

# Laboratory of Molecular Genetics

<http://www.bio.eng.osaka-u.ac.jp/mg/biomgadm/>



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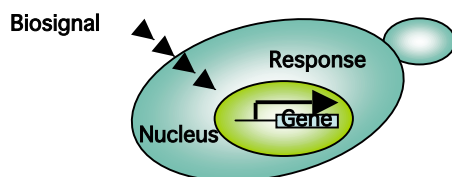


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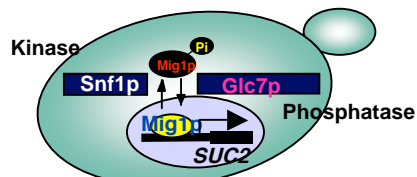
The main research interest of this laboratory is elucidating the basic mechanisms of gene regulation in eukaryotic organisms and their applications to the breeding of industrial microorganisms. To achieve this aim, a simple eukaryotic microorganism, "*Saccharomyces cerevisiae*", was selected as a model organism because with this organism precise genetic analysis is possible to perform and a host-vector system has been established. In recent years, it has attracted wide interest as a model organism for the elucidation of basic cellular mechanisms in eukaryotes such as growth control and transcriptional regulation. The importance of this organism in the brewing and fermentation industries confers on this organism its significant role as an experimental material for research. Fortified with these facts, we will devote ourselves to the pursuit of several research subjects under the following four main research projects. Furthermore, the lab has an activity as Yeast Genetic Resource Center ([http://yeast.lab.nig.ac.jp/nig/index\\_en.html](http://yeast.lab.nig.ac.jp/nig/index_en.html)) under the National BioResource Project by MEXT.

## --- Genetics and Molecular Biology of Yeast! ---

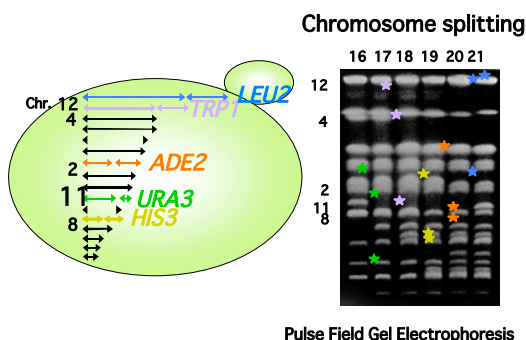
### 1) Signal Transduction and Regulation of Gene Expression in Yeast



### 2) Yeast Genome Science and Genome Biotechnology

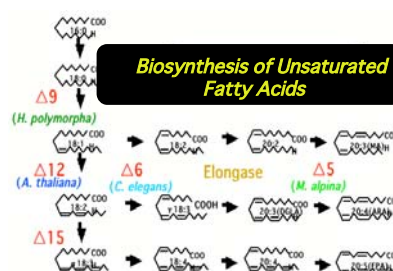


### 3) Yeast Chromosome Engineering



Pulse Field Gel Electrophoresis

### 4) Yeast Lipid Biotechnology



It is our hope to contribute to the promotion and improvement of welfare and quality of human life through our research activities.