

Diagnostic for kidney transplant graft dysfunction



THE UNIVERSITY OF
SYDNEY

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Medical technology



> TRL 3-4
> Clinical trial

Problem

Post-kidney transplant complications threaten graft function, requiring invasive biopsies for diagnosis. This not only places patients at risk but also burdens them with anxiety and potential side effects. A non-invasive, accurate diagnostic method is critically needed to improve patient care and outcomes.

Solution

Our technology offers a non-invasive diagnostic alternative by analysing urinary cells with multispectral autofluorescence. In trials, it distinguished between acute tubular necrosis (ATN), graft rejection, or non-rejection associated interstitial fibrosis and tubular atrophy (IFTA) with over 90% accuracy. This innovation promises to enhance clinical decision-making and patient quality of life, while reducing the need for invasive biopsies.

Intellectual Property Status

This technology is the subject of an Australian provisional patent application.

Potential Commercial Applications

- Integration into routine patient monitoring in clinical settings, for early detection of transplant rejection and other post-transplant complications.
- Adoption by transplantation centres for post-operative care to enhance patient follow-up and personalise treatment plans
- Utilisation in pharmaceutical trials to assess the efficacy of new immunosuppressive therapies in

preventing transplant rejection, by providing non-invasive biomarkers of kidney function.

- Incorporation into telehealth services, allowing for remote monitoring of kidney transplant patients and reducing the need for in-person consultations.

Inventors

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Scientific Data

Additional data and information is available at:
<https://xxxx>.



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