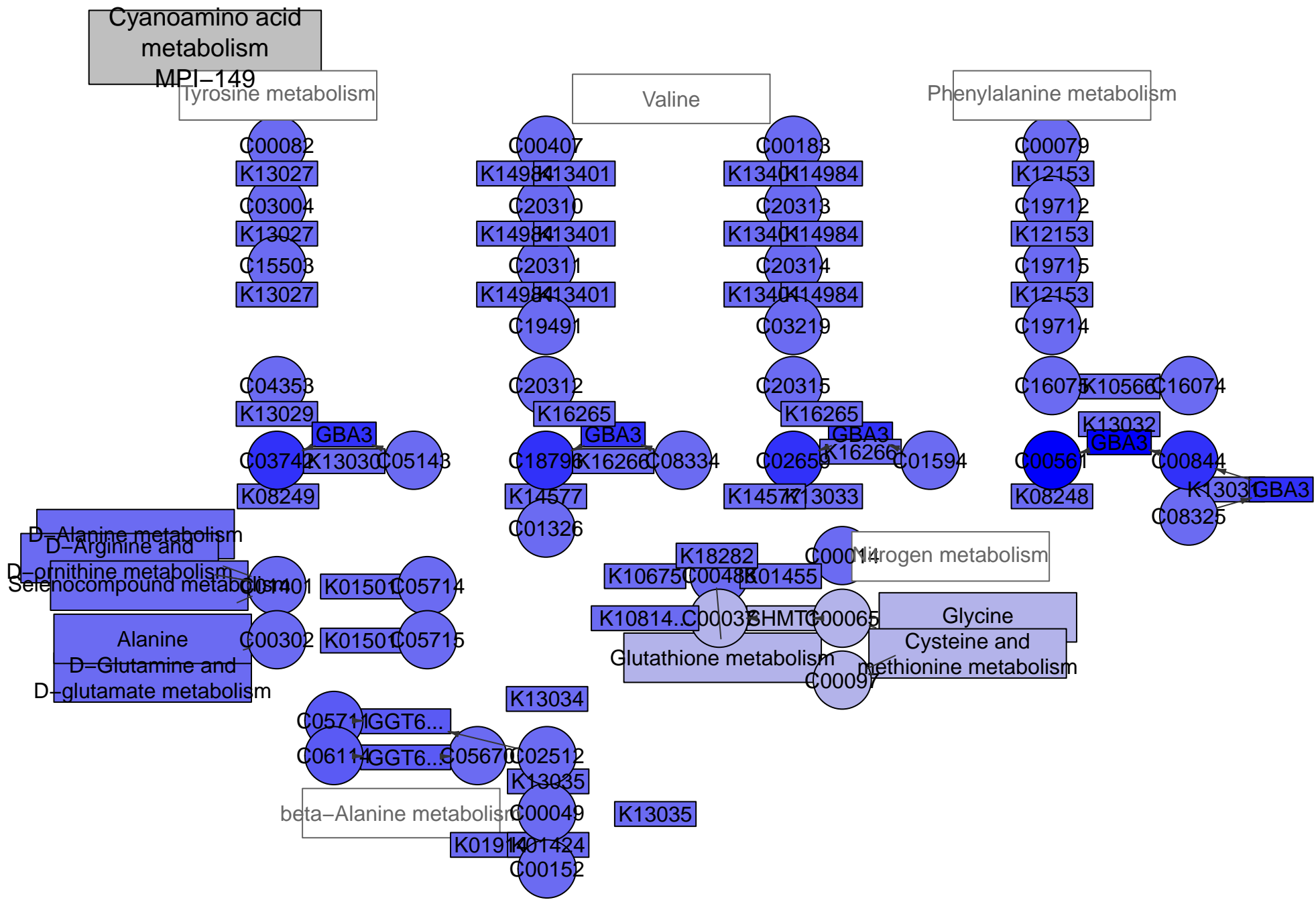








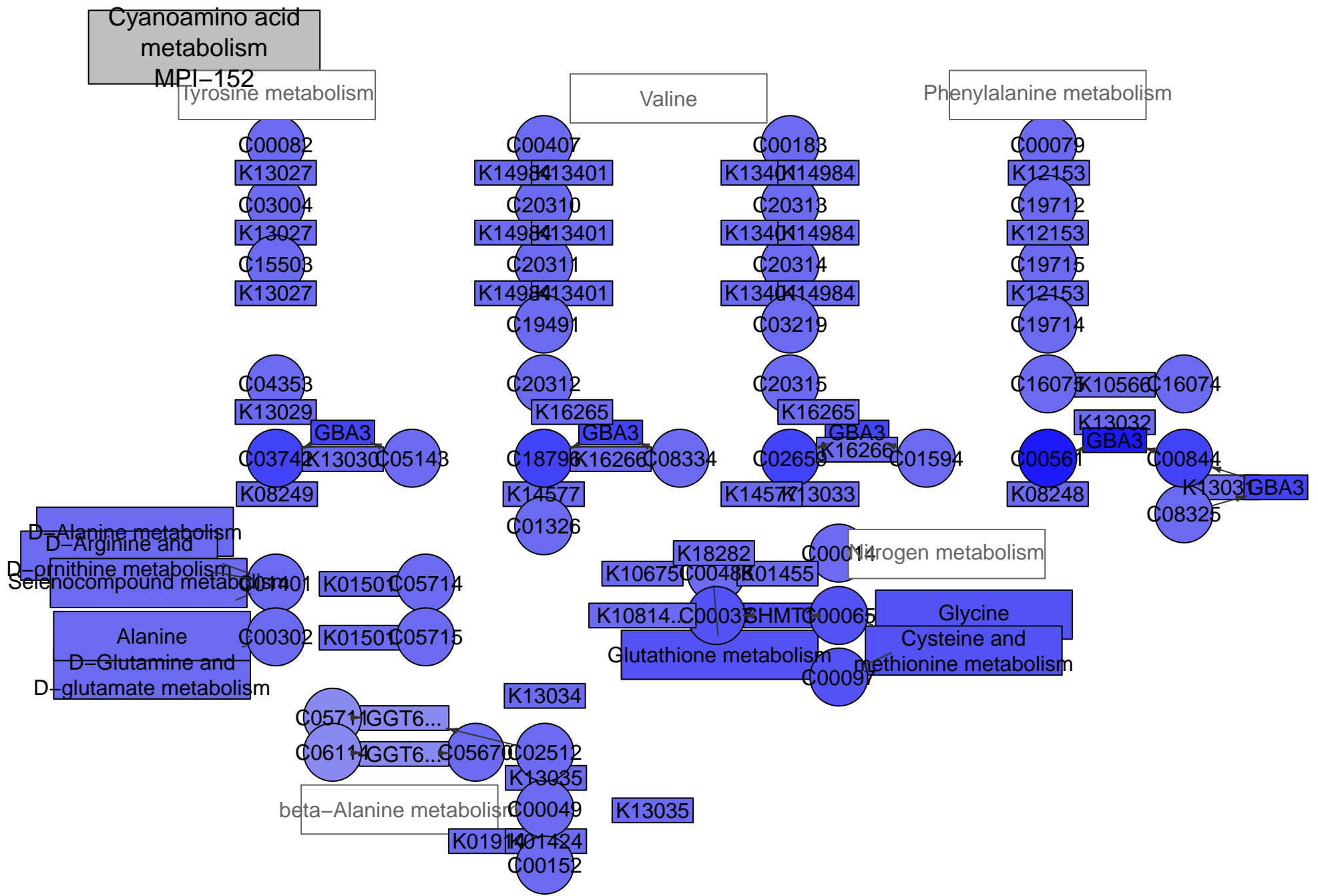


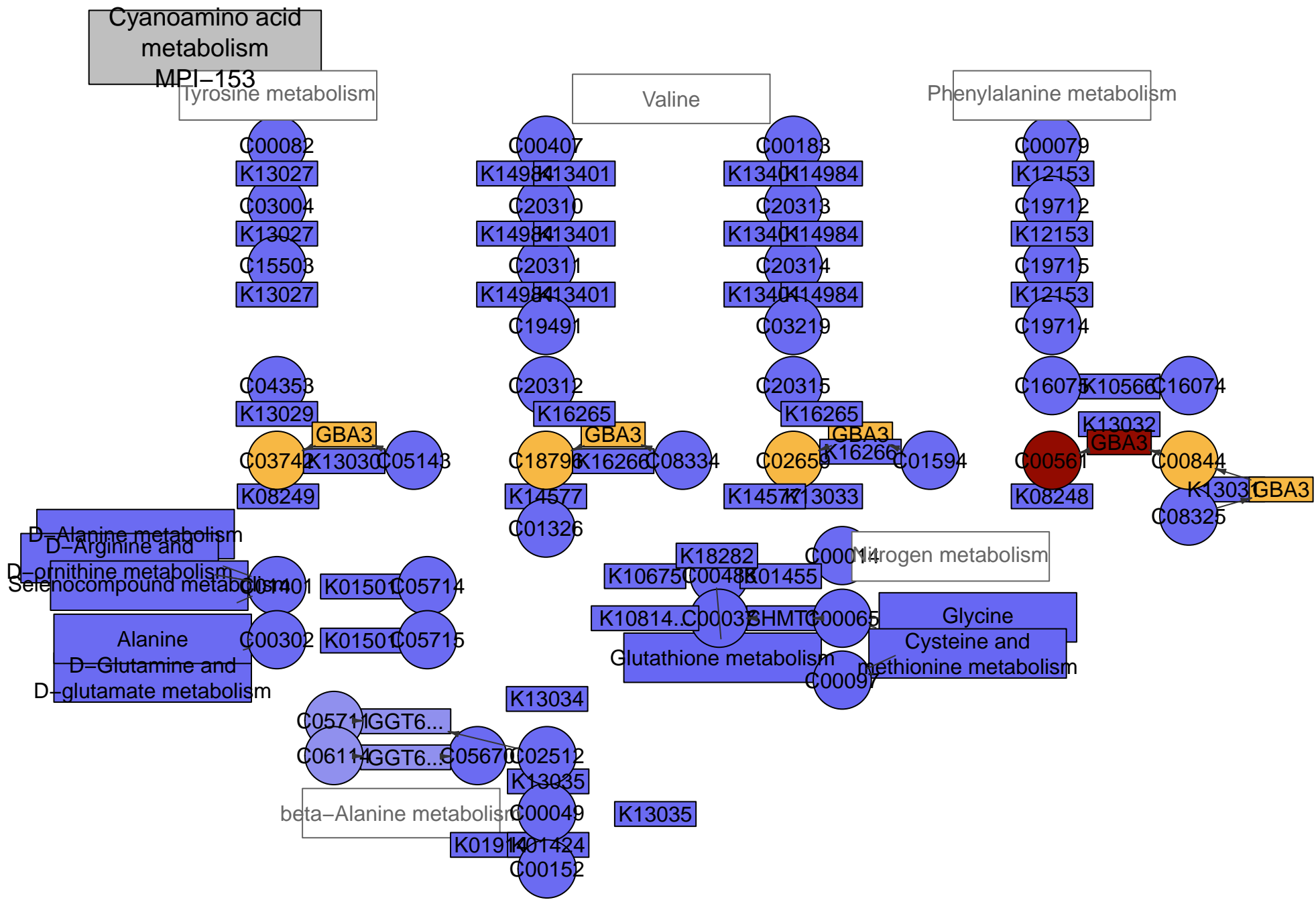


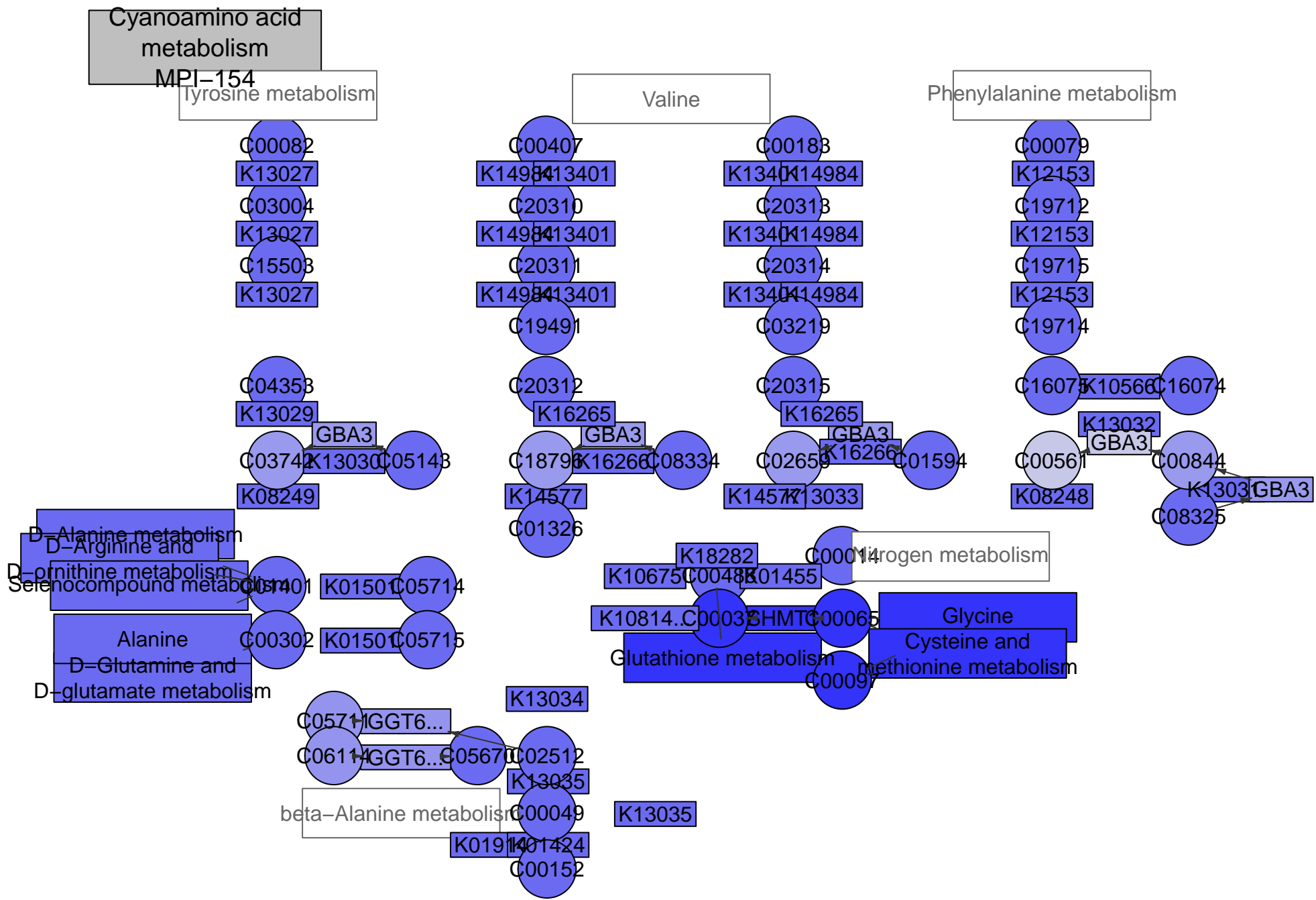


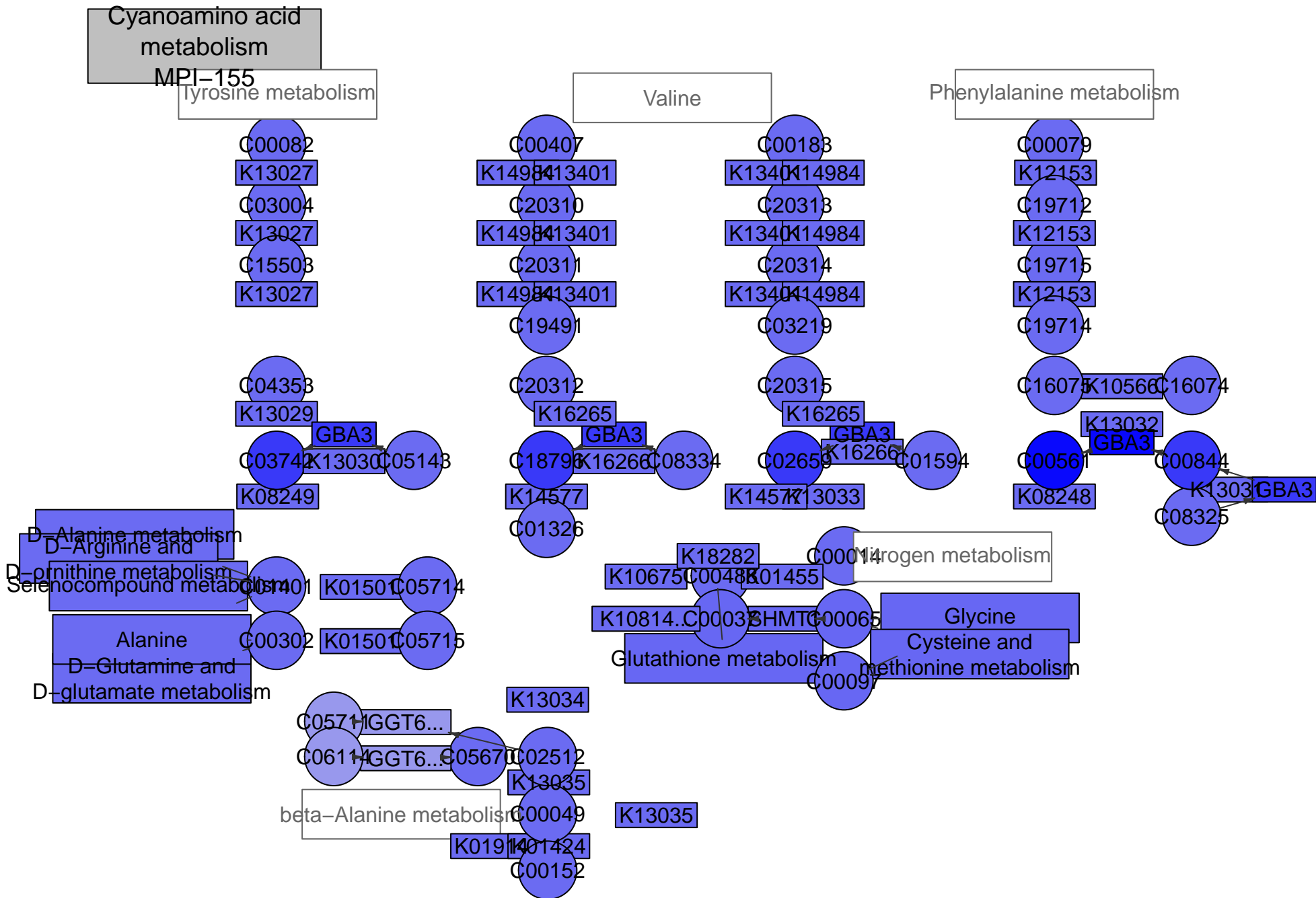


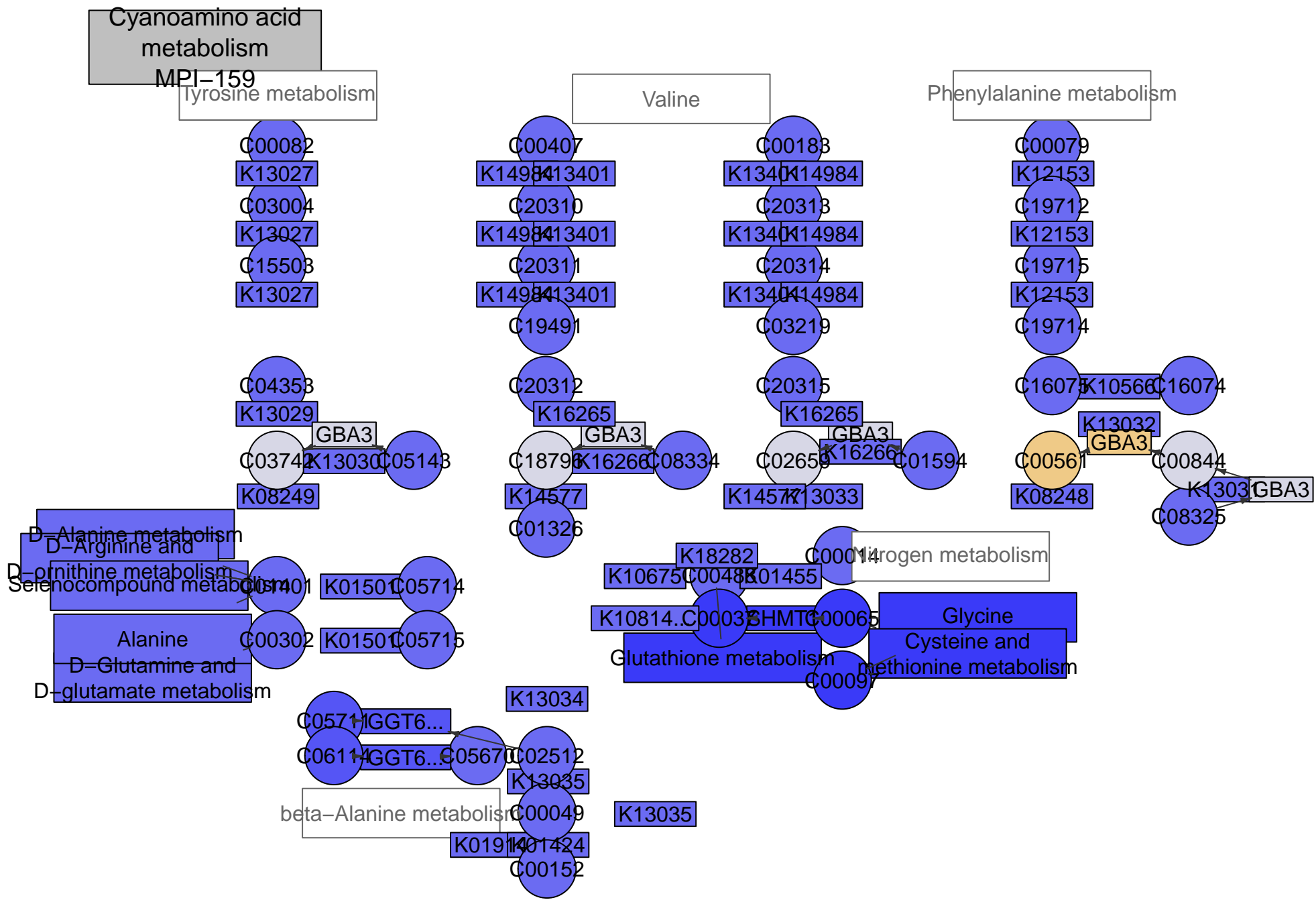












Cyanoamino acid metabolism

MPI-159

Tyrosine metabolism

Valine

Phenylalanine metabolism

D-Alanine metabolism  
D-Arginine and  
D-ornithine metabolism  
Selenocompound metabolism

Alanine  
D-Glutamine and  
D-glutamate metabolism

beta-Alanine metabolism

Glutathione metabolism

Nitrogen metabolism

Glycine  
Cysteine and  
methionine metabolism



Cyanoamino acid metabolism

MPI-164

Tyrosine metabolism

Valine

Phenylalanine metabolism

C00082

K13027

C03004

K13027

C15508

K13027

C04358

K13029

GBA3

C03742

K13030

C05143

K08249

C05140

K0150

C05714

C00302

K0150

C05715

C05714GGT6...

C06114GGT6...

C05670

C02512

K13035

beta-Alanine metabolism

C00049

K01914

C01424

C00152

K13034

K13035

C00407

K14984

K13401

C20310

K14984

K13401

C20311

K14984

K13401

C19491

C20312

K16265

GBA3

C18796

K16266

C08334

K14577

C01326

K18282

K10675

C00488

K01455

K10814

C00033

SHMTG

Glutathione metabolism

C00097

C00188

K13401

K14984

C20313

K13401

K14984

C20314

K13401

K14984

C03219

C20315

K16265

GBA3

C02659

K16266

C01594

K14577

K13033

C00014

C00065

SHMTG

C00097

C00097

C00097

C00079

K12153

C19712

K12153

C19715

K12153

C19714

C16075

K10566

C16074

C00561

K13032

GBA3

K08248

C08325

C00844

K13031

GBA3

Nitrogen metabolism

Glycine Cysteine and methionine metabolism

D-Alanine metabolism

D-Arginine and

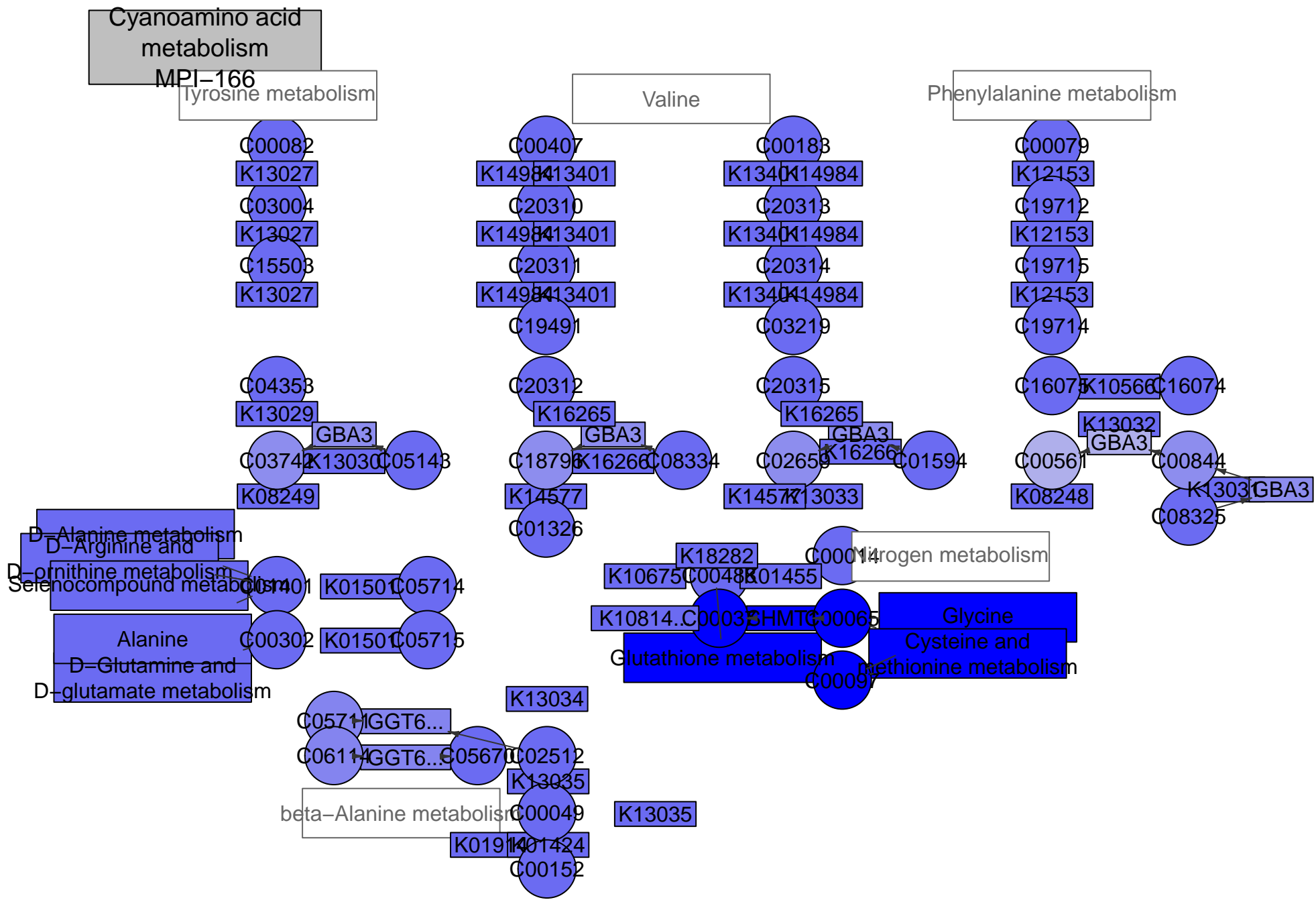
D-ornithine metabolism

Selenocompound metabolism

Alanine

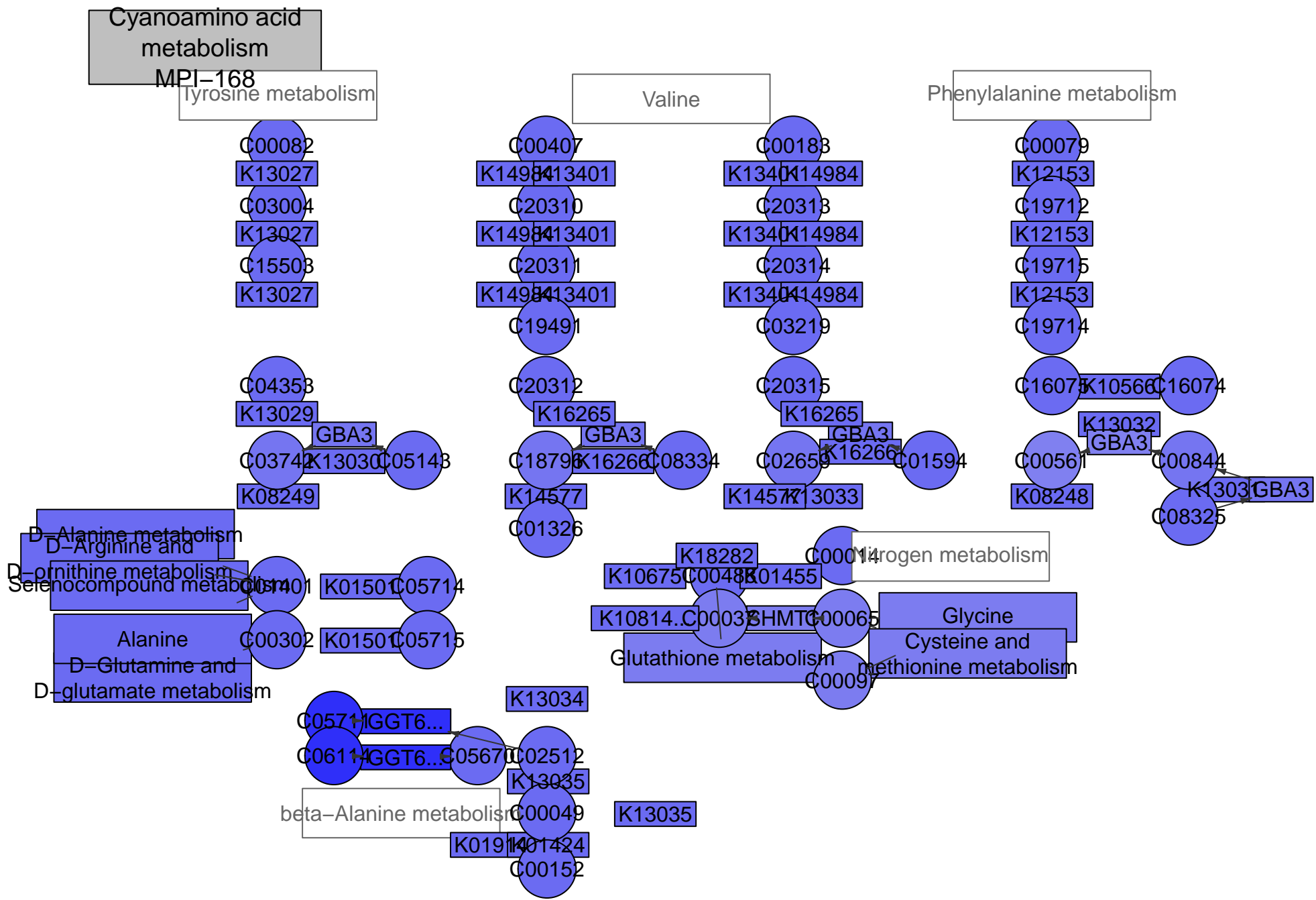
D-Glutamine and

D-glutamate metabolism

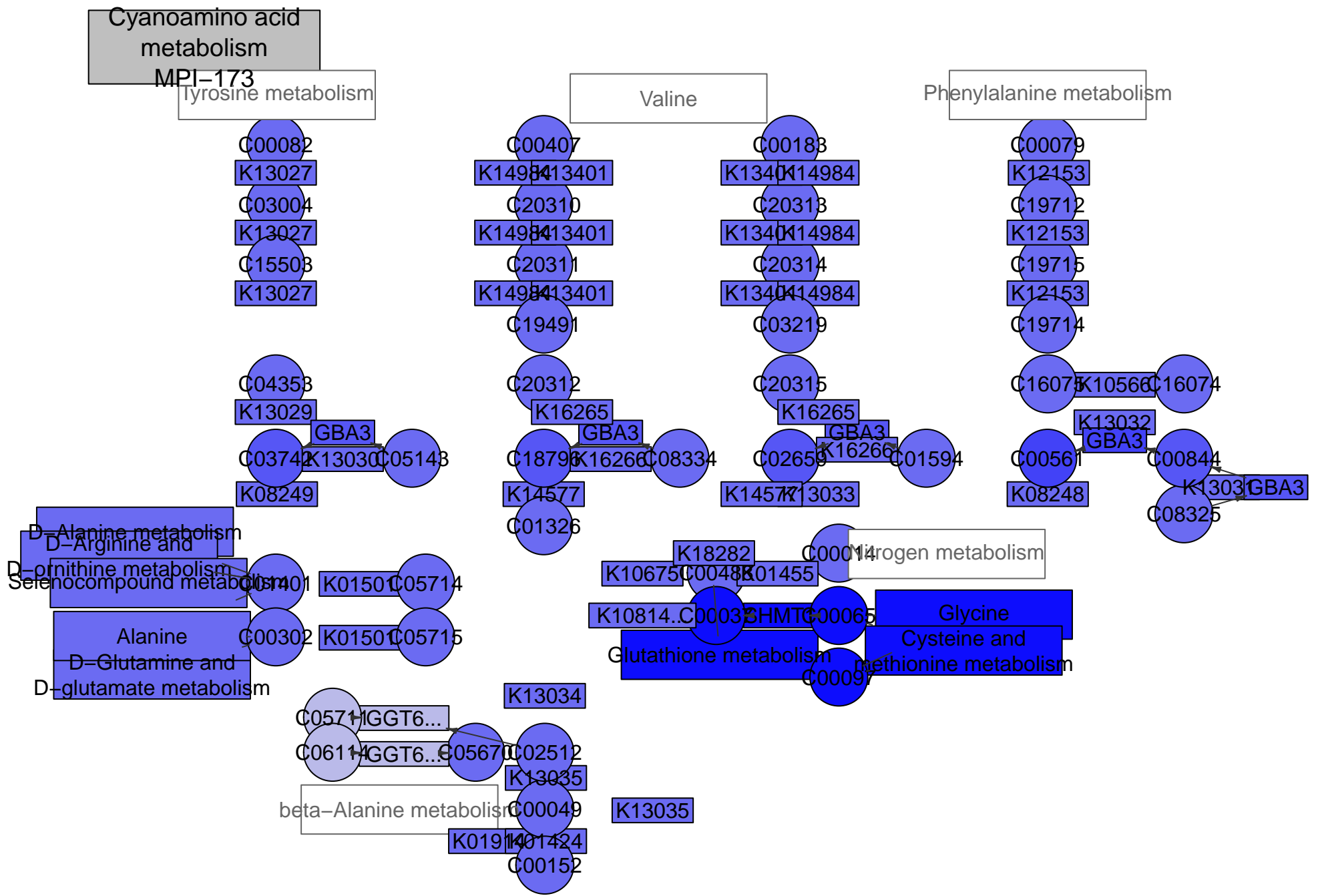


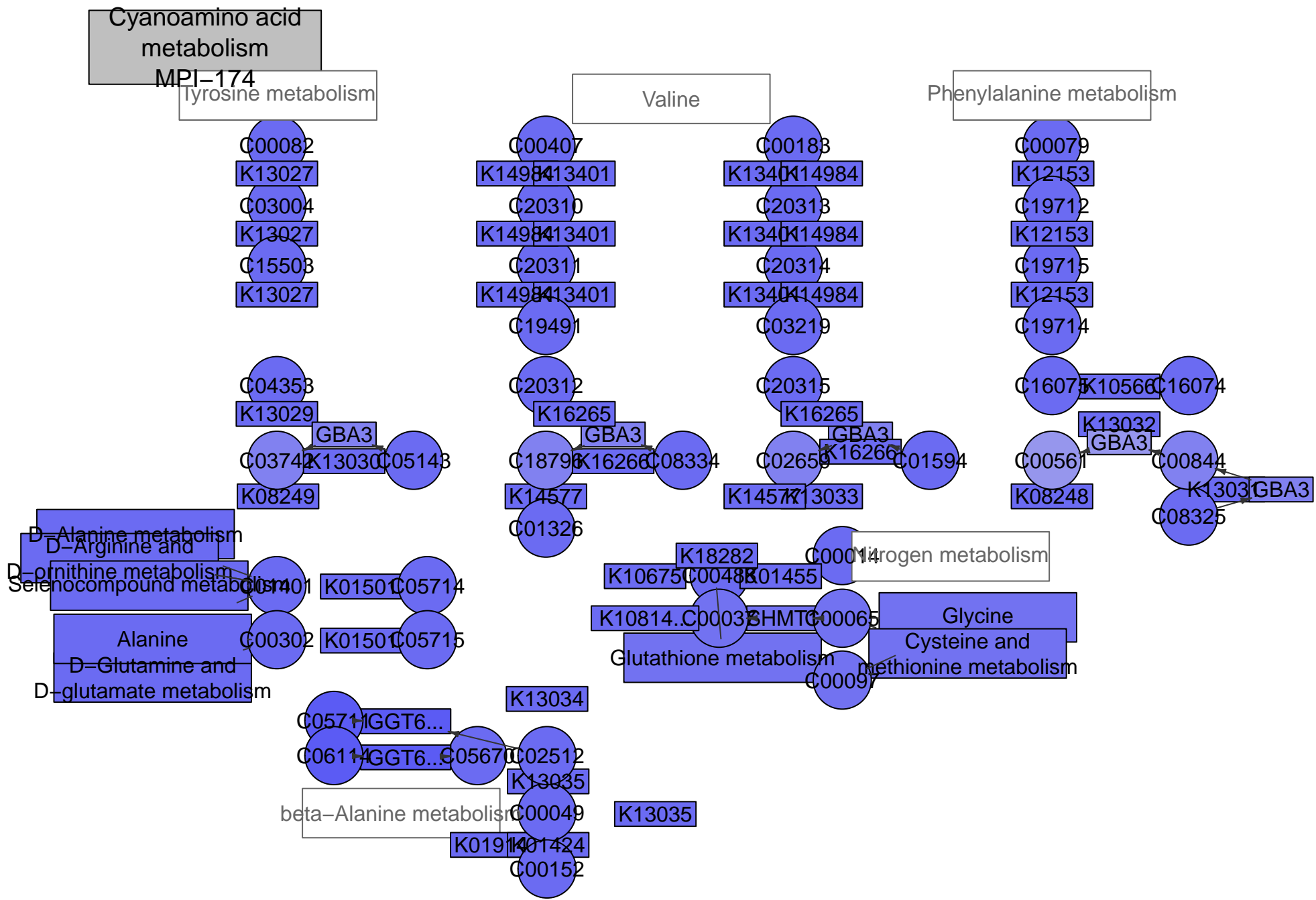


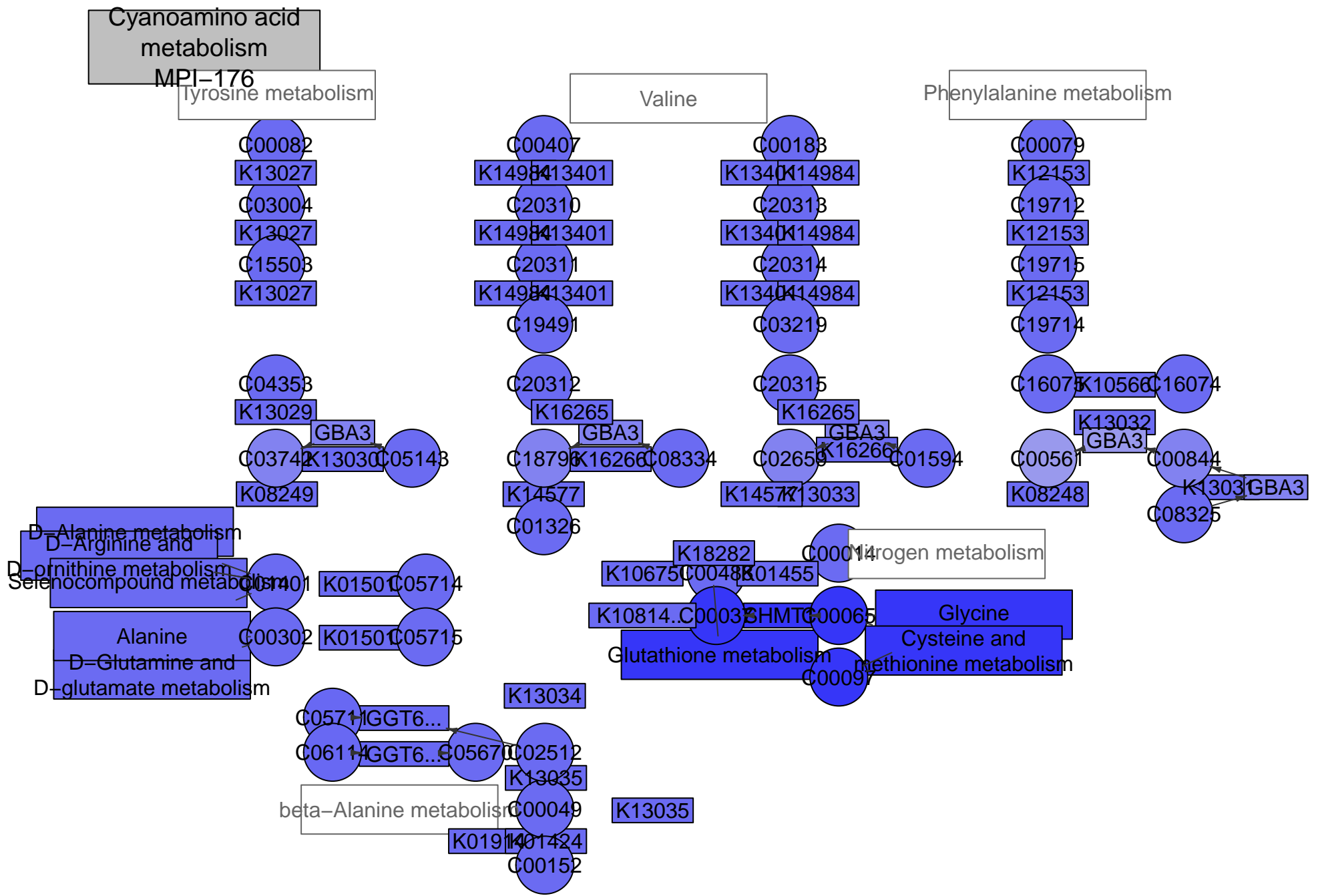


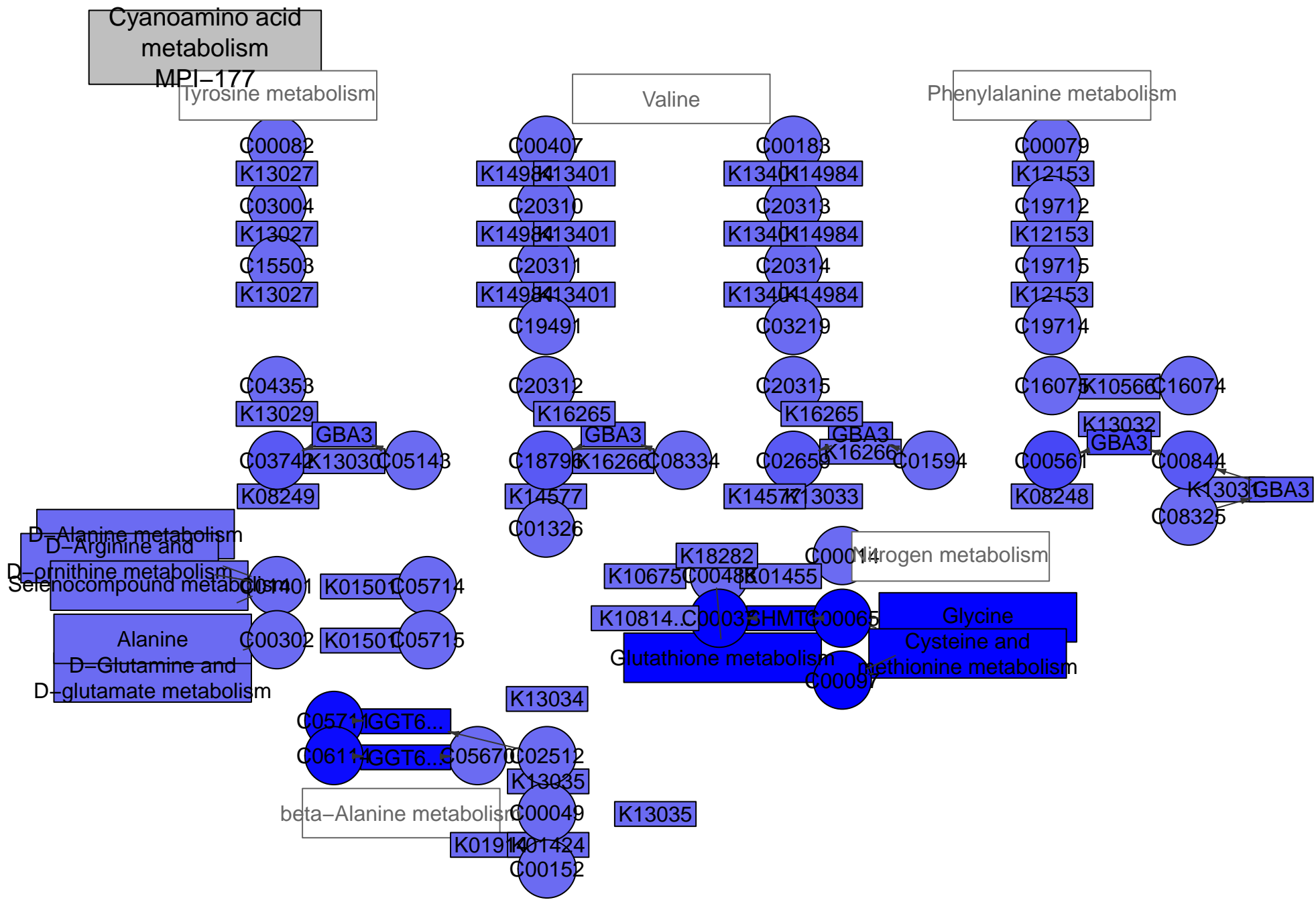


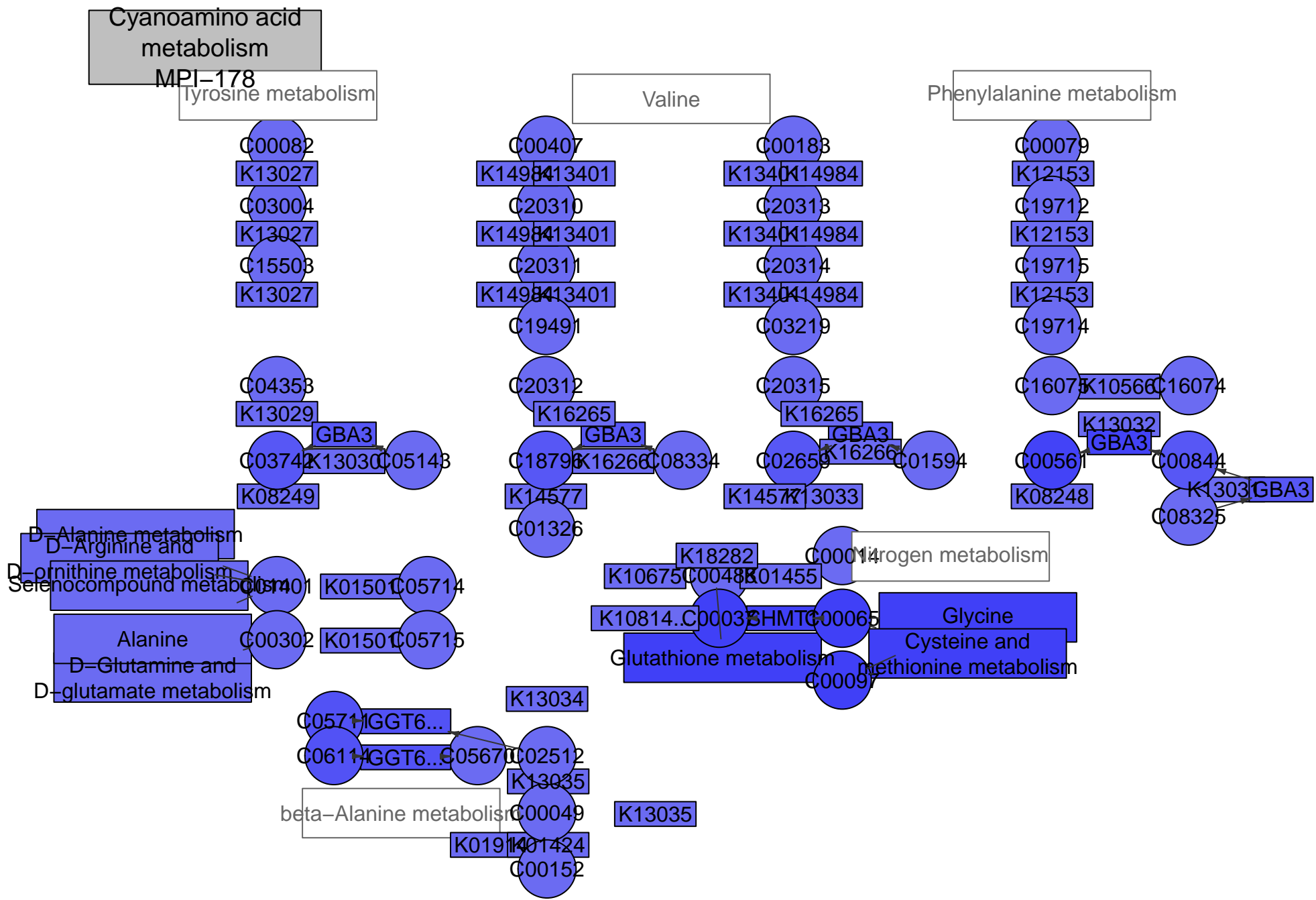








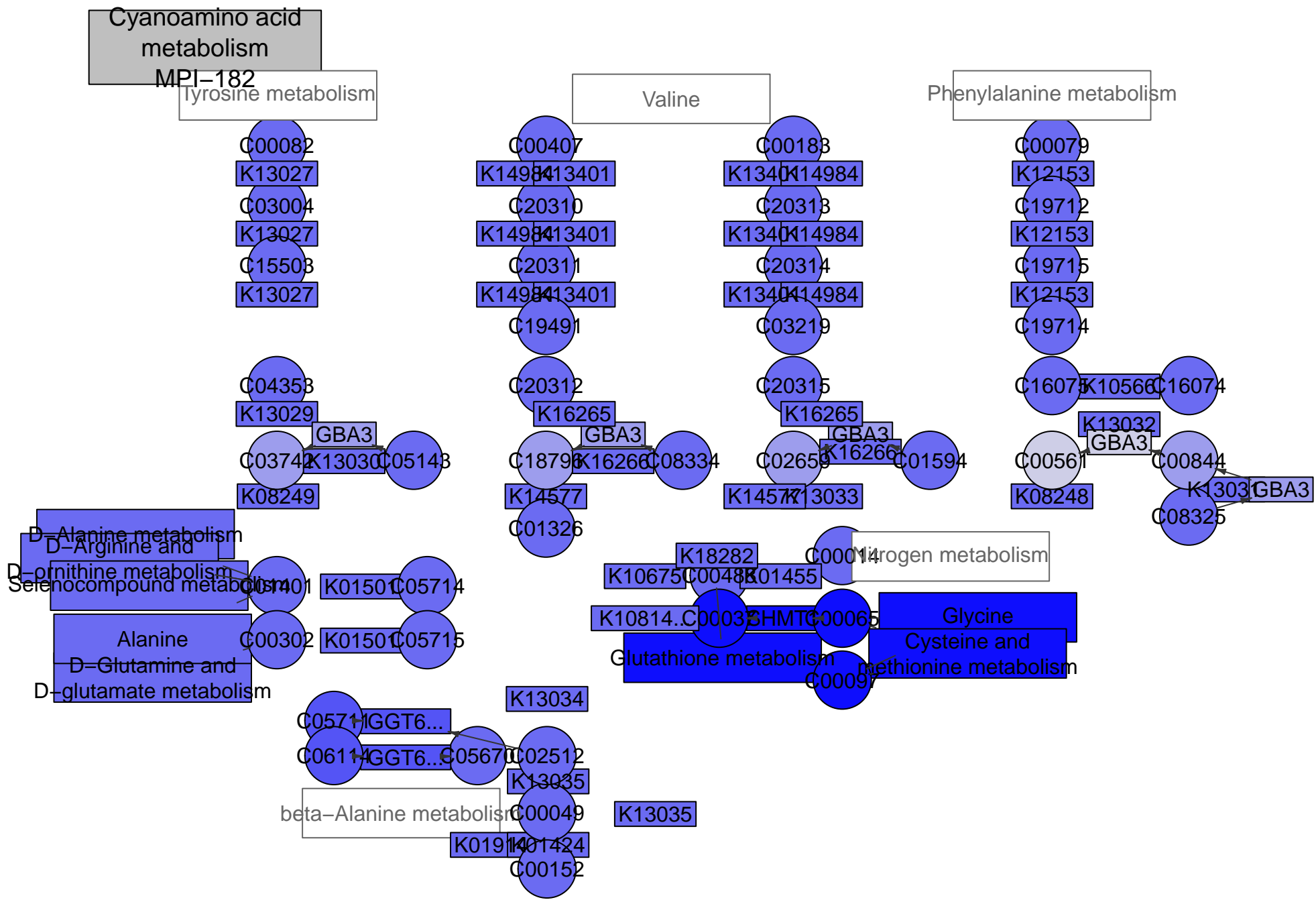
























Cyanoamino acid metabolism

MPI-189

Tyrosine metabolism

Valine

Phenylalanine metabolism

C00082

K13027

C03004

K13027

C15508

K13027

C04358

K13029

GBA3

C03742

K13030 C05143

K08249

C05140

K0150 C05714

C00302

K0150 C05715

C05714 GGT6...

C06114 GGT6... C05670

K13034

K13035

beta-Alanine metabolism

C00049

K01914 C01424

C00152

C00407

K14984 K13401

C20310

K14984 K13401

C20311

K14984 K13401

C19491

C20312

K16265

GBA3

C18796

K16266 C08334

K14577

C01326

Valine

C00188

K13401 K14984

C20313

K13401 K14984

C20314

K13401 K14984

C03219

C20315

K16265

GBA3

C02659

K16266 C01594

K14577

K13033

K18282

K10675 C00488

C00014

K10814 C00033

SHMT C00065

C00097

Glutathione metabolism

methionine metabolism

K13035

C00079

K12153

C19712

K12153

C19715

K12153

C19714

C16075

K10566

C16074

C00561

K13032

GBA3

K08248

C00844

C08325

K13031

GBA3

Nitrogen metabolism

Glycine

Cysteine and

methionine metabolism

D-Alanine metabolism

D-Arginine and

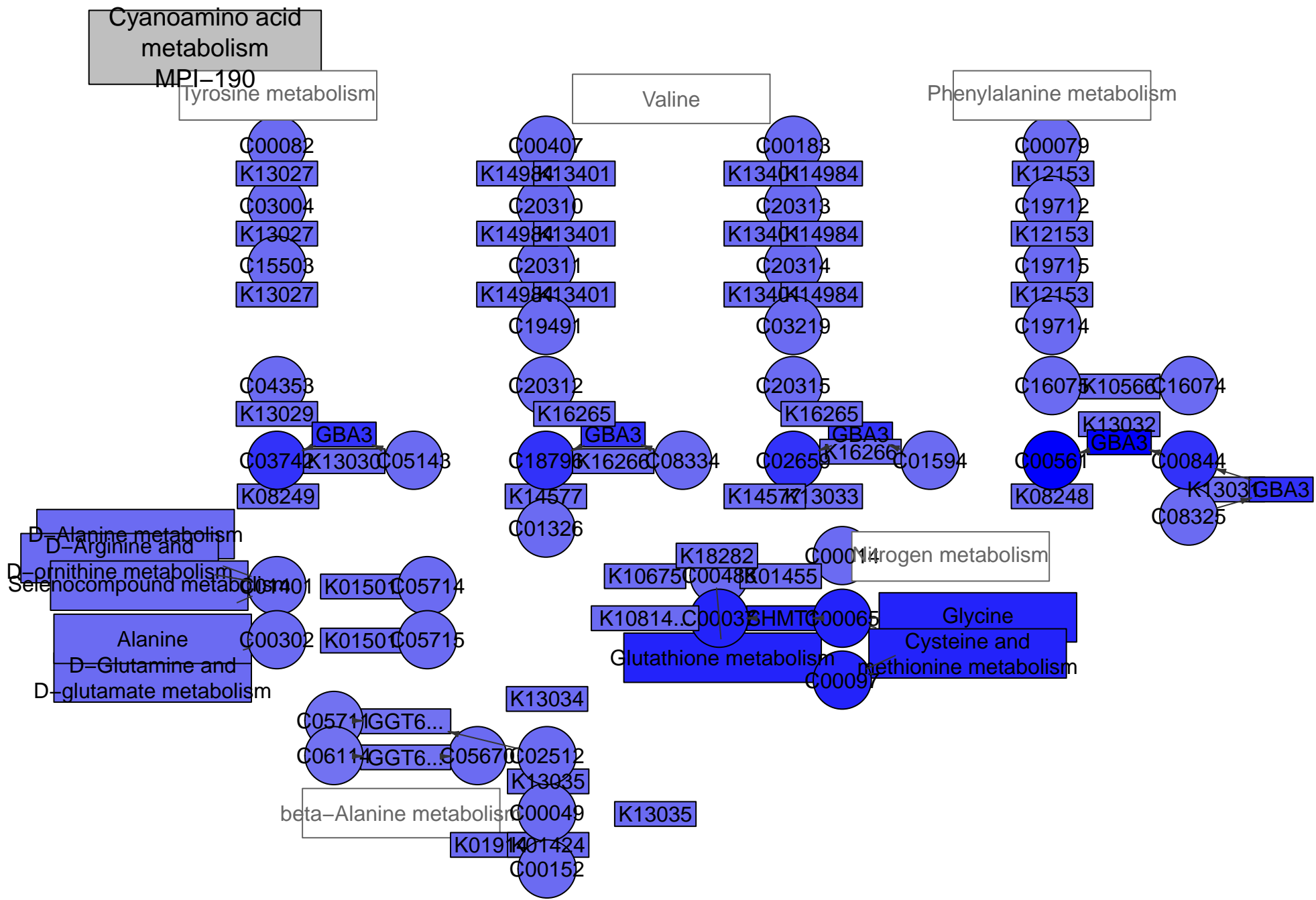
D-ornithine metabolism

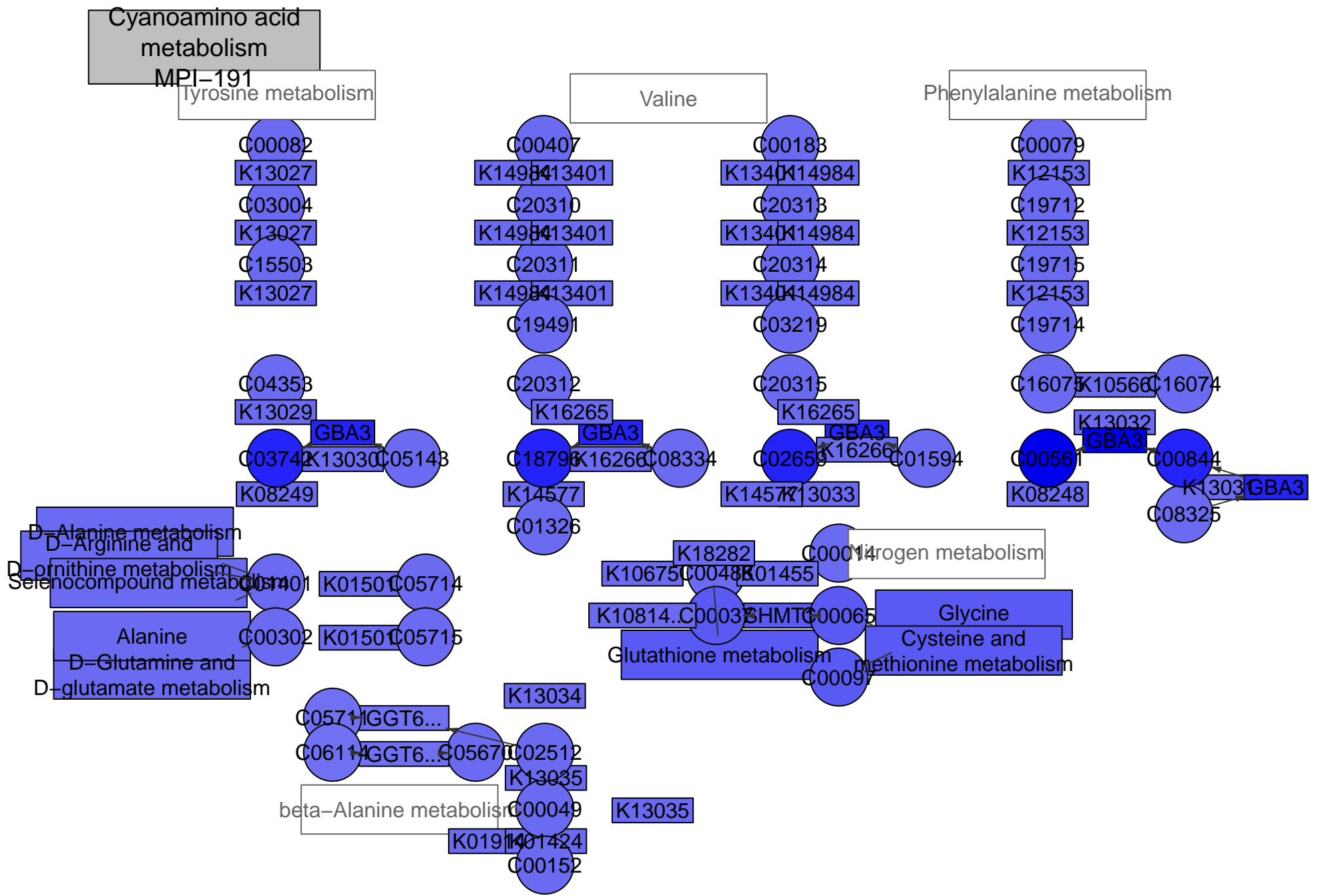
Selenocompound metabolism

Alanine

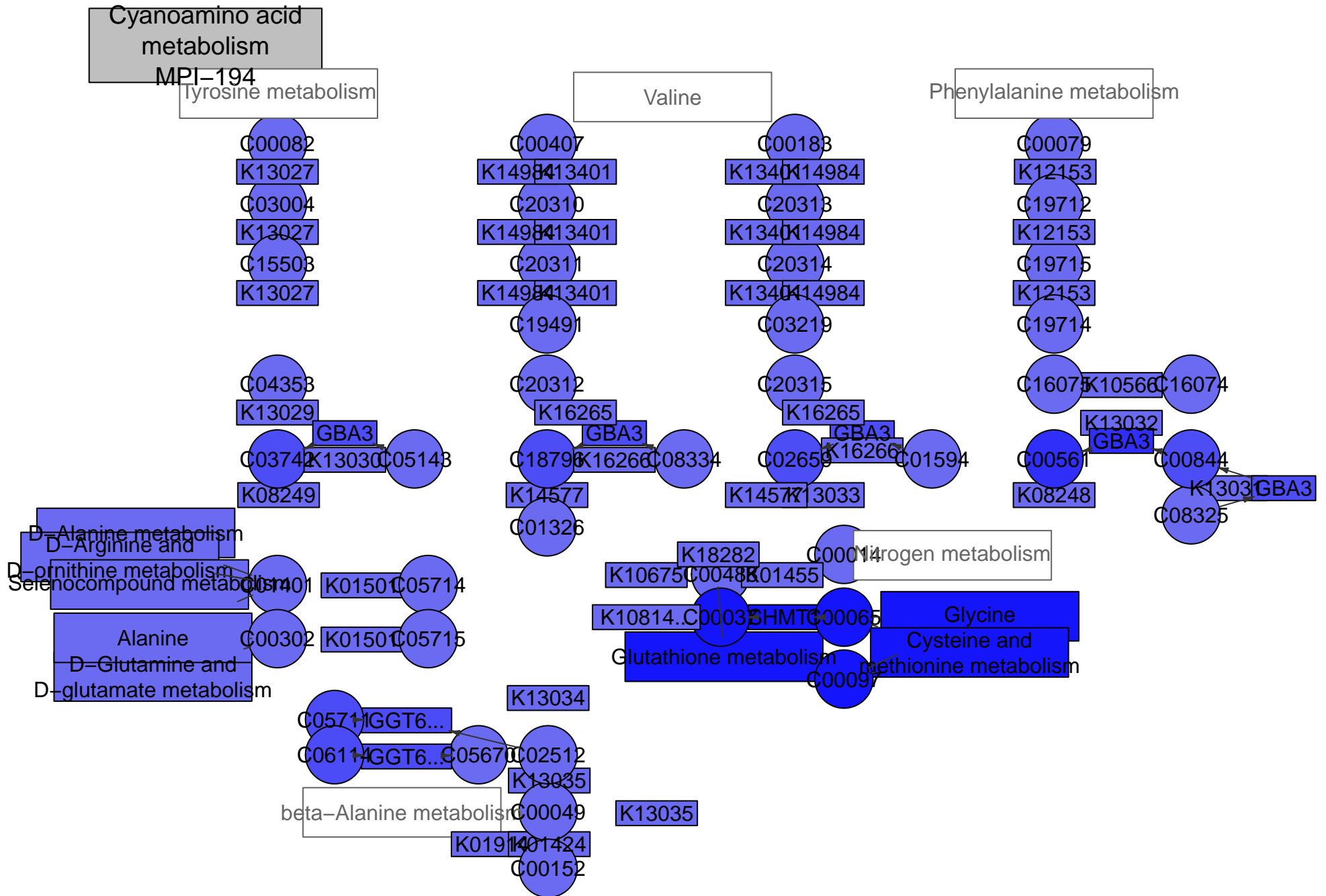
D-Glutamine and

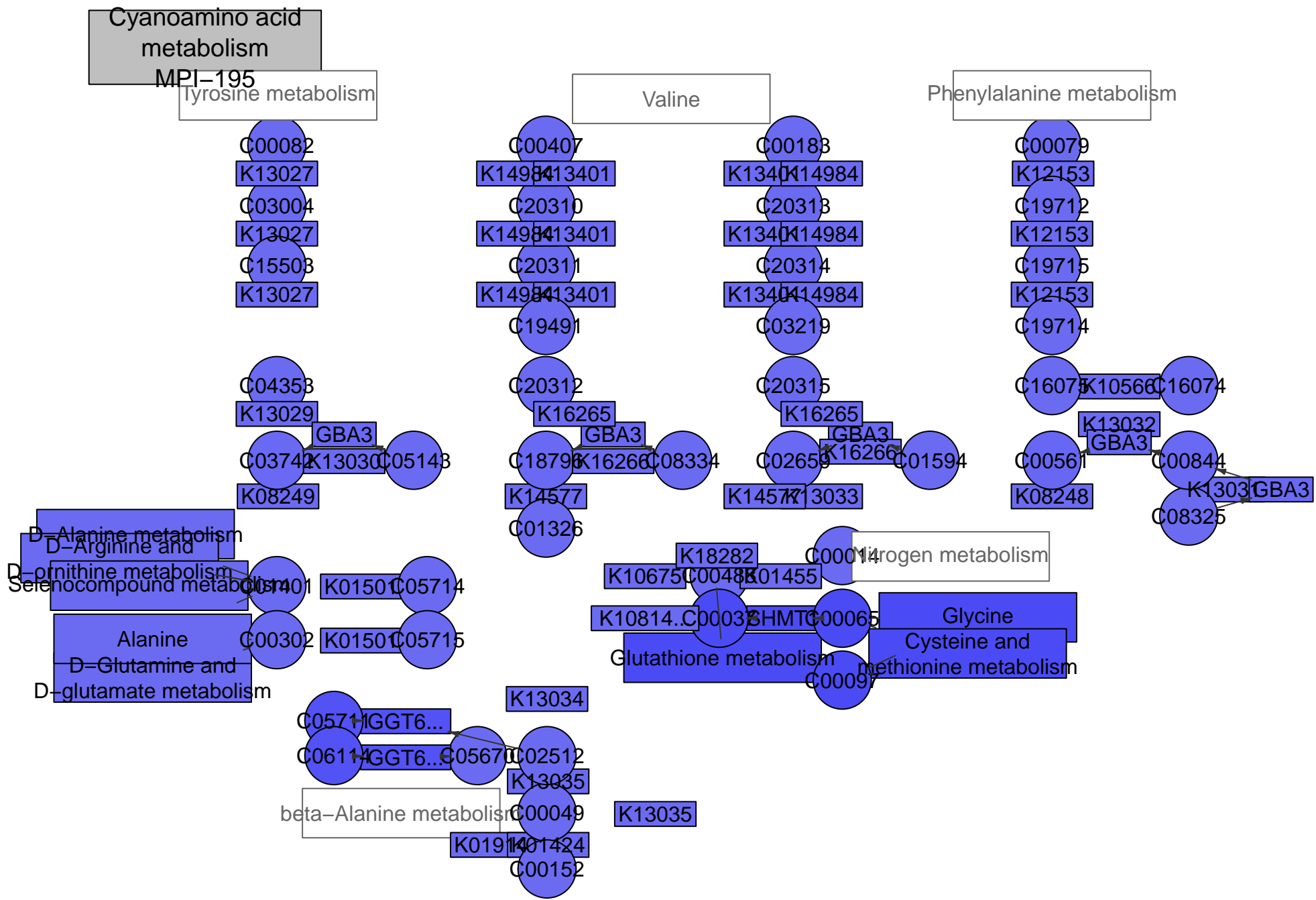
D-glutamate metabolism

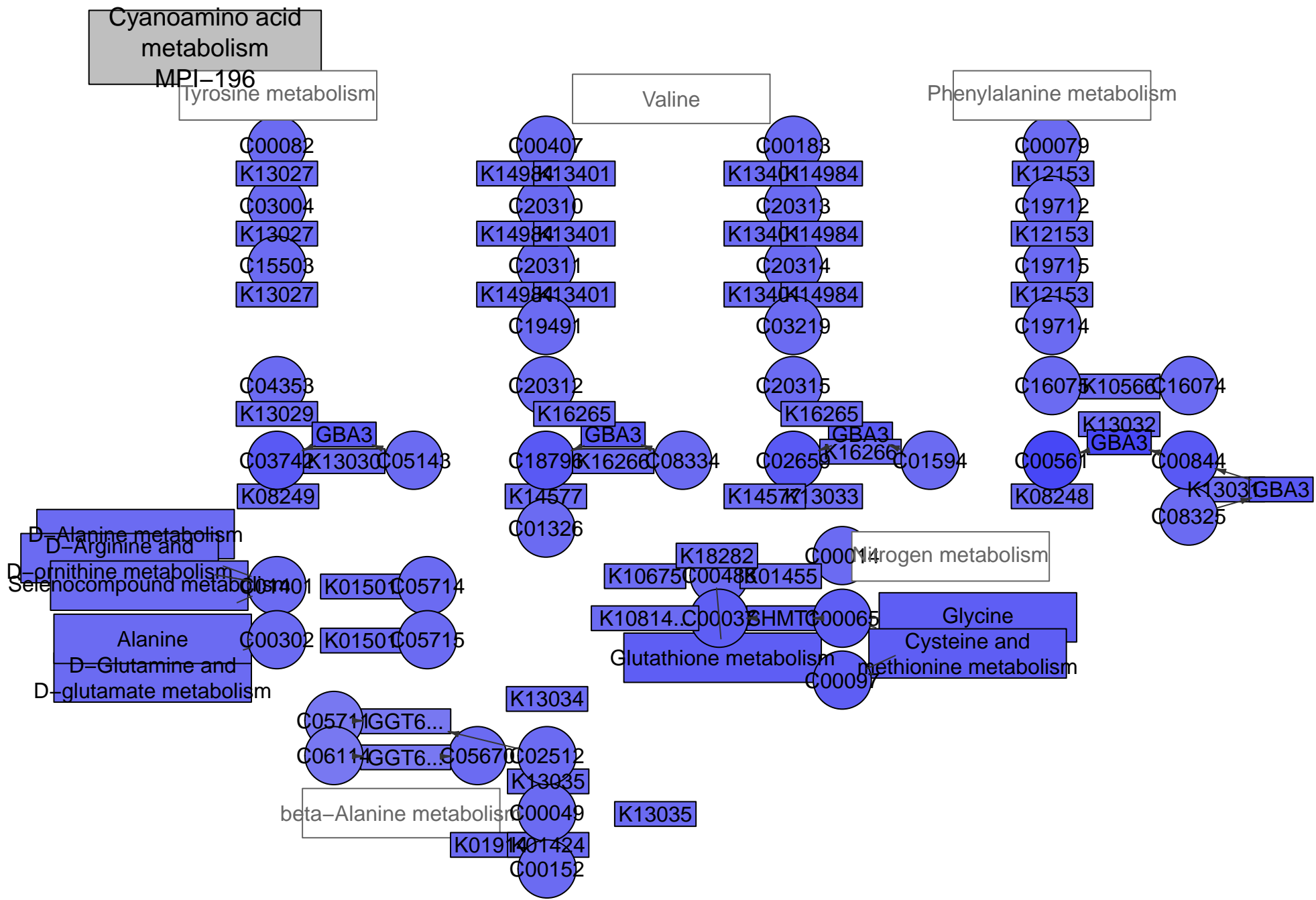












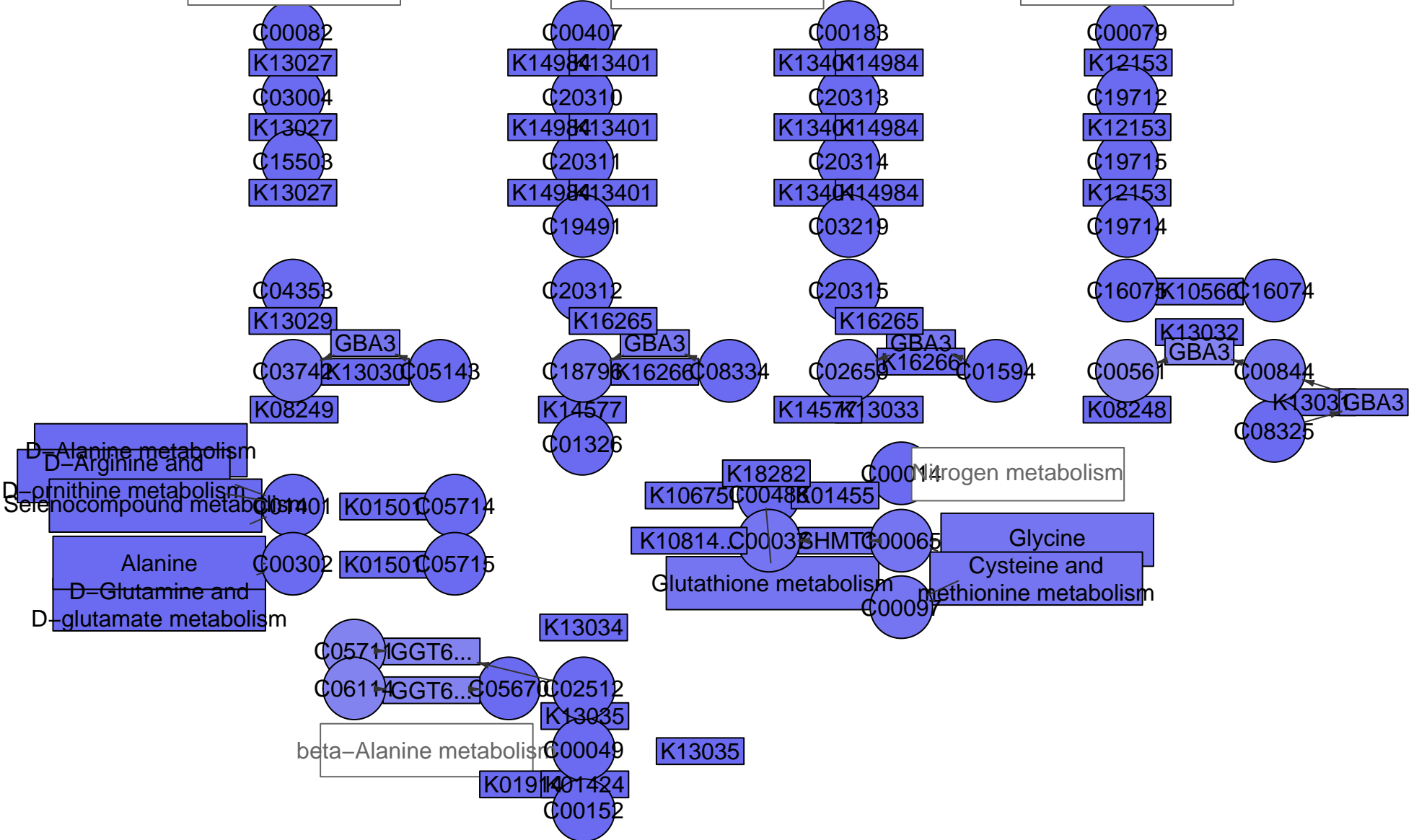
Cyanoamino acid metabolism

MPI-198

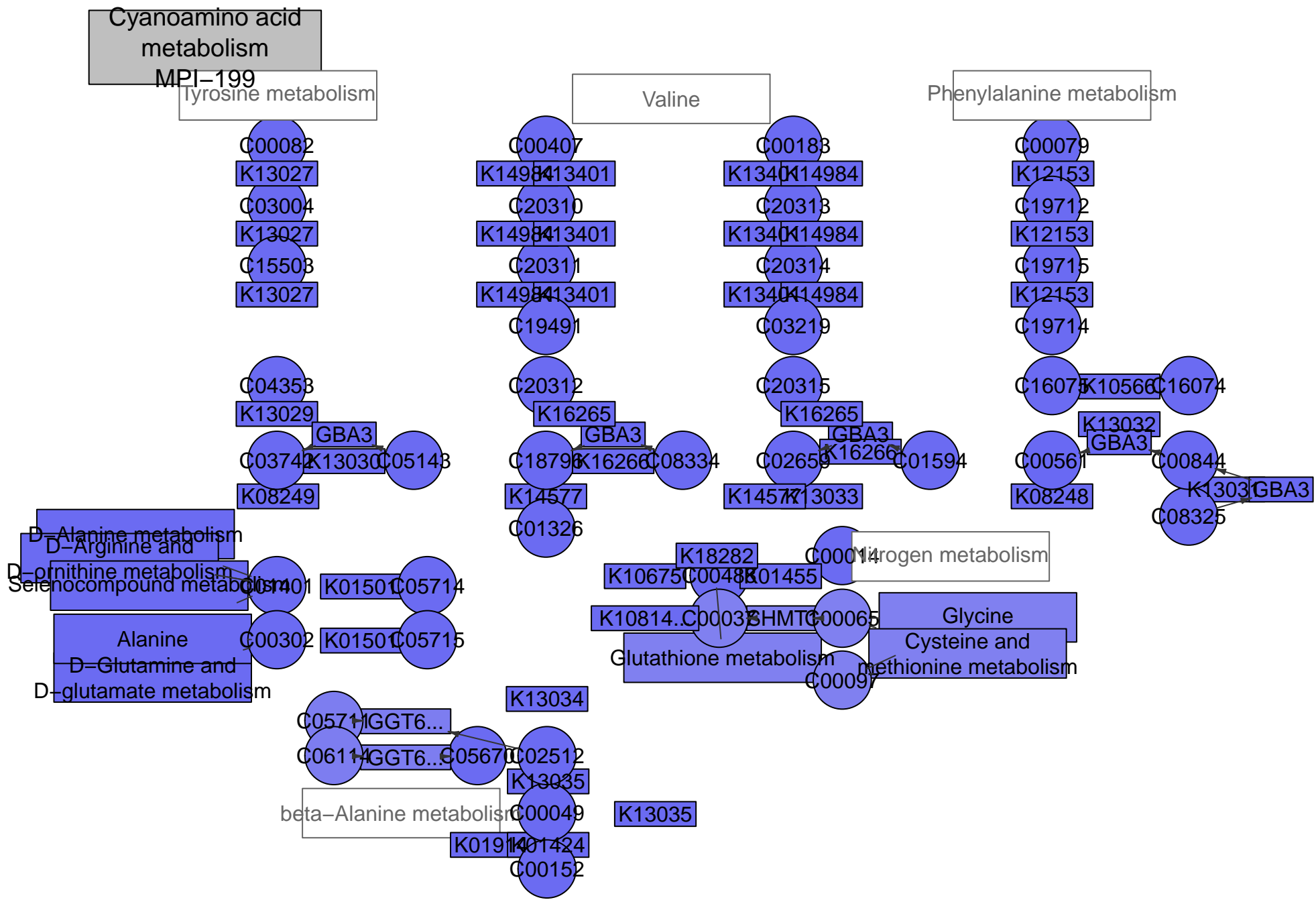
Tyrosine metabolism

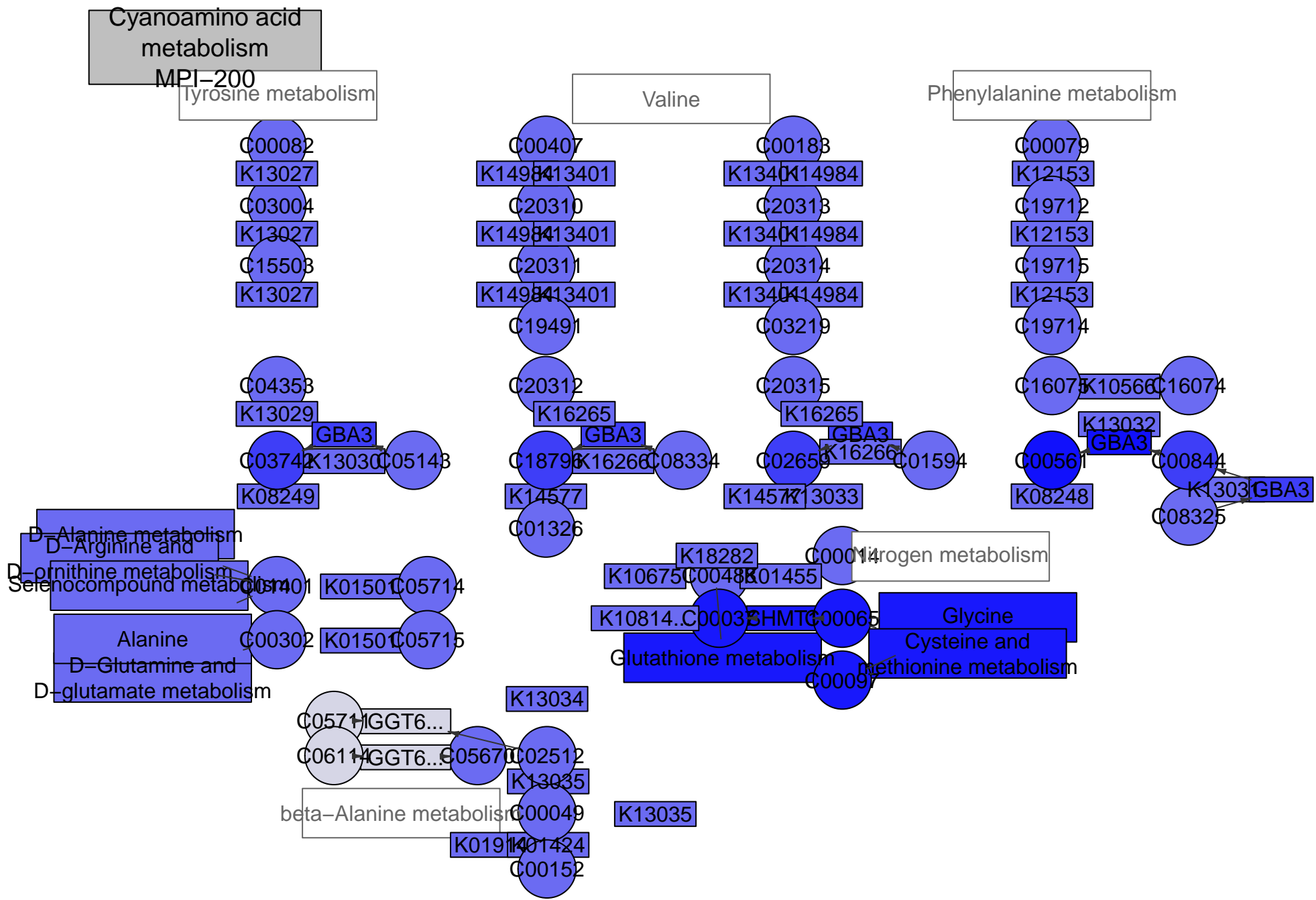
Valine

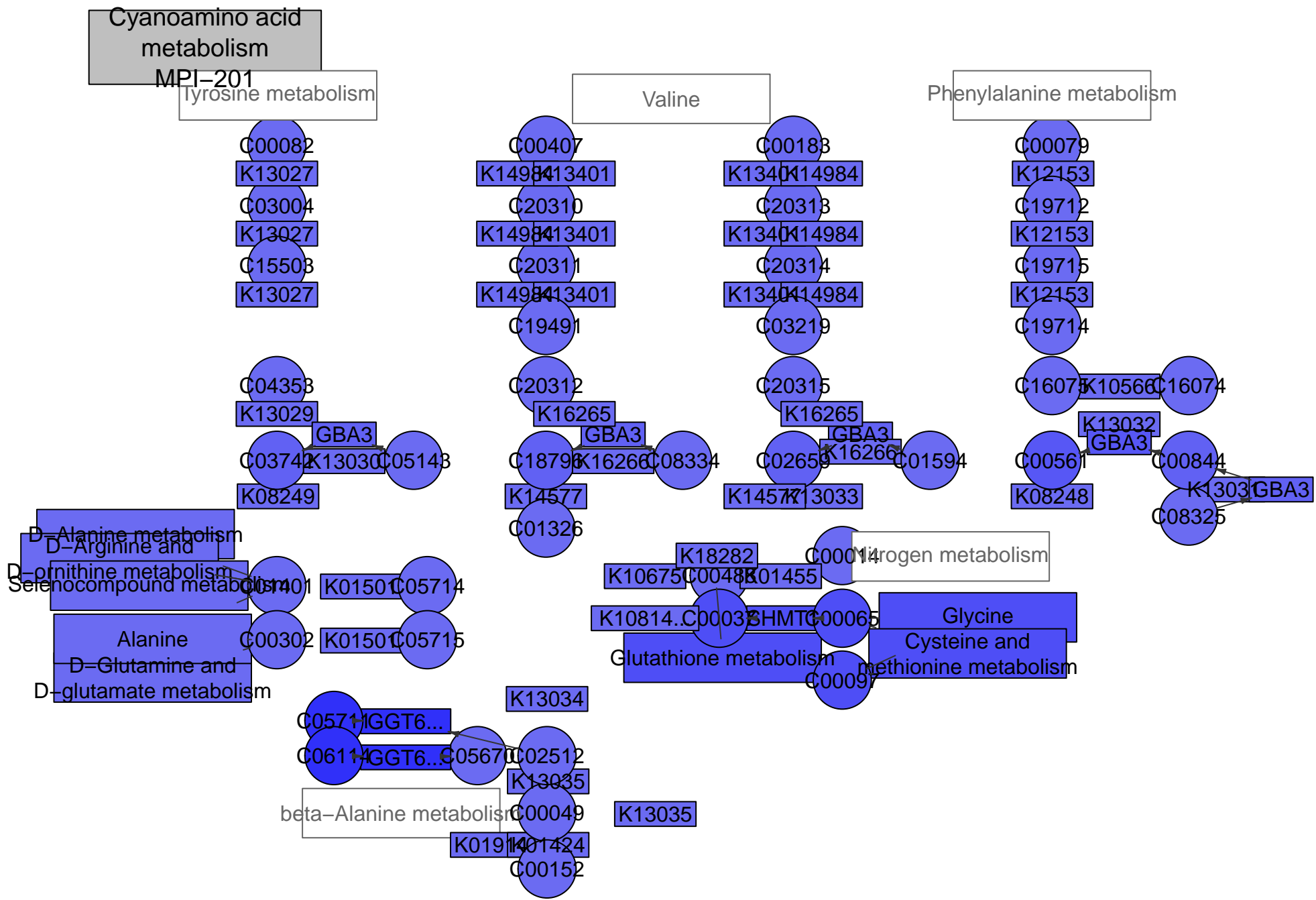
Phenylalanine metabolism

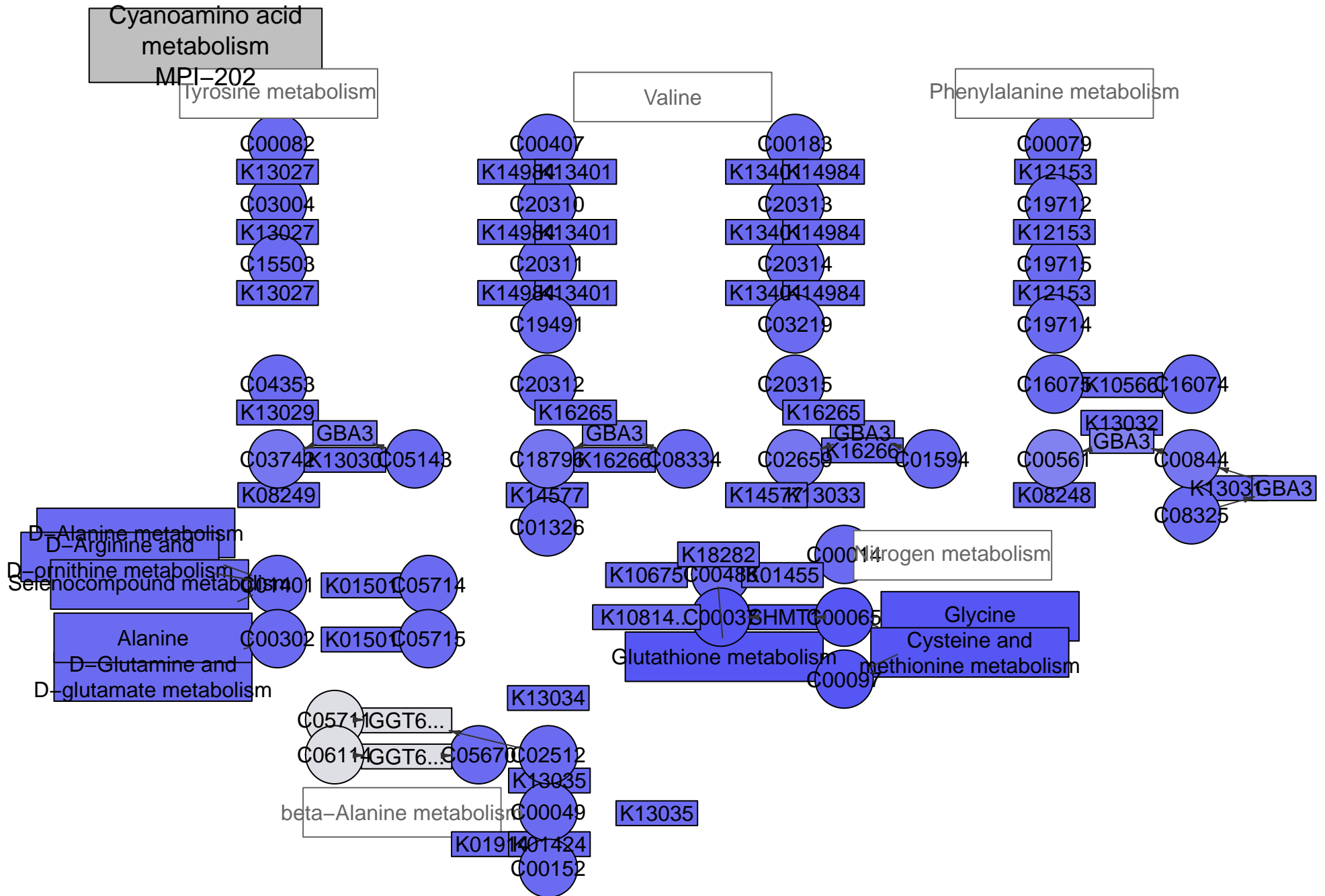


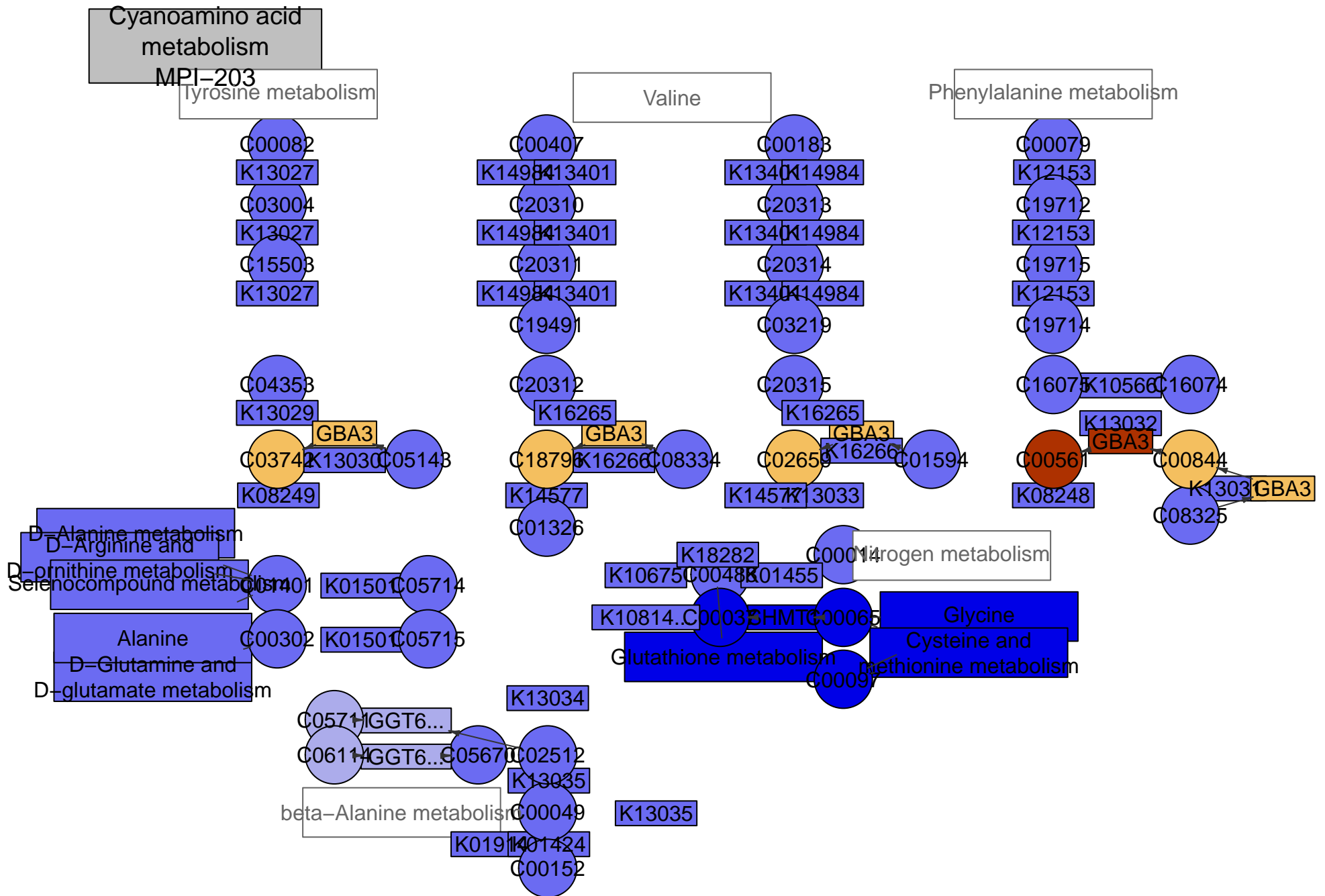


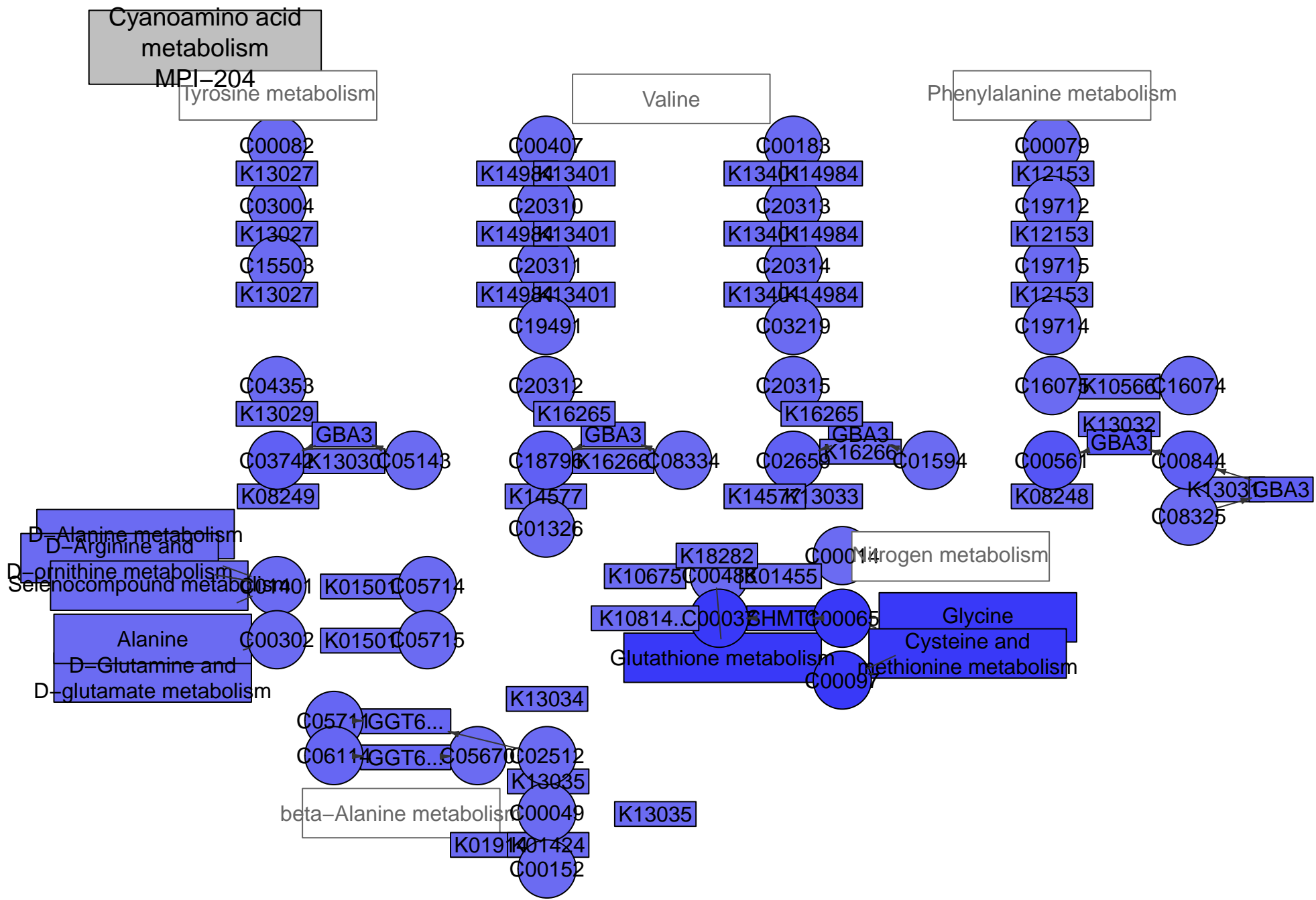


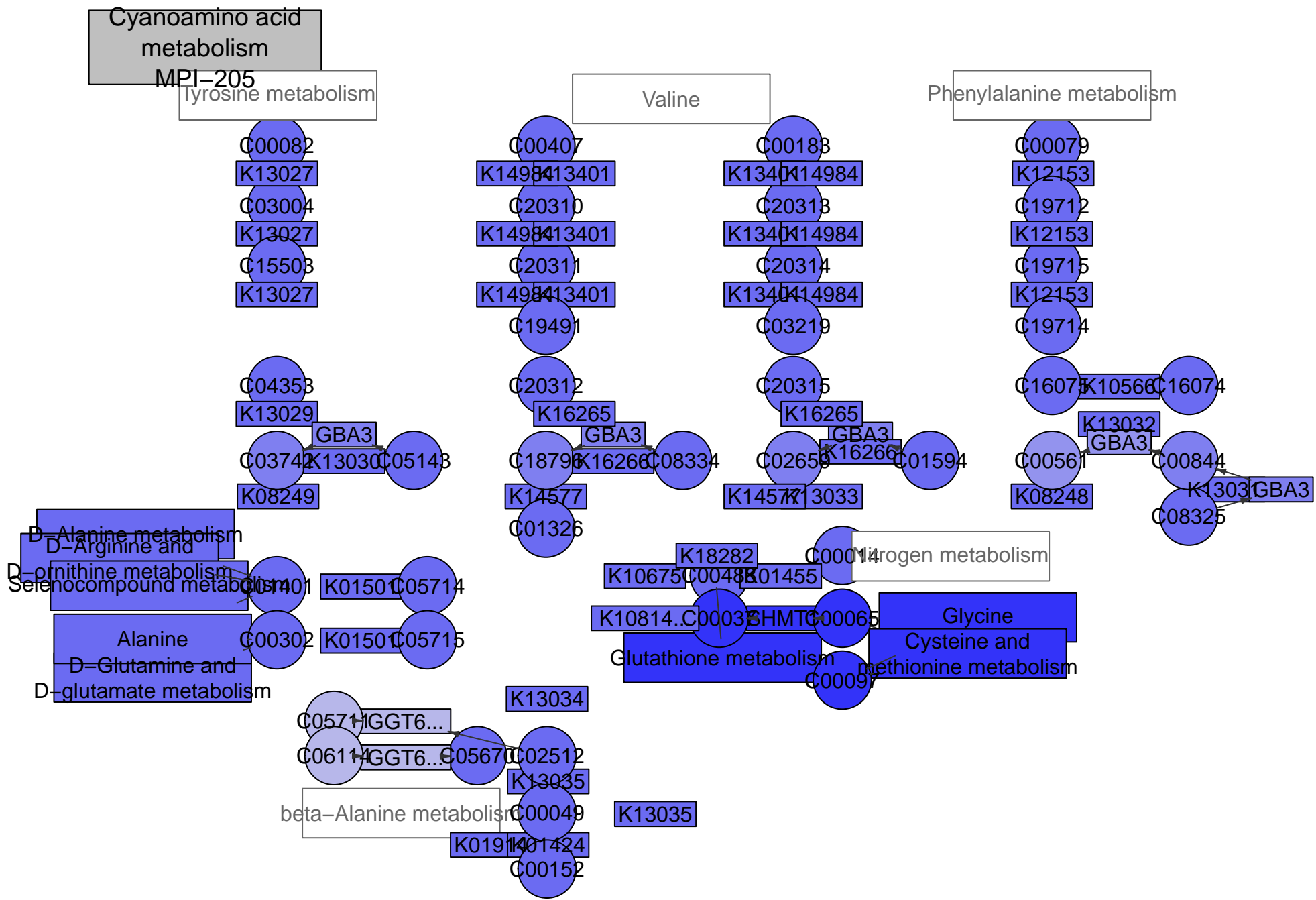


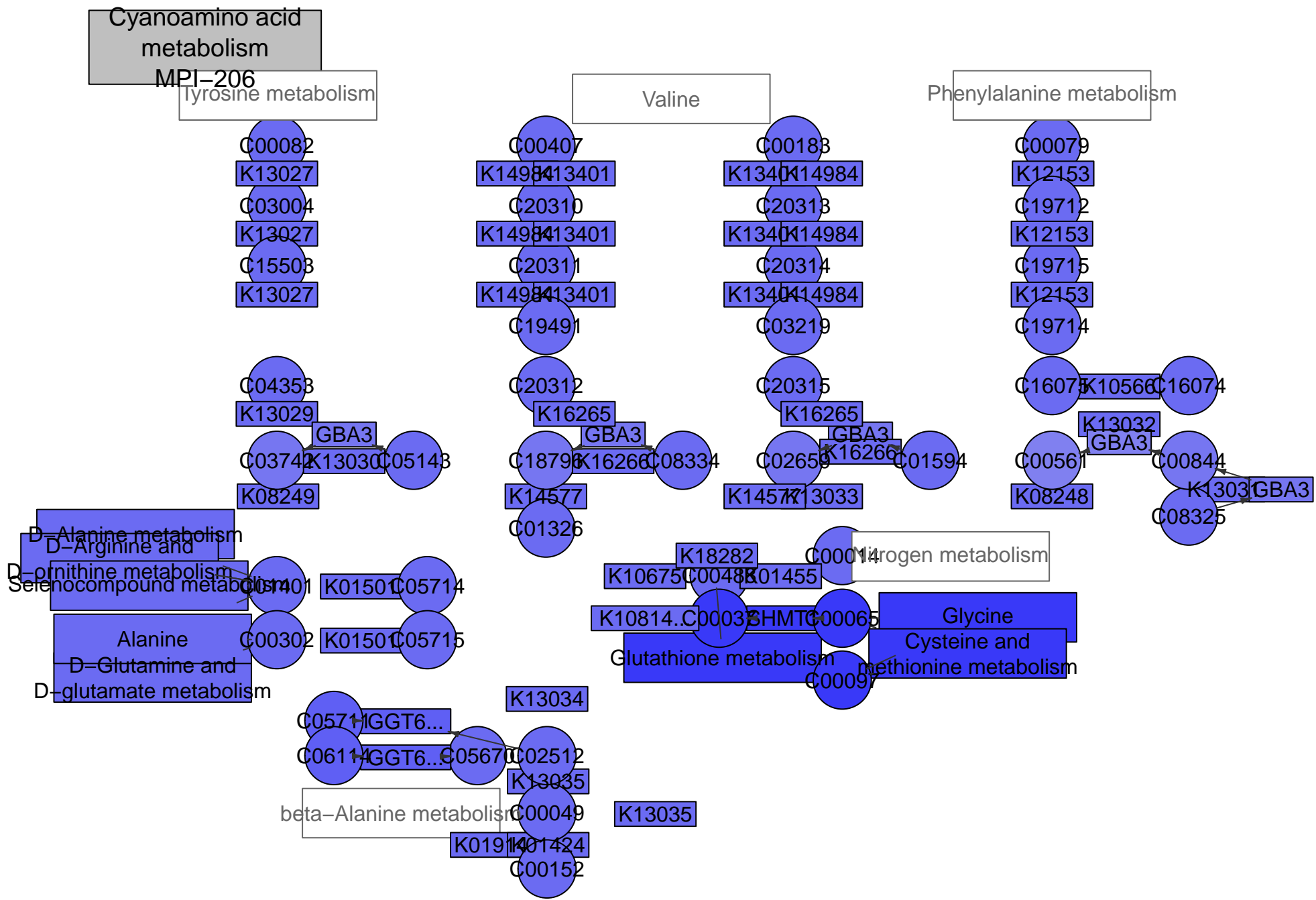






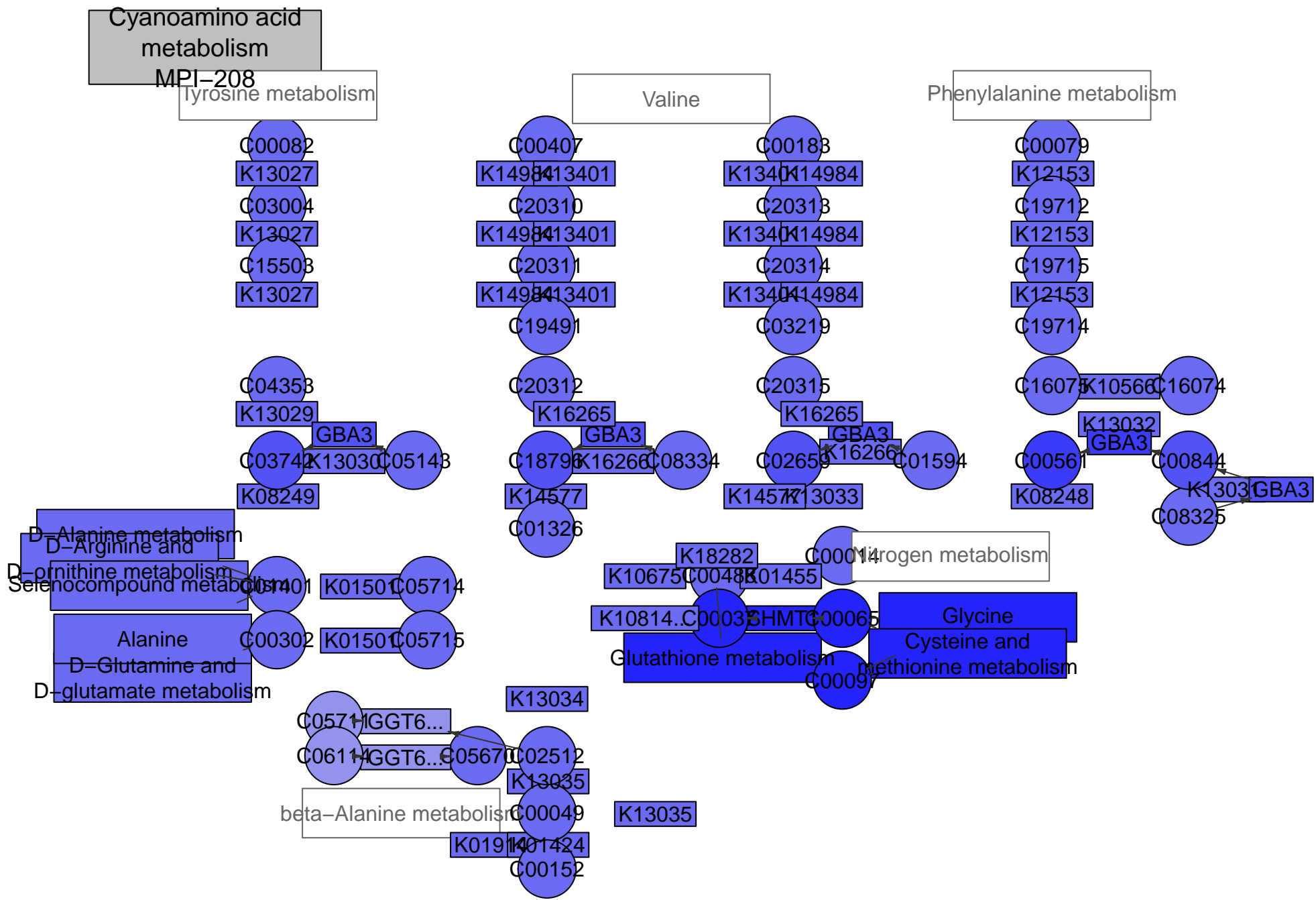




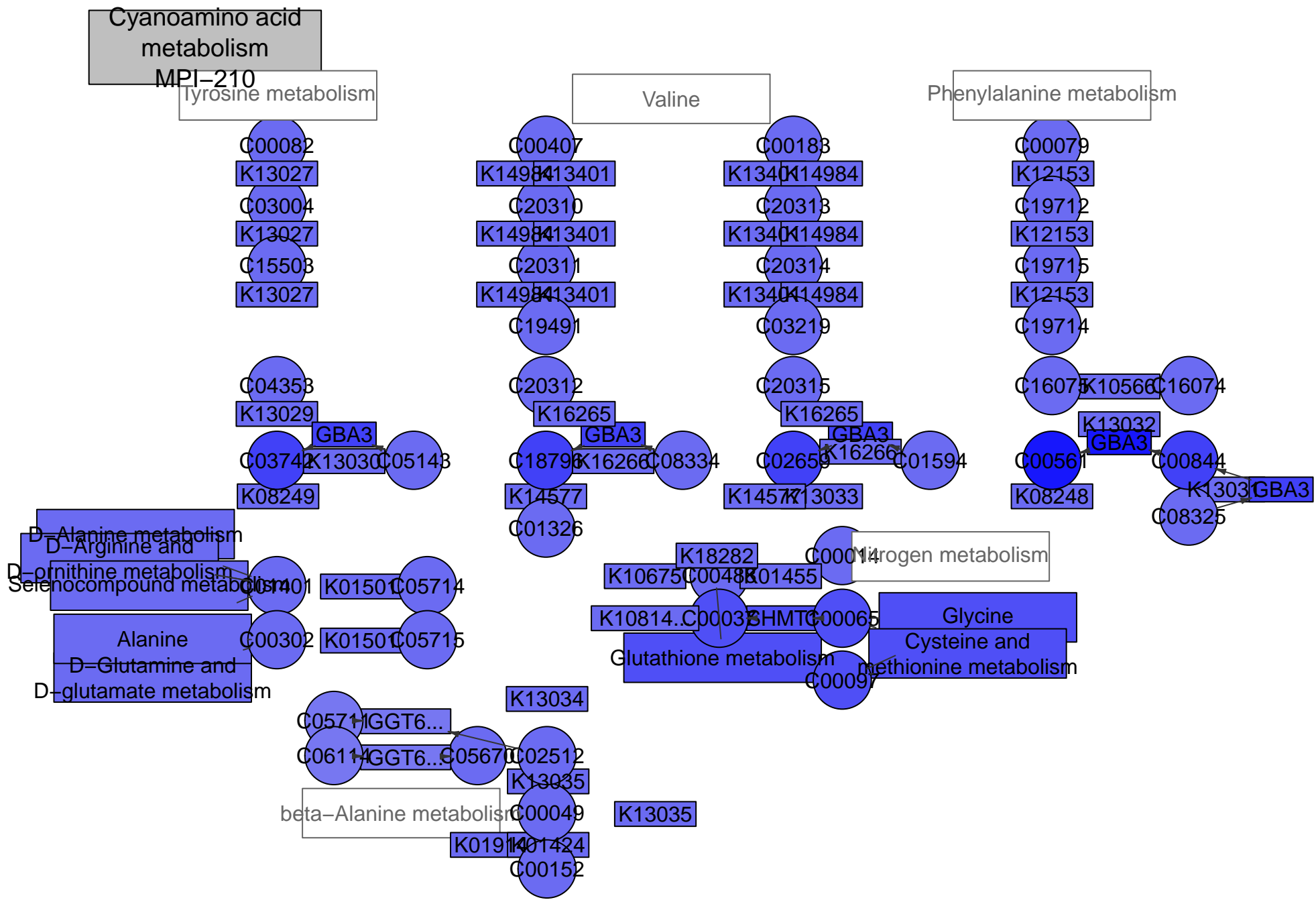




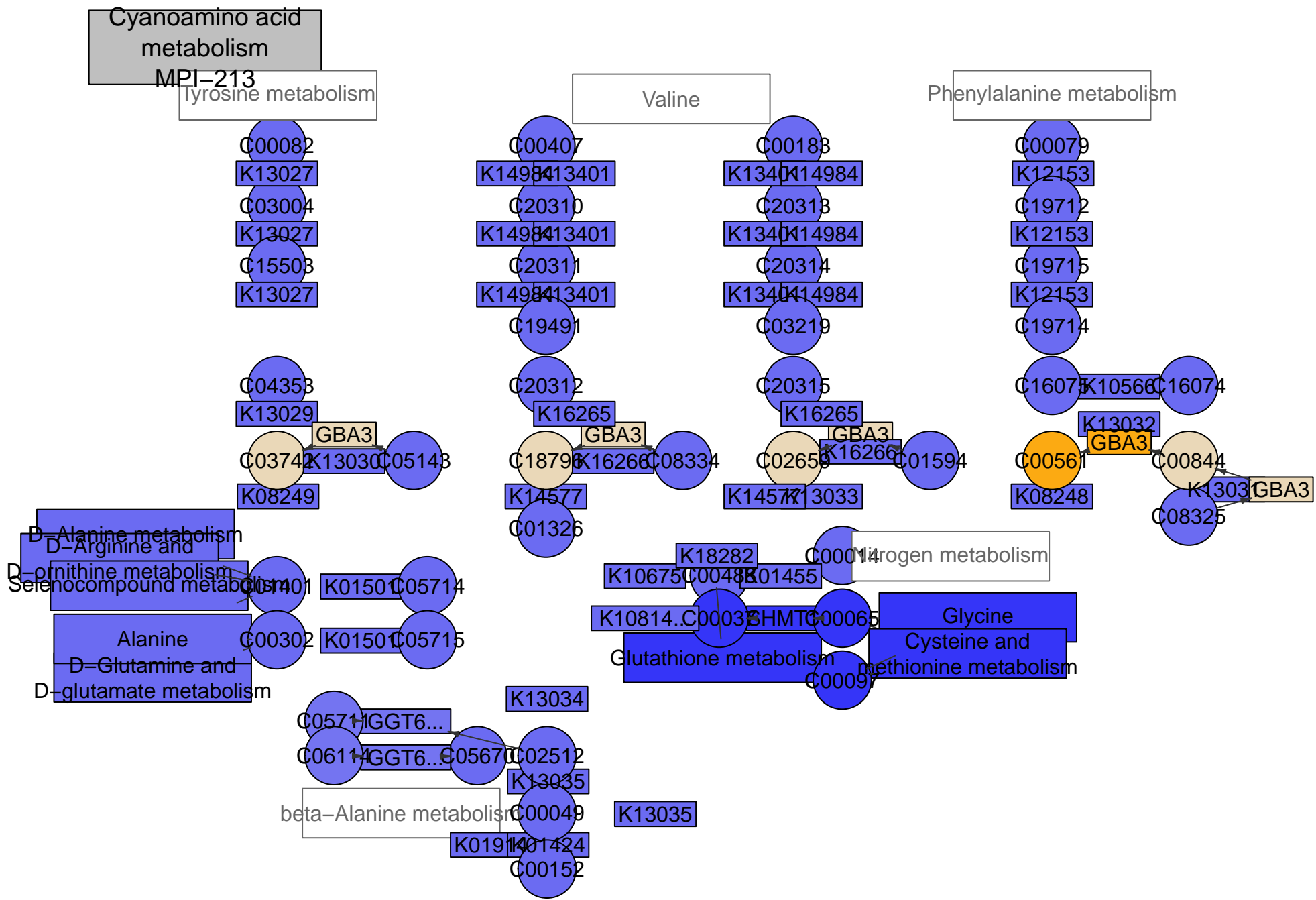








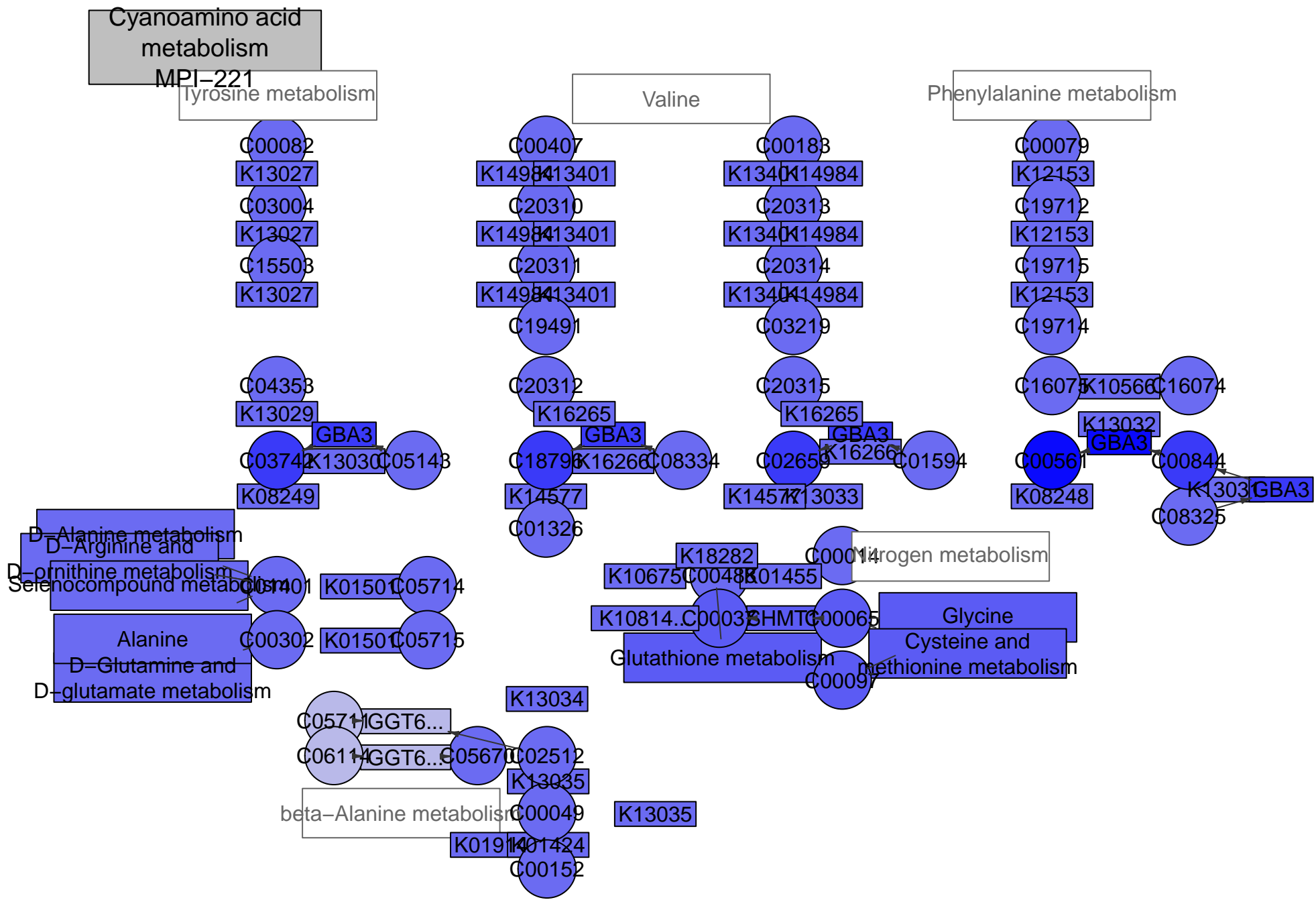








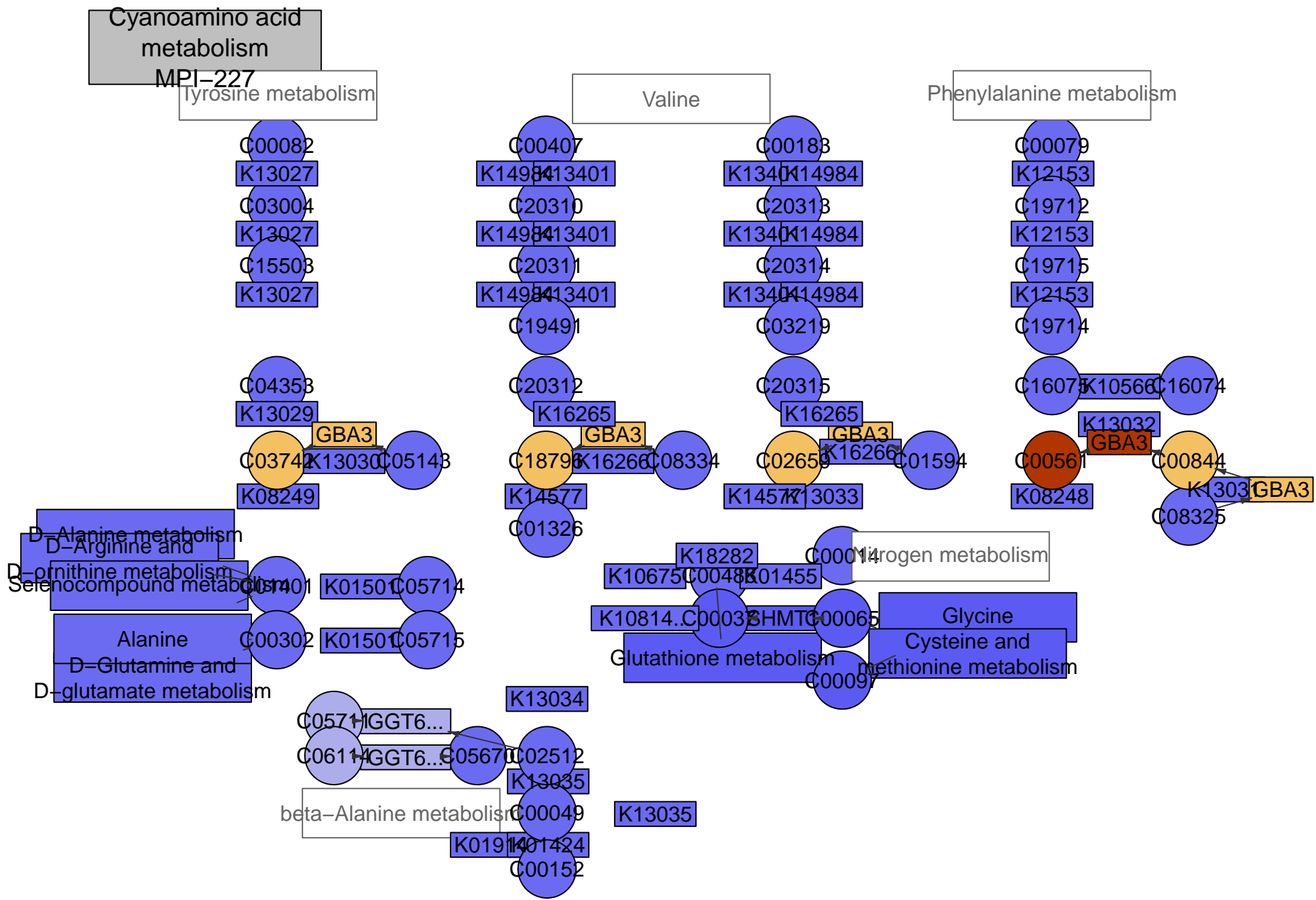




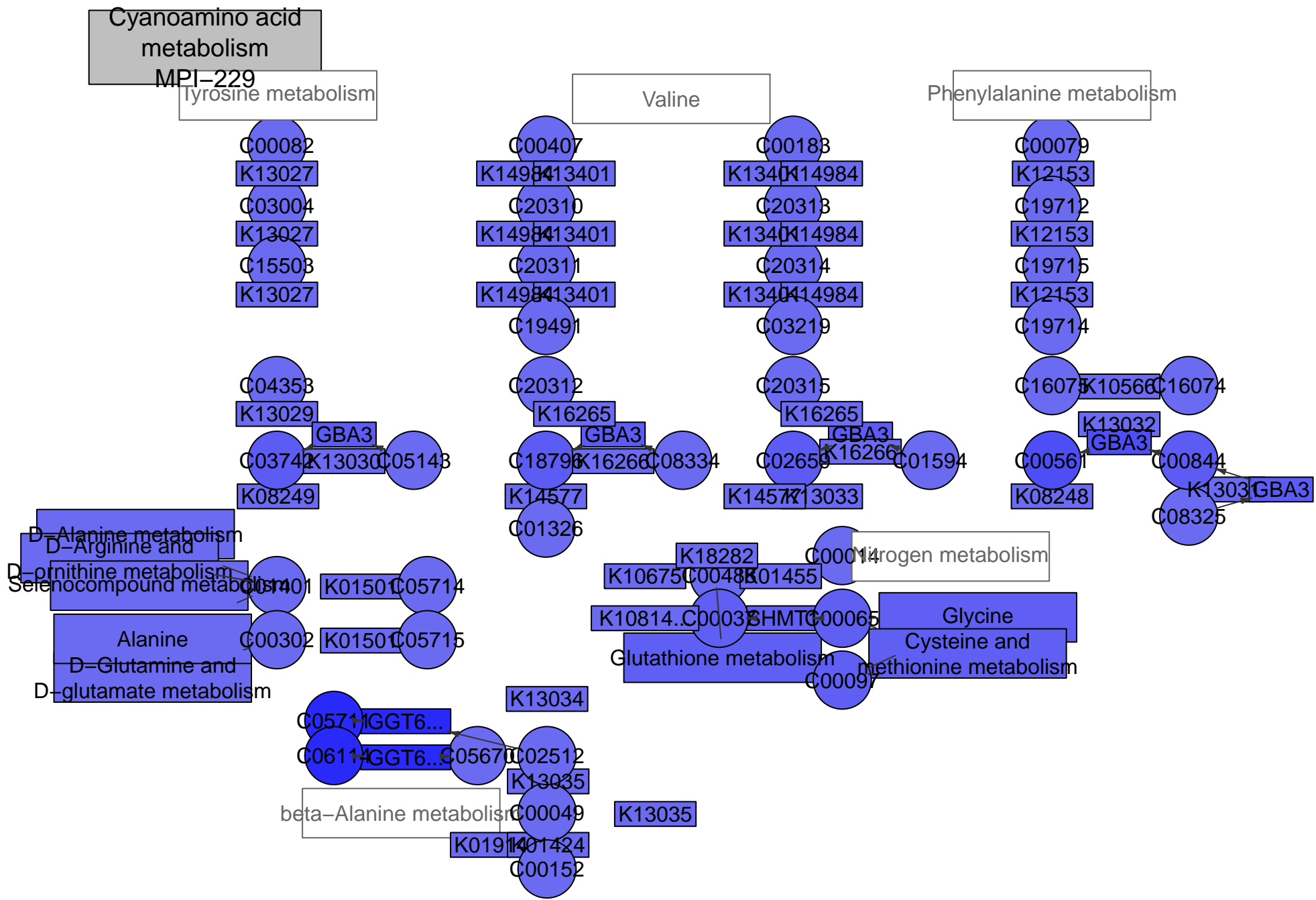


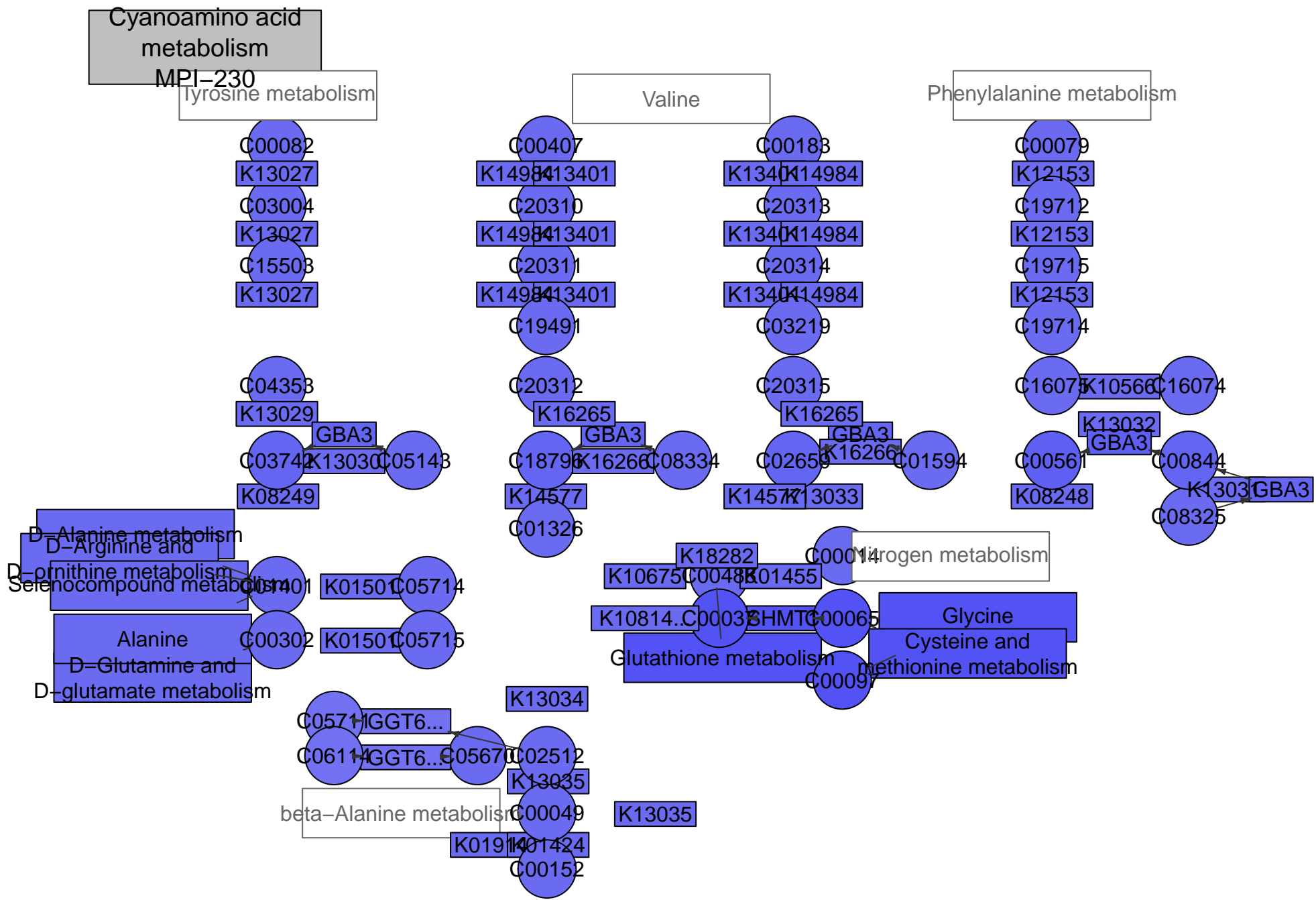






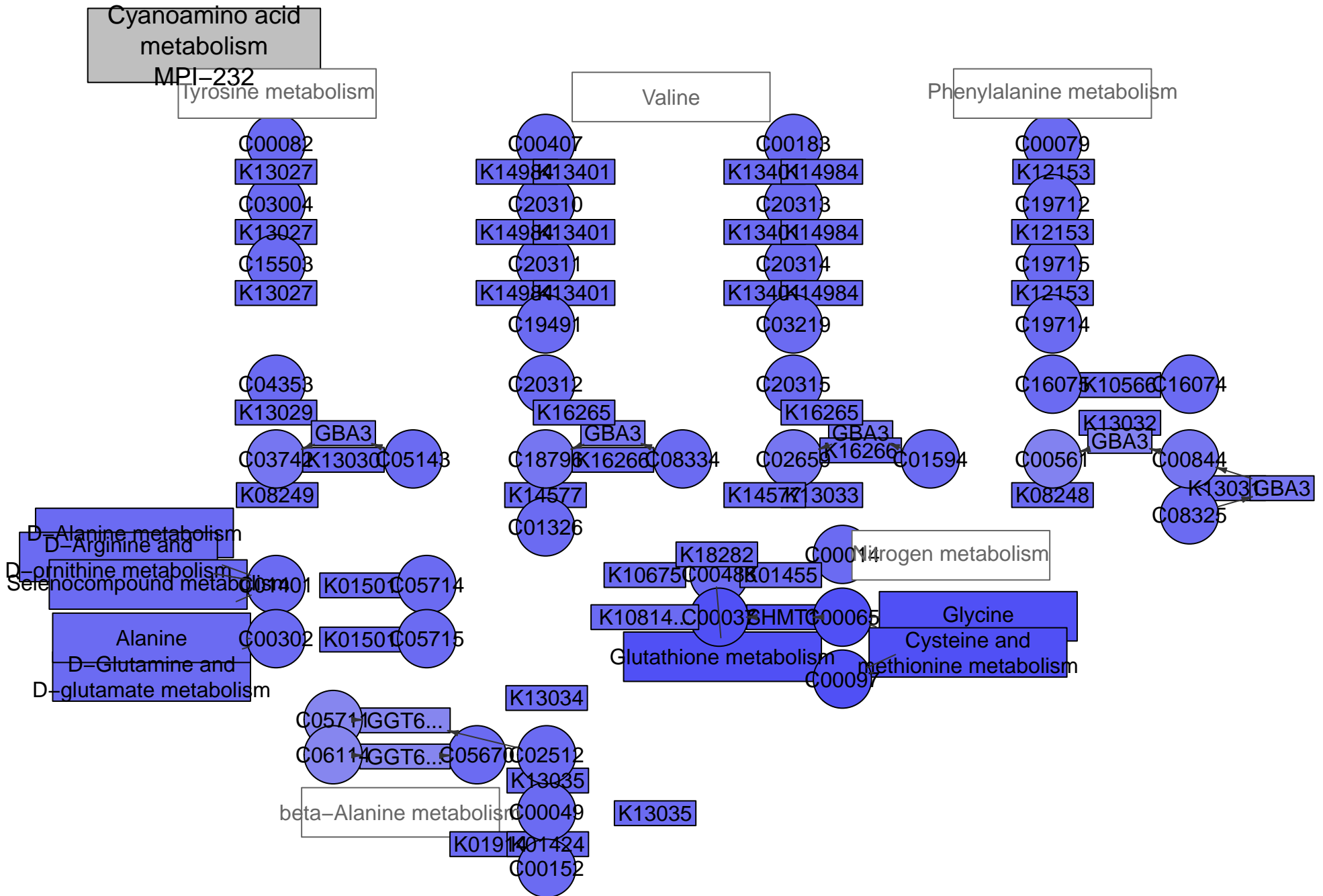


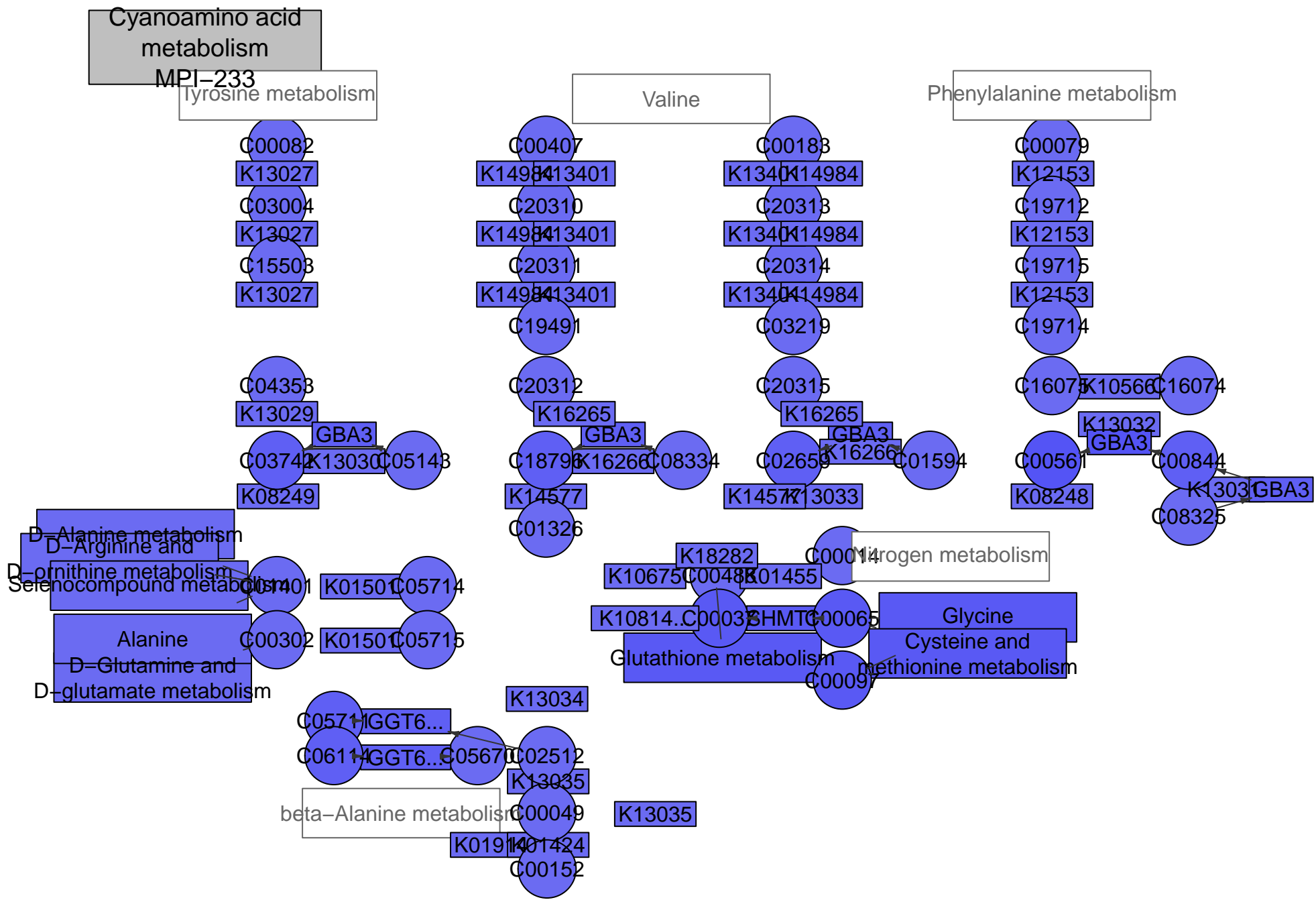














Cyanoamino acid metabolism

MPI-235

Tyrosine metabolism

Valine

Phenylalanine metabolism

