

## ***CV – Dr Pelagia Foka***

***Position Title:*** Senior Researcher (Researcher Grade B'), Molecular Virology Laboratory, HPI Athens

### ***Education:***

Institution and Location	Degree	Completion Date	Field of Study
NKUA, Department of Chemistry	BSc	07/1999	Chemistry
Cardiff University, UK, School of Biosciences, Department of Biochemistry	Ph.D.	07/2003	Molecular Cell Biology/Biochemistry

### ***A. Personal Statement***

I am a chemist by training, specialising in biochemistry, molecular biology, immunology and molecular virology. I completed my PhD thesis in Molecular/Cell Biology and Biochemistry at the Biochemistry Dept., School of Biosciences, Cardiff University, UK, (Thesis Project: Regulation of CCAAT enhancer binding alpha (C/EBP $\alpha$ ) transcription factor in hepatic acute phase response). In 2002, I obtained a BBSRC fellowship for the development of non-viral polymeric vectors for drug delivery and targeting in liver cancer and moved to the Welsh School of Pharmacy. In 2003, I became a Wellcome Trust Fellow working in the molecular mechanisms involved in macrophage-mediated regulation of lipid metabolism in atherosclerosis at the Biochemistry Dept., School of Biosciences, Cardiff University, UK. Returning to Greece in 2006, I joined HPI to participate in European and Nationally-funded projects with the laboratories of Molecular Virology and Molecular Biology – Immunobiotechnology as a postdoctoral researcher. In 2018, I was appointed Researcher Grade C' at the Molecular Virology Laboratory, HPI. I have been promoted to Senior Researcher (Researcher Grade B'), since April 2022. Over the years, I have built solid and fruitful international, national and intra-institutional collaborations, I have set up cutting-edge methodologies for the advancement of my research works, I have trained and supervised a plethora of students in the lab, I have demonstrated in university practicals and I have taught university courses and tutorials.

### ***B. Positions and Honours***

*1998-2002:* PhD Studentship - Biochemistry Dept., School of Biosciences, Cardiff University, UK

*1998-2002:* Full-time Demonstrator in Undergraduate Practical Classes – Biochemistry Dept., School of Biosciences, Cardiff University, UK

*2002-2003:* BBSRC Postdoctoral Fellowship - Welsh School of Pharmacy, Cardiff University, UK

2003-2006: Wellcome Trust Fellowship - Biochemistry Dept., School of Biosciences, Cardiff University, UK

2006-2010: Postdoctoral Scientist - 6<sup>th</sup> EU Framework (FP6), Molecular Virology Laboratory (Dr P. Mavromara group), HPI

2006: “Bourse de Stage” Fellowship – Training in Molecular Virology, University of Lyon, France, Scientific department of the French Institute of Athens

2011-2014: Senior Postdoctoral Researcher - ESPA/Synergasia, Molecular Biology - Immunobiotechnology Laboratory (Dr A. Mamalaki group), HPI

2014-Present: Visiting Lecturer - MSc in Advanced Systems & Methods in Biomedical Engineering, Department of Biomedical Engineering, University of West Attica

2015-2017: Senior Postdoctoral Researcher - Hellenic Association for the Study of the Liver, Molecular Virology Laboratory (Dr U. Georgopoulou group), HPI

2018-03/2022: Researcher (Grade C'), Molecular Virology Laboratory, HPI

11/2019: Organising Committee Member of the 70<sup>th</sup> HSBMB Congress

2019-2021 and 2021-2023: HSBMB Tellers Committee member (elected)

04/2022-Currently: Senior Researcher (Grade B'), Molecular Virology Laboratory, HPI

### ***C. Contributions to Science***

- *Research interests:* i) Investigation of HCV- and HBV- host interactions, with emphasis on immunometabolic studies, lipid metabolism, iron homeostasis, liver inflammation and the epigenetic determinants of HCV-driven pathogenesis in viral persistence and hepatocellular carcinoma (HCC). ii) Host immune responses in HCV, HBV and SARS-CoV-2 infections. iii) Development of safe and efficient HSV-1-derived oncolytic vectors, designed to strictly target and eradicate HCC. iv) Development of molecular diagnostics for MERS-CoV based on state-of-the-art synthetic biology techniques. v) Generation of pseudoviral particles for research and diagnostic purposes. vi) Creation of “more physiologically-relevant” tissue environments for the study of viral infection pathobiology by constructing and validating novel *in vitro* 2D and 3D cell culture and co-culture models.

- Member of the HPI Steering Committee for the creation of the new HPI-PRC - Pathogens Research Centre within the HPI premises. The proposal was drafted and submitted to the Ministry of Development and Investments for funding by the “Greece 2.0 National Recovery and Resilience Plan”. It was approved in May 2021 and 26.2M € have been allocated to HPI for the realisation of the project.

- Supervisor the iGEM Athens 2018 team for the project “GENOMERS: Toehold switch-enabled viral detection via routine glucose monitoring technology” (<http://2018.igem.org/Team:Athens>). The project

was carried out at the Molecular Virology Laboratory and it was the official Greek participation to the International Synthetic Biology Competition iGEM in Boston, USA, in October 2018. The project dealt with the development of a molecular diagnostic method for the detection of MERS-CoV using toehold switch technology coupled with a glucose – related reporter protein. The team received a bronze medal for its efforts.

- Candidate for the “Pasteur Network Talent Award 2017” a competition of the International Pasteur Institute Network (IPIN) for the most talented young scientists below 45 years of age.

#### ***D. Additional Information***

##### ***Funding***

- 2022 – 2024: Gilead Sciences, Hellas, Asklepios Grants, “Epigenetic Control of the Endohepatic Metastatic Potential of HCV-HCC via the LS1 – Emmprin Axis” (Primary Investigator)
- 2021 – 2023: National Science Fund, Ministry of Education and Science, Bulgaria, Competition for financial support of basic research projects – 2021, “Coronavirus Infections - Host and Cell Interactions in the One Health Concept” (In collaboration with Dr U. Georgopoulou and Prof. M. Margaritova Zaharieva - S. Angeloff Institute of Microbiology, Bulgaria)
- 2021 – 2023: Diagnostiki Athinon Clinical and Research Laboratory, “Development of a GC/MS-based analytical method for the determination of bioactive lipids” (In collaboration with Dr P. Eliadis - HPI)
- 2020 – 2023: Nostos Donation –Hellenic Pasteur Institute competitive studentships, Three-year PhD Studentship, “RNA Viruses and Host Immune Responses” (Primary Investigator)
- 2020 – 2022: Young Researchers Support Grant, 2<sup>nd</sup> round - ESPA 2014 – 2020, “Cellular Mediators as Modulators of Adaptive Immune Responses in HCV Infection” (Associate Academic Advisor)
- 2018 – 2020: Gilead Sciences, Hellas, Asklepios Grants, “HCV-regulated lipid metabolism of the host as a putative mechanism for HCC development” (Primary Investigator)
- 2015 – 2017: Hellenic Association for the Study of the Liver, “Deregulation of Lipid Metabolism in HCC: The HCV paradigm (In collaboration with Dr U. Georgopoulou - HPI)

##### ***Member of the Scientific Societies***

Association of Greek Chemists, Hellenic Society of Biochemistry and Molecular Biology, Hellenic Association for the Study of the Liver, Society for Chemistry and Industry, British Biochemical Society.

##### ***Supervision of Students and Postdocs***

Hellenic Pasteur Institute: 6(Postdocs)/12 (PhD)/3 (MSc)/9 (Undergrads-Interns)

Cardiff University, School of Biosciences and School of Pharmacy, UK: 7(PhD)/3(MSc)/5 (Undergrads)

***Academic Reviewer***

In 12 Journals – 6 Publishing Houses:

*MDPI* (IJMS, Entropy, Cancers, Cells, JCM)

*Springer* (MCB, BMC Medicine)

*Elsevier* (Biomedicine & Pharmacotherapy, Bioorganic Chemistry)

*Wiley* (Traffic)

*Taylor and Francis* (Toxicology Mechanisms and Methods)

*PLOS* (PLOS One),

Journal of Molecular Biochemistry

***Full list of Publications:*** [AAQ-4267-2020](#) (Publons – WOS ResearcherID)