

Departamento de Ciências da Vida

Elucidating the sexual cycle of an orange colored yeast

The Yeast Genomics lab @ NOVA



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M.Sc Applied Microbiology
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Objectives

Identification of the genomic regions governing the sexual cycle of the orange yeast *Phaffia*

Genetic manipulation of a selected strain in order to assess the function of each gene in sexual reproduction

Comparative genomics of *Phaffia* species

Methodology

Construction of a collection of knockout mutants by genetic engineering

Study of several aspects of *Phaffia*'s cell cycle by flow cytometry, microscopy and fluorescence microscopy imaging

Comparative genomics using next generation sequence data

Expected Results

Elucidation of the sexual cycle of an eukaryotic microorganism

Insights on structure, function and evolution of the genetic *loci* responsible for sexual behavior in Fungi

