

Róisín McManus, PhD



DZNE and University Hospital Bonn

Senior Postdoctoral Researcher

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Research Expertise

Dr. McManus is a neuroimmunologist interested in the inflammatory pathways within the brain that are triggered during aging and Alzheimer's disease. Her major area of interest is in how such immune responses change with age and chronic activation, resulting in a vicious cycle that ultimately leads to enhanced progression of neurodegenerative disease.

Education / Training

Trinity College Dublin, Ireland, PhD, 2015

Trinity College Dublin, Ireland, Postgraduate Certificate in Innovation and Entrepreneurship, 2014

Trinity College Dublin, Ireland, B.Sc. in Neuroscience 2010

Appointments / Positions Held

2015 - present

Postdoctoral research fellow in the DZNE, Bonn

2015

Postdoctoral researcher in Trinity College Dublin, Ireland

Honors / Awards

2020

Postdoc Innovation fund award (EXC2151-390873048)

2020

Postdoc committee member of the Bonn School of Advanced Studies in Immunology, organising the 1st Young Scientists Symposium, 2021

2018 - present

Conference abstract reviewer at AAIC

2018

Invited talk, AAIC, USA

2017 - present

Grant reviewer French National Research agency

2015 – present

Manuscript reviewer for Alzheimer's and Dementia, Journal of Alzheimer's disease, Current Alzheimer Research, Molecular Neurobiology, Molecular Medicine, Brain Behaviour and Immunity, Scientific Reports, PLoS One

2013 - present

Travel award from the British society of Immunology Congress, German Multiple Sclerosis society, Immunosenescence Bonn,

Alzheimer Forschung Initiative

2014

Trinity College Dublin, Dean of Student's Roll of Honour

2013

Oral Presentation Prize, Frontiers in Neurology

2012

Poster Presentation Prize, Neuroscience Ireland

2010

Innovation Bursary, Trinity College Dublin

Most Relevant Publications

1. **McManus RM**, Heneka MT. T cells in Alzheimer's disease: space invaders. *Lancet Neurol.* 2020 Apr;19(4):285-287.

2. Ising C, Venegas C, Zhang S, Scheiblich H, Schmidt SV, Vieira-Saenger A, Schwartz S, Albaset S, **McManus RM**, Tejera D, Griep A, Santarelli F, Brosseron F, Opitz S, Stunden J, Merten M, Kayed R, Golenbock DT, Blum D, Latz E, Buée L, Heneka MT. NLRP3 inflammasome activation drives Tau pathology. *Nature.* 2019 Nov;575(7784):669-673.

3. Lučiūnaitė A, **McManus RM**, Jankunec M, Rácz I, Dansokho C, Dalgediene I, Schwartz S, Brosseron F, Heneka MT. Soluble A β Oligomers and Protofibrils Induce NLRP3 Inflammasome Activation in Microglia. *J Neurochem.* 2019 Dec;e14945.

4. Heneka MT, **McManus RM**, Latz E. Inflammasome signaling in brain function and neurodegenerative disease. *Nat Rev Neurosci.* 2018 Sept;19:610-621.

5. **McManus RM**, Finucane OM, Wilk MM, Mills KHG, Lynch MA. FTY720 Attenuates Infection-Induced Enhancement of A β Accumulation in APP/PS1 Mice by Modulating Astrocytic Activation. *J Neuroimmune Pharmacol.* 2017 Dec;12(4):670-681.

6. **McManus RM**, Higgins SC, Mills KH, Lynch MA. Respiratory infection promotes T cell infiltration and amyloid-beta deposition in APP/PS1 mice. *Neurobiol Aging.* 2014 Jan;35(1):109-21.

7. Browne TC, McQuillan K, **McManus RM**, O'Reilly JA, Mills KH, Lynch MA. IFN- γ Production by amyloid β -specific Th1 cells promotes microglial activation and increases plaque burden in a mouse model of Alzheimer's disease. *J Immunol.* 2013 Mar 1;190(5):2241-51.