

Eleftheria Babaliari, Ph.D.

Personal Information

Address: Eleftheriou Venizelou 153, Gazi, Heraklion Crete, 71414, Greece

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E-mail: ebabaliari@iesl.forth.gr

Birthday date: 24/08/1990

Nationality: Greek

Research Interests

Microfluidics, Laser Processing, Tissue Engineering, Biomaterials, Polymers

Education

- **University of Crete**

Doctor of Philosophy (PhD), Materials Science

2015 – 2020

- **University of Crete**

Master of Science (MSc), Materials Science, 8.97 / 10

2012 – 2015

- **University of Crete**

Bachelor's degree, Materials Science, 8.08 / 10

2008 – 2012

Experience

- **Postdoctoral Researcher at Foundation for Research and Technology – Hellas (FORTH), Institute of Electronic Structure and Laser (IESL)**

Foundation for Research and Technology - Hellas (FORTH), Institute of Electronic Structure and Laser (IESL)

January 2021 – Present

Greece

- **Assistant in the laboratory of laser and modern physics**

University of Crete

January 2023 – December 2023

Supervisors: Emmanuel Stratakis, Costas Fotakis

Greece

- **Assistant in the laboratory of laser and modern physics**

University of Crete

September 2022 – December 2022

Supervisors: Emmanuel Stratakis, Costas Fotakis

Greece

- **Assistant in the laboratory of laser and modern physics**

University of Crete

January 2021 – December 2021

Supervisors: Emmanuel Stratakis, Costas Fotakis

Greece

- **Assistant in the laboratory of laser and modern physics**

University of Crete

January 2020 – December 2020

Supervisors: Emmanuel Stratakis, Costas Fotakis

Greece

- **PhD thesis: Laser microstructured scaffolds for tissue engineering under dynamic cell culture conditions**

Foundation for Research and Technology - Hellas (FORTH), Institute of Electronic Structure and Laser (IESL)

December 2015 – October 2020

Supervisors: Anna Mitraki, Emmanuel Stratakis

Greece

- **Assistant in soft matter lab**

University of Crete

November 2019 – December 2019

Supervisor: Maria Vamvakaki

Greece

- **Assistant in the laboratory of laser and modern physics**

University of Crete

January 2019 – December 2019

Supervisors: Emmanuel Stratakis, Costas Fotakis

Greece

- **Assistant in soft matter lab**

University of Crete

November 2018 – December 2018

Supervisor: Maria Vamvakaki

Greece

- **Assistant in the laboratory of laser and modern physics**

University of Crete

January 2018 – December 2018

Supervisors: Emmanuel Stratakis, Costas Fotakis

Greece

- **Assistant in soft matter lab**

University of Crete

November 2017 – December 2017

Supervisor: Maria Vamvakaki

Greece

- **Assistant in the laboratory of laser and modern physics**

University of Crete

September 2017 – December 2017

Supervisors: Emmanuel Stratakis, Costas Fotakis

Greece

- **Teaching Assistant in chemistry lesson**

University of Crete

September 2016 – December 2016

Supervisors: Emmanuel Tylianakis, Kelly Velonia

Greece

- **Teaching Assistant in chemistry lesson**

University of Crete

September 2015 – December 2015

Supervisors: George Fytas, Emmanuel Tylianakis

Greece

- **Master thesis: Microfluidics in biomaterials for bone tissue engineering applications**

Foundation for Research and Technology - Hellas (FORTH), Institute of Electronic Structure and Laser (IESL) & Biomaterials lab (University of Crete)

February 2014 – April 2015

Supervisors: Maria Chatzinikolaidou, George Petekidis, Maria Vamvakaki

Greece

- **Teaching Assistant in chemistry lesson**

University of Crete

September 2014 – December 2014

Supervisors: George Fytas, Emmanuel Tylianakis

Greece

- **Teaching Assistant in chemistry lesson**

University of Crete

October 2013 – January 2014

Supervisors: Maria Chatzinikolaidou, Emmanuel Tylianakis

Greece

- **Diploma thesis: Rheology of hard sphere colloidal suspensions and binary mixtures**

Foundation for Research and Technology - Hellas (FORTH), Institute of Electronic Structure and Laser (IESL)

September 2011 – October 2012

Supervisor: George Petekidis

Greece

- **Practical exercise: Rheology of hard sphere colloidal suspensions and binary mixtures**

Foundation for Research and Technology - Hellas (FORTH), Institute of Electronic Structure and Laser (IESL)

February 2011 – May 2011

Supervisor: George Petekidis

Greece

- **Assistant in chemistry lab**

University of Crete

February 2011 – May 2011

Supervisor: Emmanuel Tylianakis

Greece

- **Teaching Assistant in chemistry lesson**

University of Crete

September 2010 – December 2010

Supervisors: Emmanuel Tylianakis, Kelly Velonia

Greece

Languages

- ✓ **Greek** (Native)
- ✓ **English** (Level C2: Proficiency, London Tests of English, Level 5, Edexcel)

Honors & Awards

- **Best Poster Presentation Award - IESL**

«Combined effect of shear stress and topography on Schwann cells behavior
E. Babaliari, P. Kavatzikidou, A. Mitraki, Y. Papaharilaou, A. Ranella, E. Stratakis»
12th FORTH Retreat 2019, Patra, Greece, 15 – 16 October 2019

- **ELIDEK**

Hellenic Foundation for Research and Technology (ELIDEK) (PhD Scholarship)
2017

- **IKY**

State Scholarships Foundation (IKY) (PhD Scholarship, «ΕΣΠΑ 2014 – 2020»)
2016 – 2019

- **Onassis Scholarship**

Onassis Foundation (PhD Scholarship)
2016

- **IKY**

State Scholarships Foundation (IKY) (Undergraduate Scholarship)
2011 – 2012

- **Soukouli Scholarship**

University of Crete
2011 – 2012

Publications

- Sentjabrskaja, T., Babaliari, E., Hendricks, J., Laurati, M., Petekidis, G., & Egelhaaf, S. U. (2013). Yielding of binary colloidal glasses. *Soft Matter*, 9(17), 4524-4533.
- Babaliari, E., Kavatzikidou, P., Angelaki, D., Chaniotaki, L., Manousaki, A., Siakouli-Galanopoulou, A., Ranella, A., & Stratakis, E. (2018). Engineering Cell Adhesion and Orientation via Ultrafast Laser Fabricated Microstructured Substrates. *International journal of molecular sciences*, 19(7), 2053.
- Babaliari, E., Petekidis, G., & Chatzinikolaïdou, M. (2018). A Precisely Flow-Controlled Microfluidic System for Enhanced Pre-Osteoblastic Cell Response for Bone Tissue Engineering. *Bioengineering*, 5(3), 66.
- Babaliari, E., Kavatzikidou, P., Mitraki, A., Papaharilaou, Y., Ranella, A., & Stratakis, E. (2021). Combined effect of shear stress and laser-patterned topography on Schwann cell outgrowth: synergistic or antagonistic?. *Biomaterials Science*, 9(4), 1334-1344.
This article is part of the themed collection: Editor's Choice: Microfluidics
- Manganas, P., Kavatzikidou, P., Kordas, A., Babaliari, E., Stratakis, E., & Ranella, A. (2022). The role of mechanobiology on the Schwann cell response: A tissue engineering perspective. *Frontiers in Cellular Neuroscience*, 16.
- Babaliari, E., Ranella, A., & Stratakis, E. (2023). Microfluidic Systems for Neural Cell Studies. *Bioengineering*, 10(8), 902.

Conference Proceedings

- Babaliari, E., Chatzinikolaidou, M., & Petekidis, G. (2015, September). Dynamic Culture in a Microfluidic Chamber Enhances Proliferation and Osteogenic Response Of Pre-osteoblastic Cells. In *TISSUE ENGINEERING PART A* (Vol. 21, pp. S151-S152).

Conferences

- 7th International Conference Hellenic Society of Rheology, FORTH, Heraklion, Greece, 7 – 10 July 2014
- 9th Convention of the Hellenic Society for Biomaterials, Athens, Greece, 7 – 8 November 2014 (Oral Presentation)
- 12th International Conference on Nanosciences & Nanotechnologies, Thessaloniki, Greece, 7 – 10 July 2015 (Oral Presentation)
- 27th European Conference on Biomaterials, Krakow, Poland, 30 August – 3 September 2015 (Poster Presentation)
- 4th Termis World Congress, Boston, USA, 8 – 11 September 2015 (Poster Presentation)
- E-MRS Fall Meeting, Warsaw, Poland, 19 – 22 September 2016 (Poster and Oral Presentation)
- ETPN 2016, Heraklion, Crete, Greece, 12 – 14 October 2016 (Poster Presentation)
- 2nd Israel-Greece Joint Meeting on Nanotechnology and Bionanoscience, Heraklion, Crete, Greece, 25 – 28 October 2016 (Poster Presentation)
- 6th Int'l Conference on Tissue Engineering in conjunction with the 3rd Int'l Conference on Regenerative Biomedical Materials, Heraklion, Crete, Greece, 14 – 19 June 2017 (Poster Presentation)
- 11th FORTH Retreat, Heraklion, Crete, Greece, 13 – 14 October 2017 (Poster Presentation)
- 4th International Conference on Biomedical Polymers & Polymeric Biomaterials, Krakow, Poland, 15 – 18 July 2018 (Oral Presentation)
- 1st International Conference on Nanotechnologies and Bionanoscience, Heraklion, Crete, Greece, 24 – 28 September 2018 (Poster and Oral Presentation)
- TERMIS EU 2019, Tissue Engineering Therapies: From Concept to Clinical Translation & Commercialisation, Rhodes, Greece, 27 – 31 May 2019 (Oral Presentation)
- 12th FORTH Retreat, Patra, Greece, 15 – 16 October 2019 (Poster Presentation)
- 1st FORTH YouR Night, Heraklion, Greece, 13 December 2019 (Poster Presentation)
- E-MRS Spring Meeting, Virtual Conference, 31 May – 3 June 2021 (Oral Presentation)
- 13th FORTH Retreat, Heraklion, Greece, 15 – 16 July 2022 (Poster Presentation)
- IESL Science Days 2022, Heraklion, Greece, 15 – 16 December 2022 (Poster Presentation)

- 2nd International Conference on Nanotechnologies and Bionanoscience, Heraklion, Crete, Greece, 11 – 15 September 2023 (Oral Presentation)

Summer Schools and Workshops

- 2nd Summer School «Photonics meets Biology», Hersonissos, Crete, Greece, 30 September – 3 October 2013
- Scientific Writing Workshop on «Journal Analysis: Maximizing The Chances Of Getting Your Work Published And Building A Research Paper (Using Models Like Swales and Feak’s Cars To Model And Write Articles)», University of Crete, Department of Chemistry, Greece, 21 July 2015
- 3rd FASTDOT Summer School «Photonics meets Biology», Hersonissos, Crete, Greece, 27 September – 2 October 2015
- Summer School on «Regenerative Nano-Medicine: From Advanced Delivery Systems to Electronic-Based Devices», Tel Aviv University, Israel, 19 – 23 June 2016 (Poster and Oral Presentation)
- 1st Scientific Workshop on «Applied Nanotechnology in Health Sciences and Environment, Safety, quality and efficiency – Regulatory Framework», Heraklion, Crete, Greece, 30 June 2019
- 5th Summer School «Photonics meets Biology», Heraklion, Crete, Greece, 16 – 20 September 2019
- Virtual TERMIS workshop: «Cell-Matrix Interaction and Mechanobiology in Regenerative Medicine», Brno, Czech Republic, 10 – 11 June 2021 (Oral Presentation)
- Online NeuroStimSpinal Workshop: «Present approaches for neural tissue regeneration: NeuroStimSpinal project», 29 September 2021
- «ΙΑΕΟΠΟΙΕΙΟ», Heraklion, Crete, Greece, March – May 2023