

Research Equipment: Meso Quickplex SQ120.

Awarded to: Laure Lau, P. Howarth, H. Arshad, A. Walls and H. M. Haitchi **Amount:** £10,000

Lay summary

The multi user MSD Quickplex SQ120 was purchased through AAIR Charity after receiving matching funding from the Head of CES and the Faculty of Medicine Research Management Committee. This has been up and running since March 2016. Several projects in CES have already been benefited from this equipment. By taking advantage of the high sensitivity of MSD ELISA plate assays:

- Dr Emily Swindle's PhD student was able to detect IFN-beta release from human mast cells infected with cold virus.
- Professor Christodoulidas' group has used the MSD ELISA plates to measure the IL-18 and IL-1beta release in human primary corneal fibroblasts in different conditions of *Pseudomonas aeruginosa* infection.
- Dr Richard Felwick has been studying human colonic explant cultures for his PhD project. The MSD assay has provided him a high sensitivity platform in which to measure pro-inflammatory cytokine release from these samples. The multiplex format and small sample volumes needed were critical for these precious samples.
- Dr Deiphine Boche's group were able to explore the inflammatory responses in precious post-mortem brain tissue from patients who had suffered from dementia and Alzheimer's disease. She has measured pro-inflammatory cytokines.

Drs Walls and Lau have been seeking to establish an association between pro-inflammatory cytokines and mast cell proteases in the serum of patients with anaphylaxis in order to identify those susceptible to severe reaction.
