

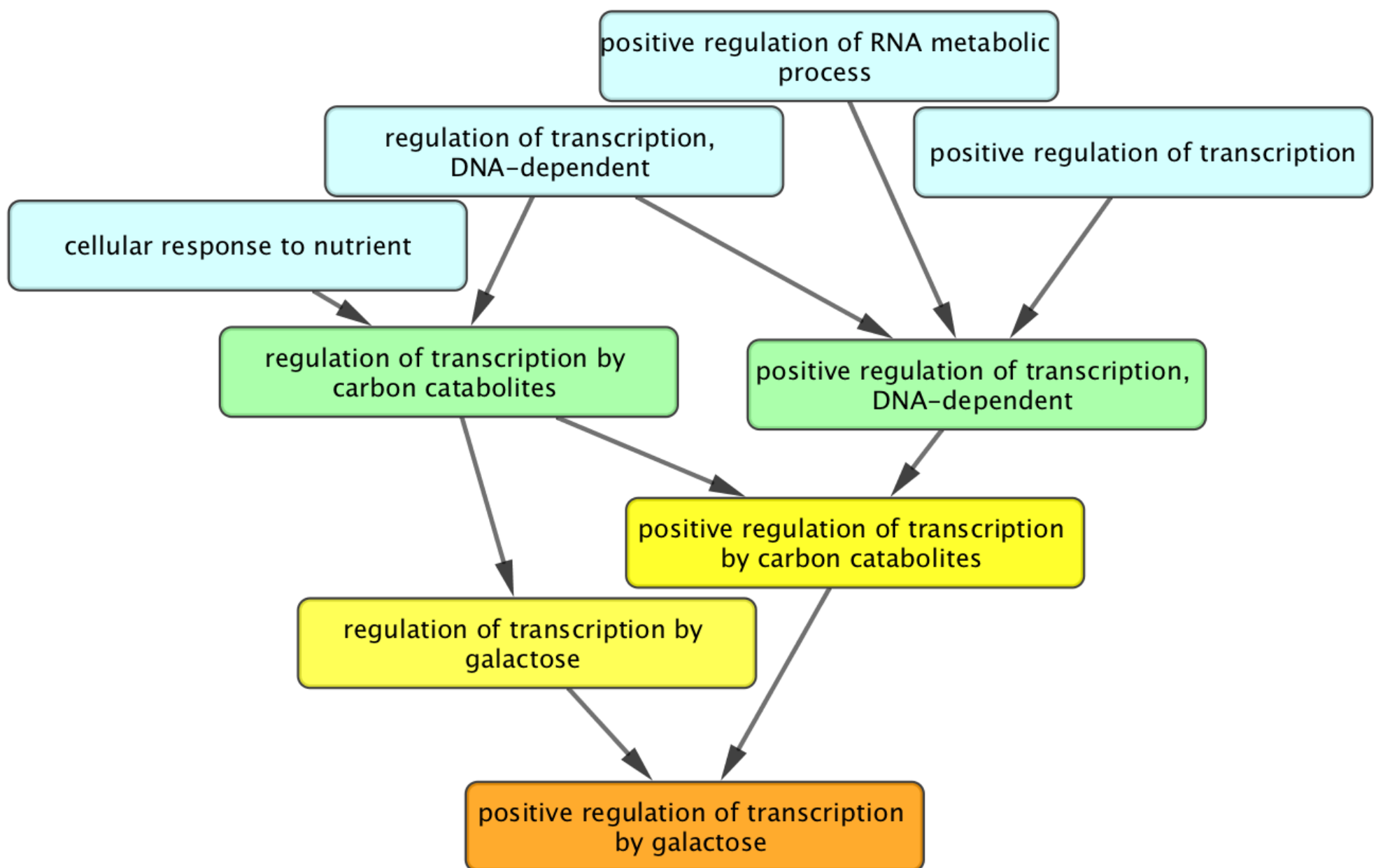
The Gene Ontology and Gene Enrichment

Peter Oxley, PhD

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Gene Ontology (GO):

A logical structure of biological functions ('terms') and their relationships to one another.



GO Annotations:

evidence-based statements
relating a gene product to a term

Gene	GO term	Evidence Code	Reference
OXT	Signal Transduction	TAS	PMID: 10218979
PKN1	Regulation of transcription	IDA	PMID: 12514133
ZNRF1	E3 ubiquitin-protein ligase	IBA	GO_REF: 000033

Evidence Codes:

- Experimental
- Computational Analysis
- Author Statement
- Curatorial Statement
- Automatically Assigned

AmiGO2

for Browsing and searching
the Gene Ontology and
Annotations

<http://amigo.geneontology.org>

Search Templates



Use predefined **templates** to explore Gene Ontology data.

Go »

Advanced Search



Interactively **search** the Gene Ontology data for annotations, gene products, and terms using a powerful search syntax and filters.

Search ▾

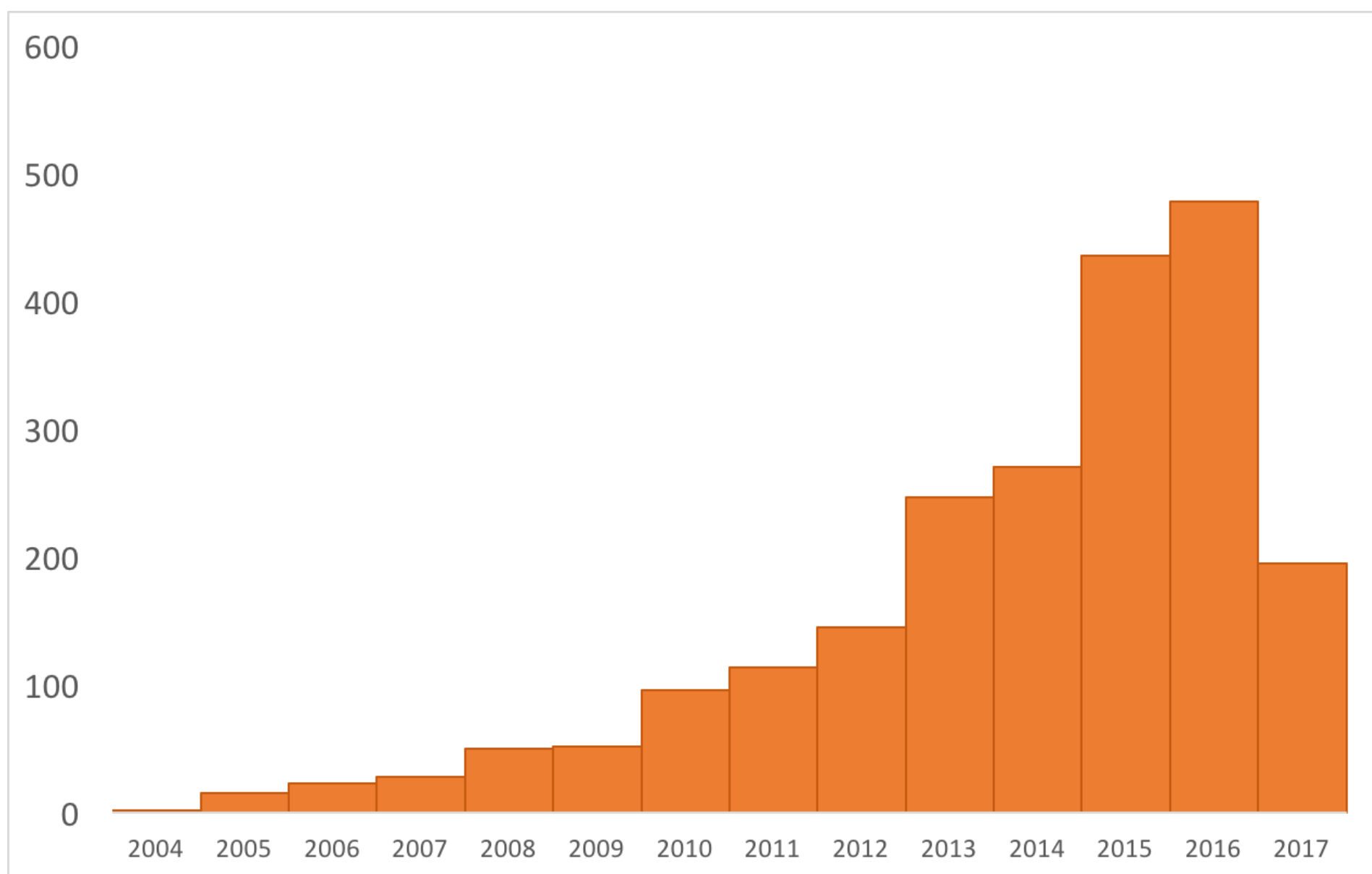
Browse the Ontology



Use the drill-down **browser** to view the ontology structure with annotation counts.

Go »

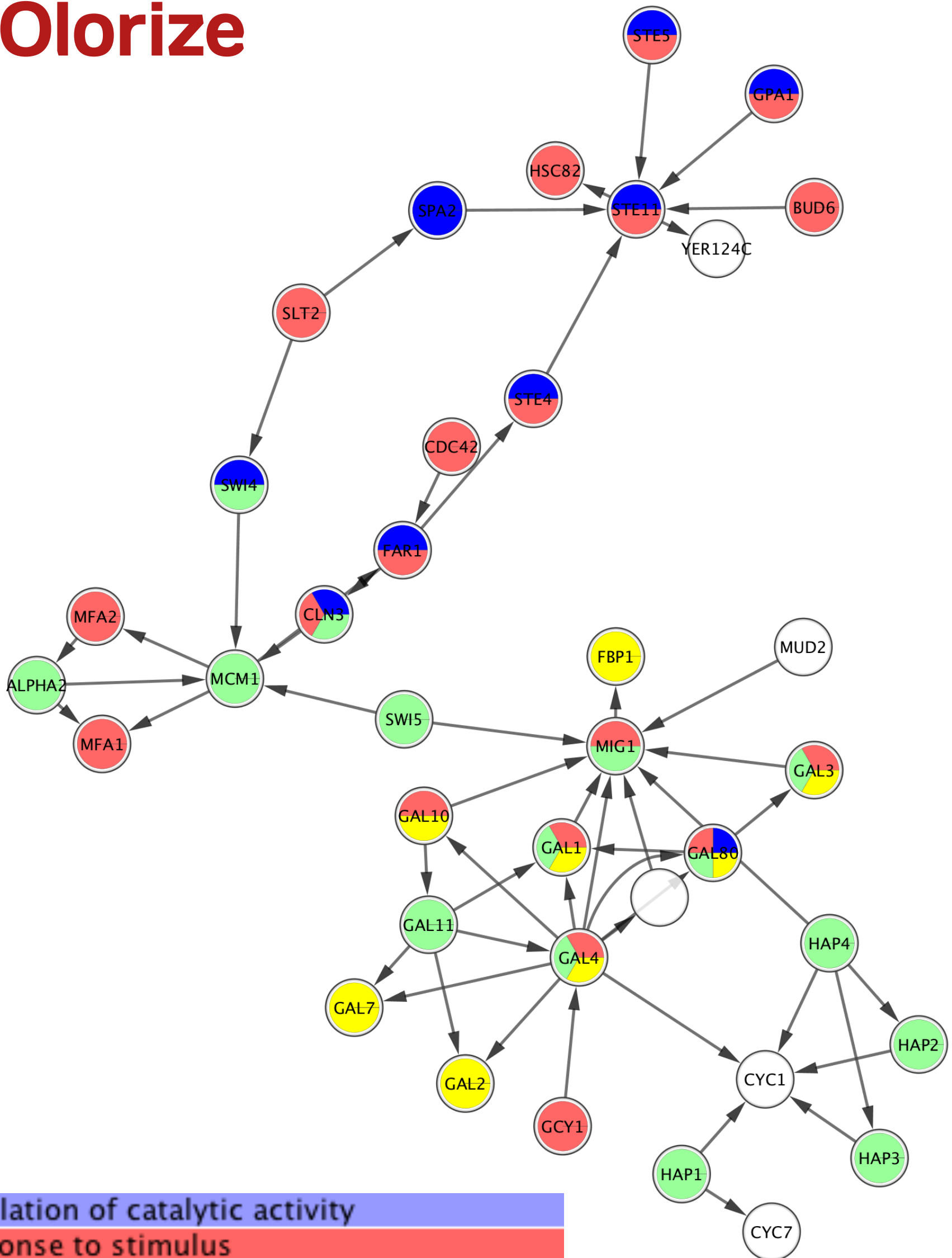
Publications matching Gene Ontology Enrichment Analysis, by year



for visualization of GO enrichment networks



Cytoscape with Golorize



regulation of catalytic activity

response to stimulus

regulation of gene expression

hexose metabolic process