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:

Role of alternative splicing in the regulation of mitochondrial physiology and retrograde signaling to the nucleus

Principal Investigator:

Zoi Erpapazoglou

Popular Title:

Regulation of mitochondrial physiology in gastric cancer

Scientific Field:

Life Sciences

Host Institution:

Biomedical Sciences Research Center “ Alexander Fleming”

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Mitochondria are semiautonomous organelles, critically involved in ATP production, Ca2+ buffering, oxidative stress and apoptosis. They are in constant communication with the nucleus, and induce, under stress conditions, massive changes in nuclear gene expression (mitochondrial retrograde signaling). Mitochondrial quality and signaling have attracted great attention in the study of pathogenesis of neurodegenerative and metabolic diseases, as well as cancer. The transcriptional regulation of these pathways has been thoroughly investigated. However, there is growing evidence that post-transcriptional regulation, specifically alternative splicing, constitutes an additional, yet poorly explored level of control.

In the proposed project, we will investigate the role of alterative splicing in signaling pathways between mitochondria and the nucleus. We will then investigate the impact of deregulating such splicing events in the development of pathogenesis, using gastric cancer as a model.

Project Impact on Society

The main aim of the proposed research is to provide novel mechanisms controlling RNA and underlying mitochondrial function during gastric cancer development and progression. As such, the proposed research has significant potential to identify targets for therapeutic intervention against this disease, the 5th most common form of cancer worldwide. In addition to dissemination of scientific knowledge (publications in peer reviewed journals, participation in national and international conferences), large-scale data from our research will be made available to the scientific community (deposition in international public repositories).

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

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The funding has provided me the chance to pursue me career as post-doctoral researcher in Greece, after a 12-year period of being abroad. I am particularly enthusiastic about this opportunity to work in an internationally renowned institute, where I feel confident that I will benefit from all the necessary support and interactions, to successfully carry out the proposed research project. A project that is in total coherence with my previous scientific interests, and which will allow me to explore new scientific horizons.

The Principal Investigator,
Zoi Erpapazoglou

Funding

Amount: **180,000 €**

Duration: **36 months**

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

H.F.R.I.
Hellenic Foundation for Research & Innovation

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