

Dionysia Kefala

Biochemist-Biotechnologist, MSc, PhD candidate

Personal information

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Work Experience

- Oct 2021-
To date** **Research Associate**
1. Laboratory Quality Management System (QMS) Organization & Implementation according to Good Manufacture Practice (GMP) Guidelines
 2. Equipment & Supply chain management
 3. Integral part for the acquisition of the Advanced Therapeutic Medicinal Products (ATMP) manufacturing license from the National Agency of Medicines
 - Preparation & presentation of the laboratory QMS for the inspection
 - Participation in the on-site inspection by the local regulatory authorities
 4. GMP validation of ATMP manufacturing for clinical translation in a phase I/II trial (EUDRACT-2021-006367-26).
 5. ATMP documentation under investigation: Drafting of Investigation New Drug dossier and Investigator's Brochure for submission to the competent authorities
 6. Preparation & submission of required documents for the audit and approval of commercial ATMPs in a clinical setting by pharmaceutical companies
- Director: Alexandros Spyridonidis
GMP Lab, Institute of Cell Therapy, University of Patras
- Jun 2020-
To date** **PhD Thesis**
- "Development and optimization of an adoptive T cell immunotherapy against GvHD in allo-HSCT patients"
- Supervisor: Alexandros Spyridonidis
Bone Marrow Transplantation Lab, Institute of Cell Therapy, University of Patras
- Oct 2018-
Apr 2019** **Master Thesis**
- "Study hematopoiesis in Acute Myeloid Leukemia: Setting up a model based on Pluripotent Stem Cells"
- Supervisor: Laurent David
IPSCDTC core facility, Health Research Institute, University of Nantes, France
- Feb 2018-
Jul 2018** **Master Internship**
- "Evaluation of CD38-CCR affinities for improving the dual BCMA-CD38 targeting strategy by CAR-T cells against multiple myeloma"
- Supervisor: Maria Themeli
Department of Hematology, UMCA, Netherlands

- Jul 2017-
Aug 2017** **Graduate Trainee Internship**
"Targeting of multiple myeloma related antigens via engineered CAR-T cells"
Supervisors: Maria Themeli, Richard Groen
Department of Hematology, UMCA, Netherlands
- Feb 2016-
Feb 2017** **Bachelor Thesis**
"Gene silencing of *Orco* and *Snmpl* in the olive fruit fly, *Bactrocera oleae*"
Supervisors: Konstantinos Mathiopoulos, Konstantina Tsoumani
Laboratory of Molecular Biology and Genomics, University of Thessaly, Larissa, Greece
- Jul 2013-
Aug 2013** **Bachelor Internship**
Quality Control of food products post-production by evaluation of *E. coli*, coliforms, salmonella & Listeria detection, Tsabassis Golden Tastes S.A, Argos, Greece

Education

- Jun 2020-
To date** **PhD Candidate**
School of Medicine, University of Patras, Greece
- Sep 2017-
Dec 2019** **MSc Oncology**
Faculty of Medicine, Vrije Universiteit Amsterdam, the Netherlands
- Sep 2011-
Feb 2017** **BSc Biochemistry & Biotechnology**
School of Health Sciences, University of Thessaly, Larissa, Greece

Expertise

1. Primary T cell & iPSC handling
2. Flow Cytometry, FACS Sorting & Analysis (FlowJo)
3. Molecular Techniques (Cloning, Bacterial transformation, Transfection, Transduction, PCR, RT-PCR)
4. Genome Editing (CRISPR/Cas9)
5. Aseptic Working under GMP conditions

Certificates

- **BD FACSAria III sorter training**, SB Bionalytica S.A., April 21st, 2021
- **ICH Good Clinical Practice E6**, Global Health Network, Score 89%, Jul 7th, 2021

Teaching

Supervision and training of undergraduate students

1. Internship: Basic immunology, T cell culturing & Flow Cytometry- Ecem Çerçi, 3rd year student, Molecular Biology & Genetics, Üsküdar University, Jun 2023-Aug 2023
2. Internship: Basic immunology, T cell culturing & Flow Cytometry- Mustafa Can Caner, 3rd year student, Molecular Biology & Genetics, Üsküdar University, Jun 2023-Aug 2023
3. BSc Thesis: "Validation of differentially expressed genes of iG-Tregs uncovered by RNA-sequencing", Selina Tzoumari, 4th year student Department of Biology, University of Patras, May 2023-To date
4. BSc Thesis: "Evaluation of HLA-G expression on hypomethylation-induced HLA-G expressing T regulatory cells after cryopreservation", Afroditi Rapti, 4th year student Department of Biology, University of Patras, Nov 2022-To date
5. BSc Thesis: "Study of the effect of inhibitory cytokines on T cell proliferation" - Anastasia Klimi, 4th year student Department of Biology, University of Patras, Sep 2021-Sep 2022

6. Internship: T cell culturing, Flow Cytometry- Andreakou Agapi, 3rd year student Agricultural University of Athens, Direction - Biotechnology, Greece, Jun 2021- Aug 2021
7. Lab Training: iPSCs manipulation, CRISPR/Cas9 genome editing -Cécile Palao, 3rd year student, iPSC Platform, Health Research Institute of University of Nantes, France, Feb 2019- Mar 2019

Lectures

1. **Module: “How to get a Cell & Gene Therapy program started?”**, MSc Cell & Gene Therapy, School of Medicine, University of Patras, Greece, (<https://mastercgt.com/>), 2023
2. **Seminar: Principles of ATMP production, the life cycle of a product, Tracking/ Labelling, Gowning and simulation, Aseptic work and simulation**, MSc Cell & Gene Therapy, School of Medicine, University of Patras, Greece, 2022-2023

Languages

Greek: Native

English: Advanced Level C1

Professional Memberships

1. European Hematology Association (EHA)
2. Member of International Society of Cell & Gene Therapy (ISCT)

Selected Abstracts Presented in Scientific Meetings

1. M. Lysandrou, **D. Kefala**, P. Christofi, C. Pieridou, E. Vlachonikola, P.G. Papayanni, M. Kyriakou, N. Savvopoulos, A. Miggos, A.-L. Chatzidaniil, A. Papadopoulou, K. Stamatopoulos, P. Costeas, E. Yannaki, A. Spyridonidis. Induced HLA-G⁺ regulatory T cells (iG-Tregs) against Graft-versus-Host Disease from bench to bedside. European Hematology Association Hybrid Congress, June 8-11, 2023 - Frankfurt. **Travel Award**
2. P. Christofi, **D. Kefala**, M. Lysandrou, P.G. Papayanni, C. Pieridou, N. Savvopoulos, A.-L. Chatzidaniil, M. Kyriakou, I. Sakellari, P. Costeas, A. Papadopoulou, E. Yannaki, A. Spyridonidis. Characterization and GMP manufacturing of epigenetically reprogrammed HLA-G expressing, T regulatory cells (iG-Tregs), 29th European Society of Gene & Cell Therapy Virtual Congress, October 11-14, 2022 - Edinburgh. **Travel Award**
3. **D. Kefala**, M. Lysandrou, P. Christofi, P.G. Papayanni, C. Pieridou, N. Savvopoulos, A.-L. Chatzidaniil, M. Kyriakou, I. Sakellari, P. Costeas, A. Papadopoulou, E. Yannaki, A. Spyridonidis. Pre-clinical development and characterization of a decitabine-induced regulatory HLA-G⁺CD4⁺ -T cell-enriched cell product against GvHD, 2nd Translational Research Conference Immune & Cellular Therapies: Focus on Advanced Gene-Engineered Immune Cells, September 12-14, 2022 - Berlin. **Selected Oral Presentation**
4. M. Lysandrou, **D. Kefala**, P. Christofi, P.G. Papayanni, C. Pieridou, N. Savvopoulos, A.-L. Chatzidaniil, M. Kyriakou, P. Costeas, A. Papadopoulou, E. Yannaki, A. Spyridonidis. Pre-clinical development and characterization of a decitabine-induced regulatory HLA-G⁺CD4⁺ -T cell-enriched cell product against GvHD, 9th International Conference on HLA-G, July 4-5, 2022 - Paris
5. **D. Kefala**, M. Lysandrou, P. Christofi, C. Pieridou, P. Papayanni, N. Savvopoulos, M. Kyriakou, A. Chatzidaniil, P. Stamou, A. Anagnostopoulos, A. Papadopoulou, P. Costeas, E. Yannaki, A. Spyridonidis. Pre-clinical development of a decitabine-induced regulatory HLA-G⁺CD4⁺ -T cell-enriched cell product (iG-Tregs) against Graft-versus-Host Disease, Congress of the International Society of Gene and Gene Therapy, May 4-7, 2022 - San Francisco
6. P. Christofi, **D. Kefala**, M. Lysandrou, P.G. Papayanni, C. Pieridou, N. Savvopoulos, A.-L. Chatzidaniil, M. Kyriakou, I. Sakellari, P. Costeas, A. Papadopoulou, E. Yannaki, A. Spyridonidis. Pre-clinical development and characterization of a decitabine-induced regulatory HLA-G⁺CD4⁺ -T cell-enriched cell product against GvHD, 5th Congress of the Hellenic Society of Gene Therapy and Regenerative Medicine, May 27-29, 2022 - Thessaloniki

7. **D. Kefala**, P. Christofi, M. Lysandrou, P.G. Papayanni, N. Savvopoulos, A. Papadopoulou, A. Anagnostopoulos, E. Yannaki, A. Spyridonidis. *Ex vivo* production of HLA-G⁺ T regulatory cells through pharmacological hypomethylation as a treatment against Graft versus Host Disease (GvHD), 32nd Annual Congress of the Hellenic Society of Haematology, November 10-14, 2021 - Athens

Publications (in peer reviewed journals)

1. Savvopoulos, N., Stampolitis, K., Alexandropoulos, G., **Kefala, D.**, Lysandrou, M., Zacharioudaki, V., Tsolakos, N., Spyridonidis, A. A GMP-Compliant Procedure for the Generation of Gene-Modified T cells. *J. Vis. Exp.* (Pending Publication), e65097, In-press (2023).
2. M. Lysandrou*, **D. Kefala***, P. Christofi, N. Savvopoulos, P.G. Papayanni, R. Theodorellou, E. Sagiadinou, V. Zacharioudaki, M. Moukouli, D. Tsokanas, G. Karavalakis, M. Liga, K. Stavrinou, A. Papadopoulou, E. Yannaki, A. Spyridonidis. Study Protocol: Phase I/II trial of induced HLA-G⁺ regulatory T cells (iG-Tregs) in patients undergoing allogeneic hematopoietic cell transplantation from an HLA-matched sibling donor. *Front. Med.* 2023 May 19;10:1166871. doi: 10.3389/fmed.2023.1166871. eCollection 2023. PMID: 37275377 PMCID: PMC10237041
3. Katsarou A, Sjöstrand M, Naik J, Mansilla-Soto J, **Kefala D**, Kladis G, Nianias A, Ruiters R, Poels R, Sarkar I, Patankar YR, Merino E, Reijmers RM, Frerichs KA, Yuan H, de Bruijn J, Stroopinsky D, Avigan D, van de Donk NWCJ, Zweegman S, Mutis T, Sadelain M, Groen RWJ, Themeli M. Combining a CAR and a chimeric costimulatory receptor enhances T cell sensitivity to low antigen density and promotes persistence. *Sci Transl Med.* 2021 Dec 8;13(623):eabh1962. doi: 10.1126/scitranslmed.abh1962. Epub 2021 Dec 8. PMID: 34878825; PMCID: PMC9869449.

Referees

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Richard Groen, Assistant Professor, Hematology Department, UMCA, Amsterdam, the Netherlands

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Laurent David, Assistant Professor, IPSCDTC core facility Nantes, University of Nantes, Nantes, France

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