

Departamento de Ciências da Vida

## Functional Genomics and Physiology of Yeasts

The Yeast Genomics lab @ NOVA



CENTRO DE RECURSOS MICROBIOLÓGICOS



Paula Gonçalves

Assistant Professor

DCV

PhD Yeast Molecular Biology

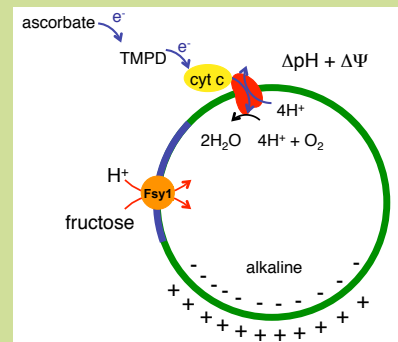
### Objectives

**General:**

- To use comparative genomics to elucidate important aspects of the biology of yeasts

**Specific:**

- To understand the evolution of mating systems in red pigmented yeasts
- To study the evolution of selected families of sugar transporters
- To address specific problems of industrial fermentations conducted by yeasts



### Methodology

- Whole genome sequencing
- Sugar transport measurements in yeasts
- Study of gene expression by Real Time – RT PCR
- Genetic manipulation of *Saccharomyces cerevisiae* and *Phaffia rhodozyma*

### Expected Results

- Revised models describing the evolution of mating systems in Fungi (Basidiomycetes).
- Up to 50 new sequences of complete yeast genomes
- Identification of new sugar transporters with useful biochemical properties

