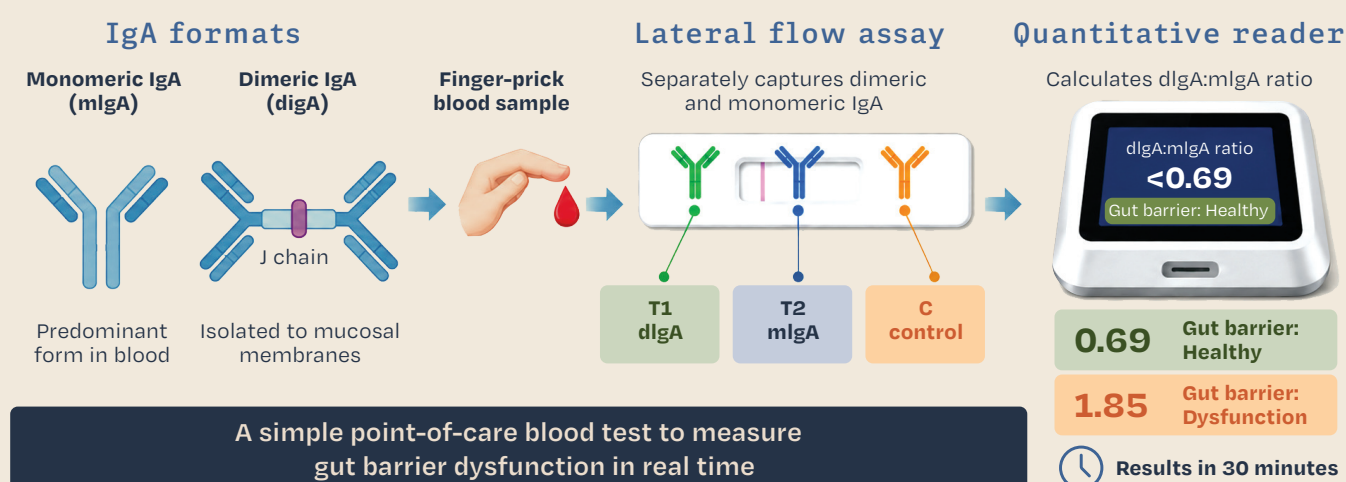


A novel point-of-care test for gut health

Gut barrier dysfunction is difficult to measure. We're making it visible at the point of care.



Burnet has developed a patented finger-prick blood test that measures a novel IgA biomarker signature elevated in patients with cirrhosis, where intestinal barrier dysfunction ("leaky gut") is a well-recognised feature. This biomarker may provide a simple way to detect and monitor intestinal barrier leakage associated with a range of gastrointestinal and systemic conditions. We are seeking partnerships to develop the test as a rapid, non-invasive point-of-care tool for monitoring gut health in real time, with potential applications in conditions such as inflammatory bowel disease, liver disease and other disorders associated with impaired intestinal barrier function.

Our Discovery

Monomeric IgA (mIgA) predominates in the bloodstream, while dimeric IgA (dIgA) is associated with mucosal immunity. Under healthy conditions dIgA does not readily cross into the blood stream.

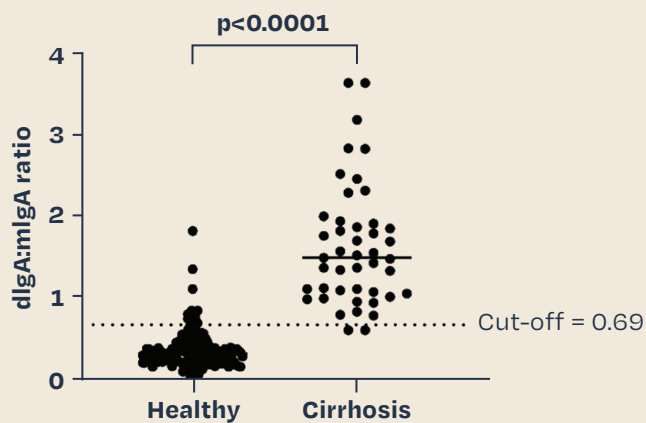
Burnet researchers identified that changes in the relative abundance of these IgA forms in blood, particularly the dIgA:mIgA ratio, could provide a biomarker signature of a leaky gut.

Our Patented Technology

PCT/AU2021/050037 *Detecting gut barrier dysfunction and/or cirrhosis*

Our patented technology applies the dIgA:mIgA biomarker signature to diagnostic methods, kits and lateral-flow test formats for monitoring cirrhosis and associated gut barrier dysfunction.

Human data supporting our dIgA:mIgA biomarker



Patients with cirrhosis showed a significantly elevated dIgA:mIgA ratio versus healthy controls ($p < 0.0001$), with the majority above the study-defined cut-off.

This human data supports the development of the dIgA:mIgA ratio as a biomarker of intestinal barrier dysfunction. Next-generation development will integrate the test into a one-step finger-prick platform with results in ≤ 20 minutes and visual readout without a reader. Performance will be validated using biobank IBD clinical samples.

ISO 9001: Highest quality, industry-ready R&D partner

Our ISO 9001 certification gives our industry partners, funders and study participants confidence that we conduct our research in an ethical, robust and reproducible way that meets the highest international standards.



Platform Capabilities

- Development of dimeric IgA- and monomeric IgA-selective detection reagents for diagnostic assays
- Bead- and particle-based assays with potential for multiplex biomarker panels
- Qualitative, semi-quantitative and quantitative test formats
- Compatible with serum, plasma, whole blood and other biological samples
- Clinical trial and longitudinal monitoring of biomarker and disease-status changes
- Flexible lateral-flow formats adaptable to different cassette designs and reader platform
- Potential multi-analyte panels incorporating liver health, fibrosis, inflammation and microbial-translocation biomarkers

Partner with us



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