

Curriculum Vitae
<p>Name Maria Markou</p> <p>Position Postdoctoral Researcher at Biomedical Research Institute of Molecular, Foundation for Research and Technology-Hellas (FORTH-BRI), Ioannina, Greece</p>
<p><u>EDUCATION</u></p> <p>10.2009-10.2015: Ptychion in Biology (5-year study), Department of Biological Applications and Technology, University of Ioannina, Greece</p> <p>10.2014-10.2015: Integrated master, Biomedical Research Institute, Foundation for Research and Technology-Hellas (FORTH-BRI), Ioannina, Greece, Project title: "Differentiation of vascular progenitor cells on scaffolds for the generation of vascular tissues in vitro"</p> <p>02.2016-07.2020: PhD in Laboratory of Biological Chemistry, Medical School, University of Ioannina Title of PhD: Molecular mechanisms of VEGF in vasculogenesis and applications in regenerative medicine Supervisor: Prof. Theodore Fotsis, Medical School, University of Ioannina, Greece</p> <p><u>PROFESSIONAL EXPERIENCE:</u></p> <p>07.2013-08.2013: Workshop on microbiological laboratory</p> <p>10.2014-10.2015: Bachelor thesis at BRI, FORTH, Ioannina</p> <p>05.2017: Participation in the training program of the Aristotle University of Thessaloniki, entitled "Cultivation and identification by flow cytometry of mesenchymal cells in GMP good manufacturing practice"</p> <p>06.2018: Participation in the international course care and use of laboratory animals (mice, rats, and zebrafish), FELASA accredited course (Ref. No. 051/15)</p> <p><u>RESEARCH GRANTS</u></p> <p>03.2016-09.2016: Researcher in the project funded by the program "Siemens-Biology-Biophotonics" Title: Differentiating hESCs/iPSCs in cells of mesodermal genealogy. Study of basic molecular mechanisms and applications in Regenerative Medicine</p> <p>03.2020-05.2021: Researcher in the project funded by Greece and the European Union (European Social Fund- ESF) through the Operational Programme «Human Resources Development, Education and Lifelong Learning 2014- 2020» Title: Generation of distinct phenotypes of mural cells from differentiation of human pluripotent stem cells: application in the generation of vascularized tissue engineered constructs</p> <p>09.2020-07.2021: Researcher in the project funded by the FORTH SYNERGY grant awarded for Inter - Institutional collaboration. Title: Modelling neurological disorders using graphene-based neurovascular organoids derived from pluripotent human cells</p> <p>08.2021-Pres: Researcher in the project funded by Greece and European Union through the Operational Programme Unified Action of State Aid for Technology Research Development and Innovation "RESEARCH - CREATE – INNOVATE". Title Development of novel therapeutic strategies against Parkinsons disease.</p> <p><u>FELLOWSHIPS</u></p> <p>1. Fellowship for post-graduate studies of the second-cycle (PhD) in Greece from The State Scholarships Foundation, in the framework of the Operational Programme "Education and Life Long Learning"</p> <p><u>PUBLICATIONS</u></p> <p>1. Mechanical stress affects methylation pattern of GNAS isoforms and osteogenic differentiation of hAT-MSCs. Vlaikou AM, Kouroupis D, Sgourou A, Markopoulos GS, Bagli E, <u>Markou M</u>, Papadopoulou Z, Fotsis T, Nakos G, Lekka ME, Syrrou M. <i>Biochim Biophys Acta</i>. 2017 Aug;1864(8):1371-1381. doi: 10.1016/j.bbamcr.2017.05.005</p> <p>2. Medium-term Electrophysiologic Effects of a Cellularized Scaffold Implanted in Rats After Myocardial Infarction. Kolettis TM, Bagli E, Barka E, Kouroupis D, Kontonika M, Vilaeti AD, <u>Markou M</u>, Roumpi M, Maltabe V, La Rocca V, Agathopoulos S, Fotsis T. <i>Cureus</i>. 2018 Jul 10;10(7): e2959. doi: 10.7759/cureus.2959</p>

3. Tissue Engineering Using Vascular Organoids From Human Pluripotent Stem Cell Derived Mural Cell Phenotypes. *Markou M, Kouroupis D, Badounas F, Katsouras A, Kyrkou A, Fotsis T, Murphy C, Bagli E. Front Bioeng Biotechnol. 2020 Apr 17; 8:278. doi: 10.3389/fbioe.2020.00278*

4. "Vascularization in 3D Cell Culture". Chapter on "Basic Concepts on 3D Cell Culture" book. *Markou M, Kouroupis D, Fotsis T, Bagli E, Murphy C. Springer*

5. Embryonic Stem Cells Are Devoid of Macropinocytosis a Trafficking Pathway for Activin A in Differentiated Cells. *Kostopoulou N, Bellou S, Bagli E, Markou M, Kostaras E, Hyvönen M, Kalaidzidis Y, Papadopoulos A, Chalmantzi V, Kyrkou A, Panopoulou K, Fotsis T & Murphy C. J Cell Sci. 2021 Jul 1;134(13): jcs246892. doi: 10.1242/jcs.246892*

6. Translational control in neurovascular brain development. *Chalkiadaki K, Statoulla E, Markou M, Bellou S, Bagli E, Fotsis T, Murphy C, Gkogkas C. R Soc Open Sci. 2021 Oct 13;8(10):211088. doi:10.1098/rsos.211088.*

AWARDS

1. Third award for the poster presentation at TERMIS European Chapter Meeting (05.2019)

Generation of 3D vascular units for tissue engineering applications

M Markou, D Kouroupis, E Barka, F Badounas, D Stellas, T Fotsis, E Bagli, C Murphy**

2. Second award for the oral presentation at 52nd Panhellenic Ophthalmology Congress (06.2019)

Development of *in vitro* models for studying mural cell-endothelial cell interactions

Markou M, Kouroupis D, Kyrkou A, Badounas F, Murphy C, Fotsis T, Bagli E

3. Award for the poster presentation at 13th FORTH REATRET (07.2022)

Tissue engineering using vascular organoids from human pluripotent stem cell derived endothelial cells and mural cell phenotypes

CONFERENCE ANNOUNCEMENTS

A. Conferences-Oral presentation

1. Oral presentation at **67th Panhellenic Conference of the Hellenic Society for Biochemistry and molecular Biology** (11.2016). Title: *Generation of mural cells from human pluripotent stem cells*

2. Oral presentation at virtual **Panhellenic Conference of the Hellenic Society for Biochemistry and molecular Biology** (06.2021). Title: *Generation of distinct phenotypes of mural cells from differentiation of human pluripotent stem cells: application in the generation of vascularized tissue engineered constructs*

B. Conferences-Poster Announcement

1. **4th Conference of Young Scientists of Hellenic Society of Biochemistry & Molecular Biology**, Title: *Generation of mural cells from human pluripotent stem cells, November 24, 2016, Ioannina, Greece*

2. **69th Conference of the Hellenic Society of Biochemistry & Molecular Biology**, Title: *Mural cells of Distinct Phenotypes Differentiated from Human Pluripotent Stem Cells: Generation of 3D Vascular Units for Tissue Engineering, November 23-25, 2018, Larisa, Greece*

3. **69th Conference of the Hellenic Society of Biochemistry & Molecular Biology**, Title: *The Role of ARF6 in TGF-β family signalling in differentiated and human Embryonic Stem Cells, November 23-25, 2018, Larisa, Greece*

4. **4th Congress of Gene Therapy and Regenerative Medicine**, Title: *Mural cells of distinct phenotypes differentiated from human pluripotent stem cells: generation of 3d vasculoids for tissue engineering, May 17-18, 2019, Athens, Greece*

5. **TERMIS European Chapter Meeting "Tissue Engineering Therapies: From concept to clinical translation and commercialization"**, Title: *Generation of 3D vascular units for tissue engineering applications, 27-31 May 2019, Rhodes, Greece *Award as the 3rd best poster*

6. **52nd Panhellenic Ophthalmology Congress**, Title: *Development of in vitro models for studying mural cell-endothelial cell interactions, June 6-8 2019, Athens * Award as the 2nd best poster*

7. **13th Hellenic Polymer Society International Conference**, Title: *Development, characterization and in vitro evaluation of chitosan-fish gelatin-glycerol hydrogel membranes for wound healing applications, December 12-16, Athens, Greece*

8. 13th Hellenic Polymer Society International Conference, Title: *Development of new aqueous conjugated polymer nanoparticles for bioimaging as fluorescent probes*, December 12-16, Athens, Greece

9. Tissue Engineering and Regenerative Medicine International Society (TERMIS) European Chapter Conference, Title: *Tissue engineering using vascular organoids from human pluripotent stem cell derived endothelial cells and mural cell phenotypes*, 28th June -1st July 2022 Krakow, Poland