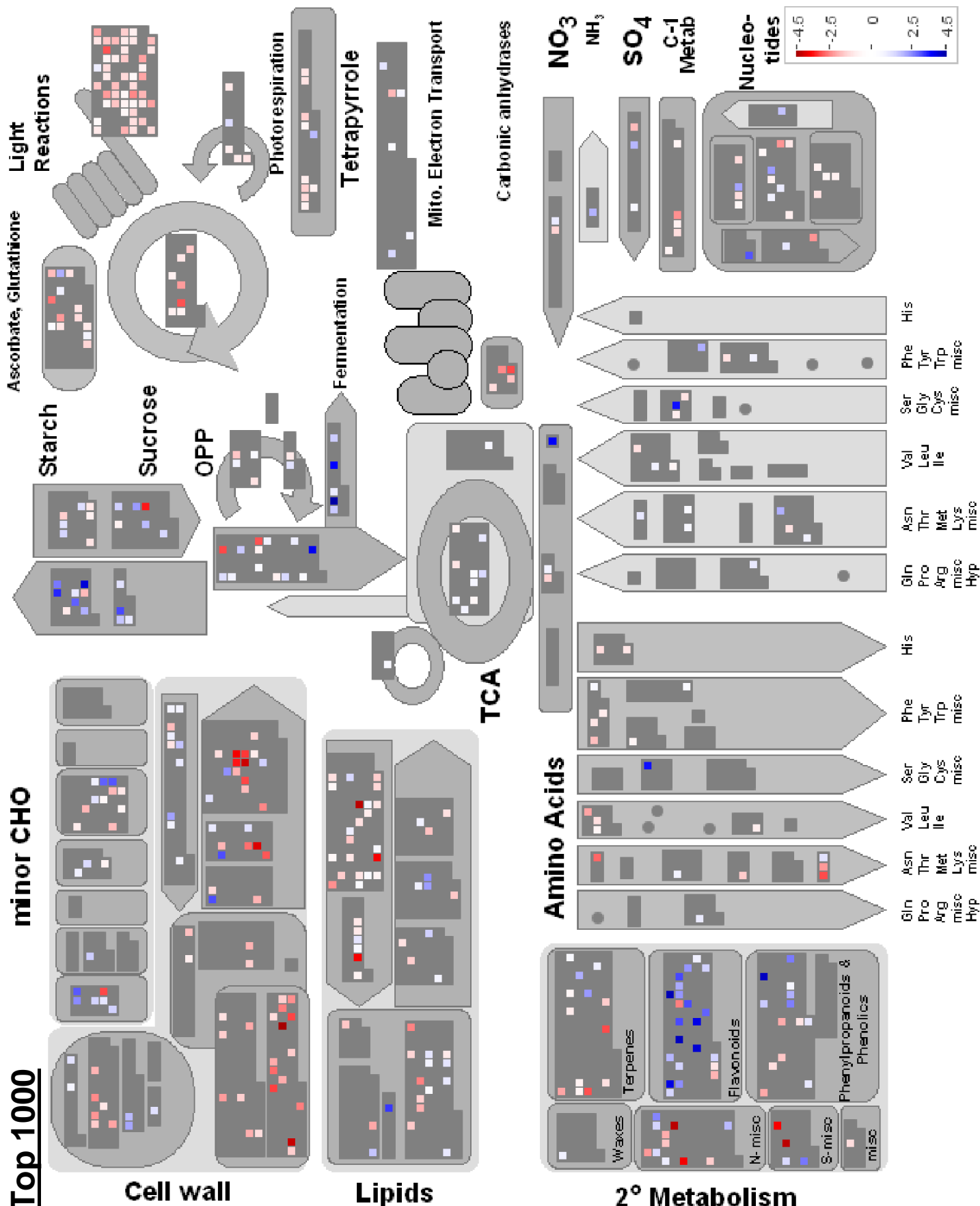


Supplemental Figure 1. Mapman visualization of general metabolism pathways for gene lists used in this study. These lists are the 1000 most significant up- and down-regulated genes for each accession during cold acclimation, the 423 genes significantly changed during cold acclimation in all accessions, genes positively and negatively correlating with acclimated freezing tolerance for the core accessions and genes up- and down-regulated in Te or Can in comparison to the other accessions. Except for the correlations, data are the mean fold changes of GCRMA (log₂ scale) expression estimates for the comparison of interest. The intensity of blue or red colour indicates the magnitude of up- and down-regulation, respectively. For the list of genes correlating with acclimated freezing tolerance, blue and red respectively indicate positively and negatively correlating genes. Interactive viewing of these data and of other pathways via the Mapman software is strongly encouraged and details are provided in Supplemental Dataset 1.

Te Top 1000

minor CHO



Cell wall

Lipids

2° Metabolism

Rsch Top 1000

minor CHO

Light Reactions

Ascorbate, Glutathione

Starch

Sucrose

OPP

Fermentation

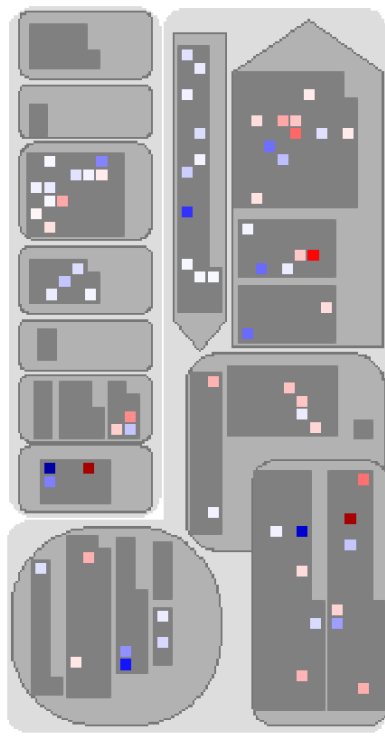
Photorespiration

Tetrapyrrole

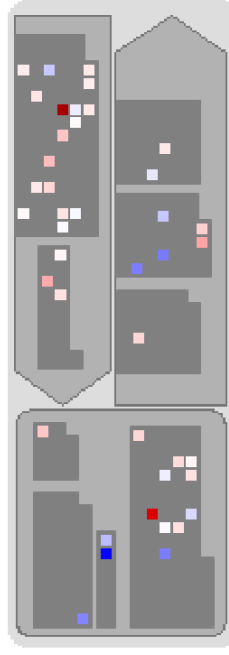
Mito. Electron Transport

TCA

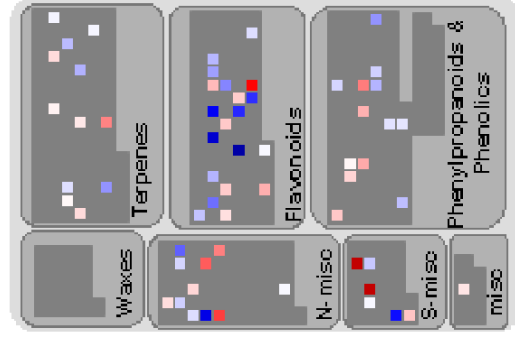
Carbonic anhydrases



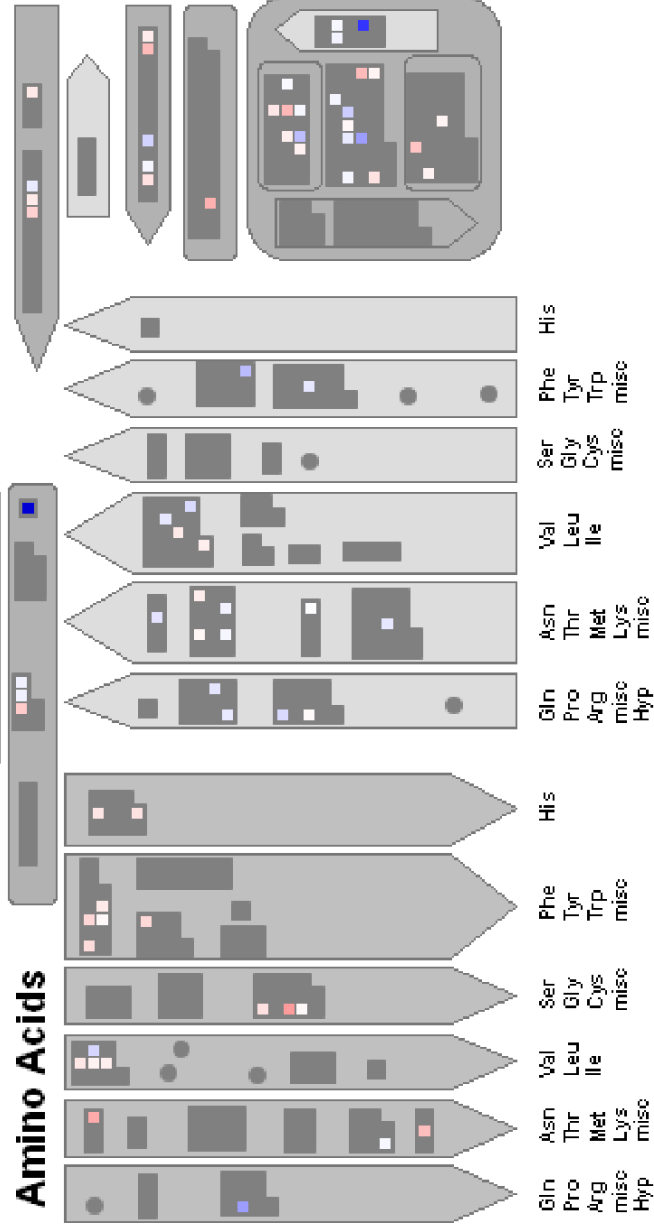
Cell wall



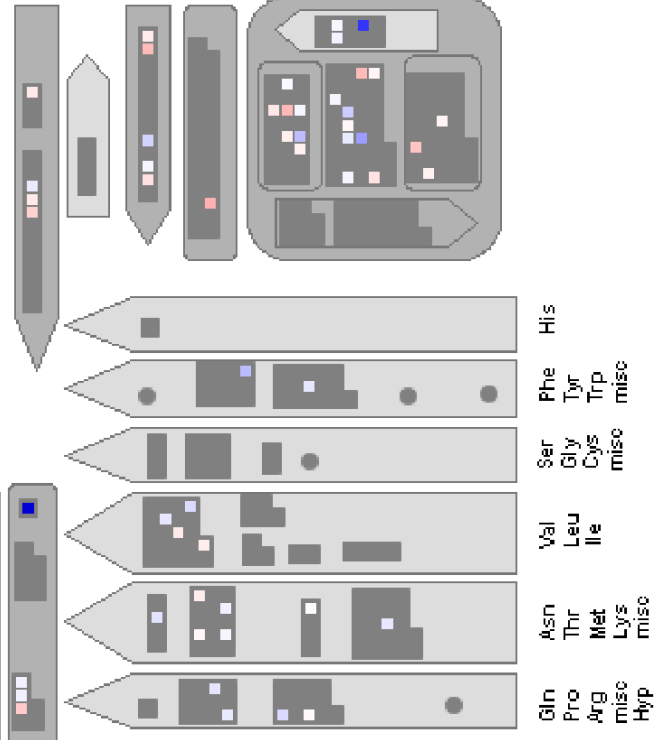
Lipids



2° Metabolism



Amino Acids



NO₃

NH₃

SO₄

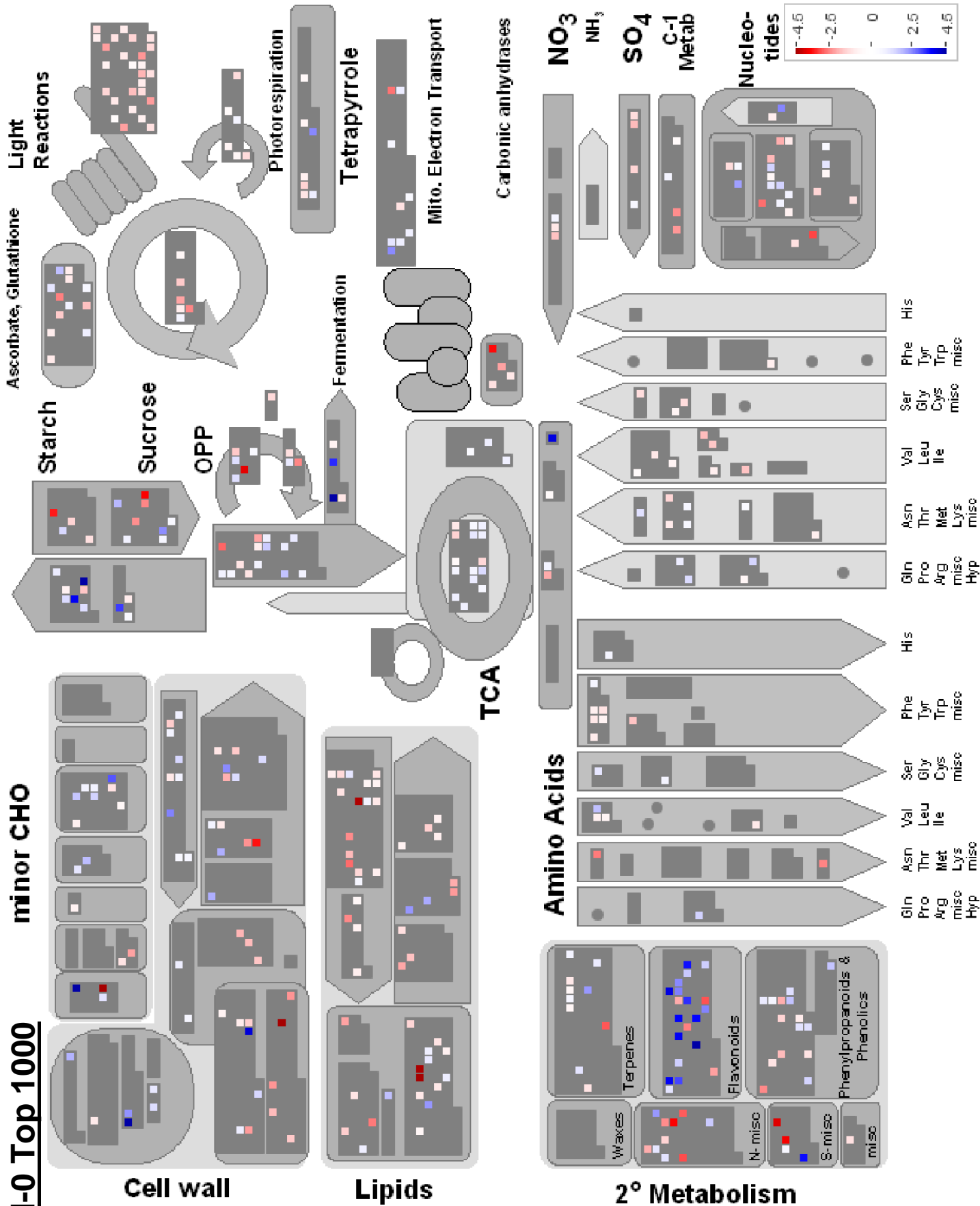
C-1 Metab

Nucleotides

- Gln
- Pro
- Arg
- misc
- Hyp
- Asn
- Thr
- Met
- Lys
- misc
- Val
- Leu
- Ile
- Ser
- Gly
- Cys
- misc
- Phe
- Tyr
- Trp
- misc
- His

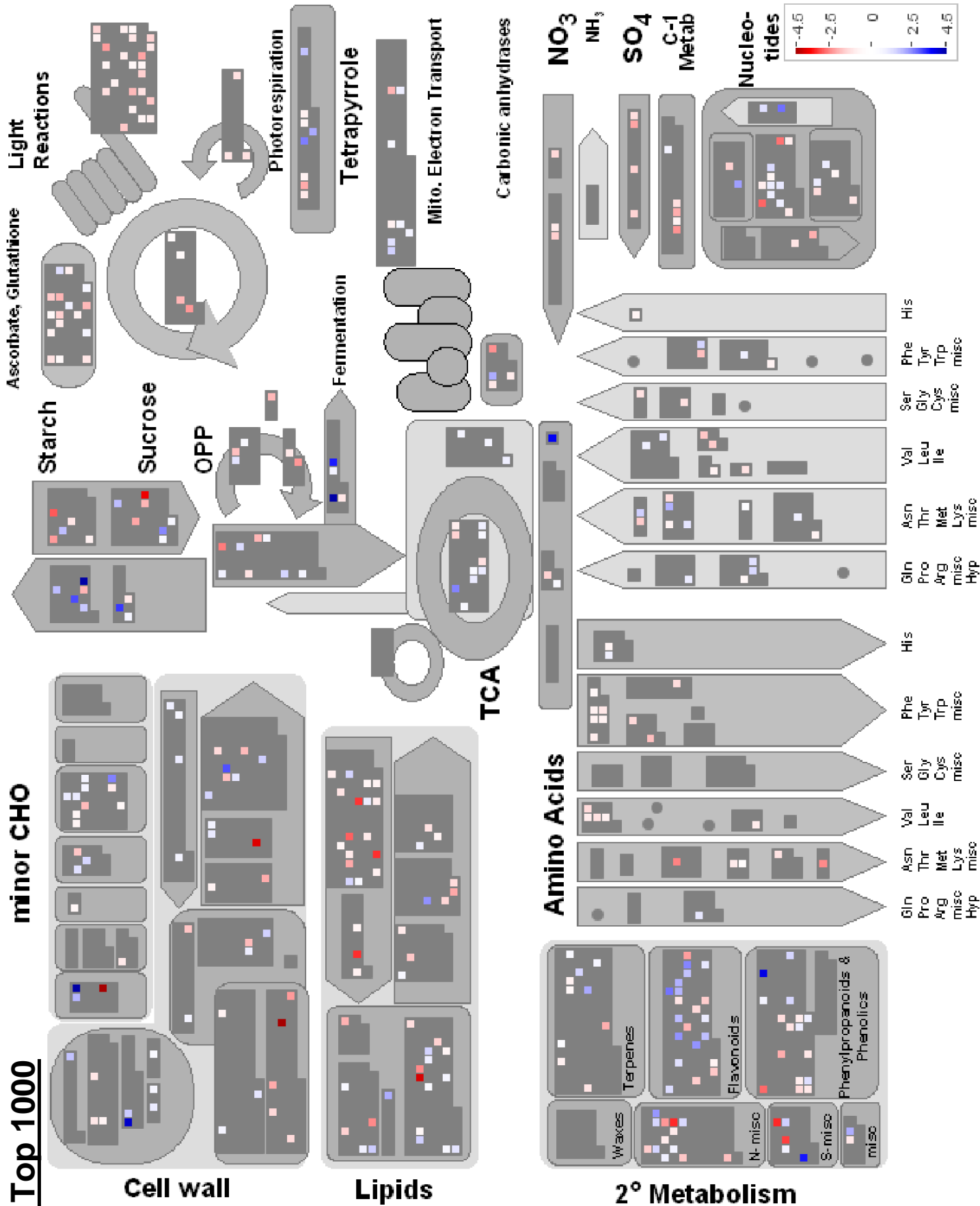
Col-0 Top 1000

minor CHO



Nd Top 1000

minor CHO



Cell wall

Lipids

2° Metabolism

Amino Acids

TCA

Fermentation

OPP

Sucrose

Starch

Ascorbate, Glutathione

Light Reactions

Photorespiration

Tetrapyrrole

Mito. Electron Transport

Carbonic anhydrases

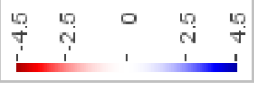
NO₃

NH₃

SO₄

C-1 Metab

Nucleotides

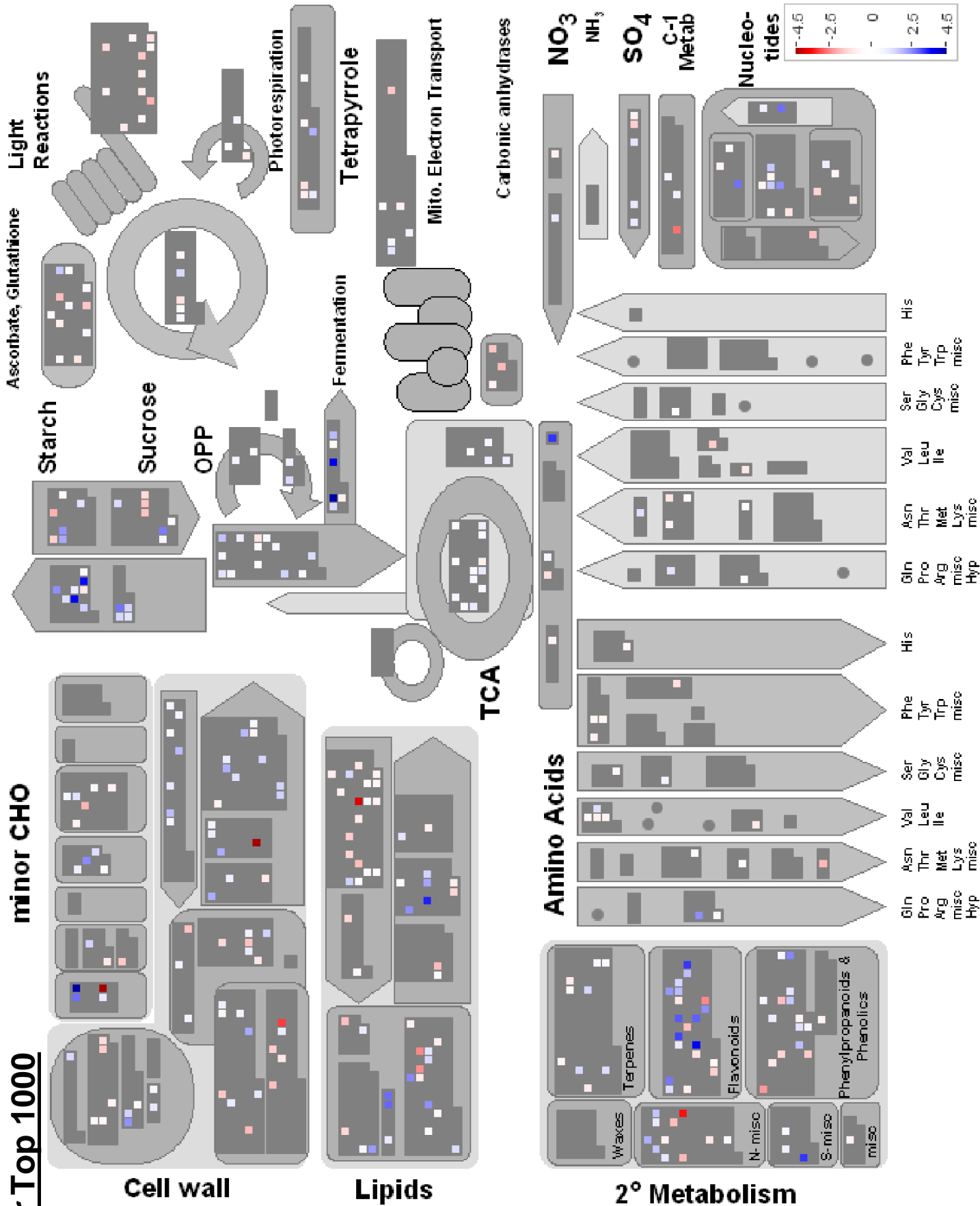


- His
- Phe
- Tyr
- Trp
- misc
- Ser
- Gly
- Cys
- misc
- Val
- Leu
- Ile
- Asn
- Thr
- Met
- Lys
- Gln
- Pro
- Arg
- misc
- Hyp
- His
- Phe
- Tyr
- Trp
- misc
- Ser
- Gly
- Cys
- misc
- Val
- Leu
- Ile
- Asn
- Thr
- Met
- Lys
- Gln
- Pro
- Arg
- misc
- Hyp

- Waxes
- Terpenes
- Flavonoids
- Phenylpropanoids & Phenolics
- N-misc
- S-misc
- misc

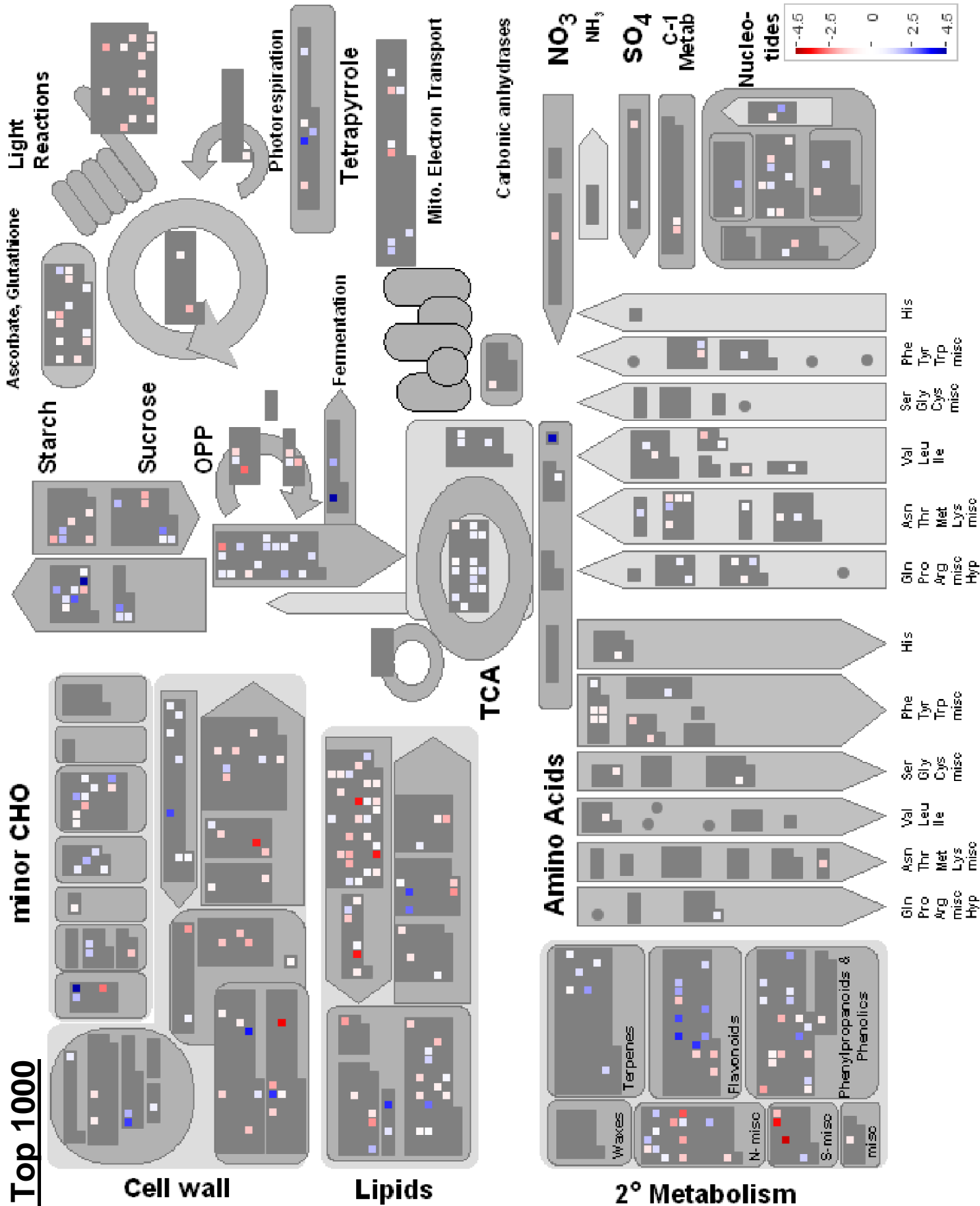
Ler Top 1000

minor CHO



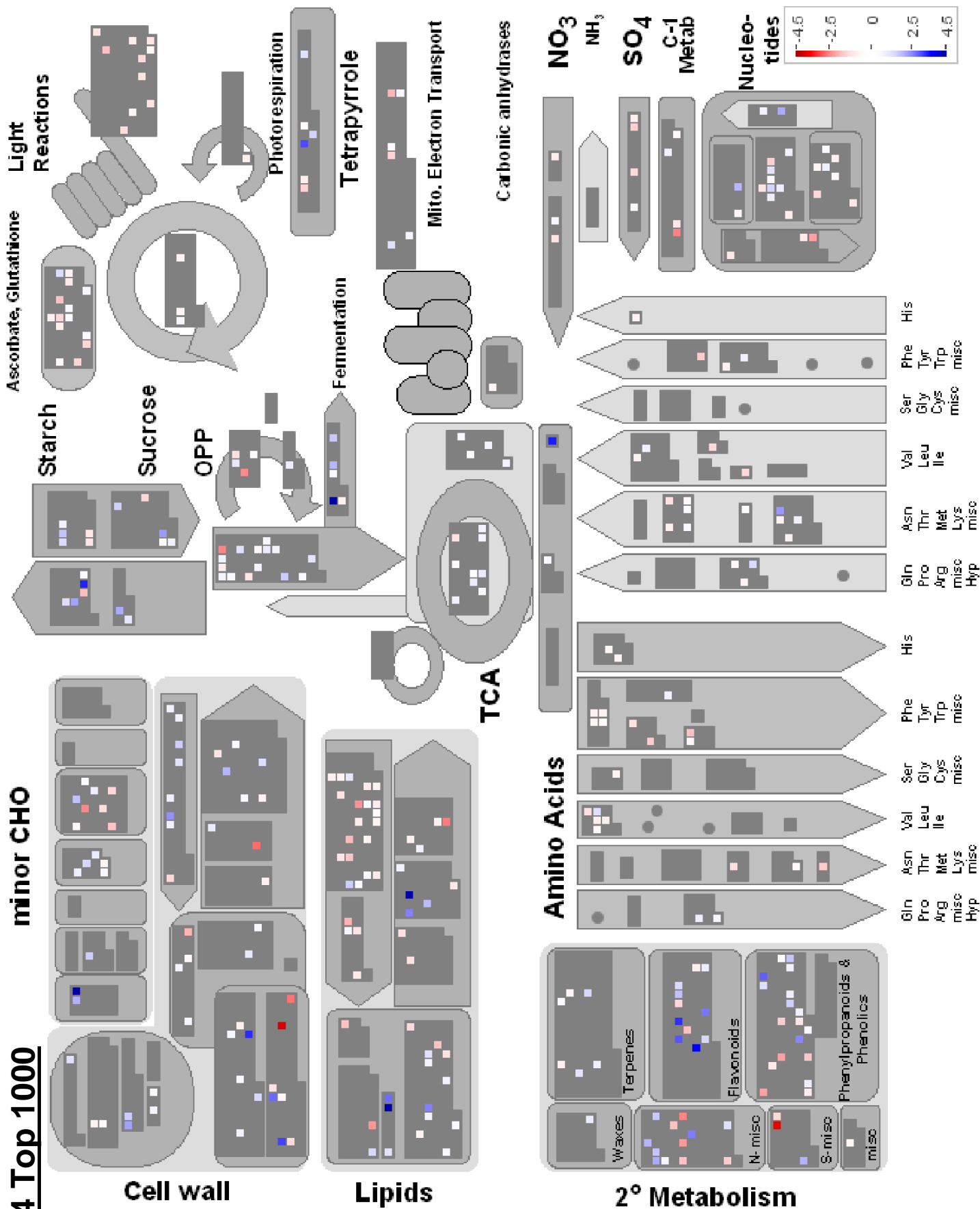
Co Top 1000

minor CHO



C24 Top 1000

minor CHO



Cell wall

Lipids

2° Metabolism

Amino Acids

TCA

Fermentation

Carbonic anhydrases

Light Reactions

Ascorbate, Glutathione

Starch

Sucrose

OPP

Photorespiration

Tetrapyrrole

Mito. Electron Transport

NO₃

NH₃

SO₄

C-1 Metab

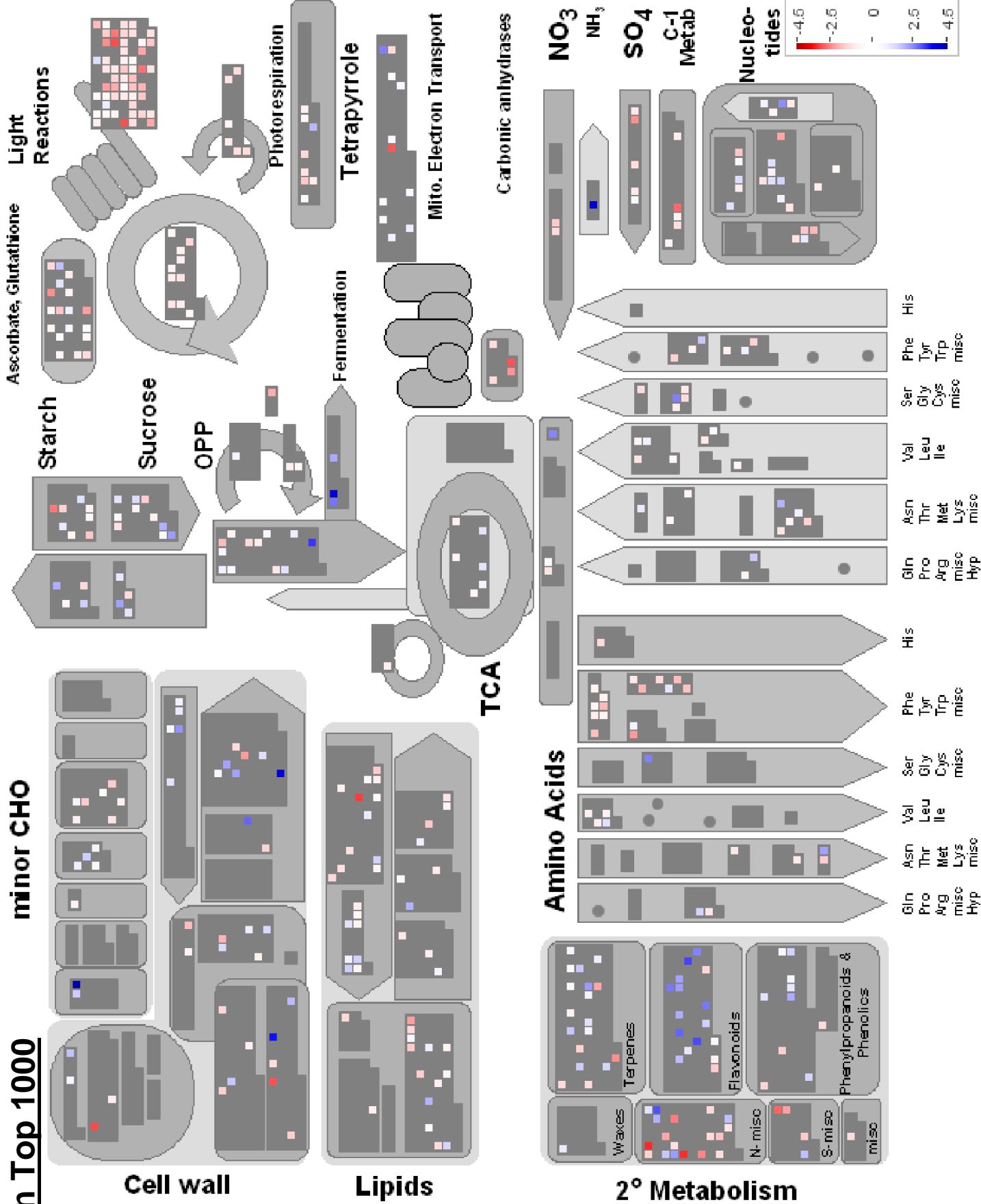
Nucleotides



- Gln
- Pro
- Arg
- misc
- Hyp
- Asn
- Thr
- Met
- Lys
- misc
- Val
- Leu
- Ile
- Ser
- Gly
- Cys
- misc
- Phe
- Tyr
- Trp
- misc
- His

Can Top 1000

minor CHO



Cell wall

Lipids

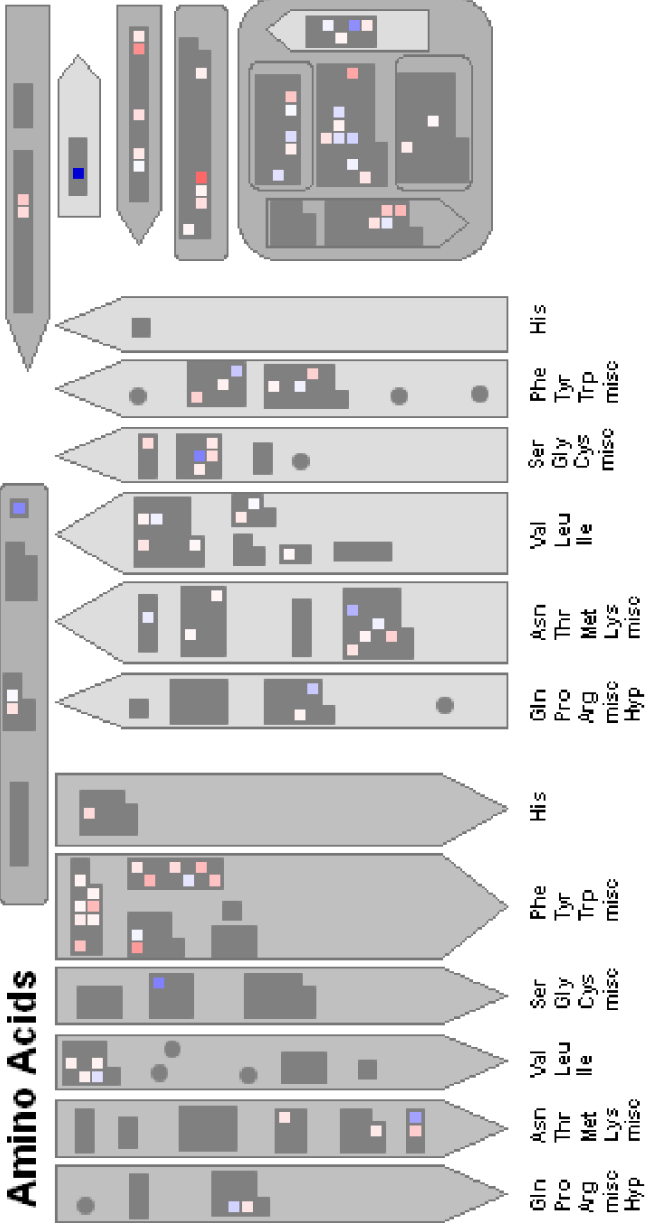
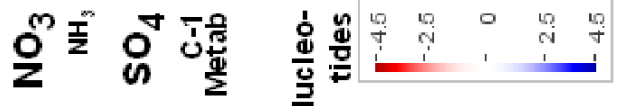
2° Metabolism

Amino Acids

TCA

Fermentation

Carbonic anhydrases



Light Reactions

Ascorbate, Glutathione

Starch

Sucrose

OPP

Photorespiration

Tetrapyrrole

Mito. Electron Transport

NO₃

NH₃

SO₄

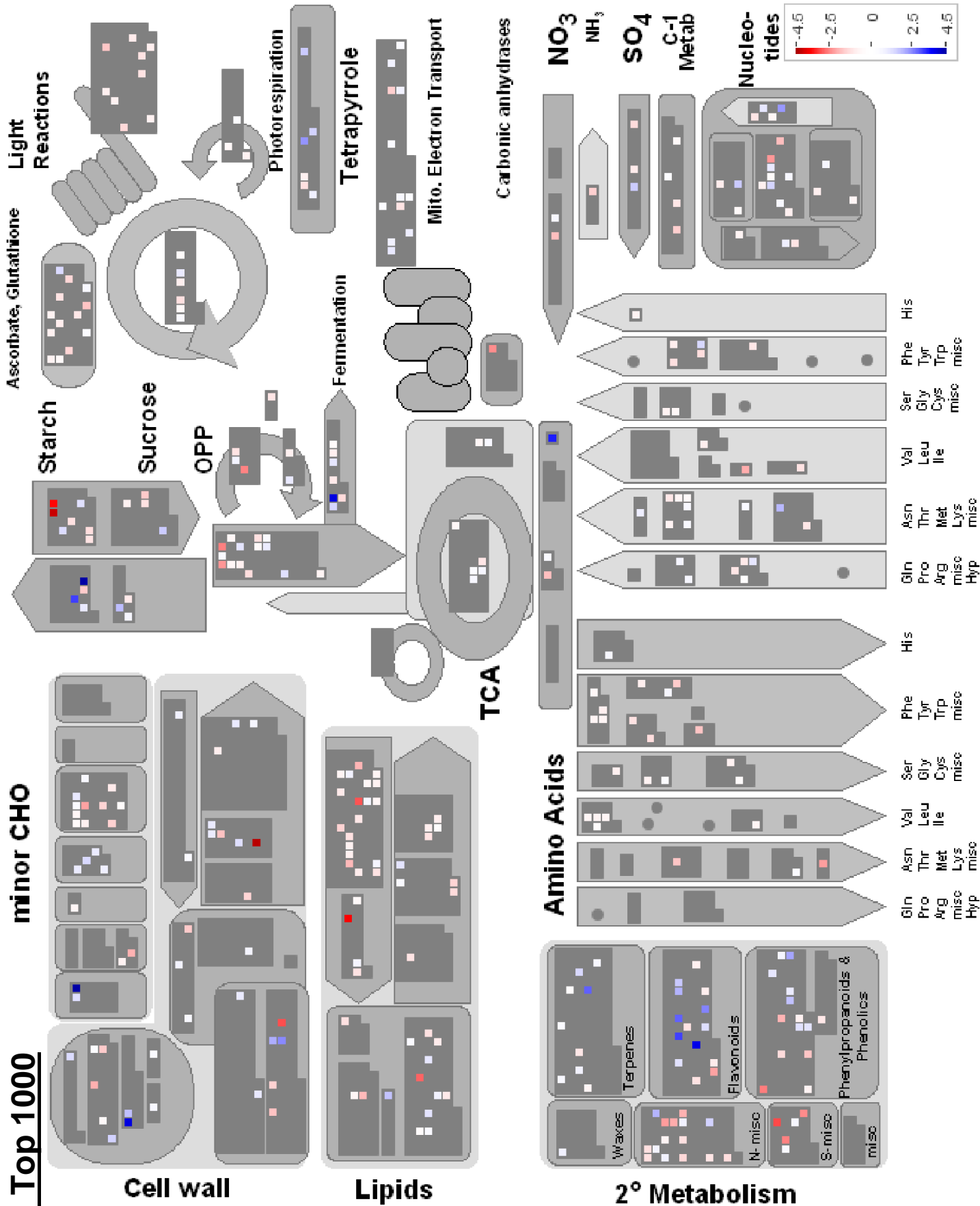
C-1 Metab

Nucleotides

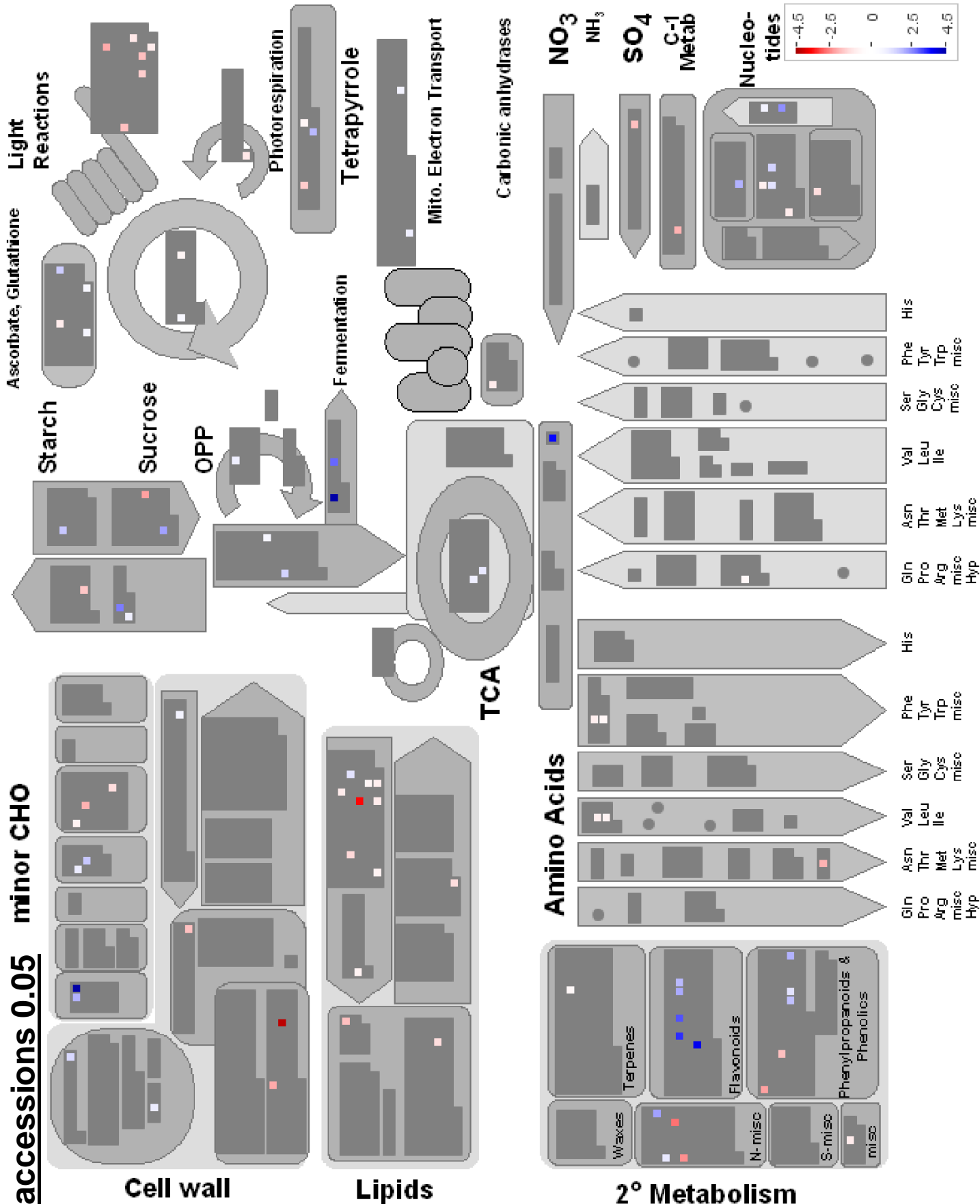
- Gln
- Pro
- Arg
- misc
- Lys
- Hyp
- Asn
- Thr
- Met
- Lys
- Val
- Leu
- Ile
- Ser
- Gly
- Cys
- misc
- Phe
- Tyr
- Trp
- misc
- His

Cvi Top 1000

minor CHO

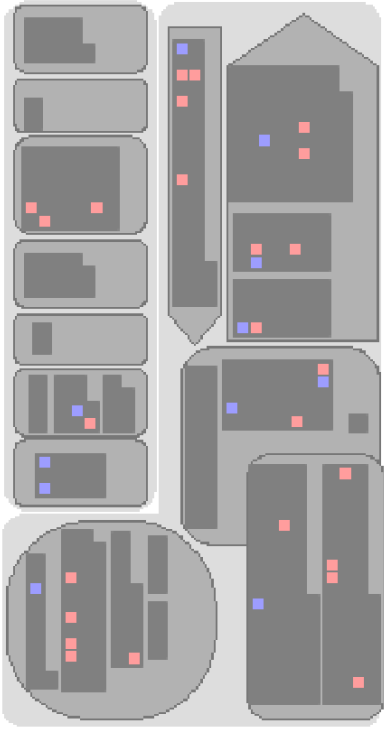


All accessions 0.05 minor CHO



ACC Correlation

minor CHO



Cell wall

Lipids

Light Reactions

Ascorbate, Glutathione

Starch

Sucrose

OPP

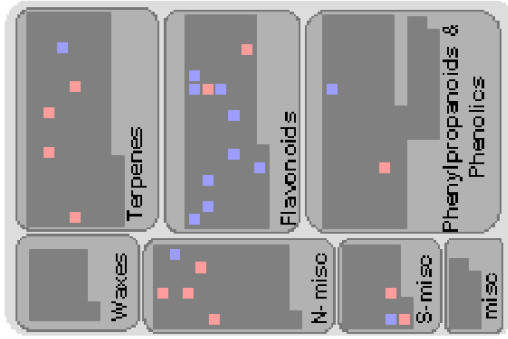
Fermentation

Tetrapyrrole

Mito. Electron Transport

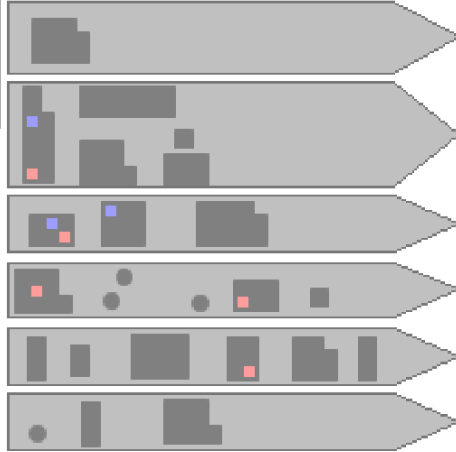
TCA

Carbonic anhydrases



2° Metabolism

Amino Acids



Gln
Pro
Arg
misc
Lys
Hyp

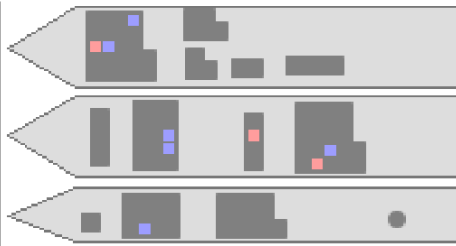
Asn
Thr
Met
Lys
misc

Val
Leu
Ile

Ser
Gly
Cys
misc

Phe
Tyr
Trp
misc

His



Gln
Pro
Arg
misc
Lys
Hyp

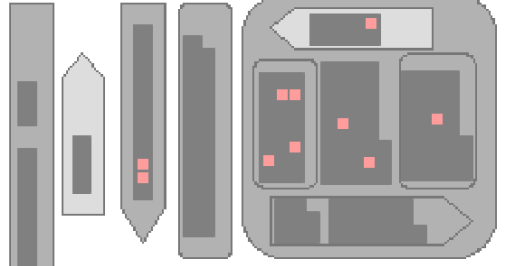
Asn
Thr
Met
Lys
misc

Val
Leu
Ile

Ser
Gly
Cys
misc

Phe
Tyr
Trp
misc

His



NO₃
NH₃

SO₄
C-1
Metab

Nucleo-
tides

Red: -ve correlation

Blue: +ve correlation

NA Te vs others

minor CHO

Light Reactions

Ascorbate, Glutathione

Starch

Sucrose

OPP

Fermentation

Tetrapyrrole

Mito. Electron Transport

Carbonic anhydrases

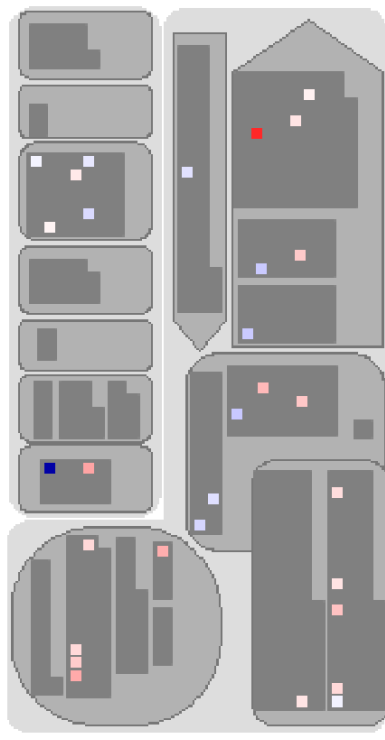
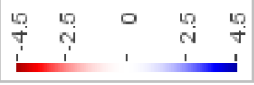
NO₃

NH₃

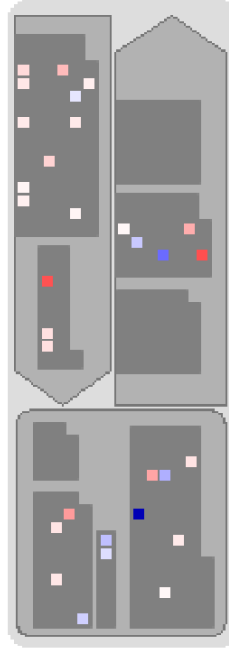
SO₄

C-1 Metab

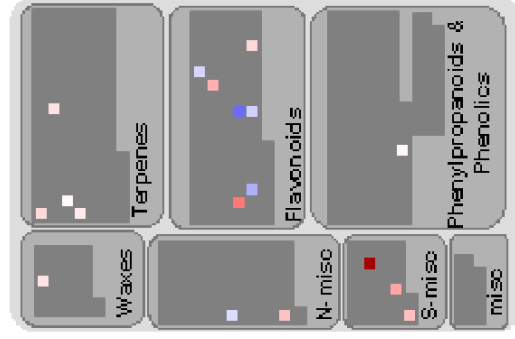
Nucleotides



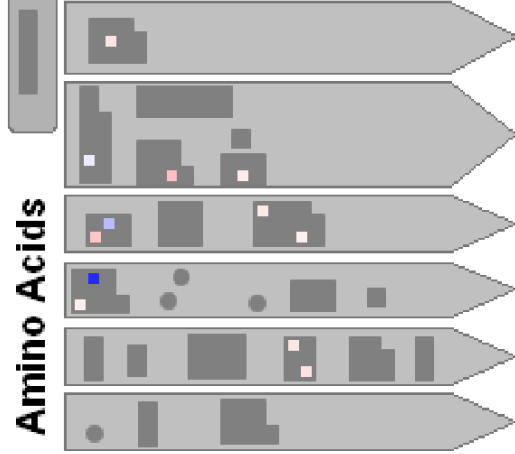
Cell wall



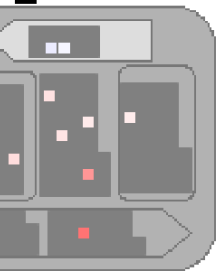
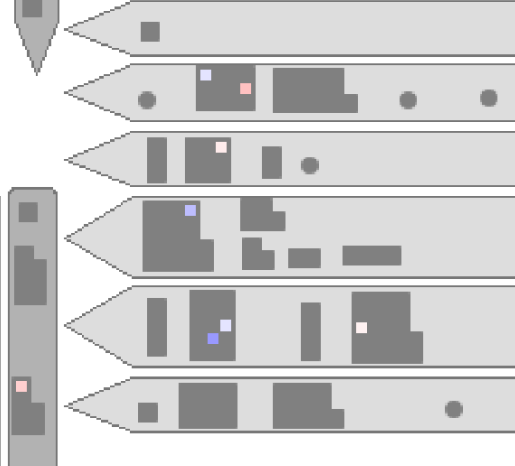
Lipids



2° Metabolism



Amino Acids



Nucleotides

- His
- Phe
- Tyr
- Trp
- misc
- Ser
- Gly
- Cys
- misc
- Val
- Leu
- Ile
- Asn
- Thr
- Met
- Lys
- Gln
- Pro
- Arg
- misc
- Hyp
- His
- Phe
- Tyr
- Trp
- misc
- Ser
- Gly
- Cys
- misc
- Val
- Leu
- Ile
- Asn
- Thr
- Met
- Lys
- Gln
- Pro
- Arg
- misc
- Hyp
- Waxes
- Terpenes
- N-misc
- S-misc
- misc
- Flavonoids
- Phenylpropanoids & Phenolics
- Gln
- Pro
- Arg
- misc
- Lys
- Hyp
- Asn
- Thr
- Met
- Lys
- misc
- Val
- Leu
- Ile
- Ser
- Gly
- Cys
- misc
- His
- Phe
- Tyr
- Trp
- misc
- Ser
- Gly
- Cys
- misc
- Val
- Leu
- Ile
- Asn
- Thr
- Met
- Lys
- Gln
- Pro
- Arg
- misc
- Hyp
- His
- Phe
- Tyr
- Trp
- misc
- Ser
- Gly
- Cys
- misc
- Val
- Leu
- Ile
- Asn
- Thr
- Met
- Lys
- Gln
- Pro
- Arg
- misc
- Hyp

NA Can vs others

minor CHO

Light Reactions

Ascorbate, Glutathione

Starch

Sucrose

OPP

Fermentation

Tetrapyrrole

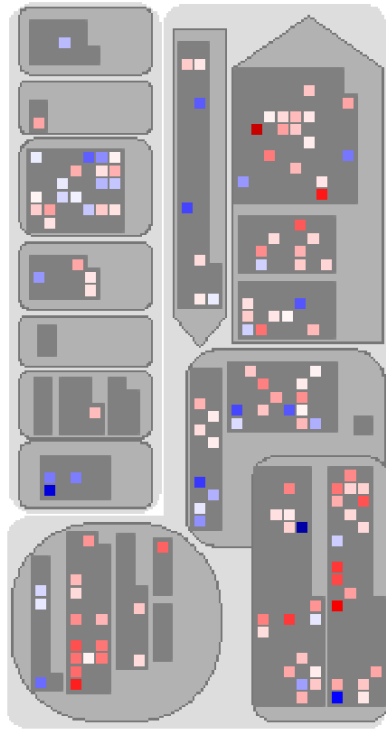
Mito. Electron Transport

Carbonic anhydrases

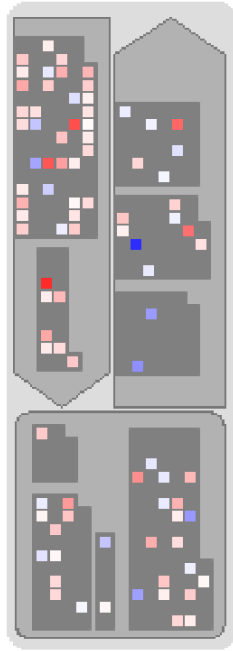
NO₃ NH₃

SO₄ C-1 Metab

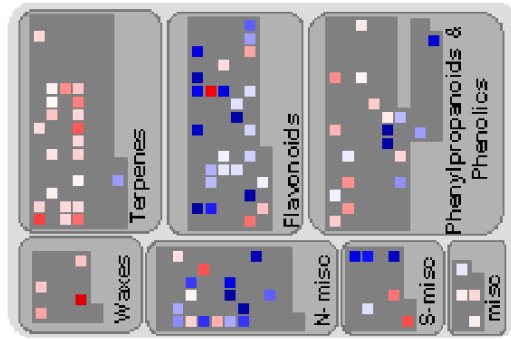
Nucleo- tides



Cell wall



Lipids

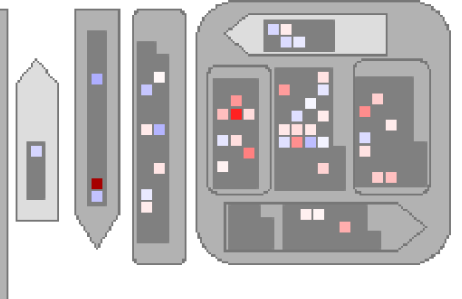
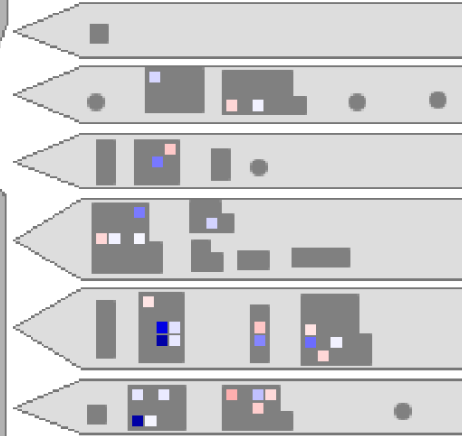
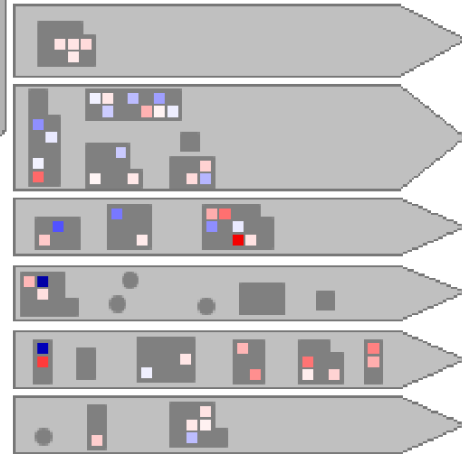


2° Metabolism

Amino Acids



TCA



Gln	Pro	Arg	misc	Lys	Hyp	Gln	Pro	Arg	misc	Lys	Hyp	Gln	Pro	Arg	misc	Lys	Hyp	Asn	Thr	Met	Lys	Val	Leu	Ile	Val	Leu	Ile	Ser	Gly	Cys	misc	Phe	Tyr	Trp	misc	His
-----	-----	-----	------	-----	-----	-----	-----	-----	------	-----	-----	-----	-----	-----	------	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	------	-----	-----	-----	------	-----