

THE PONTIFICAL ACADEMY OF SCIENCES

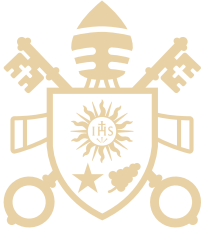
Conference on

THE ART & SCIENCE OF OLIVE OIL: NUTRITION, MEDICINE AND PLANETARY HEALTH

Securing the Future of a World Cultural Heritage



**May 3-4, 2022 (Invitational Conference at the Academy)
Vatican City**



Overview

In November 2020, the world marked the 10th anniversary of the designation by UNESCO of the Mediterranean Diet as an Intangible Cultural Heritage. At the foundation of the Mediterranean Diet is the olive oil kitchen, and behind that the world of olive tree cultivation and olive oil production from growing and harvesting to processing. Olive oil has been an integral part of Mediterranean food and society for millennia. And yet even today—with all of the attention that has been paid to olive oil and the Mediterranean Diet over the past several decades—we are still early in the discovery process about the true value of olive oil and the heritage of olive grove landscapes across the Mediterranean to our health, to our cultures and the sharing of food with family and friends, and to the sustainability of our environment.

The Art & Science of Olive Oil: Nutrition, Medicine and Planetary Health is being designed as a small, two-day invitation-only conference hosted by the Pontifical Academy of Sciences that brings together leading scientists and other experts from a variety of fields to highlight what we know about the contribution that olive oil can make to our lives as well as what needs further research attention. Our inquiry will highlight the scientific case for a heightened focus on quality in olive

oil production, the many pathways that olive oil is thought to contribute to optimal health, and the surprising contribution this ancient food and related food system is making toward our planetary health.

In centuries past, many food and agricultural practices persisted for many hundreds of years due in part to the slow pace of change. Today, in the modern world, the future of olive oil and the sustainability of rural agricultural communities throughout the Mediterranean that depend on a robust olive oil sector are not automatically assured. The challenges are: the headwinds of competitive, global marketing practices; consumer preferences that are still largely detached from healthy food system considerations; and impacts from climate change that will likely require sustained investment in agricultural research to keep olive groves healthy. A final focus of this workshop, then, is to add to our understanding of why and how this Mediterranean tradition of olive oil needs our active, vigilant attention to assure that it survives and thrives for future generations. This discussion will include a focus on innovation in the culinary arts, preventive medicine, education, marketing and digital communications.

El arte y la ciencia del aceite de oliva: Nutrición, Medicina y Salud Planetaria. Asegurar el futuro de un patrimonio cultural mundial

Resumen

En noviembre de 2020, el mundo celebró el décimo aniversario de la designación por parte de la UNESCO de la Dieta Mediterránea como Patrimonio Cultural Inmaterial. En la base de la Dieta Mediterránea está la cocina basada en el aceite de oliva, y detrás de ella el mundo del cultivo del olivo y la producción de aceite de oliva, desde el cultivo y la cosecha hasta el procesamiento. El aceite de oliva ha sido parte integrante de la alimentación y la sociedad mediterráneas durante milenios. Y, sin embargo, incluso hoy —con toda la atención que se ha prestado al aceite de oliva y a la Dieta Mediterránea en las últimas décadas— todavía estamos en el proceso de descubrimiento del verdadero valor del aceite de oliva y del patrimonio de los paisajes de olivares en todo el Mediterráneo para nuestra salud, para nuestras culturas, como también para compartir la comida con la familia y los amigos, y en fin para la sostenibilidad de nuestro medio ambiente.

El arte y la ciencia del aceite de oliva: Nutrición, Medicina y Salud Planetaria se ha concebido como una pequeña conferencia de dos días, organizada por la Academia Pontificia de las Ciencias, que reúne a destacados científicos y otros expertos de diversos campos para poner de relieve lo que sabemos sobre la contribución que el aceite de oliva puede hacer a nuestras vidas, así como lo que necesita más atención en la investigación. Nuestra investigación pondrá de relieve los argumentos científicos que justifican una mayor atención

a la calidad en la producción de aceite de oliva, las numerosas vías por las que se cree que el aceite de oliva contribuye a una salud óptima y la sorprendente contribución que este antiguo alimento y el sistema alimentario relacionado con él están haciendo a nuestra salud planetaria.

En siglos pasados, muchas prácticas alimentarias y agrícolas persistieron durante muchos cientos de años debido, en parte, a la lentitud del cambio. Hoy, en el mundo moderno, el futuro del aceite de oliva y la sostenibilidad de las comunidades agrícolas rurales de todo el Mediterráneo que dependen de un sector del aceite de oliva robusto no están automáticamente asegurados. Los retos son: los vientos en contra de las prácticas de comercialización competitivas y globales; las preferencias de los consumidores, que todavía están muy alejadas de las consideraciones de un sistema alimentario saludable; y los impactos del cambio climático, que probablemente requerirán una inversión sostenida en investigación agrícola para mantener la salud de los olivares. Así pues, el objetivo final de este taller es contribuir a nuestra comprensión de por qué y cómo esta tradición mediterránea del aceite de oliva necesita nuestra atención activa y vigilante para garantizar que sobreviva y prospere para las generaciones futuras. El debate se centrará en la innovación en las artes culinarias, la medicina preventiva, la educación, el marketing y las comunicaciones digitales.

Programme

Please note: Session plans and presentation titles have not yet been fully confirmed, and are subject to change

| MAY 2, 2022 | |
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| | No-host, small group dinners for program participants |

| MAY 3, 2022 | |
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| Opening Session | |
| 9:00 | <i>Words of Welcome</i> H.E. Msgr. Marcelo Sánchez Sorondo |
| 9:15 | <i>Olive Oil, Religion and Culture: An Enduring Symbol of Life</i> H.Em. Card. Giovanni Battista Re |
| Session II Olive Oil and the Convergence of Public Health and Environmental Imperatives | |
| 9:45 | <i>Personal Health, Planetary Health and the Mediterranean Olive Oil Kitchen: Framing our Challenges and Opportunities</i> Walter Willett |
| 10:05 | <i>The Olive in Food Systems Perspectives – Inspiring Sustainability Thinking</i> Joachim von Braun |
| 10:25 | Discussion |
| 10:50 | Coffee Break |
| Session III Olive Oil, Nutrition and the Prevention of Chronic Disease—The State of our Knowledge | |
| 11:20 | <i>Olive Oil and the Mediterranean Diet: Finding Context in Healthy Fats, Plant-Forward Dietary Patterns, and Global Patterns of Chronic Disease</i> Frank Hu |
| 11:40 | <i>Keys for Greater Longevity: The Role of the Olive Oil in the Mediterranean Diet</i> Ramon Estruch |
| 12:00 | <i>Olive oil and its Unique Antioxidants: Protection against Cholesterol Oxidation and Cardiovascular Diseases</i> Michael Aviram |
| 12:20 | Discussion |
| 12:45 | Lunch |

| Session IV Olive Oil and the Mediterranean Diet—Insights from Italy, Greece and Spain | |
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| 14:00 | <i>Olive Oil and the Heritage of the Italian Mediterranean Diet: The Imperative to Innovate</i> Francesco Sofi |
| 14:20 | <i>Olive Oil and the Heritage of the Greek Mediterranean Diet: Priorities for Research and Education</i> Antonia Trichopoulou |
| 14:40 | <i>Olive Oil and the Heritage of the Spanish Mediterranean Diet: Priorities for Research and Education</i> Miguel Ángel Martínez-González |
| 15:00 | Discussion |
| 15:25 | Coffee Break |
| Session V Translation, Adoption and Education—Pathways of Opportunity | |
| 15:55 | <i>Science into Action: Sector-Specific Strategies to Increase Adoption of the Mediterranean Diet and the Culture of Olive Oil</i> Stefanos Kales |
| 16:15 | <i>Chefs, Olive Oil and the Plant-Forward Kitchen: Culinary Strategies to Support Food System Transformation</i> Greg Drescher |
| 16:35 | <i>Sensory Science, Emotion and Technology — Increasing Engagement Around the Olive Oil Experience</i> Jean-Xavier Guinard and Gemma Pasquali |
| 17:05 | Discussion |
| 17:30 | <i>The Olive Tree and Planetary Health—A Vision for Advancing Research and Scholarship, Education, Preservation and Practice</i> Tassos Kyriakides and Vasilis Vasiliou |
| 18:05 | Discussion |
| 18:30 | Reception |
| 19:00 | Dinner at Pontifical Academy of Sciences |

MAY 4, 2022

Session VI
Olive Oil and the Plant-Forward Kitchen—Micronutrients, Health and Longevity

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| 9:00 | <i>Olive Oil Excellence and the Mediterranean Diet: Phytochemical Research, Inflammation, and the Prevention of Cognitive Decline</i> Walter Willett |
| 9:20 | <i>High-Altitude Production and the Polyphenol Content in Olive Oil</i> Francisco José Alarcos Martínez |
| 9:40 | <i>Advancing a Framework for High-Polyphenolic Olive Oil, from Production to the Consumer Market</i> Prokopios Magiatis |
| 10:00 | Discussion |

Session VII
Advancing Excellence and Innovation in the Olive Oil Industry

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| 10:30 | Panel Discussion Moderator: Dan Flynn Panelists: Jaime Lillo, Eleni Melliou, Leandro Ravetti, Javier Fernandez Salvador, Imene Trabelsi Trigui, Rosa Vañó |
| 11:30 | Coffee Break |

Session VIII
Knowledge Agenda: Towards a Better-Educated Olive Oil Consumer Market

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| 11:55 | Panel Discussion Moderator: Greg Drescher Panelists: Emmanouil Anagnostatakis, Paul Bartolotta, Maria Loi, Teresa Pérez, Joseph Profaci, Rafi Taherian |
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Session IX
Looking to the Future: Consensus Document

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| 12:55 | Review of Draft Consensus Document Olive Oil: The Future of a World Heritage—Nutrition, Medicine and Planetary Health Group Discussion |
| 13:25 | <i>Concluding Remarks</i> H.E. Msgr. Marcelo Sánchez Sorondo |
| 13:30 | Lunch |
| 14:45 | Program Ends |

List of Participants



FRANCISCO JOSÉ ALARCOS MARTÍNEZ

Catedrático de Ética Teológica en la Facultad de Teología de Granada de la Universidad Loyola Andalucía y director de la Cátedra de Bioética de la U. Loyola. Co-Founder Altitud1080, Organic olive oil company, Granada, Spain



FRANK HU, MD, PhD

Chair, Department of Nutrition, and Professor of Nutrition and Epidemiology, Harvard T.H. Chan School of Public Health; Professor of Medicine, Harvard Medical School and Channing Lab, Brigham and Women's Hospital



MICHAEL AVIRAM, DSC

Professor (Emeritus) of Biochemistry, Head, The Lipid Research Laboratory, Rappaport Faculty of Medicine, Technion, Israel Institute of Science & Technology, Haifa, Israel



STEFANOS KALES, MD, MPH

Professor of Medicine, Harvard Medical School; and Professor and Director of the Occupational and Environmental Medicine Residency, Harvard T.H. Chan School of Public Health



JOACHIM VON BRAUN, PhD

President, Pontifical Academy of Sciences; Director of the Center for Development Research (ZEF), Bonn University, and Professor for Economic and Technological Change; and Chair of the Scientific Group, United Nations Food Systems Summit (2021)



TASSOS C. KYRIAKIDES, PhD

Assistant Professor, Yale Center for Analytical Sciences, Yale School of Public Health; Co-founder, Yale Olive Institute New Haven, CT



GREG DRESCHER

Senior Advisor, Strategic Initiatives The Culinary Institute of America NY, USA



PROKOPIOS MAGIATIS, PhD

Associate Professor, School of Pharmacy, University of Athens, and General Secretary, World Olive Center for Health



RAMON ESTRUCH, MD, PhD

Senior Consultant, Internal Medicine, Hospital of Barcelona, Professor of Medicine, University of Barcelona, and Principle Investigator, PREDIMED study; Chair, Scientific Advisory Council, Torribera Mediterranean Center



MIGUEL ÁNGEL MARTÍNEZ-GONZÁLEZ, MD, PhD, MPH

Professor and Chair of the Department of Preventive Medicine and Public Health at the University of Navarra Medical School



JEAN-XAVIER GUINARD, PhD

Professor of Sensory Science, University of California, Davis



GEMMA PASQUALI, PhD

Villa Campestri and Villa Campestri Oleoteka, The Mugello, Italy



MARCELO SÁNCHEZ SORONDO
Pontifical Academy of Sciences,
The Vatican



VASILIS VASILIOU, PhD
Professor of Epidemiology and Chair,
Department of Environmental Health
Sciences, Yale School of Public Health;
Co-founder, Yale Olive Institute



FRANCESCO SOFI, MD, PhD
Associate Professor of Food Science
and Clinical Nutrition, University of
Florence



WALTER WILLETT, MD, DrPH
Past Chair, Department of Nutrition,
and Professor of Nutrition and
Epidemiology, Harvard T.H. Chan
School of Public Health; Professor of
Medicine, Harvard Medical School;
Chair, CIA-Harvard Menus of Change
Scientific and Technical Advisory
Council, and Co-Chair, EAT-Lancet
Commission



ANTONIA TRICHOPOULOU, MD
President, Hellenic Health Foundation;
Professor Emeritus, School of
Medicine, National and Kapodistrian
University of Athens

PANELISTS



EMMANOUIL ANAGNOSTATAKIS
Owner, Creta Verde Olive Oil, Crete



JAIME LILLO
Deputy Director, International Olive
Council, Madrid



PAUL BARTOLOTTA
Chef/Owner and co-founder, The
Bartolotta Restaurants, Milwaukee,
Wisconsin



MARIA LOI
Chef/Owner, Loi Estiatorio Restaurant,
New York City, author and television
host



JAVIER FERNANDEZ SALVADOR
Executive Director, University of
California, Davis Olive Center



ELENI MELLIU, PhD
Researcher, School of Pharmacy,
University of Athens, and President,
World Olive Center for Health



DAN FLYNN
Consultant and Founding/Former
Executive Director, University of
California, UC Davis Olive Center



TERESA PÉREZ MILLÁN
Director General, Olive Oil from Spain,
Madrid



JOSEPH R. PROFACI
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IMENE TRABELSI TRIGUI, PhD
Professor of Management Sciences,
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LEANDRO RAVETTI
Co-CEO and Technical Director,
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ROSA VAÑÓ
Co-owner and Commercial Manager,
Castillo de Canena, Jaen, Spain



RAFI TAHERIAN
Associate Vice President, Yale
Hospitality, Yale University

COLLABORATING ACADEMIC INSTITUTIONS AND ORGANIZATIONS

The Culinary Institute of America
Harvard T.H. Chan School of Public Health
Hellenic Health Foundation
Olive Wellness Institute
University of Barcelona/Torribera Mediterranean Center
University of California, Davis Olive Center
University of Florence
University of Navarra
World Olive Center for Health
Yale University

Biographies of Participants

Francisco J. Alarcos Martínez Catedrático de Ética Teológica en la Facultad de Teología de Granada de la Universidad Loyola Andalucía y director de la Cátedra de Bioética de la U. Loyola. Miembro del Comité de Bioética de Andalucía y consultor en diferentes comités de ética asistencial. Forma parte del consejo asesor de la revista 'Ars Brevis' de la Universidad Ramon Llull de Barcelona. Ha publicado 9 libros sobre temas relacionados con la ética de la vida; 15 artículos de revistas y 9 colaboraciones en obras colectivas. También ha coordinado 3 publicaciones en obras colectivas. Ha sido profesor invitado en otras universidades y escuelas de postgrado, así como a un buen número de conferencias en congresos y actividades divulgativas. Cofundador de Altitud1080 proyecto de agricultura de aceite de oliva ecológico en altitud y de impacto social

Anagnostakis Emmanouil was born in 1955 in the area of Kolymvari, Chania, Crete. That area is historically associated with olive cultivation, which is evident by the existence of olive trees dating back more than 2500 years: that is for example the ancient olive tree in the village Vouves. So, already as a child in a typical family of the area, he actively participated in the cultivation and in all the processes connected with olives and olive oil. Of course, it was later on that he became a fan of the product. From 1981 to 1991 he was working as a bank employee. From 1992 to 2000 he was successively working in two companies which operated with olive oil, with the aim of gaining business experience. In 2001 he founded Terra Creta S.A., for which he was solely responsible until 2015. At that point he was forced to leave due to various reasons. These 15 years were enough for this company to become the largest Greek exporting company in the olive oil sector. From 2015 until now he cultivates a large number of olive trees with organic methods and he produces quality olive oil in his own estate "Creta Verde", which he then packages and promotes in the market under the name of the estate, "Creta Verde". The philosophy and practices that he serves throughout all these years with passion are the total quality and the innovations.

Michael Aviram is a leading expert and opinion leader in cholesterol research, and particularly, in the role of oxidative stress and antioxidants in cardiovascular diseases (CVD) development. He elucidated the mechanisms behind the protection against CVD that is provided by endogenous antioxidants, as well as by consumption of polyphenols from the Israeli Seven Species and from the Mediterranean Diet, such as pomegranate, grape (red wine), and olive (leaves, and oil). Professor Aviram heads the Lipid Research Laboratory at the Technion Rappaport Faculty of Medicine in Haifa, Israel. Aviram sabbaticals along the years took place at the MIT, Columbia University, University of Washington, University of Michigan, and the University of Illinois. Aviram published 500 original scientific papers and his work has been cited over 40,000 times. Finally, Professor Aviram supervised 33 graduate students and 57 clinician – scientists.

Greg Drescher is senior advisor for strategic initiatives at The Culinary Institute of America (CIA). Previously, as CIA vice president for strategic initiatives and industry leadership, he oversaw

the college's leadership initiatives for the foodservice industry, including academic and other strategic partnerships, conferences, invitational leadership retreats, digital media, and other global initiatives. He is the creator of the college's Worlds of Flavor International Conference & Festival (now in its 24th year), as well as a portfolio of health and sustainability leadership initiatives including Menus of Change and Healthy Kitchens, Healthy Lives, jointly presented by the Harvard T.H. Chan School of Public Health—Department of Nutrition; the Menus of Change University Research Collaborative, co-led by the CIA and Stanford University in association with more than 60 leading colleges and universities; and the annual Global Plant-Forward Culinary Summit and Plant-Forward Kitchen digital media platform. Co-developer of the CIA's new partnership with the University of Barcelona—the Torribera Mediterranean Center, with its focus on the healthy, traditional Mediterranean Diet and regional food studies—and an advisor to the European-based EAT Foundation, Greg works internationally to advance innovation at the intersection of health, sustainability, culture, and culinary insight. In 2005, Greg was inducted into the James Beard Foundation's Who's Who of Food & Beverage in America, and in 2007 and 2009 he shared a second and third James Beard Award for his team's work in developing the CIA's World Culinary Arts digital media series, filmed on location around the world. He served on the National Academy of Medicine's Committee on Strategies to Reduce Sodium Intake in the United States. In 2011, he was inducted as a member of the Accademia dei Georgofili, Europe's oldest agricultural academy based in Florence. In 2017, *Foodservice Director* included Greg in its "20 People Shaping American Foodservice Today." Before joining the CIA 27 years ago, he jointly spearheaded a collaboration of some of the world's leading health experts and organizations—including the Harvard T.H. Chan School of Public Health and World Health Organization—in authoring *The Mediterranean Diet Pyramid: A Cultural Model for Healthy Eating*. The cumulative results of this research were published in a special edition of the *American Journal of Clinical Nutrition* (1995), creating an evidence-based foundation for much of the academic, policy, and consumer interest in the Mediterranean Diet that followed.

Jean-Xavier Guinard is Professor of Sensory Science and Co-Director of the Coffee Center at the University of California, Davis. Trained as a food and agricultural engineer in France, he earned MS degrees in sensory physiology and in food science/enology and a PhD in microbiology from UC Davis. His research focuses on sensory strategies for dietary change and the optimization of the sensory quality and consumer acceptance of foods, beverages and other consumer products. He teaches undergraduate, graduate and lifelong learning courses at UC Davis and consults for food and beverage companies and consumer agencies worldwide. Over the past 20 years, Jean-Xavier has served in various administrative roles for international education at the University of California and for the Robert Mondavi Institute at UC Davis.

Frank Hu is Chair of Department of Nutrition, Fredrick J. Stare Professor of Nutrition and Epidemiology at Harvard T.H. Chan School of Public Health and Professor of Medicine, Harvard

Medical School and Brigham and Women's Hospital. He serves as Co-director of the Program in Obesity Epidemiology and Prevention at Harvard and Director of Boston Nutrition and Obesity Research Center Epidemiology and Genetics Core. His major research interests include epidemiology and prevention of cardiometabolic diseases through diet and lifestyle; gene-environment interactions; nutritional metabolomics; and nutrition transitions and cardiometabolic diseases in low- and middle-income countries. He served on the IOM Committee on Preventing the Global Epidemic of Cardiovascular Disease, the AHA/ACC Obesity Guideline Expert Panel, and the 2015 Dietary Guidelines Advisory Committee, USDA/HHS. He has served on the editorial boards of *Lancet Diabetes & Endocrinology*, *Diabetes Care*, and *Clinical Chemistry*. Dr. Hu was elected to the National Academy of Medicine in 2015.

Stefanos N. Kales is a Professor of Medicine at Harvard Medical School, and Professor & Director of the Occupational Medicine Residency at the Harvard Chan School of Public Health (HSPH). He is also Chief of Occupational Medicine /Medical Director- Employee Health at the Cambridge Health Alliance, a Harvard-affiliated hospital system. He organized and hosted Harvard's groundbreaking 2014 Mediterranean Diet Conference, and he was Scientific Chair of the landmark 2017 Mediterranean Diet & Health Conference in Greece. In 2019, Dr. Kales received competitive funding from Harvard's Radcliffe Institute for Advanced Study to organize and host the invitation-only Exploratory Seminar: "Mediterranean Diet: Promotion and Dissemination of Healthy Eating". Dr. Kales has participated in a wide range of medical/public health research, advisory and teaching activities on five continents resulting in over 200 publications and wide recognition nationally and internationally. He serves on the editorial boards of several biomedical journals and is a faculty member in Harvard's Cardiovascular Epidemiology Program and Harvard Medical School's Division of Sleep Medicine. Dr. Kales has received numerous honors, including the 2013 Kehoe Award for Excellence in Education and Research and 2014 Harriet Hardy Award for outstanding scientific contributions to the field. He has also received honors from the International Association of Fire Chiefs and was inducted into the Order of Emperor Dom Pedro II by the Federal Corp of Brazilian Military Firefighters. He has also received several million dollars in competitive US federal funding, including an ambitious Mediterranean Diet Intervention trial ("Feeding America's Bravest: Survival Mediterranean Style) among Midwestern firefighters which was awarded the 2017 Silver Medal for Health Research by the Oleocanthal International Society, and another recent grant to create a Healthy Lifestyle smartphone application. Dr. Kales grew up around traditional Greek foods prepared by his beloved grandmother in the family kitchen and expanded these formative experiences through extensive travels in Greece, Cyprus, Spain and Italy. As a health educator, he seeks to lead by example; following a Mediterranean diet, practicing regular physical fitness and good sleep hygiene. Based on his combined medical and public health training, his research and clinical practice, he is convinced that lifestyle measures like Mediterranean nutrition are the most accessible, effective and valuable means of chronic disease prevention and control. Dr. Kales' ultimate goal is to use innovative approaches to disseminate

healthy Mediterranean eating in schools, workplaces and hospitals. Dr. Kales recently co-authored the "Textbook of Lifestyle Medicine", from Wiley & Sons publishers. In May 2022, he will participate as a speaker in the Pontifical Academy of Sciences symposium: "The Art & Science of Olive Oil" at the Vatican, and is co-organizing a conference in Cyprus on lifestyle for dementia prevention under the auspices of the A. G. Leventis Foundation. He was also recently invited to participate as an expert advisor to Greece's National Public Health Organization (EODY).

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 Director at the Department of Veterans' Affairs Cooperative Studies Program (VACSPPC-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. 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.

Maria Loi is an internationally renowned entrepreneur, author, television personality and philanthropist working to change the world – one healthy bite at a time. Known as the Julia Child of Greece, she is the founder and face of a lifestyle brand that nurtures a healthy body and soul, melds the inspiration of ancient Greece with a modern approach to the Greek-Mediterranean diet, cooks up a heaping dose of happiness, humor and joy and helps people boost their immunity and improve their health, wellness and longevity.

Prokopios Magiatis is associate Professor of Pharmacognosy and Natural Products Chemistry at the Department of Pharmacy of the University of Athens. He graduated from the same Department, and he did his postdoctoral research at the Curie Institute in Paris. He has worked as a visiting professor at the Olive center of the University of California, Davis and as affiliate professor in the medical school of Virginia Commonwealth University. In 2009, he was awarded the Egon-Stahl silver medal as the top scientist under 40 years old in the field of natural products chemistry and pharmacology. His research is focused

on the analysis, isolation, chemical synthesis, and bioactivity of natural products and especially on the phenolic compounds of olive oil. He has been awarded as the inventor of the year 2016 in Greece for his invention ARISTOLEO. He is an author of 150 publications and 14 patents.

Miguel Ángel Martínez-González is a medical epidemiologist, Professor of Public Health at the University of Navarra, Adjunct Professor of Nutrition at Harvard TH School of Public Health (Dpt. of Nutrition) and researcher at CIBEROBN, with more than 30 years of experience in epidemiologic research on the determinants of chronic diseases, especially in nutrition and lifestyle fields. He has designed and directed large trials and cohorts, such as the SUN, PREDIMED and PREDIMED-Plus projects, which have shed unparalleled light and scientific evidence from Spain with worldwide impact. In 1995 he founded and started the Department of Preventive Medicine and Public Health at the University of Navarra, which today is one of the most fruitful and leading Departments in Spain. Since then, Dr. Martínez-González has published more than 1000 articles and abstracts indexed in Web of Science and he is on of the most cited scientist in Spain in the ranking of all scientific areas in recent years. He has been mentor of a large group of Full Professors and Associate Professors of Epidemiology and Public Health. He is the editor of the main textbooks in Spanish on Biostatistics (Elsevier), Epidemiology (Ariel-Planeta) and Public Health (Elsevier). As a popularizer, his recent publications with Editorial Planeta stand out: "Salud a Ciencia Cierta (Evidence-based Health)" (2018) and "¿Qué comes? (What do you eat?)" (2020). His 2021 book entitled "LA SANIDAD EN LLAMAS" (The health system on fire) published last June also by Planeta publishing house denounced the mismanagement of the COVID-19 pandemic in Spain. But, above all, this book was a tribute to the victims and to the health workers who were on the front line in the hospitals saving human lives.

Eleni Melliou is the president of World Olive Center for health, a non-profit organization established in Athens since 2017. She has two degrees, one from the Chemistry department of University of Athens and one from the department of Food Technology of the Technological Institute of Athens. She has received her MSc and PhD from the Pharmacy department of the University of Athens in 2005. She works as a laboratory Teaching Staff in the University of Athens, in the department of Pharmacy, laboratory of Pharmacognosy and Chemistry of Natural Products. Her research is focused on the chemistry of natural products and particularly on isolation and structural identification of bioactive small molecules from foods. In 2011 she worked as visiting professor in the department of Food Science and Technology of the University of California in Davis. She has >60 publications and 6 patents. Since 2012 she collaborates with the UC Davis Olive center. In 2014-2016 she had an affiliate professor position at the Virginia Commonwealth University. She has been awarded as the inventor of the year 2016 in Greece for her invention ARISTOLEO. Together with prof. Magiatis she has created the first university lab offering analysis of olive oil by NMR regarding its content on health protecting phenolic compounds.

Gemma Pasquali Full degree in Agricultural Science, PhD in Agrobiotechnology for Tropical and Subtropical Productions at the Fac-

ulty of Agriculture of the University of Florence and post-doctorate at the Citrus Research and Education Center of the University of Florida. Worked on genetic transformation of protoplasts of citrus and other species, in the fusion of protoplasts and subsequent regeneration in vitro and in vivo culture of herbaceous and tree species. Owner at Villa Campestri Olive Oil Resort and Oleoteca Villa Campestri.

Joseph R. Profaci has served as Executive Director of the North American Olive Oil Association since October 2017. He is an experienced food products attorney and business manager, with 25 years of experience in the olive oil category. Prior to joining NAOOA, he served as general counsel for Colavita USA, LLC, a leading importer and distributor of Italian specialty food products. While with Colavita USA, Mr. Profaci was an active member of the NAOOA, including serving as the organization's chair from June 2015 – June 2017. Mr. Profaci is a graduate of Harvard College and New York University School of Law.

Leandro Ravetti graduated as an Agricultural Engineer in Argentina achieving the second highest academic score in the country. He worked for the National Institute of Agricultural Technology in olive production research and advised many of the country's largest olive developments from 1995 until he moved to Australia in 2001. Leandro has also studied and worked as an invited researcher at the Olive Growing Research Institute of Perugia, Italy and at different Governmental Olive Institutes in Andalusia, Spain where he completed a postgraduate degree on olive growing and olive oil processing. Leandro has been Executive Director of Cobram Estate Olives Limited (CBO) since 2005. As part of his role with CBO, Leandro has overseen all technical aspects of production developing the world's leading Oliv.iQ[®] growing system. Leandro has also been involved as adviser, researcher, and invited speaker in most other new olive industries such as New Zealand, Japan, Peru, South Africa, Chile, and USA. Leandro was an alternate director of the Australian Olive Association between 2009 and 2012. During that period, Leandro covered the position of Drafting Leader for the new Australian Standard for Olive Oil (AS 5264-2011) receiving the 2011 Standards Award for outstanding contribution to standardisation in Australia. Leandro Ravetti has also received a Meritorious lifetime award from the Australian Olive Association for his outstanding contribution to the Australian olive industry.

Francesco Sofi, MD, PhD is Associate Professor of Food Science and Clinical Nutrition at the Department of Experimental and Clinical Medicine of the School of Human Health Sciences of the University of Florence. He is Director of the Unit of Clinical Nutrition of the University Hospital of Careggi, in Florence. President of the master's degree in Food Science of the University of Florence, he is director of the Interdepartmental Centre for Research on Food and Nutrition of the University of Florence. He is author of about 230 scientific studies, published in peer-reviewed International Journals. He won several national and international prizes.

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

Imene Trabelsi Trigui Motivation: As an enthusiastic, hard-working and fast learning person, with an excellent academic and professional record and an important interest about innovative marketing strategies in MARKETING field, I am strongly motivated to collaborate with other professors and researchers from different countries and nationalities. I am confident that this experience could be an asset to build up strong basis for research methods and new academic, professional and personal skills. Objective: Full Professor in Management Sciences (Professeure des Universités) Specialized in Agrifood, Olive Oil and Medical & Agricultural Tourism Marketing, PhD from ENITAC (Ecole Nationale des Ingénieurs des Travaux Agricoles de Clermont Ferrand-France) teaching in Economics and Management Sciences Faculty of Sfax (TUNISIA) with over 20 years of experience providing thorough and skillful support to Students and researchers through university different levels (License, Master and Doctorate).

Antonia Trichopoulou, MD, PhD, is President of the Hellenic Health Foundation, Professor Emeritus, School of Medicine, University of Athens and National School of Public Health, Greece. She has served as president of the Federation of the European Nutrition Societies (FENS) and as chairperson or key member of numerous Greek, European Commission and World Health Organization Committees. She has received numerous honors and awards and was decorated by the President of the Greek Republic with the Golden Cross of Honor for her work in nutrition and public health. Her scientific work has focused on public health nutrition and nutrition epidemiology, with emphasis on the health effects of the Mediterranean diet and traditional foods.

Vasilis Vasiliou is the Susan Dwight Bliss Professor of Epidemiology and the Chair of the Department of Environmental Health Sciences at Yale School of Public Health. He is also Professor at the Yale School of the Environment and at Yale School of Medicine. He received his BSc in Chemistry (1983) and PhD in Biochemical Pharmacology (1988) from the University of Ioannina, Greece. He then trained as Fogarty Fellow in molecular toxicology and pharmacogenetics at the College of Medicine of the University of Cincinnati (1991-1995). In 1996, he joined the University of Colorado School of Pharmacy where he rose through the ranks to become Professor and Director of the Toxicology Program. In 2014, he joined the faculty of Yale University in his new position. His laboratory utilizes state-of-the-art integrated system approaches that include metabolomics, lipidomics, exposomics, tissue imaging mass spectrometry, deep learning, as well as human cohorts and genetically engineered mouse models in order to elucidate mechanisms, and to discover biomarkers and novel interventions for human disease. At Yale the director of the NIAAA-funded R24-Resource Center for Mouse Models and Metabolomics Tools to Investigate Alcohol Metabolism and Tissue Injury, and he also leads an NIAAA-funded T32 Translational Alcohol Research Program (TARP) Training Program for post-doctoral fellows, and an NIHES -funded R25 Summer Research Experience in Environmental Health (SREEH) Training Program that introduce undergraduate students in Connecticut (CT) to Environmental Health Research. Finally, he is along with Dr Kyriakides 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.

Walter Willett is a physician and epidemiologist and Professor of Epidemiology and Nutrition at the Harvard T.H. Chan School of Public Health. He served as Chair of the Department of Nutrition at Harvard for 25 years. Much of his work has been on the development of methods, using both questionnaire and biochemical approaches, to study the effects of diet on the occurrence of major diseases. He has applied these methods starting in 1980 in the Nurses' Health Studies I and II and the Health Professionals Follow-up Study. Together, these cohorts that include nearly 300,000 men and women with repeated dietary assessments are providing the most detailed information on the long-term health consequences of food choices. Dr. Willett has published over 2,000 research papers, primarily on lifestyle risk factors for heart disease and cancer, and has written the textbook, *Nutritional Epidemiology*, published by Oxford University Press. He also has four books for the general public. Dr. Willett is the most cited nutritional scientist internationally. He is a member of the National Academy of Medicine and the recipient of many national and international awards for his research.

For the biographies of PAS Academicians, please see www.pas.va.

Logistics

IN-PERSON ATTENDANCE

Dress Code is formal business attire.

Food: We will provide coffee breaks, lunch and dinner on 3 May, and a coffee break and lunch on 4 May. If you have any food allergies or dietary requirements, please let us know in advance.

Covid restrictions: In-person participants will be required to follow all testing and travel protocols. Travel insurance that covers any extra accommodation expenses in the event of a mandatory quarantine is mandatory. Please continue to refer to government pages and <https://tinyurl.com/2p98p266> to understand evolving travel requirements.

The Vatican requires proof of full vaccination/Covid passport for entry. For those staying at the Domus Sanctae Marthae, the Domus requires proof of full vaccination plus a Covid test, which can be the same one the guests have used to board the plane.

During the workshop, participants are kindly requested to keep their FFP2/KN95 masks on indoors, except when giving their speech and during coffee breaks and meals.

Should you require tests for your return journey, there are a number of pharmacies just outside the Vatican walls where both PCR and rapid tests can be done without an appointment.

Security: invites are strictly personal. Please remember to bring a valid ID.

VIRTUAL ATTENDANCE

A Zoom link will be sent to virtual participants before the event, with the request not share it with external parties.

FOR MORE INFORMATION

Please refer to www.pas.va and www.pass.va for further information on the Academies, the Academicians, and current and past events.

You can also view previous PAS workshops on the Casina Pio IV YouTube channel: www.youtube.com/c/CasinaPioIV

Memorandum

3 May 2022

A bus will leave the Domus and Hotel Il Cantico at 8.45 a.m. to accompany participants to the Casina Pio IV, where the meeting will start at 9.00 a.m.

After dinner, at 8.00 p.m. the same bus will take you back to your hotel.

4 May 2022

A bus will leave the Domus and Hotel Il Cantico at 8.45 a.m. to accompany participants to the Casina Pio IV, where the meeting will start at 9.00 a.m.

At 2.30 p.m. the bus will take you back to your hotel.

Chiesa di Santo Stefano degli Abissini
St Stephen of the Abyssinians Church

Sede della Pontificia Accademia delle Scienze
Seat of the Pontifical Academy of Sciences
(Casina Pio IV)

Ingresso del Perugino
The 'Perugino' gate

Ingresso Musei Vaticani
Entrance gate to the Vatican Museum

Domus Sanctae Marthae

Altare Tomba S. Pietro
Altar of St Peter's Tomb

Ingresso Sant'Uffizio
The 'Sant'Uffizio' gate

Ingresso Sant'Anna
The 'Sant'Anna' gate

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