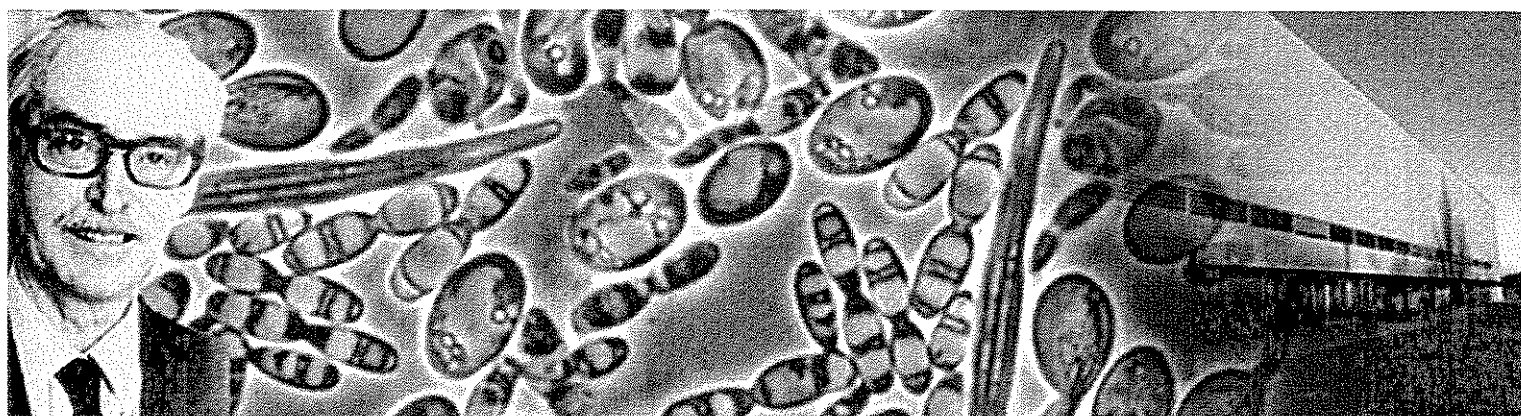


XIX Jornadas de Biologia de Leveduras "Professor Nicolau van Uden"

15 | Junho
16 | 2012



Faculdade de Ciências e Tecnologia da Universidade Nova de Lisboa
Campus da Caparica

PROGRAMA

SEXTA-FEIRA, 15 DE JUNHO

- 9.30** **Recepção e entrega de documentação**
- 10.45** **Café**
- 11.15** **Sessão de Abertura**
Fernando Santana (Director da Faculdade de Ciências e Tecnologia)
Isabel Sá Nogueira (Representante do Centro de Recursos Microbiológicos)
Álvaro Fonseca (Comissão Organizadora)
Helena Rodrigues de Sousa (Comissão Organizadora)
- 11.30** **Conferência “Professor Nicolau van Uden”**
Moderador: Cecília Leão
Secrets of life imprinted in the death of yeast
Paula Ludovico
- 12.30 - 14.00** **Almoço na sala Ágora**
- Sessão I – Yeast Physiology and Genetics**
 Moderadores: Maria C. Loureiro Dias /José M. Peinado
- 14.00 - 14.15** Extrinsic factors influencing cell viability in chronological aging yeast
 Júlia Santos
- 14.15 -14.30** Autophagy and aged yeast cells response to proteotoxic stress
 Belém Sampaio-Marques
- 14.30 - 14.45** CgQdr2 drug:H⁺ antiporter from the pathogenic yeast *Candida glabrata*: role
 and regulation in azole drug resistance
 Catarina Costa
- 14.45 - 15.00** Evolution of the 12-spanner drug:H⁺ antiporters of family 1 (DHA1) in the
 pathogenic *Candida* species: phylogenetic analysis of Mdr1 and Flu1 proteins
 Paulo Jorge Dias
- 15.00 - 15.15** Gene expression regulation in yeast mediated by the transcription factor Haa1p:
 identification of residues required for functional Haa1-DNA associations and role
 of copper in DNA-binding
 Sílvia Henriques
- 15.15 - 15.30** Role of the DHH1 gene in the regulation of monocarboxylic acids transporters
 expression in *Saccharomyces cerevisiae*
 Sandra Mota
- 15.30 - 15.45** A genetic strategy for selection for simultaneous pentose and glucose transport
 Filipa Pereira
- 15.45 - 16.00** The MX4 blaster cassette for clean removal of MX4 deletion cassettes
 Ângela Carvalho
- 16.00 - 16.30** **Café**
- 16.30 - 16.45** Screening for the presence of new Ffz-like hexose transporters in yeasts
 Sara Cabral

16.45 - 17.00 Characterization of xylanases-producing yeasts isolated from Brazilian ecosystems
Carla Lara

17.00 - 17.15 Diversity and physiological characterization of D-xylose fermenting yeasts isolated from Brazilian Amazonian forest
Raquel M. Cadete

Sessão II- Yeast Ecology and Genetics of Reproduction

Moderadores: Fernando Rodrigues / Álvaro Fonseca

17.30 - 17.45 Diversity of yeasts in beech forest soils
Andrey Yurkov

17.45 - 18.00 A first glimpse on the genetic diversity of *Saccharomyces uvarum*
Carla Gonçalves

18.00 - 18.15 Complex population structure of *Saccharomyces paradoxus* in Eurasia
Pedro Miguel Almeida

18.15 - 18.30 Molecular evidence for a tetrapolar mating system and genetic heterogeneity in the basidiomycetous yeast *Kwoniella mangroviensis*
Marco A. Guerreiro

18.30 - 18.45 Identification and functional analysis of mating genes of the dimorphic fungal pathogen *Paracoccidioides brasiliensis*
Jéssica Rezende Gomes

20.00 **Jantar das Leveduras**
SOLAR DOS ZAGALOS (SOBREDA)

SÁBADO, 16 DE JUNHO

Sessão III- Yeasts in Fermentation Processes

Moderadores: Manuel Malfeito-Ferreira / César Fonseca

9.00 - 9.15 Screening yeast deletion strains for their performance during wine fermentation
Tiago Viana

9.15 - 9.30 Influence of non-*Saccharomyces* yeasts on the sensorial profiles of Touriga Nacional wines
Andreia Teixeira

9.30 - 9.45 Survival rate of wine-related yeasts during alcoholic fermentation assessed by direct live/dead staining combined with fluorescence *in situ* hybridization
Patrícia Branco

9.45 - 10.00 Impact of assimilable nitrogen availability in glucose uptake kinetics in *Saccharomyces cerevisiae* during alcoholic fermentation
Margarida Palma

10.00 - 10.15 Isolation and screening of novel inulinase producing yeasts
Pedro D. Teixeira

10.15 - 10.30 Production of bioethanol from carob pulp: integration of 1st and 2nd generation
Francisco Mendes

10.30 - 11.00 **Café**

Sessão IV– Yeast as Model Organism

Moderadores: Manuela Côrte-Real / Miguel Teixeira

- 11.00 - 11.15** Evaluation of coumarins effect in *Saccharomyces cerevisiae*
Dora Pinto
- 11.15 - 11.30** *Saccharomyces cerevisiae* as an expression host and experimental model system for the functional analysis of *Arabidopsis thaliana* putative multidrug transporters: role of ScTpo1 homolog AtZif11 in herbicide resistance and auxin transport
Tânia R. Cabrito
- 11.30 - 11.45** Plk2 mediated phosphorylation on Ser-129 induces α -synuclein aggregation
Pedro Antas
- 11.45 - 12.00** Using microfluidics for alpha-synuclein controled expression and inclusions formation monitorization in a Parkinson's disease yeast model
Sandra Tenreiro
- 12.00 - 12.15** Preventing S129 alpha-synuclein phosphorylation increases toxicity, inclusion formation and decreases protein turnover in a yeast model of Parkinson's disease
Madalena M. Reimão-Pinto
- 12.15 - 12.30** A new inhibitor of p53-MDM2 interaction discovered using a yeast target-based screening approach
Joana Soares
- 12.30 - 12.45** Discovery of potent small-molecule caspase-7 activators using yeast target-based screening assays
Clara Pereira
- 12.45 - 13.00** Using yeast to study the regulation of mammalian protein kinase C isoforms by the ceramide pathway
Cláudia Bessa
- 13.00 - 14.30** **Almoço na sala Ágora**

Sessão V– Yeasts and the Health Sciences

Moderadores: Teresa Gonçalves / Sandra Tenreiro

- 14.30 - 14.45** Characterization of cisplatin-induced cell death in *Saccharomyces cerevisiae*
Susana R. Chaves
- 14.45 - 15.00** C2-phytoceramide induces cell wall defects and sensitivity to osmotic stress in *Saccharomyces cerevisiae*
Maria João Sousa
- 15.00 - 15.15** Unveiling the conserved yeast recovery pathway to amphotericin B action
Rita Teixeira-Santos
- 15.15 - 15.30** Impact of CUG ambiguous decoding on *Candida albicans* adhesion and surface diversity
Ana Silva-Dias
- 15.30 - 15.45** Impact of caffeine in the internalization of *Candida albicans* by human keratinocytes
Marta Mota
- 15.45 - 16.00** Impact of A2A receptors in macrophage recognition of *Candida albicans*
Lisa Rodrigues

- 16.00 - 16.15** Molecular typing of Portuguese *Cryptococcus neoformans* isolates using the phospholipase (PLB1) gene and assessment of antifungal resistance
Carina Máximo
- 16.15 - 16.30** *Paracoccidioides brasiliensis* virulence is affected by the negative regulator of inorganic sulfur assimilation SconC
João Menino
- 16.30 - 17.00** **Café**
Conferência “Jovem Investigador” – Tributo à Professora Isabel Spencer Martins
Moderadora: Isabel Sá Correia
- 17.00 - 17.30** Quantitative- and phospho-proteomic analysis of the yeast response to the tyrosine kinase inhibitor IM
Sandra C. dos Santos
- 17.30 - 18.00** Evolution and maintenance of sex in red yeasts: moving from genes to genomes
Marco A. Coelho
- 18.00** **Sessão de encerramento**

Yeast as Model Organism

EVALUATION OF COUMARINS EFFECT IN *SACCHAROMYCES CEREVISIAE*

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1, Instituto Gulbenkian de Ciência, Oeiras, PT; 2, CGM, CNRS, Gif-sur-Yvette, FR; 3, Gonçalo Moniz Research Center, Fundação Oswaldo Cruz, Salvador, BA, BR and Center of Biotechnology and Cell Therapy, Hospital São Rafael, Salvador, BA, BR; 4, ESTeSL, IPL, Lisboa, PT
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Coumarin and derivatives (Coumarins) are phenolic compounds widely distributed in the plant kingdom, as for example in tonka bean and cassia cinnamon. These compounds are involved in various processes such as the defense against phytopathogens, the response to abiotic stress and the regulation of oxidative stress. Coumarins can be produced synthetically and are broadly used as additives in the food, perfumes, cosmetics and pharmaceutical industry due to their vast array of biological activities, including anticoagulant, analgesic, anti-inflammatory and anti-microbial. The main metabolite (derivative) of coumarin in humans is umbelliferone (7-hydroxycoumarin). Coumarins have been reported to possess antioxidant properties, although some reports suggest that under some circumstances they can also act as pro-oxidants. In order to ascertain the antioxidant/pro-oxidant properties of Coumarins, we are currently studying their effects using key oxidative-responsive genes in the yeast *Saccharomyces cerevisiae*. The effects of coumarin and umbelliferone were evaluated in strains of *S. cerevisiae* deleted for the genes encoding the transcriptional activators involved in the oxidative stress and antioxidant responses (MSN2 and YAP1, respectively), the gene encoding for the pleiotropic drug transcriptional regulator *PDR3*, and genes encoding drug pumps/transporters. Our results point to divergent growth effects due to the presence of coumarin and umbelliferone. These results will be presented and discussed in light of the pro- and anti-oxidant properties of both compounds, as observed by drug sensitivity growth assays and are, currently, under evaluation by assessing regulated activity of the transcription factors.