

Curriculum Vitae of Dr Emma Grant PhD

PERSONAL DETAILS

Name: Dr Emma Grant

Position: NHMRC CJ Martin Research Fellow

Institution: Monash University, VIC, Australia

Contact: emma.grant@monash.edu

SHORT BIOGRAPHY AND RESEARCH INTERESTS

Dr Emma Grant is an NHMRC Early Career Fellow working at Monash University, Victoria, Australia. Dr Grant completed her PhD studies, “Understanding immune responses to Influenza viruses” in 2015 at Melbourne University under the supervision of Prof. Katherine Kedzierska. Following her PhD, she was awarded an NHMRC CJ Martin Fellowship, undertaking her first 2 years at Cardiff University in Wales, UK, under the mentorship of Prof. David Price. She has since returned to work at Monash University, firstly within the Rossjohn Laboratory under Prof. Jamie Rossjohn, and more recently in the newly established Gras laboratory under the mentorship of A/Prof. Stephanie Gras. Her interests remain within anti-viral immunity and her research focuses on understanding key correlates of immune protection against different viral infections.

ACADEMIC RECORD

- 2011-2015** Degree of Doctor of Philosophy (PhD) – The Department of Microbiology and Immunology, The University of Melbourne at the Peter Doherty Institute of Infection and Immunity (*Conferring of Degree 16th Dec 2015*)
- 2010** Bachelor of Science (Honours) –The University of Melbourne
- 2007-2009** Bachelor of Science - The University of Melbourne

RESEARCH FUNDING

- 2016** CJ Martin ECR Fellowship - National Health and Medical Research Council (NHMRC)

OTHER AWARDS AND SCHOLARSHIPS

- 2018** ASI Travel Bursary - Australasian Society for Immunology (ASI)
- 2016** ASI ICI Travel Award - Australasian Society for Immunology (ASI)
- 2014** ASI International Travel Award - Australasian Society for Immunology (ASI)
- 2014** Major Bartlett Travel Scholarship - Department of Microbiology and Immunology, University of Melbourne at the Peter Doherty Institute for Infection and Immunity
- 2013** Douglas and Lola Douglas Scholarship in Medical Science - The Australian Academy of Science (AAS)
- 2013** NHMRC Aboriginal and Torres Strait Islander Health Research Scholarship - National Health and Medical Research Council (NHMRC)
- 2013** ASI Travel Bursary - Australasian Society for Immunology (ASI)
- 2013** Major Bartlett Travel Scholarship - Department of Microbiology and Immunology, University of Melbourne
- 2012** May Stewart Bursary Faculty Scholarship - Faculty of Medicine, Dentistry and Health Sciences (MDHS), The University of Melbourne

- 2011** Gilead Sciences Pty. Ltd. Educational Grant - Australian centre of Hepatitis and HCV research (ACH²)
- 2011** Major Bartlett Travel Scholarship - Department of Microbiology and Immunology, University of Melbourne

PUBLICATIONS

- 2019** McLaren JE, Clement M, Marsden M, Miners KL, Llewellyn-Lacey S, **Grant EJ**, Rubina A, Gimeno Brias S, Gostick E, Stacey MA, Orr SJ, Ladell K, Price DA, Humphreys IE. *IL-33 augments virus-specific memory T cell inflation and potentiated the efficacy of an attenuated Cytomegalovirus-based vaccine*. J Immunol, 2019, Feb 1;202(3):943-955.
- 2018** **EJ Grant**, TM Josephs, L Loh, EB Clemens, S Sant, M Bharadwaj, W Chen, J Rossjohn, S Gras* and K Kedzierska*. *Equal contribution. *Broad CD8⁺ T cell receptor cross-recognition of distinct influenza A in humans*. Nat Commun, 2018 Dec 21;9(1):5427.
- 2018** KS Wun, JF Reijneveld, TY Cheng, K Ladell, AP Uldrich, J Le Nours, KL Miners, JE McLaren, **EJ Grant**, OL Haigh, TS Watkins, S Suliman, S Iwany, J Jimenez, R Calderon, KL Tamara, SR Leon, MB Murray, JA Mayfield, JD Altman, AW Purcell, JJ Miles, DI Godfrey, S Gras, DA Price, I Van Rhijn, DB Moody, J Rossjohn. *T cell autoreactivity directed toward CD1c itself rather than toward carried self-lipids*. Nature immunology, 2018, 19 (4), 397.
- 2017** THO Nguyen, S NL Sant, Bird, **EJ Grant**, EB Clemens, M Koutsakos, SA Valkenburg, S Gras, M Lappas, A Jaworowski, J Crowe, L Loh, K Kedzierska. *Perturbed CD8⁺ T cell immunity across universal influenza epitopes in the elderly*. Journal of Leukocyte Biology, 2017, jlb. 5MA0517-207R
- 2017** TM Josephs, **EJ Grant**, S Gras. *Molecular challenges imposed by MHC-I restricted long epitopes on T cell immunity*. Biological chemistry 398 (9), 1027-1036
- 2017** **EJ Grant***, S Nüssing*, S Sant, EB Clemens and K Kedzierska. *The role of CD27 in anti-viral T-cell immunity*. *Equal contribution. Curr Opin Virol. 2017, 22, 77-88.
- 2016** **EJ Grant**, TM Josephs, SA Valkenburg, L Wooldridge, M Hellard, J Rossjohn, M Bharadwaj, K Kedzierska, and S Gras. *Lack of heterologous cross-reactivity towards HLA-A*02:01 restricted viral epitopes is underpinned by distinct α T cell receptor signatures*. J Biol Chem. 2016 Nov 18;291(47):24335-24351
- 2016** THO Nguyen, NL Bird, **EJ Grant**, JJ Miles, PG Thomas, TC Kotsimbos, NA Mifsud, K Kedzierska. *Maintenance of the EBV-specific CD8⁺ TCR α repertoire in immunosuppressed lung transplant recipients*. Immunol Cell Biol. 2016, 95 (1), 77.
- 2016** SA Valkenburg, TM Josephs, EB Clemens, **EJ Grant**, GC Wang, D Price, A Miller, S Tong, PC Doherty, PG Thomas, J Rossjohn, S Gras and K Kedzierska. *Molecular Basis for Universal HLA-A*0201-restricted CD8⁺ T Cell Immunity against Influenza Viruses*. PNAS, Proc Natl Acad Sci U S A. 2016, 19;113(16):4440-5.
- 2016** **EJ Grant**, SM Quinines-Parra, EB Clemens and K Kedzierska. *Human influenza viruses and CD8⁺ T cell responses*. Curr Opin Virol. **2016** Feb;16:132-42.
- 2016** THO Nguyen, M Koutsakos, **EJ Grant**, PC Doherty and K Kedzierska, *Towards Future T Cell-Mediated Influenza Vaccines*. Infect Dis Transl Med, 2016, 2(1): 20-29.
- 2016** EB Clemens, **EJ Grant**, Z Wang, S Gras, P Tipping, J Rossjohn, AMiller, S Tong and K Kedzierska. *Towards identification of immune and genetic correlates of severe influenza disease in Indigenous Australians*. Immunol Cell Biol, 2016, 94 (4), 367-377.
- 2014** S Quiñones-Parra, **EJ Grant**, L Loh, THO Nguyen, K Campbell, S Tong, A Miller, PC Doherty, D Vijaykrishna, J Rossjohn, S Gras and K Kedzierska. *Pre-existing CD8⁺ T-*

- cell immunity to the H7N9 influenza A virus varies across ethnicities*. PNAS, 2014 Jan 21;111(3):1049-54.
- 2014 EJ Grant**, L Chen, S Quiñones-Parra, K Pang, K Kedzierska and W Chen. *T-cell immunity to influenza A viruses*. Critical Reviews in Immunology, 2014; 34(1):15-39.
- 2013 KR Short**, M Vissers, S de Kleijn, A L. Zomer, K Kedzierska, **E Grant**, PC Reading, PWM Hermans, G Ferwerda & D A. Diavatopoulos. *Bacterial Lipopolysaccharide Inhibits Influenza Virus Infection of Human Macrophages and the Consequent Induction of CD8⁺ T Cell Immunity*. Journal of Innate Immunity, 2013; 6(2):129-39.
- 2013 KR Short***, **EJ Grant***, M Vissers, PC Reading, DA Diavatopoulos and K Kedzierska. *A novel method linking antigen presentation by human monocyte-derived macrophages to CD8⁺ T cell polyfunctionality*. * Equal contribution. Frontiers in Immunology. 2013 Nov 21;4:389.
- 2013 E Grant***, C Wu*, KF Chan, S Eckle, M Bharadwaj, QM Zou, K Kedzierska and W Chen. *Nucleoprotein of influenza A virus is a major target of immunodominant CD8⁺ T cell responses* *Equal contribution. Immunology and Cell Biology, **2013**, 91(2):184-94

CONFERENCE AND MEETING PARTICIPATION

Oral Presentations

- 2018 E Grant**, T Josephs, L Loh, B Clemens, S Sant, M Bharadwaj, W Chen, J Rossjohn, S Gras and K Kedzierska. Australasian Society for Immunology (ASI) conference, Perth, Aust, Dec 2018
- 2018 E Grant**, T Josephs, L Loh, B Clemens, S Sant, M Bharadwaj, W Chen, J Rossjohn, S Gras and K Kedzierska. Australian Synchrotron Users Meeting, Australian Synchrotron, Melb, Aust, Nov 2018
- 2013 E Grant**, M Bharadwaj, A Jaworowski and K Kedzierska. Australasian Society for Immunology (ASI) conference, Wellington, NZ, Dec 2013.
- 2012 E Grant**, M Bharadwaj, W Chen and K Kedzierska. Australasian Society for Immunology (ASI) conference, Melbourne, Aust, Dec 2012.
- 2011 E Grant***, C Wu*, KF Chan, M Bharadwaj, QM Zou, K Kedzierska and W Chen. *Equal contribution. The 2011 Annual Influenza Retreat, Melbourne, Aust, Nov 2011.
- 2011 E Grant***, C Wu*, KF Chan, M Bharadwaj, QM Zou, K Kedzierska and W Chen. *Equal contribution. Department of Microbiology and Immunology Postgraduate Retreat, Lancemore Hill Kilmore, Aust, Sept 2011.
- 2011 E Grant**, PC Doherty, J McCluskey, K Kedzierska, M Bharadwaj. 7th National workshop of the Australian Centre for HIV and Hepatitis Virology Research (ACH²). Sunshine Coast QLD, Aust, June 2011.

Poster presentations

- 2016 EJ Grant**, S Nussing, N Bird, A Jaworowski, A Schuessler, C Smith, A Al-Shamkhani, M Bharadwaj and K Kedzierska. International congress of Immunology (ICI), Melbourne, Australia, Aug 2016.
- 2015 E Grant**, W Chen, J Rossjohn, S Gras and K Kedzierska. Keystone symposia: Viral Immunity, Colorado, USA, Jan 2015.
- 2015 EB Clemens**, **E Grant**, S Gras, J Rossjohn, W Chen, K Kedzierska. Keystone symposia: Viral Immunity, Colorado, USA, Jan 2015.
- 2014 E Grant**, S Quiñones-Parra, L Loh, C Wu, S Gras, J Rossjohn, W Chen and K Kedzierska. *Immunodominant*. Keystone symposia: Pathogenesis of respiratory infections, Colorado, USA, Jan 2014.
- 2013 E Grant**, M Bharadwaj, A Jaworowski and K Kedzierska. Australasian Society for Immunology (ASI) conference, Wellington, NZ, Dec 2013.

2012 E Grant, M Bharadwaj, W Chen and K Kedzierska. Australasian Society for Immunology (ASI) conference, Melbourne, Aust, Dec 2012.

2011 E Grant*, C Wu*, KF Chan, M Bharadwaj, QM Zou, K Kedzierska and W Chen. *Equal contribution. Australasian Society for Immunology (ASI) conference, Adelaide, Aust, Dec 2011.

SERVICE TO THE PROFESSION AND COMMUNITY

Manuscript reviews

2018 – ongoing Direct invitation from journals to peer review articles for publication

2014 - 2017 Invitation from supervisors to assist in reviewing articles for publication

Community engagement

2018 National Science week, 15th August, Monash University

2018 Scientific Sensory Showcase, 31st May, Monash University

2018 Day of Immunology, 26th April, Monash University

2018 International Women in Science, 20th Feb, Monash University

2017 Tutor for the Seren Project, Cardiff University

2017 Committee for the Cardiff University Life Sciences Challenge, Cardiff University

2016 Committee for the Cardiff University Life Sciences Challenge, Cardiff University

2015 Year 10 laboratory experience, The University of Melbourne

2014 Year 10 laboratory experience, The University of Melbourne

2012 Primary School laboratory experience, The University of Melbourne

Memberships

2011 – ongoing Member of the Australasian Society for Immunology (ASI)

Scientific Committee/Representative roles

2012 Student Representative on the ASI Student Committee

2012 Student representative on the ASI Postgraduate Workshop Organizing Committee

2012 President of the Special Postgraduate Association for Students in Immunology and Microbiology (SPASIM), The University of Melbourne

Teaching roles

2017 Tutor for MB Bch PCR, First year medical students, Cardiff University

2016 Tutor for MB Bch PCR, First year medical students, Cardiff University

2012 Demonstrator/Tutor for Techniques in Immunology, The University of Melbourne

2011 Demonstrator/Tutor for Techniques in Immunology, The University of Melbourne

Invited presentations

2015 Invited speaker, Cardiff University, Wales, UK