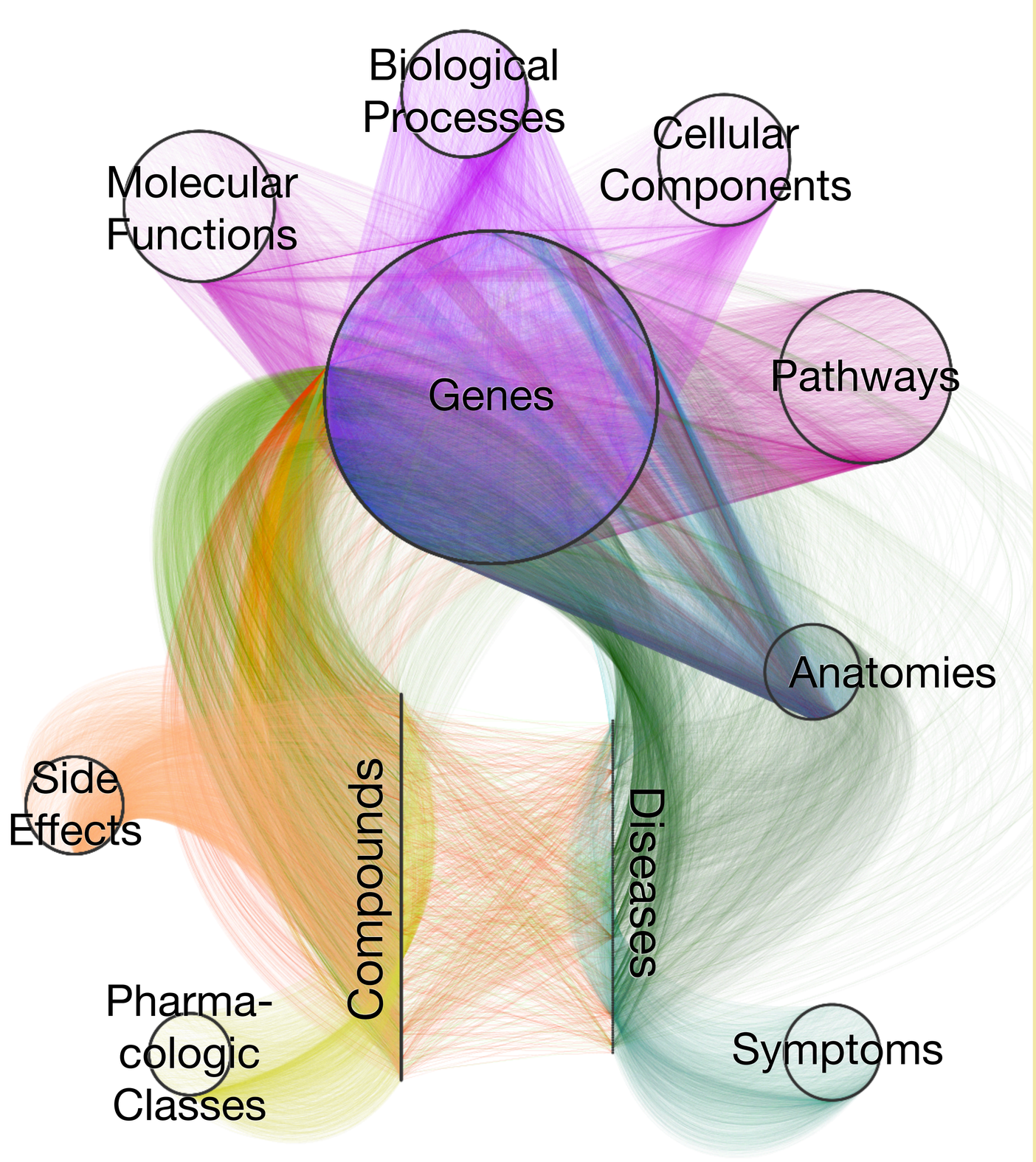
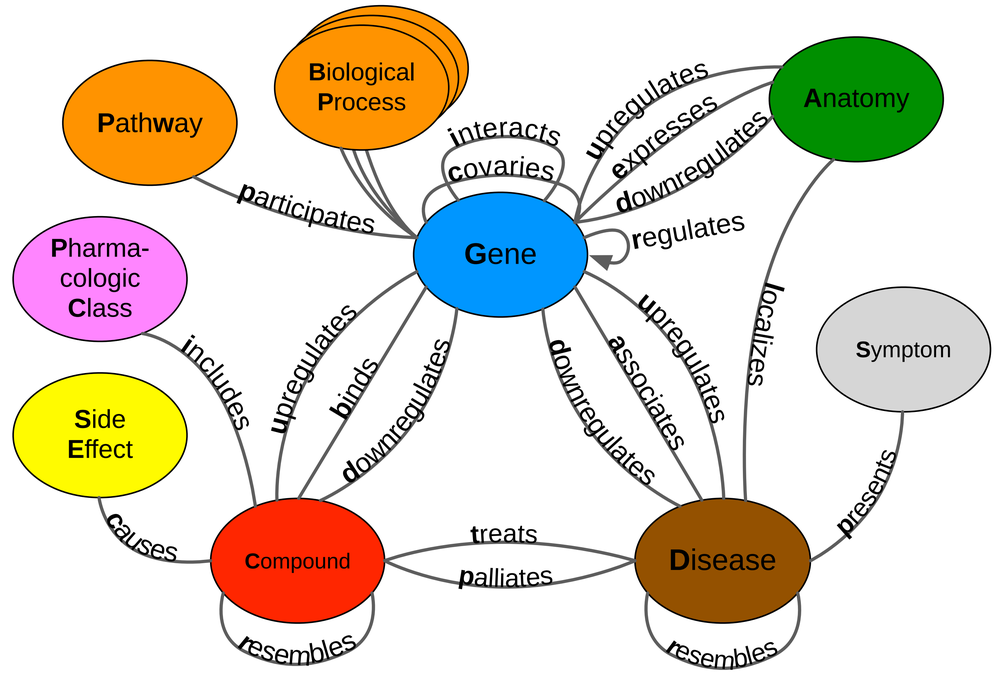
the hetnet awakens at https://neo4j.het.io

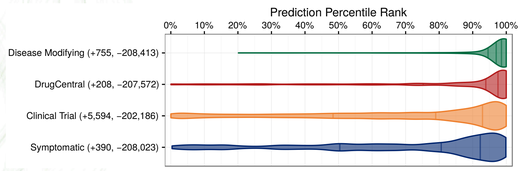
Hetionet v1.0 encodes biology from 29 resources into 47 k nodes and 2.25 M relationships.



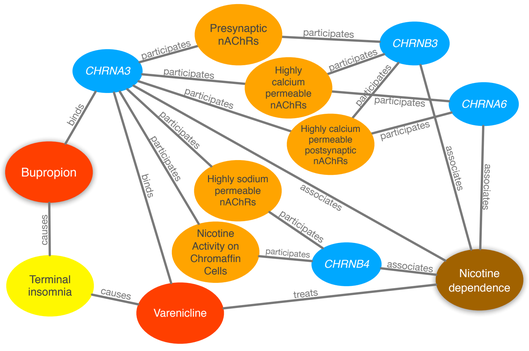
Hetionet v1.0 is composed of 11 node and 24 relationship types.



Project Rephetio applied Hetionet to systematically identify drug repurposing candidates. The predictions successfully prioritized four existing catalogs of treatments.

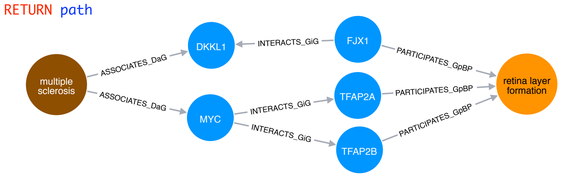


The network support for each of the 209,168 predictions is available at http://het.io/repurpose. For example, here's why Hetionet thinks bupropion treats nicotine dependence.



You can query Hetionet using Cypher. This query finds paths that suggest how multiple sclerosis could affect retina layer formation.

```
MATCH path =
  // Specify the type of path to match
  (n0:Disease)-[e1:ASSOCIATES_DaG]-(n1:Gene)-[:INTERACTS_GiG]-
  (n2:Gene)-[:PARTICIPATES_GpBP]-(n3:BiologicalProcess)
WHERE
  // Specify the source and target nodes
  n0.name = 'multiple sclerosis' AND n3.name = 'retina layer formation'
  // Require GWAS support for the Disease-associates-Gene relationship
  AND 'GWAS Catalog' in e1.sources
  // Require the interacting gene to be upregulated in a relevant tissue
  AND exists((n0)-[:LOCALIZES_DlA]-(:Anatomy)-[:UPREGULATES_AuG]-(n2))
RETURN path
```



The project was discussed in realtime at https://thinklab.com/p/rephetio where 44 contributors wrote 108,699 words.