

BIOGRAPHICAL SKETCH

NAME: Petros A. ELIADIS	POSITION TITLE: Specific Operations Scientist B' Laboratory of Immunology, HPI		
EDUCATION/TRAINING	DEGREE	YEARS	FIELD OF STUDY
<u>GRADUATE STUDIES:</u> Aristotelian Univ. of Thessaloniki, Dept. of Biology	BSc in BIOLOGY	1978-1982	BIOLOGY
<u>POSTGRADUATE STUDIES:</u> Aristotelian Univ. of Thessaloniki, Dept. of Biology	Doctorate of Biological Sciences	1985-1991	IMMUNOLOGY
Hellenic Pasteur Institute, Lab of Biotechnology	Post doc	1991-1993	BIOTECHNOLOGY

- **Positions and Employment**

2023-today: Specific Operations Scientist B', Laboratory of Immunology, Immunology Dept., Hellenic Pasteur Institute (HPI), Athens, GREECE.

2010-2022: Specific Operations Scientist C', Laboratory of Molecular Biology & Immunobiotechnology, Immunology Dept., Hellenic Pasteur Institute (HPI), Athens, GREECE.

Project title (1): "Study of recombinant Hecpudin and characterization of mAbs recognizing this hormonal peptide molecule" 2010-2021.

Project title (2): "HCV-regulated lipid metabolism of the host as a putative mechanism for HCC development" 2018-2020.

Project title (3): "Initiation of large-scale production of SARS-CoV-2 antigens for serological immuno-assays of SARS-CoV-2 antibodies and application in the upcoming national vaccination" 2020-2021.

2000-2009: Research Associate grade D, Immunology Lab., Biochemistry Dept., HPIInstitute, Athens, GREECE.

Project title (1): "Role of apoptosis on pathogenicity of autoimmune thyroiditis: study of Fas/FasL pathway" 2000-2008.

Project title (2): "Monoclonal antibodies with the ability to penetrate into living cells" 2006-2009.

1994-1999: Research assistant, Immunology Lab., Biochemistry Dept., Hellenic Pasteur Institute, Athens, GREECE.

Project title: "Identification and isolation of autoantigens recognized by anti-smooth muscle autoantibodies (ASMA). Monoclonal antibodies production for different antigens. Development of immunoenzymatic methods."

1991-1993: Post-doctoral Associate, Dept. of Biotechnology, Hellenic Pasteur Institute, Athens, GREECE.

Project title: "Monoclonal antibodies for diagnosis and differentiation of chlamydia ovine abortions".

- **Honors, Awards**

07/2021: Poster Tour Session. Distinction for the oral presentation at the 27th International Symposium on Hepatitis C Virus and Related Viruses, (HCV 2021 Virtual Symposium).

10/2018: Bronze Medal in the International Synthetic Biology Competition iGEM 2018, co-supervision of the iGEM Athens 2018 team that took place at iGEM 2018 Giant Jamboree, Boston, USA.

2013: 2nd Award in the 13rd Panhellenic Congress of Hepatology, 9-12 May 2013, Rhodos, Greece.

1998: 1st Award in 24th Ann. Greek Medical Congress, 5-9 May 1998, Ath., Greece, (AmphiaraioFound.)

1989: 2nd Award in the 1st European Neuroimmunomodulation Congress, Mantona di Campilio, Italy.

1985-1988: Greek Government's fellowship Award for PhD THESIS.

- **Theses (1996-2022 period)**

Supervision of ten lab based dissertation projects of undergraduate students, co-supervision of PhD students, participate in training of PhD, MSc, BSc students and internships.

- **Professional Activities**

Eliadis Petros (PhD), is working as Staff Research Scientist, in Laboratory of Immunology, at HPI. During his research experience, he was involved in the purification of different native proteins (human Ags such as Thyroglobulin, Vimentin, Actin) and the expression, production and purification of some recombinant proteins (molecules such as human Hecpudin, SARS-Cov-2 proteins, receptor ACE2 protein), in the generation of monoclonal and polyclonal antibodies for a panel of antigens (thyroglobulin/thyroxin antigens, hepcidin-25, anti-DNA penetrating mAbs etc.) and the development of different immunoenzymatic methods (chlamydia ovine abortions, autoantigens recognized by ASMA, AngpL-3, AngpL-4 and TGF- β sandwich ELISAs and competitive ELISA for identification of neutralized anti Spike-trimer antibodies of SARS-Cov2. At the same time these molecules usually were studied and used *ex vivo*, in cellular models (Flow Cytometry-FACS, Live Fluorescent Microscopy and Confocal Microscopy).

This period (i) a surrogate SARS-CoV-2 neutralization test was designed for quantitative assessment of neutralizing antibodies (the validation of this inhouse method that uses trimeric spike protein is ongoing with promising results) and (ii) HCV-regulated lipid metabolism and the detection of immune response determinants and metabolic biomarkers in viral infection and ensuing human disease is ongoing (in collaboration with the Lab. of Molecular Virology).

- **Publications in refereed journals: 14**

1. "Novel Competitive ELISA Utilizing Trimeric Spike Protein of SARS-CoV-2, Could Identify More Than RBD-RBM Specific Neutralizing Antibodies in Hybrid Sera" **Petros Eliadis**, Annie Mais, Alexandros Papazisis, Eleni K Loxa, Alexios Dimitriadis, Ioannis Sarriorgiou, Marija Backovic, Maria Agallou, Marios Zouridakis, Evdokia Karagouni, Konstantinos Lazaridis, Avgi Mamalaki, Peggy Lymberi, *Vaccines* (Basel) **2024** Aug 13;12(8):914. doi: 10.3390/vaccines12080914.

2. "HCV-Induced Immunometabolic Crosstalk in a Triple-Cell Co-Culture Model Capable of Simulating Systemic Iron Homeostasis" Foka P., Dimitriadis A., Karamichali E., Kochlios E., **Eliadis P.**, Valiakou V., Koskinas J., Mamalaki A., Georgopoulou U. *Cells* (2021), 10(9):2251. doi.org/ 10.3390/cells10092251.
3. "Differential Expression of the Host Lipid Regulators ANGPTL-3 and ANGPTL-4 in HCV Infection and Treatment" Vaia Valiakou, **Petros Eliadis**, Eirini Karamichali, Ourania Tsitsilonis, John Koskinas, Urania Georgopoulou,* and Pelagia Foka,*, *Int J Mol Sci.* **2021** Jul 26;22(15):7961. doi: 10.3390/ijms22157961.
4. "The Hepatitis C virus NS5A and core proteins exert antagonistic effects on HAMP gene expression: the hidden interplay with the MTF-1/MRE pathway" Alexios Dimitriadis, Pelagia Foka, Eleni Kyratzopoulou, Eirini Karamichali, Stavroula Petroulia, Panagiota Tsitoura, Athanasios Kakkanas, **Petros Eliadis**, Urania Georgopoulou and Avgi Mamalaki. *FEBS Open Bio.* **2021** Jan;11(1):237-250. doi: 10.1002/2211-5463.13048.
5. "DNA-histone complexes as ligands amplify cell penetration and nuclear targeting of anti-DNA antibodies via energy-independent mechanisms." Zannikou M, Bellou S, **Eliades P**, Hatzioannou A, Mantz. M, Carayanniotis G, Avrameas S, Lymbery P., *Immunology* **2016** Jan;147(1):73-81. doi:10.1111/imm.12542. Epub 2015 Nov 24.
6. "Low Serum Hepcidin in Patients with Autoimmune Liver Diseases." Lyberopoulou A, Chachami G, Gatselis NK, Kyratzopoulou E, Saitis A, Gabeta S, **Eliades P**, Paraskeva E, Zachou K, Koukoulis GK, Mamalaki A, Dalekos GN, Simos G. *PLoS One* **2015** Aug 13;10(8):e0135486. doi:10.1371/journal.pone.0135486.
7. "Rapid elevation of transferrin saturation and serum hepcidin concentration in hemodialysis patients after intravenous iron infusion." N. Kitsati, D. Liakos, E. Ermeidi, M.D. Mantzaris, S. Vasakos, E. Kyratzopoulou, **P. Eliadis**, E. Andrikos, E. Kokkoulou, G. Sferopoulos, A. Mamalaki, K. Siamopoulos, D. Galaris, *Haematologica* **2015** Mar;100(3): 80-83.doi: 3324/haematol.2014.116806. Epub2014 Nov25.
8. "AB0342 Serum Transferrin Receptor Ratio to Serum Ferritin and Hepcidin Levels in the Differential Diagnosis of Anemia in Rheumatoid Arthritis Patients" E. Nita, E. Kyratzopoulou, **P. Eliadis**, D. Makatsori, C. Kostara, A. Mitsioni, C. Tsaousi, S. Levidiotou, E. Bairaktari, A. Mamalaki, P.V. Voulgari., *Annals of the Rheumatic Diseases* **2015** June, 74:1008, Suppl.2, doi.org/10.1136/annrheumdis-2015-eular.4411.
9. "Thyroxine-binding antibodies inhibit T cell recognition of a pathogenic thyroglobulin epitope" Dai Y, **Eliades P**, Carayanniotis K, McCormick DJ, Kong Y-CM, Magaffa V, Cordopatis P, Lymbery P, Carayanniotis G., *J Immunol* **2005**; 174: 3105-3110.
10. "Enhancing or suppressive effects on processing of pathogenic T-cell epitope in Thyroglobulin" Dai, Y, Carayanniotis, K, **Eliades, P**, Lymperi, P, Shepherd, P, Kong, Y-CM., Carayanniotis, G. *J. Immunol*, **1999**; 162: 6987-6992
11. "A simple method for the serodiagnosis of human hydatid disease based on a protein A/colloidal dye conjugate" **Eliades P**, E.Karagouni, I.Stergiadou & K.Miras, *J.Immun.Meth.***1998**;218:123-132.
12. "Diversity among abortion strains of Chlamydia psittaci demonstrated by inclusions morphology, polipeptide profiles and monoclonal antibodies" E. Vretou, H. Loutrari, L. Mariani, K. Kostelidou, **P. Eliades**, G. Conidou, S. Karamanou, O. Mangana, V. Siarkou, O. Papadopoulos, *Veterinary Microbiology* **1996**; 51: 275-289.
13. "Eucariotic cell component that bind to chlamydial elementary bodies: the histones" Vretou E, **Eliades P**, Psarrou E, Kouvatsou R., *FEMS Microb Let* **1992**; 91:225-230.
14. "Effect of a novel analgesic-opioid agonist on human blood lymphocytes: Counteraction by interleukins" **Eliades P**, Kourounakis L., *Intern J Neurosc* **1990**; 51: 207-208.