



Translational Immunology, Inflammation and Infection

Representative Case Study —
Trinity Health Kidney Centre –
Unlocking the potential of patient
registries and biobanks.

Prof. Mark Little

Clinical and Market Need

As part of the Trinity Health Kidney Centre, this TTMI research unit is a basic science facility uniquely placed to address clinical questions of importance pertaining to kidney diseases. Under the leadership of Prof. Mark Little, Trinity Health Kidney Centre is an academic health science centre that incorporates the clinical services in Tallaght and St James's Hospitals.

This highly successful endeavour has exclusive access to longitudinal data and samples from many well -phenotyped patients through the Irish Rare Kidney Disease Registry and Biobank, and the material available has led to the development of exciting new biomarkers of kidney disease. Such an approach has led to the publication last year in the Journal of the American Society of Nephrology by the group of a unique urine test that will help clinicians manage difficult to treat kidney vasculitis.

Urinary Soluble CD163 in Active Renal Vasculitis O'Reilly V et al, J Am Soc Nephrol. 2016 Sep;27(9):2906-16. doi: 10.1681/ASN.2015050511

The group have shown that soluble CD163, as measured in urine of patients, correlates well with the level of inflammation caused in active renal vasculitis and displays excellent biomarker characteristics.

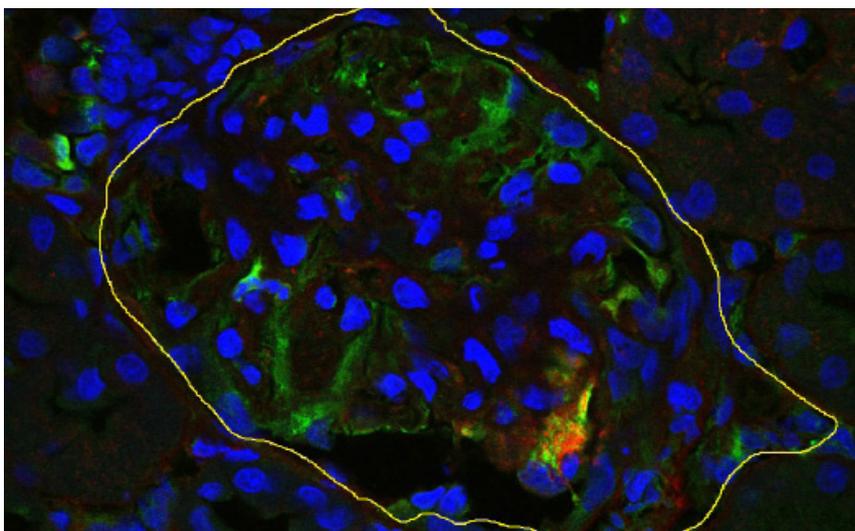
Partnership

In view of the strong clinical background of the group and collaborations with the CRF, there is governance, oversight and due diligence which allows for the safe application of human materials to addressing crucial clinical research questions.

The development, from scratch, of new biomarkers for kidney disease has been taken to patent submission, and formal industrial collaboration. The group's leadership is manifest in European fora that seek to advance new paradigms of how best to manage patients with devastating vasculitis.

Approach

Considering the clinical and scientific remit of the group, they are uniquely placed to engage in translational medicine and nephrology. Such endeavours deliver real advances in precision medicine where patients can be treated, but only when these new tests are supportive. Such endeavours also avoid the use of treatments in patients where they are no longer indicated. Research efforts are enhanced by a combination of clinical access to material from kidney patients and cell and molecular biology excellence on the same campus, coupled with deep phenotyping in patients. Furthermore the group has a track record in leading international collaborations and grant funding endeavours which seek to establish new biomarkers of kidney disease.



Staining of the glomerulus to define expression of the macrophage marker CD163 (red), which is detectable in the urine in active glomerulonephritis



Collaborator/Funding Agencies

