

Title: Scope of the Gene Ontology Vocabularies  
Authors: Midori A. Harris  
Address: EMBL-EBI  
Wellcome Trust Genome Campus  
Hinxton  
Cambridge  
CB10 1SD  
UK

Abstract: The main goal of the Gene Ontology (GO) project is to produce a dynamic, controlled vocabulary that can be applied to all organisms even as knowledge of the roles of gene products is accumulating and changing. To address the growing need for meaningful annotation of genes and their products in different organisms, three independent, structured networks of terms are being developed to describe three key aspects of biology. "Molecular function" describes the activities or tasks performed by individual gene products at the molecular level, such as "DNA binding," "molecular motor," or "protein kinase." "Biological process" describes broad biological goals, such as "mitosis" or "sterol metabolism," that are accomplished by ordered assemblies of molecular functions. "Cellular component" encompasses subcellular structures, locations, and macromolecular complexes; examples include "ribosome" and "origin recognition complex." The GO vocabularies do not encompass names of gene products or protein features such as domains or motifs, nor do they capture information about evolutionary relationships between species. Two other key aspects of the GO project are the application of GO terms in annotating genes or gene products, and the development of software for querying, displaying, and manipulating ontologies and annotations.

GO Consortium home page: <http://www.geneontology.org>