The expanding application of flow cytometry in diverse fields challenges many researchers when attempting to compare data between facilities, instrumentation and publications.

Accuracy and reliability applies not only to instrumentation. A standardise approach to protocol design and implementation and how the data is presented, allows for constructive scientific discussion.

The increased ability of flow cytometers to make many measurements (parameters), and perform this at speed (cells/second) can present a problem when the reference data has been performed on a system with less capability.

Gaining an understanding of the instrumentation and the technology has the potential to enhance the robustness of the research data when optimised experimental conditions have been achieved.

Systematic approaches and evaluation can only occur when theory has been applied to real life situations. Hear how our speakers have approached and successfully navigated these issues in their own laboratories.

**Forensic Flow Cytometry - a functional verification of flow cytometry cell sorting and analysis**

**How similar is similar? A comparison of different flow cytometry analyzers and cell sorters**

Flow cytometry is used in many different research fields for analysing particles or cells and to furthermore sort populations of interest. In general, the setup of a flow cytometry experiment should be optimised depending on the experimental conditions. However, many different analysers and cell sorters of different price ranges are available with slightly different instrumental designs. In order to compare data between different instruments or even between different facilities, the need of standardisation for staining protocols, instruments settings and data analysis has become more and more apparent.

**Characterisation of cell alterations caused by FACS – A functional verification of cell sorting approaches.**

The biological status of cells, their viability, vitality and functionality after a sort, is crucial for the reliability and outcome of subsequent experiments. So far no attempts have been made to systematically evaluate sorting parameters and their influences on the quality of sorted cells.

**Preenter: Dr Matthias Schiemann - Core Manager of the Flow Cytometry FACS unit and group leader at the Institute for Medical Microbiology, Immunology and Hygiene – Technische Universität München**

**Performance Evaluation of CytoFLEX with plate loader for clinical molecular diagnostics**

**Preenter: Dr Karl Poetter - Founder, Chief Scientific Officer, and Executive Director - Genera Biosystems Limited**

**Seminar 13:30—16:00 Monday 7th September 2015**

**Location:** The Peter Doherty Institute
Mezzanine Seminar Room - GM 002
The Peter Doherty Institute for Infection & Immunity
792 Elizabeth St (Cnr Grattan), Parkville