



HARVARD T.H. CHAN
SCHOOL OF PUBLIC HEALTH

Dissemination & Translation of Healthy Mediterranean Diet Principles

Stefanos N. Kales MD, MPH, FACP, FACOEM

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Director, Occupational Medicine Residency

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**Chef Culinary
CONFERENCE²⁰²²**

28th Chef Culinary Conference
June 5-10, 2022 | UMass Amherst | Amherst, MA

Ancient Hippocratic Medicine



Hippocrates divided Medicine into three branches, Physics (Internal Medicine), Surgery, and Dietetics (ΔΙΑΙΤΑ = way of life) (Lifestyle Medicine)

Recognized the Environment's Impact on Health:
“On Air, Water and Places”
(Περὶ αἰέρων, υδάτων, τόπων)



Modern Medicine- we know more, but we behave worse



Medications and Surgery have greatly advanced

“Dietetics”/Lifestyle Measures- failing at the societal level

Obesogenic Foods and Environments Predominate

Sleep Duration is Decreasing

Screen time (TV, Devices, etc) & Sedentary time Increasing

**➡ Obesity, Diabetes Mellitus/ “Diabesity” – drastic increases
Other Chronic/ Non-communicable diseases**

Textbook of Lifestyle Medicine

LABROS S. SIDOSSIS | STEFANOS N. KALES



WILEY Blackwell

We need to emphasize “Lifestyle Medicine” in every medical specialty and at most patient visits (Medi-Lifestyle)

“Lifestyle Medicine..” helps “with the prevention and treatment of most of the chronic non-communicable diseases, including anxiety, depression, psychosomatic disorders, obesity, type 2 diabetes mellitus, cardiovascular diseases, autoimmune disorders, osteoporosis and cancer.”

Prof. George P. Chrousos

“...a very valuable tool for professionals who want to apply the principles of the Mediterranean lifestyle to their patients...”

Prof. Miguel A. Martínez-González

We know what to do, but we are not so good in doing it and worse getting other people to do it.



An expert panel of renowned nutrition leaders from academia and nationally recognized health experts in diet, nutrition, obesity, food psychology, diabetes and heart disease evaluated 40 diets and ranked the top rated diets

2018, 2019, 2020, 2021, 2022

Best Diet Overall	Best Diets for Healthy Eating	Best Heart Healthy Diet	Easiest Diet to Follow	Best Plant-based Diet	Best Diabetes Diet
Mediterranean Diet #1	Mediterranean Diet #1	Mediterranean Diet #1	Mediterranean Diet #1	Mediterranean Diet #1	Mediterranean Diet #1



Scientific Report of the
2015 Dietary Guidelines Advisory Committee

Advisory Report to the Secretary of Health and Human Services
and the Secretary of Agriculture

Recognize and Recommend the
Mediterranean Diet as a healthy option
for Americans



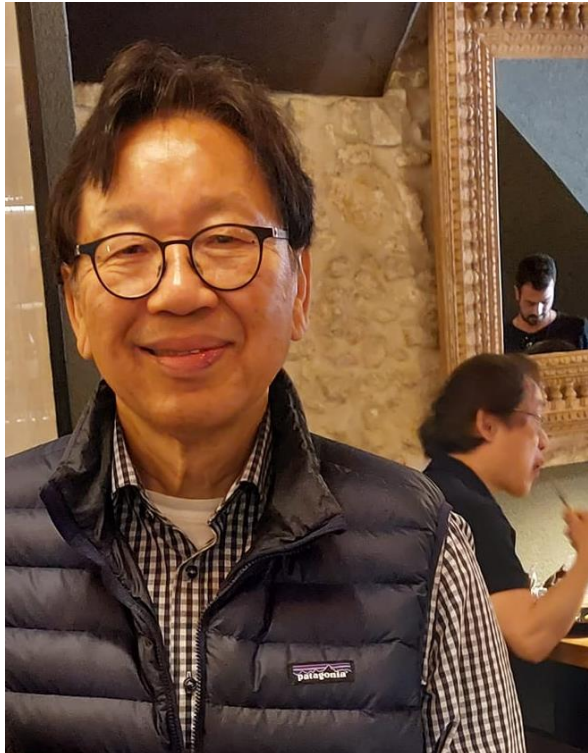
Dietary
Guidelines
for Americans

2020 - 2025

University of Massachusetts Dining: Led by Ken Toong – a major Olive Oil & Greek Diet Proponent

Princeton Review named UMASS # 1 best campus food for five consecutive years (2017-2021)

GREEK NEWSPAPER: Ο κ. Ken Toong ΕΧΕΙ ΤΗΝ ΕΥΘΥΝΗ ΓΙΑ 50.000 ΓΕΥΜΑΤΑ ΤΗΝ ΗΜΕΡΑ !
" Χρησιμοποιεί Ελληνικό λαδι, οσπρια AGRINO, Λαβρακι Κεφαλλονιας, και πολλά άλλα"







WORKPLACE, SCHOOL. ETC. INTERVENTION S

DIETARY INTERVENTIONS



REVIEW

Curr Opin Clin Nutr Metab Care 2021, 24:490–503

DOI:10.1097/MCO.0000000000000794



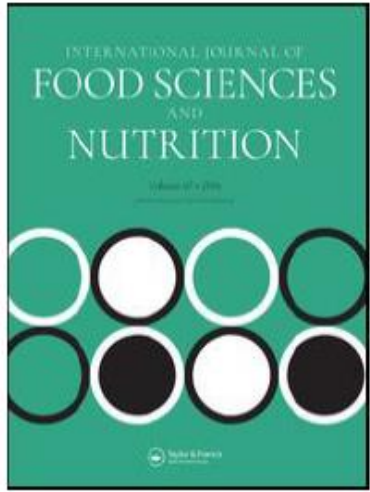
Healthy lifestyle interventions across diverse workplaces: a summary of the current evidence

Amalia Sidossis^{a,b}, Gabriel C. Gaviola^{a,b}, Mercedes Sotos-Prieto^{b,c,d}, and Stefanos Kales^{a,b}

Diet Interventions identified:

1. Healthy food Availability/ Portion Sizes
2. Labeling/ Positioning
3. Pricing & Other Incentives / Elimination
4. Teaching Kitchens
5. Combinations- thereof





Mediterranean diet – promotion and dissemination of healthy eating: proceedings of an exploratory seminar at the Radcliffe institute for advanced study

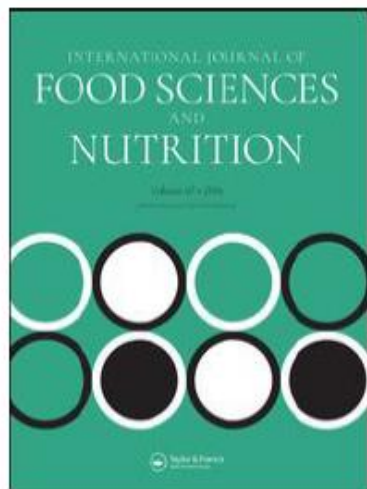


Mercedes Sotos-Prieto, Daniele Del Rio, Greg Drescher, Ramon Estruch, Chavanne Hanson, Timothy Harlan, Frank B. Hu, Maria Loi, James P. McClung, Angelo Mojica, Daniela Puglielli, Ken Toong, Fania Yangarber & Stefanos N. Kales

September 2019, convened thought leaders at an exploratory seminar entitled: “Mediterranean Diet: Promotion and Dissemination of Healthy Eating”.

Hosted by the Radcliffe Institute for Advanced Studies at Harvard University.

The multi-disciplinary faculty discussed best practices for translating traditional Mediterranean lifestyle principles to modern society.



Mediterranean diet – promotion and dissemination of healthy eating: proceedings of an exploratory seminar at the Radcliffe institute for advanced study

Table 1. Mediterranean diet, promotion and dissemination.

Issue/Question	Challenges	Strategies/Solutions	Settings where most applicable
Most important challenges to healthy eating in modern society	<ul style="list-style-type: none"> - Less people cooks - Less meals at home - Time pressures - Lower access to fresh and healthy food at higher costs - Abundance of refined and processed, calorie-dense unhealthy foods - Decreased quality and increased portion sizes at lower costs 	<ul style="list-style-type: none"> - Teach the value of home cooking and cooking, food shopping skills - Development of simple, fast, healthy and sustainable menus - Implementation of healthy nutrition practices and translation of MedDiet principles at schools and workplaces. - Increased access to healthy and fresh foods in all neighbourhoods 	<ul style="list-style-type: none"> - Homes/families - College /University canteens. - Restaurants. - Companies/other workplaces
Best ways to promote MedDiet principles in workplaces, schools, hospitals, other institutions (e.g. the military) and the food service industry	<ul style="list-style-type: none"> - Costs/budget constraints - Time pressures - Not prioritised - Lack of nutrition/health knowledge - Perception of authority removing choices 	<ul style="list-style-type: none"> - Nutrition education, awareness and public engagement. - Smartphone applications to assist in making healthy choices - Clearer Food labelling - Choice and Price Architecture that promotes healthy choices without eliminating traditional choices. - Reduce portion sizes, while increasing quality and improving taste. - Addressing children's nutrition knowledge, eating behaviours and physical activity attitude improve choices and to become positive family change agents 	<ul style="list-style-type: none"> - Workplace cafeterias - Primary School canteens - University Cafeterias - Hospital cafeterias and patient food service. - Military canteens - Food Service Industry
Best adapting traditional Mediterranean diet to various ethnic and regional preferences across the US while being inclusive and maintaining cultural sensitivities	<ul style="list-style-type: none"> - Less healthy habits/choices which maybe based on traditions and/or ethnic and regional preferences - Commercial/Political interests promoting less healthy foods 	<ul style="list-style-type: none"> - Know and respect individual and group preferences - Build on and adapt traditions, rather than trying to eliminate them - Identify local products, foods and recipes that exemplify healthy eating principles (e.g. Nordic Diet paradigm) - Adapt traditional recipes and menus with respect and cultural sensitivity 	<ul style="list-style-type: none"> - Various ethnic and regional communities

Five Small Steps to Improve Your Health

FIREFIGHTERS' MEDITERRANEAN PYRAMID



Good Nutrition, Adequate Sleep and Frequent Physical Activity (150 minutes of moderate intensity or 75 minutes of vigorous intensity aerobic activity each week) promote weight control and reduce the risks of heart disease and cancer, while lowering stress and its negative consequences. Spend quality time with family and co-workers.

"Feeding America's Bravest: Firefighters Mediterranean Diet Intervention Pyramid" © 2017 S.N. Kales (PI)

Funded by US Federal Emergency Management Agency Assistance to Firefighters Grant program: Award Number EMW-2014-FP-00612

1. Replace butter and stick margarine with **Extra Virgin Olive Oil** and eat at least four tablespoons/ day.
2. **Drink water** instead of sodas, energy drinks and other sugary beverages. A glass of red wine with off-duty dinners is fine.
3. **Choose chicken, turkey, fish, eggs and beans.** Limit red and processed meat
4. Eat more **fruits and vegetables.** Eat fresh berries instead of sweet desserts.
5. Choose **whole grains.** Avoid refined carbohydrates.



LAW ENFORCEMENT OFFICERS' MEDITERRANEAN DIET PIRAMYD

Water as the main beverage.
Avoid sugary drinks and energy drinks



Use Extra Virgin Olive Oil for food preparation, cooking and all salad dressings. Use at the table to add flavor to foods.



Sleep 7-8 hours nightly.
Use naps during shift work.

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MEDITERRANEAN CUISINE COMES TO THE CAR PLANT

In the popular imagination, car factories are not normally associated with nutritious, high-quality food. In the Spanish city of Barcelona, that is all set to change, as SEAT teams up with Harvard University to research the benefits of the celebrated Mediterranean diet for occupational health.

The diet—rich in olive oil, fish, vegetables, nuts and beans—has

long been thought to help reduce the risk of cancer, cardiovascular diseases and even neurodegenerative conditions. "Studies have shown that the diet leads to a 30% to 40% decrease in the risk of heart disease and cancer and about a 25% decrease in overall mortality, as well as reduced risks of Alzheimer's and



other chronic diseases," says Dr. Stefanos N. Kales, the director of occupational medicine at the Harvard School of Public Health. Working closely with SEAT, Kales is planning to make a series of changes to the nutrition provided at the car plants and to incorporate the traditions of the Mediterranean diet more widely. "We already provide Mediterranean options in our canteens, and now we

are going to give assembly-line workers healthy, Mediterranean snacks during their shifts rather than sandwiches with processed meat," explains Dr. Patricia Such, SEAT's head of health and safety. SEAT and Harvard researchers will then study the impact of the nutritional changes on the health of participating workers. "SEAT has one of the most comprehensive programs that I know of in any country for looking after their employees' health," Kales adds. ■

Analyses of 533 workers attending annual employer-sponsored medical exams at two different factories showed that participants at the intervention factory had significantly improved adherence to Mediterranean diet, reduced waist circumference, improved inflammatory biomarkers, and better general health and sleep quality scores.

El estudio quiere demostrar que la **dieta mediterránea**, el **ejercicio físico** y el **bienestar emocional** mejoran la salud en general y, con ello, nuestra calidad de vida.





HARVARD T.H. CHAN

SCHOOL OF PUBLIC HEALTH

Mediterranean Diet and Workplace Health
September 27-28, 2014
Harvard School of Public Health
Boston, MA



“This unique and innovative conference featured lectures, panels, and select chef-supervised meals to increase awareness, appeal, and understanding of Mediterranean dietary habits as a vehicle for improved workplace health.”

«Το ΕΥΖΗΝ»

Greek Diet: “Χόρτα, Όσπρια και Μπόλικο Λάδι”



Review Article

Mediterranean diet and health

Ancel Keys: "Seven Countries Study"

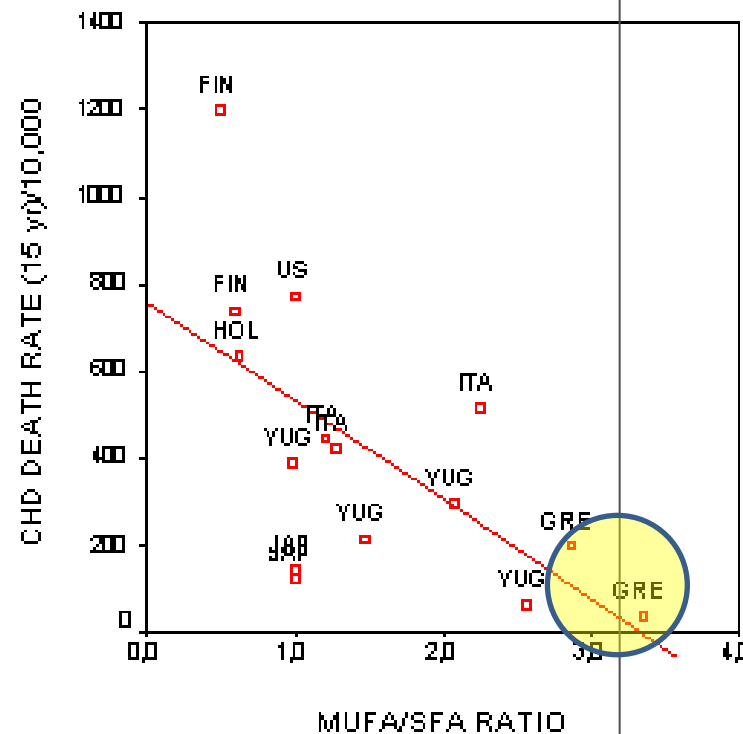
"The concept of the Mediterranean diet dates back to the 1960s', when Ancel Keys coined the term following the results of an epidemiological study, which demonstrated that the populations (Italy and Greece) that overlooked the Mediterranean Sea had a reduced incidence of cardiovascular disease and cancer in comparison to the other populations."

Sofi et al. BioFactors, 39(4):335–342, 2013



The Seven Countries Study (Keys, 1970)

Keys et al
Am J Epidemiol 1986;124:903



Life expectancy / Disease Rates in U.S.A, Greece and Japan, In 1960's

		U.S.	Greece	Japan
Life expectancy at age 45 in years	(M)	27	31	27
	(F)	33	34	32
Coronary Heart Disease	(M)	189	33	34
	(F)	54	14	21
Cerebrovascular Diseases	(M)	30	26	102
	(F)	24	23	57
Breast Cancer	(F)	22	8	4
Stomach Cancer	(M)	6	10	48
Colon, Rectal Cancer	(F)	3	6	26
	(M)	11	3	5
Total Cancer	(F)	10	3	5
	(M)	102	83	98
	(F)	87	61	77

Willet W. Science 1994

The Challenge of Torriberra- 2018



ATTICA
CAPE SOUNIO, SOUNIO
Boutique Resort

PALLAS ATHENA, ATHENS
VOULIAGMENI SUITES

NEW: GRECOTEL ACROPOLIS
Boutique Resort

CORFU
World of Kommeno
CORFU IMPERIAL, KOMMENO
Luxury Beach Resort

THE VILLAS OF KOMMENO
PENINSULA

LUX ME DAPHNILA BAY, DASSIA
Lux Me Resort

EVA PALACE, KOMMENO
Luxury Beach Resort

DANILIA VILLAGE

NEW: COSTA BOTANICA, ACHARAVI
THE COUNTRY HOUSE
THE SUMMER HOUSES

RHODES
LUX ME DAMA DAMA, FALIRAKI
Lux Me Resort

MYKONOS
MYKONOS BLU, PSAROU
Boutique Resort

MYKONOS BLU VILLAS, PSAROU
Boutique Resort

MYKONOS LOLITA, AG. SOSTIS
Boutique Resort

HALKIDIKI
MARGO BAY & CLUB TURQUOISE
Luxury Beach Resort

ALEXANDROUPOLIS
ASTIR*EGNATIA

LARISSA
LARISSA IMPERIAL

KOS
LUX ME KOS IMPERIAL, PSALIDI KOS
TOWN
Lux Me Resort

NEW: CASA PARADISO, MARMARI
All In Lifestyle Resort

PELOPONNESE
RIVIERA OLYMPIA, KYLLINI
MANDOLA ROSA
Boutique Resort

LA RIVIERA
Luxury Beach Resort

OLYMPIA OASIS
Lux Me Resort

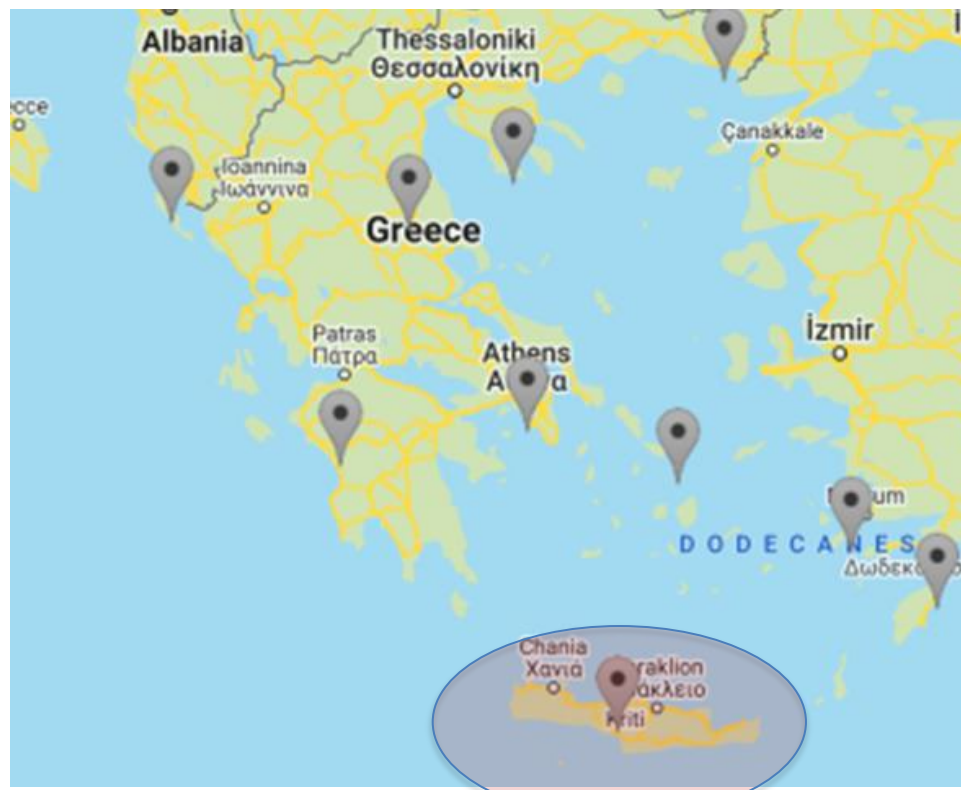
ILIA PALMS
All In Lifestyle Resort

CASA MARRON

FILOXENIA KALAMATA

Non-Profit USA & MoU with Grecotel

40 HOTELS IN 12 TOP GREEK DESTINATIONS



• HELLENIC CENTER •



OF EXCELLENCE FOR
HEALTH & WELLNESS

CRETE

AMIRANDES, HERAKLION
Boutique Resort

CRETA PALACE, RETHYMNO
Luxury Beach Resort

LUX ME WHITE PALACE, RETHYMNO
Luxury Beach Resort

CARAMEL, RETHYMNO
Boutique Resort

MARINE PALACE & AQUA PARK,
PANORMO
All In Lifestyle Resort

NEW: CASA MARINA & AQUA PARK
All In Lifestyle Resort

MELI PALACE, SISSI LASSITHI
All In Lifestyle Resort

PLAZA BEACH HOUSE, RETHYMNO

GRAND LEONIKI RESIDENCE,
RETHYMNO

VILLA OLIVA, RETHYMNO

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

*Securing the Future of a World Cultural Heritage,
Casina Pio IV, The Vatican, May 3-4, 2022*

Το Κέντρο Αριστείας για την Υγεία και την Ευεξία σε συνεργασία με την GRECOTEL ανακοινώνει στόχους και δράσεις

The Hellenic Center for Excellence in Health & Wellness in Collaboration with GRECOTEL announces its goals and first steps



THE PONTIFICAL ACADEMY OF SCIENCES



The Hellenic Center for Excellence in Health & Wellness in Collaboration with GRECOTEL announces its goals and first steps at the Vatican's Pontifical Academy

• **ΤΟ ΠΡΩΤΟ ΔΙΕΘΝΕΣ ΕΠΙΣΤΗΜΟΝΙΚΟ ΣΥΝΕΔΡΙΟ ΣΤΗΝ ΚΡΗΤΗ ΤΟ ΦΘΙΝΟΠΩΡΟ**

**Η Greccotel και το Κέντρο Αριστείας για την Υγεία
και την Ευεξία ανακοινώνουν στόχους και δράσεις**

Continuing Professional Education (all levels/disciplines)

Wellness/Medical Tourism

“Farm Store”

Winery, Wine Cellars and Wine Education



THE ART & SCIENCE OF OLIVE OIL: NUTRITION, MEDICINE AND PLANETARY HEALTH
*Securing the Future of a World Cultural Heritage,
Casina Pio IV, The Vatican, May 3-4, 2022*



THE PONTIFICAL ACADEMY OF SCIENCES



“The Real Cretan Experience”

In collaboration with the Hellenic Center of
Excellence for Health & Wellness

May 5-9, 2022



ΕΛΛΗΝΙΚΟΣ
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ΠΕΡΙΦΕΡΕΙΑ ΚΡΗΤΗΣ
REGION OF CRETE

ACTTA
ASSOCIATION of CRETAN TOURISM & TRAVEL AGENCIES

MIA MONADIKH EMPEIRIA ZΩΗΣ - " A ONCE IN A LIFE TIME EXPERIENCE "

Prof. Frank Hu, Chair of Nutrition, Harvard Chan School of Public Health

**"Only now, I understand why the Cretan Lifestyle and
Traditional Greek Diet led to Superior Health & Longevity Results"**



Hellenic Center for Excellence in Health & Wellness

Using the traditions & history of the Cretan Diet as a reference point for Education & Research

The Center couples its varied educational offerings with Hands-On Immersion

Visitors will see, hear, taste and live unique and unforgettable experiences in Crete inspired by the land, people and their history.



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Η ΕΦΗΜΕΡΙΔΑ
ΤΩΝ ΣΥΝΤΑΚΤΩΝ

ets



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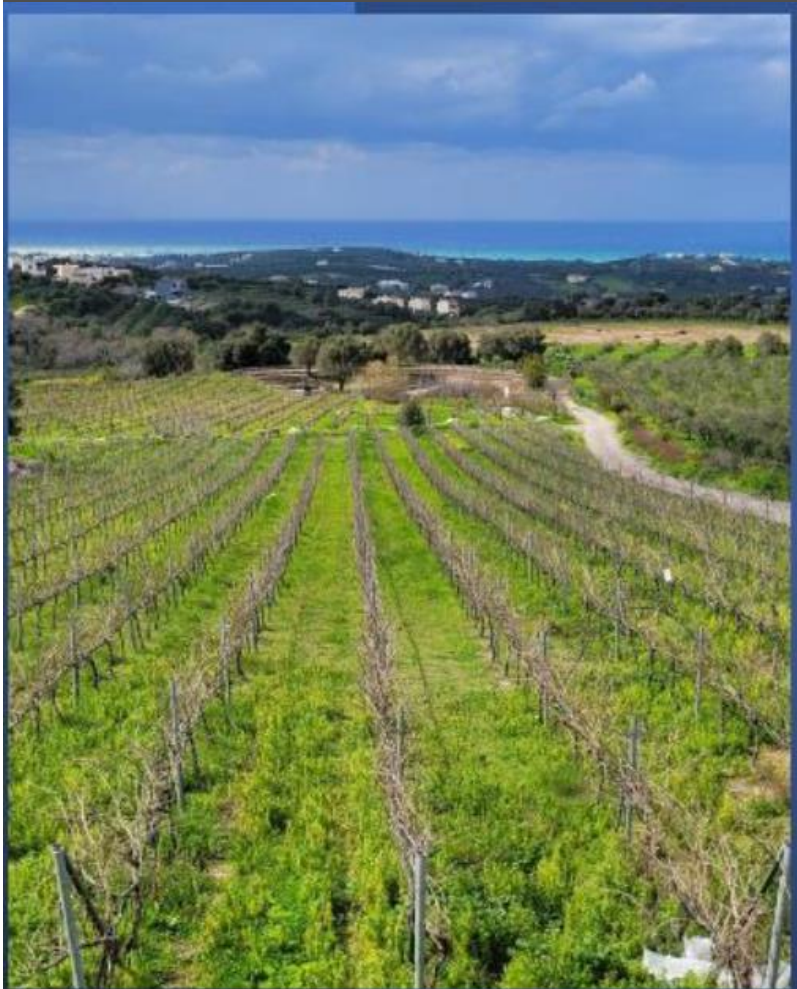
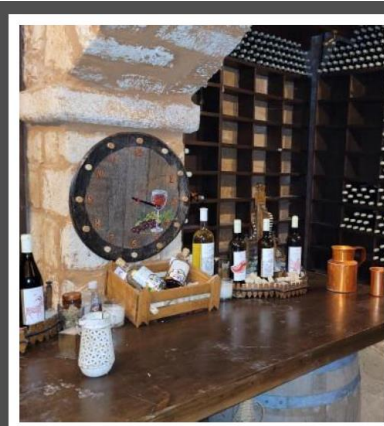
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GRECOTEL
HOTELS & RESORTS



**CRETAN LIFESTYLE:
IMMERSION EXPERIENCE:
Nov. 7-11: Creta Palace, Crete**





HARVARD T.H. CHAN
SCHOOL OF PUBLIC HEALTH

THANK YOU - DISCUSSION

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Chef Culinary
CONFERENCE 2022

28th Chef Culinary Conference
June 5-10, 2022 | UMass Amherst | Amherst, MA