



Dr Stephanie Gras

ARC Future Fellow

Head, Viral Immunity Laboratory



Monash Biomedicine Discovery Institute
Infection and Immunity Program

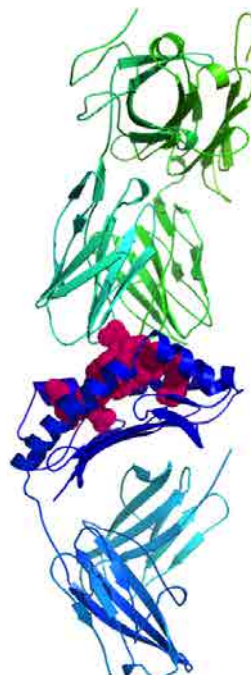
EMAIL stephanie.gras@monash.edu

TELEPHONE +61 3 9905 0254

Viruses are part of day-to-day encounters that the immune system needs to deal with. How the immune system “sees”, recognises and eliminates viral infection is not fully understood. Indeed, viruses are able to mutate in order to escape the immune system surveillance. If we were to develop better vaccine and drugs, or even vaccine against viruses like HIV, it is essential to understand the mechanism of viral recognition and viral escape prior to this.

Research Projects

1. Structural investigation into T cell response to Influenza virus
2. Structural investigation into T cell response to HIV



Selected significant publications:

1. Hassan C, Chabrol E, Jahn L, Kester MG, de Ru AH, Drijfhout JW, Rossjohn J, Falkenburg JH, Heemskerk MH, **Gras S**, van Veelen PA. 2015. Naturally processed non-canonical HLA-A*02:01 presented peptides. *Journal of Biological Chemistry* 290: 2593-2603.
2. Liu YC, Chen Z, Burrows SR, Purcell AW, McCluskey J, Rossjohn J, **Gras S**. 2012. The Energetic Basis Underpinning T-cell Receptor Recognition of a Super-bulged Peptide Bound to a Major Histocompatibility Complex Class I molecule. *Journal of Biological Chemistry* 287: 12267-12276.
3. **Gras S**, Chen Z, Miles JJ, Liu YC, Bell MJ, Sullivan LC, Kjer-Nielsen L, Brennan RM, Burrows JM, Neller MA, Purcell AW, Brooks AG, McCluskey J, Rossjohn J, Burrows SR. 2010. Allelic polymorphism in the T cell receptor and its impact on immune responses. *Journal of Experimental Medicine* 207(7): 1555-67.
4. **Gras S**, Kedzierski L, Valkenburg SA, Laurie K, Liu YC, Denholm JT, Richards MJ, Rimmelzwaan GF, Kelso A, Doherty PC, Turner SJ, Rossjohn J, Kedzierska K. 2010. Cross-reactive CD8+ T-cell immunity between the pandemic H1N1-2009 and H1N1-1918 influenza A viruses. *PNAS* 107(28): 12599-604.
5. **Gras S**, Burrows SR, Kjer-Nielsen L, Clements CS, Liu YC, Sullivan LC, Bell MJ, Brooks AG, Purcell AW, McCluskey J, Rossjohn J. 2009. The shaping of T cell receptor recognition by self-tolerance. *Immunity* 30(2): 193-203.