

A Functional enrichment

Functional Enrichment Analysis (FEA)
 - Adjusted p-value < 0.05
 - Background frequency < 0.10

Candidate genes FEA

All Disease genes FEA

	ALS	SMA
- GO:3195725	✗	✓
- GO:6092660	✓	✗
- GO:0005125	✓	✓

Retain GO terms associated to at least one ALS and SMA gene simultaneously

B

Functional enrichment simplification

1) Merge GO terms by:
 - Gene co-occurrence
 - Semantic similarity

2) Assign to each GO group a GO class by text mining the most frequent key terms

3) Assign each GO group to a gene set according to GO terms origin

- GO:0005125
 - GO:7529911
 - GO:0093790
 - GO:0060092
 - GO:9825561
 - GO:6771000
 - GO:0512591
 - GO:0092456
 - GO:8199733
 - GO:6660092
 - GO:9573125

GO terms



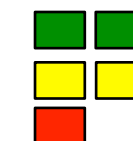
GO groups



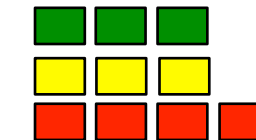
GO classes



GO groups related to
Candidates only



GO groups related to
both sets



GO groups related to
Disease genes only

