

SGD

# Saccharomyces Genome Database (SGD) Through the Years



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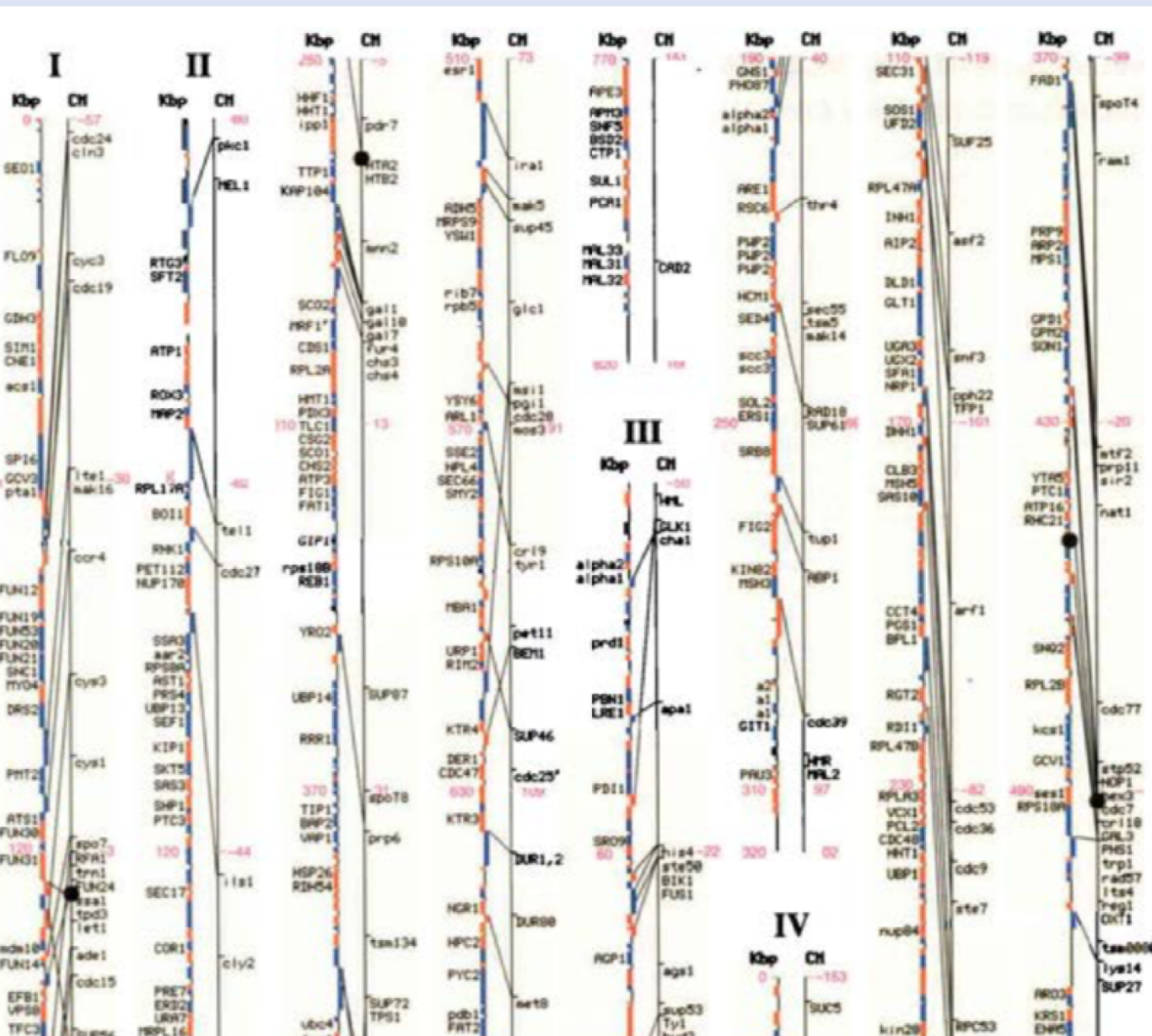
“The human genome project has spawned a vigorous new science called genomics. The model organisms were to serve as the “Rosetta Stone” that would allow us to understand the human genome sequence. The rise of genomics and bio-informatics has had another consequence: the increasing dependence of all biology on results available only in electronic form. Most of the useful genomic data, notably genetic maps, physical maps, as well as DNA and protein sequences, are available only on the Worldwide Web. As a result, databases of genomic information for a variety of organisms have been organized.”  
David Botstein and J. Michael Cherry 1997  
Proc. Natl. Acad. Sci.

The *S. cerevisiae* database was created in 1993 using the AceDB software created by R. Durbin for visualization of the *C. elegans* genome. SacchDB website was launched in 1994 featuring *S. cerevisiae* genetic maps, nomenclature and curated literature. The genetic maps were the result of 40 years of genetic analysis.

In 1996 the complete sequence of the first eukaryote, *Saccharomyces cerevisiae*, appeared on the World Wide Web and the physical mapping data was based on this complete genomic sequence.

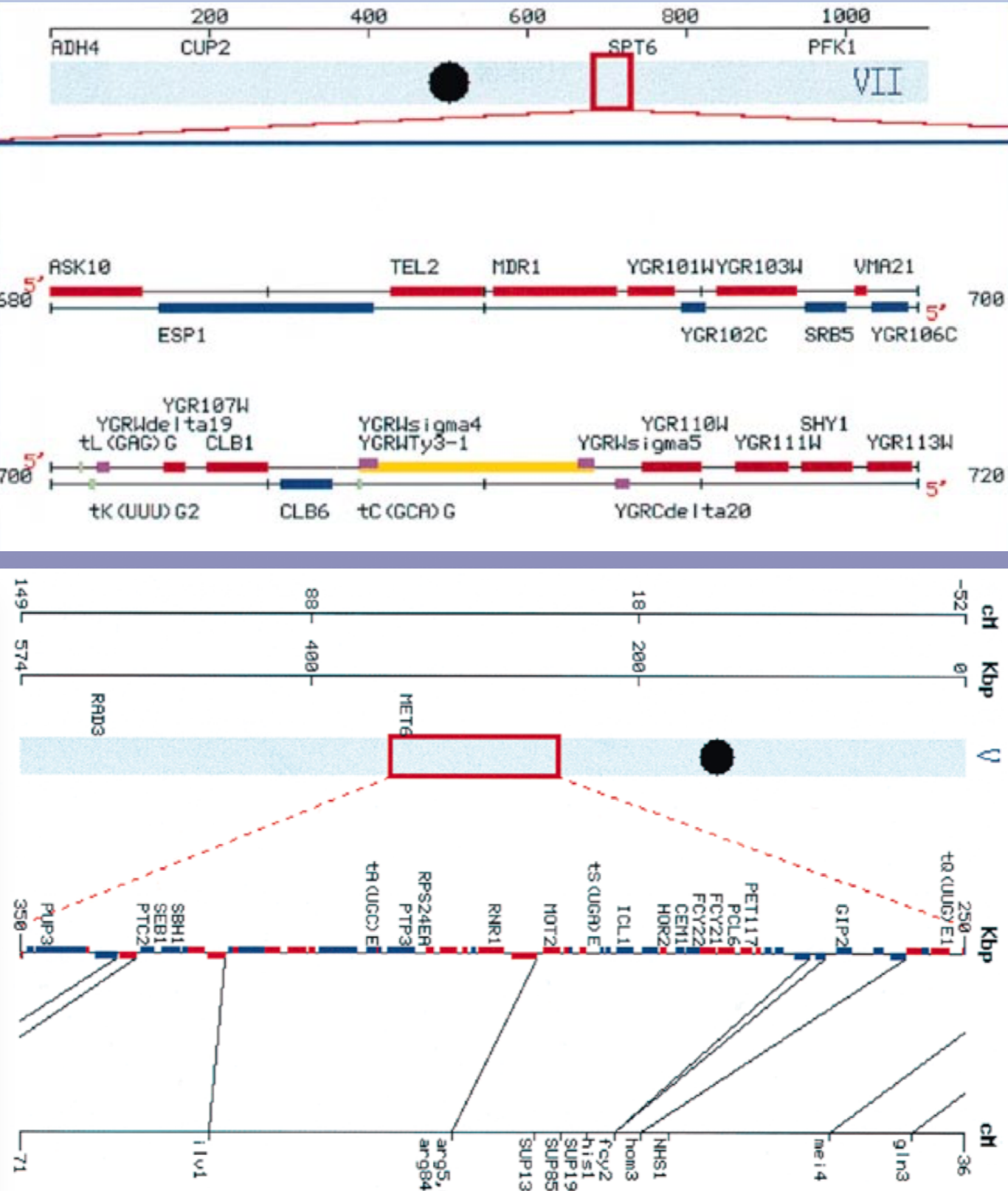
1997

Alignment of Genetic and Physical Map



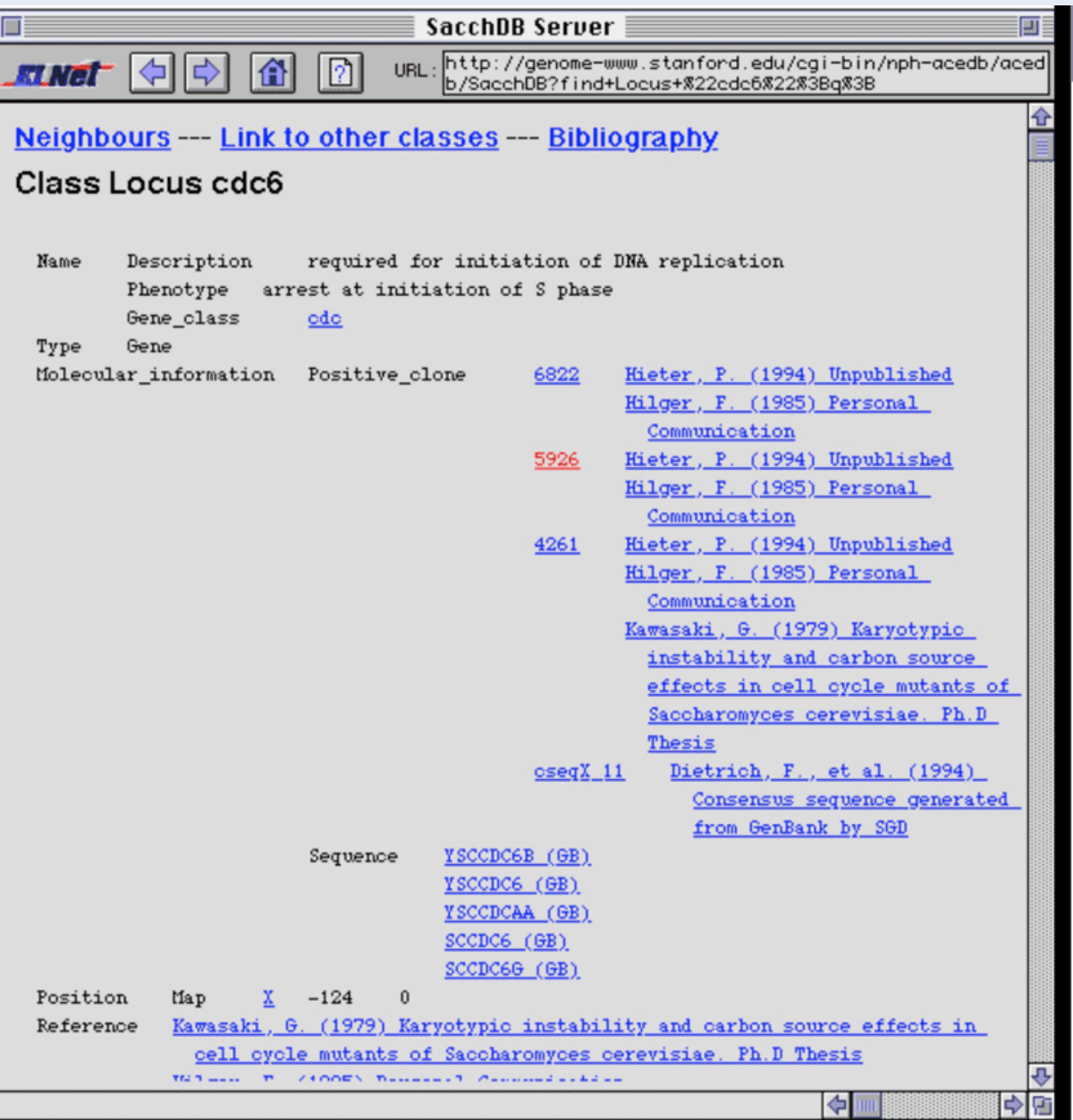
1998

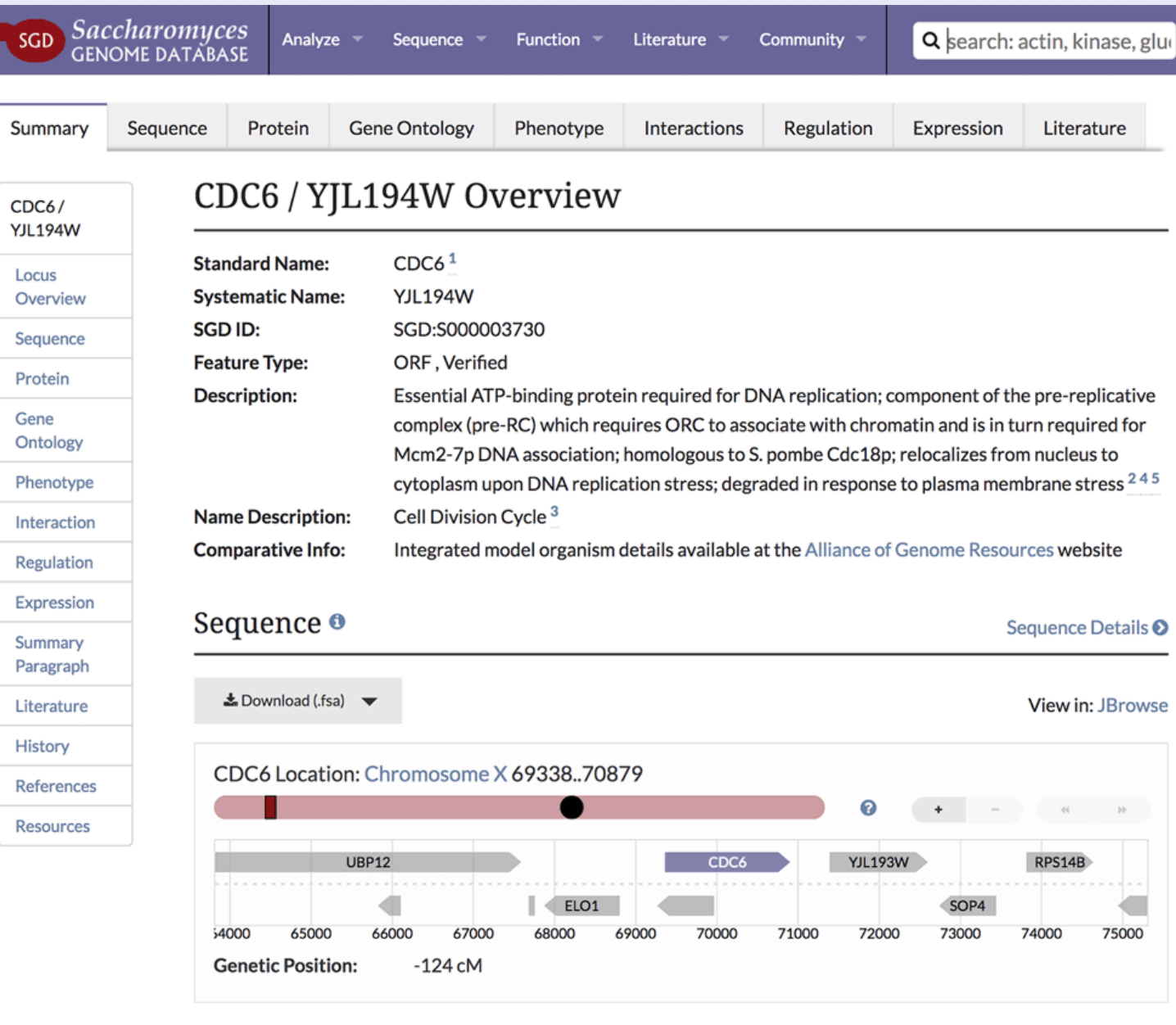
First Clickable Features Map and Clickable Combined Physical and Genetic Map



1994

First SGD Website and the Current 2019 Site for CDC6





25 Years of SGD

...and still your best bud!

1993

1993-2001

1993: SGD initiated with AceDB+  
1994: Website launched, genetic maps and nomenclature  
1996: Complete budding yeast genome sequence  
2000: Oracle database  
2001: Phenotypes from yeast systematic deletion project, 20 million web hit milestone

2002

2002-2009

2002: GO Team Mapper, Synonym Viewer, Fungal Alignments  
2003: Functional annotations for all ORFs, 30 million hits  
2004: Genome browser, genetic & physical interaction data  
2005: Expert gene descriptions  
2008: Biochemical pathways  
2009: YeastGFP

2010

2010-2014

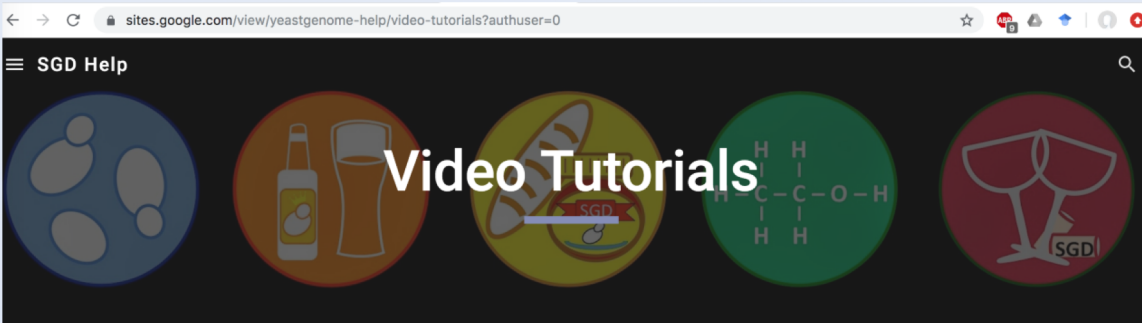
2010: Post-translational modifications, SGD on Facebook, Twitter  
2012: YeastMine & SPELL tools  
2015: First research blog posting  
2015: Gene regulation  
2014: 12 alternative reference genomes, human disease knowledge, SGD YouTube channel

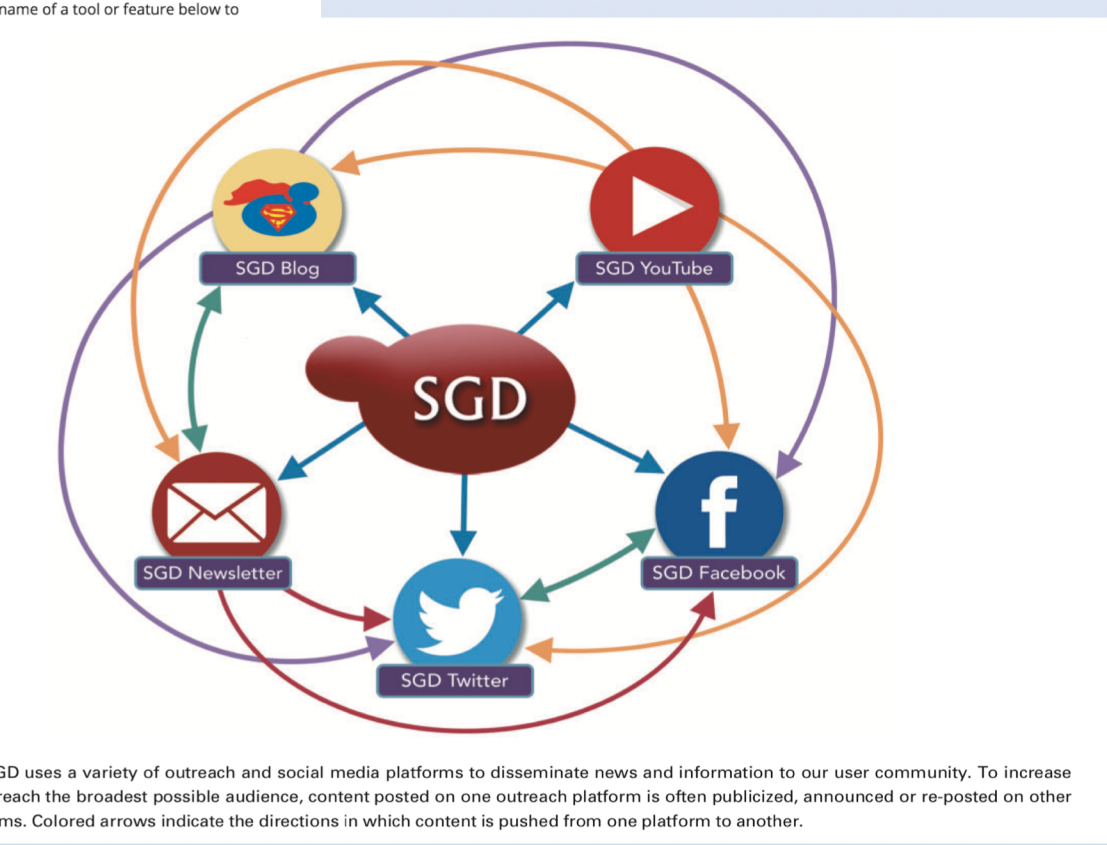
2015

2015-2018

2015: Phenotype summaries, Variant Viewer  
2016: Website redesigned, SGD webinars series, faceted search  
2017: 21st century database and search, founding member of Alliance of Genome Resources  
2018: 25th anniversary of SGD!

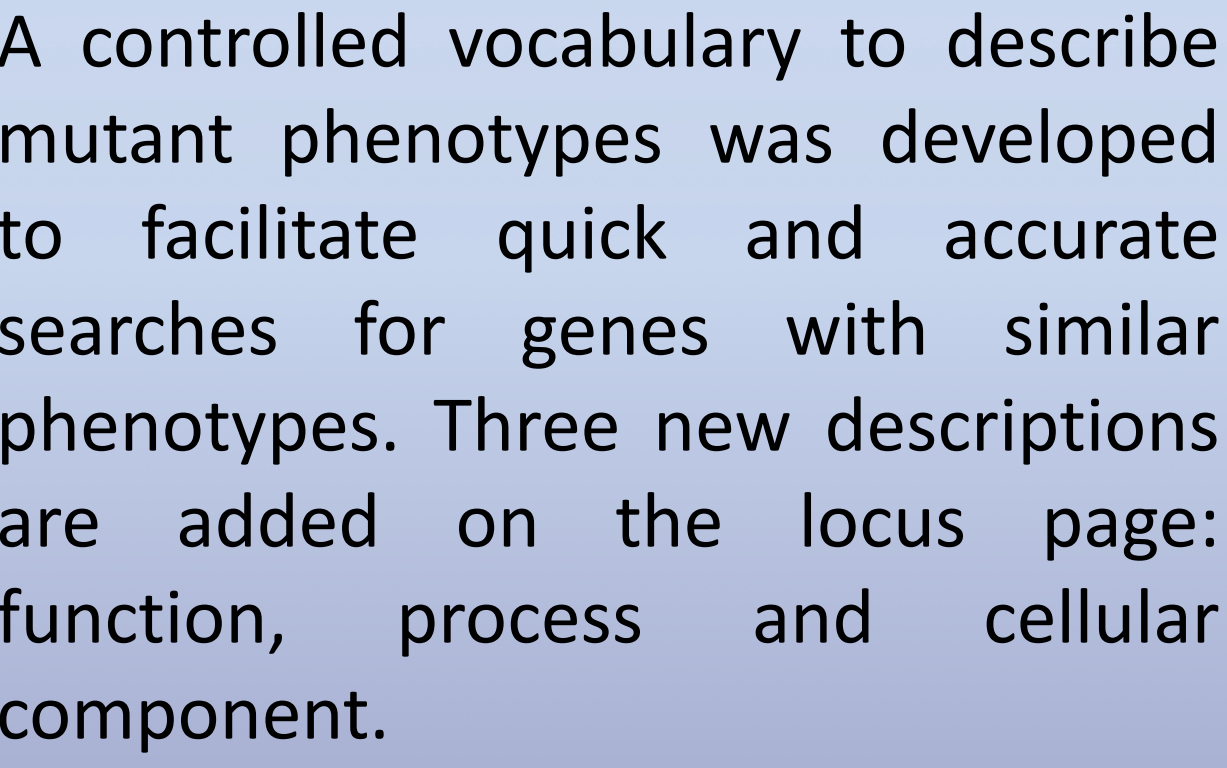
SGD Tutorials and Outreach





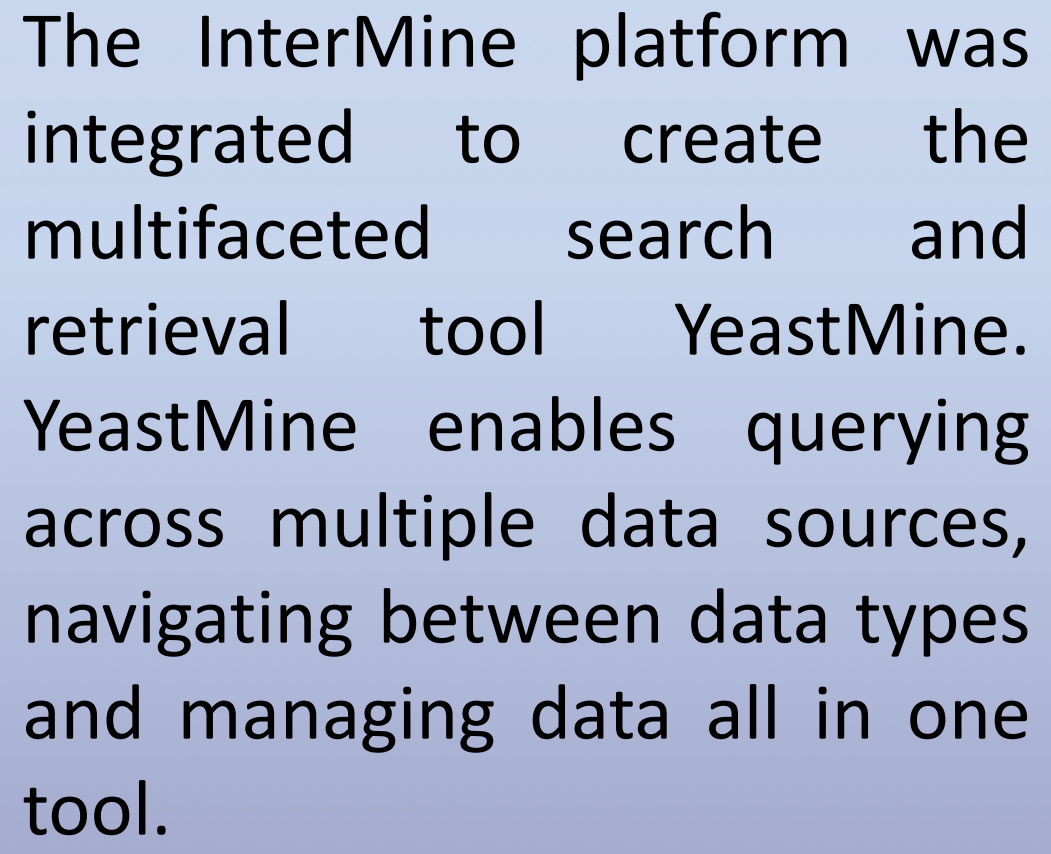
2000

Introducing Gene Ontology (GO) Terms



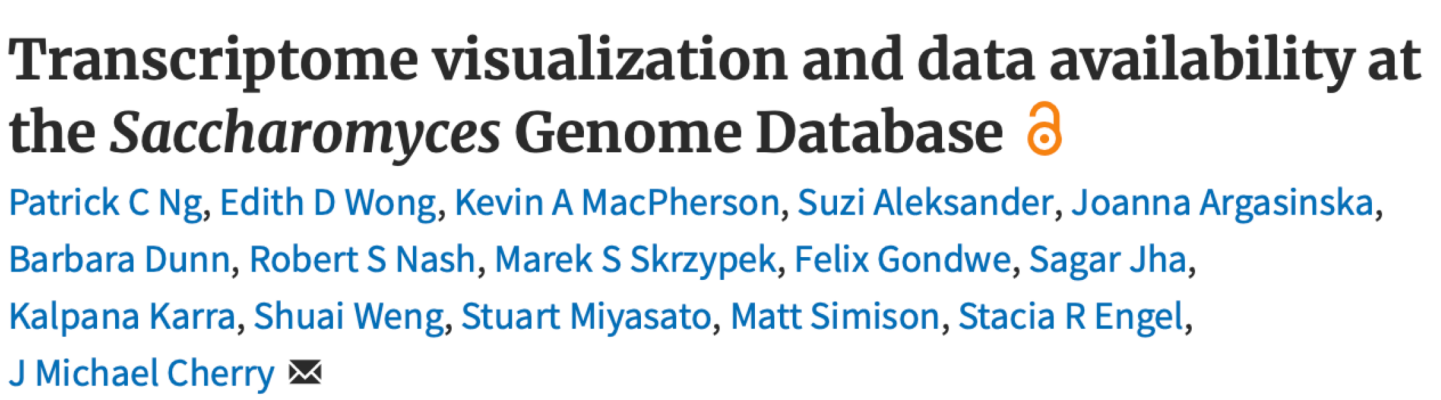
2012

YeastMine Advanced Query



2019

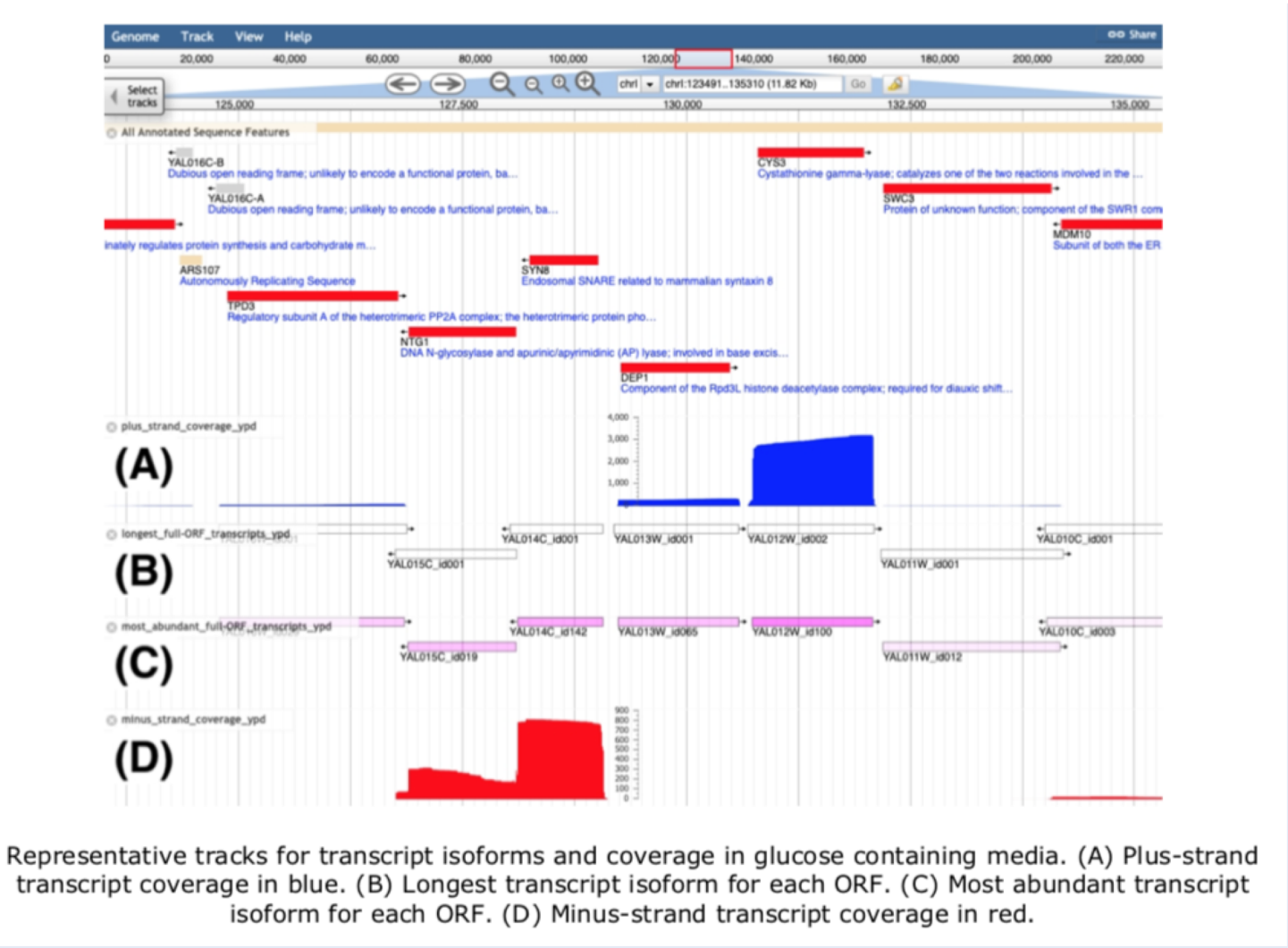
Transcriptome Visualization Paper



Transcriptome visualization and data availability at the *Saccharomyces* Genome Database

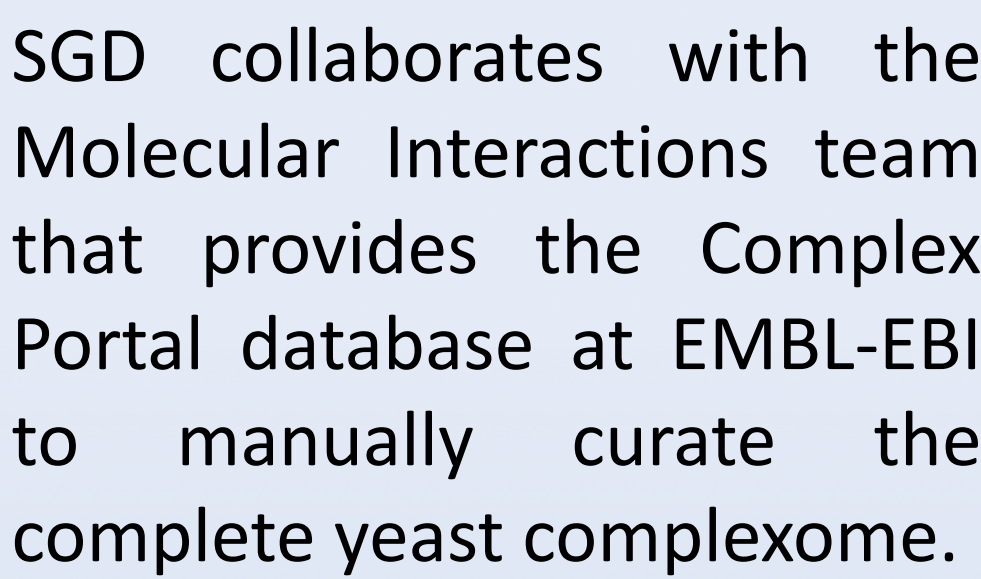
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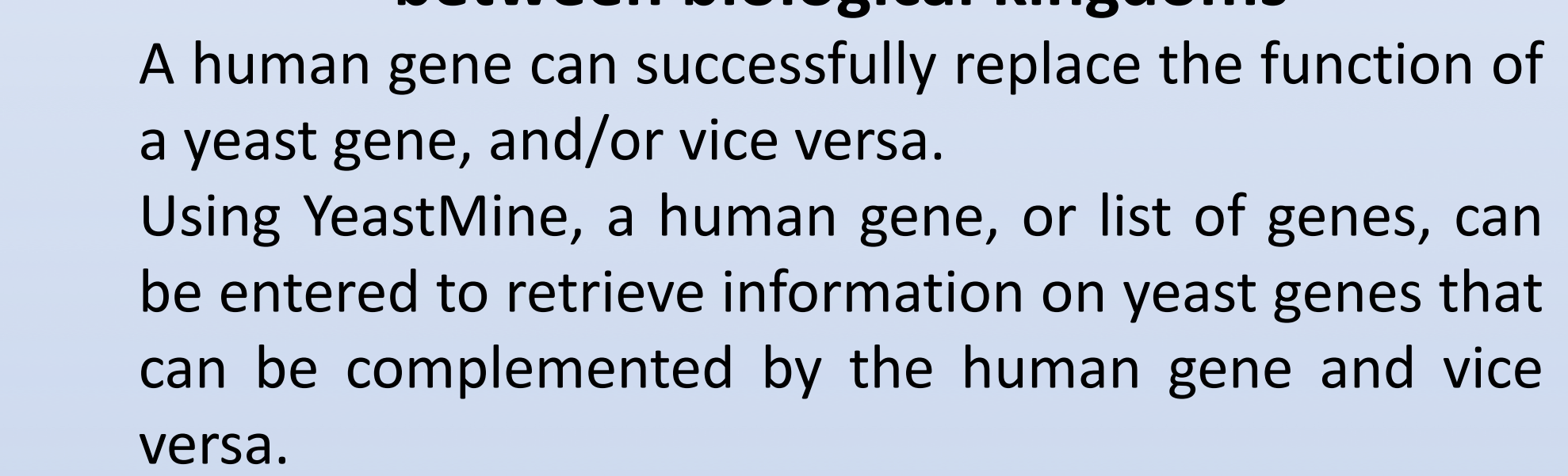
2019

Yeast Macromolecular Complexome




2018

Yeast-Human Complementation Data: a tool to understand human genes and a bridge between biological kingdoms



Founding member of Alliance of Genome Resources



SGD, along with the five other major model organism database (MOD) projects (Mouse Genome Database (MGD), Rat Genome Database (RGD), Zebrafish Information Network (ZFIN), WormBase, and FlyBase and the Gene Ontology (GO) Consortium founded the Alliance of Genome Resources, a new platform that aims to integrate, develop and maintain genome information resources in order to facilitate the use of a variety of model organisms to understand the genetic bases of human biology and disease.

2016

Multi-genome Reference Panel

