

# Driving cancer research through RACS grant

The 2015 recipient of the John Mitchell Crouch (JMC) Fellowship, Professor Alexander Heriot (pictured below), has used part of the attached funding to extend his world-leading translational research into new treatments for complex lower gastrointestinal cancers and peritoneal disease.



Image: Professor Alexander Heriot

The Director of Cancer Surgery at the Peter MacCallum Cancer Centre (PMCC), Professor Heriot was awarded the College's most prestigious Fellowship in recognition not only of his work to improve the outcomes of patients with complex colorectal disease but also for his support of junior surgeons undertaking higher degrees within his research program.

Since taking up his position in 2006, Professor Heriot helped establish the laparoscopic and robotic colorectal surgery program, set up a tertiary and quaternary multidisciplinary referral service for patients with advanced pelvic cancer and developed one of only five units in Australia to provide surgical management of peritoneal cancer.

His commitment to treating the most complex lower gastrointestinal disease has resulted in a four-fold increase in throughput with patients now referred to his unit from across Victoria, other parts of Australia and abroad.

Throughout all of this work,

Professor Heriot has also supervised and supported 14 surgeons through Masters, Doctorate and PhD research programs through interdepartmental collaborations with medical oncology, radiation oncology, and the Research Division at the PMCC and the University of Melbourne.

His research program covers a range of areas and tumour types which at present includes:

- Identifying novel therapeutic targets through genomics and assessment using human xenografts for the treatment of anal cancer;
- Identifying tumoural immunological markers of response and outcome to neoadjuvant chemoradiotherapy in the treatment of rectal cancer;
- Exploring the impact of the peritoneal environment on the risk of developing peritoneal disease; and
- Evaluating the thromboembolic risk during neoadjuvant therapy and surgery and conducting molecular profiling of predictors of that increased risk.

Professor Heriot said that while colorectal cancer remained the second most common cause of cancer death there were limited funds available to research rarer cancer types which made the funds attached to the JMC Fellowship greatly appreciated.

He said he used some money to further research into anal cancer, which he said receives little public attention or support, while also funding a junior surgeon to tackle unexplored aspects of peritoneal disease.

"There is currently a great deal of work being done on the development of cancer vaccines and immunotherapy which boost the body's ability to recognise and fight certain cancer tumours but the focus of this research has largely been in the possible treatment of melanoma and lung

cancer," Professor Heriot said.

"We are now investigating whether this approach might be useful in the treatment of anal cancer because while there are over 300 new cases per year in Australia we can still only offer patients the same treatment as we offered 40 years ago and 30 per cent of such patients still do not survive beyond five years.

"We are now in the process of using biopsies of such tumours to grow them in the lab to determine if we can find biomarkers which predict response and resistance to adjuvant therapies while also looking to identify novel pathways for targeted therapies.

"I have used some of the JMC money to extend this work into rectal cancer and have supported a research Fellow to initiate new fields of research into peritoneal cancer.

"One of the most important and rewarding aspects of receiving the JMC Fellowship is that it provides the funds to allow research into totally unexplored realms which stands in stark contrast to most grants which are tied to data and predicted outcomes.

"This untied money, then, allows us to conduct research which may generate that data which in turn could allow us to apply for other grants, so that the JMC Fellowship creates a snowball effect that begins with basic curiosity, develops into basic science with the end result, hopefully, being improvements in clinical care."

Professor Heriot said that aside from his clinical and research responsibilities, he took great enjoyment in supporting the next generation of surgical scientists.

He said the young surgeons working in his research program were in the national colorectal training program and had been embedded into various laboratories across PMCC.

"The focus of our translational research has been to build a bridge between the bench and the bedside and

## CAREER HIGHLIGHTS – GRANTS & AWARDS

2017 - Supervisor of the recipient of the RACS Foundation for Surgery Small Project Grant for research into peritoneal malignancy

2016 - Colorectal Surgical Society of Australia and New Zealand (CSSANZ) Foundation Grant for research investigating immune markers to predict response and the role of Immunotherapy in neoadjuvant rectal cancer treatment.

- CSSANZ Foundation Grant for research into personalising treatments for patients with metastatic colorectal cancer
- Victorian Cancer Agency grant to advance research into the shared care of colorectal cancer survivors
- RACS John Mitchell Crouch Fellowship

2015 - Bricker Prize, Society of Pelvic Surgeons

2013 - Recipient of the RACS Hugh Johnston ANZ Chapter of the American College of Surgeons (ACS) Travelling Fellowship where he attended and participated in the ACS Annual Clinical Congress in Washington DC, USA.

2010 - NHMRC grant to fund research into predicting the response to chemoradiotherapy in patients with advanced rectal cancer.

these young surgeons are that bridge and I get great intellectual stimulation in supporting their endeavours because they are doing some amazing work," he said.

"I think it's extremely important for surgery to retain primacy in the treatment of cancer and for surgeons to take the lead in these new fields of research.

"We are the first to see cancer patients upon referral, we are the first to diagnose the disease, and predominantly surgery is the primary therapy. Hence, it is essential that we lead this biomedical research because we understand the physiology of cancer, the surgical options for treatment and the likely outcomes."

Professor Heriot completed his general surgical training in London and undertook specialist colorectal Fellowships at St Vincent's Hospital in Melbourne, St Mark's Hospital, London, and the Cleveland Clinic in the US.

He said he was asked by his mentor in Australia, Professor Jack Mackay, to return following his time in Melbourne and that he found the opportunity to build a world class colorectal surgical program while conducting cutting-edge translational research too marvellous to resist.

Professor Heriot is a former Chair of the Research Support Committee for the Colorectal Surgical Society of Australia and New Zealand (CSSANZ), is a board member of the Australasian Training Board in Colorectal Surgery and is the Chair of the Operations Committee of the Binational Colorectal Cancer Audit.

He has published more than 145 peer reviewed papers, multiple book chapters and a book on lower

gastrointestinal disease and is the current Director of the Lower Gastrointestinal Tumour Stream at the Victorian Comprehensive Cancer Centre (VCCC).

He said that the recent move by the PMCC into a new state-of-the-art facility in Parkville, Melbourne, as a member of the Victorian Comprehensive Cancer Centre, provided significant opportunities for advances and collaborations in cancer care and research.

"One of the most rewarding aspects of working at the PMCC is that it has world-class laboratories on site with more than 500 laboratory researchers working alongside us in the surgical units," he said.

"Our collaborations with the VCCC also offer enormous opportunity and there is no question that we are now providing clinical care and conducting research that compares to that provided or conducted at the premier centres in the world."

Professor Heriot described being selected to receive the JMC Fellowship as an unexpected honour and privilege.

"To be considered in the same field as other recipients of the JMC Fellowship is both humbling and a great honour and I thank the College and Fellows for their support."

The John Mitchell Crouch Fellowship is the premier research award of the RACS and commemorates an outstanding Fellow of the College who died as a young man. The award is made to an individual who is deemed by the College Council to be making an outstanding contribution to the advancement of Surgery.

- With Karen Murphy

## Private Practice Opportunity for a Vascular Surgeon Newcastle, NSW

Lake Macquarie Private Hospital has an opportunity for a Vascular Surgeon to establish a well-supported private practice in partnership with the hospital.

### Benefits:

- Vascular angiography laboratory providing a wide range of endovascular procedures including endoluminal grafting.
- Opportunity to join one of our existing Vascular Surgeons (including practice management support) or set up within our onsite (sessional) consulting suites available with basic secretarial support;
- Opportunity to receive direct patient referrals from the hospital's private Emergency Department, allowing you to build your private patient referral base;
- Assistance with marketing your practice to GPs and other Specialists to further establish your referral base.

### Minimum Requirements:

Applicants must have FRACS, specialist registration with AHPRA and full billing rights.

### For a confidential discussion, please contact:

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