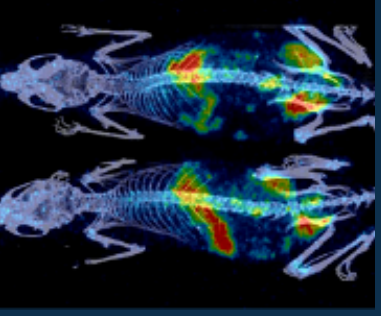

Tracer compounds in a rat cancer model

# ADVANCING IMAGING FOR OVARIAN AND BLADDER CANCER

Updated on 15th January 2026

BIOLOGICS AND VACCINES

**Prof John Hooper** and his team at Mater Research, University of Queensland, are developing a novel radio-imaging agent (10D7 antibody) to improve ovarian cancer detection and for future applications, to guide targeted therapy. By tagging cancer cells with a tracer, this approach aims to enhance disease visibility during radiology scans, similar to prostate cancer imaging.

With TIA's support, this collaboration has leveraged expertise from the National Biologics Facility at the University of Queensland, and CSIRO Biomedical Manufacturing in Clayton, Victoria. These facilities helped optimise the 10D7 monoclonal antibody for PET-CT imaging by developing five variants to improve manufacturability and reduce immune activation. They then established large-scale production and purification methods for conjugating 10D7 with a chemical linker (DFO), ensuring clinical-grade quality.

TIA funding was pivotal in making clinical-grade production feasible. "Without it, academic researchers would struggle to afford industry manufacturing rates." said Prof John Hooper. Through this support, over 500 vials of clinical-grade antibody were produced, enabling Phase I trials.

The project has since secured $1.8M through an NHMRC Ideas Grant, $1.9M in MRFF funding for an ovarian cancer trial and $950,000 from the CUREator scheme for a bladder cancer trial.

Preclinical imaging experiments were conducted at the Translational Research Institute and facilities from the NCRIS-supported National Imaging Facility; the Centre for Advanced Imaging at the University of Queensland, with radiolabelling performed by Q-TRaCE at the Herston Royal Brisbane and Women's Hospital precinct.

With a Phase I clinical trial underway, the team credits TIA-funded research as critical in advancing this technology toward future clinical use in ovarian and bladder cancer patients.

> "The TIA voucher program was absolutely essential for us to move forward confidently from a laboratory-grade reagent to a clinical grade radio-imaging agent for evaluation in ovarian cancer and bladder cancer patients. The bottom-line is that without the TIA scheme we'd still be locked out of translating our technology into something that has potential to benefit humans from both a health perspective and an economic perspective." **Prof John Hooper**

**Impact:**

TRL 1 TRL 2 **TRL 3** **TRL 4** **TRL 5** **TRL 6** TRL 7 TRL 8 TRL 9