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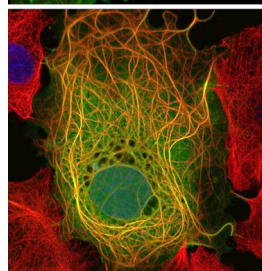
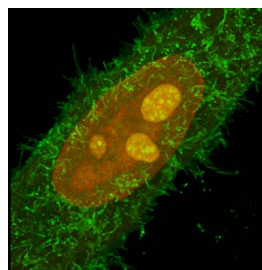
WEB med.monash.edu/microbiology/staff/moseley.html

Viruses pose one of the grand challenges to human and animal health globally and within Australia. Viral disease progression is critically dependent on the formation of specific interaction networks between viral proteins and host cell factors, which enable viral subversion of important processes such as antiviral immunity and cell survival.

We use advanced cellular/molecular biology approaches to elucidate these interactions at the molecular level, and to define their functions in diseases caused by highly lethal human viruses including rabies, Australian bat lyssavirus, Nipah, Hendra, and Ebola, as well as a number of agriculturally significant and potentially zoonotic animal viruses. The overarching aim of the research is to identify novel targets and strategies for the development of new vaccines and therapeutics for currently incurable viral diseases.

Research Projects

1. **Elucidating the Rabies Virus P protein Axis**
2. **Nucleolar targeting by RNA viruses**
3. **Viral reprogramming of host cell signalling**
4. **Super-resolution analysis of the virus-host interface**
5. **Using Viruses to Cure Neurological Diseases**



Cell images from high resolution confocal microscopic analysis, showing virus-host interactions within nucleoli (upper panel) and at the microtubule cytoskeleton (lower panel).

Selected significant publications:

1. Brice A, Whelan DR, Ito N, Shimizu K, Wiltzer-Bach L, Lo CY, Blondel D, Jans DA, Bell TD, **Moseley GW** (2016) Quantitative Analysis of the Microtubule Interaction of Rabies Virus P3 Protein: Roles in Immune Evasion and Pathogenesis. *Sci Rep* 6: 33493
2. Wiltzer L, Okada K, Yamaoka S, Larrous F, Kuusisto HV, Sugiyama M, Blondel D, Bourhy H, Jans DA, Ito N, **Moseley GW** (2014) Interaction of rabies virus P-protein with STAT proteins is critical to lethal rabies disease. *J Infect Dis* 209: 1744-53
3. Lieu KG, Brice A, Wiltzer L, Hirst B, Jans DA, Blondel D, **Moseley GW** (2013) The rabies virus interferon antagonist P protein interacts with activated STAT3 and inhibits Gp130 receptor signaling. *J Virol* 87: 8261-5
4. Oksayan S, Wiltzer L, Rowe CL, Blondel D, Jans DA, **Moseley GW** (2012) A novel nuclear trafficking module regulates the nucleocytoplasmic localization of the rabies virus interferon antagonist, P protein. *J Biol Chem* 287: 28112-21
5. **Moseley GW**, Lahaye X, Roth DM, Oksayan S, Filmer RP, Rowe CL, Blondel D, Jans DA (2009) Dual modes of rabies P-protein association with microtubules: a novel strategy to suppress the antiviral response. *J Cell Sci* 122: 3652-62