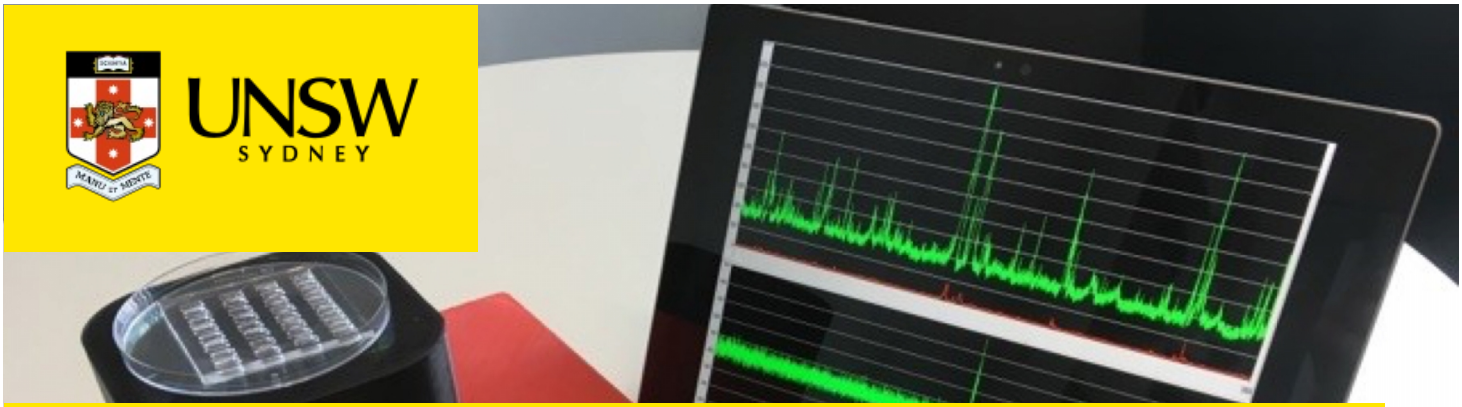

Single Molecule Diagnostics

Development of a portable, simple and efficient solution (NanoBright) to perform single-molecule detection in 30 seconds, opening new opportunities for point-of-care diagnostics and the detection of pathogens in the field.

Competitive advantage

- A compact plug-and-play single molecule microscope made from a 3D printed scaffold
- Small (20 cm x 10 cm footprint), easy to use and can operate in broad daylight
- Performance is as good as high-end commercial microscopes

Impact

- NanoBright enables the discovery and measurement of biomarkers at very low concentrations in complex samples. The reduced cost and ease of operation makes this the ideal platform to develop a range of assays for single molecule detection.

Successful outcomes

- Developed and used the Nanobright technology in laboratories for over 2 years
- Provided Nanobright to five academic research groups in Australia and Europe to detect rare species in complex biological samples at the single molecule level

More Information

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Capabilities and facilities

- NanoBright is a compact confocal spectroscope; the “nanodrop” of single molecule detection. This device reads, in real time, the fluorescence from single proteins or single particles and enables quantification of number and size of the particles in the sample
- With 105 times greater sensitivity (compared to plate readers), sample preparation times can be drastically reduced as less amplification or incubat