

Personal Information

First name, family name, **TIMOKRATIS KARAMITROS**

Date of birth: 05/02/1983

Nationality: Greek (EU)

Communication: Professional Address: Hellenic Pasteur Institute, 127 Vas. Sofias Avenue, 115 21 Athens, Greece

Tel.: + 30 210 6478871 / e-mail: tkaram@pasteur.gr

ORCID ID: 0000-0003-0841-9159 | Web of Science Researcher ID: ABE-3880-2021

Dr. Timokratis Karamitros is a Principal Investigator (PI) and Head of the Bioinformatics and Applied Genomics Unit, in the Hellenic Pasteur Institute (HPI), Greece. He is an expert in NGS technologies and Bioinformatics and his research is focused on viral genomics and on pathogen – host interactions. As a postdoctoral researcher in the Applied and Evolutionary Virology Lab, University of Oxford, UK, he investigated the activity of Human Endogenous Retroviruses. As a Director and founder of the Molecular Diagnostics Department of the “Centre of Laboratory Medicine”, Nicosia, Cyprus, he worked in the development of molecular diagnostics. He is PI of one European Grant (“LEAPS” HORIZON-HLTH-2022), PI for HPI in the National Flagship Action «Hellenic Molecular Oncology Network”, PI for HPI in the National Flagship Action “Greece vs Corona”, member of a GeCIP crosscut domain in the “100.000 Human Genomes Project” (Genomics England), member of the International Consortium “COVID19 Human Genetics Effort”. He manages a group of 9 young scientists, 2 postdocs, 2 PhD Students, 2 MCs technicians, 3 MSc students. He is an author of 57 publications in high impact International Journals (e.g. Science, eLife, PNAS, Nucleic Acids Research, Eurosurveillance etc). Scopus citations: 4344, h-index 17. Google Scholar citations: 6355, h-index: 21.

Education / Qualifications

- 03/2006 – 07/2011 **Doctor of Philosophy (PhD): Applied Genomics, Bioinformatics, Molecular Virology**
Department of Hygiene, Epidemiology and Medical Statistics, Faculty of Medicine, National & Kapodistrian University of Athens, Greece
Laboratory of Molecular Virology, Hellenic Pasteur Institute, Athens, Greece
- 09/2001 – 10/2005 **Bachelor of Science (BSc), Biology**
Biology Department, Faculty of Science, National & Kapodistrian University of Athens, Greece

Scientific Experience

Current Position

- 04/2023 – present **Senior Researcher** - Bioinformatics and Applied Genomics Unit, Department of Microbiology, Hellenic Pasteur Institute, Athens, Greece.

Previous Positions

- 02/2019 – 03/2023 **Commissioned Researcher** - Bioinformatics and Applied Genomics Unit, Department of Microbiology, Hellenic Pasteur Institute, Athens, Greece.
- 04/2017 – 01/2019 **Senior Post Doctoral Researcher** - “Stavros Niarchos” foundation fellow
Laboratory of Public Health, Department of Microbiology, Hellenic Pasteur Institute, Athens, Greece
- 04/2014 – 03/2017 **Post-Doctoral Researcher**
Laboratory of Applied and Evolutionary Virology, Department of Zoology, University of Oxford, United Kingdom
- 08/2011 – 03/2014 **Managing Director of Molecular Diagnostics Department (Founder)**
Medifos Centre of Molecular Diagnostics, Nicosia, Cyprus

Publications in International Journals

<https://pubmed.ncbi.nlm.nih.gov/?term=karamitros+t&sort=pubdate&size=200>

Book Chapters

- 1: Karamitros T, Magiorkinis G. Multiplexed Targeted Sequencing for Oxford Nanopore MinION: A Detailed Library Preparation Procedure. *Methods Mol Biol.* 2018;1712:43-51. doi: 10.1007/978-1-4939-7514-3_4.
- 2: Karamitros T, Paraskevis D, Magiorkinis G. Hepatitis C Virus Origin. Book chapter in "Hepatitis C: Epidemiology, Prevention and Elimination. 2021 V1, p45-53. doi: 10.1007/978-3-030-64649-3_2.
- 3: Tara P. Hurst, Timokratis Karamitros, and Gkikas Magiorkinis. Human Endogenous Retroviruses in Triple-Negative Breast Cancer Book chapter in "Drug and Therapy Development for Triple Negative Breast Cancer" Available from: VitalSource Bookshelf, Wiley Professional, Reference & Trade (Wiley K&L), 2023.
- 4: Pogka V, Mentis A, Karamitros T. "Dual RNA-seq analysis of patients' cells and viral genome after measles infection" Book chapter in *Measles and Related Morbilliviruses: Methods and Protocols.* Springer Nature 2023, In Press

International Conference Proceedings

1. Kontizas, E.; Tastsoglou, S.; **Karamitros, T.**; Karayiannis, Y.; Kollia, P.; Hatzigeorgiou, A.; Mentis, A.; Sgouras, D. N. Putative impact of CagA protein on DNA damage repair modulation during *Helicobacter pylori* infection. SEP 2019. HELICOBACTER. Vol24 p5.02
2. Papadopoulou, G.; Martinez-Gonzalez, B.; **Karamitros, T.**; Kollia, P.; Mentis, A. F.; Sgouras, D. N. Whole Genome Sequencing analysis for characterization of genomic variations associated with antimicrobial resistance among Greek *Helicobacter pylori* isolates. SEP 2019 HELICOBACTER. Vol24 p1.53
3. Martinez-Gonzalez, B.; **Karamitros, T.**; Karayiannis, I.; Kontizas, E.; Georgopoulos, S. D.; Michopoulos, S.; Mantzaris, G.; Sgouras, D. N.; Mentis, A. F. Whole genome sequence analysis for characterization of gene mutations involved in antibiotic resistance in *Helicobacter pylori* clinical isolates in Greece. SEP 2018 HELICOBACTER. Vol23 P06.01
4. Gkikas Magiorkinis, Dimitrios Paraskevis, Oliver-George Pybus, **Timokratis Karamitros**, Tetyana Vasylyeva, Marina Bobkova, Angelos Hatzakis. HIV-1 epidemic in Russia: an evolutionary epidemiology analysis. *The Lancet*, Volume 383, Supplement 1, 2014, Page S71, ISSN 0140-6736, [https://doi.org/10.1016/S0140-6736\(14\)60334-2](https://doi.org/10.1016/S0140-6736(14)60334-2).

International Conferences

1. Vasiliki Pogka, Gesthimani Papadopoulou, Vanessa Valiakou, Dionysios Sgouras, Andreas Mentis, **Timokratis Karamitros**. Targeted virome enrichment and nanopore sequencing enables detection and genome assembly of unknown viruses: the example of SARS-CoV-2. 31st ECCMIC online 9-12 July 2021.
2. Eugene Gardner, **Timokratis Karamitros**, Matthew Hurlles*, Gkikas Magiorkinis*. Identification of mobile elements in the 100,000 genomes project. Genomics England Research Conference 2019. 4th November 2019, London – United Kingdom.
3. G. Papadopoulou, B. Martinez-Gonzalez, **T. Karamitros**, P. Kollia, A. F. Mentis, D. N. Sgouras. Whole genome sequencing analysis for characterization of genomic variations associated with

antimicrobial resistance among Greek *Helicobacter pylori* isolates. XXXIInd International Workshop on Helicobacter and Microbiota in Inflammation and Cancer, Innsbruck, Austria. September 6-7, 2019.

4. **Karamitros T**, Pogka V, Mentis A. Dual-RNAseq enables full genome assembly of measles virus, minority-variant detection and host-pathogen interactions delineation. ESCV2018: 21st Annual Meeting, European Society for Clinical Virology. Athens, Greece, 23rd -26th Sep 2018.
5. **Karamichali E**, Hajar C, Kakkanas A, Agnes M, **Karamitros T**, Vassiliki P, Varacioti A, Kalliaropoulos A, Martinez-Gonzales, Pelagia F, Koskinas J, Mentis A, Benjelloun S, Pineau P, Georgopoulou U. HCV defective genomes promote persistent infection by modulating the viral life cycle. HCV2018: 25th International Symposium on Hepatitis C Virus and Related Viruses. Dublin, 8th - 11th Oct 2018.
6. Santander C, **Karamitros T**, Hurst T, Marchi E, Klenerman P, Lin A, Paraskevis D, Hatzakis A, Katzourakis A, **Magiorkinis G**. HERV-K HML-2 is Replicating in the Germ line of Modern Humans Inducing Pathogenic Remodeling of the Transcriptome. 18th International Conference on Human Retrovirology. Tokyo, Japan, 3rd - 10th March, 2017
7. **Vasylyeva TI**, Friedman S R, Hatzakis A, Pybus O G, Katzourakis A, Smyrnov P, **Karamitros T**, Paraskevis D, Magiorkinis G. HIV epidemic dynamics in people who inject drugs inferred from data from Russia and Ukraine. 13th International Conference on Molecular Epidemiology and Evolutionary Genetics of Infectious Diseases. Antwerp Belgium, May 10th - 13th, 2016
8. **Ntziora F**, Paraskevis D, Magiorkinis E, **Karamitros T**, Poughias L, Hatzakis A Development of a highly sensitive system for the detection and quantification of all major HBV resistance mutations based on ARMS RT-PCR with molecular beacon. 44th Annual Meeting of the European Association for the Study of the Liver. Copenhagen, Denmark, Apr 22th - 26th 2009

Presentations as Invited Speaker (selected)

Karamitros T "Clinical Metagenomics: A one-stop-shop tool for deciphering viral infections and host-pathogen interactions' National Molecular Microbiology Diagnostic User Group (NMG) Annual Conference December 2nd – 3rd, 2019, Toronto, Canada

Karamitros T "The HERV-K HML-2 integration within RASGRF2 is associated with intravenous drug abuse and modulates transcription in a cell-line model". Third International Workshop on Human Endogenous Retroviruses and Diseases, November 5th and 6th 2019, Lyon – France

Karamitros T "The CD4-integrated LTR of the Human Endogenous Retrovirus K interferes with the expression of the CD4 gene in HIV-infected human cell lines". Medawar Day, Oxford Martin School of Medicine. Oct 6th 2016, Oxford, United Kingdom

Research Grants

<i>Project Title</i>	<i>Funding source</i>	<i>Period</i>	<i>Role of the PI</i>
Integrating Multi-Disciplinary Expertise in a Learning and Adaptive European Pandemic Preparedness (LEAPS)	«HORIZON Research and Innovation Actions» HORIZON-HLTH-2022-DISEASE-07-02	2023-2027	Principal Investigator
«SUB3. Applied Research for Precision Medicine through a Non-Profit Organisation under Private Law - "Hellenic Precision Medicine Network " (HPMN)»	National Recovery and Resilience Plan “Greece 2.0” (MIS)5184864	2023-2025	Principal Investigator
Decision making support infrastructure for fighting antimicrobial resistant bacteria in hospitals	National Recovery and Resilience Plan “Greece 2.0” (TA 5149205)	2022-2024	WP3 Principal Investigator
Uncovering hidden antimicrobial resistance reservoirs and dynamics in the gut microbiota of undersampled human populations	International Pasteur Network Programmes Transversaux de Recherche - PTR 2022	2022-2024	Principal Investigator
Subproject 4 of the National Flagship Action entitled “Epidemiological (...), in response to the SARS-CoV-2 crisis”	Ministry of Development & Investments, Public Investments Programme (PIP)	2021 - 2023	Principal Investigator
«Development of a novel Diagnostics method (...) 3 rd generation sequencing technologies »	Ministry of Development and Investment (5050220)	2020 - 2022	Principal Investigator
«The Hellenic Network of Precision Medicine on Cancer initiative»	Ministry of Education, Research and Religion	2018-2021	Technical Committee member
«Development of Novel biological products and services for infectious and neurodegenerative diseases»	Stavros Niarchos Foundation GR (92.38.0002)	2017-2019	Senior Post-Doctoral Research Associate
«Mapping the up-regulation of Human Endogenous Retrovirus K (...) cancer and other diseases»	Medical Research Council UK (MR/K010565/1)	2014-2017	Post-doctoral Research Associate
«Investigation of the immune-regulatory functions of HCV protein core+1»	General Secretariat for Research and Technology (03EΔ298-8594)	2006-2009	PhD Candidate

Memberships & reviewing activities

04/2017 – Present	Member, European Society of Clinical Microbiology and Infectious Diseases (ESCMID)
11/2009 – Present	Member, Hellenic Society of Biochemistry and Molecular Biology
10/2017 – Present	Editorial Board Member of Peer Reviewed Journals: Frontiers in Microbiology – Virology sector, Methods-x, Data in Brief
10/2013 – Present	Reviewer in Peer Reviewed Journals: Nature Communications / Clinical Microbiology and Infection / Frontiers in Immunology / Frontiers in Microbiology / AIDS Research and Human Retroviruses / Genetics and evolution /Scientific Reports / Medicine / PLoS ONE / Patters (Cell Press)

Teaching activities

2021 - Present	Academic Lecturer. MSc, Bioinformatics. Department of Biology, National & Kapodistrian University of Athens, Greece
2020	Academic Lecturer. MSc, Biomedical Methods and Technology in Diagnostics. Biomedical Sciences Department, University of West Attica, Athens, Greece.
2020 - Present	Academic Lecturer. MSc, Biology Applications in Medicine. Department of Biology, National & Kapodistrian University of Athens, Greece
10/2017 – Present	Academic Lecturer. MSc, Clinical Epidemiology: Research methodology in Clinical Practice Department of Hygiene, Epidemiology and Medical Statistics, Faculty of Medicine, National & Kapodistrian University of Athens, Greece
11/2017 – 01/2018	Academic Lecturer. MSc, Clinical Chemistry: Molecular Diagnostics Methodology. Department of Chemistry, National & Kapodistrian University of Athens, Greece

Supervision of Graduate students and PostDoctoral Fellows

02/2019 – Present	2Postdoc, 2PhD Student, 3MSc Students, 5 Undergraduate Students. Bioinformatics and Applied Genomics Unit, Hellenic Pasteur Institute, Greece
04/2017 – 02/2019	2 PhD Students, 2 MSc Students. Laboratory of Medical Microbiology, Department of Microbiology, Hellenic Pasteur Institute, Greece
04/2014 – 04/2017	3 PhD Students. Laboratory of Applied Evolutionary Virology, Department of Zoology, University of Oxford, United Kingdom

Fellowships and Awards

2021	2nd Prize. Oral Presentation. “SARS-CoV-2 Molecular Transmission Clusters & Containment Measures in ten European regions during the first pandemic wave”,Bousali M, Dimadi A, Kostaki EG, Tsiordas S, Nikolopoulos G, Sgouras N, Magiorkinis G, Papatheodoridis G, Pogka V, Lourida G, Argyraki A, Angelakis E, Sourvinos G, Beloukas A, Paraskevis D, Karamitros T., 9th Panhellenic AIDS and Hepatitis Meeting, September 2021.
2020	#GreeceVsVirus #COVIDhackGR hackathon distinction for the proposal “m2B Data Analytics”, Athens, Greece, April 2020.
2019	1 st Prize, “Georgios Papaenangelou Award”. Oral Presentation ‘ Karamitros T , Pogka V, Euaggelidou M, Mentis A. Dual-RNAseq enables full genome assembly of measles virus, minority-variant detection and host-pathogen interactions delineation. 9 th Hellenic Conference of Clinical Microbiology. Athens, Greece, 20 th -23 rd Feb 2019.

-
- 2016 3rd Prize, Oral Presentation 'The Interferon- α Receptor-1 Promoter Polymorphisms are linked to the HBV-associated Hepatocellular Carcinoma and interfere with the transcriptome'. **Karamitros T**, Papatheodoridis G, Paraskevis D, Hatzakis A, Mbissa T, Georgopoulou U, Klenerman P, Magiorkinis G.
- 2010 1st Prize, Oral Presentation: "Development of a highly sensitive system for the detection and quantification of all major HBV resistance mutations based on ARMS RT-PCR with molecular beacon". Ntziora F, Paraskevis D, Magiorkinis E, **Karamitros T**, Poughias L, Hatzakis A. 17th Conference of Viral Hepatitis B and C. Athens, Greece, Jan 30th -31st 2010
- 2006 –2009 **Full postgraduate scholarship for PhD studies** Scholar provided by the Greek State. Funded by the General Secretariat for Research and Technology (SRPP 2003 -code 03EΔ298-8594)

Organisation of Scientific Meetings

- 11/2019 Member of the Organising Committee, 70th National Conference of the Hellenic Society of Biochemistry and Molecular Biology, November 29th – December 1st, 2019, Athens Greece
- 10/2017 Member of the Local Organising Committee, 12th Conference of Hellenic Society for Computational Biology and Bioinformatics (HSCBB17), Athens, Greece
- 09/2017 Member of the Organising and Scientific Committee, 4th Scientific Conference in the frame of the European Researchers' Night 2017 activities, Hellenic Pasteur Institute, Athens, Greece