

4TH INTERNATIONAL

YALE SYMPOSIUM ON OLIVE OIL & HEALTH

Rome,
15-18
September 2022

IN COLLABORATION WITH

PARTNER

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Edited by: University of Bari Aldo Moro (Alessandro Leone, Antonio Berardi)

INTRODUCTION

This Symposium will bring together academics, organizations and industry involved in research and education related to the olive tree and its products. It will provide an opportunity/venue for the critical assessment of ways to augment the synergy between science, technology and culture to address climate change and planetary health.

It will address current issues pertinent to the areas of: Chemistry and Omics, Bioactivity and Wellness, Nutrition and Sensory Science, Gastronomy and Culture, Agricultural Technology and Agronomy, and Economics and Policy. Oral and poster presentations, round tables, olive oil tasting and social gatherings will encourage and stimulate discussion and foster partnerships and collaborations among attendees, individuals and entities under the umbrella of the mission of the proposed Yale Olive Sciences and Health Institute.

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Rome,
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15 SEPTEMBER

5:00 - 7:00
REGISTRATION AND WELCOME RECEPTION

6 PM
Tasting session with producers of Evoos Trends in Garum Ancient Food Library and Museum; dinner

16 SEPTEMBER Venue: Palazzo Valentini, Rome

8:30 - 9:30 AM
REGISTRATION

9:30 - 10:15 AM
OPENING CEREMONY
Hon. Pierluigi Sanna, Mayor of Metropolitan City of Rome
Hon. Sabrina Alfonsi, Councilor of Rome for Agricultural Policies, Environment and the waste cycle
Hon. Mario Ciarla, President Arsiat
Hon. Damiano Pucci, Councilor for Agricultural Policies of Metropolitan City of Rome
Prof. Orazio Schillaci, Rector University of Rome Tor Vergata
Prof. Stefano Bronzini, Rector University of Bari Aldo Moro
Prof. Vasilis Vasiliou & Prof. Tassos C. Kyriakides, Yale University
Pedro Bruno Cobo, Deputy for Agriculture, Livestock, Environment and Climate Change, Provincial Council of Jaen, Spain. "Passing of the Symposium olive tree".

10:30 AM - 1:00 PM
POLICY AND THE BUSINESS OF OLIVE OIL
Chair: Dr. Angelo Frascarelli ISMEA
Introduction of the topic.

Hon. Paolo De Castro, Member of EU parliament.
"European proposals for the olive oil supply chain".
David Granier, President of UNAPROL, Italy.
"Olive Oil Quality: a value for policies and the marketplace".
Mercedes Fernandez, International Olive Council.
"IOC harmonization in markets".
Roberto Copparoni, Direzione generale per l'igiene e la sicurezza degli alimenti e la nutrizione - Ufficio 5, Ministry of Health, Italy. "NutrInform: Italy's answer to Nutriscore"
Emmanouil Karpadakis, Olive Oil Innovation, Communication and Area Exports
Melissa-Kilizas, (Terra Creta Brand); Vice President of Cretan Exporters Association, Greece.
"Nutriscore: the position of producer and consumer".

OPEN DISCUSSION
Impact of existing/future policies on producers and the trade.

1:00 - 3:00 PM
SHOW COOKING: THE IMPORTANCE OF OLIVE OIL IN THE ITALIAN CUISINE
Chef: Andrea Fusco
Light lunch in Palazzo Valentini

3:00 - 5:30 PM
OLIVE OIL AND MEDITERRANEAN DIET: PRECISION NUTRITION HUMAN HEALTH
Chair: Prof. Antonia Trichopoulos, Member of the Athens Academy, President of the Hellenic Health Foundation, Emeritus professor Medical School, Athens University.

Prof. Antonino De Lorenzo, University of Rome Tor Vergata: "The Italian Mediterranean Diet, a sustainable diet".

Pablo Pérez-Martínez, Director Científico del Instituto Maimónides de Investigación Biomédica de Córdoba (IMIBIC), Catedrático de Medicina, Universidad de Córdoba, Especialista Medicina Interna, Hospital Universitario Reina Sofía, Córdoba, Spain. "Mediterranean Diet in secondary prevention: the winning card".
Prof. Laura Di Renzo, University of Rome Tor Vergata, Italy. "Nutraceutical properties of extra-virgin olive and health benefits of extra-virgin olive oil".
Prof. Maurizio Servili, University of Perugia, Italy. "From olives to olive oil: the change in the phenolic composition".
Prof. Paola Gualtieri, University of Rome Tor Vergata, Italy. "Nutrients and Hazard Analysis of Critical Control Points (HAACP) process for extra-virgin olive oils".

5:30 - 6:00 PM
POSTERS PRESENTATION

6:00 - 7:30 PM
Olive oil tasting experience in EVOO school led by UNAPROL

8:30 PM
Osteria Flavio al Velavevodetto Testaccio, a tour in the roman traditional food

17 SEPTEMBER Venue: Palazzo Valentini, Rome

8:00 - 9:00 PM
REGISTRATION

9:00 - 11:00 AM
THE OLIVE GROVE AND CLIMATE CRISIS: AMELIORATION & ADAPTATION
Chair: Prof. Riccardo Gucci, University of Pisa, President of the Italian Academy of the Olive Tree and Olive Oil, Italy.
Keynote Presentation: "Evolution and technical perspectives of olive growing".

Dr. Donato Boscia, Institute for Sustainable Plant Protection of CNR-Bari, Italy.
"Xylella fastidiosa in olive groves: diffusion, impact and management of the epidemic"
Dr. Luca Regni, University of Perugia, Italy.
"Strategies to increase the carbon sequestration in olive groves"
Dr. Rocio Diaz-Chavez, Senior Research Fellow, Centre for Environmental Policy Imperial College London, UK.
"Circular economy in olive oil production"
Dr. Mariem Gharsallaoui, Olive Tree Institute and Green Engineering, Tunisia
"Climate change and its impact on olive oil production in the southern shore of the Mediterranean"

11:00 AM - 1:00 PM
ADVANCES IN GENOMICS AT THE INTERSECTION OF OLIVE TREES, THEIR PRODUCTS AND HUMAN HEALTH
Chair: Prof. Giuseppe Novelli, University of Rome Tor Vergata, Italy. Keynote Presentation. "Precision health: convergence of genomics and environment".

Prof. Vasilis Vasiliou, Yale University, USA.
"Advances in the genome analysis of the olive tree".
Prof. Anagnostis Argiriou, Deputy Director Institute of Applied Biosciences, Greece.
"The long path from genome to olive oil: The case of Greek olive tree cultivars".
Prof. Piero Morandini, University of Milan, Italy.
"Genetic transformation of Olea europea".

1:00 - 3:30 PM
Visit to the olive grove of the Palatine Hill and the Colosseum
Light lunch Palazzo Valentini

3:30 - 5:30 PM
INNOVATIVE SYSTEMS FOR EXTRA-VIRGIN OLIVE OIL PROCESSING AND CIRCULAR ECONOMY
Chair: Prof. Alessandro Leone, University of Bari, Italy.
Keynote Presentation. "Towards the sustainable management of oil mill waste: analysis of a case study".

Dr. Gabriel Beltrán Maza, IFAPA Sevilla, Spain
"Progress of extraction process: between the physical and the virtual".
Prof. Luciano Meschia, Polytechnic University of Bari, Italy.
"Pulsed electric fields in the olive oil extraction process".
Dr. João Nunes, BLC Association - Technology and Innovation Campus, Oliveira do Hospital, Portugal.
"Trends and importance of the circular economy for the resilience and competitiveness of the olive oil value chain".

5:30 - 6:00 PM
POSTERS PRESENTATION

6:00 - 7:00 PM
Free time

8:30 PM
TRADITIONAL DINNER AND FOLK MUSIC IN TRASTEVERE
Osteria Pro Loco Trastevere

18 SEPTEMBER Venue: Palazzo Valentini, Rome

9:30 AM - 12:30 PM
MARKETING OLIVE OIL: COMMUNICATION AND STRATEGY
Chair: Stefano Vaccari, Direttore Generale CREA

Richard Wolny, Organizer of the special show Experience the World of Olive Oil at Biofach trade fair
"How to promote olive oil at trade fairs".
Alexandra Devarenne, Extra Virgin Alliance, USA
"How do we tell the olive oil story?".
Nicola Di Noia, Direttore Generale UNAPROL, Consigliere Delegato EVOO School, Italy
"Communicating olive oil through olive oils: building consumer awareness as a pre requisite of marketing strategy".
Francesca Rocchi, School Project: Slow Food Rome
"The fundamental importance of becoming aware at school about what we feed us: EVOO as a new tool".
Emmanouil Papoutsakis, Executive chef, Greece
"Restaurants and chefs as extra-virgin olive oil ambassadors: a great challenge".
Marco Morello Executive, Chef Collettivo Gastronomico Testaccio Rome
"Farmers markets and direct-to-consumer marketing: building culture and shortening the olive oil chain".

12:30 - 1:30 PM
CLOSING REMARKS AND PRESENTATION OF THE NEXT CONFERENCE
Prof. Laura Di Renzo, Prof. Alessandro Leone
Prof. Vasilis Vasiliou, Prof. Tassos C. Kyriakides

1:30 - 2:30 PM
Light lunch Palazzo Valentini

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Rome,
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ORGANIZING COMMITTEE

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Laura Di Renzo *University of Rome Tor Vergata*
Alessandro Leone *University of Bari Aldo Moro, Italy*
Francesca Rocchi *Slowfood and Eataly, Italy*
Antonino De Lorenzo *University of Rome Tor Vergata, Italy*
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Vasilis Vasiliou *Yale School of Public Health, USA*

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MEMBERS

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Paola Gualtieri *University of Rome Tor Vergata, Italy*
Alexandra Kicenik Devarenne *Extra Virgin Alliance, USA*
Rafi Taherian *Yale University, USA*
Manuel Parras Rosa *University of Jaen, Spain*
Elena Guzman Jimenez *University of Jaen, Spain*

SECRETARIAT

Francesca Rocchi *Slowfood and Eataly, Italy*
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For registration and further information, please visit our website:
yaleoliveandhealthsymposium.org

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Environmental Health Sciences

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ORGANIZING COMMITTEE

Laura Di Renzo



Laura Di Renzo, Ph.D. in Molecular and Cellular Biology, Specialization in Food Science, is the Director of the School of Specialization in Food Science, Associated Professor at the Division of Clinical Nutrition and Nutrigenomics, Department of Biomedicine and Prevention University of Tor Vergata. She is co-coordinator of the Food-Working Group of the University Network for Sustainable Development (RUS). She is the Legal representative of the DAFNE-Defense of Agriculture, Food Nutrition and Environment Association, non-profit association. She is the Coordinator of the II level Master in "Preventive and Initiative Medicine", and Master in "Weight eating disorders", University of Rome Tor Vergata.

Expert in nutritional genomics and body composition, she carries out her research in the field of a) clinical nutrition; b) nutritional genomic; c) human body composition; d) food safety and nutritional quality; Mediterranean Diet; food resilience in a One Health perspective.

Alessandro Leone



Alessandro Leone is a Full Professor in Mechanics and agricultural mechanization and, Food Processing Plants, at the Department of Agricultural and Environmental Science (DiSAAT), University of Bari Aldo Moro.

The research activity has been developed mainly by carrying out theoretical and practical topics relating to agricultural machinery (i.e. precision farming machines), food plants and their safe use in the workplace

The research developed has been the result of the interaction with research institutes and manufacturers companies of machinery for the agro-industry, which enabled the development of many pre-competitive prototypes.

He deals with the study and evaluation in the mill of machines for oil extraction with particular reference to the most recent technological innovations such as heat exchangers and microwave, ultrasounds, and pulsed electric fields systems.

He has participated and currently operates in international cooperation programs with Egypt, Iraq, Palestine and Pakistan, to the development of sustainable agriculture models, improvement of mechanization in agriculture and improvement of agricultural production chains.

He is the author of over 100 scientific publications published in national and international journals and conferences.

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Francesca Rocchi



I was born in Venice and there I graduated in philosophy.

I'm a taster and journalist at the Slow Food publisher's Guide to Extravergini. In 2010 I was elected President of Slow Food Lazio and I have been a National Council Member for Slow Food Italy.

In 2014, I have been Vice President of Slow Food Italia, delegate for climate changes issues and school canteens program.

I'm member of the Slow Food Extra-Virgin Olive Oil Project, which promotes the environmental, landscape, health and economic value of extra-virgin olive oil, and inform consumers about the qualities of good, clean and

fair oil.

I'm also an educator in the field of food and wine for Slow Food and Eataly, with a focus on the olive tree cycle and on the potential of using EXTRAVERGINE in the daily diet.

I am President of PopOlio a new project born to promote through a popular language, the EVO culture and I am Italian Chief Panel of AIOA, Australian International Olive oil Award.

I am Vice President of Foodinsider, a national observatory on school canteens.

I'm the artistic director of Mercato Mediterraneo of Fiera di Roma, an event dedicated to the Mediterranean Diet and relationship between people and communities, and artistic director of Roma Baccalà where I introduce a space totally dedicated to the culture of EVO.

I am teaching in Università La Sapienza Roma, master in Nutrition Science.

Member of Symposium

Vasilis Vasiliou



Susan Dwight Bliss Professor of Epidemiology, Chair of the Department of Environmental Health Sciences at Yale School of Public Health Dr. Vasiliou received his BSc in Chemistry (1983) and PhD in Biochemical Pharmacology (1988) from the University of Ioannina, Greece. He then trained as a Fogarty Fellow in gene-environment interactions, molecular toxicology and pharmacogenetics at the Department of Environmental Health in the College of Medicine at the University of Cincinnati (1991-1995). In 1996, he joined the faculty of the University of Colorado School of Pharmacy where he rose through the ranks to become Professor and Director of the

Toxicology Graduate Program. In July 2014, he joined the faculty of Yale University in his new position.

Professor Vasiliou has established an internationally recognized research program that has been continuously funded by several USA federal agencies such as NEI/NIH, NIAAA/NIH and NIH/NIEHS since 1997. His research interests include mechanisms of cellular responses to environmental stress, gene-environment interactions, alcohol-induced tissue injury, pharmacogenetics and his laboratory studies metabolic diseases including obesity and diabetes, and

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cancer. Dr. Vasiliou has published over 190 papers and edited three books on Alcohol and Cancer. He has trained over twenty five doctoral and post-doctoral students. Dr. Vasiliou is the editor of Human Genomics.

Prof. Vasiliou along with Dr. Tassos C. Kyriakides has been establishing The Yale Olive Sciences and Health Institute. This Institute's mission is to facilitate and coordinate rigorous study, robust research, and creative interdisciplinary education and activities related to the olive tree and its products. The concept and mission of the Institute has been widely supported and endorsed by over 70 international and national academic, research and private entities working in the field.

Tassos C. Kyriakides



Tassos C. Kyriakides, completed his B.Sc. as a Fulbright Scholar at UCLA (Biochemistry; 1993) and received his Ph.D. at the Yale School of Public Health (Epidemiology of Infectious Diseases; 1999).

He is an Assistant Professor, Yale School of Public Health where he helps design and guide and collaborates on numerous clinical research projects. He consults on methodology, data processes and management, and statistical analysis for numerous research protocols; has been an abstract mentor for researchers at the International AIDS Conferences since 2012, mentors

graduate students, and is a statistical reviewer for high-impact journals (Lancet Infectious Diseases; Lancet Gastroenterology & Hepatology).

He is the co-proponent for the establishment of the Yale Olive Sciences and Health Institute that will focus on the olive tree and its products, and their effects on human and planetary health. He frequently gives talks on the health benefits of olive oil and he is the principal investigator of a research project to assess the benefits of table olives on cardiovascular markers among college students. He is a Legacy Circle member of the Massaro Community Farm, in Woodbridge, CT. He is the Immediate Past President of the Association of Yale Alumni in Public Health (AYAPH) Board and a faculty fellow at Yale's Saybrook College.

He is the Director at the Department of Veterans' Affairs Cooperative Studies Program (VACSPCC-West Haven, CT), a clinical trials data coordinating center, where he has worked the last 20+ years on pivotal trials in: HIV/AIDS treatment (The OPTIMA Trial); surgery (The OVER Trial); PTSD (The VIP-STAR Trial). In his capacity as Director, he currently coordinates and facilitates activities in five clinical trials and a Lung Precision Oncology Program in 85 Veterans' Affairs Medical Centers in the US.

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Antonio De Lorenzo



Antonino De Lorenzo is Full Professor, since 2000. He is Director of the Department of Biomedicine and Prevention and Director of Clinical Program "Clinical Nutrition" at PTV Policlinico Tor Vergata, Italy. He is Referent of the Schools of Specialization in Food Science at the National University Council and President of the National Board of Full Professor in Applied Dietary Technical Sciences MED/49.

He was Director of Specialization School in Food Science at the University of Rome "Tor Vergata" and Coordinator of PhD School of "Applied Medical-Surgical Sciences" of the University of Rome "Tor Vergata". He,

also, was President of "Istituto Nazionale per la Dieta Mediterranea e la Nutrigenomica - INDIM". He was Member of several Ministerial Commissions (about national critical issues in nutrition; eating disorders; nutritional safety; prevention and fight against obesity). His research activities have always been about the study of body composition, in all its aspects, including the interaction of adipose tissue with other tissues and with the inflammatory state, and genetics aspects. This led him to discover "Normal Weight Obese Syndrome". His research field specifically concerned: evaluation and assessment of body composition; quantitative and qualitative assessment of bone mineral density, lean mass and fat mass by Dual Energy X-ray absorptiometry; assessment of body water compartments with bioimpedance; validation of the body impedance method in the study of body composition; validation of indirect calorimetry to estimate the basal metabolic rate and respiratory quotient; study about conventional and organic agriculture; nutrigenetics and nutrigenomics clinical trial, to evaluate effect of specific polymorphisms and effect of several nutrients. He participated to different national and international projects as Principal Investigator or Research Unit Responsible: "La sostenibilità dell'Agricoltura Biologica. Valutazioni economiche, ambientali e sulla salute umana" - Funding of the Ministry of Agricultural and Forestry Policies; "Salvaguardia della salute e dei prodotti agroalimentari" Confronto tra prodotti agricoli convenzionali e prodotti biologici - Funding of the Ministry of Agricultural and Forestry Policies; "Mensa Sana e corpore sano" MenSa, Funding of the Ministry of Agricultural and Forestry Policies DM 20099 23.12.2009; "Modelli viticoli e valore salutistico dell'uva e del vino: verifiche agronomiche e dietetiche" VINSALUT - Funding of the Ministry of Agricultural and Forestry Policies; DM 18829/7818 del 05/08/2009; "Valorizzazione della qualità Salutare e Nutraceutica della nocciola: la corilicoltura tra prassi produttivo territoriali, usi gastronomico-alimentari e patrimonializzazione della memoria locale". VALSANUT - Funding of the Ministry of Agricultural and Forestry Policies; D.M.; 2017188 of March 24th. He had several collaborations with national and international research centers. He is author of more 300 articles, with more than 14000 citations and an H-index of 54. He was author of more than 50 chapters of national and international treaties/books. He participated as an invited speaker in more than 100 national/international conferences. He was listed, on October, 16th 2020, by PLOS BIOLOGY (updated in 2021 by Stanford University) among the world's top scientists for scientific productivity.

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Paola Gualtieri



Paola Gualtieri is Type B fixed-term researcher (RTDB) in Applied Dietary Technical Sciences, at the Section of Clinical Nutrition and Nutrigenomics, Department of Biomedicine and Prevention, University of Rome Tor Vergata. Before, she was Research Fellow on 4P Medicine. She earned her PhD in Applied Medical-Surgical Sciences, with line of research in Clinical Nutrition. Her thesis concerned “Process innovation to contrast the erosion of the Mediterranean Diet and consumer protection: study of a territorial model”, with particular attention to the Nutrient and hazard Analysis of Critical Control Point (NACCP) Process. Her thematic area of research is: effects of different diets and nutrients on body composition; nutrigenetics

and nutrigenomics analysis; NACCP on food chain; food chemistry. She is author of more 50 articles, with more than 1800 citations and an H-index of 19. She was also author of 2 chapter on international books.

Alexandra Kicenik Devarenne

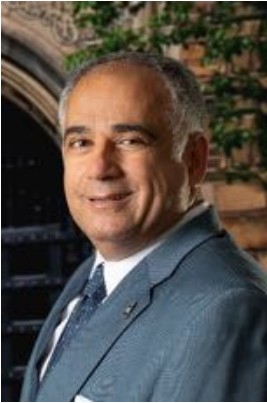


Alexandra Kicenik Devarenne is an olive oil consultant, writer and educator based in California. She has presented at many olive oil conferences and events in the US and abroad, focusing on olive oil sensory education, communication, marketing and quality, and serves on the organizing committee for the International Yale Symposium on Olive Oil and Health. She is the author of Olive Oil: A Field Guide from AOCS Press and has written on many aspects of olive oil for both popular and scholarly publications and websites. Alexandra's olive oil work started during her

seven years at the University of California Cooperative Extension and she is a graduate of UC Berkeley. She became an official olive oil taste panel member in 2003 and has taught olive oil tasting classes for Olive Oil Sommeliers of Japan, Culinary Institute of America, Institute of Agrifood Research and Technology in Catalonia, California State and Los Angeles County Fairs, UC Davis, and many others. She serves as a judge and advisor for various California and international olive oil competitions. Alexandra is the director of Extra Virgin Alliance, the specialty section of the North American Olive Oil Association, working with international olive oil producers and experts to foster appreciation, restore consumer trust and create value in the market for authentic extra virgin olive oil. Her consulting work focuses on all aspects of improving olive oil quality and success, from helping clients select the best olive cultivars for their needs to creating outstanding blends and telling their stories in the marketplace.

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Rafi Taherian



As the Associate Vice President of Yale Hospitality (YH), Rafi leads with a strong belief and commitment to leverage YH's operations in creating opportunities for engaged learning, innovation, and sustainable practices. Yale's mission of research, teaching, preservation, and practice of knowledge is translated into the language of food and its supporting systems by all divisions of the YH organization. Rafi's ongoing engagement with food industry professionals and thought leaders results in many initiatives at the local, regional, national, and international levels that support a plant-centric approach. The team creates craveable menus that are not only better for the people and better for the planet but are also developed using ethical and humane practices at every stage of the food system. YH is a robust organization that serves more than 15,000 meals per day with a team of over 850 and comprised of three operational divisions, which continually deliver best-in-class hospitality practices. With over 35 years of industry experience, Rafi is invited to present at national and international conferences and is a recipient of numerous industry awards and recognitions including the Silver and Gold Plate Awards by the International Food Manufacturer Association.

Manuel Parras Rosa



Professor of Marketing and Market Research at the University of Jaén and member of the University Institute for Research in Olive Grove and Olive Oils.

Author and co-author of 20 monographs, 52 book chapters, 100 papers in national, international and sectorial journals and 75 papers presented at national and international congresses. Researcher in 61 European, international, national and regional R+D+i research projects and contracts, of which he has been Principal Investigator in 20 of them.

He has given conferences on olive oil marketing, by invitation, in Australia, Brazil, Belgium, Croatia, Egypt, Spain, United States, Italy, Morocco, Portugal, Turkey and Uruguay.

National Prize for Agricultural, Fishing and Food Publications (Social Sciences Modality), awarded by the Ministry of Agriculture, Fishing and Food, in 1996. Essay Prize Jaén, 1998, granted by the General. UNICAJA Prize for Research on Economic Development and Agrarian Studies (Dissemination/Didactic Modality), in 2000. Arco Iris Award of Cooperativism 2005, in the modality of Best Research on Cooperativism.

Scientific Commissioner of the Tierras del Olivo Exhibition. Member of the Andalusian Olive Council as a specialist of recognized prestige. Member of the Instituto de Estudios Giennenses, institution in which he is Coordinator of the Olive Culture Section. President of the Center of Innovation and Technology of the Olive grove and the Oil (CITOLIVA), from December 18, 2002 to November 18, 2006. Secretary of the Board of Directors and of the Executive Committee of the Scientific-Technical Park of the Olive Grove and Olive Oil (GEOLIT), from 2000 to 2006.

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President of the Economic and Social Council of the province of Jaén, from 2002 to 2007 and since May 2015. President of the Federation of Olive Oil Producers of Jaén, since May 2017. President of the Regulatory Council of the PGI "Aceite de Jaén", since June 2020. Magnificent Rector of the University of Jaén (April 2007-April 2015). Gold Medal of the University of Jaén.

Elena Guzman Jimenez



PhD in Agri-Food Technology from the University of Córdoba. She has developed her scientific training in several research centres, including the Centre for Agricultural Research of Wallonia (CRAW) in Belgium, the University College of Dublin in Ireland, and three in Spain, the University of Jaén, the University of Granada, and the University of Córdoba.

She has been putting her knowledge into practice in research and development centres for more than ten years, developing new analytical methodologies for the improvement and automation of production processes in the olive oil industry. The use of computer vision-based sensors for process monitoring and product quality improvement in the agro-food industry are her research priorities.

She has several JCR indexed publications and has participated in many national and international research projects and contracts with several collaborations. She is founder of the startup BIOLIVE SOLUTIONS focused on providing advisory services to the olive sector on environmental management, improving the production process and applying the health benefits of EVOO for the improvement and marketing of this product. She is currently a researcher and head of R&D at the University Institute of Research for Olive and Olive Oil at the University of Jaén, Spain.

Maurizio Servili



Prof. Maurizio Servili graduated in Agricultural Science in 1986 at the University of Perugia, Italy.

He acquired domestic and international experience as a doctoral fellow at the Istituto di Industrie Agrarie (1986-1990) University of Perugia, Italy and The Food Science Laboratories, Dept. Bioscience and Biotechnology of Strathclyde University, Glasgow, Scotland. Prof. Servili started his academic career as Assistant Professor at the Faculty of Agriculture, University of Perugia (1990-1998). He was for sixteen years Associate Professor (the University of Molise and the University of Perugia). Now he is a Full Professor at the Department of Agricultural, Food and Environmental

Sciences, University of Perugia. The main research topics concern:

- 1) Study of phenolic and volatile compounds of several foods (table olive, virgin olive oil, wine and tomato derivatives) and their variability and role during the ripening, the processing and the shelf-life;
- 2) Processing of virgin olive oil and wine

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- 3) Characterization and valorisation of by-products
- 4) Development of instrumental methods of the food quality analysis;
- 5) Study of possible modification induced by processing, packaging and storage on olive oil major and minor components
- 6) Development of prediction models for the quality deterioration of olive oil;
- 7) Study of health-promoting effects of olive oil phenolic compounds.

Rosa Vañó



Rosa Vañó, economist, founder and co-owner of the Andalusian premium extra virgin olive oil brand Castillo de Canena together with her brother Francisco. Member of a family of olive growers dating back to 1780, they are totally focused on sustainable and regenerative farming, innovation, excellence, and value-added gastronomic experience around their EVOOs.

Riccardo Gucci



Riccardo Gucci is Full Professor at the Department of Agricultural, Food and Environmental Sciences of the University of Pisa, where he teaches the courses Tree Science and Olive growing and Viticulture. He is currently Associate Editor of the journals “Irrigation Science” and “Frontiers in Plant Science (Horticulture)”, Scientific director of the technical journal “Olivo e Olio” (Edagricole), and President of the Italian Academy of the Olive and Oil. His main research activities are in the physiology of fruit trees and orchard management. He has been working on the physiological response to abiotic stresses, and the ecophysiology of trees for orchard design and productivity. He has authored over 90 articles in refereed journals with impact factor, book chapters, and over 140 other scientific and technical articles. He is co-author of the book Pruning and training systems for modern olive growing CSIRO Publishing, and editor of Principles of Modern Fruit Science, ISHS.

Antonio Berardi



Phd. Ing. Antonio Berardi graduated at Politecnico di Bari as Mechanical Engineer in 2009 and Management Engineer in 2010. He received PhD degree in 2015 at University of Foggia - Dept. Sciences of Production, Engineering, Mechanics and Economics Applied to Agro-Zootechnical Systems. Starting from 2015 up to 2021 he collaborates occasionally with University of Foggia and the research group of Prof. Alessandro Leone, participating in research activities in the context of competitive projects and

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E.R.S.A.F. in order to organize and manage project research. From 2022 he obtained the position of Researcher and published more than 10 research articles in SCI(E) journals"

Ylenia Granitto



A professional olive oil taster and writer, she brings along the experience and knowledge acquired during her former several-year career in the field of Human Rights. Enrolled in the National List of Technicians and Experts of Virgin and Extra Virgin Olive Oils, she is a member of the Professional Panel of the Chamber of Commerce of Rome and a judge in Italian and international olive oil competitions and guides. She is a correspondent from Italy for the Olive Oil Times since 2015 and collaborates with authoritative Italian magazines, having interviewed many of the leading figures in the high quality extra virgin olive oil sector.

Antonia Tamborrino



Antonia Tamborrino is assistant professor at the Department of Agricultural and Environmental Science, University of Bari, Italy. She earned her Ph.D. in Agro-Food Industry Plant, graduating with highest honors in Agriculturae Science in 2000.

Her research focused on the machines and plant for agro-food production, in particular deals with the innovation and optimization of agro-food industry equipment and plant, design of the food pilot plant and their implementation in the industrial environmental; management and verifying of industrial plant. Her interests include also planning of system for recycling of the agro industrial by-products, harvesting mechanization system and harvesting machine.

Antonia currently teaches courses in Machine and plant for agrofood industry and in Mechanization for the sustainable management of land. She has co-authored over 75 peer-reviewed scientific articles and several book chapters on innovation in olive oil extraction process. For her skills and contributions to the research in olive oil at the UC Davis, she received the Honorary Citizen of the City of Davis, (CA), USA. She has been invited to speak about olive oil extraction process and plant innovation at a number of national and international meetings, and has organized for special symposia at the national and international meetings. She has received different engagement as International Expert on Agricultural mechanics and Agro-food equipment and plant and has been involved in International Cooperation for Technological Development Activities to support vulnerable communities in the Middle East.

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SPEAKERS

David Granieri. President of UNAPROL, Italy.

“Olive Oil Quality: a value for policies and the marketplace”.



David Granieri was born in Rome on 10/01/1979. He manages the family farm, located in the heart of Sabina, in Nerola (RM). He has helped modernize the farm, focusing on quality certifications, short supply chain and multifunctionality. An olive grower by vocation and passion, he was a major player in the birth of the PGI Rome oil.

He has always accompanied his entrepreneurial commitment with roles of responsibility in support of Italian agriculture.. Currently, David Granieri is Coldiretti Vice President, President of the Coldiretti Lazio Federation, and President of Unaprol, the most important Italian olive oil consortium.

When we talk about extra virgin olive oil, we all agree: we are talking about a high-quality product. We must, however, also all agree that quality must be recognized as a value by European Union regulation. Policy must create the tools to give value to extra virgin olive oil. We need to avoid further confusion among consumers, who already find a seemingly equal product at very different prices. We need clarity and transparency of regulations. Only in this way extra virgin oil can have the right market positioning and quality be recognized at the right price.

Mercedes Fernandez. International Olive Council.

“IOC harmonization in markets”.



MERCEDES FERNÁNDEZ ALBALADEJO works for the Executive Secretariat of the International Olive Council, the UN-brokered international commodity organisation for olives and olive oil. After qualifying and working as a doctor she joined the IOC where she was initially in charge of overseeing IOC-funded scientific research. Since 2005 she has headed the IOC Standardisation and Research Unit, which is responsible for developing and updating standards and methods for the physico-chemical and sensory analysis of olive products in partnership with experts and specialist agencies and for harmonising product standards in line with the objectives of the International Olive Oil and Table Olive Agreement. The main focus of her

work is on quality control, fair international trading, consumer rights protection and fraud prevention. She liaises actively with international standards agencies and participates as a speaker in international congresses and seminars besides writing publications and articles on olive oil and table olives.

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Emmanouil Karpadakis. Olive Oil Innovation, Communication and Area Exports, Melissa-Kikizas, (Terra Creta Brand); Vice President of Cretan Exporters Association, Greece.

“Nutriscore: the position of producer and consumer”.



Born on the island of Crete in Greece, he has studied and worked initially as an engineer and later in the field of international relations.

For more than 16 years he has been working in the olive oil sector as a professional in the olive oil production technology, marketing, innovation, exports, and sensory evaluation with long experience in the international olive oil market.

Currently he is working as exports area manager and sensory evaluation expert at MELISSA-KIKIZAS SA and Terra Creta olive oil brand.

He is the Vice President of Cretan Exporters Association and a taster in international olive oil competitions.

He has been a member of the Greek OO development committee, while today he participates in the committees of Greek AREPO and Cretan OO sector development.

Being an expert in his field with recognized knowledge and experience, he has present topics related to olive oil in international fairs and events as guest speaker (IOC summit, FHC summit, HORECA forum etc).

Chair: Antonia Trichopoulou. Member of the Athens Academy.

President of the Hellenic Health Foundation. Emeritus professor Medical School, Athens University



Antonia Trichopoulou MD, PhD, Member of the Academy of Athens, President of the Hellenic Health Foundation, Full Professor Emeritus of the University of Athens School of Medicine. She has served as president of the Federation of the European Nutrition Societies and as chairperson or key member of numerous Greek, European Commission and World Health Organization Committees. She has received numerous honors and awards. In 2011, she received the Federation of European Nutrition Societies Award for her “outstanding nutritionist career”. Her scientific work focuses on public health and nutritional epidemiology, emphasizing health effects of the Mediterranean diet and traditional foods. Named in Thomson Reuters 2014

“World's Most influential Scientific Minds” List and awarded as a Highly Cited Researcher by Clarivate Analytics in 2018 and 2021, she is decorated with the Golden Cross of Honour for work in preventative medicine and nutrition by the President of the Greek Republic.

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Pablo Pérez-Martínez. Director Científico del Instituto Maimónides de Investigación Biomédica de Córdoba (IMIBIC), Catedrático de Medicina, Universidad de Córdoba. Especialista Medicina Interna, Hospital Universitario Reina Sofía, Córdoba, Spain. “*Mediterranean Diet in secondary prevention: the winning card!*”.



Evidence from clinical trials of the effect of a Mediterranean diet in secondary prevention of cardiovascular disease is scarce. Although clinical guidelines recommend the Mediterranean diet for secondary prevention, there have been no clinical trials in the past 20 years to support this recommendation. During the last 10 years we have conducted the CORDIOPREV study, a single centre, randomised, dietary intervention clinical trial in patients with coronary heart disease developed at Reina Sofía University Hospital in Córdoba, Spain.

In this conference I will present the main results of the CORDIOPREV study published in the *Lancet Journal*. In our study, evaluating the effects of a comprehensive, high-intensity dietary intervention with a Mediterranean diet or a low-fat diet over 7 years of follow-up in 1002 patients with coronary heart disease, the Mediterranean diet was superior to the low-fat diet in preventing a major cardiovascular event, with a decrease of HR of 26%. The results of our study provide evidence that the Mediterranean diet rich in virgin olive oil is better than the low-fat diet in preventing cardiovascular recurrence. Our study is the most extensive study on secondary prevention with a Mediterranean diet, has the longest follow-up, and had more reported events.

We discuss the implications in the clinical practice and some mechanism to explain our findings. In summary this study is a hallmark for the effect of the Mediterranean diet on secondary prevention of cardiovascular disease and can be used to change clinical guidelines on diet recommendations and follow-up of patients with coronary heart disease.

Maurizio Servili. University of Perugia, Italy. “*From olives to olive oil: the change in the phenolic composition*”.



Olive fruit is extremely rich in phenolic compounds, and the main classes of phenols, occurred in the olive drup, are phenolic acids, phenol alcohols, flavonoids lignans and secoiridoids. The secoiridoids are the most concentrate phenols in olive fruit and include oleuropein, demethioleuropein ligstroside, nuzhenide and verbascoside. Those glucosidic forms occurring mainly in olive pulp, are the precursor of virgin olive oil and table olives phenols. In particular virgin olive oil contains aglycon derivatives of demethioleuropein as well as oleuropein, and ligstroside such as oleocantal and oleacin, respectively.

They are produced during the fruit crushing, by the endogenous β -glucosidase.

Table olives on the contrary, contain mainly 3,4-diidroxifenil-ethanol and p-hidroxifenil ethanol, derived from chemical or biological hydrolyses of the secoiridoid glucosides.

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Secoiridoids are bioactive phenols that show various biological antioxidant and anti-inflammatory activities and they can contribute to explain the positive relationship between human health and the Mediterranean diet. Several results about the qualitative and quantitative variability of bioactive phenols in virgin olive oils and in table olives, demonstrating the effect of the processing conditions of production, will be reported and discussed.

Chair: **Riccardo Gucci**. University of Pisa. President of the Italian Academy of the Olive Tree and Olive Oil, Italy. **Keynote Presentation:** “*Evolution and technical perspectives of olive growing*”.



Olive growing is not only one of the most widespread fruit industries in the world and Italy, but it also has some distinct features from other perennial fruit crops. From traditional, low density, rainfed groves that were pruned and harvested manually, olive growing has evolved into high density, irrigated, highly mechanized orchards. The advantages of modern planting systems in terms of high yields at reasonable costs are clearcut, yet there are some concerns about the environmental impact and the low number of cultivars that are suitable for very high density systems. The presentation will

give an overview of the critical issues that still affect olive growing and limit olive oil production as well as the technical solutions that can further contribute to develop this industry.

Donato Boscia. Institute for Sustainable Plant Protection of CNR-Bari, Italy. “*Xylella fastidiosa in olive groves: diffusion, impact and management of the epidemic*”.



The bacterium *Xylella fastidiosa* native to the Americas, where it has been confined for a long time, was considered since its first discovery in California, among the most dangerous plant pathogens. Indeed it is the agent of destructive diseases of important agricultural crops, able to infect hundreds of plant species (EFSA 2022) and to develop epidemics in various agro-ecosystems. Regulated as a quarantine pathogen in the European Union (EU) and several countries of the EPPO (European Plant Protection Organization) region, it is currently included among the 20 quarantine organisms ranked at the top of priorities for EU member states, based on the severity of the economic, social and environmental impact. The

phytosanitary scenario changed significantly in 2013, when diagnostic investigations aimed at understanding the etiology of an unknown disease that threatened the olive industry in the southwestern coast of the Italian region of Apulia, revealed its presence. For the first time in Europe, in olive trees and oleanders showing symptoms of desiccation or in almond with symptoms of leaf scorching. The impact of the bacterium, which in a few years affected almost 40% of the Apulia Region, has been devastating, as it has already destroyed or seriously damaged at least 10 million olive trees, causing economic damage estimated, so far, in two billion euros. This dramatic picture has led the European Commission to issue, since February 2014, severe containment measures (decisions and regulations), which over time have been modified in line with the results that the efforts of the scientific community, financially supported by the EU, have produced in recent years.

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Research director and Head of the operative unit of Bari (Italy) of the Institute for Sustainable Plant Protection of CNR, Donato Boscia is a plant pathologist who contributed to the discovery and the first report, in October 2015, of *Xylella fastidiosa* in olive, almond and oleander in Apulia (Italy). Dr. Boscia's research activity has been centred for many years on the study of grapevine viruses. He contributed to the identification and/or the definition of the aetiological role of viruses responsible

for, or associated with important grapevine diseases: GFkV, GVA, GVB, GVD, GLRaV-2, and GLRaV-7. To all these viruses, plus GLRaV-3 and GLRaV-6, he has raised Monoclonal Antibodies (Mabs), developing sensitive ELISA kits, some of which are available on the market and are now widely used. A remarkable contribution to serological diagnosis of other viruses was the production of a set of specific Mabs for the identification of different strains of Plum pox virus, of ApMV, PDV and PNRSV, and the Citrus psorosis virus.

He has deeply contributed to the development of the main research program ongoing in Apulia on *X. fastidiosa*, by coordinating the field and laboratory activities. Among the projects of which he has been coordinator, deserves to be mentioned "POnTE - Pest Organisms Threatening Europe" (GA 635646), a 4-years project funded in the frame of the EU program Horizon 2020.

He contributed to developing important scientific evidence on the new *X. fastidiosa* strain widespread in Puglia concerning, in particular, the genetic and biological characterization of the bacterium, the identification and characterization of its vectors, the identification of the host plants and the identification of characters of resistance in the olive germplasm.

He has published over 100 peer-reviewed papers (H-index 38) and coordinated 9 R&D research projects.

Luca Regni. University of Perugia, Italy. *"Strategies to increase the carbon sequestration in olive groves"*.

In many areas, traditional olive groves are often abandoned due to low productivity, difficult mechanization and high labour costs with negative consequences not only for the oil production amount but also for the loss of the numerous ecosystem services provided by them. To counter this trend, the economic sustainability of cultivation in these areas must be restored. Among possible actions, monetisation of ecosystem services related to olive growing would play a major role. One ecosystem service that is already measurable and so can be monetized is the mitigation of climate change resulting from the increase of C sequestered in the olive groves and the reduction of C emissions into the air. Considering the balance between C sequestration and emission for the cultivation phase, in a case study of conventional olive grove, already in the fifth year after planting the balance became positive, that is, the olive grove has begun to sequester carbon. The CF determination has shown that the practices more impacting in terms of CO₂ emissions were chemical fertilization, pesticide treatments (emissions related to the production of fertilizers/pesticides and the relative transport in the farm) and the transport of olives from the field to the mill. In another case study related to the production of organic extra virgin olive oil, the amount of CO₂ sequestered, including carbon sequestration in the pruning material was almost double the quantity emitted (6.0 kgCO₂eq/L oil vs 3.4 kgCO₂eq/L oil). The soil amendment with



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olive mill wastes, especially if composted represent a sustainable practice that can increase the soil fertility and the organic C stored in the agro-ecosystems. Indeed, about 50% of the C supplied with composted olive mill waste was sequestered in the olive grove system, especially in the soil. So, it can be assessed that the production of extra virgin olive oil with sustainable techniques can be a tool to counteract climate change.

EDUCATION: 2018 eligibility to become Associate professor for the scientific sector AGR/03 “General Arboriculture and Tree Cultivation”. 2017 PhD graduation in “Agricultural, Food and Environmental Sciences and

Biotechnology” at University of Perugia (UNIPG). 2011 Graduated in Agricultural Science with full marks and honours at UNIPG. **RESEARCH ACTIVITIES:** 2021-present Fixed term researcher L.240/10 art. B in the DSA3– UNIPG 2020-2021 Research fellow 2017 Research activities carried out in Greece in the framework of the LIFE Project OLIVE4CLIMATE 2017-2019 Inhouse consultant for UNIPG in the LIFE Project OLIVE4CLIMATE 2013 Investigator in the Project funded by Umbria Region “Carbon sequestration and Carbon Footprint in the olive agro-ecosystem and the olive supply chain” 2009-to present Collaborator in several national and local Scientific projects. **TEACHING POSITION:** From 2022 lectures in the course “Tree Cultivation” in the in the DSA3 - UNIPG, Italy. **SCIENTIFIC PUBLICATIONS:** Scopus indexes: 55 papers, 743 citations, h-index 18. Main research fields: eco-physiology and efficiency of fruit tree species; valorization of olive-oil by-products; LCA and C sequestration in olive groves; abiotic stresses, plant micropropagation, etc. **MAIN SCIENTIFIC AWARDS:** 2018 - First award “Antico Fattore” – Accademia dei Georgofili

Firenze 2015 - First Young researcher award “Giornate Tecniche SOI 2015”. 2013 - Special mention “Linfas - Fondazione Italiana Accenture e Fondazione Collegio delle Università Milanesi. **EDITORIAL AND REFEREE ACTIVITIES:** Assistant editor of the journal Agronomy research, member of the editorial board of Agriculture- MDPI. Guest editor for Special Issues for the journals Agriculture MDPI and Agronomy-MDPI. Reviewer for several Scopus/WoS indexed journals. **CONGRESS AND MEETING ORGANIZATION/SPEAKER.** Organizer and Speaker in several National and International Conferences. **MEMBERSHIP OF SCIENTIFIC SOCIETIES** Accademia Nazionale dell’Olivo e dell’Olio, Italian Horticultural Society (SOI) and International Society for Horticultural Science (ISHS).

Rocio Diaz-Chavez. Senior Research Fellow, Centre for Environmental Policy Imperial College London, UK. “*Circular economy in olive oil production*”.



Dr Rocio A Diaz-Chavez is a Senior Research Fellow at the Centre for Environmental Policy of Imperial College London since 2004. She acted as Deputy Director and Energy and Climate Change Programme Leader at the Stockholm Environment Institute Africa Centre from 2017 to 2022.

Her research area focuses on sustainability assessment and deployment of bioeconomy, bioenergy, land use and natural resources.

Dr Diaz-Chavez has extensive experience managing and coordinating research and implementation projects. She has worked in different regions including Europe, Africa, Asia and Latin America. She developed indicators for the Global Bioenergy Partnership from FAO. She acted as Chair of the

Social Group of the Bioenergy Standard for the International Organisation for Standardisation

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(ISO). She was the co-chair of the International Energy Agency for the UK Task 40 (Biomass trading) 2012-2017. She received the SCOPE 2010 Young Scientist Award in Environmental Management for her work on indicators and standards.

Mariem Gharsallaoui. Olive Tree Institute and Green Engineering, Tunisia. *“Climate change and its impact on olive oil production in the southern shore of the Mediterranean”*



Mariem Gharsallaoui is an engineer in the olive oil process; she obtained her doctorate in olive oil Chemistry. She has been a permanent researcher at the Institute of the olive tree since 2001 where she is responsible for two research projects "Extraction systems and exploiting by-products" and "olive oil Quality and voice recovery».

She is also the Responsible in a national innovation research project "New ecological process of olive oil extraction: Qualitative, economic, and environmental impact" and member of the regional committee "sensitization oil mills operators" and also in the National chemistry committee for the

revision of the commercial standard for olive oil and pomace olive oil.

She has taught several university courses such as refining processes of vegetable oils; olive oil extraction process; sensorial analysis; quality tools, and she was a supervision of several ends of study projects, masters and doctoral theses. She is also Author and coauthor of scientific indexed and impacted papers in international journals

She has her master degree from the University of Jaén as an international expert in virgin olive oil tasting under the guidance of Olive Oil Council and she is Jury Member in the panel of several International Competitions: in Japan, Italy, Germany, Tunisia, Canada, Dubai, Australia. She is a tasting panel leader and the creator of an innovative panel made up solely of young blind people. She is also organizing and training workshops and courses for professionals in the field of olive oil. She is Consultant for the accreditation of chemical and sensory analysis laboratories.

She is a co-founder of the international mountain olive tree festival.

She is preparing and activating a class in a television program to raise awareness and educate about fatty substances.

Anagnostis Argiriou. Deputy Director Institute of Applied Biosciences , Greece. *“The long path from genome to olive oil: The case of Greek olive tree cultivars”*.



Prof. Anagnostis Argiriou is the Deputy Director of the Institute of Applied Biosciences - Centre for Research and Technology Hellas and Prof. at the University of the Aegean, Department of Food Science and Nutrition. His scientific interests are extended across the different domains of food production, consumer behavior, nutrition and health, in order to understand the interconnections between lifestyle and diet with health and wellness. He has several years of teaching experience in academic institutions and is the author of numerous scientific publications on internationally reputed

journals. In the last five years, he participated as coordinator or researcher in 23 European and National research programs.

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Chair: **Alessandro Leone**. University of Bari, Italy. **Keynote Presentation**. *“Towards the sustainable management of oil mill waste: analysis of a case study”*.



According to the objectives set out in the European Green Deal and National Recovery and Resilience Plan (PNRR), the lecture aims to showing as innovate the entire olive oil extraction chain to make it more efficient in terms of quality and quantity of extracted olive oil and especially more sustainable for the environment, thanks to the recovery of oil mill waste for energy purposes.

The ongoing work on the efficient recovery of oil mill waste will be shown. In particular, it will be shown how through the process of anaerobic digestion, cogeneration and trigeneration it is possible to give a value to the

wastewater and the waste from the mill, giving back to the supply chain a small additional economic value that compensates for the efforts.

During the lecture, a case study analysis will be shown of an efficient anaerobic digestion, cogeneration and trigeneration process, suitable for the by-products and wastewater of the oil industry, which will make it possible to transform a waste into a resource for agronomic and energy purposes.

Gabriel Beltrán Maza. IFAPA, Sevilla, Spain. *“Progress of extraction process: between the physical and the virtual”*.

In the last 5 years, the virgin olive oil extraction process is registering very important advances that combine new extraction technologies, digitization and virtualization of the process integrated in the circular bioeconomy.



The works in progress by the IFAPA oil mill team will be showed. Fruit cooling systems, sensors for fruit characterization ‘on line’, new technologies for malaxation improvement or its substitution, studies of oil clarification and storage are some of the advances carried out.

The digitization and the development of new sensors for each process step and their integration in intelligent systems by IoT, Big Data, machine learning and deep learning will be addressed. The integration of the physical and virtual are being achieved by the building of process simulators and Digital Twins.

All these advances are framed in an environmentally respectful scenario which allows the use of by-products to produce energy and/or organic matter to be returned to the olive orchard.

Gabriel Beltrán is Titular researcher of IFAPA Center Venta del Llano in Mengibar, Jaén (Spain). His works are focused now in the virgin olive oil extraction process.

The main research interest is to study the effect of the variables of the extraction process on the nutritional and sensory characteristics of virgin olive oil. He works in fruit reception step studying the fruit cooling systems and new strategies to characterize the olive fruit at the mill reception. The

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fruit grinding, optimizing the variables and testing new crushers is a research topic in progress besides the application of new technologies as Ultrasounds and Pulse Electric Fields to help to malaxation or as alternative to traditional malaxer .

He is very interested in the development of the oil mill 4.0 developing .intelligent systems mean IoT, Big Data, Machine learning, deep learning and blockchain technologies and their integration in Digital Twins.

Recently he started to work in the utilization on olive and oil mill by-products to produce energy and organic matter.

Luciano Mescia. Polytechnic University of Bari, Italy. *“Pulsed electric fields in the olive oil extraction process”*.

While the olive oil industries often use well known unit operations, sometimes these processes are not efficient or sustainable. As a result, the need to develop more efficient processing lines is crucial for obtaining higher quality products. Over the last years, pulsed electric fields (PEF) technology has attracted the interest of numerous researchers and companies due to its ability to reduce processing time and increase the extraction yields in different food processes. In this article, the studies regarding the application of PEF technology in olive oil processing is discussed. The impact of PEF technology on olive oil extraction process and industrial plant layout will be analyzed in detail. An industrial pilot plant able to deliver unipolar electric pulses with amplitude <10 kV, current <200 A and 3 kW maximum average power is used. The study concentrates on the evaluation of the impact of PEF on the oil extraction in terms of extractability and content enhancement of the bioactive substances. Based on its flexibility and continuous operation, the PEF plant can be easily integrated into olive oil extraction plant increasing, at the same time, the process efficiency.



Luciano Mescia is an associate professor in electromagnetic fields at Department of Electrical and Information Engineering, Politecnico di Bari. Moreover, he has the National Scientific qualification as full professor for the scientific disciplinary field 09/F1-Electromagnetic Fields. His theoretical and experimental research activities focus on electromagnetic technologies, devices and systems for food processing, industrial, biological, optical, and biomedical applications. He has been and is currently involved in several national and international research projects both as coordinator and partner. His research work has resulted in 76 articles published on indexed international journals, 2 international books, 9 chapters published on international books, 4 editorials on international journals, 5 articles published on national journals, 84 articles published on international conference proceedings, 26 articles published on proceedings of national conferences, 4 approved international patents and 2 international patents in the approval phase. He is a scientific committee member of the Italian Society of Environmental Medicine and InResLab. He is editor of Hindawi Mathematical Problems in Engineering as well as of several special issue published on international journals. Since 2006, Luciano Mescia is a teaching staff member of Electrical and Information Engineering PhD course at Politecnico di Bari. He was and

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actually is the supervisor of international PhD and internship students. Luciano Mescia is a member of the Materials for Optics and Photonics in Extreme Radiation Environments (MOPERE) research group working at Laboratoire Hubert Curien of the Jean Monet University, Saint Etienne. He is a member of the University Quality Presidium (PQA) at Politecnico di Bari as well as the Process Manager for VQR 2015 – 2019, Dipartimento di Ingegneria Elettrica e dell'Informazione (DEI), Politecnico di Bari. Luciano Mescia is the Local Academic Coordinator of the Associated

Academic Partner Politecnico di Bari for the Erasmus Mundus joint master degree - RADMEP – Radiation and its Effects on MicroElectronics and Photonics Technologies. He has been involved in various third mission activities and the dissemination of scientific knowledge about the electromagnetic pollution to public institutions and the general public. In January 2015, he achieved the Honorable Mention by IEEE MTT-S Central-Southern Italy Award 2014. He was a coauthor of the top cited article 2019-2020 published on Wiley Bioelectromagnetics journal. Luciano Mescia is a member of Italian Society of Electromagnetism (SIEM).

João Nunes. BLC3 Association - Technology and Innovation Campus, Oliveira do Hospital, Portugal. *“Trends and importance of the circular economy for the resilience and competitiveness of the olive oil value chain”.*



The olive oil value chain represents one of the most important bioeconomic sectors for Mediterranean region since: (i) the olive oil value chain is one of the most important and with the greatest impact for the productive and industrial agrifood sector in the Mediterranean region; (ii) the Mediterranean diet, which is heavily reliant on olive oil, is one of the healthiest and richest diets in the world; (iii) socially, it is one of the primary and transforming activities with the greatest historical and social importance in Europe. Due to these facts, especially in the last decade, the olive oil worldwide production and consumption have been constantly risen.

The challenges of the Olive Oil value chain are transversal to all stages of its life cycle in order to improve its competitiveness, representing a key option for the Circular Economy and precision biotechnology (e.g., molecular biology).

The presentation “Trends and importance of the Circular Economy for the resilience and competitiveness of the Olive Oil value chain” will address challenges and technological trends for a new vision and approach to waste recovery and mass flows of the Olive oil value chain. Accordingly, processes and technologies for the valorisation of solid and liquid waste in value cascade and biorefineries will be addressed as one of the major trends and needs, as well as the typology of business models.

Conversely, regarding biotechnology, the molecular and plant improvement aspects and the quality of preservation and transformation of the fruit into oil are in constant evolution, with specific needs for technologies to increase resilience to climate change, particularly in regard to plant health, water stress, nutrient cycling, productivity and temperature amplitudes, such as droughts.

João Nunes is the Founder, President and CEO of Association BLC3 - Technology and Innovation

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Campus, the President of CECOLAB - Collaborative Laboratory Towards a Circular Economy and founder of start up BLC3 Evolution Lda (spin off BLC3). He has created a R&D network of more than 60 entities, from 9 European countries, in the areas of Bioeconomy and Circular Economy. He coordinates the research unit Centro Bio: Biorefineries, Bioindustries and Bioproducts, funded by the Foundation for Science and Technology (FCT), and the Head of Research Infrastructures Network of National Strategic Interest in Circular Economy. He has a Bachelor and a Master Degree in Mechanical Engineering (specialization Energy and Environment) from the University of Coimbra and a PhD in Bioscience (Forestry, Sustainability Assessment Models and Biorefineries), from the University of Coimbra and Institute of Catalysis and Petrochemistry of CSIC/Spain. His

activity covers the complete cycle of invention from the idea (laboratory) to the market and the assembly of industrial processes and lines. He boasts a professional experience of more than 20 years in research in technologies for the valorisation and conversion of specific mass flows, from lignocellulosic biomass to urban waste and effluents or in "multi-input" format. He specializes in 1st, 2nd and 3rd generation biorefineries; bioeconomy and circular economy; energy and environmental management; multidimensional optimization (energy, environment and economy); criteria for the sustainable use of resources, materials, products and systems; development of products and systems in the agro-food sector, especially clean technology systems; energy systems, energy efficiency and industrial optimization; solar energy; heat transmission.

Nicola Di Noia. Direttore Generale UNAPROL, Consigliere Delegato EVOO School, Italy. *“Communicating olive oil through olive oils: building consumer awareness as a pre requisite of marketing strategy”.*

The first objective of oil communication should be to increase consumer knowledge of the extra virgin olive oil product. This product is a primary food of the Mediterranean diet, has important health and nutritional properties, but is still little known. Communication, therefore, must be based on experience: consumers must be guided to taste different types of olive oil to acquire the basic principles for recognizing the distinctive characteristics of EVO oil and for differentiating a quality oil from a poor one. An informed consumer can make informed purchasing choices.



Di Noia was born in Taranto on 17/07/1973. After graduating in Agricultural Sciences in 1997, he joined the Carabinieri Corps, dedicating himself for nearly 10 years to the repression and prevention of crimes in the agricultural and agribusiness sector. He has been with Coldiretti since 2006, as olive oil sector national manager. Currently, he is General Manager in Unaprol and CEO of Fondazione EVOO school.

He is a professional oil taster and Head of tasting panel, according to IOC guidelines. He is a member of the "Olive Oil and Table Olives" working group of Copa-Cogeca in Brussels and participates in the IOC Olive Oil and Table Olives Advisory Committee.

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Emmanouil Papoutsakis. Executive chef, Greece. *“Restaurants and chefs as extra-virgin olive oil ambassadors: a great challenge”.*



Chef Manolis Papoutsakis was born and raised in Crete, Greece. He graduated from the University of Crete and received his BA and MA from the Faculty of Philosophy. In the army he received his basic training as a chef and since then he realized that cooking would become his profession and philosophy his hobby. In Thessaloniki, Greece, went to prepare his doctoral thesis on Plato, but at the same time, he continued to build his culinary career. In 2017, he decided to open his own Cretan cuisine restaurant, "Haroupi", of which he is also the chef.

The restaurant has already been distinguished and awarded many times while it has given a new dynamic of renewal to the traditional Cretan cuisine. He is also the chef and co-owner of the Ten Tables restaurant in Thessaloniki city. He is a regular

member of the Chefs Club of Crete, teaches cooking and has taken part as a judge in several cooking competitions, as well as the Master Chef Junior television competition, while he also has his own cooking show on state television on the subject of PDO and PGI Greek products.

He writes a lot as a guest editor about gastronomy and taste . He recently returned from Sweden, where he apprenticed for 3 months at the famous restaurant Frantzen (3* Michelin). He travels a lot and loves good food and wine and, of course, good quality olive oil.

Marco Morello Executive. Chef Collettivo Gastronomico Testaccio Rome *“Farmers markets and direct-to-consumer marketing: building*



The experience and importance of quality daily in our life and farmer market life . How to raise awareness of the consumer through the continuous touch with people troughs events, tastings, active knowledge on healthy and good foods and olive oils.

Since 153 a.C. Testaccio has been the borough in Rome of market food, where gastromic code grew up in the time untill the present . Come from the tradition means learn from the past, accept the modern challenges and be ready to bring on the way to promote in the better way the good products.

This rules moved me and my partners in business in the market to create a platform of activities focused on the quality and the sustainability of food.

A borough, a market, conceived not just like a commercial space, but like an “agorà” to keep in touch the world of good food with social life.

Then the new idea, dream, project of my soul, was the creation and grow up a new group around a food hub inside the ex “ Mattatoio Di Roma” the ancient slaughterhouse, an iconic place in Rome “: Collettivo Gastronomico Testaccio. The history goes on.

YALE SYMPOSIUM ON OLIVE OIL & HEALTH

POSTER/ABSTRACT

GHG emissions of Portuguese Olive oil: a Life-Cycle Assessment approach

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Keywords: Olive Oil, Olives, Life-Cycle Assessment, Olive Pomace, GHG.

The olive value chain represents one of the most important bioeconomic sectors for Portugal. This represents an opportunity to emerge as the third-largest worldwide olive oil producer in the upcoming decade due to the modernization of its olive groves. This paper presents a greenhouse gas (GHG) assessment of the olive oil production in Portugal, using a Life-Cycle Assessment methodology. A life-cycle model and inventory were implemented for the entire production process, including a comprehensive analysis of olive cultivation. Different scenarios were modulated: traditional rainfed (T), intensive (I) and super-intensive (SI) systems, during their entire life-cycle in a reference period of 50 years; olive oil extraction (three-phase extraction, two-phase extraction, and traditional pressing) and packaging. The results shows that the main contributors to the GHG emissions was the use of fertilizers, particularly the impact of the production and field emissions. Efficient use of fertilizers thus seems to be a key factor for mitigating the GHG intensity of olive oil production. This work shows the importance of optimize agricultural practices during the entire life-cycle of an olive grove, proposing measures to overcome and minimize the GHG intensity. Additionally, more in-depth study should be carried out on the treatment and/or valorisation of olive pomace in order to better reflect the dimension of the problem and the need to solve it.

Acknowledgements

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Olive Oils enhanced by Nature protect our Health & delight our Palate

Giavroglou Niki, Rigakou Aimilia

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The production and bottling of olive oil remains one of the most important traditions and industries in the Mediterranean and especially in Greece. It is a food that does not need pasteurization or the addition of preservatives, while it has been used as a food preservative since ancient times. Having the knowledge and experience of 20 years of our involvement commercially with Greek EVOO and while following the developments and new research that come to the surface daily about the benefits of olive oil, we develop new products based on olive oil, which are based on EU-approved health claims. Also, the EFSA has approved the following health claim regarding unsaturated fats-contained in extra virgin olive oil: Replacing saturated fats in the diet with unsaturated fats contributes to the maintenance of normal blood cholesterol levels. Oleic acid is an unsaturated fat. The purpose of this presentation is to promote products that not only delight the palate of the consumer by enriching his dish with flavors and aromas, but at the same time contribute to the protection of health and the enhancement of his immune system.

Olive oil can be the basis for the dilution of many lipoextracts, flavors and essential oils which release beneficial micro-ingredients into olive oil. Our Sparta Essences series includes: i) Chili, rich in capsaicin - against various gastrointestinal dysfunctions, ii) Lemon, rich in citral - protective action against inflammation and oxidative stress, iii) White Truffle, enriched in proteins, amino acids, vitamins – making its consumption a pleasant and healthy process, iv) Greek Basil, rich in linalool and eucalyptol – soothing effect of kidney dysfunction and mild respiratory system, v) Garlic, for coughing and for the prevention of atherosclerosis, vi) Greek Oregano, rich in carvacrol and thymol for stomach disorders and respiratory diseases, vii) Butter Aroma, desired butter flavor, without guilt! In addition, another olive oil enhanced by nature is a high oleocanthal olive oil - the most valuable phenol in EVOO.

Oleocanthal acts as a natural anti-inflammatory substance, with an effect similar to ibuprofen.

In conclusion, following the tradition we are led to innovation. Nowadays, there are the means to study traditional recipes, to evolve them and to create new products, qualitatively and quantitative tested in order to promote them all over the world.

Innovation, in this case is the fact that all the above olive oil products. In ingredients that contribute to taste and health, special attention should be paid to their percentage content, as well as to the taste of olive oil that will be used to result in a harmonized, healthy and stable product.

YALE SYMPOSIUM ON OLIVE OIL & HEALTH

Comparison between the content of pentacyclic triterpenes provided by the recommended dietary intake of table olives and extra-virgin olive oil.

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Pentacyclic triterpenes (PT) are secondary plant metabolites present in the fruits of *Olea europaea* L. Although less investigated than polyphenols, these compounds elicit anti-inflammatory, anti-diabetic, neuroprotective, and anti-tumoral activities, among others. Given their acknowledged beneficial effects on health, we have investigated the content of PT provided by 15 small-sized Arbequina table olives (AO) and 25 mL of extra-virgin olive oil (EVOO), which correspond to the daily intake recommended by the Mediterranean diet pyramid. The study was performed with AO and EVOO, from the same cultivars of the Arbequina variety situated in Ribera d'Ebre (Tarragona) and harvested in the same season. To determine the content of PT, AO and EVOO were submitted to liquid-liquid extraction. Briefly, destoned AO or EVOO were mixed with ethanol:methanol (1:1, v/v), agitated in a vortex, placed into an ultrasonic bath, and centrifuged. Two more extractions of the pellet were performed, and the three supernatants were pooled. For AO, the supernatants were diluted 1/50 in methanol 80% and analyzed by LC-APCI-MS whereas, for EVOO, the solvent was evaporated to dryness, and the residue was reconstituted with 80% methanol, prior to LC-APCIMS. AO contained a total amount of 3275.5 ± 68.8 mg/kg of PT, ahead of the 143.1 ± 11.8 mg/kg found in EVOO of the same variety. A similar profile was found in AO and EVOO, with maslinic acid accounting for approximately 76.6%, followed by oleanolic acid with 23.1% and erythrodiol with 0.3%. Uvaol was only detected in EVOO with 0.1%. Thus, the intake of 15 small-sized AO provides 47.03 ± 1.29 mg of maslinic acid, 14.21 ± 0.33 mg of oleanolic acid, and 0.178 ± 0.001 mg of erythrodiol. Moreover, a daily intake of 25 mL of EVOO gave 2.57 ± 0.26 mg of maslinic acid, 0.71 ± 0.01 mg of oleanolic acid, 0.011 ± 0.001 mg of erythrodiol, and 0.004 ± 0.001 mg of uvaol. Therefore, considering the recommended consumption of both foods, the amount of PT supplied by AO is 61.4 mg, while EVOO provides only 3.3 mg. In conclusion, the present results confirm table olives as a more relevant source of PT than EVOO.

Given the health-protecting properties of these bioactive compounds, it could be plausible to recommend the regular consumption of the fruit of *Olea europaea* L. for the prevention of chronic diseases in the context of a healthy lifestyle.

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YALE SYMPOSIUM ON OLIVE OIL & HEALTH

Predicting Consumers' Olive Oil Choice by the use of Neuromarketing and AI

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ABSTRACT

Despite the increasing price of olive oil, the consumption of olive oil keeps on growing in the past years (European Commission, 2022). However, with the rise of consumerism and the entry of even more brands and suppliers, not only are opportunities for suppliers increasing, but so are challenges. Among these challenges are, in particular, the targeted and effective positioning of the product and the analysis of consumer perceptions and needs regarding olive oil in order to advance impactful communications. Existing results demonstrate the importance of different aspects on the purchase decision of olive oil. Some of these are e.g. the price, type (Chrysochou et al. 2022) Country of origin (Dekhili 2011; Bimbo et al. 2021) and even sustainability labels (Erraach 2021) can be an effective means to promote olive oils. While the product has been studied from various scientific perspectives, deeper insights are still needed to address some challenges related to its successful positioning in the growing market. The underlying research project focuses on a step toward a more holistic view on consumer perception and behavior related to olive oil. Associations of olive oil are identified and their effect on behaviorally relevant variables is empirically measured. By anchoring favorable associations with a product or even a brand in the consumer's mind, the probability of activating these associations in a specific consumption context can be increased and correspondingly drive consumer behavior. Additionally, understanding hidden motives and their effects on consumer behavior, such as represented by archetypes, can promote symbolical relationships with customers instead of driving solely sales or stimulating economic transaction (Dominici et al. 2016). However, processes underlying human judgment and decision making occur mainly subconscious, automatic, and are not consciously controlled. Due to their implicit nature, traditional methods of consumer psychology or marketing research are limited in their ability to capture these associations precisely. In order to assess this implicit level, the present research project applies implicit methods and artificial intelligence, which allow a more efficient assessment of implicit associations to olive oil. Through the analysis by means of neural networks, conclusions can be drawn about which associations of olive oil are most suitable of driving the consumers' choice of consumption.

Keywords: Consumer Behavior; Consumer Neuroscience; Neuromarketing; Archetypes; Olive Oil; Artificial Intelligence

YALE SYMPOSIUM ON OLIVE OIL & HEALTH

International marketing strategies for enhancing the link between the Italian EVOO and the elements of the Italian Cultural Heritage. A business case of an Italian Producers Organization

Gaetano Macario (UniBa), Savino Santovito (UniBa)

Key Words: International Marketing, Strategies, Extra Virgin Olive Oil, Made in Italy, Italian origins, Cultural Heritage, Networks, Consumer Experience, Engagement

This work aims to contribute to the wide debate in literature on the subject of the Italian Extra Virgin Olive Oil (EVOO) and of the international marketing strategies for the enhancement of the links between the Made in Italy EVOO and the distinctive identity values (healthy eating, quality, tradition and culture) and the peculiar elements of the territories of origin (Dop, Igp, Bio, etc), as the true evidence of the Italian Cultural Heritage (Macario, Santovito, 2016) and as the best elements of authenticity of the Made in Italy EVOO.

Made in Italy food products suffer an intensive competition in foreign markets by fake Italian food products, which use, unfairly, brands that evoke in the foreign consumers the wrong idea of a Made in Italy food product, generating and spreading the harmful phenomena of Italian sounding, fake Italian and lookalike.

These phenomena generate a strong distrust in foreign consumers, also due to the presence in foreign markets of fake EVOO, causing little confidence and a lot of confusion in identifying a true Italian EVOO. Therefore, the research activity is focused on the strategic enhancement of the links between the cultural identity of the Made in Italy food products and Italians residing abroad (currently over 5.6 million) (AIRE, 2022, Fondazione Migrantes, 2022) and Italians of origin (about 80.0 million) (MAECI, 2022), who are strongly and nostalgically attracted by the Made in Italy food products, recognizing them as emblems of an Italian cultural heritage transferred from generation to generation of Italians who emigrated abroad in the past.

The activities carried out within an applied research and development project in a primary Producers Organization (PO) of EVOO, based in Puglia, have identified and analyzed the associations of Italians residing abroad and Italian natives in international markets, most attractive for the olive sector, especially in reason for the feelings of nostalgia and the strong cultural links with the value of excellence of Made in Italy food. So these activities have started relationships aimed to develop synergies (network strategies) with Italian communities abroad, with a win-win perspective, and a strong sense of identification in the cultural values of the Italian and Apulian territory, inherent in agri-food products and EVOO, aimed to generate and grow trust for the Italian communities abroad engagement, in the form of ambassadors or influencers, to enhance the Made in Italy food products in their respective foreign markets of residence.

The first findings of the research made it possible to outline an innovative and strategic model of collective and systemic development (Golinelli, 2000, 2005, 2012, Barile et al., 2012) of the Italian olive production chain at mesosystem level (Santovito, 2005) and of high quality Made in Italy food (co-marketing and cobranding), that could be extended to the entire Made in Italy agri-food sector.

This model aims to realise a growth of the trust in foreign consumers and of the value of Italian EVOO image, through organized experiential marketing paths (consumer experience), such as incoming (Macario G., Santovito S., Silvestri R., 2019), tasting events and courses (sending kit of samples of olive oils and the creation of video and digital application for learning how to taste EVOO), conferences and webinars, digital community, and to enhance the links with the roots and

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the distinctive elements of the territories of origin of Italian and Apulian EVOO on international markets.

GEN4OLIVE: A CUTTING-EDGE EUROPEAN PROJECT IN OLIVE GROWING AND THE FIRST RESULTS RELATED TO OLIVE PHENOLIC VARIABILITY.

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Climate change, emerging diseases and genetic erosion threaten olive production worldwide.

While olive germplasm banks offer a possible solution, they remain unexploited due to limited development of pre-breeding activities and lack of collaboration and interaction between the germplasm banks and farmers/breeders. The EU-funded GEN4OLIVE project will increase the mobilisation of olive genetic resources and encourage pre-breeding activities by characterizing more than 500 varieties and 1000 wild and ancient genotypes around the topics of climate change, pest and diseases, production and quality and modern planting systems issues. The project will also develop smart ICT tools to make olive genetic resources more accessible to endusers.

One of the objectives of the project was the analysis of phenolic compounds in 44 different olive varieties during three consecutive years. The results show clear and significant differences among the varieties from the quantitative and qualitative phenolic point of view. The genotype factor explains most of the variance up to 67% while the interannual/environmental factor explains the rest of the variance. On the other hand, the varieties were classified into 3 stable phenolic profile groups: rich in aglycone compounds, rich in oleocanthal and oleacein, and varieties that do not stand out in any particular phenolic profile. This work and results pave the way for the development of new breeding programmes for obtaining healthy oils with different organoleptic profiles.

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Olea europaea: contribution to the valorisation of the most important Portuguese olive tree cultivar ‘Galega vulgar’

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The cultivated olive tree (*Olea europaea* L. subsp. *europaea*) is a perennial plant widely cultivated all over the world, being extremely relevant for the bioeconomy of Portugal. The main traditional Portuguese cultivar, ‘Galega vulgar’, is of utmost importance due to its excellent olive oil quality, rusticity and tolerance to drought, being associated with several Protected Denominations of Origin (PDO). However, it has been replaced by higher-yielding and more adapted to intensive production foreign varieties, resulting in lower quality of olive oil and a reduction in ‘Galega vulgar’ production.

In this work we intend to increase the available ‘Galega vulgar’ genetic and phenotypic knowledge, leading to a more efficient and sustainable exploitation of this cultivar. To accomplish these objectives, a national prospection was performed, identifying 595 trees belonging to ancient and centenary age groups. These trees were characterized using 14 SSR molecular markers after variety validation by endocarp measurements. Ninety-five distinguishable multi-locus genotypes were identified, revealing the presence of a reasonable amount of intra-genetic and morphological variability. Genetic erosion was detected through the loss of some allele combinations across time. These 595 trees were also characterized in situ for eleven fruit and oil phenotypic traits. These data were used to quantify the genotype by environment interaction and the stability of the most frequent clones of ‘Galega vulgar’. The integration of the detailed genotypic and environmental characterization was used to select the most interesting genotypes for production. These genotypes, representatives of the still existing variability of ‘Galega vulgar’, are being established under the same environmental conditions, in an ex situ field trial, allowing future genetic studies under ideal conditions for the development of selection molecular tools, to support better informed conservation and breeding decisions.

The introduction of adapted improved ‘Galega vulgar’ clones into production, will reinforce the Portuguese international market niche associated with olive oils and olives of excellent quality.

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IL FIORELLO OLIVE OIL COMPANY EDUCATION * HEALTH * ECONOMICS * SUSTAINABILITY

As a California grower and miller of certified extra virgin olive oil, we have a responsibility to our guests to share our knowledge. Olive Oil is a valuable food product, representing quality, significant health benefits, and an immense variety flavors. Our motto is “Olive Oil is an ancient food that deserves a place on the modern table.” Organic farming and sustainability are central to our business plan. We work diligently to counter the misinformation about olive oil by educating our customers. We believe this task is critical to those who produce this valuable product.

Since 2010, IL Fiorello Olive Oil Company, has presented over 20,000 comparative tastings and food pairings. Before COVID this company grew 30% each year. We are returning to that level. Our oils have won 200 medals and twice been named Best of California.

We present an interactive tasting experience that includes four certified extra virgin olive oils and a balsamic vinegar reduction matched with seasonal foods from our organic garden. The experience lasts an hour, and the menu rotates monthly. The tasting experience instructs guests how to properly taste and evaluate oil.

Our presentation demonstrates the magic that occurs when excellent olive oil and great food combine. We review the importance of extra virgin certification and focus on expanding their palates with our innovative food pairings. The experience concludes with a video of our olive milling process. This presents the entire process of growing, milling, and consuming oil with good food. We combine the tasting experience with an hour-long tour of our organic Farm. During the tour and tasting, we discuss the health benefits of olive oil with the Mediterranean diet.

IL Fiorello grows 13 varieties of olives and presents unique single varietal oils that consistently win international awards. Customers receive informational cards about their oils. These cards assist our guests in the use of oils in their homes. This written outreach is particularly important.

Adulteration of oil is a threat to our agricultural business. To this end, IL Fiorello attempts, through our tastings and tours, to counter this fraud.

We present a unique experience that is educational for our guests, financially lucrative for our company, and supports our goals of sustainability.

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DNA data: empowering Olive Oil traceability from field to store

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Olive Oil (OO) is a fast-growing industry, with projected valuation of US\$ 20 Bn by 2030. Due to its high economic value, its liquid nature coupled with its complex and fragmented supply chain of different stakeholders OO, and particularly Extra Virgin Olive Oil (EVOO), is considered at high risk of noncompliances and frauds (e.g., admixtures/substitutions, varietal mislabeling) for illegitimate profit. The above lead to undesired financial, social and environmental effects. A behavioral study on the impact of the OO fraud to the modern consumer when exposed to EVOO fraud revealed a significant reduction of its valuation up to 50%, affecting mainly high-end labels (organic; Protected Geographical Indication, PGI; Protected Designation of Origin, PDO). In the same direction, a survey on the label transparency revealed that ~74% of the consumers would buy a product with a trustful label and ~50% would pay 10% more for such product. Interestingly, ~65% of the consumers believe that transparency is a responsibility that burdens the manufacturer/brand. The OO fraud practices have also a societal and environmental impact, flattening commercial value of EVOO from local producers and varieties. This often leads to the substitution of the local varieties with highly productive ones, reducing producers' income and affecting biodiversity. The protection of producers' valorization and biodiversity, it has been foreseen as a mandatory action also by corporates of the sector. Thus, effective technologies are imperative to tackle challenges regarding conformity checks, for immutable proof of authenticity and traceability in the OO industry. This can be bridged by DNA; an indisputable and accessible source of information that delivers a genetic ID to any natural product, such as the olive varieties comprising an EVOO or detection of substitutions with vegetable oils. The ability to obtain the genetic profile of an EVOO via DNA tests makes it almost impossible to admix while in parallel assures its varietal composition from field-to-store. DNA-based authentication and traceability acts as a positive adaptation for both the society and the environment, by adding value to local varieties embracing agrobiodiversity, while supporting local producers by value their produce. Indeed, this aligns with the GREEN DEAL EU F2F (Farm to Fork) framework, creating balance between nature-food-biodiversity and consumer wholesomeness.

Therefore, the need for a “holy trinity” of transparency – traceability – authenticity, verifiable and immutable becomes an absolute necessity.

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Sustainable development with olive groves and combating climate change

30 years ago, the 200-hectare [Faros Estate](#) was a deserted peninsula of land on Sigri, Lesvos island, Greece, empty of flora and fauna.

Today, it's home to the **youngest olive grove in the world** !

A thriving ecosystem for wildlife alongside our plantation of 40.000 olive trees & 10.000 other trees !
With animals and birds flocking back to the estate, we erase the carbon footprint created by 2.000 people. We proudly contribute to the ecosystem of the island of Lesvos and the microclimate of Sigri.



During the past years, and up to now, we plant new olive trees. Thus, we protect the environment from desertification.

Our estate has many different native trees as well as many varieties from around the world. Our Olive cultivars consist of a selective range of trees, each of them giving a distinctive characteristic to the olive oil: Adramytiani, Kolovi, Koroneiki, Kalamon, Chalkidikis, Mavroelia, Melolia, Frantoio, Leccino, Aricombi, Arbequina, Picual. On top of our 40.000 olive trees, we have carefully chosen more trees to live together with olives. Palm trees, pines, cypresses, tamarisk trees, and more, grow side by side.

Part of what makes our cultivation so unique is that we produce our own compost, in a separate location within Faros Estate, to nourish our trees. We collect all-natural local resources from animal by-products, Posidonia seaweed and pruning. Everything is therefore returned to the earth.

We are a Dedicated, Active and Qualified team, focused on Sustainability & Ethical work culture.

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We take care of our every single tree and on the very same day of harvest, the olive fruits continue their way to our high-tech, prototype, state-of-the-art Olive Mill & Bottling Facilities, also built in Faros Estate and set according to the most up-to-date European guidelines, practices and strict internal procedures.

We have vertical production. Thus we produce great-tasting, sustainable, EXTRA VIRGIN OLIVE OILS high in phenolic compounds, vitamin E, oleic acid and squalene.



Ol' eve Olive Oil is a result of several factors, including olive cultivars, time of harvest, olive tree conditions, processing methods, storage conditions, and so much more. All our products are tested in accredited labs. Top quality is our priority and we make sure what we give to people is true to label and 100% beneficial for their health.



Faros Estate and Sigrì Olive Mill are visitable and open to people who share the same mindset with us.

Website: www.sigriolivemill.health

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