



MARIA TAMPAKAKI

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Current Appointment

Graduate fellow at the Computational Bio-Medicine Lab (CBML), Institute of Computer Science (ICS), Foundation for Research and Technology-Hellas (FORTH)

Date of birth: 30/09/1993, Heraklion Crete | Nationality: Greek

EDUCATION

2020-

PhD CANDIDATE, INSTITUTE OF COMPUTER SCIENCE, FOUNDATION FOR RESEARCH AND TECHNOLOGY-HELLAS (FORTH)

2016-2019

MSc in "BRAIN & MIND" SCIENCES, SCHOOL OF MEDICINE, UNIVERSITY OF CRETE

Grade: 8.53/10, "Excellent"

2011-2016

BSc in BIOLOGY, DEPARTMENT OF BIOLOGY, UNIVERSITY OF CRETE

Grade: 7.24/10, "Very Good"

2008-2011

HIGH SCHOOL DIPLOMA, "DOMINIKOS THEOTOKOPOULOS", 1ST HIGH SCHOOL OF MALEVIZI

Municipality of Malevizi, Heraklion Crete

Grade: 19/20, "Excellent"

RESEARCH EXPERIENCE

10/2018 – 10/2019

MASTER THESIS

"IMAGE GUIDED BRAIN CANCER MODELING – THE ROLE OF PROMYELOCYTIC LEUKEMIA PROTEIN IN GLIOBLASTOMA PHYSIOLOGY"

Computational Bio-Medicine Lab (CBML), Institute of Computer Science (ICS), Foundation for Research and Technology-Hellas (FORTH), (inseption.gr)

Evaluation Committee:

1. Supervisor: V. Sakkalis, Principal Researcher, Computational Bio-Medicine Lab, ICS, FORTH (sakkalis@ics.forth.gr)
2. Evaluator: K. Sidiropoulou, Assistant Professor in Neurophysiology, Dept. of Biology, University of Crete (sidirop@uoc.gr)
3. Evaluator: T. Maris, Assistant Professor of Medical Physics, Faculty of Medicine, University of Crete (tmaris@med.uoc.gr)

Summary: Computational modeling of the physiological characteristics of Glioblastoma (GB) cells based on in vitro biological models. The physiological properties of genetically modified GB cell lines are studied in vitro, in 2D and 3D cultures, and imaged with fluorescence pulse sources, aiming in new imaging biomarkers and therapeutic targets identification. Furthermore, the project involves the development of an ex vivo mouse brain slice protocol in order to study the invasive properties of the GB cells in their microenvironment of origin with the use of photoacoustic imaging.

10/2017 – 02/2018

LAB ROTATION

“ANALYSIS OF MACAQUE PREFRONTAL CORTEX ELECTROPHYSIOLOGICAL RECORDINGS”

Laboratory of Visual Cognition, Faculty of Medicine, University of Crete

Supervisor:

G.Gregoriou, Associate Professor, Medical School, University of Crete (gregoriou@uoc.gr)

Summary: Off-line analysis in MATLAB of macaque prefrontal cortex (PFC) electrophysiological activity regarding the PFC relationship to attention. Basic training in macaque handling and behavioral training.

05/2017 – 09/2017

LAB ROTATION

“IN VITRO/IN SILICO STUDY OF THE ROLE OF PHYSIOLOGICAL FACTORS AFFECTING TUMOR GROWTH IN PRIMARY GLIOBLASTOMA CELL LINES”

Computational Bio-Medicine Lab (CBML), Institute of Computer Science (ICS), Foundation for Research and Technology-Hellas (FORTH)

Supervisor:

V. Sakkalis, Principal Researcher, Computational Bio-Medicine Lab, ICS, FORTH (sakkalis@ics.forth.gr)

Summary:

In Vitro/In Silico study of physiological characteristics of Glioblastoma (GB). Parametrization and validation of a hybrid discrete-continuous patient-specific computational model based on theoretical and experimental results.

09/2015 – 07/2016

BACHELOR THESIS

“DIFFERENTIAL REGULATION OF COGNITIVE FUNCTIONS IN ADOLESCENT AND ADULT MICE”

Neurophysiology and Behavior Lab, Dept. of Biology, University of Crete

Supervisor:

K. Sidiropoulou, Assistant Professor in Neurophysiology, Dept. of Biology, University of Crete (sidirop@uoc.gr)

Summary: Development of the Attentional Set-Shifting Task behavioral protocol in order to study the cognitive flexibility in adolescent and adult mice. Training in Standard Operating Procedures such as subcutaneous and intraperitoneal injections, transcardial perfusion and brain tissue collection.

07/2015 – 09/2015

INTERNSHIP

Molecular and Cellular Cognition Lab, German Center for Neurodegenerative Diseases (DZNE), Research Center Caesar, Bonn, Germany

Supervisor:

D. Ehninger, Principal Investigator, Molecular and Cellular Cognition Lab, German Center for Neurodegenerative Diseases (DZNE), Research Center Caesar, Bonn, Germany (dan.ehninger@dzne.de)

Summary: Brief training on basic Molecular Biology techniques (Western Blot, PCR etc.) and biological image analysis using Cell Profiler.

03/2015 – 06/2015

LAB ROTATION

Neurophysiology and Behavior Lab, Dept. of Biology, University of Crete

Supervisor:

K. Sidiropoulou, Assistant Professor in Neurophysiology, Dept. of Biology, University of Crete (sidirop@uoc.gr)

Summary: Video Analysis of behavioral experiments using JWatcher. Basic training in electrophysiological recordings, animal handling, animal house facilities and laboratory safety.

2012

LAB ROTATION

Natural History Museum of Crete

Supervisor:

P. Lymperakis, Curator of Vertebrates at the Natural History Museum of Crete (lyberis@nhmc.uoc.gr)

Summary: Species classification of birds and small mammals.

SCHOLARSHIPS AND ACADEMIC ACHIEVEMENTS

- 07/2019: 4th ESMI Imaging Summer School TOPIM-TECH, Chania, Greece
- 10/2018 – Present: Graduate Fellowship funded by FORTH

PUBLICATIONS

- Oraiopoulou M.E., **Tampakaki M.**, Tzamali E., Tamiolakis T., Makatounakis V., Vakis F. A., Zacharakis G., Sakkalis V., Papamatheakis J., *“A 3D tumor spheroid model for the T98G Glioblastoma cell line phenotypic characterization”*, Tissue and Cell, Elsevier, 2019

PARTICIPATION IN CONFERENCES

Oral Presentations

1. **“PML and Neoplasia - The Role of PML in Glioblastoma Evolution”**, Clinical and Translational Oncology Conference 2019, Heraklion, Greece
2. **“The Physiological Effects of the Promyelocytic Leukemia Protein on the U87MG Glioblastoma Cell Line”**, 33rd Annual Congress Hellenic Neurosurgical Society & 4th Congress SeENS Southeast Europe Neurosurgical Society 2019, Thessaloniki, Greece

Abstracts/Posters

1. **Tampakaki M.**, Oraiopoulou M.E., Psycharakis S., Tzamali E., Zacharakis G., Sakkalis V., Papamatheakis J., (2019), *“The role of Promyelocytic Leukemia protein pathways in brain cancer”*, 12th FORTH Retreat, ICE-HT, Patras, Greece
2. **Tampakaki M.**, Oraiopoulou M.E., Tzamali E., Zacharakis G., Sakkalis V., Papamatheakis J., (2019), *“The effect of pathological developmental pathways in human brain cancer physiology”*, 28th meeting of the Hellenic Society for Neuroscience”, Heraklion, Greece
3. **Tampakaki M.**, Oraiopoulou M.E., Psycharakis S., Tzamali E., Sakkalis V., Zacharakis G., Papamatheakis J., (2019), *“The role of PML in Glioblastoma physiology”*, 4th ESMI Imaging Summer School TOPIM-TECH, Chania, Greece
4. ME. Oraiopoulou, E. Tzamali, S. Psycharakis, **M. Tampakaki**, E. Parasiraki, G. Tzedakis, AF. Vakis, V. Sakkalis, J. Papamatheakis, and G. Zacharakis (2019) *“Physiological description of patient-derived Glioblastoma cells using fluorescence imaging,”* 4th ESMI Imaging technology summer workshop TOPIM TECH, MAICh-Chania, Greece
5. **Tampakaki M.**, Oraiopoulou M.E., Psycharakis S., Tzamali E., Sakkalis V., Zacharakis G., Papamatheakis J., (2019), *“Light Sheet Fluorescence Microscopy Imaging Of Promyelocytic Leukemia Protein Physiologic Effects On The U87MG Glioblastoma Cell Line”*, 14th European Molecular Imaging Meeting (EMIM), Glasgow, Scotland, UK

SKILLS

Languages

- Greek: Native
- English: Certificate of Proficiency (ECPE-C2), University of Michigan and Edexcel, Level 5
- German: Goethe-Zertifikat, B2

Other Skills and Interests

- Driving License Category B
- Classical and contemporary dance, Theater