

ALISSAFI THEMIS

SHORT CURRICULUM VITAE

Dr. Themis Alissafi is Assistant Professor in Biology at the Department of Biology at National & Kapodistrian University of Athens (NKUA), School of Medicine, and Group Leader of the Immune Regulation laboratory at Biomedical Research Foundation of the Academy of Athens (BRFAA).



Dr. Alissafi received her BSc and MSc at Chemistry from the University of Crete. In 2010 she was awarded her PhD from the Medical School of University of Crete and her doctoral thesis in Dr. Panoutsakopoulou's lab at BRFAA focused on immunology. As a European Respiratory Society (ERS) and European Academy of Allergy and Clinical Immunology (EAACI) fellow she performed postdoctoral research in immunology at Prof. BN. Lambrecht's lab at Gent University, Belgium. Following her repatriation, she joined Prof. D Boumpas' autoimmunity and inflammation lab and Dr. Verginis' immune regulation lab at IMBB and BRFAA respectively, as an IKY postdoctoral fellow. Since 2019 she is leading her own research group at the Immune Regulation lab of BRFAA. In 2020 she was elected Researcher (assistant professor level) at IMBB and since 2021 she holds the position of the assistant professor in Biology at the Medical School of NKUA.

The focus of her scientific work is on immunological tolerance networks. Her research team seeks mechanistic information on distinct regulatory cells involved in immune responses during autoimmunity and cancer, in an effort to develop novel, precise therapeutic interventions and to discover innovative biomarkers. Her laboratory employs high-throughput cutting edge single cell RNA-seq, and ATAC-seq, mass cytometry and metabolomic approaches to interrogate primary human specimens and transgenic mouse models.

Dr. Alissafi's track-record includes > 21 publications, in major peer-reviewed multi-disciplinary scientific journals (including: *Cell Metabolism*, *Nature Medicine*, *Journal of Clinical Investigation*, *Journal of Experimental Medicine*, *PNAS*). During her scientific career, she had the honour to receive many prestigious international (ERS, EAACI, EWRR) and national (Fotis Kafatos, IKY, HELANI) awards. Her research has attracted > 2 million euros funding by the European Research Council (ERC) Starting Grant 2020, Horizon 2020 and the Hellenic Foundation of Research and Innovation (HFRI). Themis Alissafi has been invited to present her research work in various major international meetings, she has trained a significant number of > 20 junior scientists at postgraduate level and has served as ad hoc reviewer for various scientific journals.

Dr. Themis Alissafi teaches Biology and Genetics to undergraduate medical students at NKUOA and is a lecturer of Immunology and Cancer Biology in four postgraduate programs at NKUA and University of Crete.

ORCID ID: 0000-0002-4002-6008

URL: www.alissafilab.com, www.talissafi.com, www.linkedin.com/in/themis-alissafi, https://biology.med.uoa.gr/prosopiko/meli_dep/

Selected Publications:

1. Grigoriou M., Banos A., Hatzioannou A., Kloetgen A., Kouzis P., Aggouraki D., Zakopoulou R., Bamias G., Kassi E., Mavroudis D., Bamias A., Boumpas D.T., Tsirigos A., Gogas H., **Alissafi T***, Verginis P* (*equal last and corresponsance). Regulatory T cell transcriptomic reprogramming denominates adverse events induced by checkpoint inhibitors in solid tumors., **Cancer Immunology Research**, 2021 Jul;9(7):726-734. doi:10.1158/2326-6066.
2. **Alissafi T***, Kalafati L., Lazari M., Alexaki I., Chavakis T., Verginis P*. (*correspondence). Mitochondrial Oxidative Damage Underlies Regulatory T Cell Defects in Autoimmunity, **Cell Metabolism**, 2020. Oct 6;32(4):591-604.e7. doi: 10.1016/j.cmet.2020.07.001.
3. **Alissafi T**, Hatzioannou A, Legaki AI, Varveri A, Verginis P. Balancing cancer immunotherapy and immune-related adverse events: The emerging role of regulatory T cells. **J Autoimmun.** 2019 Aug Nov;104:102310. doi: 10.1016/j.jaut.2019.102310.
4. **Alissafi T**, Hatzioannou A, Mintzas K, Barouni RM, Banos A, Sormendi S, Polyzos A, Xilouri M, Wielockx B, Gogas H and Verginis P. Autophagy orchestrates the regulatory program of tumor-associated myeloid-derived suppressor cells. **J Clin Invest**, 2018 Aug 31;128(9):3840-3852. doi: 10.1172/JCI120888.
5. **Alissafi T**, Kourepini E, Simoes D, Paschalidis N, Aggelakopoulou M, Sparwasser T, Boon L, Hammad H, Lambrecht B.N and Panoutsakopoulou V. Osteopontin promotes protective antigenic tolerance against experimental allergic airway disease. **J Immunol**, 2018 Feb 15;200(4):1270-1282. doi: 10.4049/jimmunol.1701345.
6. **Alissafi T**, Banos A, Boon L, Sparwasser T, Ghigo A, Wing K, Vassilopoulos D, Boumpas D, Chavakis T, Cadwell K, Verginis P. Tregs restrain dendritic cell autophagy to ameliorate autoimmunity. **J Clin Invest**, 2017 Jun 30;127(7):2789-2804. doi: 10.1172/JCI92079.
7. Hatzioannou A*, **Alissafi T***, Verginis P. (*equal contribution). Myeloid-derived suppressor cells and T regulatory cells in tumors: unraveling the dark side of the force. **J. Leukoc. Biol.** 2017 Aug Aug;102(2):407-421. doi: 10.1189/jlb.5VMR1116-493R.
8. **Alissafi T**, Hatzioannou A, Ioannou M, Sparwasser T, Grün JR, Grützkau A, Verginis P. De novo-induced self-antigen-specific Foxp3+ regulatory T cells impair the accumulation of inflammatory dendritic cells in draining lymph nodes. **J Immunol.** 2015 Jun 5;194(12):5812-24. doi: 10.4049/jimmunol.1500111.
9. Kourepini E, Aggelakopoulou M, **Alissafi T**, Paschalidis N, Simoes DC, Panoutsakopoulou V. Osteopontin expression by CD103- dendritic cells drives intestinal inflammation. **Proc Natl Acad Sci U S A.** 2014 Mar 4;111(9):E856-65. doi: 10.1073/pnas.1316447111.
10. Ioannou M, **Alissafi T**, Lazaridis I, Deraos G, Matsoukas J, Gravanis A, Mastorodemos V, Plaitakis A, Sharpe A, Boumpas D, Verginis P. Crucial role of granulocytic myeloid-derived suppressor cells in the regulation of central nervous system autoimmune disease. **J Immunol.** 2012, Feb 1;188(3):1136-46. doi: 10.4049/jimmunol.1101816.
11. Semitekolou M, **Alissafi T**, Aggelakopoulou M, Kourepini E, Kariyawasam HH, Kay AB, Robinson DS, Lloyd CM, Panoutsakopoulou V, Xanthou G. Activin-A induces regulatory T cells that suppress T helper cell immune responses and protect from allergic airway disease. **J Exp Med.** 2009, Aug 3;206(8):1769-85. doi: 10.1084/jem.20082603.
12. Xanthou G, **Alissafi T**, Semitekolou M, Simoes DC, Economidou E, Gaga M, Lambrecht BN, Lloyd CM, Panoutsakopoulou V. Osteopontin has a crucial role in allergic airway disease

through regulation of dendritic cell subsets. **Nat Med.** 2007, May;13(5):570-8. doi: 10.1038/nm1580.