

# The stats boggle the mind

It sees more than 137,000 in-patients and accommodates more than 500,000 out-patient visits each year, has a staff of more than 13,000 and conducts one of the largest clinical research programs in the world. It treats more than 400 different subtypes of cancer, operates more than 100 research laboratories and receives many hundred millions of dollars in philanthropic support alone per annum.

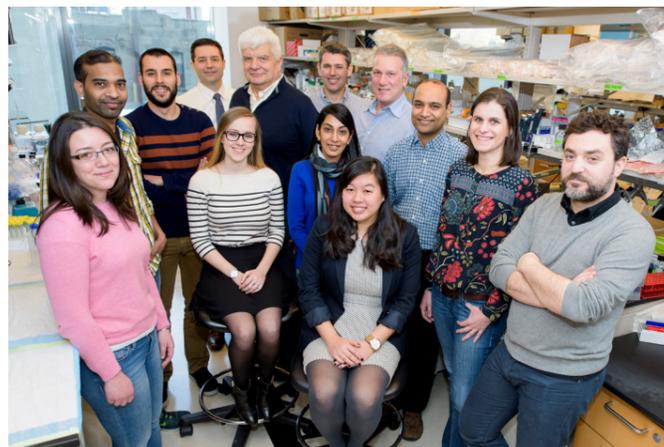


He said the work had the potential to lead to clinical trials for patients with RAIR and that understanding how RNA splicing proteins and microRNAs regulate thyroid cancer development could lead to effective new therapies to improve the outcomes for patients around the world.

“So far we have established five different cell models of splicing factor modulation with analysis of cell proliferation of these models, showing that loss in the knockdown cells leads to reduced cellular growth” Dr Glover said.

“This is very encouraging and confirms that the splicing factor has a tumour suppressor action in thyroid cancer.

“We have also identified two microRNAs that have been shown to be over-expressed in PTC and we are currently devising a system to knockout the genes for these two microRNAs to see how they effect thyroid cancer progression.



“The splicing factor project is particularly exciting as it was recently found that splicing factor mutations are important in the development of cancers such as leukaemia, but their significance in thyroid cancer is newer still.

“A number of drugs are being developed or currently under trial to target splicing, so if I can show in the mouse models that splicing factor is important in thyroid cancer development, it could lead to clinical trials even within the timeframe of one or two years.”

Dr Glover said that although it had been a difficult decision to leave Australia after finishing his PhD research to take up the Fellowship in the US, he hoped that conducting research at the MSKCC would enable him

to best develop his career as an independent surgeon-scientist.

“It was a big decision as I had just been given the appointment as a Visiting Medical Officer at Mona Vale Hospital on Sydney’s northern beaches where I had started to develop my practice which I then had to close,” he said.

“In addition, there is currently a shortage of clinical appointments in Sydney so resigning from a VMO position meant that I had no guarantee of finding another one when I returned to Sydney but while I had to carefully consider this, I thought the chance to work at the MSKCC was worth the risk.

“Dr Andrew Biankin who is also a RACS Fellow and previous recipient of the Neil Hamilton Fairley Fellowship is now a very successful pancreatic cancer surgeon scientist in the UK so I knew that the experience of working overseas at one of the greatest cancer centres in the world had to be embraced.”

The decision appears to have paid off.

Since taking up his research position in New York, Dr Glover has been offered an appointment as a Group Leader at the Garvan Institute of Medical Research in Sydney upon his return in 2018, which will allow him to establish his own independent research group into endocrine cancers. He has also been appointed as a Guest Editor for a special edition of the *Journal of Molecular and Cellular Endocrinology*.

“From a collaborative viewpoint, both the sheer scale of the MSKCC and its location creates a cross-pollination of ideas and interaction with other scientists, surgeons and physicians that is both incredibly dynamic and more difficult to find in Australia,” he said.

“For instance, part of my project has involved working with the Omar Abdel-Wahab Laboratory, a leukaemia research group at MSKCC as well as working with computational biologists from the Hutch Institute in Seattle.

“The MSKCC also neighbours the Rockefeller University and the Weill-Cornell Medical School and they all share some facilities and open their meetings to staff from the three institutions, which means there are always amazing meetings, discussions and presentations to access.

“Another great difference working here is the availability of routine genomic sequencing for cancer samples which is crucial in advancing our understanding of various cancers such as thyroid cancer.”

Dr Glover said he was also greatly enjoying his free time in New York. He said he had swapped his Sydney interests in surfing and surf life saving to sailing and running and that he will be a crew member later this year on the America II yacht. He has also recently won a lottery spot to compete in this year’s New York City marathon.

He thanked RACS and its Fellows for the support provided to him.



The Foundation for Surgery Tour de Cure Research Scholarship is funded by the Australian charity *Tour de Cure*. Entirely dedicated to curing and preventing cancer, the charity raises funds through cycling tours and events across Australia.

- With Karen Murphy

Images (From far-left): Dr Anthony Glover; With the team at the Fagin Laboratory, Memorial Sloan Kettering Cancer Center in the US; Working with Dr Jim Fagin (l).

## CAREER HIGHLIGHTS: GRANTS, AWARDS & SCHOLARSHIPS

**2016:** Foundation for Surgery Tour de Cure Research Scholarship for research into “understanding the role of RAS mutations in advanced thyroid cancer”.

**2016:** NHMRC Neil Hamilton Fairley Early Career Fellowship – granted to persons of outstanding ability who wish to make clinical research a significant component of their career.

**2015:** Kolling Institute Young Investigator Oral Prize.

**2014:** American Association for Cancer Research Scholar in Training Award.

**2014:** Sydney Cancer Conference Award for Basic Biomedical Cancer Research.