

Description of Funded Research Projects

1st Call for H.F.R.I. Research Projects
to support Post-Doctoral Researchers



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Hellenic Foundation for
Research & Innovation

Research Project Title:

**Valorization of agro-industrial
by-product streams from Aegean
for the production of
carotenoids, proteins and novel
functional foods**

Principal Investigator:
Charalampia Dimou

Popular Title:

**Valorization of agro-industrial by-products
towards the production of novel food
products**

Scientific Field:

Agricultural Science

Host Institution:

University of the Aegean



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The development of bio or environmentally friendly strategies for the production of value-added food products with high nutritional value is a field of high interest for both the industrial sector, consumers and academic research. Driven by increasing social demand for the production of healthier products not colored by chemical synthesized ingredients, malnutrition of a great deal of worldwide population, the necessity of protecting the environment, waste management penalties imposed from inappropriate discharging of waste streams, valorization of high pollutant by-product streams for the production of bio or carotenoids and functional food from costless raw materials, has become inevitable. Therefore, the exploitation of agro-industrial originated by-product streams, aiming at producing functional foods through the application of proper processes, is a promising alternative toward sustainable management, promoting public health.

The aim of this proposal is the development of appropriate environmentally friendly systems for the production of (bio) carotenoids, proteins and innovative functional or superfood products, utilizing various agro-industrial by-products of different regions of Greece, emphasis on the wider area the Aegean and more specifically North Aegean area.

Production of carotenoids, proteins and functional products from agroindustrial by-product streams is of high significance for a multivariate prospective regarding society, humans and food processing. Carotenoids, apart from coloring substances in the food matrix, may prevent the development of several diseases. The United Nations Food and Agriculture Organization has estimated that about 795 million people of the 7.3 billion people in the world, or one in nine, were suffering from chronic undernourishment in 2014-2016. Thinking that the most significant reason for malnutrition or undernutrition is protein-energy malnutrition, is more than obvious that the production of protein rich products from residues, could partially solve malnutrition issues.

So, valorization of agroindustrial by-product streams from Aegean for the production of carotenoids, proteins and novel functional foods could simultaneously propose novel ways of agroindustrial by-products management and production of functional products of high nutritional value.

To me, H.F.R.I. funding
would mean...

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For me, H.F.R.I. funding constitutes a great opportunity to do and develop research in my country, which is very difficult, owing to very few available resources and vacancies in my research area interests. H.F.R.I. funding gives me an incentive to develop research, preventing my relocation abroad, which seemed inevitable. Of course, the realization of research innovations described in approved for funding research proposal, would have been impossible without H.F.R.I. funding.

*The Principal Investigator,
Charalampia Dimou*

Funding

Amount: **199,999 €**

Duration: **36 months**

Foundation: **H.F.R.I.**





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