



# INTERNATIONAL CONFERENCE ON MEDITERRANEAN DIET AND GASTRONOMY

Linking Innovation, Sustainability and Health

15-16 October, University of Évora

## Book of Abstracts

Organizing partners:





# Committee

## Scientific Committee

### Chair of the conference

Elsa Lamy, University of Évora (ICAAM - Institute of Mediterranean Agricultural and Environmental Sciences)

### Committee

Ana Beatriz, Moratinos, University of Extremadura, Spain

Anabela Romano, University of Algarve, Portugal

Célia Quintas, University of Algarve, Portugal

Cláudia Viegas, Estoril Higher Institute for Tourism and Hotel Studies, Portugal

Cristina Carrasco, University of Extremadura, Spain

Cristina Pinheiro, University of Évora (ICAAM), Portugal

Fernando Capela e Silva, University of Évora (ICAAM), Portugal

Fernando Milheiro Nunes, University of Trás-os-Montes e Alto Douro, Portugal

Isabel Ferreira, Polytechnic Institute of Bragança (CIMO), Portugal

Jesús Román Martínez, Spain Dietetics Society and Complutense University of Madrid, Spain

Manuela Pintado, Católica University, Portugal

Maria Fernanda Cosme Martins, University of Trás-os-Montes e Alto Douro, Portugal

Maria João Cabrita, University of Évora (ICAAM), Portugal

Maria Palma Mateus, University of Algarve, Portugal

Maria Paulina Neves da Mata, NOVA University and University of Lisbon, Portugal

Maria Raquel Lucas, University of Évora (CEFAGE), Portugal

Miguel Elias, University of Évora (ICAAM), Portugal

International Conference on Mediterranean Diet and Gastronomy: Linking Innovation, Sustainability and Health | 15-16 October, University of Évora

Rui Gaspar, University of Algarve and Católica University, Portugal

Sofia Tavares, University of Évora (CIEP), Portugal

## Organizing Committee

### University of Évora

Ana Garrido (ICAAM)

Carla Simões (ICAAM)

Cristina Pinheiro (ICAAM)

David Guedes (CIEP)

Fernando Capela e Silva (ICAAM)

Graça Machado (ICAAM)

Lénia Rodrigues (ICAAM)

Raquel Ferro (ICAAM)

Raquel Lucas (CEFAGE)

Sofia Tavares (CIEP)

Vlademir Silva (CEFAGE)

International Conference on Mediterranean Diet and Gastronomy: Linking Innovation, Sustainability  
and Health | 15-16 October, University of Évora



# Contents

<b>Introduction</b> .....	8
<b>Plenary Sessions</b> .....	10
1. Eat well, sleep well – The Mediterranean way .....	11
2. Mediterranean Diet: Good sense and good taste .....	13
3. As the twig is bent, so is the tree inclined.....	14
4. Why we eat what we eat: Psychological determinants of food choice .....	15
5. Salivary signatures of taste perception and diet.....	16
6. Interactions between saliva, mucosae and flavor compounds.....	17
7. Sensory and hedonic responses to foods: highlights from the Italian Taste study.....	18
8. How nutrients, neuronal circuits, and gut bacteria shape nutritional decisions .....	20
9. ‘Gastrophysics’ Meets ‘The Mediterranean Diet’ .....	21
10. Communicating Food: Design in the Culinary Arts.....	23
11. Promoting the Mediterranean Diet: Importance of Marketing, Innovation and Consumer .....	24
12. For the diversity of the Mediterranean Diet – the hidden role of the small family farmers .....	25
13. Mediterranean species: nutritional, bioactive and new ingredients development potential .....	26
14. Valorisation of by-products and resources of the Mediterranean diet .....	27
15. The Mediterranean and the Roman Food Supply: grain, wine, olive oil and salted fish .....	28
<b>Oral communications</b> .....	30
OC01. Local Production: A renewed approach in the region of Alentejo.....	31
OC02. Perceptions about the concept of Mediterranean Diet, its evolution and potential abuse: Perspectives of professionals from Algarve-Portugal.....	32
OC03. As we eat, so shall we be? Socialization, well-being and food in the transition to adult life ..	34
OC04. Redesigning Food Experience .....	36

OC05. Audio-visual to promote Mediterranean Diet and Health .....	37
OC06. Sensory characterization and evaluation of sweet miso-like fermented grass pea products: construction of a preference mapping.....	38
OC07. Promoting home cooking as an integral part of the Mediterranean diet: results of the PRIMEMEAL project .....	40
OC08. Study about the use of edible flowers for gastronomic purposes in Portugal.....	41
OC09. Alentejo Eating Habits vs Mediterranean Diet .....	42
OC10. Acceptance of exotic beverages with health benefits in Europe: a cross-country comparison of hibiscus products.....	43
OC11. EATMOT Project: Eating motivations in different parts of the world, and particularly in countries from the Mediterranean Area.....	44
OC12. The impact of the organic and gluten free claims on food perception.....	45
OC13. Knowledge about the benefits associated with the ingestion of dietary fibre: Comparison between Mediterranean and Non-Mediterranean Countries .....	46
OC14. Using by-products and non-valuable natural products as flour source to produce gluten free bread .....	47
<b>Posters.....</b>	<b>48</b>
P01. The role of taste sensitivity and lifestyle in food preferences in Portuguese primary school children.....	49
P02. Health nudge-based interventions in a retail setting: Evidences from a field experiment .....	51
P03. Sea lamprey ( <i>Petromyzon marinus</i> L.), a delicacy in several Mediterranean countries: unlocked the chemical composition benefits behind the success of the high gastronomic impact and traditional usage.....	52
P04. Comparison between semi-intensively and intensively grown beef .....	53
P05. The use of acorns in Portugal – lessons from the past .....	55
P06. Cherry storage using Chitosan edible coatings and essential oils.....	56
P07. Cold storage of table grapes ‘Sugraone’ .....	57
P08. Evolution of ‘Jonathan’ apples during cold storage .....	59
P09. Quality evaluation of Strawberry using NIR .....	60
P10. Texture evaluation of two Cachena bovine muscles during storage .....	61
P11. Aqueous extracts of <i>Origanum vulgare</i> and <i>Thymus</i> spp. from Alentejo: Anti-inflammatory and Antioxidant Screening .....	62
P12. Phenolic characterization and antioxidant assessment of <i>Vitis vinifera</i> L. grapes produced in Alentejo .....	64

P13. Regional olive oil food systems from a small producer’s perspective: similarities and differences in 4 Mediterranean regions – Castellón (Spain), Lucca (Italy), Ileia (Greece) and Central Alentejo (Portugal).....	65
P14. Extracts from two Mediterranean wild edible plants, <i>Helichrysum picardii</i> Franco and <i>Calamintha nepeta</i> (L.) Savi subsp. <i>nepeta</i> , as a source of natural antioxidants.....	66
P15. Variability in consumption and knowledge about edible flowers according to country .....	67
P16. Sterol and fatty acid profile in negrinha and santulhana varietal olive oils from Trás-os-Montes region .....	68
P17. Chemical and microbiological stability of the low caliber apple slices prepared by osmotic dehydration .....	70
P18. Strawberry spread - New Food New Tech.....	71
P19. The history of the manufacture of cheeses in Alentejo .....	72
P20. Influence of <i>Cynara cardunculus</i> L. ecotypes on physical and chemical properties of PDO Évora cheese.....	73
P21. Valorisation of Shiitake mushroom by-products through confection of pies and rissoles.....	75
P22. Characterization of consuming habits regarding bakery products and acceptance of new products incorporating whey residue .....	76
P23. Mathematical modelling of the drying kinetics of acorn ( <i>Quercus rotundifolia</i> ) - optimization of shelling process .....	77
P24. Consumption and knowledge on legumes in Portugal .....	78
P25. Table olives: a food of the millenary Mediterranean diet pattern .....	79
P26. Incorporation of Mediterranean shrub ( <i>Cistus ladanifer</i> L.) in lamb diets to improve the nutritional value and oxidative stability of meat .....	80
P27. INIAV - Technology & Innovation Unit (UTI): contributions to the Mediterranean diet sustainability .....	82
P28. Nudging consumer behaviour in a restaurant setting through innovation: increasing legumes consumption by promoting healthier choices .....	83
P29. Wine water footprint assessment in the Mediterranean region.....	85
P30. Physical-chemical and rheological characterization of tomato ( <i>Solanum lycopersicum</i> L.) of Algarve.....	87
P31. Human and canine prevalence obesity and feeding habits – a one health approach in Portugal .....	88
P32. Nutritional value of bread enriched with legume flours.....	90
P33. What is happening with Mediterranean Diet patterns in Alentejo?.....	91
P34. Regulated Deficit irrigation in pomegranate orchard .....	93
P35. Use of digital image analysis for monitoring the ripening of Évora PDO cheese.....	94

P36. Renewing concepts: adapting the food choice questionnaire to the Portuguese consumption of rice through the use of images.....	95
P37. Moroccan Diet between a protective and causative effect.....	96
P38. Mediterranean Diet and autoimmune diseases: what do we know? .....	97
P39. Attitudes and beliefs of producers and veterinarians regarding the implementation of biosecurity measures on cattle farms .....	98



# Introduction

## The International Conference on Mediterranean Diet and Gastronomy: Linking Innovation, Sustainability and Health

The Mediterranean Diet is the theme that brings together in Évora many renown national and international experts on many different domains and research topics. UNESCO's classification as Intangible Cultural Heritage of Humanity attests the relevance of a nutritional model that remained "constant over time and space", but, more importantly, it asserts it as much more than a simple diet.

In order to grasp the true essence of this conference, one question stands in the foreground: what is the Mediterranean Diet?

It's tradition. The customs and practices of communities of the Mediterranean basin are the base for this diet and cement the identity of this territory. In this conference, we want to talk about the past, but also about the future. We wish to reflect on how, in a context of pervasive change, tradition and innovation can coexist and give origin to new products and services that transform the old into the new.

It's socialization. Beyond food, this diet is about a way of being and living. Based on the values of sharing and caring, the Mediterranean Diet tells us about the identity of people. In some respects, each person is like all other people, some other people, and no other people. In this continuum between personal identity and cultural belonging, there is a world of factors affecting feeding behaviour.

It's health. Characterized by diversity and balance, the Mediterranean Diet is a rich and harmonious conjugation of highly nutritious food. International research has been documenting its benefits for health promotion and for preventing some of the most widespread chronic diseases of the XXI century.

It's sustainability. Valuing endogenous products and respecting biodiversity and seasonal cycles of produce allow for a more efficient and clever use of natural resources. To that extent, one cannot talk about Mediterranean Diet without mentioning sustainability. In a time when preservation is one of the

International Conference on Mediterranean Diet and Gastronomy: Linking Innovation, Sustainability  
and Health | 15-16 October, University of Évora

most pressing concerns of our collective conscience, sustainable practices of production and consumption are a necessary topic of discussion.

It's experience. The Greek root word "*diata*" means a way of life. Thus, we need not only to address the questions of "what", but also of "how": the act of eating. The experience with food is part of the essence of the Mediterranean Diet, making sensory science a necessary topic for this conference.

For all these reasons, we believe this conference is for you. From body to mind, from biology to culture, from history to innovation, from knowing to doing, there are multiple perspectives on eating.

International Conference on Mediterranean Diet and Gastronomy: Linking Innovation, Sustainability and Health | 15-16 October, University of Évora

## OC13. Knowledge about the benefits associated with the ingestion of dietary fibre: Comparison between Mediterranean and Non-Mediterranean Countries

GUINE, R., P., F.<sup>1</sup>, FERRÃO, A., C.<sup>1\*</sup>, DUARTE, J.<sup>1</sup>, FERREIRA, M.<sup>1</sup>, CORREIA, P.<sup>1</sup>, LEAL, M.<sup>2</sup>, RUMBAK, I.<sup>3</sup>, BARIC, I., C.<sup>3</sup>, KOMES, D.<sup>3</sup>, SATALIC, Z.<sup>3</sup>, SARIC, M., M.<sup>4</sup>, TARCEA, M.<sup>5</sup>, FAZAKAS, Z.<sup>5</sup>, JOVANOSKA, D.<sup>6</sup>, VANEVSKI, D.<sup>6</sup>, VITTADINI, E.<sup>7</sup>, PELLEGRINI, N.<sup>7</sup>, SZUCS, V.<sup>8</sup>, HARANGOZO, J.<sup>8</sup>, EL-KENAWY, A.<sup>9</sup>, EL-SHENAWY, O.<sup>10</sup>, YALÇIN, E.<sup>11</sup>, KÖSEMECI, C.<sup>11</sup>, KLAVA, D.<sup>12</sup> & STRAUMITE, E.<sup>12</sup>

<sup>1</sup> CI&DETS, Polytechnic Institute of Viseu, Portugal ; <sup>2</sup> Faculty of Health Sciences, Maimonides University, Argentina ; <sup>3</sup> Faculty of Food Technology and Biotechnology, University of Zagreb, Croatia ; <sup>4</sup> Department of Health Studies, University of Zadar, Croatia ; <sup>5</sup> University of Medicine and Pharmacy from Tirgu-Mures, Romania ; <sup>6</sup> Public Health Institute, Centre for Public Health, Tetovo, Macedonia ; <sup>7</sup> Department of Food Science, University of Parma, Italy ; <sup>8</sup> National Agricultural Research and Innovation Centre, Budapest, Hungary ; <sup>9</sup> Genetic Engineering Institute, University of Sadat City, Egypt ; <sup>10</sup> Department of Psychology, Faculty of Arts, Menofia University, Egypt ; <sup>11</sup> Department of Food Engineering, Abant İzzet Baysal University, Turkey ; <sup>12</sup> LUA Latvia University of Agriculture, Latvia.

\* [acristinaferrao@gmail.com](mailto:acristinaferrao@gmail.com)

### ABSTRACT

It is well known that dietary fibre (DF) is recognized as very important to maintain health and prevent some chronic diseases. Therefore, the objective of the present study was to evaluate the level of knowledge about the effect for the human body derived from ingesting DF. For that purpose, a descriptive cross-sectional study was carried out on a sample of 6010 participants, from 10 countries. The results obtained were compiled into a variable that accounted for the general level of knowledge, and this showed that globally the level of information about the benefits of DF was acceptable (average score of  $3.54 \pm 0.5$ , on a scale from 1 to 5). Some of the variables considered for the study were gender, level of education, living environment and country, for which significant differences were found between groups. The highest level of knowledge was found for women, with university degree, from Portugal and living in urban areas. As a conclusion, it was possible to see that, in general, the participants in the study were quite well informed about the benefits of DF for the improvement of human health.

**KEYWORDS:** Dietary fibre, Health effect, Cardiovascular disease, Diabetes, Obesity, Survey