DAY 1 – DECEMBER 19

08.30h: Registration

09.00h: Opening session

09.15h-11.15h: NEUROSCIENCE, VISION AND BRAIN DISEASES SESSION | Chairpersons: Henrique Girão & Sandra Cardoso

09.15-09.35: Win or Lose – Behavior, cellular and molecular characterization of social subordination - João Peça

09.35-09.55: Fuelling the brain in Diabetes Mellitus – evidence for singular bioenergetics and neurotransmission relationships in the diabetic brain - Miguel Castelo-Branco

09.55-10.15: Adenosine A2A receptor blockade therapeutically reverses synaptic dysfunction and altered mood and memory performance in mice subjected to chronic unpredictable stress - Rodrigo Cunha

10.15-10.25: Neurometabolic and electrophysiological changes during cortical spreading depolarization: a multimodal approach based on lactate-glucose dual microbiosensor arrays - Cátia Marques

10.25-10.35: Caloric restriction and sirtuin 1 as novel therapeutic interventions for Machado-Joseph disease - Cláudia Cavadas

10.35-10.45: Histone deacetylase inhibitors ameliorate pyruvate dehydrogenase complex activity in Huntington’s disease – A. Cristina Rego

10.45-10.55: Monitoring oxidative stress and progression to cell death: from secretome to blood diagnosis - Bruno Manadas

10.55-11.05: Adenosine A2A receptor inactivation and caffeine abrogate microglia-mediated neuroinflammation and afford protection to the retina in experimental models of glaucoma - A Raquel Santiago

11.05-11.15: Neural Connectivity and Affective Cognition in young adults with Bipolar At-Risk Criteria – Vitor Santos

11.15-11.45h: Coffee break

11.45h: Invited Speaker | Chairperson: Carlos B Duarte

Positioning the cell nucleus in skeletal myofibers | Edgar Gomes, IMM - Instituto Medicina Molecular, University of Lisbon

12.45h-14.30h: Lunch break
14.15h: **SCIENCE.PT** | Manuel Heitor, Minister of Science and Technology

15.00h: **PhD Programs Associated to CNC.IBILI** | Chairpersons: João Ramalho-Santos & Carlos Cavaleiro

15.00h-15.15h: Unravelling the impact of methylphenidate on blood-brain barrier function: in vitro and animal studies - Vanessa Coelho-Santos, InterUniversity PhD Program in Ageing and Chronic Diseases

15.15h-15.30h: Functional Imaging of Vertical and Horizontal Saccades in Parkinsonian Syndromes - João Lemos, PhD Program in Health Sciences

15.30h-15.45h: Methods and instrumentation for corneal metabolic imaging - Susana Figueiredo Silva, PhD Program in Biomedical Engineering

15.45h-16.00h: Analysis of extracellular stimuli in the regulation of stem cell fate - Tânia Perestrelo, Doctoral Program in Experimental Biology and Biomedicine (PDBEB)

16.00h-16.15h: Dietary Sugar and Gut metabolic shifts: implications for fatty liver and type 2 diabetes development - João Silva, PhD Program in Biosciences

16.15h-16.30h: Association of the mast cell activator C48/80 with chitosan nanoparticles as a new adjuvant strategy for nasal vaccination against anthrax – Dulce Bento, PhD Program in Pharmaceutical Sciences

16.30h-17.00h: Coffee break

17.00-19.00h: **Metabolism & Aging Session** | Chairpersons: João Laranjinha & Ana Paula Silva

17.00-17.20: Measuring metabolic fluxes in all sorts of places using deuterated water - John Jones


17.40-18.00: Heartbroken: Mitochondrial damage by anthracyclines - Paulo Oliveira

18.00-18.10: Metabolism in reproduction & pluripotency - João Ramalho-Santos

18.10-18.20: Overcoming menopause effects: What can we do for it? - Vilma Sardão

18.20-18.30: Intercellular communication in heart diseases - Henrique Girão

18.30-18.40: More than just thermogenesis: Novel avenues to understand bile acid-induced metabolic normalization effects - João Teodoro

18.40-18.50: Computational enzymology: enzyme mechanisms and rational engineering - Alexandra Carvalho

18.50-19.00: The epicardial adipocyte- a new metabolic signature - Eugénia Carvalho

20.00h: Dinner @ Centro Cultural D. Dinis
DAY 2 – DECEMBER 20

09.00h-10.00h: A conversation with the Nature Communications Associate Editor Carolina Perdigoto | Chairpersons: Luís Pereira de Almeida & Ana Luisa Carvalho

10.00h: Coffee break

10.30h-12.30h: STEM-CELL BASED AND MOLECULAR THERAPIES SESSION | Chairpersons: Miguel Castelo-Branco & Ramiro Almeida

10.30h-10.40h: Bioengineering tools to modulate (stem) cell activity - Lino Ferreira

10.40h-10.50h: Programming Definitive Hematopoiesis and Immunity - Filipe Pereira

10.50h-11.00h: MicroRNAs as novel regulators of heart disease - Miguel Mano

11.00h-11.10h: Localized Redox Relays as a Privileged Mode of Hydrogen Peroxide Signaling - Armindo Salvador

11.10h-11.20h: TB and not TB in the 21st century: a quest for new target-tailored precision antibiotics - Nuno Empadinhas

11.20h-11.30h: Fungal melanin synthesis: a new target for antifungal agents – Chantal Fernandes

11.30h-11.40h: Systems biology approaches identify host micorRNAs regulating infection by bacterial pathogens - Ana Eulália

11.40h-11.50h: Bridging cancer biology and the patients’ needs with nanomedicine-based approaches - João Nuno Moreira

11.50h-12.00h: From gene to therapeutic strategies: the case of Machado-Joseph disease - Luís Pereira de Almeida

12.00h-12.10h: The intranasal route as a novel and effective drug delivery strategy for the treatment of chronic diseases: from nasal to neurological disorders - Ana Fortuna


12.20h-12.30h: Avian antibodies in biomedicine and biotechnology - Ricardo Vieira-Pires

12.30h-14h: Lunch break
14.00h-15.00h: **POSTDOCS FORUM** | Chairpersons: Célia Aveleira & Francisco Ambrósio

14.00h-14.10h: The role of neuropeptides in diabetic foot ulcers - *Ermelindo Leal*

14.10h-14.20h: Type 2 diabetes & Alzheimer disease: Let's talk about sex? - *Ana Duarte*

14.20h-14.30h: Real-time fMRI neurofeedback: from feedback modulation to clinical applications - *Bruno Direito*

14.30h-14.40h: Neural stem cells based therapies for Machado-Joseph disease treatment - *Liliana Mendonça*

14.40h-14.50h: Simultaneous Recording of Neurometabolic Changes and Local Field Potential Related Currents in Rodent Models of Epilepsy - *Ana Ledo*

14.50h-15.00h: Building bridges between Academia and the Market - *Marta Passadouro (III/UC)*

15.00h – 15.30h: **TECHNOLOGY TRANSFER TO THE MARKET** | Chairpersons: Paulo J Oliveira & John Jones

15.00h-15.15h: So you want to be a tech CEO? Customer development, MVPs and other tricks of the trade - *Carlos Cerqueira, IPN*

15.15h-15.30h: Challenges in tech innovation ambitions: what it takes - *Joana Branco, Biocant*

15.30-16.00h: Coffee break

16.00h-17.00h: **CNC.IBILI SPIN OFF COMPANIES** | Chairpersons: João Nuno Moreira & Lino Ferreira

    **Exo-T** - Joana Correia (Chief Scientific Officer)

    **LifeTag** - João Silva – (Co-founder)

    **Matera** - Cristiana Paulo (Chief Technology Officer)

    **Mitodiets** - José Duarte (Chief Marketing Officer)

    **Toxfinder** - Teresa Cruz Rosete (Co-founder)

    **Treat-U** - Vera Moura (CEO)

17.00h: **CULTURAL EVENT**