

Short CV

Education/Training

5/2005-5/2008: Post-doctoral fellow (HFSP0, ENTER2004). Biomedical Research Foundation Academy of Athens (BRFAA). Cell Biology. Zebrafish endocardial cushion and valve development. (9/05–7/06 *military service*)

1/2002-4/2005: Postdoctoral fellow in Department of Biochemistry and Biophysics, University of California San Francisco (UCSF). Laboratory of Prof. Didier Y. R. Stainier.

2001 Ph.D. Department of Molecular Cell Biology, Molecular Genetics, University of Utrecht, The Netherlands. Laboratory of Prof. Ben Scheres.

1997 B.Sc /M.Sc. Biology and Biotechnology Department, Agricultural University of Athens, Greece.

1991 Varvakio high school.

Fluent in Greek, English, French and Dutch.

Positions / Employment:

2023- currently: Associate Professor of Biological Chemistry, Ioannina Medical School

2019-2023: Researcher B, Zebrafish Disease Models lab, BRFAA.

2008-2018: Researcher C, Developmental Biology lab, BRFAA.

Recent selected seminars and associations I participate

2023: Invited Speaker, Animod Cuba 2024. International workshop on Animal Models and Preclinical Research 2024. 2024, Cuba.

2023: Invited Speaker, Scientific Committee, 2nd Natural Cosmetics International Meeting. September 2023, Poland

2022: Organizing Committee, 2nd Cardiovascular Olympiad. Heraklio, Crete. April 2022

2021: Organizing Committee, 71st Meeting of the Hellenic Biochemistry and Molecular Biology Society, Athens

2021: Invited speaker and Scientific Committee: Natural Cosmetics International meeting, Poland.

2020-2024: Managing Committee, European Venom Network (EuVenom COST action), currently STSM co-coordinator. <https://euven-network.eu>

2019: 4th Zebrafish Personalised and Precision Medicine meeting. Toronto, Canada.

2019: Invited Speaker, Animod Cuba 2019. International workshop on Animal Models and Preclinical Research 2019

2019: Invited Speaker, Annual meeting of the Heart Valve Society, Barcelona, Spain.

2018-2022: Managing Committee, Catalysing transcriptomics research in cardiovascular disease (<https://cardiorna.eu>), currently STSM coordinator.

2018: Invited Speaker, European Society of Cardiology, Heart Failure 2018, Austria.

2018-2022: Re-elected at the Executive board of the European Zebrafish Society.

2018: European zebrafish PI meeting, Trento, Italy, speaker.

2017: Invited Speaker at Biotechnology Havana, Cuba, representing EuFishBiomed

2017: Zebrafish Disease Models Meetings, San Diego, USA, speaker.

SUPERVISION OF GRADUATE STUDENTS & POSTDOCTORAL FELLOWS

I have been the Scientific Supervisor of 7 completed Ph.D. theses, 9 completed master theses and 2 undergraduate theses. I have been also in the PhD thesis committee of another 8 Ph.D. theses for Greek Universities. I have been also invited as an examiner in 4 completed theses from the Biology Department of the University of Cyprus and the University of Madrid.

Graduate Students (as the Scientific Supervisor)

Name	Degree	Year Conferred	Current Position
Stamatia Kalogirou	PhD	2014	Cardiologist, MD (University of Athens Medical School. With Prof. Stefanadis, Prof. Tousoulis)
Nikos Malissovass	PhD	2015	Clinical Research Associate, Pharmaserve-Lilly (University of Crete Medical School. With Prof. Gravanis, Prof. Vardas)
Despina Bournele	PhD	2016	Scientific Personnel, Benakeio Institute, Athens (University of Athens Medical School. With Prof. Lekakis, Prof. Parisis)
Panagiotis Kefalos	PhD	2020	Medical Science Liaison, Abbvie (University of Patras, Biology. With Prof. Flytzanis, Prof. Mintzas)
Panagiotis Sarantis	PhD	2020	Research Assistant, Medical School Athens (University of Athens, Biology. With Prof. Gaitanaki, Prof. Efthimiopoulos)
Matina Katraki Pavlou	PhD	2021	Post-doctoral fellow, BRFAA, Beis lab (University of Patras, Pharmacology. With Prof. Papadimitriou, Prof. Topouzis)
Panagiota Giardoglou	PhD	2022	Post-doctoral fellow, Charokopeio (Charokopeio University with Prof. Dedoussis, Prof. Yiannakouris)

Postdoctoral Fellows

Name	Years	Current Position
Maria Zoupa	2012-2014	Scientific Personnel, Benakeio Insitute, Athens
Claudia Roedel	2012-2015	Postdoctoral fellow, University of Potsdam
Adamantia Agalou	2015- 2022	Scientific Personnel, Benakeio Insitute,
Vasiliki Tsata	2019-current	
Dimitris Grivas	2021-current	
Matina Katraki-Pavlou	2022-current	
Antonia Theodoridi	2023-current	

My research interests are in the areas of Cellular and Developmental Biology. During my PhD in the lab of Ben Scheres in Utrecht, I identified how the plant hormone, auxin acts to maintain the stem cell population of *Arabidopsis* roots and identified the *PLETHORA* family of transcription factors that act downstream of auxin and are the master regulators of several developmental processes. I moved to UCSF in 2002, as a post-doc in the lab of Didier Stainier and started working with zebrafish, focusing on cardiovascular development and more particularly on cardiac valve development. I was the first to describe this process at cellular resolution, using confocal microscopy. I also participated in a forward genetics screen, where I identified several mutants regulating cardiac valve development.

I moved back to Greece in 2005, as a Human Frontier Career Development awardee and was the first to introduce zebrafish Biomedical research in Greece in 2005. I have installed and maintained the largest zebrafish facility in Greece since then. I am a founding member of the European Zebrafish Society with more than 300 participating labs.

During the last years, I collaborated with several Greek research teams and trained numerous people to use zebrafish as an experimental model system. These projects include screenings for new Bioactive Compounds in Natural Extracts, Ecotoxicological studies of emerging pollutants, as well as generating zebrafish knock outs to study the function of novel genes. The main focus of my lab remains on Cardiovascular Disease and angiogenesis. We have been able to identify the significance of intracardiac flow dynamics during the development of the heart for proper cardiac valve development. We recently expanded our strategy to study the mechanisms of cardiovascular regeneration exploiting the extraordinary regenerative potential of zebrafish. We developed the first inducible system to genetically ablate valve cells and showed that zebrafish could regenerate their cardiac valves. We identified Notch and Tgfb signaling pathways as critical regulators for different stages of this process (Kefalos et al., 2019; Bensimon-Brito et al., 2020).

In parallel, we set up several assays to perform high-throughput chemical screens using zebrafish embryos. This approach is widely used for drug repurposing and identifying novel bioactive compounds. We have routinely screened for angiogenesis inhibition, melanogenesis inhibition, wound healing, cardiac function, and toxicity and used human cancer cells xenotransplantations in zebrafish. We collaborate with several pharmacologists and chemists who are providing us with unique compounds. We have screened plant extracts (with the lab of Prof. Skaltsounis at the Pharmacology department NKUA) (Agalou et al., 2019), macroalgae (with the lab of Prof. Roussis and Ioannou at the Pharmacology department NKUA) and compounds synthesized in the labs of Prof. Tzakos (University of Ioannina) (Diamantis et al., 2021) and Prof. Sarli (University of Thessaloniki) (Leonidis et al., 2021; Leonidis et al., 2023).

Bibliography August 2023:

Scopus author ID: 65079672 . 4748 citations, 54 documents, h-index: 22

<https://www.scopus.com/authid/detail.uri?authorId=6507967207>

GoogleScholar: 6485 citations, h-index:25, i-10-index:37

<http://orcid.org/0000-0003-2579-7848>

<https://pubmed.ncbi.nlm.nih.gov/?term=beis+d&sort=date>

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5. Leonidis G, Koukiali A, Sigala I, Tsimaratou K, **Beis D**, Giannakouros T, Nikolakaki E, Sarli V. (2023) Synthesis and Anti-Angiogenic Activity of Novel c(RGDyK) Peptide-Based JH-VII-139-1 Conjugates. *Pharmaceutics*. 22;15(2):381. doi: 10.3390/pharmaceutics15020381.
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