

Transforming Protein Landscape in the Mediterranean

Exploration and Implementation of Products with Alternative Proteins in Mediterranean Region

Prof. Dr.-Ing. Özlem Özmutlu



The PRIMA programme is supported under Horizon 2020, the European Union's Framework Programme for Research and Innovation



Our Mission

➤ ProxIMed aims to revolutionize **protein consumption** in the **Mediterranean region** through **innovation** and **sustainability**.

➤ The project focuses on developing over **20 alternative protein products** with the active involvement of consumers, industry partners, and innovative technologies.

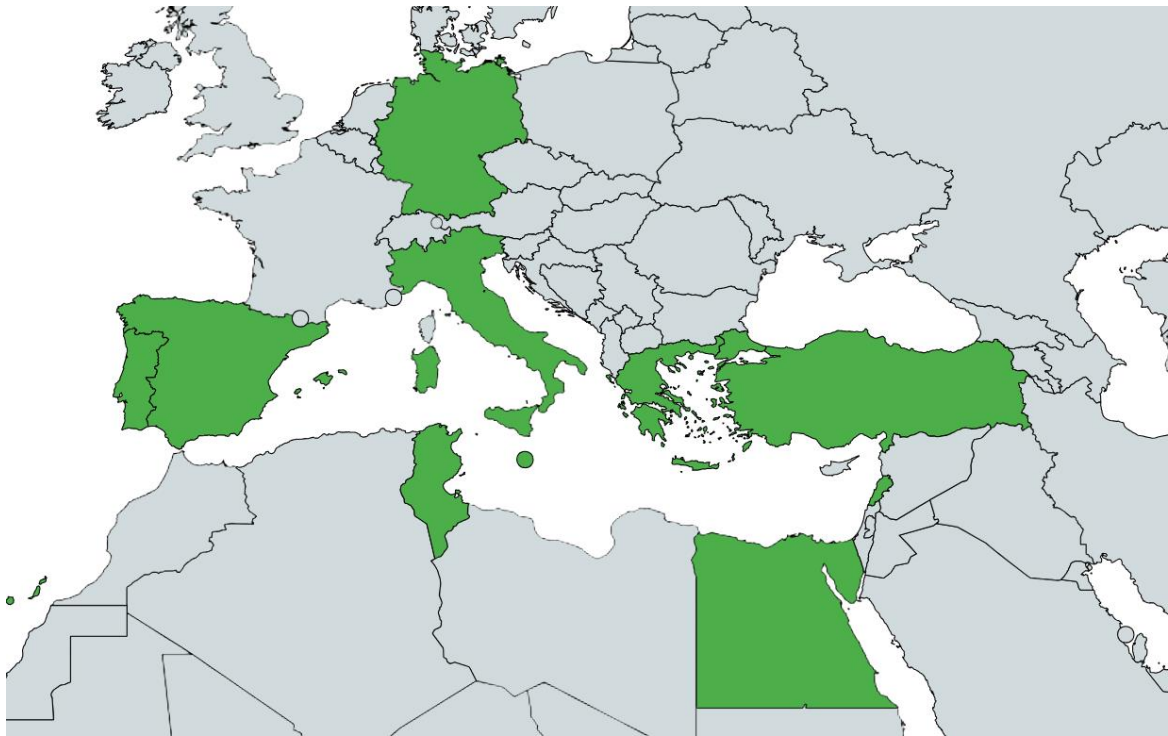
By **reducing environmental impact**, **improving food security**, and **enhancing food choices**, ProxIMed strives to shape a **healthier and more sustainable future** for the Mediterranean population.



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Our Reach



10 Countries



17 Partners



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Our Partners



**ODTÜ
METU**

Middle East Technical University
(METU) - **TURKIYE**

American University of Beirut (AUB) - **LEBANON**



Focus Foodlabs (FFL) - **GERMANY**

TAT Gıda Inc. - **TURKIYE**



University of Sfax (UoS) - **TUNISIA**

AINIA- **SPAIN**



Arid Regions Institute (IRA) - **TUNISIA**

Proteinsecta (PS) - **SPAIN**



proteinsecta



WEIHENSTEPHAN TRIESDORF
University of Applied Sciences

HSWT - **GERMANY**



University of Parma (UNIPR) - **ITALY**

Assiut University (AU) - **EGYPT**



GreenSurvey
Institut für Marktforschung
Prof. Dr. Menrad GmbH

Green Survey (GS) - **GERMANY**

Aristotle University Thessaloniki (AUTH) - **GREECE**



**ARISTOTLE
UNIVERSITY
OF THESSALONIKI**



Uluova Dairy Company (UL) - **TURKIYE**

Malta College of Arts, Science and Technology (MCAST)
MALTA



MCAST



Universidade Catolica Portuguesa (UCP) - **PORTUGAL**

Deutsche Institut für Lebensmittel (DIL) - **GERMANY**



Visual Summary of ProxIMed



Protein Sources of ProxIMed



Traditional alternative protein sources

Lentil | Faba Bean | Chia Seed

Terrestrial sources

Mallow | Tomato Leaves

Aquatic sources

Duckweed | Microalgae

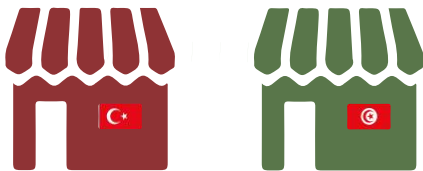
Microbial sources

Mycoprotein | Insects

Agri-food by products

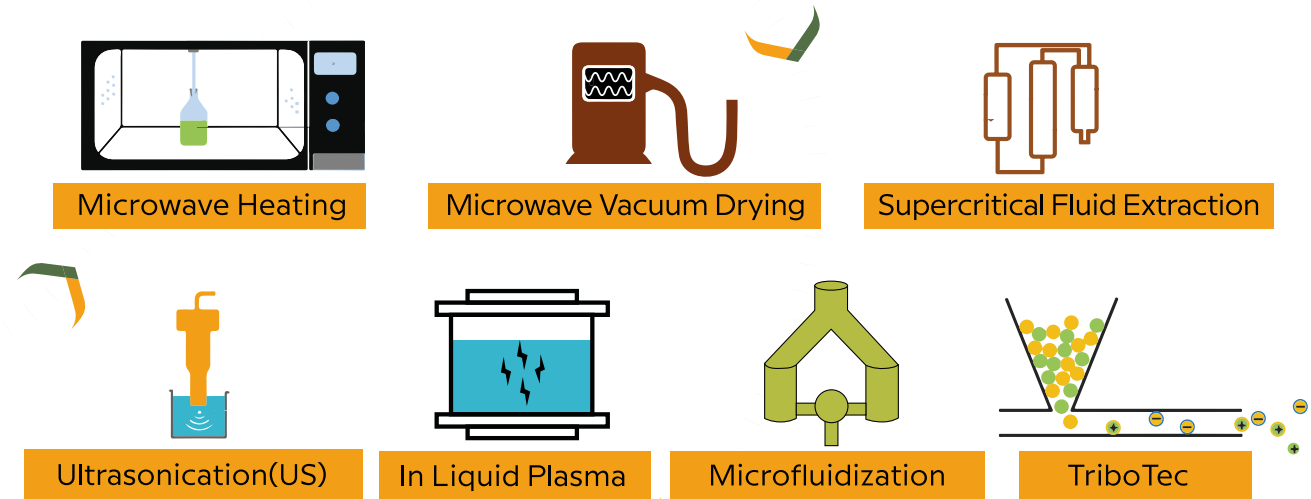
Tomato pomace | Dates by products | Sesame cake

Market Launch of the New Alt-Proteins

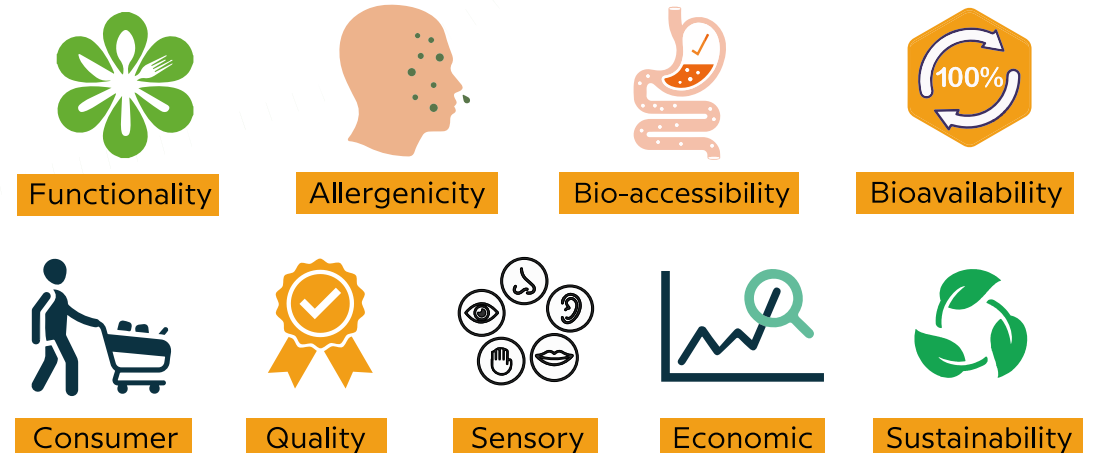


With the help of industrial partners (TAT, UL, FFL, PS), 2 selected products will be launched in Turkish and Tunisian markets.

Pre-processing/Extraction/Fractionation Methods



Product Nutrition, Safety & Health Aspects



Consumers' Acceptance

Analyze consumers' general perception, relevant benefits and barriers related to developed products

Focus Group Studies

- Interest in insects as food (TR)
- Interest in mixed vegetable pickles/ready soups enriched with proteins (TR)
- Interest in mycoproteins (PT)
- To explore the factors influencing consumer acceptance of alternative proteins derived from agricultural by-products in Tunisia (TU)

Consumer preferences and WTP (willingness-to-pay) for the developed alternative protein food products

- Online Survey Portugal (600), Turkey (600), Tunisia (400), Ethiopia (600)



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Consumers' Acceptance

- Key purchasing decisions are driven by **price, convenience, and trust in familiar brands**.
- **Personal recommendations** from family or friends hold more weight than marketing or studies in influencing food choices.
- Meat is culturally associated with a complete meal, with a **strong preference for local, fresh market ingredients** over supermarket options.
- There is **resistance to new ingredients** or deviations from traditional preparation methods, as these changes can be seen as disrespectful.
- **Familiarity** with ingredients, like dates and sesame, **increases acceptance of new products**.



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Thank you.

We are ready for your questions.

Find us online @proximedprima or
by scanning the QR code

Visit our website for more information!
proximedprima.eu



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Thank you!



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PRIMA
PARTNERSHIP FOR RESEARCH AND INNOVATION
IN THE MEDITERRANEAN AREA



Our Vision

"A future where alternative protein sources redefine diets, promoting health and sustainability."

➤ In this vision, ProxIMed envisions a shift towards protein sources that not only meet dietary needs but also **align with ecological and economic goals**.

By integrating **low-input and available raw materials** with **innovative extraction processes**, ProxIMed seeks to create a **paradigm shift in the way people perceive and consume proteins** in the Mediterranean.

The vision extends beyond product development, aiming to instill a **long-lasting positive impact on health, the environment, and the overall well-being of communities in the region**.



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	Alt-protein Source	Products to be Developed	Partner
	Tomato Pomace	Fermented vegetable pickle in protein enriched solution; Ready soups	TAT/METU
	Tomato Leaf	Traditional ready dishes Tomato sauces Protein powder as an ingredient	
	Lentil	Easy mix vegan/vegetarian meatballs: A powder mix to prepare meat ball analogues	HSWT/FFL
		Protein powder as an ingredient	
	Sesame Cake	Tahini enriched with sesame protein	AUB Sonaco Al Rabih
		Protein powder as an ingredient	
	Date by-product	Protein powder as an ingredient	UoS/IRA
	Microalgae	Protein powder as an ingredient	UoS
		Capsules as supplement	
	Mycoprotein	Powder as food ingredient	ANIA /UCP
		Snack Bar	
	Algae/Date/Sesame cake	Protein enriched yoghurt	UL
	Insects	Protein powder as an ingredient	AINIA/PS
		Meat / Fish analogues	DIL
		Animal feed	AUTh
	Faba Beans	Protein powder as an ingredient	METU
	Chia Seed	Protein powder as an ingredient	HSWT
	Mallow	Protein powder as an ingredient	METU



	Alt-protein Source	Partner	Products to be Developed
1	Tomato pomace/Tomato leaf protein	TAT, METU	Pickle; sauces, dishes, soups
2	Lentil protein concentrates	HSWT, FFL	Easy mix meat ball analogues
3	Sesame seed cake/meal protein	AUB	Tahini
4	Mycoprotein powder	UCP	Protein snack bar
5	Date seed protein/Algal proteins	UL	Protein enriched yoghurt
6	Insects proteins	AUTh	Animal Feed
7	Insects proteins	DIL	Meat analogue/fish analogue

Work Packages

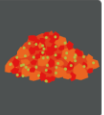
Work Packages					
WP #	WP Title	Participant #	Lead Participant	Start Month	End Month
1	Management and Coordination	1	HSWT1	1	48
2	Consumers' acceptance	1	HSWT2	1	48
3	Protein production through innovative technologies	2	METU	3	42
4	Product development and sensorial evaluation	10	AINIA	12	48
5	Economic and Environmental assessment	3	GS	1	48
6	Health, Nutrition & Safety Aspects	7	AUTh	6	48
7	Business model development	1	HSWT3	24	48
8	Dissemination and Communication Activities	2	METU	1	48



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Our Worklist

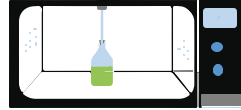
	Alt-protein Source	Products to be Developed	Partner		Alt-protein Source	Products to be Developed	Partner
	Tomato Pomace	Fermented vegetable pickle in protein enriched solution Protein powder as an ingredient	TAT/METU		Mycoprotein	Powder as food ingredient Capsules as supplement Dessert	ANIA /UCP
	Tomato Leaf	Fermented vegetable pickle in protein enriched solution Protein powder as an ingredient	TAT/METU		Algae/Date/ Sesame cake	Dairy substitutes	UL
	Faba Beans	Easy mix vegan/vegetarian meatballs: A powder mix to prepare meat ball analogues Protein powder as an ingredient	HSWT/FFL		Insects	Protein powder as an ingredient Food products will be determined based on consumer studies (e.g. sport nutrition snack bars; meat and fish analogues) Animal feed	AINIA/PS/DIL
	Sesame Cake	Tahini enriched with sesame protein Protein powder as an ingredient	AUB Sonaco Al Rabih		Lentil	Protein powder as an ingredient	HSWT
	Date by-product	Protein powder as an ingredient	UoS/IRA		Chia Seed	Protein powder as an ingredient	HSWT
	Microalgae	Protein powder as an ingredient Capsules as supplement	UoS		Mallow	Protein powder as an ingredient Capsules as supplement	METU



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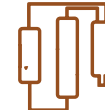
Pre-processing/Extraction/Fractionation Methods



Microwave Heating



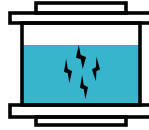
Microwave Vacuum Drying



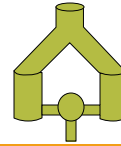
Supercritical Fluid Extraction



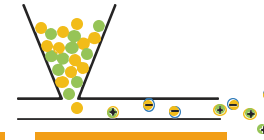
Ultrasonication(US)



In Liquid Plasma



Microfluidization



TriboTec

Product Nutrition, Safety & Health Aspects



Functionality



Allergenicity



Bio-accessibility



Bioavailability



Consumer



Quality



Sensory



Economic



Sustainability



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