



UNIVERSIDADE  
DE ÉVORA

VII Encontro de Estudantes de Doutoramento em **Ambiente e Agricultura**  
VII PhD Students Meeting in **Environment and Agriculture**

12 e 13 de dezembro | 12<sup>th</sup> and 13<sup>th</sup> December 2022

## **VII Encontro de Estudantes de Doutoramento em Ambiente e Agricultura**

**12 e 13 de dezembro 2022**

## **VII PhD Students Meeting in Environment and Agriculture**

**12<sup>th</sup> and 13<sup>th</sup> December 2022**

**Pólo da Mitra, Universidade de Évora**

# **Book of abstracts**

---



**Title:** VII PhD Students Meeting in Environment and Agriculture

**Editors:**

Marta Laranjo

Ana Alexandre

Bruno Medronho

Cláudia Marques

**Address:**

Universidade de Évora,

Largo dos Colegiais, 2

7004-516 Évora

**Published:**

UE – Universidade de Évora

Copyright © 2022, all rights reserved

ISBN: 978-972-778-298-7



Dear participants,

It is our great pleasure to welcome you to the **VII Encontro de Estudantes de Doutorado em Ambiente e Agricultura (EEDAA) / VII PhD Students Meeting in Environment and Agriculture**, held in Évora on the 12<sup>th</sup> and 13<sup>th</sup> of December 2022. We have put together a two-day program with the aim of encouraging scientific discussion. This Meeting represents an excellent opportunity for young researchers to exchange ideas and to explore new challenges in research regarding Environmental and Agricultural Sciences.

This event is organized by MED – Mediterranean Institute for Agriculture, Environment and Development & CHANGE – Global Change and Sustainability Institute, and IIFA – Institute for Advanced Studies and Research, University of Évora and supported by UNIMED – Mediterranean Universities Union.

The EEDAA focuses on four main areas: Veterinary Sciences and Animal Production; Agricultural Sciences and Food Sciences; Environment, Landscape and Sustainability; and Biology and Biochemistry. The meeting includes four invited plenary lectures and several presentations selected from the abstracts submitted by PhD students. In addition, all authors that were not selected for oral communication, will present their work as posters displayed throughout the meeting.

This meeting intends to stimulate the interaction between PhD students, to streamline scientific discussion and highlight the ones who will become the researchers of the future.

Finally, we wish to thank the scientific committee as well as all the participants who have contributed to the scientific program and hope you will enjoy the meeting and appreciate the beautiful city of Évora, an UNESCO World Heritage. You should find all detailed information in this book of abstracts, including the detailed program, abstracts, and a list of participants.

Welcome to Évora!

The Organising Committee,

Marta Laranjo, MED|CHANGE

Ana Alexandre, MED|CHANGE

Bruno Medronho, MED|CHANGE

Cláudia Marques, IIFA



## COMMITTEES

### **Organising Committee**

Marta Laranjo, Universidade de Évora - MED|CHANGE

Ana Alexandre, Universidade de Évora - MED|CHANGE

Bruno Medronho, Universidade do Algarve - MED|CHANGE

Cláudia Marques, Universidade de Évora - IIFA

### **Scientific Committee**

Ana Teresa Caldeira, Universidade de Évora – HERCULES|IN2PAST

Elsa Leclerc Duarte, Universidade de Évora – MED|CHANGE

Fátima Baptista, Universidade de Évora – MED|CHANGE

Luiz Gazarini, Universidade de Évora – MED|CHANGE

Maria João Cabrita, Universidade de Évora – MED|CHANGE

Raquel Lucas, Universidade de Évora – CEFAGE|CHANGE

Teresa Pinto Correia, Universidade de Évora – MED|CHANGE





**Organised by:**



**Supported by:**





## Programme

Monday, December 12 2022

09:00	<b>Registration</b>
09:45	<b>Opening Session</b>
	<b>Paulo Quaresma</b> Vice-Rector - Universidade de Évora
	<b>Rui Salgado</b> Director - Instituto de Investigação e Formação Avançada (IIFA)
	<b>Teresa Pinto Correia</b> Director - Instituto Mediterrâneo para Agricultura, Ambiente e Desenvolvimento (MED)
10:00	<b>Plenary Lecture</b> <i>Genomics for sustainability: exploring local genetic resources in Portuguese-speaking African countries</i> <b>Andreia Amaral</b> Universidade de Évora, CIISA & AL4Animals

<b>Veterinary Sciences and Animal Production</b>	
	Chair: <b>Jordana Lopes</b> Universidade de Évora – MED & CHANGE
<b>Communications selected from the submitted abstracts</b>	
10:45	<i>Effect of almond hull inclusion in lamb diets on growth performance and carcass and meat quality</i> <b>Liliana Cachucho</b> CEBAL, CIISA
	<i>Systematic identification of genetic markers associated with carcass weight in Portuguese Preta cattle using medium density SNP-chip</i> <b>Maria Feliciano</b> Universidade de Évora – MED & CHANGE, Universidade Lusófona
11:15	<b>Coffee-Break &amp; Poster Session</b>
11:45	<i>The Black Soldier Fly as a sustainable management of urban organic waste: a One Health Perspective</i> <b>Joana Oliveira</b> Instituto Universitário Egas Moniz - CiiEM

## Agricultural Sciences and Food Sciences

Chair: **Nicasio Morillo**  
Universidade de Évora – MED & CHANGE

### Communications selected from the submitted abstracts

**12:00** *Manufacturing cultured meat through a scalable and cost-effective bioprocess*  
**Hélder Tavares**  
Instituto Superior Técnico – iBB & i4HB, CCMAR

*Improving the sustainability of rainfed olive orchards by using zeolites and early-maturing annual legumes cover crop*  
**Sandra Martins**  
Universidade de Trás-os-Montes e Alto Douro – CITAB & Inov4Agro

**12:30 –  
14:30** Lunch

**14:30** **Plenary Lecture**  
*Water, Nature, and Carbon Balance in Food Production - Looking for a Smart and Sustainable Living*  
**Manuela Moreira da Silva**  
Universidade do Algarve – CIMA & ARNET, CEiiA

## Agricultural Sciences and Food Sciences (continued)

Chair: **Nicasio Morillo**  
Universidade de Évora – MED & CHANGE

### Communications selected from the submitted abstracts

**15:15** *The added value of aged beef*  
**Sara Ricardo Rodrigues**  
Universidade de Évora – MED & CHANGE

*Emergence of Antibiotic Resistant Coagulase Negative Staphylococci in the Pork Meat Chain*  
**Maria Teixeira**  
Faculdade de Medicina Veterinária da Universidade de Lisboa – CIISA & AL4AnimalS

**15:45** Coffee-Break & Poster Session

**16:30** *Can Biscogniauxia mediterranea be the new causal agent of disease in almond trees?*  
**Ana Faustino**  
CEBAL-MED & CHANGE, Instituto Politécnico de Beja

*Cover crop potential to mitigate N-NO<sub>3</sub><sup>-</sup> leaching in Portuguese processing tomato production system - 1<sup>st</sup> year highlights*

<b>17:30</b>	<p><b>Ricardo Vieira Santos</b> Universidade de Évora – MED &amp; CHANGE</p>
	<p><i>Host plant response to the application of nematicidal phytochemicals</i> <b>Pedro Barbosa</b> Universidade de Évora – MED &amp; CHANGE</p>
	<p><i>Green Options to Substitute Nitrate in Cured Meat Products: Thymus citriodorus and Salvia elegans</i> <b>Patrícia Bernardo</b> Faculdade de Medicina Veterinária da Universidade de Lisboa – CIISA &amp; AL4AnimalS</p>
	<p>Closing of the first day of the VII EEDAA</p>

Tuesday, December 13 2022

Environment, Landscape and Sustainability	
	Chair: <b>Sérgio Prats Alegre</b> Universidade de Évora – MED & CHANGE
<b>Communications selected from the submitted abstracts</b>	
9:30	<i>Grey infrastructures: an opportunity to promote native plants</i> <b>Mariana Pucarinho Fernandes</b> Universidade de Évora – MED & CHANGE, cE3c & CHANGE
	<i>Lignin extraction from agroforest residues using natural deep eutectic solvents</i> <b>Catarina Fernandes</b> Universidade de Coimbra – CIEPQPF, MED & CHANGE
	<i>Mapping colluvial mesovoid shallow substratum habitats: a case study in karst (Arrábida Natural Park, Portugal)</i> <b>Rita Pereira Eusébio</b> Faculdade de Ciências da Universidade de Lisboa - cE3c & CHANGE
	<i>Nature-based solutions as climate change adaptation measures in Mediterranean watersheds</i> <b>Miguel Rodrigues</b> Faculdade de Ciências da Universidade de Lisboa - cE3c & CHANGE
	<i>Spatiotemporal analysis of marginalization drivers in Gennargentu- Mandrolisai inland areas</i> <b>Pietro Todde</b> Università degli studi di Sassari
10:45	<b>Coffee-Break &amp; Poster Session</b>
11:15	<i>Integrated assessment of ecological and human dimensions in the functional dynamics of Atlantic mangroves: studies in the Tarrafes do Rio Cacheu Natural Park (Guinea-Bissau)</i> <b>Arthur Veronez</b> Universidade de Coimbra - CFE
11:30	<b>Plenary Lecture</b> <i>Ecosystem Services in the Portuguese Biosphere Reserves</i> <b>Helena Freitas</b> Universidade de Coimbra - CFE
12:15-14:30	<b>Lunch</b>

<b>14:30</b>	<p><b>Plenary Lecture</b>  <i>Antimicrobial peptides as an innovative therapeutic approach in human and veterinary medicine</i>  <b>Manuela Oliveira</b>          Faculdade de Medicina Veterinária da Universidade de Lisboa – CIISA &amp; AL4AnimalS</p>
--------------	--

<b>Biology and Biochemistry</b>	
	Chair: <b>Pedro A. Salgueiro</b> Universidade de Évora – MED & CHANGE
<b>Communications selected from the submitted abstracts</b>	
<b>15:15</b>	<p><i>Endophytic bacteria associated with spontaneous legumes in arid zones of Tunisia: Genetic diversity, metabolic functionalities and potential application to mitigate the impact of climate change</i>  <b>Roukaya Ben Gaied</b>            University of Gabes - Arid Lands Institute of Medenine</p> <hr/> <p><i>HSI modelling derived from GPS tracking data, shows spatial variability and significant historic suitability loss in a declining grassland bird</i>  <b>Tiago Crispim Mendes</b>            Universidade de Évora – MED &amp; CHANGE</p>
<b>15:45</b>	<b>Coffee-Break &amp; Poster Session</b>
<b>16:30</b>	<p><i>Rewilding and rewiring animal-plant interactions in road verges: measuring the provision and regulation of ecosystem services in a Green Infrastructure</i>  <b>Carmo Silva</b>            Universidade de Évora – MED &amp; CHANGE</p> <hr/> <p><i>Natural Remnant Habitats – a key for biodiversity conservation in Montado agroecosystems</i>  <b>Erika Lemos de Almeida</b>            Universidade de Évora – MED &amp; CHANGE</p> <hr/> <p><i>Soil fungal community structure is shaped mostly by edaphic properties and cultivated crops in the subtropical and temperate agroecosystems</i>  <b>Maria Ornelas Oliveira</b>            Universidade da Madeira – ISOPlexis, Universidade de Aveiro - CESAM</p>
<b>17:15</b>	<b>Closing Session</b> <b>Best Poster Award</b> <b>Solange de Oliveira Award</b>

**Note: The posters will be displayed throughout the Meeting.**

## BEST POSTER AWARDS



### Cristina Mendes

was awarded with the **Best Poster Prize** for the Poster

*“Transcript analysis of Plastid Terminal Oxidase (PTOX) reveals a putative role in adventitious roots and somatic embryos development in Olea europaea L.”*

in the area of **Biology and Biochemistry**

On behalf of the Organising Committee,

**Teresa Pinto Correia**  
Director of MED



### Fábio Teixeira

was awarded with the **Best Poster Prize** for the Poster

*“Whole genome sequencing of Landim pigs from Mozambique: a contribution for the exploration of African genetic resources in Portuguese-speaking countries*

in the area of **Veterinary Sciences and Animal Production**

On behalf of the Organising Committee,

**Teresa Pinto Correia**  
Director of MED







## José Massuça

was awarded with the **Best Poster Prize** for the Poster

*“The purpose of the Delphi methodology on a participatory approach for the assessment of the Social Dimension of Sustainability in Agribusiness”*

in the area of **Environment, Landscape and Sustainability**

On behalf of the Organising Committee,

**Teresa Pinto Correia**  
Director of MED



## Mariana Patanita

was awarded with the **Best Poster Prize** for the Poster

*“An overview of grapevine defence mechanisms and associated biological pathways during fungal and oomycete infections towards a sustainable management strategy”*

in the area of **Agricultural Sciences and Food Sciences**

On behalf of the Organising Committee,

**Teresa Pinto Correia**  
Director of MED





## Capillarity natural dye recovery application to improve wool dyeing process

A.I. Arroyo-Escoto<sup>1,2,3</sup>, F. Carvalho<sup>3,4</sup>, M.C. Fernandes<sup>1,2</sup>

<sup>1</sup>Centro de Biotecnologia Agrícola e Agro-Alimentar do Alentejo (CEBAL)/ Instituto Politécnico de Beja (IPBeja), 7801-908 Beja, Portugal

<sup>2</sup>MED – Mediterranean Institute for Agriculture, Environment and Development & CHANGE – Global Change and Sustainability Institute, CEBAL 7801-908 Beja, Portugal

<sup>3</sup>Departamento de Tecnologias e Ciências Aplicadas, Instituto Politécnico de Beja (IPBeja), Ap 158, 7801-902 Beja, Portugal

<sup>4</sup>FiberEnTech, Fiber Materials and Environmental Technologies, Rua Marquês d'Ávila e Bolama, 6201-001 Covilhã, Portugal

Email: [maria.fernandes@cebal.pt](mailto:maria.fernandes@cebal.pt)

Textile industry is one the most polluting in terms of its water effluents. During the different processes involved, the dyeing stage entails the biggest water contaminant percentage. Textile dyes are aromatic molecules normally obtained from biological origin with the particular feature to be capable to interact with the selected fibre and light to produce the desired colour. The growing textile demand has forced the production of other synthetic molecules with similar capabilities. Nevertheless, these molecules have shown to be highly environmental recalcitrant, and unfortunately create several health problems on the population in contact (wastewater and textiles). The biggest world textile dyers use low recovering technology which ends up in environmental discharge with poor or non-dye recovery, losing more than 80 % of the applied concentration in the process. Attending this situation in terms of technology and economy, it has been proposed a capillarity recovering technic envisioning the wastewater detoxification and subsequent dye reflux back into the system. To achieve this objective, it has been created a rudimentary system based on applied pressure and fibre catching that allows its replication at any location to trap and liberate the dye at will, with the advantage of recovering the material to reuse it in another detoxification cycle. Fibres like cotton and filtering paper are being tested for this porpose, focusing on its environmental implications.

A. I. Arroyo-Escoto thanks to Fundação para a Ciência e a Tecnologia (FCT) for the grant UI/BD/153579/2022. This work is done under GO -Tinturaria natural - Utilização dos corantes naturais em fibras naturais project (REF: PDR2020-101-031963), cofinanced by Fundo Europeu Agrícola de Desenvolvimento Rural (FEADER). MED, CHANGE, and FiberEnTech are funded by UIDB/05183/2020, LA/P/0121/2020, and UID/Multi/00195/2020 projects, respectively.