



Justina Ugwah begins scholarship project on smart impedance needle probes for real time detection of breast cancer

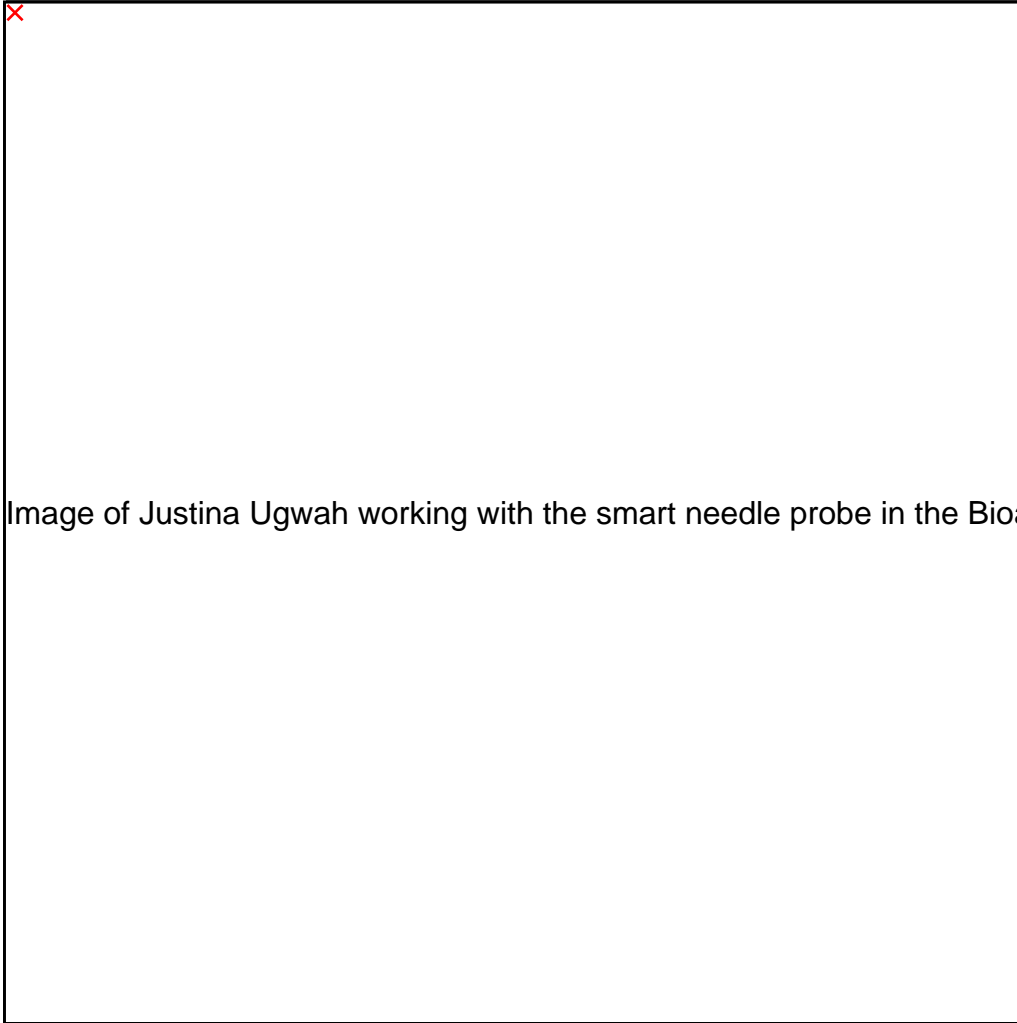


Image of Justina Ugwah working with the smart needle probe in the Bio

Justina working with the smart needle probe in the Bioanalysis Laboratory Tyndall National Institute

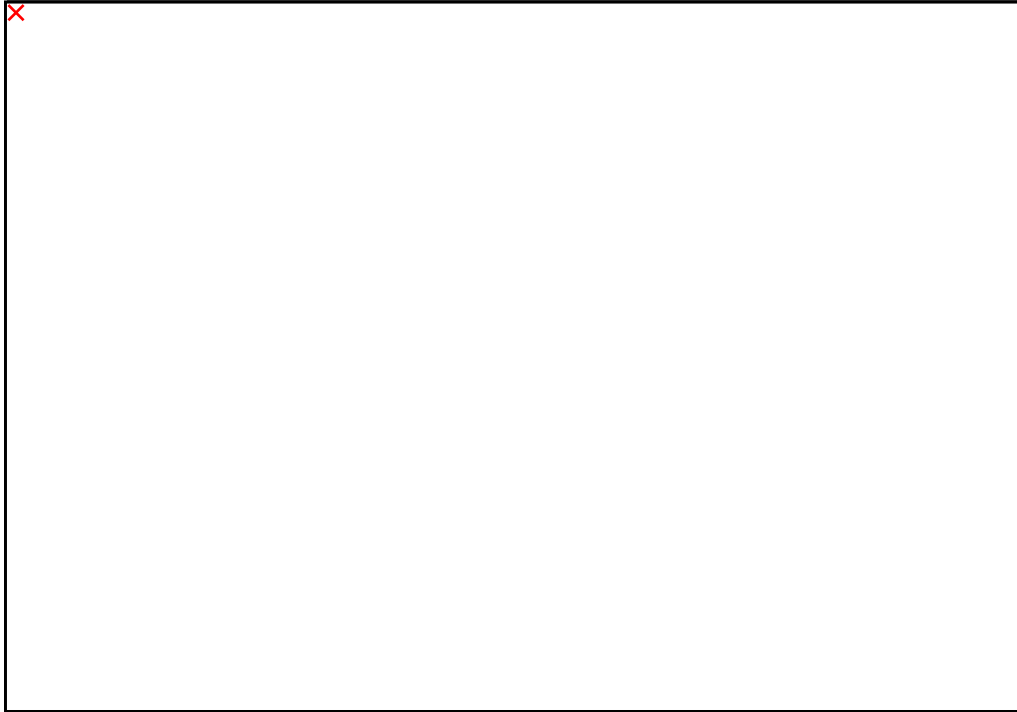
Congratulations to Ms Justina Ugwah on starting her Irish Research Council Enterprise Partnership Scheme Postgraduate Scholarship. The title of her PhD project is "Development of minimally invasive smart impedance needle probes for real time detection of breast cancer" and is co-funded by the Cork Academy of Regional Anaesthesia.

Justina's two clinical co-supervisors are Dr Brian O'Donnell and Mr Martin O'Sullivan, Regional Cancer Centre South, Cork University Hospital. The smart needle technology is being developed at Tyndall National Institute, University College Cork under the supervision of Dr Eric Moore (School of Chemistry and Academic Member of Tyndall) and we are really looking forward to working on this excellent project with our clinical partners.

Abstract:

This project aims to develop a smart probe to improve detection of breast cancer by providing the clinician data to reliably identify and localise the presence of a malignant tumour. If breast cancer is found early, it is easier to treat with a high chance of cure and complete recovery.

Impedance can be used as a technique to detect breast cancer as the impedance of a malignant tumour is lower than that of normal breast tissue. Our solution will facilitate more sensitive identification of cancer, with real-time measurement, enabling a minimally invasive option to patients that require evaluation of breast lumps.



Pictured from left to right

Dr Brian O'Donnell, Ms Justina Ugwah, Mr Martin O'Sullivan and Dr Eric Moore

Funding Acknowledgement:

[The Irish Research Council](#), Project ID EPSPG/2017/289

[Cork Academy of Regional Anaesthesia LTD](#)