



# Conor M. Finlay

PRINCIPLE INVESTIGATOR

Trinity Translational Medicine Institute, Trinity College Dublin

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Immunologist

## Research Roles

### SENIOR RESEARCH FELLOW, TRINITY COLLEGE DUBLIN, 2023-PRESENT

My group investigates innate immune cells in inflammation, combining molecular immunology, in vivo science and computational approaches to understand immune cell function in health and disease. Through leadership of TCD Omics and key clinical partnerships, we apply these approaches to understand human immune responses.

Role	Focus	Partners	Outputs
PI, Finlay Lab	Immune cell biology & bioinformatics	3 PhD students	Macrophage biology, computational immunology
Scientific Director, TCD Omics Renal Research	Single cell RNA-seq facility Biomarker discovery	TTMI-supported RA Prof. Mark Little, ADAPT	Core technology service Data analytics, translational research
Pleural Disease Program Mast Cell Program	Macrophage function Diagnostic development	Assoc. Prof. Laura Gleeson Ridge, Conlon, Moran	Translational immunology Clinical immunology

### HONORARY RESEARCH FELLOW, UNIVERSITY OF MANCHESTER (2021-PRESENT)

- Collaboration on MRC programme grant with Prof. Judith Allen. Pleural Macrophage biology.

## Past Employment History

#### Research Fellow

Trinity College Dublin

SUPERVISOR: AIDEEN LONG

2023-2024

- HEALD consortium - molecular biology and sequencing lead of tumour DNA and RNA-sequencing (with Aideen Long), since August 2023

#### Research Fellow

Trinity College Dublin

SUPERVISOR: PROF MARK LITTLE

2021-2023

- Single cell RNA-sequencing lead on COVID-19 strategic partnership. Laboratory management of Trinity Kidney Health Centre (THKC). Clinical data analysis: incorporating data from clinical datasets (RedCap) with biobank datasets to stratify patients and combine with biomarker results for analysis using machine learning.

#### Research Associate

University of Manchester

SUPERVISOR: PROF JUDITH ALLEN.

2017-2021

- Origin, heterogeneity, proliferation and effector function of macrophages during helminth infection and type 2 immune responses. Funding: Medical Research Council/Wellcome Trust. See recent preprint for outputs.

#### Lecturer (teaching relief)

Trinity College Dublin

SCHOOL OF BIOCHEMISTRY AND IMMUNOLOGY

2016-2017

- Performed the teaching duties for a senior professor on sabbatical for 1 year. Duties included undergraduate practical supervision, undergraduate and MSc teaching via lectures and tutorials, setting examinations and corrections with associated administration duties.

#### Post-doctoral Researcher

Trinity College Dublin

SUPERVISOR: PROF KINGSTON HG MILLS.

2013-2016

- Research projects: 1. IP-protected translational project identifying and testing novel helminth-derived proteins as therapeutics for inflammatory disease. 2. Role of mast cells in the alternative activation of macrophages via IL-33. 3. Circadian regulation of autoimmune disease

## Education

### Special Purpose Certificate in Teaching, Learning & Assessment for Academic Practice

Trinity College Dublin

PERSPECTIVES ON TEACHING AND LEARNING IN HIGHER EDUCATION

2022

- Constitutes one third of the SP Cert

### Informatics Training Scheme (Wellcome Trust TPA)

University of Manchester

PROGRAMMING AND COMPUTATIONAL APPROACHES TO BIOLOGY MODULES

2020

- Constituted 50% of taught component of MSc Bioinformatics and Systems Biology

## PhD in Immunology

IMMUNE MODULATION BY THE HELMINTH PARASITE FASCIOLA HEPATICA

- Supervisor: Kingston Mills

Trinity College Dublin

2013

## BA(Mod) in Natural Sciences

MAJOR: BIOCHEMISTRY WITH IMMUNOLOGY

- Grade: 1:1, graduated top of class

Trinity College Dublin

2007

## Funding

### AWARDED

#### SFI-Pathways Programme

457K, PI

- Macrophage Activation and Transition in the Autoimmune Kidney (MacATAK): uncovering functional outcomes of macrophage differentiation in the inflamed kidney

Science Foundation Ireland

2024-2028

#### Trinity Doctorate Award 2024-2025, PI-led application

122K, PI

- Mapping Macrophage Cell State Transition in Inflammation and Infection at Single Cell Resolution

Trinity Doctorate Award

2024-2028

#### The Meath Foundation 2024

70K, Co-I (35K TO MY GROUP)

- 'Characterisation and Inhibition of Monocyte-Driven Inflammation in AAV (CIMDIA)'

The Meath Foundation

2024-2026

#### Higher Education Research Equipment Grant

30.2K, PI

- Cell counting solution to support TCD Omics

Higher Education Authority

2024-2025

#### Dean's Research Initiatives Fund

20K, PI

- Mapping human macrophage anti-microbial function in pleural infection

Faculty of Health Sciences, TCD

2024

#### Enterprise Ireland-funded Industry collaboration

93K

- Title withheld, scRNA-sequencing of blood cancer

Legend Biotech

2024

#### Building Engagements in Health Research Scheme

10K EUR, Co-PI

- Understanding mast cells and their progenitors in Telangiectasia Macularis Eruptiva Perstans (TMEP)'

Internal TCD

2023

#### MR/V011235/1 Programme Grant

2.26 MILLION GBP, RESEARCH CO-INVESTIGATOR

- "Macrophages in type 2 immunity: unravelling susceptibility and resistance to tissue nematode infection". I co-wrote grant and provided scientific design and preliminary data. Awarded an honorary position at UoM to facilitate ongoing collaboration after leaving Manchester

Medical Research Council

2021

#### Building Engagements in Health Research Scheme

10K EUR, Co-PI

- 'Nanoparticle modulation of neutrophil and monocyte responses to ANCA'

Internal TCD

2021

## Presentations, Awards & contributions

### ORAL PRESENTATIONS

2024	UK Kidney Week (Invited talk)	Edinburgh
2023	AI-driven Digital Content Technology (ADAPT) Collaboration Day (Invited talk)	TU Dublin
2023	Irish society of Parasitology	Tralee, Ireland
2023	Building Engagements in Health Research	TCD, Dublin
2022	Mononuclear Phagocytes in Health and Disease (Invited talk)	CRICK, London
2022	Parasitic Helminths: New Perspectives in Biology and Infection	Hydra, Greece
2022	COVID-19 Immunology, Vaccines and Lessons for the Future (Invited talk)	TCD, Dublin
2022	Trinity Translational Medicine Institute - Conference 2022 (Invited talk)	TTMI, Dublin
2021	Cytokine and interferon society meeting	Cardiff
2019	Irish Society of Immunology (best presentation award)	RCSI, Dublin
2019	BSI Type 2 Immunology Meeting	Manchester
2019	KU Leuven, UZ Gasthuisberg Campus (Invited talk)	KU Leuven
2015	Molecular and cellular biology of helminth parasites IX	Hydra, Greece
2015	TBSI Post-Doc Research Day	TCD, Dublin
2015	1st TBSI-Weimann joint Immunology conference	Rehovot, Israel
2015	European Congress of Immunology	Vienna
2009	European Congress of Immunology	Berlin

### POSTER PRESENTATIONS

2023	British Society of Immunology	Belfast
2019	British Society of Immunology	Liverpool
2018	Type 2 Immunity in Homeostasis and Disease	Bruges
2017	British Society of Immunology	Brighton
2016	British Society of Immunology	Liverpool
2015	Frontiers in neurology	TCD, Dublin
2014	Cytokine and interferon society meeting	Melbourne
2012	Keystone: Biology of Cytokines	Colorado
2012	British Society of Immunology	Colorado
2011	Cytokine and interferon society meeting	Florence

## MEDIA AND COMMENTARY

- Commentary in *Immunity*: “Macrophages show up in style when Th2 lymphocytes organize their homecoming”
- Paper featured on The Immunology Podcast - Episode 51
- Immunity paper featured on August 2023 edition of *Journal of Allergy and Clinical Immunology* News Beyond Our Pages column.
- Irish Health Professional 2023
- Medical Express 2023

## AWARDS

2022	Wiley Top Cited Article Award - Parasite Immunology
2021	EFIS/EJI Travel/Abstract Award Winners Presenting at Cytokines 2021
2019	Best presentation from selected abstracts - Irish Society of Immunology
2015	Visiting student training scheme - Weizmann Institute of Science
2015	TBSI Post-Doc Research Day - Runner up talk prize
2014	Milstein Travel Award - International Cytokine society
2007	Valedictorian - Biochemistry with Immunology degree
2007	Best Undergraduate Research Poster Prize - School of Biochemistry and Immunology

## DISCIPLINE CONTRIBUTIONS

2024	European Journal of Immunology	Article review
2024	European Congress of Immunology	Poster session reviewer
2024	European Congress of Immunology	Session Chair
2023	Kidney Research UK	Grant review
2023	Annals of the Rheumatic Diseases	Article review
2023	British Fellowship awarding body (name withheld)	Grant review
2022	Irish Nephrology Society Conference	Session Chair
2022	Post-doctoral scientist at TCD	Interview panel
2022	PhD Candidate in TCD	Continuation Viva
2022	Kidney International	Article review
2021-2022	Frontiers in Immunology	Article review
2021-2022	Research Assistant at TCD	Interview panel
2021	French National Research Agency (ANR) 2021 generic call	Grant review
2021	BBSRC Discovery Fellows award	Grant review
2021	Venture capital funded Trinity Spinout – Parvalis Tx	Patent (inventor)
2018	Scientific Reports	Article review
2017-2020	Parasite Immunology	Article review

## Active Collaborations

### Graham Heieis & Bart Everts

O-GLCNACYLATION IN MACROPHAGE HOMEOSTASIS

Leiden

### Lara Dungan, Niall Conlon

UNDERSTANDING MAST CELLS AND THEIR PROGENITORS IN TELANGIECTASIA MACULARIS ERUPTIVA PERSTANS

St James' Hospital

### Padraic Fallon

TITLE WITHHELD; INFLAMMATION FOCUSED (MOUSE)

Trinity College Dublin

### Arthur White

NEW STATISTICAL METHODS FOR SEMI-SUPERVISED CLUSTERING OF FLOW AND MASS CYTOMETRY DATA

Trinity College Dublin

### Legend Biotech & Tony McElligott

TITLE WITHHELD

Trinity College Dublin

**Judi Allen, Lili Zhang**

B CELL-MACROPHAGE INTERACTIONS IN TYPE 2 IMMUNE RESPONSES

University of Manchester

**Pn'g Loke**

EFFECT OF GENOTYPE ON ALTERNATIVE ACTIVATION OF SEROUS CAVITY MACROPHAGES

NIH, Bethesda, MA

**Niall Conlon, Katie Ridge**

ROLE OF MAST CELL PROGENITORS IN CHRONIC URTICARIA

St James' Hospital

**Ross MacManus**

LINKING IMMUNE CELL PERTURBATIONS TO ANKYLOSING SPONDYLITIS OUTCOMES

Trinity College Dublin

**Mark Travis**

TITLE WITHHELD, T CELL AND INFECTION FOCUSED (MOUSE)

University of Manchester

**Maria M. Munoz San Martin**

TITLE WITHHELD, MICROGLIA FOCUSED (MOUSE)

RCSI

**Sharee Basdeo**

INNATE IMMUNE TRAINING OF HUMAN MONOCYTES AND MACROPHAGES BY SARS-COV2 VACCINE CHAdOx1

Trinity College Dublin

**Judi Allen**

SEROUS CAVITY MACROPHAGE IN NEMATODE CONTROL

University of Manchester

**Judi Allen, James Parkinson**

THE PLEURAL CAVITY MACROPHAGE PROTEOME

University of Manchester

**Alvaro Diaz**

ROLE OF CD40 SIGNALLING IN TISSUE RESIDENT MACROPHAGE PROLIFERATION

Uni. de la República Uruguay

## Teaching & Supervision

### FORMAL TEACHING

#### Heritability, Genotyping, Genetics of Heritable Disease

Medium class size

BIOENGINEERING (4TH YEAR)

2024

- Explores genetic inheritance, disease patterns, and population genetics. Students learn heritability concepts, genotyping methods, and genetic disease mechanisms, combining theoretical principles with practical medical applications.

#### Introduction to omics technologies

20 students

CORE RESEARCH SKILLS MODULE

2023

- General introduction to omics technologies to new PhD students

#### Transcriptomics (2 hr workshop)

20 students

MSC IN IMMUNOLOGY

2022

- Introduction to Transcriptomics and single cell technologies

#### Datascience for Immunology (3 workshops and assessment)

20 students

MSC IN IMMUNOLOGY

2022

- 12 hours direct teaching time. Introduction to R programming, with a focus on analysis in R markdown. Analysing and visualising immunology data in R. Single cell RNA-sequencing analysis. Student assessment in Single cell RNA-sequencing analysis. Module design and module reform.

#### R programming, data visualisation and transcriptomic analysis (3 workshops)

20 students

MSC IN IMMUNOLOGY

2021

- Part of immunogenetics module - This included 3 dry lab sessions (in person) and assessment: student presentations of bioinformatic analysis (microarray)

#### T cells (4 lectures)

30 Students

BA(MOD) BIOCHEMISTRY WITH IMMUNOLOGY (4TH YEAR)

2016-2017

- This advanced course teaches most aspects of T cell biology from development, T cell education, tolerance, activation through the immunological synapse, APC function, co-stimulation, expansion, tissue/lymph node homing, T cell subset differentiation, regulation and the concept of immune responses types. Assessment: written exam

#### Cancer immunology and immunotherapy (2 lectures)

30 Students

BA(MOD) BIOCHEMISTRY WITH IMMUNOLOGY (4TH YEAR)

2016-2017

- Brief history of chemotherapy, failed early immune oncology interventions, recent success, checkpoint inhibitors, combination studies, CAR-T cell, future perspectives Assessment: written exam

#### Multiple sclerosis (1 lecture)

30 Students

BA(MOD) BIOCHEMISTRY WITH IMMUNOLOGY (4TH YEAR)

2016-2017

- Th1 and Th17 cells in autoimmunity, animal models of disease, S1p1 inhibitors, VLA4, future targets.

#### T cell differentiation, effector function and regulation (2 lectures)

20 students

MSC IN IMMUNOLOGY

2016-2017

- Introductory course to T cell biology, differentiation and the cytokine control of immune responses. Assessment: written exam

#### Introduction to parasite and type 2 Immune responses (3 lectures)

20 students

MSC IN IMMUNOLOGY

2014-2017

- This is an advanced course that covers aspect of type 2 immune responses. Th2 cells, helminth infections, eosinophils, M2 macrophages, wound repair, hygiene hypothesis and allergy. Workshop style with three PBL topics. Assessment: written exam

## Integrated Tutorials

BA(MOD) BIOCHEMISTRY WITH IMMUNOLOGY (3RD YEAR)

- Ongoing small group tutorials for 3 students each year integrated with specific modules

3 students

2014-2017

## RESEARCH PROJECT SUPERVISION

2025	BA(mod) Human Health and Disease	TCD
2024-2028	PhD Immunology (sole-supervisor)	TCD
2024-2028	PhD Bioinformatics (sole-supervisor)	TCD
2024	Msc Molecular Medicine	TCD
2023-2027	PhD Immunology (co-supervisor)	TCD
2023	BA(Mod) Molecular Medicine (intercalating Medical student)	TCD
2022	BA(Mod) Molecular Medicine (intercalating Medical student)	TCD
2021-2022	Bachelor in Medicine	TCD
2021-2022	Research Assistant	TCD
2021-2022	PhD student	TCD
2021	BA(Mod) Molecular Medicine (intercalating Medical student)	TCD
2020-2021	Mres Infection Biology	UoM
2018-2019	Mres Infection Biology	UoM
2017-2021	PhD Student (day-to-day supervisor, unofficial)	TCD
2016	Msc Immunology	TCD
2015-2017	PhD Student	TCD
2015	Msc Immunology	TCD
2014	Msc Immunology	TCD

**Additional teaching duties** In 2016 I took on the academic duties for a Professor in TCD on teaching sabbatical. This included all aspects of the role, including practical supervision, assessment and marking, tutorials and administrative duties. I have organised visits for school students between 2013-2016. I sit on thesis committees for 3 PhD students.

## Outreach, organisation and PPI

**Discover Research Night**, Dublin Sep 2014. Marie Skłodowska-Curie-funded. I was the event organiser responsible for public engagement at Trinity Biomedical Sciences Institute, organising a team of 50 researchers in leading themed tours of scientific facilities. We were the most subscribed event of Dublin Research Night (>500 members of the public).

**10th International Symposium on Bordetella**, Sep 2013. Logistics manager responsible for operations of the conference including registration, AV equipment and support for speakers.

**Manchester Immunology Group Seminar Series**, May 2017 – Sep 2018. Co-lead organiser. Handling invitations, hospitality, communications, for renowned international speakers to visit University of Manchester.

**School talk**, Oaklands Community College, Edenderry Co. Offaly, 2021. “The life of a scientist”.

**TCD Omics Core facility**. I have established formal pipelines for a single cell RNA-sequencing core service ‘TCD Omics’. I have successfully lobbied my institute to fund a research assistant to support the service under my supervision.

**Patient involvement** I have worked alongside patient representatives for Vasculitis Ireland as part of the PARADISE project. I have pitched an idea to the St James hospital Patient Representative Group and received feedback on development of a research programme, lay abstract and patient information leaflet.

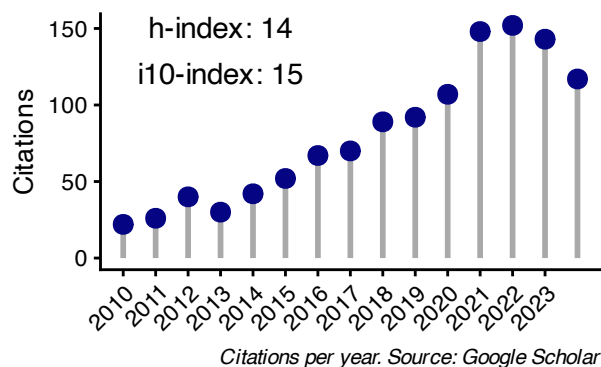
## Publications

\* (Co-)corresponding author or (co-)senior authorship

1. Dwivedi, A., Mhaonaigh, A. U., Carroll, M., Khosravi, B., Batten, I., Ballantine, R. S., Phelan, S. H., O’Doherty, L., George, A. M., Sui, J., Hawerkamp, H. C., Fallon, P. G., Noppe, E., Mason, S., Conlon, N., Cheallaigh, C. N., Finlay\*, C. M., & Little\*, M. A. (2024). Emergence of dysfunctional neutrophils with a defect in arginase-1 release in severe COVID-19. *JCI Insight*, 9(17). <https://doi.org/10.1172/jci.insight.171659>
2. Ridge, K., Moran, B., Alvarado-Vazquez, P. A., Hallgren, J., Little, M. A., Irvine, A. D., O’Farrelly, C., Dunne, J., Finlay\*, C. M., & Conlon\*, N. (2024). Lin - CD117 + CD34 + FcεRI + progenitor cells are increased in chronic spontaneous urticaria and predict clinical responsiveness to anti- IgE therapy. *Allergy*. <https://doi.org/10.1111/all.16127>
3. Finlay\*, C. M., & Allen\*, J. E. (2024). IL-4-ever young: Type 2 cytokine signaling in macrophages slows aging. *Immunity*, 57(3), 403–406. <https://doi.org/10.1016/j.immuni.2024.02.013>
4. Han, J., Gallerand, A., Erlich, E. C., Helmink, B. A., Mair, I., Li, X., Eckhouse, S. R., Dimou, F. M., Shakhsher, B. A., Phelps, H. M., Chan, M. M., Mintz, R. L., Lee, D. D., Schilling, J. D., Finlay, C. M., Allen, J. E., Jakubzick, C. V., Else, K. J., Onufer, E. J., ... Randolph, G. J. (2024). Human serous cavity macrophages and dendritic cells possess counterparts in the mouse with a distinct distribution between species. *Nature Immunology*, 25(1), 155–165. <https://doi.org/10.1038/s41590-023-01688-7>

5. Tachó-Piñot, R., Stamper, C. T., King, J. I., Matei-Rascu, V., Richardson, E., Li, Z., Roberts, L. B., Bassett, J. W., Melo-Gonzalez, F., Fiancette, R., Lin, I.-H., Dent, A., Harada, Y., Finlay, C., Mjösberg, J., Withers, D. R., & Hepworth, M. R. (2023). Bcl6 is a subset-defining transcription factor of lymphoid tissue inducer-like ILC3. *Cell Reports*, 42(11), 113425. <https://doi.org/10.1016/j.celrep.2023.113425>
6. Finlay\*, C. M., Parkinson, J. E., Zhang, L., Chan, B. H. K., Ajendra, J., Chenery, A., Morrison, A., Kaymak, I., Houlder, E. L., Murtuza Baker, S., Dickie, B. R., Boon, L., Konkell, J. E., Hepworth, M. R., MacDonald, A. S., Randolph, G. J., Rückerl, D., & Allen\*, J. E. (2023). T helper 2 cells control monocyte to tissue-resident macrophage differentiation during nematode infection of the pleural cavity. *Immunity*, 56(5), 1064–1081.e10. <https://doi.org/10.1016/j.immuni.2023.02.016>
7. McEntee, C. P., Houston, S., Finlay, C. M., Rossi, S., Liu, G., Shaw, T. N., Casulli, J., Fife, M., Smedley, C., Griffith, T. S., Pepper, M., Hussell, T., Hansbro, P. M., Schwartz, J.-M., Paidassi, H., & Travis, M. A. (2023). A subset of CD4+ effector memory T cells limit immunity to pulmonary viral infection and prevent tissue pathology via activation of latent TGFβ. *bioRxiv*, 2023.03.02.527395. <https://doi.org/10.1101/2023.03.02.527395>
8. McManus, C. M., Bouchery, T., Suleiman, M., Kildemoes, A. O., Ferguson, A., Wang, T., Finlay, C. M., Chan, R., Renahan, T., Mukundan, A., Nkurunungi, G., & Bobardt, S. D. (2022). Hydra 2022: Return of the interactive conference on helminth parasitology after the pandemic. *Trends in Parasitology*, 38(12), 999–1007. <https://doi.org/10.1016/j.pt.2022.09.013>
9. Finlay\*, C. M., Parkinson, J. E., Chan, B. H. K., Ajendra, J., Chenery, A., Morrison, A., Houlder, E., Baker, S. M., Dickie, B., Boon, L., MacDonald, A., Konkell, J. E., Ruckerl, D., & Allen\*, J. E. (2021). Genotype and Th2 Cells Control Monocyte to Tissue Resident Macrophage Differentiation During Nematode Infection of the Pleural Cavity. *bioRxiv*, 2021.12.17.472661. <https://doi.org/10.2139/ssrn.3992680>
10. Fiancette, R., Finlay, C. M., Willis, C., Bevington, S. L., Soley, J., Ng, S. T. H., Baker, S. M., Andrews, S., Hepworth, M. R., & Withers, D. R. (2021). Reciprocal transcription factor networks govern tissue-resident ILC3 subset function and identity. *Nature Immunology*, 22(10), 1245–1255. <https://doi.org/10.1038/s41590-021-01024-x>
11. Cunningham, K. T., Finlay, C. M., & Mills, K. H. G. (2021). Helminth Imprinting of Hematopoietic Stem Cells Sustains Anti-Inflammatory Trained Innate Immunity That Attenuates Autoimmune Disease. *Journal of Immunology (Baltimore, Md. : 1950)*, 206(7), 1618–1630. <https://doi.org/10.4049/jimmunol.2001225>
12. Finlay, C. M., Cunningham, K. T., Doyle, B., & Mills, K. H. G. (2020). IL-33-Stimulated Murine Mast Cells Polarize Alternatively Activated Macrophages, Which Suppress T Cells That Mediate Experimental Autoimmune Encephalomyelitis. *Journal of Immunology (Baltimore, Md. : 1950)*, 205(7), 1909–1919. <https://doi.org/10.4049/jimmunol.1901321>
13. Finlay\*, C. M., & Allen\*, J. E. (2020). The immune response of inbred laboratory mice to *Litomosoides sigmodontis*: A route to discovery in myeloid cell biology. *Parasite Immunology*, 42(7), e12708. <https://doi.org/10.1111/pim.12708>
14. Czajkowska, B. I., Finlay, C. M., Jones, G., & Brown, T. A. (2019). Diversity of a cytokinin dehydrogenase gene in wild and cultivated barley. *PloS One*, 14(12), e0225899. <https://doi.org/10.1371/journal.pone.0225899>
15. McEntee, C. P., Finlay, C. M., & Lavelle, E. C. (2019). Divergent Roles for the IL-1 Family in Gastrointestinal Homeostasis and Inflammation. *Frontiers in Immunology*, 10, 1266. <https://doi.org/10.3389/fimmu.2019.01266>
16. Campbell, S. M., Knipper, J. A., Ruckerl, D., Finlay, C. M., Logan, N., Minutti, C. M., Mack, M., Jenkins, S. J., Taylor, M. D., & Allen, J. E. (2018). Myeloid cell recruitment versus local proliferation differentiates susceptibility from resistance to filarial infection. *eLife*, 7, e30947. <https://doi.org/10.7554/eLife.30947>
17. Sutton, C. E., Finlay, C. M., Raverdeau, M., Early, J. O., DeCoursey, J., Zaslona, Z., O'Neill, L. A. J., Mills, K. H. G., & Curtis, A. M. (2017). Loss of the molecular clock in myeloid cells exacerbates T cell-mediated CNS autoimmune disease. *Nature Communications*, 8(1), 1923. <https://doi.org/10.1038/s41467-017-02111-0>
18. Finlay\*, C. M., Stefanska, A. M., Coleman, M. M., Jahns, H., Cassidy, J. P., McLoughlin, R. M., & Mills, K. H. G. (2017). Secreted products of *Fasciola hepatica* inhibit the induction of T cell responses that mediate allergy. *Parasite Immunology*, 39(10), e12460. <https://doi.org/10.1111/pim.12460>
19. Finlay, C. M., Stefanska, A. M., Walsh, K. P., Kelly, P. J., Boon, L., Lavelle, E. C., Walsh, P. T., & Mills, K. H. G. (2016). Helminth Products Protect against Autoimmunity via Innate Type 2 Cytokines IL-5 and IL-33, Which Promote Eosinophilia. *Journal of Immunology (Baltimore, Md. : 1950)*, 196(2), 703–714. <https://doi.org/10.4049/jimmunol.1501820>
20. Bernard, N. J., Finlay, C. M., Tannahill, G. M., Cassidy, J. P., O'Neill, L. A., & Mills, K. H. G. (2015). A critical role for the TLR signaling adapter Mal in alveolar macrophage-mediated protection against *Bordetella pertussis*. *Mucosal Immunology*, 8(5), 982–992. <https://doi.org/10.1038/mi.2014.125>
21. Finlay, C. M., Walsh, K. P., & Mills, K. H. G. (2014). Induction of regulatory cells by helminth parasites: Exploitation for the treatment of inflammatory diseases. *Immunological Reviews*, 259(1), 206–230. <https://doi.org/10.1111/imr.12164>
22. Coleman, M. M., Finlay, C. M., Moran, B., Keane, J., Dunne, P. J., & Mills, K. H. G. (2012). The immunoregulatory role of CD4<sup>+</sup> FoxP3<sup>+</sup> CD25<sup>+</sup> regulatory T cells in lungs of mice infected with *Bordetella pertussis*. *FEMS Immunology and Medical Microbiology*, 64(3), 413–424. <https://doi.org/10.1111/j.1574-695X.2011.00927.x>
23. Walsh, K. P., Brady, M. T., Finlay, C. M., Boon, L., & Mills, K. H. G. (2009). Infection with a helminth parasite attenuates autoimmunity through TGF-beta-mediated suppression of Th17 and Th1 responses. *Journal of Immunology (Baltimore, Md. : 1950)*, 183(3), 1577–1586. <https://doi.org/10.4049/jimmunol.0803803>

## CITATION METRICS



Details	Number of papers
Total Papers	23
As First Author	7
Senior, Co-senior or primary supervisor	4
Secondary author - Major contribution (>3 months)	7
Secondary author - Minor contribution (<3 months)	5
As (co-)corresponding author	5

## Referees

### Prof Judi Allen

PROFESSOR OF IMMUNOBIOLOGY; JUDI.ALLEN@MANCHESTER.AC.UK

### Prof Kingston HG Mills

PROFESSOR OF EXPERIMENTAL IMMUNOLOGY; KINGSTON.MILLS@TCD.IE

### Prof Mark A Little

PROFESSOR OF NEPHROLOGY

### Dr Matthew Hepworth

SIR HENRY DALE FELLOW; MATTHEW.HEPWORTH@MANCHESTER.AC.UK

### Prof Cliona O'Farrelly

PROFESSOR OF COMPARATIVE IMMUNOLOGY; OFARRECL@TCD.IE

*University of Manchester*

*Lydia Becker Institute*

*Trinity College Dublin*

*School of Biochemistry and Immunology*

*Trinity College Dublin*

*School of Medicine, Tallaght University*

*Hospital*

*University of Manchester*

*Lydia Becker Institute*

*Trinity College Dublin*

*School of Biochemistry and Immunology*



# Appendix

## SKILLS

I have a broad skillset that includes animal research, translational research, molecular biology, bioinformatics and clinical data analysis that enables me to design and manage research projects from a multidisciplinary point of view.

Category	Primary Skills	Tools & Technologies
Research & Analysis	Translational Research • Clinical Data Analysis • Animal Models • Patient Stratification	REDCap • Mass Cytometry • Flow Cytometry (30+ parameters) • ELISA
Programming	R (Fluent) • Python (Intermediate) • Unix/Bash (Basic)	RMarkdown • Git • HPC
Bioinformatics	Single Cell RNA-seq • Bulk RNA-seq • Mass Cytometry Analysis • Trajectory Analysis	Seurat • DESeq2 • limma • SCENIC • Spectre
Molecular Biology	NGS Library Prep • DNA/RNA Workflows • Proteomics • Cell Culture	Illumina NovaSeq • 10X Genomics • BD Rhapsody • TapeStation
Laboratory	Cell Sorting • Tissue Processing • Blood Processing • Core Facility Management	BD FACSAria • Mass Cytometry • Multiparameter Flow

## DATASETS, CODE & WEBSITES

<b>scRNA-seq data from Allergy paper 2024</b> HTTPS://WWW.NCBI.NLM.NIH.GOV/GEO/QUERY/ACC.CGI?ACC=GSE261424	<i>NCBI</i> 2024
<b>scRNA-seq expression app</b> HTTPS://SHINY.ITS.MANCHESTER.AC.UK/MDEHSJPR/ORIGINAL/	<i>shiny app</i> 2023
<b>PARADISE R package for analysis of Kidney disease dataset (private)</b> ON REQUEST	<i>R package</i> 2023
<b>L sigmodontis collective analysis</b> HTTPS://GITHUB.COM/CONORISCO/LITO_DATABASE	<i>Github</i> 2022
<b>scRNA-seq data from Immunity paper 2023</b> HTTPS://WWW.NCBI.NLM.NIH.GOV/GEO/QUERY/ACC.CGI?ACC=GSE189031	<i>NCBI</i> 2021

## SHORT-LISTED APPLICATIONS

- Short-listed for UKRI Innovation/Rutherford Fund Skills Development Fellowship (Computational Biology), 2017.
- Short-listed for academic-industry partnership post-doctoral position, Belgium, 2019
- Short-listed as candidate from school of medicine for Science Foundation Ireland Pathways programme, 2021
- Short-listed for Lister Prize 2023

## TRAINING

2023	LAST (Ireland) course (rodents)	<i>LAST Ireland</i>
2022	Illumina Sequencing (NovaSeq 6000)	<i>Illumina</i>
2018	Single Cell RNA-sequencing	<i>Earlham Institute</i>
2017	Home Office personal animal licence	<i>Manchester</i>
2014	Fluorescent activated cell sorting	<i>UCD</i>

## THESIS COMMITTEES AND CONTINUATION VIVAS

2022-2023 School of Computer Science and Statistics PhD student	<i>Ultan Doherty</i>
2022-2023 School of Medicine PhD student	<i>Sarah Connolly</i>
2021-2023 School of Medicine PhD student	<i>Mariya Al Hamrashdi</i>

## INTERVIEW PANELS

2022	Post-Doctoral scientist at TCD (TTMI lab)	<i>Interview panel</i>
2022	Research Assistant at TCD (Core funded)	<i>Interview panel</i>
2022	Research Assistant at TCD (our lab)	<i>Interview panel</i>
2021	Research Assistant at TCD (our lab)	<i>Interview panel</i>

## COURSES



#### UNIVERSITY OF MANCHESTER

- Data Protection
- Introduction to High Performance Computing
- Introduction to version control using Git
- Introduction to the UNIX shell
- Programming with Python
- Data analysis using R
- Introduction to Python

#### TRINITY COLLEGE DUBLIN

- Biological safety workshop
- Cryogenics safety workshop
- Radiological safety workshop
- LAST animal handling course (2009)
- Data Protection and Health Research (2021)
- Project Management
- Academic Practice: Perspectives on Teaching and Learning in Higher Education (1/3 SpCert - July 2022)
- Data Protection: Data Transfer and Secondary Use of Data (2021)
- Equality, Diversity and Inclusion in Higher Education

### SOCIETIES AND COMMITTEES

#### SOCIETY MEMBERSHIP

- British Society of immunology
- Irish Society of Immunology
- International Cytokine & Interferon Society
- Myeloid Network

#### COLLEGE COMMITTEES

- STTAR Data Committee (2021-2023)
- Single Cell TCD core facility working group (Chair)
- FLOCI - Flow cytometry analysis committee (2021-Present)
- Post-Doc Representative for comparative medicine unit (CMU; animal research unit) executive committee (2016)
- Covid Strategic partnership (SFI Funded) (2021-2023)
- STTAR Covid-19 M-Bio LIMS (clinical data access, 2022)