



ITQB NOVA



## PhD projects presentation

22<sup>nd</sup> & 23<sup>rd</sup> May 2025 (09:30 -17:30; 09:30-13:00), ITQB NOVA auditorium

Curricular Unit: Research Training II

Chairperson: Cristina Silva Pereira (*Biology; co-coordinator of the PhD program*);

Evaluators: Ricardo Louro (*Biological Chemistry; coordinator of the PhD program*);

João Vicente and Manuel Melo (*Biological Chemistry*); Pedro Matos Pereira (*Biology*);

Jörg Becker & Carlota Vaz Patto (*Plant Sciences*); Ana Petronilho & Rita Ventura (*Chemistry*); Catarina Brito & Ana Coroadinha (*Technology*)

| <b>22nd May 2024 morning</b> (10 min presentation, 10 min questions)<br><i>[The first name is the main supervisor; institutions only mentioned if different from ITQB NOVA or iBET]</i> |             |                                      |                                                                                                                                                                                                                                                                                                                                                              |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1                                                                                                                                                                                       | 09:50-10:10 | Ana Patrícia Fernandes Brás da Silva | Modelling and simulating the spatial heterogeneity of solid tumours.<br><b>Supervisor:</b> Isabel Rocha ( <a href="mailto:irocha@unl.pt">irocha@unl.pt</a> );<br><b>Co-supervisor:</b> António Jacinto (NIMSB)                                                                                                                                               |
| 2                                                                                                                                                                                       | 10:10-10:30 | André Filipe Alípio dos Santos       | Exploring RNase R's dual role in biofilm development and oxidative stress response of <i>Streptococcus pneumoniae</i><br><b>Supervisor:</b> Susana Domingues ( <a href="mailto:susanadomingues@itqb.unl.pt">susanadomingues@itqb.unl.pt</a> )<br><b>Co-supervisors:</b> Cecília Arraiano                                                                     |
| 3                                                                                                                                                                                       | 11:20-11:40 | Carolina Andrea Deantas Jahn         | <i>Scale-up strategies for the purification of bionanoparticles.</i> <b>Supervisor:</b> Cristina Peixoto ( <a href="mailto:peixoto@ibet.pt">peixoto@ibet.pt</a> )                                                                                                                                                                                            |
| Coffee Break (30 min)                                                                                                                                                                   |             |                                      |                                                                                                                                                                                                                                                                                                                                                              |
| 4                                                                                                                                                                                       | 11:20-11:40 | Carolina de Brito Santos             | <i>Radiant solutions: Battling Healthcare-associated infections and antibiotic resistance with UV light emitting diodes.</i> <b>Supervisor:</b> Vanessa Jorge Pereira ( <a href="mailto:vanessap@ibet.pt">vanessap@ibet.pt</a> ); <b>Co-supervisor:</b> Maria Teresa Barreto Crespo                                                                          |
| 5                                                                                                                                                                                       | 11:40-12:00 | Daniela Alexandra Rodrigues da Silva | <i>Live and synthetic nanoplatfoms for the functional, high density display of a bile salt hydrolase and their use to fight infection by Clostridiodes difficile.</i> <b>Supervisor:</b> Adriano O. Henriques ( <a href="mailto:aoh@itqb.unl.pt">aoh@itqb.unl.pt</a> );<br><b>Co-supervisors:</b> Sarela Garcia Santamarina (ITQB), Kumaran Ramamurthi (NIH) |
| 6                                                                                                                                                                                       | 12:00-12:20 | Diogo Alexandre Bernardino Ramos     | <i>Unravelling Treponema pallidum genomic epidemiology and antigenic profiles associated with syphilis outcomes and stages</i><br><b>Supervisor:</b> Miguel Pinto - INSA ( <a href="mailto:miguel.pinto@insa.min-saude.pt">miguel.pinto@insa.min-saude.pt</a> )<br>Maria José Borrego - INSA, Cláudio M. Soares                                              |
|                                                                                                                                                                                         | 12:20       | Lunch!                               |                                                                                                                                                                                                                                                                                                                                                              |

**22<sup>nd</sup> May 2024 afternoon** (10 min presentation, 10 min questions)

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|--------------------------|--------------|----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>7</b>                 | 14:00-14:20  | Diogo Jorge Silva<br>Ferreira          | Structural Characterisation of<br>Photosynthetic Membrane<br>Complexes of <i>Equisetum arvense</i> : A<br>Cryo-EM Study<br><b>Supervisor:</b> Dmitry Semchonok<br><a href="mailto:dmitry.semchonok@itqb.unl.pt">dmitry.semchonok@itqb.unl.pt</a><br>Célia V. Romão (ITQB) and Roman<br>Kouril (Palacký University Olomouc) |
| <b>8</b>                 | 14:20-14:40  | Diogo Ramos de<br>Oliveira Moura Louro | A novel small molecule as an<br>attenuator of neuroinflammation in<br>Parkinson's Disease<br><b>Supervisor:</b> Cláudia Nunes dos<br>Santos (NIMSB)<br><a href="mailto:claudia.nunes.santos@unl.pt">claudia.nunes.santos@unl.pt</a>                                                                                        |
| <b>9</b>                 | 14:40-15:00  | Enerel Ariunbold                       | Impact of Continuous Downstream<br>Processing in Complex<br>Biotherapeutic Bionanoparticles<br>Manufacturing<br><b>Supervisor:</b> Cristina Peixoto<br><a href="mailto:peixoto@ibet.pt">peixoto@ibet.pt</a> , Ricardo Silva                                                                                                |
| <b>10</b>                | 15:00-15:20  | Guilherme David<br>Castro Martins      | Targeting a new carbon dioxide<br>reductase for improved biocatalytic<br>CO <sub>2</sub> conversion.<br><b>Supervisor:</b> Inês Cardoso Pereira<br><a href="mailto:ipereira@itqb.unl.pt">ipereira@itqb.unl.pt</a>                                                                                                          |
| Coffee Break (30 min)    |              |                                        |                                                                                                                                                                                                                                                                                                                            |
| <b>11</b>                | 15:50 -16:10 | Inês Filipa<br>Fernandes<br>Afonso     | <i>Multidisciplinary approach to enhance<br/>nose-to-brain biologics delivery</i><br><b>Supervisor:</b> Rita Ventura<br><a href="mailto:rventura@itqb.unl.pt">rventura@itqb.unl.pt</a><br><b>Co-supervisor:</b> Eva Lourenço (Hovione)                                                                                     |
| <b>12</b>                | 16:10 -16:30 | Inês Quinteiro de<br>Sá                | <i>Engineering a translational human 3D model<br/>depicting invasion in immunosuppressive<br/>high-grade gliomas</i><br><b>Supervisor:</b> Catarina Brito<br><a href="mailto:anabrito@ibet.pt">anabrito@ibet.pt</a><br><b>Co-supervisors:</b> Giacomo Domenici<br>(iBET), Yonghyun Kim (University of<br>Alabama)          |
| <b>13</b>                | 16:30 -16:50 | João Miguel<br>Neves Jacinto           | <i>Integrated Continuous Bioprocessing of<br/>hiPSC-NK and derived EV to advance<br/>cancer immunotherapy</i><br><b>Supervisor:</b> Margarida Serra<br><a href="mailto:mserra@ibet.pt">mserra@ibet.pt</a><br><b>Co-supervisor:</b> Cristina Peixoto                                                                        |
| Debriefing and applause! |              |                                        |                                                                                                                                                                                                                                                                                                                            |

**23<sup>rd</sup> May 2024 morning (10 min presentation, 10 min questions)**

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| <b>14</b>             | 9:30-9:50   | João Pedro Gorjão<br>Araújo Correia            | Integrating AI and physics-based methods to foster enzyme engineering strategies.<br><b>Supervisor:</b><br>Cláudio M. Soares (claudio@itqb.unl.pt)<br>Sofia Ferreira<br>Rafael Carreira (SilicoLife)                                                                                                                                              |
| <b>15</b>             | 09:50-10:10 | Lara Rodrigues<br>Inocência                    | <i>CardioBEAT: Cardiac BioEngineering of Advanced hiPSC-based Tissues</i><br><b>Supervisor:</b> Margarida Serra<br>( <a href="mailto:mserra@ibet.pt">mserra@ibet.pt</a> )<br><b>Co-supervisors:</b> Miguel Castilho (TU/e)<br>Manuel Mazo Vega (UNAV/CIMA)                                                                                        |
| <b>16</b>             | 10:10-10:30 | Madalena Brazão<br>de Carvalho<br>Simões Abade | <i>Developing a Novel 3D Human CNS Model for Studying Gene Therapy-Induced Neuroinflammation</i><br><b>Supervisor:</b> Catarina Brito<br>( <a href="mailto:anabrito@ibet.pt">anabrito@ibet.pt</a> )<br><b>Co-Supervisors:</b> Cláudia Nunes dos Santos (NIMSB), Jacob Metzger (Max Delbruck Center, Berlin)                                       |
| <b>17</b>             | 10:30-10:50 | Márcia Filipa<br>Fernandes<br>Saraiva          | Development of conformationally defined glyco-foldamer microarrays as sensitive screening platforms for glycan-based diagnosis and therapeutic strategies in cancer<br><b>Supervisor:</b> Rita Ventura<br>( <a href="mailto:rventura@itqb.unl.pt">rventura@itqb.unl.pt</a> )<br><b>Co-supervisors:</b> Pedro Mateus, Angelina Sá Palma (FCT-NOVA) |
| Coffee Break (30 min) |             |                                                |                                                                                                                                                                                                                                                                                                                                                   |
| <b>18</b>             | 11:20-11:40 | Pedro Miguel<br>Sousa Crespo                   | The <i>Aspergillus fumigatus</i> endobacteriome and the search for new living therapeutics against aspergillosis.<br><b>Supervisor:</b> Cristina Silva Pereira<br>( <a href="mailto:spereira@itqb.unl.pt">spereira@itqb.unl.pt</a> )<br><b>Co-supervisor:</b> Raquel Sá-Leão                                                                      |
| <b>19</b>             | 11:40-12:00 | Rita Isabel<br>Caturrinho do<br>Carmo          | Evolutionary engineering of <i>Amorphotheca resinae</i> for co-degradation of lignin and resin acids in industrial effluents<br><b>Supervisor:</b> Cristina Silva Pereira<br>( <a href="mailto:spereira@itqb.unl.pt">spereira@itqb.unl.pt</a> )<br><b>Co-supervisors:</b> Tiago Martins and João Nunes (BLC3)                                     |

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| <b>20</b> | 12:00-12:20 | Rute Canhão<br>Pereira | RNA-based regulation of sporulation<br>initiation in the human pathogen<br><i>Clostridioides difficile</i> by EndoM and its<br>partner sRNAs<br><b>Supervisor:</b> Mónica Serrano<br>( <a href="mailto:serrano@itqb.unl.pt">serrano@itqb.unl.pt</a> )<br><b>Co-supervisor:</b> Olga Soutourina |
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|-------------|-------------------------------------|
| 12:20-12:30 | Debriefing, applause and gathering! |
|             | Lunch                               |