

## UCIBIO ANNUAL MEETING

28-29 September 2018 | FCT NOVA - CGD Auditorium

### PROGRAMME

Friday, 28 September 2018

#### MORNING SESSIONS

**08:30 - 09:30** REGISTRATION AND WELCOME COFFEE

**09:30 - 10:00** OPENING SESSION

09:30 **Welcome message by the UCIBIO Director Maria João Romão**  
**João Paulo Crespo**, Coordinator of Research Units from FCT NOVA  
**Virgílio Machado**, Director of FCT NOVA  
**Isabel Rocha**, Pro-Rector of NOVA

09:45 **UCIBIO AT A GLANCE**

**Maria João Romão**, UCIBIO Director

**10:00 - 11:00** KEYNOTE LECTURE # 1

**Filipe Assoreira**, P-BIO - Portugal's Biotechnology Industry Organization  
*Lifescience and Innovation in Portugal: unlocking the future*

**11:00 - 12:30** INDUSTRY & ACADEMIA PARTNERSHIP SESSION

*Chair - Maria Ascensão Reis*

INVITED SPEAKERS:

**Filipe Aguiar** (73100lda)  
**João Fonseca** (Biosurfit)  
**Manuel Pacheco** (Plux)  
**Orfeu Flores** (StabVida)  
**Rui Frade** (Sumol + Compal)

**ROUND TABLE** *An Industry view of Academia*

Participants: **Isabel Rocha, Filipe Assoreira, Filipe Aguiar, João Fonseca, Manuel Pacheco, Orfeu Flores, Rui Frade**

Moderators: **Maria Ascensão Reis & Alexandra Fernandes**

**12:30 - 14:00** LUNCH - Ágora Room

**GROUP PHOTO**

## AFTERNOON SESSIONS

**14:00 - 15:00 SCIENTIFIC SESSION 1, TL - Biological and Biomolecular Interactions***Chair - Eurico Cabrita*14:00 **Eurico Cabrita**, FCT NOVA - Overview of the Thematic Line14:05 **Susana Palma**, FCT NOVA - *Machine learning for the meta-analyses of microbial pathogens' volatile signatures*14:20 **Rui Neves**, FCUP - *Assessment and optimization of antidiabetic compounds through computational and experimental approaches*14:35 **Sofia Pauleta**, FCT NOVA - *Copper tolerance in Enterococcus faecium: unveiling the activity of a multicopper oxidase encoded by cueO gene and its gene transfer to Staphylococcus aureus*14:50 **Francisco Leisico**, FCT NOVA - *Peptidoglycan amidation in Staphylococcus aureus - structure-function studies*14:55 **Sara Pais**, FCT NOVA - *Identification and characterization of CteG, a novel Chlamydia trachomatis virulence protein***15:00 - 16:00 SCIENTIFIC SESSION 2, TL - Diagnostics, Drug Discovery and Development***Chair - Maria João Ramos*15:00 **Maria João Ramos**, FCUP - Overview of the Thematic Line15:05 **Aldino Viegas**, FCT NOVA, *NMR Structural Studies in Drug Discovery and Development*15:20 **Bruno Fonseca**, FFUP - *Cannabinoids in female reproductive tissues: biomarkers or therapeutic drugs?*15:35 **Teresa Santos Silva**, FCT NOVA - *Development and Characterization of new nanoagents to treat Rheumatoid Arthritis*15:50 **Tiago Augusto**, FFUP - *Role of Autophagy and PI3K in Aromatase Inhibitors-Acquired Resistance*15:55 **Fabiola Medina**, FCUP - *A QM/MM study of the reaction mechanism of human  $\beta$ -ketoacyl reductase***16:00 - 16:30 NETWORKING COFFEE BREAK****16:30 - 17:30 KEYNOTE LECTURE # 2****Maria João Bonifácio**, BIAL-Portela & CIA SA*Discovery & Development of New Drugs: Catechol-O-Methyltransferase Inhibitors***17:30 - 20:00 PHD STUDENT POSTER SESSION** - Ágora Room**Sponsored by Nano4Global - with refreshments and networking****19:00 - 20:00 Meeting of the Directive Board, Research Groups Leaders and Lab Leaders** – Library Auditorium**20:00 - 22:00 DINNER** - C@mpus.Come, FCT NOVA

## MORNING SESSIONS

**09:30 - 10:30 SCIENTIFIC SESSION 3, TL - Safety in Human and Environmental Health**

*Chair - Maria de Lourdes Bastos*

09:30 **Maria de Lourdes Bastos**, FFUP - Overview of the Thematic Line

09:35 **Pedro Costa**, FCT NOVA - *Toxins and other bio-reactives from marine invertebrates: Hazards or novel resources?*

09:50 **Ana Freitas**, FFUP - *Advances in the establishment of Enterococcus faecium key virulence factors*

10:05 **Marta Martins**, FCT NOVA - *Interactions between environmental carcinogens: a genotoxic and metabolomic approach*

10:20 **Ana Margarida Araújo**, FFUP - *Characterization of hepatic metabolic disturbances caused by subtoxic levels of 3,4-methylenedioxymethamphetamine (MDMA)*

10:25 **Jaime Conceição**, FFUP - *Oral solid formulations containing cyclodextrins as excipients*

**10:30 - 11:00 NETWORKING COFFEE BREAK****11:00 - 12:00 SCIENTIFIC SESSION 4, TL - (Nano)Bioengineering**

*Chair - Ana Cecília Roque*

11:00 **Ana Cecília Roque**, FCT NOVA - Overview of the Thematic Line

11:05 **Catarina R. Rodrigues**, FCT NOVA, *Nano4Nutrition* - *Nanotechnology approach for targeted absorption of nutraceuticals towards a human healthy nutrition*

11:20 **Nuno Cerqueira**, FMUP - *Novel pathways for nitric oxide formation in humans: kinetic and mechanistic studies on the nitrite reductase activity of molybdoenzymes*

11:35 **Maria Enea**, FFUP - *Multifunctional Nanocarriers for smart drug delivery: Nanotoxicology assessments and imaging - MultiNANO@Tox*

11:50 **Mariana Matos**, FCT NOVA - *Optimisation of a pilot scale process for bioconversion of fruit waste into polyhydroxyalkanoates using mixed microbial cultures*

11:55 **Tiago Ferro**, FCT NOVA - *MHC class I stability is modulated by cell surface sialylation in human dendritic cells*

**12:00 - 13:00 KEYNOTE LECTURE # 3**

**Margarida Casal**, CMBA - Centre of Molecular and Environmental Biology, University of Minho  
*Learning from nature: biopolymer design with biomimetic properties and smart behaviour*

**13:00 - 14:30 LUNCH** - Ágora Room

AFTERNOON SESSIONS

14:30 - 15:30 **INVITED LECTURES FROM EXTERNAL R&I UNITS**

14:30 **Ana Paula Duarte**, CICS-UBI - Health Sciences Research Center, University of Beira Interior

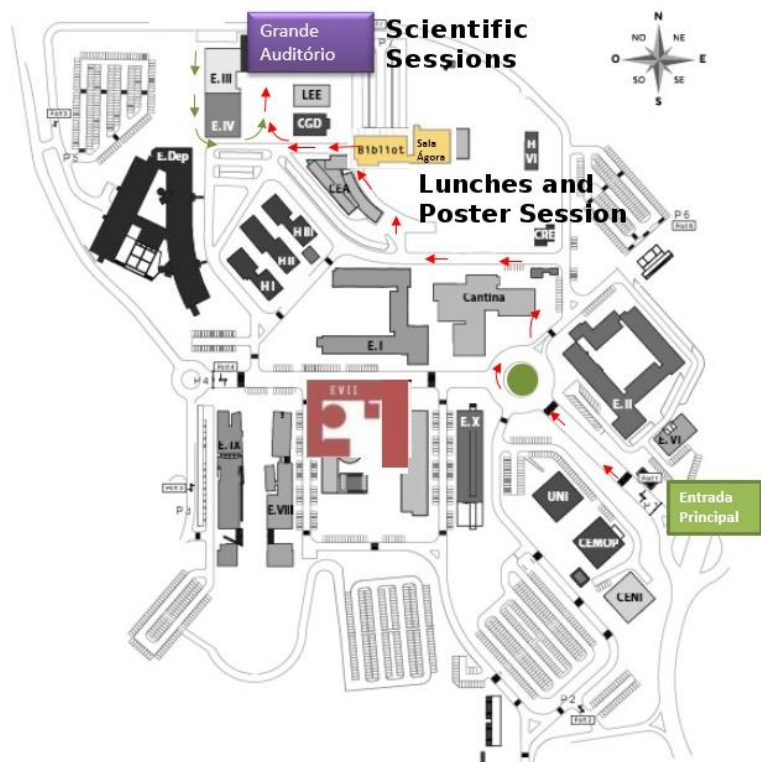
15:00 **Carlos Fontes**, CIISA - Centre for Interdisciplinary Research in Animal Health, Faculty of Veterinary Medicine - University of Lisbon

15:30 - 16:00 **CLOSING SESSION**

15:30 **Nano4Global Poster awards**

15:40 **Félix Carvalho**, UCIBIO Vice-Director

MEETING VENUE



Legenda:

Auditório CGD

Sala Ágora

Percurso

Percurso

**ORGANIZING COMMITTEE**

Angelina S. Palma, FCT NOVA

Bruno Fonseca, FFUP

Jaime Mota, FCT NOVA

Paula Guedes de Pinho, FFUP

Teresa Sequeira-Carlos, FCT NOVA

**PHD STUDENTS COMMITTEE**

Francisco Leisico, FCT NOVA

Joana Bugalhão, FCT NOVA

Lia Costa, FFUP

Luís Midão, FFUP

Micael Silva, FCT NOVA

Viviana Correia, FCT NOVA

**CONFERENCE LIVE SKETCHER**

Benedita Pinheiro, FCT NOVA

## KEYNOTE LECTURES SHORT BIO



**FILIFE ASSOREIRA** is the co-founder and CEO at Nano4 - Nanotechnology company applied to diagnostics. President of P-BIO Portugal's Biotech Industry Organization since 2015. Pharmacy Degree from University of Coimbra and MBA from AESE/IESE. For 12 years, from 2003 to 2015, gained multi-country corporate experience at Genzyme, including serving as Country manager of Portugal. Leadership roles in merger and crisis situations. Successful retail entrepreneur.



**MARIA JOÃO BONIFÁCIO** is currently Head of Pharmacology Research at BIAL. PhD in Biomedical Sciences. In 2015 became manager of the Target Identification and Early Pharmacology Service. Over the last 21 years developed research in the areas of Biochemistry, Molecular Biology and Pharmacology associated to the development of new drugs for CNS and cardiovascular disorders, from which resulted over 40 publications in peer-reviewed journals.



**MARGARIDA CASAL** is the Vice-Rector for Education at University of Minho. Full Professor of Biology at School of Sciences. Vice-President of the *Sociedade Portuguesa de Genética*. Coordinator of the FCT Doctoral Program in Applied and Environmental Microbiology. PhD in Biology from University of Minho in 1995. Head of the Centre of Molecular and Environmental Biology (2013- 2016) and Dean of the School of Sciences at U.Minho (2016-2017). Authored 9 patents, 8 book chapters and more than 120 ISI publications.

## POSTER SESSION

- P1** Ana Margarida Araújo, M. L. Bastos, E. Fernandes, F. Carvalho, M. Carvalho, P. G. de Pinho  
*Characterization of hepatic metabolic disturbances caused by subtoxic levels of 3,4-methylenedioxymethamphetamine (MDMA)*
- P2** Ana Pontes, P. Gonçalves, J. P. Sampaio  
*Characterization of a yeast hybrid lineage associate with olive brine*
- P3** Ana Rita Lima, A. M. Araújo, J. Pinto, C. Jerónimo, R. Henrique, M. L. Bastos, M. Carvalho, P. G. de Pinho  
*Evaluation of prostate cancer volatilome: an in vitro approach*
- P4** Ana Sofia Oliveira, J. Pinto, P. Lopes, M. Cabral, M. L. Bastos, P. G. de Pinho  
*CorkPlus – Contribution of cork stoppers for chemical and sensory properties of bottled wine*
- P5** André F. Pina, N. M. F. S. A. Cerqueira  
*Computational studies addressed to the catalytic mechanism of PNPOx*
- P6** Carla S. S. Teixeira, M. J. Ramos, N. M. F. S. A. Cerqueira  
*Computational studies addressed to the catalytic mechanism of Tryptophan Synthase. An emergent target for the treatment of tuberculosis*
- P7** Cláudia S.M. Fernandes, A. S. Pina, A. C. Roque  
*Affinity hydrogels with tunable properties*
- P8** D. Penas, N. R. Almeida, Ana V. Almeida, J. P. Guerra, J. P. Jacinto, N. Coelho, P. Tavares, A. S. Pereira  
*Structural Study of Dps by PELDOR*
- P9** D. O. Ribeiro, Raquel Costa, B. A. Pinheiro, N. F. Brás, M. J. Ramos, M. J. Romão, T. Feizi, W. Chai, C. M.G.A. Fontes, A. S. Palma, A. L. Carvalho  
*Structural-functional Characterization of a New LysM Domain from Clostridium thermocellum*
- P10** Fabiola E. Medina, R. P. P. Neves, M. J. Ramos, P. A. Fernandes  
*A QM/MM study of the reaction mechanism of human  $\beta$ -ketoacyl reductase*
- P11** Francisco Leisico, D. Vieira, T. A. Figueiredo, M. Silva, E. J. Cabrita, C. Morlot, T. Vernet, A. Zapun, R. G. Sobral, A. M. Ludovice, J. Trincão, M. J. Romão, H. de Lencastre, T. Santos-Silva  
*Peptidoglycan amidation in Staphylococcus aureus - structure-function studies*
- P12** Helena Coelho, M. de las Rivas, A. Diniz, S. Y. Vakhrushev, H. Clausen, F. Corzana, R. Hurtado-Guerrero, J. Jiménez-Barbero, F. Marcelo  
*<sup>19</sup>F-NMR Spectroscopy of a GalNAc-T2 inactive mutant unveil an induced-fit mechanism for GalNAc-Ts glycosylation*
- P13** Henrique S. Fernandes, M. J. Ramos, and N. M. F. S. A. Cerqueira  
*The catalytic mechanism of Serine Hydroxymethyltransferase: a drug target against Malaria*
- P14** Jaime Conceição, O. Adeoye, H. M. Cabral-Marques, J. M. Sousa Lobo  
*Oral solid formulations containing cyclodextrins as excipients*
- P15** Joana N. Bugalhão, A. Vieira, M. P. Luís, L. J. Mota  
*Identification and characterization of novel Chlamydia trachomatis virulence proteins interfering with host cell trafficking pathways*
- P16** João P. Guerra, J. P. Jacinto, A. V. Almeida, N. R. Almeida, D. Penas, N. Coelho, P. Tavares, A. S. Pereira  
*Dps: A multipurpose dodecameric bionanocage*
- P17** João P. Jacinto, J. P. Guerra, A. V. Almeida, N. Coelho, N. R. Almeida, D. Penas, A. S. Pereira, P. Tavares  
*Exploring Dynamic Structures of Bionanocages*
- P18** Jorge Soares, V. M. Costa, S. Bronze, H. Gaspar, S. Santos, M. L. Bastos, F. Carvalho, J. Capela  
*Clorgyline and N-acetyl-L-cysteine lessen the toxicity exhibited by 3,4-DMMC, mephedrone and methamphetamine in differentiated SH-SY5Y cells*

- P19** Lia Costa, T. Parente, B. M. Fonseca, I. Rebelo  
*Follicular Fluid and Granulosa Cells: an intrinsic relation*
- P20** Liliana Loureiro, D. Sousa, A. Feldmann, R. Bergmann, M. A. Palma, S. Koristka, D. Ferreira, C. Li, J. A. Ferreira, C. Novo, M. Bachmann, P. A. Videira  
*Eradication of STn-expressing tumor cells using the UniCAR technology derived from the novel anti-STn L2A5 antibody*
- P21** Manuel Matos, F. Trovão, A. Pina, A. C. Roque  
*Petasis-Ugi affinity ligands as alternative tools for antibody purification*
- P22** Maria Enea, E. Pereira, M. L. Bastos, H. Carmo  
*Toxicity and cellular uptake of AuNPs. Is there any connection?*
- P23** Nídia R. Almeida, D. Penas, A. V. Almeida, J. P. Guerra, J. P. Jacinto, N. Coelho, A. S. Pereira, P. Tavares  
*Mineral reduction and iron release in Mini-Ferritins*
- P24** Nuno Coelho, J. P. Jacinto, J. P. Guerra, A. A. Almeida, N. Almeida, D. Penas, J. Soares, A. S. Pereira, P. Tavares  
*Valorisation of protein fractions of Moringa Oleifera*
- P25** Pedro Ferreira, N. M. F. S. A. Cerqueira, P. A. Fernandes, M. J. Romão, M. J. Ramos  
*Studies on the reaction mechanism of oxidation of the N-heterocycle phthalazine (PHT) by the human Aldehyde Oxidase*
- P26** Raquel dos Santos, M. J. Romão, J. Gonçalves, A. L. Carvalho, A. C. Roque  
*Affinity magnetic precipitation for antibodies purification*
- P27** Raquel P. Portela, A. M. Ludovice, J. S. Dias, R. G. Sobral  
*Characterization of two staphylococcal proteins essential for survival upon cell wall damage*
- P28** Sara V. Pais, C. E. Key, I. S. Pereira, D. J. Fisher, L. J. Mota  
*Identification and characterization of CteG, a novel Chlamydia trachomatis virulence protein*
- P29** Tiago V. Augusto, C. Amaral, N. Teixeira, G. Correia-da-Silva  
*Role of Autophagy and PI3K in Aromatase Inhibitors-Acquired Resistance*
- P30** Tiago Ferro, H. Crespo, Z. Silva, M. Gonçalves, H. Soares, J. A. Ferreira, S. J. van Vliet, S. Springer, P. A. Videira  
*MHC class I stability is modulated by cell surface sialylation in human dendritic cells*
- P31** T. Monteiro, E. Jubete, L. Añorga, J. J. G. Moura, C. M. Silveira, M. G. Almeida  
*A quasi-reagentless bioelectrode for amperometric nitrite detection, unaffected by oxygen and cyanide*
- P32** Virgínia C. F. Carvalho, E. B. Freitas, P. J. Silva, J. Fradinho, A. Oehmen, M. A. M. Reis  
*Phototrophic Enhanced Biological Phosphorus removal: a solution for reducing the aeration necessities in conventional Enhanced Biological Phosphorus removal systems*
- P33** Viviana G. Correia, J. L.A. Brás, B. A. Pinheiro, Y. Liu, L. M. Silva, Y. Zhang, M. J. Romão, W. Chai, T. Feizi, C. M.G.A. Fontes, A. L. Carvalho, A. S. Palma  
*Assessing human microbiota systems for glycan recognition in the gut*