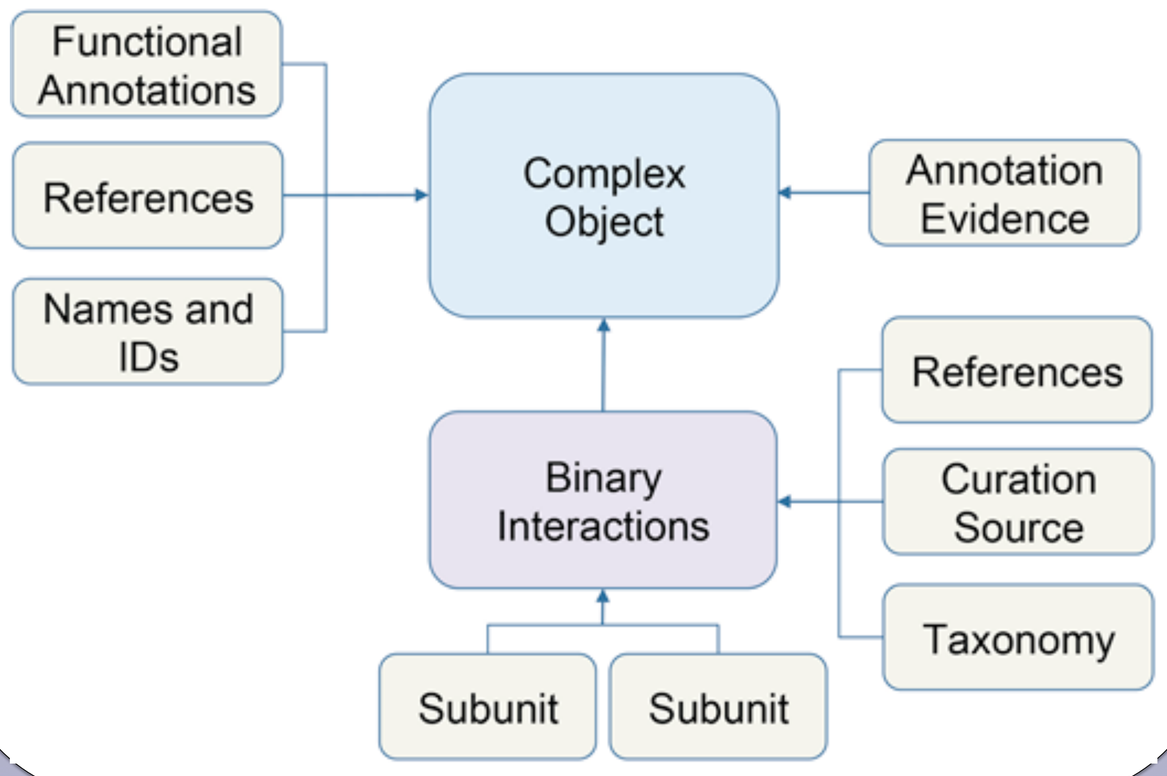
Integration of Macromolecular Complex Data into the *Saccharomyces* Genome Database

Edith D. Wong[1], Marek S. Skrzypek[1], Shuai Weng[1], Gail Binkley[1], Birgit H. M. Meldal[2], Livia Perfetto[2], Sandra E. Orchard[2], Stacia R. Engel[1], J. Michael Cherry[1] and the SGD Project[1]

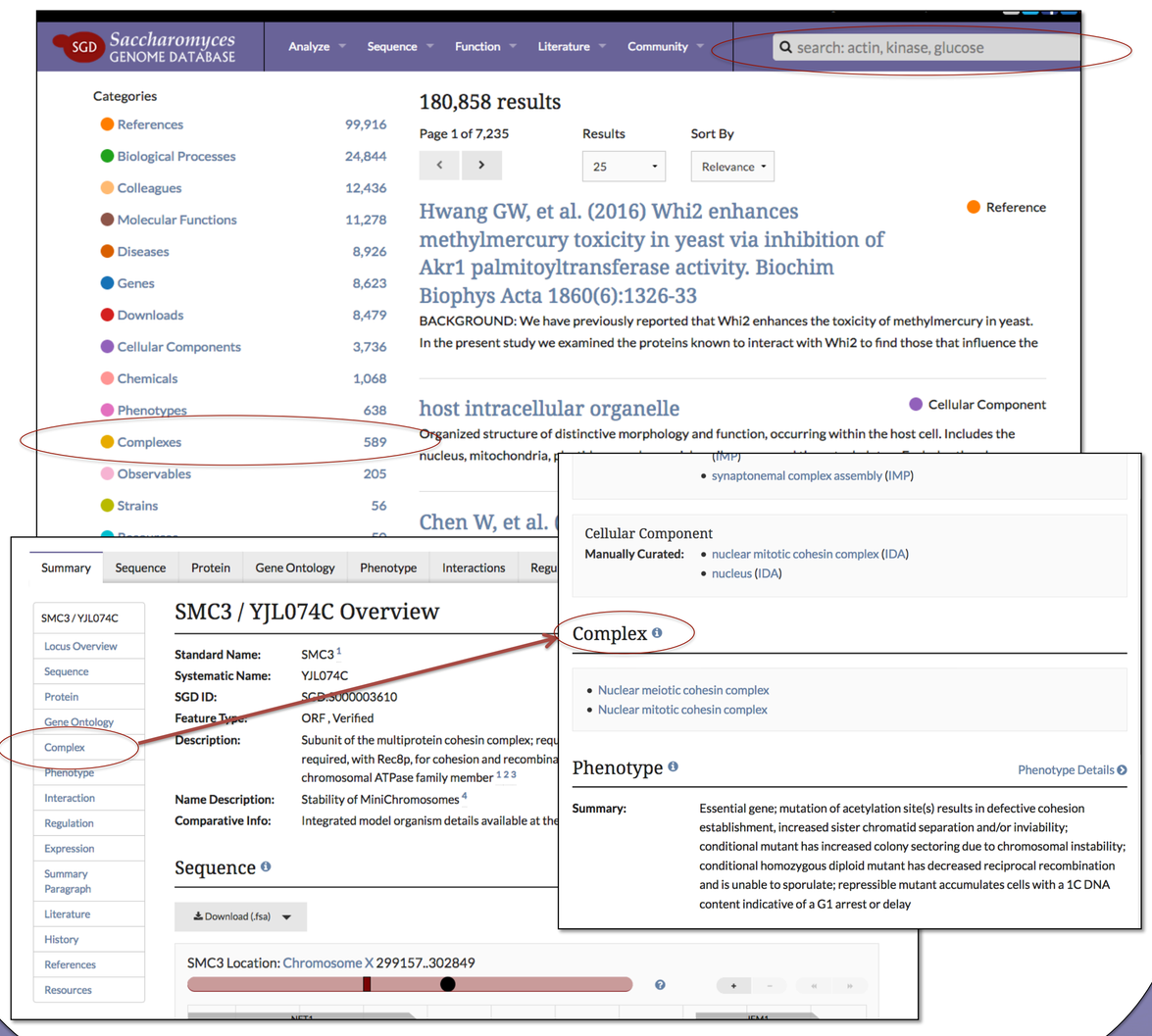
[1]Stanford University, School of Medicine, Department of Genetics, Stanford, CA
[2]European Molecular Biology Laboratory, European Bioinformatics Institute (EMBL-EBI) Wellcome Genome Campus, Hinxton, Cambridge, UK

Proteins seldom function individually. Instead, they interact with other proteins or nucleic acids to form stable macromolecular complexes that play key roles in important cellular processes and pathways. One of the goals of *Saccharomyces* Genome Database (SGD; www.yeastgenome.org) is to provide a complete picture of budding yeast biological processes. To this end, we have collaborated with the Molecular Interactions team that provides the Complex Portal database at EMBL-EBI to manually curate the complete yeast complexome. These data, from a total of 589 complexes, were previously available only in SGD's YeastMine data warehouse (yeastmine.yeastgenome.org) and the Complex Portal (www.ebi.ac.uk/complexportal). We have now incorporated these macromolecular complex data into the SGD core database and designed complex-specific reports to make these data easily available to researchers. These web pages contain referenced summaries focused on the composition and function of individual complexes. In addition, detailed information about how subunits interact within the complex, their stoichiometry, and the physical structure are displayed when such information is available. Finally, we generate network diagrams displaying subunits and Gene Ontology (GO) annotations that are shared between complexes. Information on macromolecular complexes will continue to be updated in collaboration with the Complex Portal team and curated as more data become available. SGD is funded by NIH NHGRI [U41HG001315].

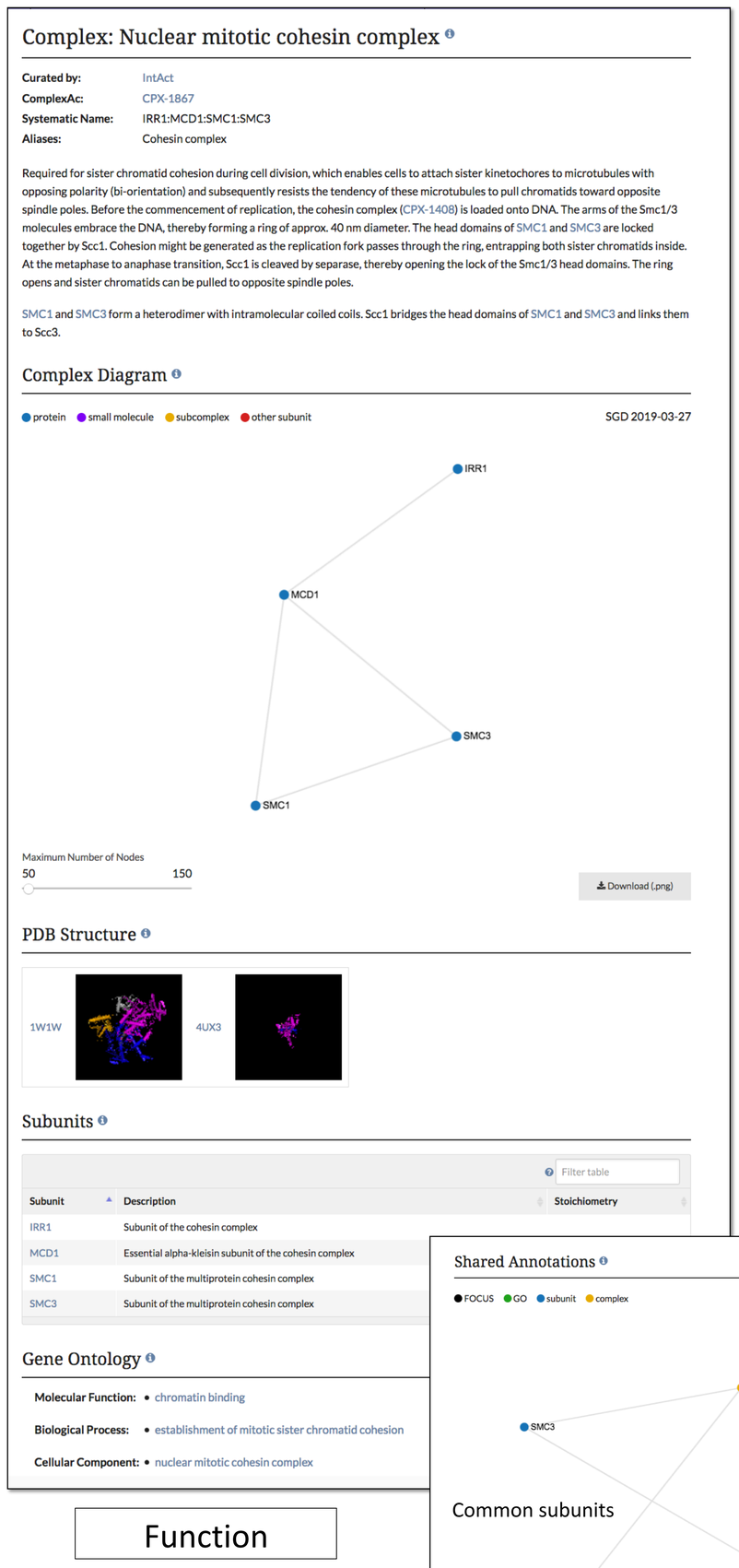
Macromolecular Complex Data



Finding Complex Data



Complex Pages



Summary information

Composition and Structure

Related Complexes

Function

Common subunits

Common annotation

sgd-helpdesk@lists.stanford.edu

https://www.facebook.com/yeastgenome/

https://www.youtube.com/SaccharomycesGenomeDatabase

@yeastgenome