Gene Ontology Consortium

Research Areas

- Tool Development
  - Standard
- Basic Research

At a Glance

- Status: Active Consortium
- Year Launched: 1999
- Initiating Organization: National Human Genome Research Institute
- Initiator Type: Government

Abstract

The Gene Ontology (GO) consortium is a major bioinformatics initiative to develop a computational representation of our evolving knowledge of how genes encode biological functions at the molecular, cellular, and tissue system levels. Biological systems are so complex that we need to rely on computers to represent this knowledge. The project has developed formal ontologies that represent more than 40,000 biological concepts and are constantly being revised to reflect new discoveries. To date, these concepts have been used to “annotate” gene functions based on experiments reported in more than 100,000 peer-reviewed scientific papers.

Structure & Governance

The GO consortium is co-directed by (in alphabetical order):

Judith Blake, Jackson Laboratory (mouse gene annotation, ontology development)
J. Michael Cherry, Stanford University (yeast gene annotation, data production processes)
Suzanna Lewis, Lawrence Berkeley National Laboratory (GO software development, ontology development)
Paul Sternberg, Caltech (C. elegans gene annotation, Common Annotation Framework development)
Paul Thomas, University of Southern California (phylogenetic annotation, ontology development)

The GO Council consists of the heads of major participating groups (in alphabetical order):

Alex Bateman, UniProt, European Bioinformatics Institute (gene annotation)
Nick Brown, FlyBase, University of Cambridge (Drosophila gene annotation)
Rex Chisholm, DictyBase, Northwestern University (Dictyostelium gene annotation)
James Hu, Texas A&M (gene annotation)
Claire O'Donovan, UniProt, European Bioinformatics Institute (gene annotation)
Helen Parkinson, Ontologies Team lead, European Bioinformatics Institute (ontology development)
Monte Westerfield, University of Oregon (zebrafish gene annotation)

Financing

Direct support for the GO consortium is provided by an R01 grant from the National Human Genome Research Institute (grant HG02273).

Intellectual Property


Data Sharing

To cite data provided by the Gene Ontology consortium, either from AmiGO or the files downloaded from the GO website, state the release date and/or version number of the data. Both annotation and ontology data may change over time, and to reproduce the results of an analysis, it is important that the same initial GO data is used.
Links/Social Media Feed

Homepage: http://geneontology.org/
Twitter: https://twitter.com/news4go

Sponsors & Partners

AgBase
Alzheimer’s Project at the University of Toronto.
Aspergillus Genome Database (AspGD)
AstraZeneca
Berkeley Bioinformatics Open-source Projects (BBOP)
Candida Genome Database (CGD)
dictyBase
EcoliWiki
Ensembl
EnsemblFungi
EnsemblPlants/Gramene
FlyBase
GeneDB
GO Editorial Office at the European Bioinformatics Institute
Gramene
Institute for Genome Sciences, University of Maryland
IntAct molecular interaction database
InterPro
J Craig Venter Institute
Microbial ENergy processes Gene Ontology Project (MENGO)
Mouse Genome Informatics (MGI)
Muscle TRAIT
PANTHER
Plant-Associated Microbe Gene Ontology (PAMGO)
Consortium
PomBase
Pseudomonas Genome Database (PseudoCAP)
Rat Genome Database (RGD)
Reactome
Saccharomyces Genome Database (SGD)
SYSCILIA
Tetrahymena Genome Database (TGD)
The Arabidopsis Information Resource (TAIR)
The Zebrafish Model Organism Database (ZFIN)
UniProt-Gene Ontology Annotation (UniProt-GOA)
University College London-based annotation group
WormBase

Updated: 04/15/2016