

**Surname:** MOONEY **Forenames:** Jason Paul

**Current post:** Research and Teaching Fellow

**Address:** Institute of Immunology and Infection Research,  
School of Biological Sciences,  
The University of Edinburgh,  
The King's Buildings, Ashworth Labs, Edinburgh EH9 3FL

**Telephone:** (m) 0795 716 6150

**Email:** jason.mooney@ed.ac.uk

**Qualifications:**

2015 **PhD Immunology**, University of California, Davis USA  
"Malaria and Salmonella Co-infection: Immunological Mechanisms of Increased Morbidity"  
Advisor: Prof. Renee M. Tsolis

2006 **BSc Microbiology**, University of Tennessee, Knoxville USA

**Current position:**

2022 Research & Teaching Fellow, Principal Investigator  
Institute for Infection and Immunity Research, School of Biological Sciences,  
College of Science and Engineering, The University of Edinburgh, UK  
Research Focus in **Immunology**: Neutrophils

**Posts held:**

2020-2022 Research Fellow (core funded)  
Institute for Infection and Immunity Research, School of Biological Sciences,  
College of Science and Engineering, The University of Edinburgh, UK  
Laboratory of Prof. Eleanor Riley.  
Research Focus in **Immunology**: Malaria

2017-2020 Research Fellow (PDRA)  
Division of Infection and Immunity, The Roslin Institute, College of Medicine  
and Veterinary Medicine, The University of Edinburgh, UK  
Laboratory of Prof. Eleanor Riley.  
Research Focus in Immunology (Malaria):  
*Impact of 'asymptomatic' malaria on neutrophil function.*

2017-2020 Collaborating **Lead Investigator**  
MRC Unit The Gambia at LSHTM, The Gambia  
Clinical study: 'Asymptomatic' malaria, anaemia and neutrophil function.

2015-2017 Research Fellow (PDRA)  
Faculty of Infectious and Tropical Diseases, London School of Hygiene &  
Tropical Medicine, UK  
Laboratory of Eleanor Riley, Ph.D.  
Research Focus in **Immunology (NK cells & Influenza)**:  
*Natural Killer cell function during recall responses to influenza infection.*

2009-2015 Graduate Research Fellow  
Medical Microbiology and Immunology, University of California, Davis, USA

Laboratory of Renee Tsohis, Ph.D.  
Research Focus in **Microbiology (Malaria & Salmonella)**:  
*Host-pathogen interactions during Malaria and Salmonella co-infections.*

2007-2009 Emerging Infectious Disease Training Fellow  
Viral and Rickettsial Disease Laboratory, California Department of Public Health, USA  
Laboratory of Carl Hanson, Ph.D.  
Research Focus in **Virology (HIV)**:  
*Evaluated neutralizing antibody efficiency to HIV-1 in-vitro.*

2007 Laboratory Technician  
Microbiology, University of Tennessee – Knoxville, USA  
Laboratory of Alison Buchan, Ph.D  
Research Focus in **Environmental Microbiology**:  
*Characterization of transposon library of novel marine bacterium.*

2006 Research Assistant  
Microbiology, University of Tennessee – Knoxville, USA  
Laboratory of Tim Sparer, Ph.D.  
Research Focus in **Virology (CMV)**:  
*Recombinant murine cytomegalovirus expressing human CMV vCXCL-1.*

#### **Academic Honours and awards:**

2020 Supervisor of the Year nominee, Edinburgh Students' Association Teaching Awards  
2014 Graduate Group in Immunology Short-term Fellowship  
2012 American Association of Immunology Trainee Abstract Award  
2007-2009 Emerging Infectious Disease Training Fellow, California Department of Public Health; managed by Center for Disease Control & Prevention (**CDC**) & Association of Public Health Laboratories (APHL), USA. \*nationally competitive award  
2006 Lisa Kahn Memorial Award for Excellence in Undergraduate Research.

#### **Grant Funding and involvement:**

2022 Wellcome Trust ISSF, UoE, lead investigator. £35,000.  
2020 Wellcome Trust ISSF, UoE, co-writer w/Prof. Riley, named PDRA. £36,559.  
2017 MRC, LSHTM/UoE, co-writer w/Prof. Riley, named PDRA. £596,781.  
2015 Internship Funding for Uganda; Gordon & Betty Moore Foundation. \$20,000.  
2010-2011 NIH T32 Training Grant, Animal Models of Infectious Diseases. \$16,000.  
2007-2009 Emerging Infectious Disease Training Fellow, Funding 25 fellows/year, \$2.3M federal program, with ~\$92,000 per fellow.

#### **Teaching:**

2022 **Course Organizer** & Lecturer – 'Molecular and Cellular Immunology – 4<sup>th</sup> year undergraduate core immunology course. Lectures: 'Innate sensors' and 'Complement'. School of Biological Sciences, The University of Edinburgh, U.K.  
2020-2022 Lecturer – 'Immunobiology of Malaria' – 4<sup>th</sup> year undergraduate students. Lectures: 'Immunological aspects of malarial anaemia and co-infections' and 'Adaptive Immunity'. School of Biological Sciences, The University of Edinburgh, U.K. C/O: Prof. Alex Rowe.  
2011-2013 Course Creator/Administration/Teacher – Immunological Methods, 15-20 first-year PhD students per year, Immunology Graduate Group, UC Davis, USA.

#### **Editorial Contributions:**

2019-present **Associate Editor**, Scientific Reports (IF 4.5)  
2016-present **Associate Editor**, BMC Infectious Diseases (IF 3.8)

2015-2020 Reviewer; Parasite Immunology, PNAS, Frontiers in Immunology

**Memberships of Academic Societies and Forums:**

2021- UKRI Early Career Researcher Forum  
2019- The Genetics Society  
2019- Staff Pride Network 🏳️, University of Edinburgh  
2018- Research Network "BactiVac" (Bacterial vaccinology)  
2016- The British Society for Immunology  
2012- The American Association of Immunologists

**Notable Invited Oral Presentations:**

- Immunology 2012, Annual Meeting of Immunologists, Boston MA 2012.
- Bay Area World Malaria Day Symposium, Emeryville CA 2013.
- UC Davis Immunology Symposium, Davis CA 2013.
- Bay Area Malaria Meeting, Berkeley CA 2014.
- British Society of Immunology, Annual Meeting, Liverpool 2016.
- UK NK cell meeting, London 2017.
- MRC The Gambia, Disease Control & Elimination, Divisional Meeting, Fajara 2018.
- British Society of Immunology, Annual Meeting, Edinburgh 2022.

**Public Engagement:**

- Easter Bush Outreach Centre, ELISA Masterclass, High School pupils.
- London Open Day, LSHTM Outreach, public workshop activities on immunity.

**Other relevant skills:**

Grant Management:

- UoE Internal post-award management: FirstWeb, eFinance, Staff recruitment/interview.

Home Office Animal Project License – *Prev. application made in ASPeL with HOI & UoE NVS*

Use/contact with core UoE research laboratories:

- Pathology unit; Easter Bush (Gillian and Scott Maxwell).
- Flow cytometry units: Kings (Dr. Martin Waterfall) and Roslin (Dr. Anna Raper).
- Edinburgh Genomics & Biomolecular Core – Luminex multiplex assay.

**Publication Record:**

Google Scholar Metrics: Citations: 698 *h index* = 14 *i10-index* = 16

**IN REVISION:**

**Mooney JP**, DonVito S, Lim R, Keith M, Pickles L, Maguire E, Wagner-Gamble T, Oldfield T, Bermejo-Pariente A, Ehimiyein AM, Philbey AA, Bottomley C, Riley EM, Thompson J. (2022) Intestinal inflammation and increased intestinal permeability in *Plasmodium chabaudi* AS infected mice. *Wellcome Open Research*. 7 (134), 134 doi: 10.12688/wellcomeopenres.17781.1

**PUBLISHED:**

**Mooney JP**, DonVito S, Jahateh M, Bittaye H, Keith M, D'Alessandro U, Bottomley C, Riley EM. (2022) Prevalence of *Plasmodium falciparum* in asymptomatic Gambian children in 2017-2018, with a comparative evaluation of diagnostic methods. *Malaria Journal* 21, 171 doi: 10.1186/s12936-022-04184-9

**Mooney JP**, DonVito S, Jahateh M, Bittaye H, Keith M, Galloway LJ, Ndow M, Cunningham AJ, D'Alessandro U, Bottomley C, Riley EM. (2022) 'Bouncing back' from subclinical malaria: Inflammation and erythrocytosis after resolution of *P. falciparum* infection in Gambian children. *Frontiers in Immunology*. 13:780525. doi: 10.3389/fimmu.2022.780525

Smith NL, Nahrendorf W, Sutherland C, **Mooney JP**, Thompson J, Spence PJ, Cowan GJM. (2020) A Conserved TCR $\beta$  signature dominates a highly polyclonal T-cell expansion during the acute phase of a murine malaria infection. *Frontiers in Immunology*. 11:3055 doi: 10.3389/fimmu.2020.587756

Sey ICM, Ehimiyein AM, Bottomley C, Riley EM, **Mooney JP**. (2020) Does Malaria cause Diarrhoea? A systematic review. *Frontiers in Medicine*. 7:703 doi: 10.3389/fmed.2020.589379

Marr EJ, Milne RM, Anar B, Girling G, Schwach F, **Mooney JP**, Nahrendorf E, Spence PJ, Cunningham D, Baker DA, Langhorne J, Rayner JC, Billker O, Bushell ES, Thompson J. (2020) An enhanced toolkit for the generation of knockout and marker-free fluorescent *Plasmodium chabaudi*. *Wellcome Open Research*. 5:71 doi: 10.12688/wellcomeopenres.15587.2.

**Mooney JP**, Qendro T, Keith M, Philbey AA, Groves HT, Tregoning JS, Goodier MR, Riley EM. (2020) Natural Killer cells dampen the pathogenic features of recall responses to influenza infection. *Frontiers in Immunology*. 11:135. doi: 10.3389/fimmu.2020.00135.

Wagstaffe HR, **Mooney JP**, Wolf AS, Prevatt N, Behrens RH, Riley EM, Goodier MR. (2019) Influenza Vaccination Primes Human Myeloid Cell Cytokine Secretion and Natural Killer Cell Function. *Journal of Immunology*. 203(6):1609-1618 doi: 10.4049/jimmunol.1801648

**Mooney JP**, Galloway L, Riley EM. (2019) Malaria, anemia and invasive bacterial disease: a neutrophil problem? *J Leukocyte Biology*. 105(4):645-655. doi: 10.1002/JLB.3RI1018-400R

**Mooney JP**, Barry A, Gonçalves BP, Tiono AB, Awandu SS, Grignard L, Drakeley CJ, Bottomley C, Bousema T, Riley EM. (2018) Haemolysis and haem oxygenase-1 induction during persistent "asymptomatic" malaria infection in Burkinabé children. *Malaria J*. 17 (1), 253 doi: 10.1186/s12936-018-2402-6

Ekregbesi P, Shankar-Hari M, Bottomley c, Riley EM, **Mooney JP**. (2018) Relationship between Anaemia, Haemolysis, Inflammation and Haem Oxygenase-1 at Admission with Sepsis: a pilot study. *Scientific Reports*, 8 (1), 11198 doi: 10.1038/s41598-018-29558-5

Wagstaffe HR, **Mooney JP**, Riley EM, Goodier MR. (2018) Vaccinating for natural killer cell effector functions. *Clinical & Translational Immunology*, 7 (1), e1010. doi: 10.1002/cti2.1010

**Mooney JP**, Wassmer SC, Hafalla JC. (2017) Type I interferon in malaria: a balancing act. *Trends in Parasitology*, 33 (4), 257-260. doi: 10.1016/j.pt.2016.12.010

Singletary, LA, Karlinsey JE, Libby SJ, **Mooney JP**, Lokken KL, Tsolis RM, Byndloss MX, Hirao LA, Gaulke CA, Crawford RW, Dandekar S, Kingsley RA, Msefula CL, Heyderman RS, Fang FC (2016). Loss of multicellular behavior in epidemic African nontyphoidal *Salmonella enterica* serovar Typhimurium ST313 strain D23580. *M Bio*, 7 (2), e02265-15. doi: 10.1128/mBio.02265-15

**Mooney JP**, Lokken KL, Byndloss MX, George MD, Velazquez EM, Faber F, Butler BP, Walker GT, Ali MM, Potts R, Tiffany C, Ahmer BM, Luckhart S, Tsolis RM. (2015) Inflammation-associated alterations to the intestinal microbiota reduce colonization resistance against non-typhoidal *Salmonella* during concurrent malaria parasite infection. *Scientific Reports* 5:14603. doi: 10.1038/srep14603

**Mooney JP\***, Lee SJ, Lokken KL, Nanton MR, Nuccio SP, McSorley SJ, Tsolis RM. (2015)

Transient loss of protection afforded by a live attenuated non-typhoidal Salmonella vaccine in mice co-infected with malaria. *PLoS Negl Trop Dis.* 9(9):e0004027. \*Co-first author. doi: 10.1371/journal.pntd.0004027

**Mooney JP\***, Butler BP\*, Lokken KL, Xavier MN, Chau JY, George MD, Schaltenberg N, Dandekar S, Santos RL, Luckhart S, Tsois RM. (2014). The mucosal inflammatory response to non-typhoidal Salmonella in the intestine is blunted by IL-10 during concurrent malaria parasite infection. *Mucosal Immunology.* 7(6):1302-11. \*Co-first author. doi: 10.1038/mi.2014.18

**Mooney JP\***, Lokken KL\*, Butler BP, Xavier MN, Chau JY, Schaltenberg N, Begum RH, Müller W, Luckhart S, Tsois RM. (2014). Malaria parasite infection compromises control of systemic non-typhoidal Salmonella infection via IL-10-mediated alteration of myeloid cell function. *PLoS Pathogens.* 10(5):e1004049. \*Co-first author. doi: 10.1371/journal.ppat.1004049  
(Article Highlighted: Kugelberg E. Opposing effects of IL-10. *Nature Reviews Immunology*, 2014 Jun;14(6):356).

Chau JY, Tiffany CM, Nimishakavi S, Lawrence JA, Pakpour N, **Mooney JP**, Lokken KL, Caughey GH, Tsois RM, Luckhart S. (2013). Malaria-associated L-arginine deficiency induces mast cell-associated disruption to intestinal barrier defenses against nontyphoidal Salmonella bacteremia. *Infect. Immun.* 81(10):3515-26. doi: 10.1128/IAI.00380-13

Cude WN, **Mooney J**, Tavanaei AA, Hadden MK, Frank AM, Gulvik CA, May AL, Buchan A. (2012) Production of the antimicrobial secondary metabolite indigoidine contributes to competitive surface colonization by the marine roseobacter *Phaeobacter sp.* strain Y4I. 78(14):4771-80.

Planque S, Salas M, Mitsuda Y, Sienczyk M, Escobar MA, **Mooney JP**, Morris MK, Nishiyama Y, Ghosh D, Kumar A, Gao F, Hanson CV, Paul S. (2010). Neutralization of genetically diverse HIV-1 strains by IgA antibodies to the gp120-CD4-binding site from long-term survivors of HIV infection. *AIDS.* 24(6):875-84. doi: 10.1128/AEM.00297-12

Matoba N, Husk AS, Barnett BW, Pickel MM, Arntzen CJ, Montefiori DC, Takahashi A, Tanno K, Omura S, Cao H, **Mooney JP**, Hanson CV, Tanaka H. (2010) HIV-1 neutralization profile and plant-based recombinant expression of actinohivin, an Env glycan-specific lectin devoid of T-cell mitogenic activity. *PLoS One*, 5(6):e111143. doi: 10.1371/journal.pone.0011143