



Background

Immune panels that include 30+ markers improve the ability to perform exploratory or targeted deep immune profiling.

Technology

Over the last decade, there has been an explosion in technological advances, which has seen an expansion in both the number of commercially available fluorescent dyes tagged to antibodies and the instrumentation.

Waipapa Taumata Rau | The University of Auckland was an early adopter of the recently developed Cytex spectral analyser, The Aurora. The combination of sophisticated equipment and a highly experienced flow cytometry team has enabled researchers at the University of Auckland to develop the capability to run assays that reliably distinguish as many as 40 cell markers.

The Aurora's innovative detectors and spectral unmixing software mean we can detect at least 30 colours on as few as three lasers or over 40 colours on five lasers. This capability provides outstanding quality data and enables far more information to be garnered from precious patient samples.

Major advantages

- More information collected from each sample.
- Ready-to-use immune panels from 26-40 colours.
- Ability to subtract cellular autofluorescence, which allows multicolour analyses of cultured cell products to be performed with ease.
- Pre-optimised reagent library allows for ability to rapidly customize existing panels or develop bespoke ones.

Applications

This unique capability enables various innovative applications in:

- Immune monitoring for drug/therapy trials (oncology, viral disease, vaccine responses, dietary interventions).
- Immune monitoring in whole blood or cryopreserved peripheral blood samples.
- Cell characterization from tissue biopsies (immune cells, stromal/stem cells).
- Characterization of cellular products for therapies (e.g., CAR T cells, mesenchymal cells).

UniServices

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