

ACHILLEAS FLOUDAS

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EDUCATION

PhD	Newcastle University (UK), Institute of Cellular Medicine Dissertation: “The role of B cells as antigen presenting cells in Primary Biliary Cirrhosis”	11.2014
BSc	University of Crete (GR), Molecular Biology Including ERASMUS at NTNU (NOR) (top 10% of class)	09.2010

RESEARCH EXPERIENCE

Assistant Professor in Immunobiology, School of Medicine, University of Ioannina	10.09.2024–now
Assistant Professor in Translational Immunology School of Biotechnology, Dublin City University	01.01.2023-09.09.2024
Principal Investigator, HRB Emerging Investigator Award Department of Molecular Rheumatology	09.2022-now
Trinity College Dublin, Department of Molecular Rheumatology Postdoctoral Fellow, Advisor: Prof. Ursula Fearon <ul style="list-style-type: none">Including CARD postdoctoral award	10.2017-09.2022
Trinity College Dublin, Translational Immunology Postdoctoral Fellow, Advisor: Prof. Padraic Fallon <ul style="list-style-type: none">Including IRC postdoctoral Fellowship	11.2014-09.2017

RESEARCH FOCUS

Immunology

Bioinformatics and Single Cell RNAseq analysis

Cell-cell interactions – translational research

Immunotherapeutics

HONORS AND AWARDS

EULAR abstract award (1 of 12 from ~5000 abstracts) “Distinct stromal and immune cell interactions shape the pathogenesis of Rheumatoid and Psoriatic arthritis”	2022
First Poster Prize Awarded by the Irish Society of Rheumatology “Distinct stromal and immune cell interactions shape the pathogenesis of Rheumatoid and Psoriatic arthritis”	2022
Elected to the rank of Senior Research Fellow Following competitive process, TCD.	2021
First Scientific Oral Prize Awarded by the Irish Society of Rheumatology Title:” Loss of Balance Between Protective and Pro-inflammatory Synovial Tissue T Cell Polyfunctionality Predates Clinical Onset of Rheumatoid Arthritis.”	2021
First Scientific Oral Prize Awarded by the Irish Society of Rheumatology Title:” Increased T Cell Plasticity with Dysregulation of Tfh, Tph and Treg Cell Responses in Children with JIA and Down Syndrome-associated Arthritis.”	2019
Travel grants and other awards Milstein Abstract Award 11 travel awards from EULAR, EMBO, ACR, EWRR, BSI, WIRM, Milstein 2015-2021	2020

FUNDING

DCU PhD Scholarships in Biotherapeutics Project grant: “Biotherapeutics for Inflammatory Skin Diseases” Amount: 120.000 € Role: Investigator	2023
DCU Infrastructure update fund Project grant: “Hypoxia Workstation upgrade” Amount: 19.000 € Role: Investigator	2023
Health Research Board-Emerging Investigator Award Project grant: “Polyfunctional-T – stromal cell crosstalk in the joint of patients with inflammatory arthritis (CrossTalk)”	2022

Amount: 770.000 €
Role: Investigator

Health Research Board 2022
Project grant: “Stromal cell subtypes define distinct pathogenesis in RA and PsA”
Amount: 360.000 €
Role: Collaborator

Health Research Board 2022
Project grant: “PRedicting Onset, Variation and Effect of treatment in Rheumatoid Arthritis (PROVE-RA).”
Amount: 360.000 €
Role: Collaborator

Science Foundation Ireland 2021
Project grant: “Molecular signatures that distinguish RA and PsA pathotypes - impact for disease progression and response.”
Amount: 615.000 €
Role: Collaborator

Dean’s Research boost program 2021
Amount: 8.000 €
Role: Applicant

CARD Research Fellow Innovation Award 2020
Post-doctoral award: “Investigating the effect of Ox-mtDNA-LL37 and succinate on B cell and synovial fibroblast pathogenicity in RA.”
Role: Applicant, individual fellowship
Amount: 80.000 €

Irish Research Council Postdoctoral Fellowship 2015
Post-doctoral award: “The role of IL-9 in Atopic Dermatitis.”
Role: Applicant, individual fellowship
Amount: 100.000 €

Janssen Pharmaceuticals
Ongoing
In kind single cell RNAseq analysis
Role: Collaborator

TEACHING AND SUPERVISING EXPERIENCE

- **Module coordinator:**
 - Βιολογία I (Biology I) (UOI)
 - Scientific Writing (DCU)

- Applied Immunology (DCU)
- Onco-Immuno Therapeutics (DCU)

- **Lecturer:**

- Βιολογία II (Biology II) (UOI)
- Molecular Immunology (UOI)
- Molecular Oncology (UOI)
- BSc Bioengineering (MEU44BM1)
- Human Health and Disease (PGU22003) – module lead
- MSc Molecular Medicine (MMHD1)

Student	Date of Award	Contribution to supervision
PhD candidates		
Karina Kulakova	ongoing	Main Supervisor
Daphni Doulapsi	ongoing	Main Supervisor
Roozbeh Senai	ongoing	Main Supervisor
Dr. Kieran Murray	June 2021	Study design, day to day supervision (flow cytometric analysis, data analysis, tissue culture techniques), thesis chapter correction, pre-viva preparation, conference presentation support/preparation, manuscript preparation for publication (<i>Murray, Floudas et al., 2021</i>)
Dr. Megan Hanlon	May 2020	Study design, supervision on data analysis and interpretation, novel flow cytometric analysis
Dr. Charlene Foley	February 2020	Study design, day to day supervision (flow cytometric analysis, data analysis, tissue culture techniques), thesis chapter correction, pre-viva preparation, conference presentation support/preparation, manuscript preparation for publication (<i>Floudas, Foley et al., 2019</i>)
Ms. Serena Foo	ongoing	Study design, day to day supervision (flow cytometric analysis, data analysis, tissue culture techniques, metabolism), conference presentation support/preparation
Masters – Research	2013-2023	6 Projects supervised to completion

- Teaching style promoting a safe, inclusive environment for ideas to be exchanged. Encouraging constructive dialogue with the students and critical thinking through interactive sessions and the use of live polling app.

PUBLIC AND PATIENT ENGAGEMENT

Lay videos

- 2021-2022-Writer of PPI videos entitled ‘Why get involved in Research’ and ‘What causes Inflammation in the Joint’
- World arthritis day 2021 lay-video (>2000 hits)

Public/Patient presentations

- 2021-Organising Committee for Patient-directed symposium- ‘Diet, Sleep and Exercise-Impact on Inflammation’
- Work closely with patient advocacy groups CARD Charity and Arthritis Ireland - Workshops, Information videos and patient engagement.

Scientific Communication/media

- 2021 Irishtimes; <https://www.irishtimes.com/topics/topics-7.121354>
- 2021 Health Professionals Network; <https://www.eurekalert.org/news-releases/786282>
- https://www.tcd.ie/news_events/articles/a-fresh-look-at-joint-inflammation-in-rheumatoid-arthritis-patients/

CONTRIBUTION TO OPEN SCIENCE

- Publication of scRNAseq data of RA and PsA synovial tissue biopsies NCBI-GEO_GSE200815, data curator: Achilleas Floudas
- Publication of two open access ‘omic’ datasets (NCBI-GEO_GSE154988 and ENA-SRP092408).

PUBLICATIONS

Journal Publications

Google scholar: <https://scholar.google.com/citations?user=qUcNcskAAAAJ&hl=en>

Scopus: <https://www.scopus.com/authid/detail.uri?authorId=55955225100>

1. T. Segasby, R. Sanaei, N. Aleksejenko, O. Mamad, D. Henshall, A. Floudas, Heller Janosch. A stolen future – aberrant hippocampal neurogenesis produces glial cells in epilepsy. *bioRxiv*, 2024.
2. Kulakova, K.; Lawal, T.R.; Mccarthy, E.; Floudas, A. The Contribution of Macrophage Plasticity to Inflammatory Arthritis and Their Potential as Therapeutic Targets. *Cells* 2024, 13, 1586.
3. C. Rafael-Vidal, S. Martínez-Ramos, B. Malvar-Fernández, I. Altabás-González, C. Mouriño, D. J Veale, A. Floudas, U. Fearon, J. María Pego Reigosa, S. García. Type I Interferons induce endothelial destabilization in Systemic Lupus Erythematosus in a Tie2-dependent manner. *Frontiers in Immunology*, 2023
4. D. Tsiapalis, A. Floudas, T. Tertel, V. Boerger, B. Giebel, D. J. Veale, U. Fearon, L. O’Driscoll. Therapeutic Effects of Mesenchymal/Stromal Stem Cells and Their Derived Extracellular Vesicles in Rheumatoid Arthritis. *Stem Cells Translational Medicine*, 2023.
5. C. McHugh, K. Hind, A. Kelly, U. Fearon, M. Wasfy, A. Floudas, Z. Barad, K. Dane, Ga. Farrell, F. Wilson. Cardiovascular risk and systemic inflammation in male professional rugby: a cross-sectional study. *BMJ Open Sport & Exercise Medicine*, 2023.
6. J. Hunter, A. Campbell, J. Butterworth, H. Sellier, N. Hannaway, S. Luli, A. Floudas, N. Kenneth, A. Moore, P. Brownridge, H. Thomas, J. Coxhead, L. Taylor, P. Leary, M. Hasoon, A. Knight, M. Garrett, I. Collins, C. Eyers, and N. Perkins. Mutation of the RelA(p65) Thr505 phosphosite disrupts the DNA replication stress response, leading to CHK1 inhibitor resistance. *Biochemical Journal*, 2022.
7. A. Floudas, C. Smith, V. Krishna, M. Canavan, V. Marzaioli, M. Hanlon, P. Gallagher, C. Hurson , S. Nagpar, R. Mullan, D. Veale, U. Fearon. Distinct stromal and immune cell interactions shape the pathogenesis of Rheumatoid and Psoriatic arthritis. *Annals of the Rheumatic Diseases*, 2022.
8. A Floudas, N Neto, C Orr , M Canavan, P Gallagher , C Hurson , MG Monaghan, S Nagpar, R Mullan, DJ Veale, U Fearon. Loss of balance between protective and pro-inflammatory synovial tissue T-cell polyfunctionality predates clinical onset of Rheumatoid Arthritis. *Annals of the Rheumatic Diseases*, 2022.
9. A. Floudas, A. Gorman, N. Neto, M. Monaghan, Z. Elliott, U. Fearon, V. Marzaioli. Inside the knee of inflammatory arthritis patients: handling and processing of synovial tissue biopsies for high throughput analysis. *Frontiers in Medicine*, 2022.
10. V. Marzaioli, M. Canavan, A. Floudas, K. Flynn, R. Mullan, D. J. Veale and U. Fearon. CD209/CD14+ Dendritic cells characterization in rheumatoid and psoriatic arthritis patients: activation, synovial infiltration and therapeutic targeting. *Frontiers in Immunology*, 2022.

11. A. Floudas, M. Canavan, T. McGarry, V. Krishna, D.J. Veale and U. Fearon. ACPA Status Correlates with Differential Immune Profile in Patients with Rheumatoid Arthritis. Cells, 2021. (Collaboration with Janssen)
12. C. Cunningham, S. Wade, C. Orr, A. Floudas, T. McGarry, S. Wade, S. Cregan, U. Fearon, D. J. Veale. Serum miRNAs signature in Rheumatoid Arthritis and ‘at risk individuals’. Frontiers in Immunology, 2021.
13. K Murray, A Floudas, C Murray, U Fearon, DJ Veale. Brief Report: First Reported Case of Tofacitinib Treatment of an Immune Checkpoint Inhibitor Induced Inflammatory Arthritis in a Patient with Pulmonary Adenocarcinoma. BMJ Case Reports, 2021.
14. A. Floudas^{*}, N. Neto, V. Marzaioli, K. Murray, B. Moran, M.G. Monaghan, C. Low, R.H. Mullan ,N.L. NL, V. Krishna, S. Nagpar, D.J. Veale, U. Fearon. Pathogenic, glycolytic PD-1+ B cells accumulate in the hypoxic RA joint. JCI insights, 2020 (* Corresponding Author). (Collaboration with Janssen),
15. V. Marzaioli, M. Canavan, A. Floudas, S. Wade, C. Low, D.J. Veale and U. Fearon. Monocyte-derived dendritic cell differentiation in Inflammatory Arthritis is regulated by the JAK/STAT axes via NADPH oxidase regulation. Frontiers in Immunology, 2020
16. S. Saunders, A. Floudas, T. Moran, M. Rooney, C. Fahy, J. Geoghegan, Y. Iwakura, P. Fallon, C. Schwartz. Dysregulated skin barrier function in Tmem79 mutant mice promoted IL-17A dependent spontaneous skin and lung inflammation. Allergy, 2020
17. A. Floudas, C. Foley, M. Canavan, M. Biniiecka, E.J. MacDermott, D.J. Veale, R.H. Mullan, O.G. Killeen, U. Fearon. Increased T Cell Plasticity With Dysregulation of Follicular Helper T, Peripheral Helper T, and Treg Cell Responses in Children With Juvenile Idiopathic Arthritis and Down Syndrome–Associated Arthritis. Arthritis and Rheumatology, 2019.
18. A. Ui Mhaonaigh, A. Coughlan, A. Dwivedi, J. Hartnett, J. Cabral, B. Moran, K. Brennan, S. Doyle, K. Hughes, R. Lucey, A. Floudas, U. Fearon, S. McGrath, S. Cormican, A. De Bhailis, E. Molloy, G. Brady, M. Little. Low Density Granulocytes in ANCA Vasculitis Are Heterogenous and Hypo-Responsive to Anti-Myeloperoxidase Antibodies. Frontiers of Immunology, 2019.
19. C. Schwartz, T. Moran, S. Saunders, A. Kaszlikowska, A. Floudas, H. Rodewald, G. Nunez, S. Galli, Y. Iwakura, L. O’Neill, A. McKenzie, G. Ogg, P. Walsh, J. Demengeot, P. Fallon. Spontaneous atopic dermatitis in mice with a defective skin barrier is independent of ILC2 and mediated by IL-1b-activated mast cells. Allergy, 2019.
20. A. Floudas, G. Avello, C. Schwartz, I. Jeffery, P. O’Toole and P. Fallon. Schistosoma Mansoni worm infection regulates the intestinal microbiota and susceptibility to colitis. Infection and Immunity, 2019.

21. A. Floudas, C.D. Cluxton, J. Fahel, AR Khan, S.P. Saunders, S. Amu, A. Alcami, P. Fallon. Composition of the Schistosoma mansoni worm secretome: Identification of immune modulatory Cyclophilin A. PLoS N.T.D., 2019. **Citations: 17**
22. A. Floudas, S. Saunders, T. Moran, C. Schwartz, E. Hams, D.Fitzgerald, J.Johnston, G. Ogg, A. McKenzie, P. Walsh and P.Fallon. Interleukin-17 receptor A maintains and protects the skin barrier to prevent allergic skin inflammation. The Journal of Immunology, 2017. **recommended on F1000**
23. C. Schwartz, A. Khan, A. Floudas, S. Saunders, E. Hams, H. Rodewald, A. McKenzie, P. Fallon. ILC2 regulate adaptive Th2 cell functions via PD-L1 checkpoint control. The Journal of Experimental Medicine, 2017. **recommended on F1000**
24. S. Saunders, T. Moran, A. Floudas, F. Wurlod, A. Kaszlikowska, M. Salimi, EM. Quinn, CJ Oliphant, G. Núñez, R. McManus, E. Hams, AD. Irvine, AN. McKenzie, GS. Ogg, P. Fallon. Spontaneous atopic dermatitis is mediated by innate immunity, with the secondary lung inflammation of the atopic march requiring adaptive immunity. J Allergy Clin Immunol. 2016;137(2):482-91
25. AR. Khan, E. Hams, A. Floudas, T. Sparwasser, CT. Weaver, P. Fallon. PD-L1hi B cells are critical regulators of humoral immunity. Nat Commun. 2015;6:5997. **Citations: 185**
26. L. Jopson, J. Newton, J.Palmer, A. Floudas, J. Isaacs, J. Qian, J. Wilkinson, M. Trenell, A. Blamire, D. Howel, D. Jones. RITPBC: B-cell depleting therapy (rituximab) as a treatment for fatigue in primary biliary cirrhosis: study protocol for a randomised controlled trial. BMJ, 2015.
27. M. Ciechomska, C. Wilson, A. Floudas, W. Hui, A. Rowan, W. van Eden, J. Robinson, A. Knight. Antigen-specific B lymphocytes acquire proteoglycan aggrecan from cartilage extracellular matrix resulting in antigen presentation and CD4+ T-cell activation. Immunology, 2014.

Review papers

28. C. Hegarty, N. Neto, P. Cahill, A. Floudas. Computational approaches in rheumatic diseases – Deciphering complex spatio-temporal cell interactions. Computational and Structural Biotechnology Journal, 2023
29. U. Fearon, M. Hanlon, A. Floudas, D. Veale. Differential cellular metabolic pathways in Rheumatoid Arthritis. Nature Reviews Rheumatology, 2022
30. M. Canavan, A. Floudas, D. Veale, U. Fearon. The PD-1:PD-L1 axis in inflammatory arthritis. BMC Rheumatology, 2021.
31. A. Floudas, S. Amu, P. Fallon, New insights into IL-10 dependent and IL-10 independent mechanisms of regulatory B cell immune suppression. Journal of Clinical Immunology. 2016.

Journal Papers Submitted/Under review/revision.

32. Jill E Hunter, Jacqueline A Butterworth, Helene Sellier, Saimir Luli, Achilleas Floudas, Adam J Moore, Huw D Thomas, Kirsteen J Campbell, Niall S Kenneth, Robson T Chiremba, Dina Tiniakos, Andrew M Knight, Benjamin E Gewurz, Fiona Oakley, Michelle D Garrett, Ian Collins, Neil D Perkins. Regulation of checkpoint kinase signalling and tumorigenesis by the NF- κ B regulated gene, CLSPN. Preprint available at: <https://www.biorxiv.org/content/early/2018/06/28/358291>

PRESENTATIONS AND INVITED LECTURES

Paper Presentation, “Distinct stromal and immune cell interactions shape the pathogenesis of rheumatoid and psoriatic arthritis”

Annual European Congress of Rheumatology, 2022

Paper Presentation, “Loss of balance between protective and pro-inflammatory synovial tissue T-cell polyfunctionality predates clinical onset of Rheumatoid Arthritis.”

American College of Rheumatology 2021.

Paper Presentation, “Loss of balance between protective and pro-inflammatory synovial tissue T-cell polyfunctionality predates clinical onset of Rheumatoid Arthritis”

Irish Society of Rheumatology 2021.

Paper Presentation, “Pathogenic, glycolytic PD-1+ B cells accumulate in the hypoxic RA joint.” Cytokines2020, 2020

Paper Presentation, “Pathogenic, glycolytic PD-1+ B cells accumulate in the hypoxic RA joint.” American College of Rheumatology, 2019.

Paper Presentation, “Increased T Cell Plasticity with Dysregulation of Tfh, Tph and Treg Cell Responses in Children with JIA and Down Syndrome-associated Arthritis.” Irish Society of Rheumatology, 2019.

Paper Presentation, “Increased T Cell Plasticity with Dysregulation of Tfh, Tph and Treg Cell Responses in Children with JIA and Down Syndrome-associated Arthritis.”

Cytokines2019, 2019.

Paper Presentation, “B cell phenotype and function in the synovium of ACPA+ and ACPA-rheumatoid arthritis patients.” Annual European Congress of Rheumatology, 2018.

Paper Presentation, “Interleukin-17 receptor A maintains and protects the skin barrier to prevent allergic skin inflammation.” World Immune Regulation Meeting, 2017.

Summer School, “Applications of Flow cytometric analysis in the study of Autoimmune Diseases,” Flow cytometry Summer School, UCD, 2015.

INVITED LECTURES

41st European Workshop for Rheumatology Research, invited speaker, May 2022

Immunology North East – BSI regional group, Meet the expert seminar series, invited speaker, January 2022

EULAR-Synovitis Study Group, winter meeting, December 2021

Expert meeting, “High dimensionality flow cytometric analysis of rheumatoid arthritis patient synovial biopsies” CYTEK, invited speaker, January 2021

SERVICE TO DISCIPLINE/COLLEGE

Επιτροπή Ηθικής και Δεοντολογίας Πανεπιστημίου Ιωάννινων **2024 - now**
(Ethics and academic integrity Committee member – University of Ioannina)

Ελληνική Εταιρία Ανοσολογίας **2024 - now**
(Hellenic Immunology Society)

Επιτροπή Αγοραζόμενων Ειδών – Ιατρικής **2024 - now**
(School of Medicine Procurement Committee member)

Επιτροπή Κατατάξεων – Ιατρικής **2024 - now**
(School of Medicine Ranking Committee member)

Academic Lead of the DCU Flow Cytometry Core Facility **2024**

EWRR 2023 – Scientific conference organising committee member

Review Editor at Frontiers in Immunology - Autoimmune and Autoinflammatory Disorders 2021

Editorial Board Member, Rheumatology, 2019-Present

Working group member of EUMUNET (EULAR network for young Rheumatologists), 2017-2021

Industry Collaborations - Janssen, Pfizer, Gilead

Committees

- Committee member, postdoctoral society, Trinity Biomedical Sciences Institute, 2015
- Student representative at the Immunology North East, BSI regional group, 2011-2013

- Student representative at the ICM postgraduate committee, 2011-2013
- Student representative at the postgraduate research committee of NCL, 2011-2013

Peer-Reviewer for:

- Rheumatology
- Frontiers in Immunology
- Frontiers Cellular and Infection Microbiology
- The Journal of Immunology

Chair

- Session at ACR, 2019

Memberships

- Cytokine Society 2019-today
- Irish Society of Immunology 2017-today
- Irish Society of Rheumatology 2020-today
- American Association of Immunology 2017-2019
- British Society of Immunology 2010-2015

LANGUAGES

English: Excellent

IELTS exam by the British Council (score: 7.5/9) 2009

Certificate of Proficiency in English (University of Cambridge) 2003

Greek: Native Language

COMPUTER SKILLS

Programming: R for the analysis of scRNAseq data

Applications: Prism, BD FACS Diva, FlowJo, ImageJ, LASX and more