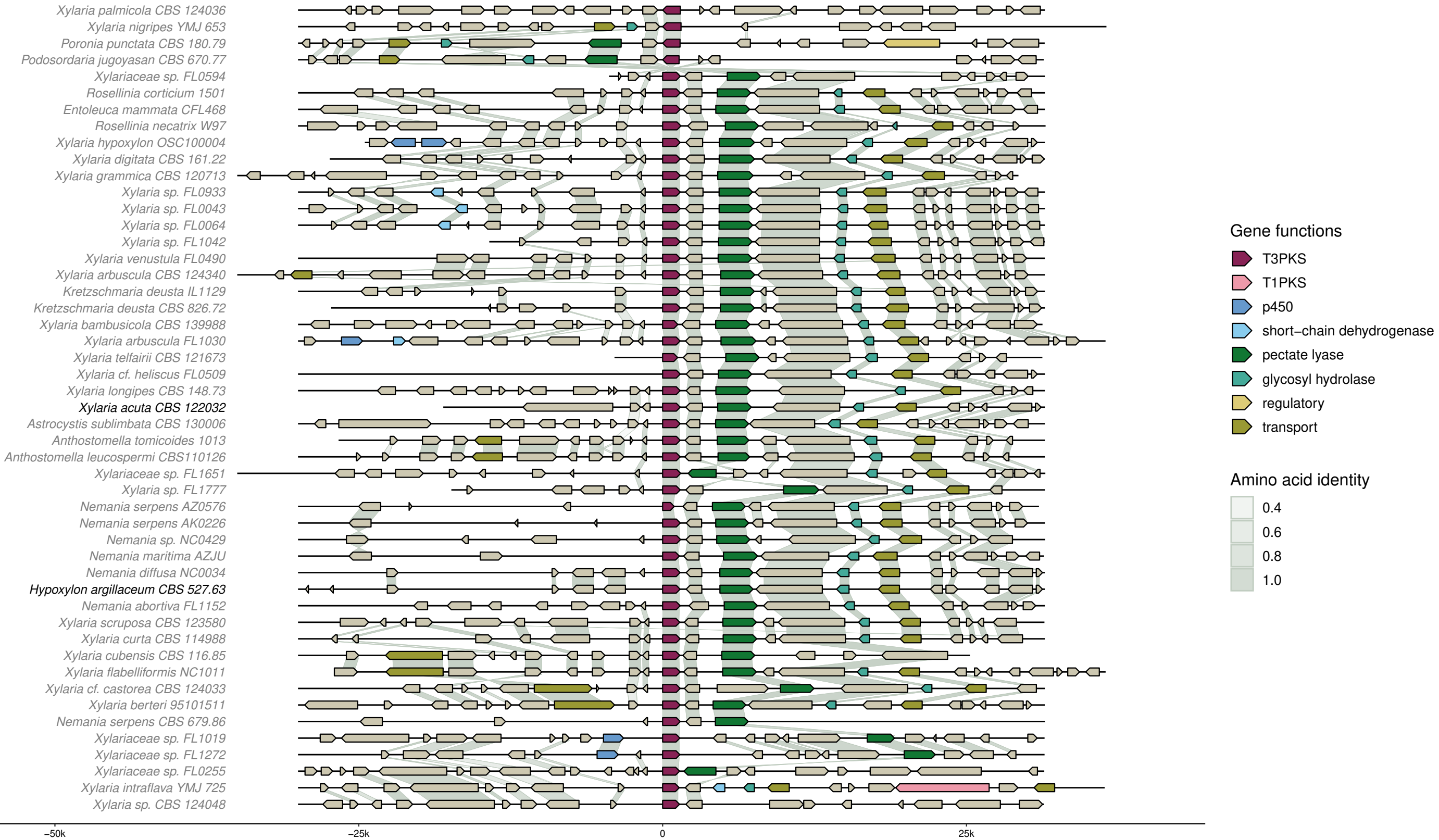
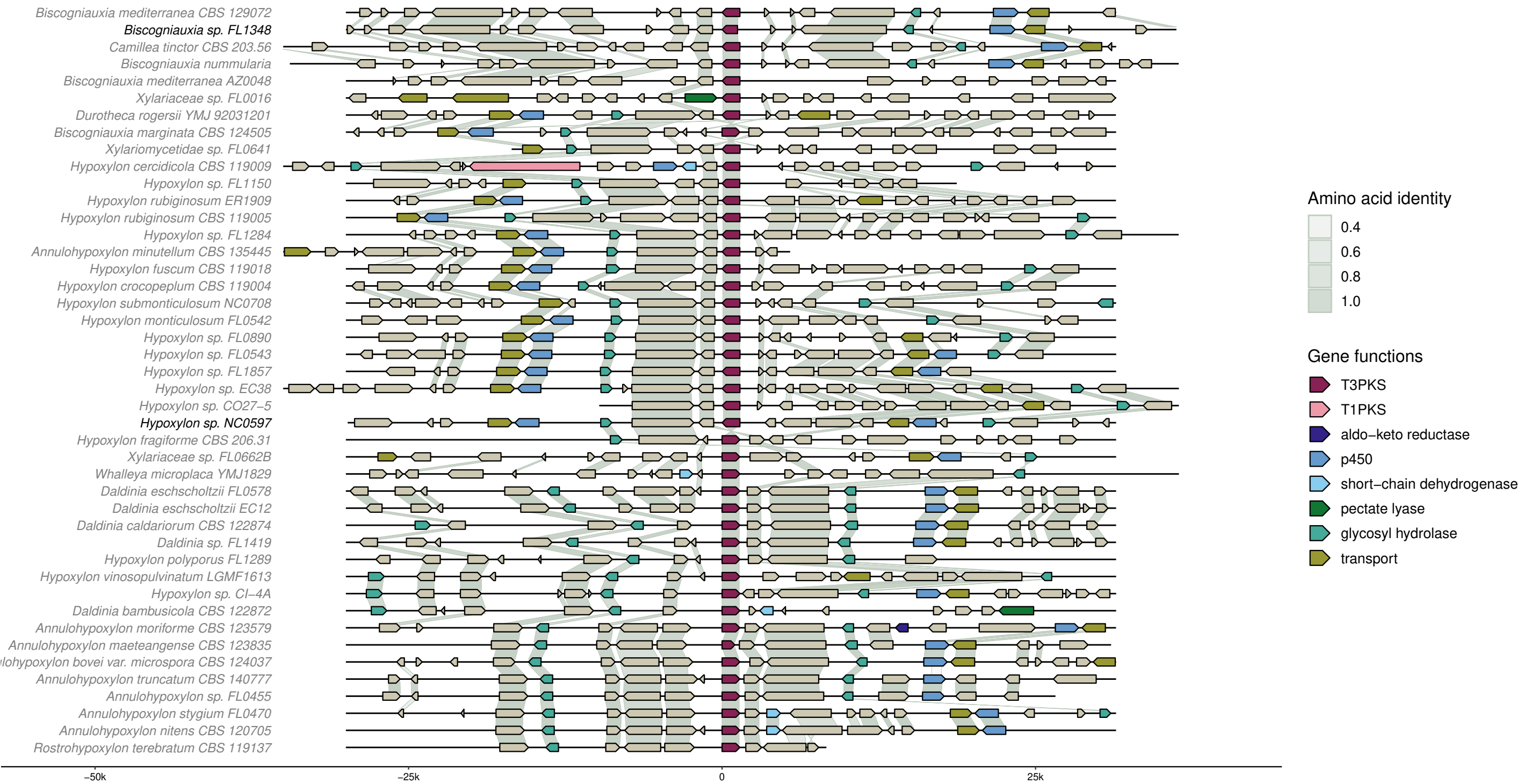


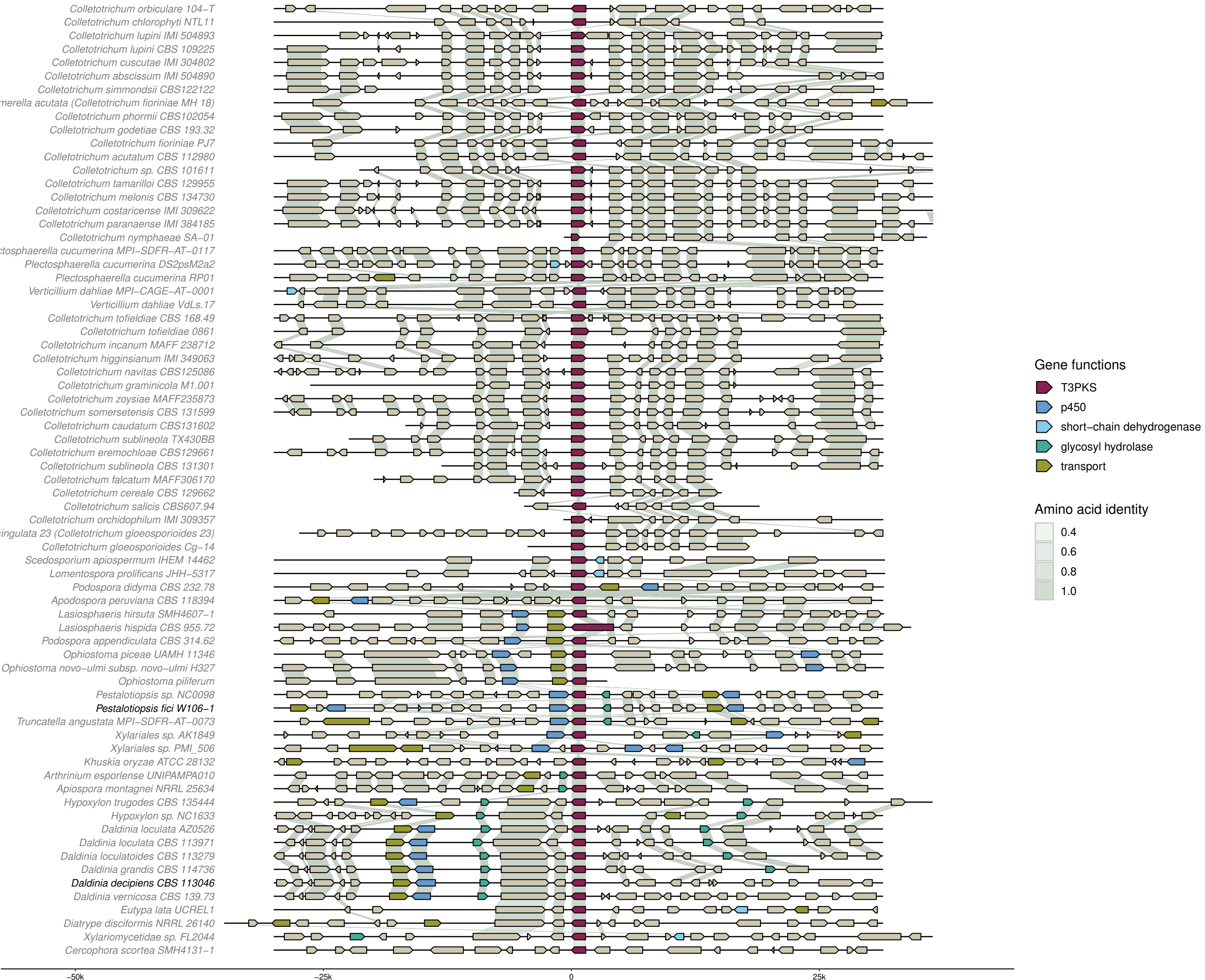
Cluster 1–1



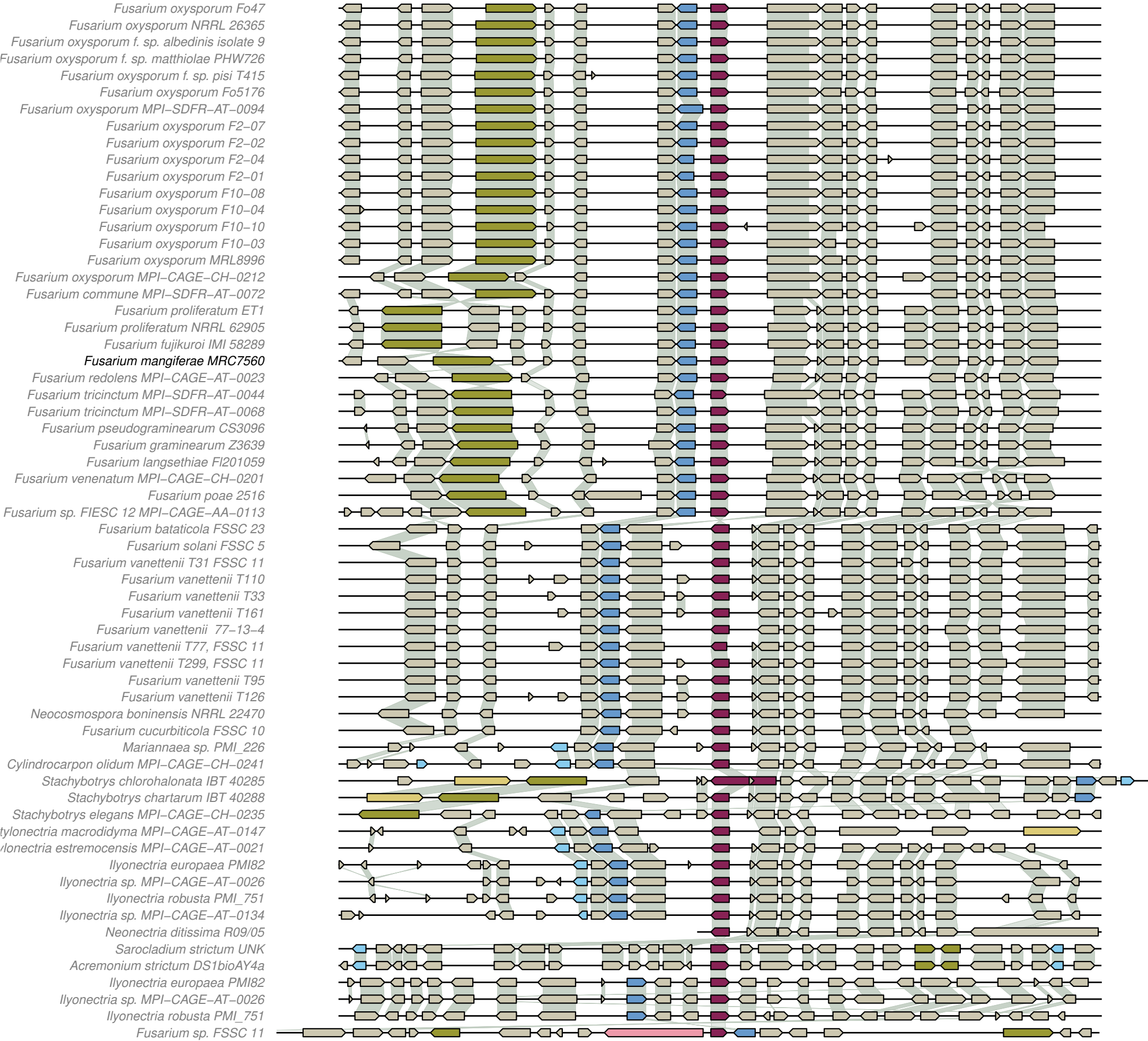
Cluster 1–2



Cluster 1–3



Cluster 1–4



Gene functions

- T3PKS
- T1PKS
- p450
- short-chain dehydrogenase
- regulatory
- transport

Amino acid identity

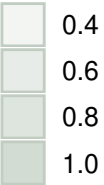
- 0.4
- 0.6
- 0.8
- 1.0

Cluster 1–5

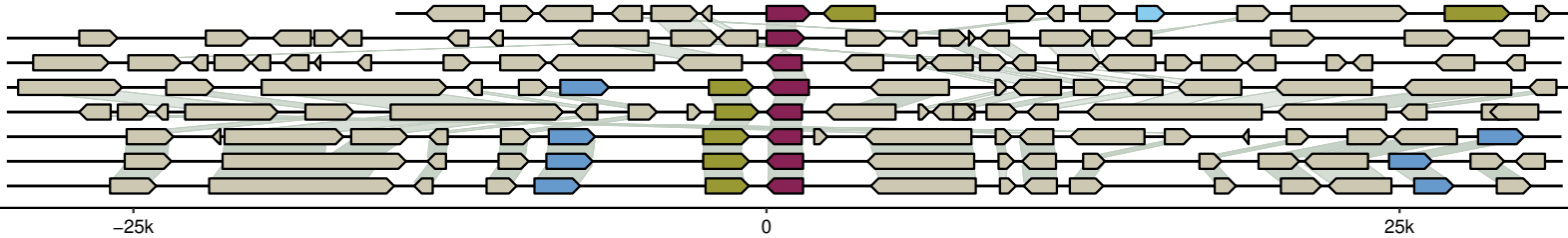
Gene functions

- T3PKS
- p450
- short-chain dehydrogenase
- transport

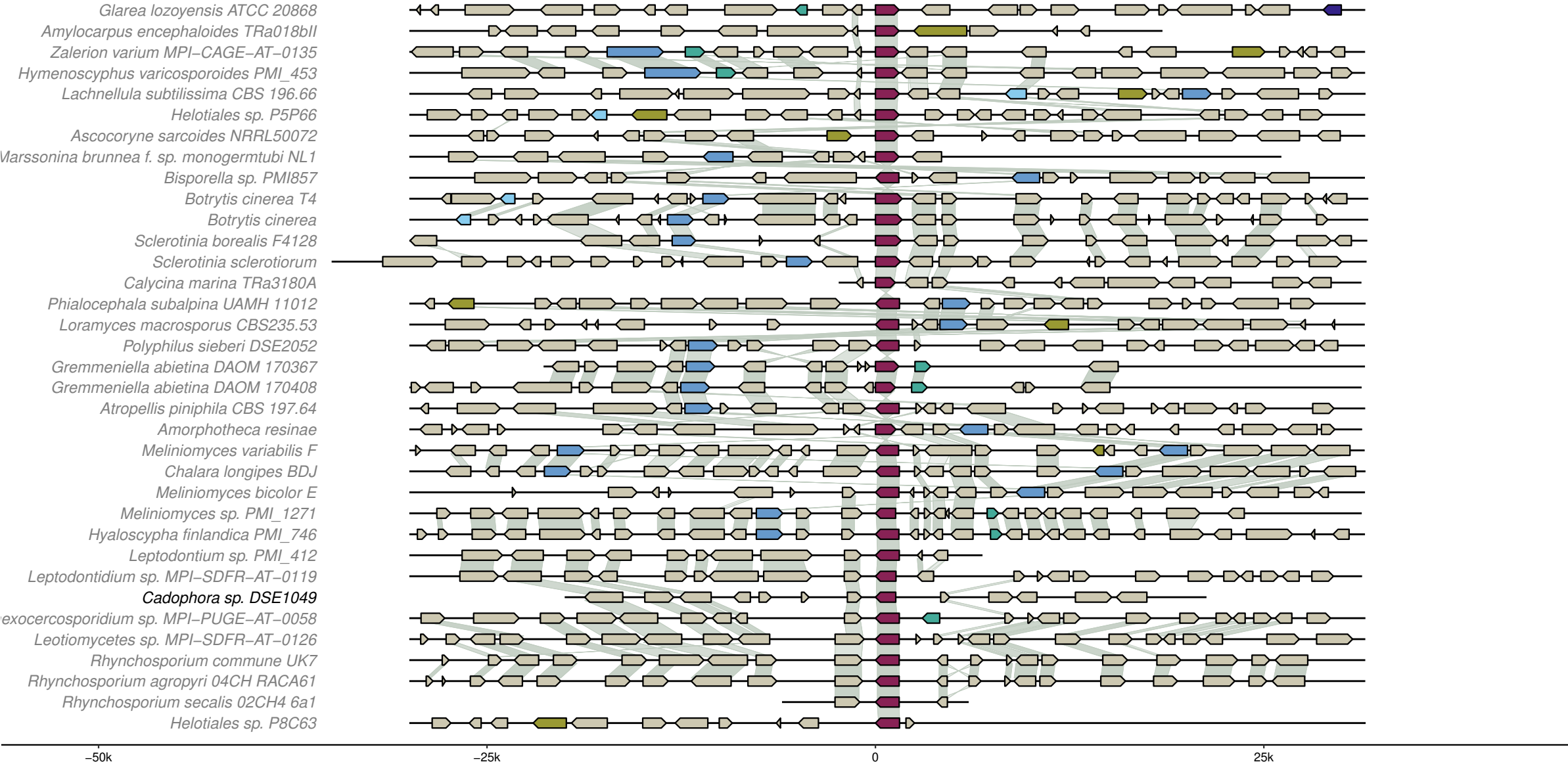
Amino acid identity



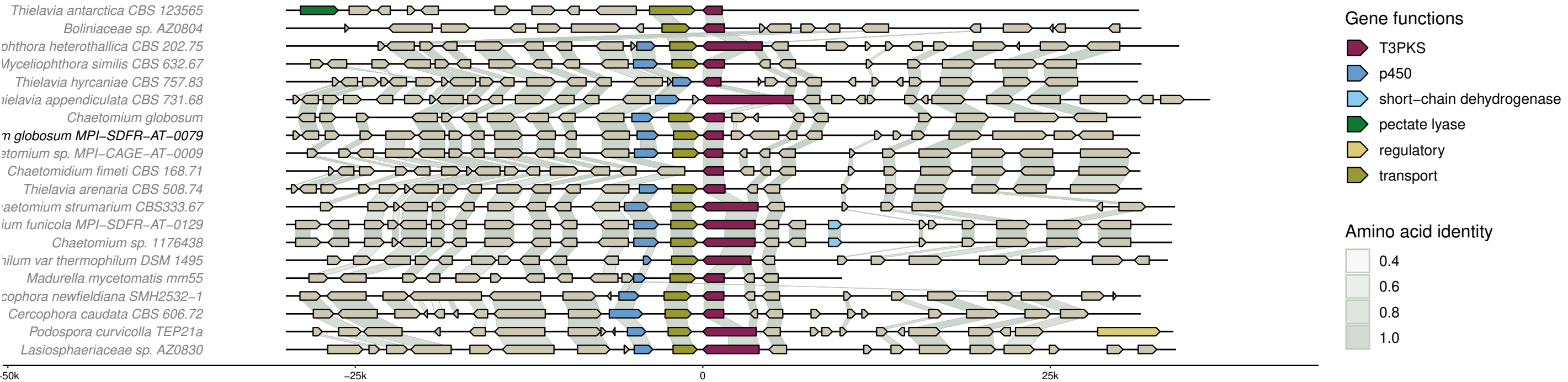
Calosphaeria pulchella
Acremonium alcalophilum
Emericellopsis sp. TS7
Sporothrix insectorum RCEF 264
Grosmannia clavigera kw1407
Sporothrix schenckii 1099–18
Sporothrix brasiliensis 5110
Ophiostoma sp. PMI_507



Cluster 2



Cluster 3

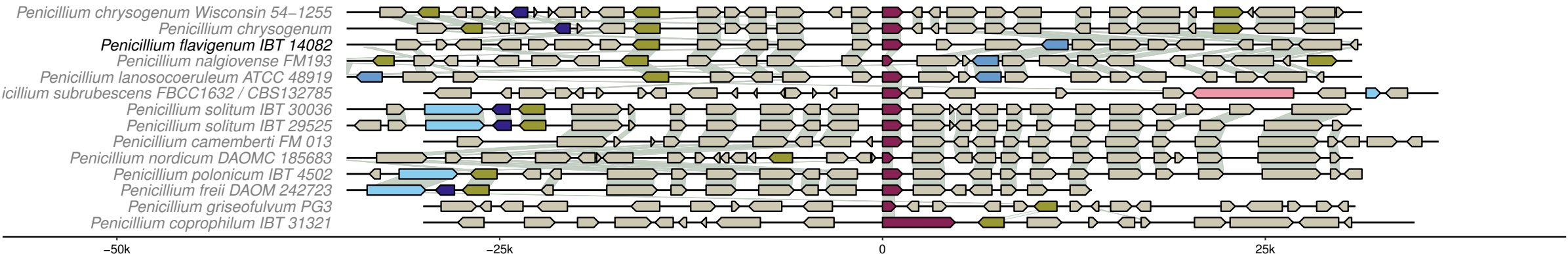
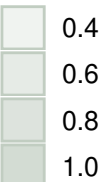


Cluster 4

Gene functions

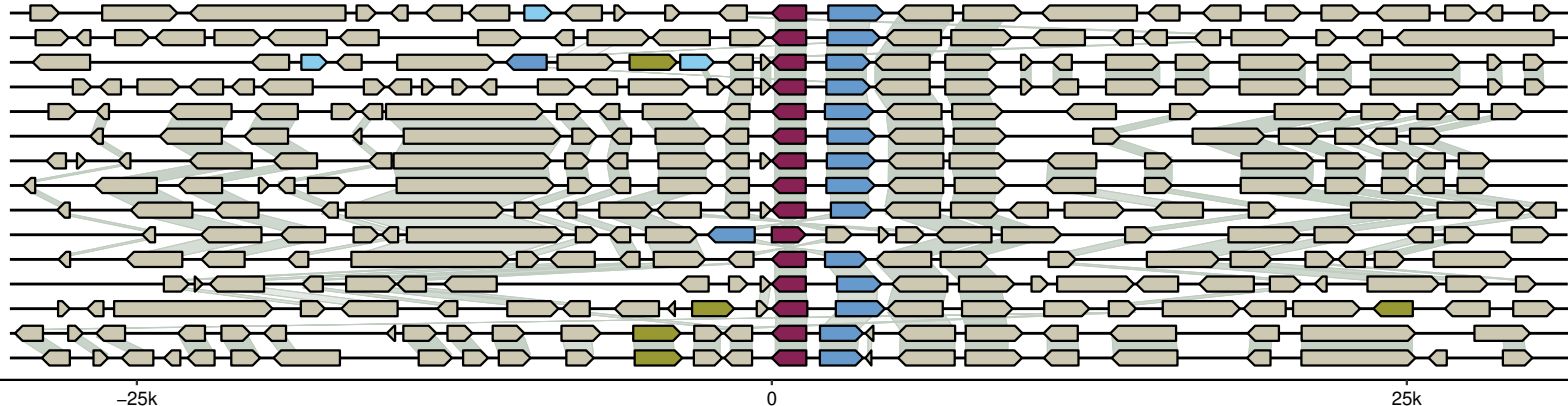
- T3PKS
- T1PKS
- aldo-keto reductase
- p450
- short-chain dehydrogenase
- transport

Amino acid identity



Cluster 5

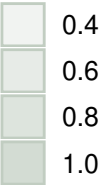
Exophiala spinifera CBS89968
Exophiala sp. JF 06–1F Fuzzy
Exophiala limosus JF 03–4F Slimy
Exophiala viscosum JF 03–3F Goopy
Exophiala multimorphosa CBS 102226
Fonsecaea erecta CBS 125763
Fonsecaea nubica CBS 269.64
Fonsecaea monophora CBS 269.37
Thialophora bantiana CBS 173.52
Thialophora carrionii CBS 160.54
Thiocladiella mackenziei CBS 650.93
Exophiala alcalophila ATCC 48519
Capronia fungicola CBS 614.96
Thielaceae sp. JF2 05–3F Dopey
Thielaceae sp. JF2 05–7F Lumpy



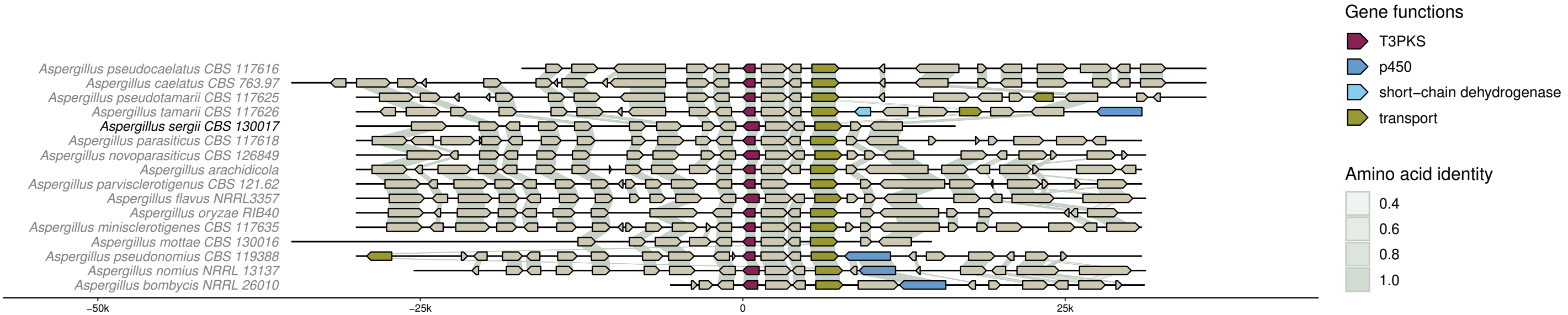
Gene functions

- T3PKS
- p450
- short-chain dehydrogenase
- transport

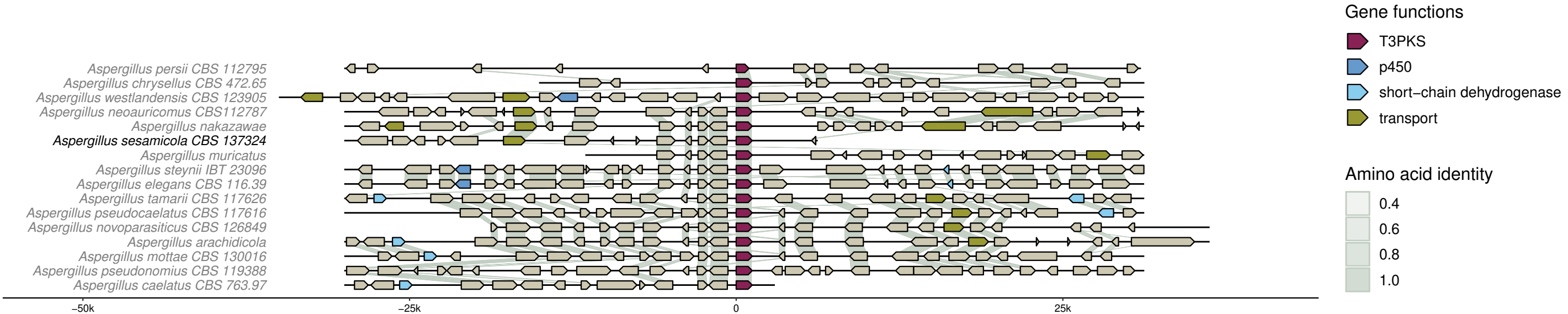
Amino acid identity



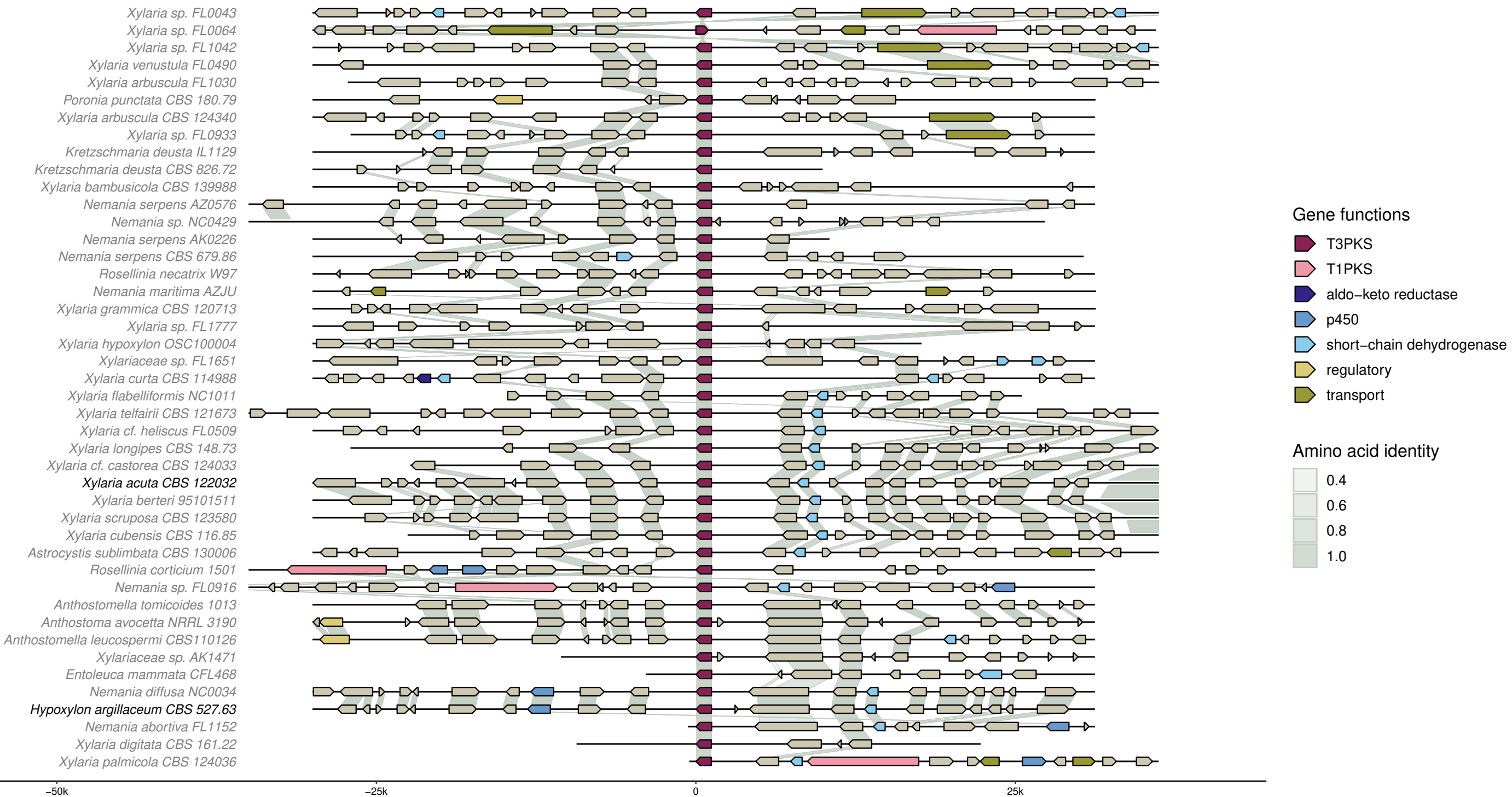
Cluster 6



Cluster 7



Cluster 8

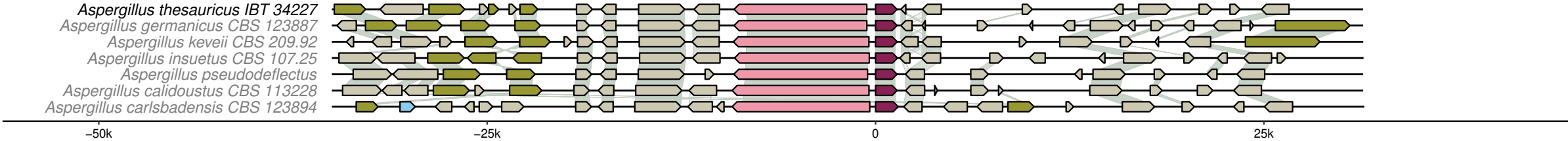
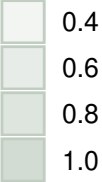


Cluster 9

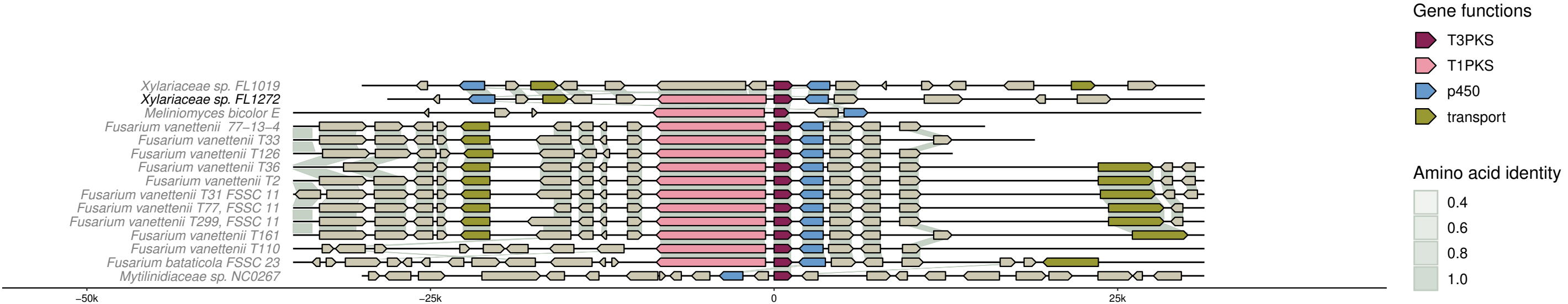
Gene functions

- T3PKS
- T1PKS
- short-chain dehydrogenase
- transport

Amino acid identity

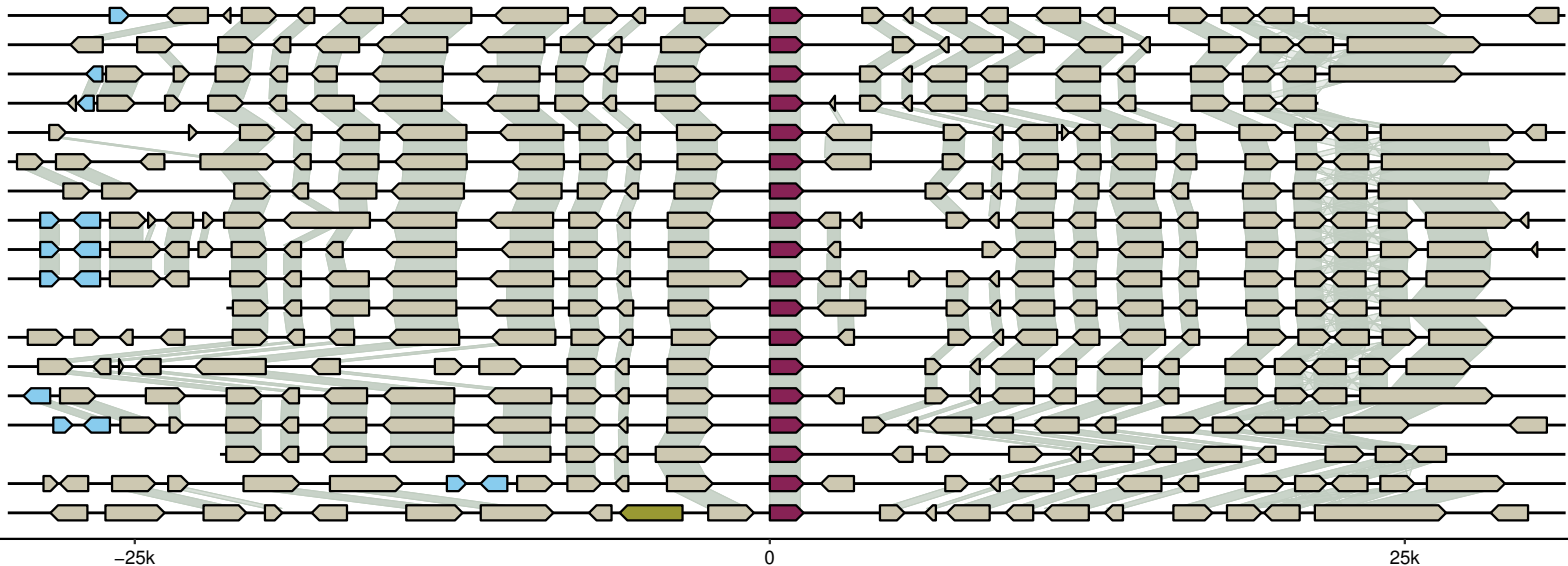


Cluster 10

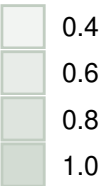


Cluster 11

Aspergillus tamaraii CBS 117626
Aspergillus pseudotamarii CBS 117625
Aspergillus pseudocaelatus CBS 117616
Aspergillus caelatus CBS 763.97
Aspergillus pseudonomius CBS 119388
Aspergillus nomius NRRL 13137
Aspergillus bombycis NRRL 26010
Aspergillus flavus NRRL3357
Aspergillus flavus NRRL3357
Aspergillus parvisclerotigenus CBS 121.62
Aspergillus minisclerotigenes CBS 117635
Aspergillus mottae CBS 130016
Aspergillus transmontanensis CBS 130015
Aspergillus parasiticus CBS 117618
Aspergillus novoparasiticus CBS 126849
Aspergillus sergii CBS 130017
Aspergillus arachidicola
Aspergillus bertholletius IBT 29228



Amino acid identity



Gene functions

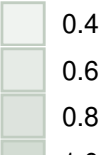
- T3PKS
- short-chain dehydrogenase
- transport

Cluster 12

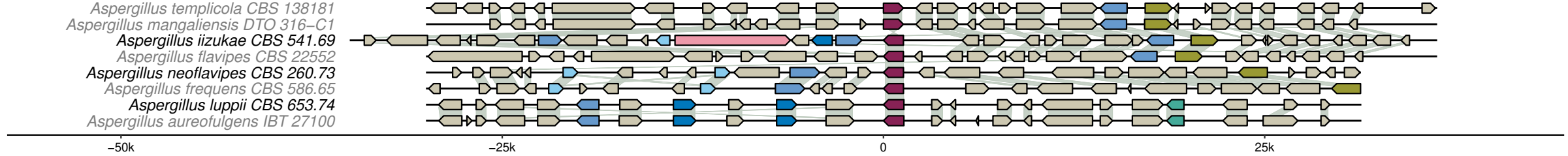
Gene functions

- T3PKS
- T1PKS
- DMAT
- p450
- short-chain dehydrogenase
- glycosyl hydrolase
- transport

Amino acid identity

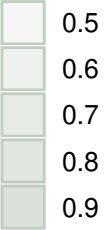


Aspergillus templicola CBS 138181
Aspergillus mangaliensis DTO 316-C1
Aspergillus iizukae CBS 541.69
Aspergillus flavipes CBS 22552
Aspergillus neoflavipes CBS 260.73
Aspergillus frequens CBS 586.65
Aspergillus luppii CBS 653.74
Aspergillus aureofulgens IBT 27100

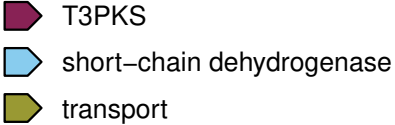


Cluster 13

Amino acid identity



Gene functions

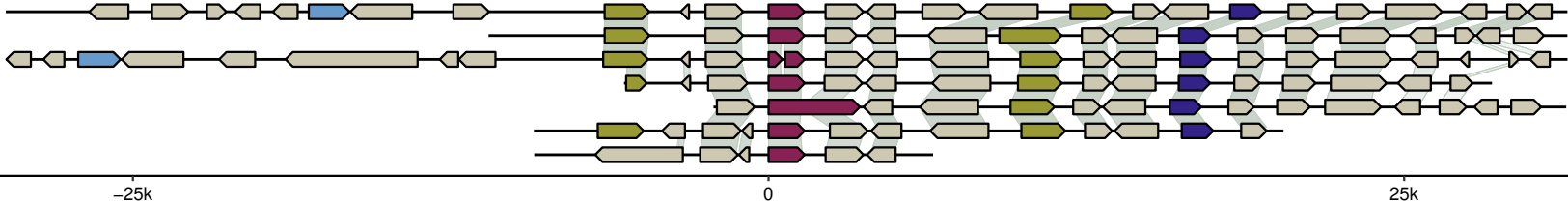


Valsa mali str. 03-8
Mytilospora chrysosperma CFL2056
Melanconium sp. NRRL 54901
Diaporthe vochysiae LGMF1583
Diaporthe helianthi str. 7/96



Cluster 14

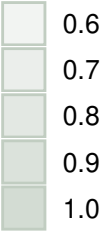
noascus verrucosus UAMH 10579
eudogymnoascus sp. VKM F-103
Pseudogymnoascus sp. 03VT05
udogymnoascus sp. VKM F-3775
udogymnoascus sp. VKM F-4246
udogymnoascus sp. VKM F-4514
udogymnoascus sp. VKM F-4520



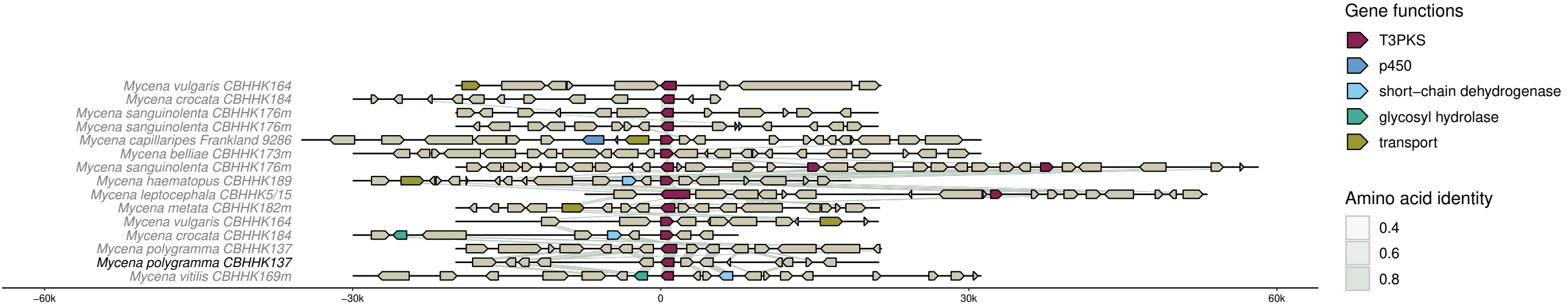
Gene functions

- T3PKS
- aldo-keto reductase
- p450
- transport

Amino acid identity

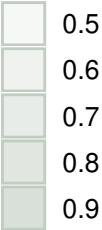


Cluster 15

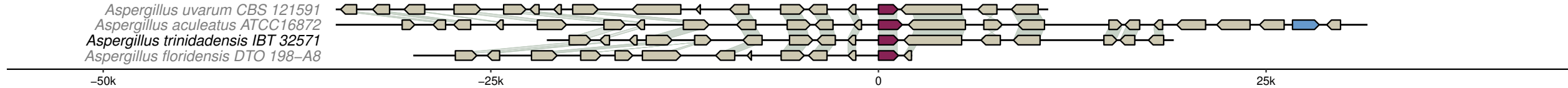


Cluster 16

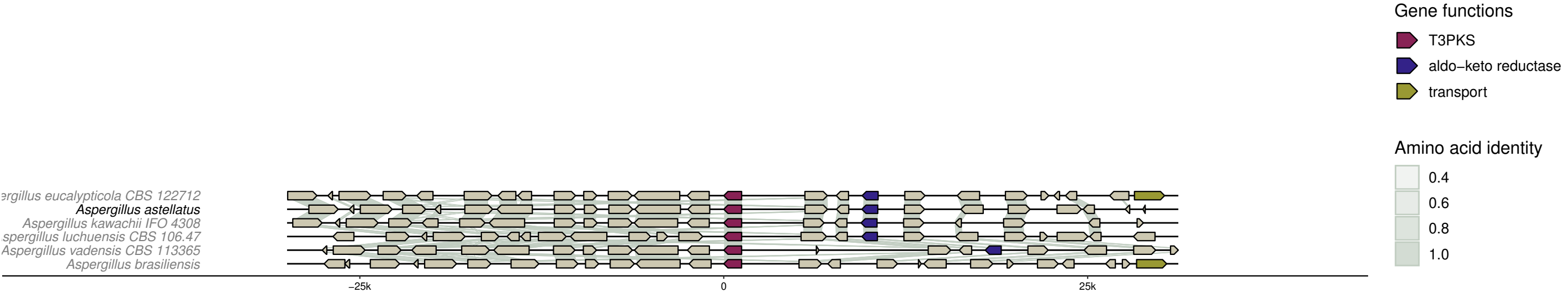
Amino acid identity



Gene functions

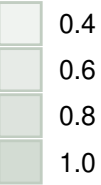


Cluster 17

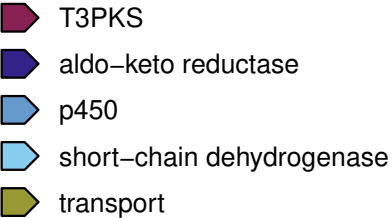


Cluster 18

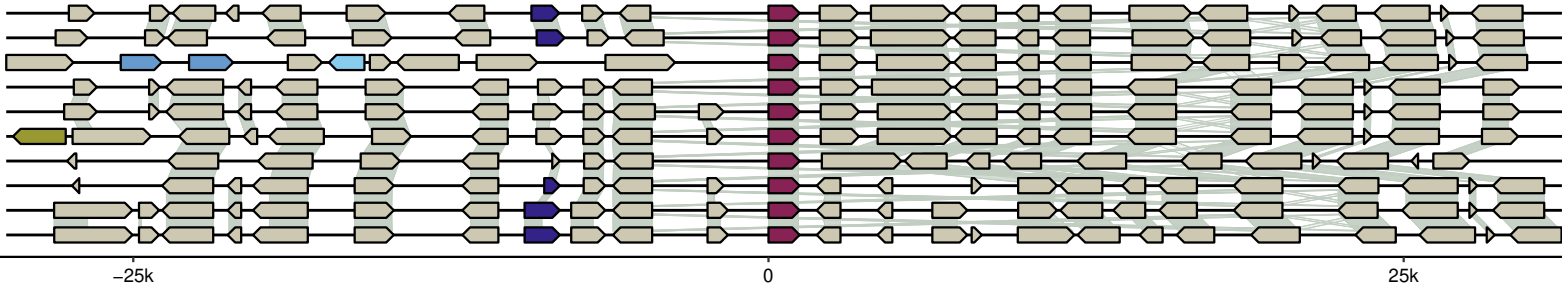
Amino acid identity



Gene functions



Aspergillus tubingensis
Aspergillus costaricensis CBS 115574
Aspergillus neoniger CBS 115656
Aspergillus niger NRRL3
Aspergillus niger ATCC 1015
Aspergillus niger (Cordae) Thom ATCC 13157
Aspergillus welwitschiae CBS139.54b
Aspergillus niger van Tieghem ATCC 13496
Aspergillus niger CBS 513.88
Aspergillus niger (lacticoffeatus) CBS 101883

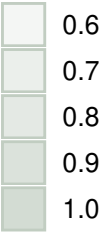


Cluster 19

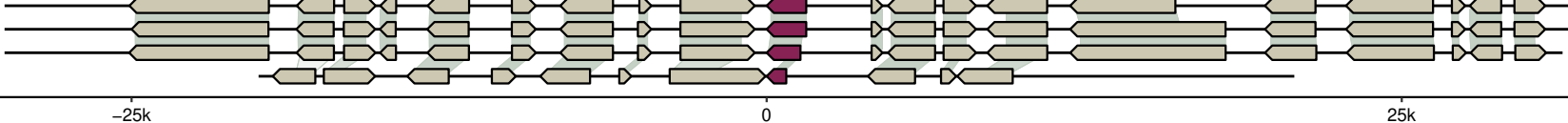
Gene functions

T3PKS

Amino acid identity



Pyricularia oryzae TH0003
Pyricularia oryzae GY0011
Pyricularia oryzae FR0013
Pyricularia oryzae 70-15



Cluster 20

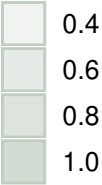


Cluster 21

Gene functions

- T3PKS
- transport

Amino acid identity



Aspergillus transmontanensis CBS 130015
Aspergillus transmontanensis CBS 130015
Aspergillus parvisclerotigenus CBS 121.62
Aspergillus tamarii CBS 117626

-50k

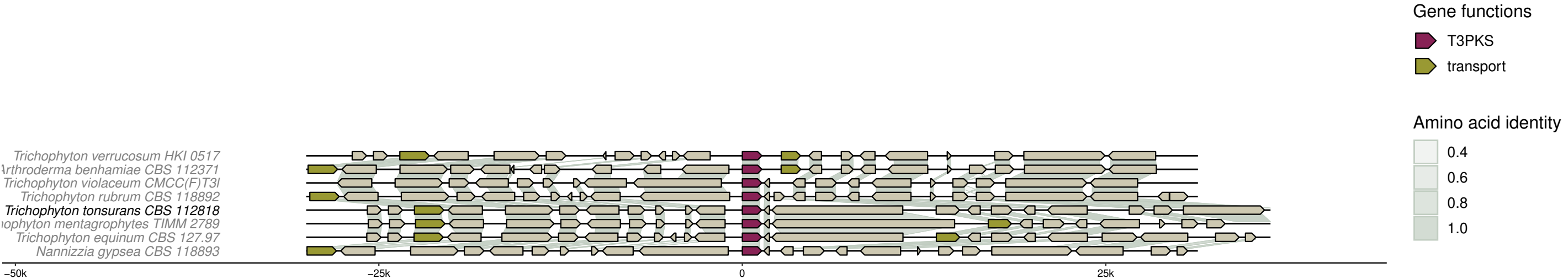
-25k

0

25k



Cluster 22



Cluster 23

Gene functions

- T3PKS
- T1PKS
- p450
- glycosyl hydrolase
- regulatory
- transport

Amino acid identity

