

## **MESTRADO EM BIOTECNOLOGIA - DISSERTAÇÕES 2018/19 e 2017/18**

### **Instituições/departamentos e siglas**

Allmicroalgae – Natural Products

Bayer

Biopremier - BPMR

Champalimaud Centre for the Unknown

CiiEM - Centro de Investigação Interdisciplinar Egas Moniz, Instituto Universitário Egas Moniz

DCM - Departamento de Ciência dos Materiais da FCT NOVA

DCSA - Departamento de Ciências Sociais Aplicadas da FCT NOVA

DCTB - Departamento de Ciências e Tecnologia da Biomassa da FCT NOVA

DCV - Departamento de Ciências da Vida da FCT NOVA

DQ - Departamento de Química da FCT NOVA

EPS - Energy Pulse Systems

FCT NOVA - Faculdade de Ciências e Tecnologia da Universidade NOVA de Lisboa

iBET - Instituto de Biologia Experimental e Tecnológica

iMM - Instituto de Medicina Molecular João Lobo Antunes

INESC - Instituto de Engenharia de Sistemas e Computadores do Instituto Superior Técnico

INSA - Instituto Nacional de Saúde Doutor Ricardo Jorge

Ism2 - Institut des Sciences Moléculaires de Marseille

ITQB NOVA - Instituto de Tecnologia Química e Biológica António Xavier

NOVA Medical School - Faculdade de Ciências Médicas

Vrije Universiteit Brussel

Em 2018/19 e 2017/18, 32% dos estudantes escolheu o DQ para realizar o trabalho de dissertação, e 32% escolheu o iBET. Os restantes 36% distribuíram-se por várias instituições/departamentos.

### **Ano lectivo 2018/19**

#### **Expression, purification and characterization of a protein isoform involved in cyclic nucleotide signaling in humans**

iBET e Bayer

Orientadores: Lúgia Nobre (iBET) e Peter Sandner (Bayer)

**Optimization of PCR microfluidic conditions for DNA amplification of gene associated with prostate cancer**

DCV

Orientador: Pedro Viana Baptista

**Advanced cell-based biosensors for detection of label-free viral pathogens**

iBET

Orientador: Ana Sofia Coroadinha

**Assessment of the cellular effects of ingested titanium dioxide nanomaterials in intestinal cells**

INSA

Orientador: Henriqueta Louro

**Design of a novel phage display vector to improve enrichment of phages with antigen-specific Nanobodies and to identify the Nanobody clones of highest affinity**

Cellular and Molecular Immunology, Vrije Universiteit Brussel

Orientador: Serge Muyldermans

**Desenvolvimento de substratos biopoliméricos para crescimento de derme reconstruída**

DQ e ITQB NOVA

Orientadores: Filomena Freitas (DQ) e Abel Oliva (ITQB NOVA)

**Fitodepuração de efluentes contaminados obtidos em processos de carbonização hidrotermal**

DCTB

Orientadores: Ana Luísa Fernando e Margarida Gonçalves

**Production of antibiotics and biopolymer by the bacterium *Pseudomonas chlororaphis* using glycerol**

DQ

Orientadores: Cristiana Torres e Bárbara Almeida

**Evolução dirigida com vista à optimização de fermentações de sumos de fruta**

DCV e CiiEM

Orientadores: Paula Gonçalves (DCV) e Madalena Salema-Oom (CiiEM)

**Green synthesis route to Copper and Iron nanoparticles**

DQ

Orientadores: Pedro Tavares e Alice Pereira

**Development of antibodies against the Notch pathway ligand JAG1 using phage display technology**

iBET

Orientadores: Ana Barbas e Gabriela Silva

**Protein based gas-sensing materials for detection of fish deterioration**

DQ

Orientador: Cecília Roque

**Production of natural elastomers (mcl-PHA) from sugar-rich substrates obtained through hot compressed water hydrolysis of grape pomace**

DQ

Orientadores: Filomena Freitas e Alexandre Paiva

### **Heterotrophic growth of microalgae strains – screening, optimization and scale-up**

Allmicroalgae - Natural Products

Orientadores: Joana Gabriela Laranjeira da Silva e Hugo Pereira Galvão

### **Chimeric lentiviral vectors for gene therapy**

iBET

Orientador: Ana Sofia Coroadinha

### **PHAs from mixed cultures as biopolymers for biodegradable films and flowerpots for plant transport**

DQ

Orientadores: Maria Ascensão Reis e Anouk Duque

### **Bioethanol production by Enterobacter A47: proof-of-concept**

DQ

Orientador: Cristiana Torres

### **Monitoring cell cultures in real time in a biochip**

INESC

Orientador: João Pedro Conde

### **Developing and improving purification strategies for biopharmaceuticals**

iBET

Orientadores: Cristina Peixoto e Ricardo Silva

### **Fermentação do bagaço de uva branca por *S. bombicola* para produção de soforólpidos**

CiiEM e DQ

Orientadores: Madalena Salema-Oom (CiiEM) e Susana Barreiros (DQ)

### **Production of xylitol by the yeast *Komagataella pastoris***

DQ

Orientador: Maria Ascensão Reis

### **Extraction of cannabis seed oil using supercritical CO<sub>2</sub> and evaluation of its bioactivity**

DQ

Orientador: Alexandre Paiva

## **Ano lectivo 2017/18**

### **Valorization of brewery waste through polyhydroxyalkanoates production**

DQ

Orientadores: Anouk Duque e Mónica Carvalheira

### **Development of biopolymer-based anti-microbial membranes**

DQ

Orientadores: Filomena Freitas e Luísa Neves

**Fermented agricultural wastes as feedstock for PHA production with photosynthetic mixed cultures operated under a permanent feast regime**

DQ

Orientadores: Joana Fradinho e Maria Ascensão Reis

**Cloning of FUT8 gene and characterization of its expression in human cell lines**

DCV

Orientadores: Paula Videira e Margarida Castro Caldas

**Design and synthesis of small protein-based scaffolds for bioengineering applications**

DQ e Ism2

Orientadores: Cecília Roque (DQ) e Olga Iranzo (Ism2)

**Genotyping circulating tumor DNA for Precision Oncology**

iMM e DCSA

Orientadores: Maria Carmo-Fonseca (iMM) e Fernanda Llussá (DCSA)

**Unveiling human Cardiac Stem Cells role in myocardial ischemia-reperfusion injury**

iBET

Orientadores: Margarida Serra e Patrícia Gomes-Alves

**Bioprocess engineering of insect cells for next generation of Influenza vaccines**

iBET

Orientadores: Antonio Roldão e Inês Isidro

**Development of curcumin lipid formulations for food applications: transport, permeability and safety evaluation on a mucus-secreting intestinal epithelial cell model**

iBET

Orientadores: Ana Matias e Vanessa Gonçalves

**Functionalization of recombinant proteins for matrix conjugation in a bifunctional bacterial infection biosensor**

DCV

Orientadores: Rita Sobral e Inês Grilo

**pH and Photoresponsive Soft Materials for Biological applications**

iBET

Orientador: Margarida Serra

**Can polyphenols metabolites ameliorate the outcome of DR?**

NOVA Medical School

Orientador: Gabriela Silva e Daniela Santos

**Novel Alginate-Chitosan aerogel fibres for potential wound healing applications**

iBET

Orientadores: Vanessa Gonçalves e Frédéric Gaspar

**Depicting the Tumor-Associated Macrophage phenotype employing 3D breast cancer cell models**

iBET

Orientadores: Catarina Brito e Sofia Rebelo

**Production of xylitol by the yeast *Komagataella pastoris***

iBET

Orientador: Filomena Freitas

**Engineering Cardiac Tissue Using Human Induced Pluripotent Stem Cell Derivatives**

iBET

Orientador: Margarida Serra

**The effect of CCBE1 in hPSC differentiation towards cardiac lineage**

iBET

Orientadores: Margarida Serra e Patrícia Gomes-Alves

**EGFR glycosylation in cancer**

iBET

Orientadores: Patrícia Gomes-Alves e Lara Marcos da Silva

**Impact of the metabolic program of germline cells in feeding behavior**

Champalimaud Centre for the Unknown, Neuroscience Programme

Orientadores: Carlos Ribeiro e Zita Santos

**Selective platelet activation by pulsed electric fields for stem cell culture**

iBET e EPS

Orientadores: Vítor Espírito Santo (iBET) e Luis Redondo (EPS)

### **Nature based peptide hydrogels as enzyme mimetics**

DQ

Orientadores: Ana Sofia Pina e Cecília Roque

### **Technology-market transfer plan of food and environmental analysis kits**

DCSA e Biopremier - BPMR

Orientadores: Fernanda Llussá (DCSA) e Joana Raquel Freitas Dias da Silva (Biopremier - BPMR)

### **Regulation of T cell fitness and function in the tumour microenvironment**

iMM

Orientadores: Karine Serre e Sofia Mensurado