

Inside a Research Facility

A look at St. James' Hospital



Dr. Joseph Keane - Director of Research, School of Medicine

Well it has been a busy year in St James' Hospital, our centre for translating basic science into clinically applicable knowledge amidst the sunny and quite environs of lovely Rialto. A good number of our Doctors have seen the fruits of their scientific labours published or turned into successful grant funding, which they plan to use to improve the management of their sick patients. In this short column I would like to emphasise just a sample of the Doctors who have achieved this, but also to emphasise two of our own Trinity medical students who have delivered world-class results.

Dr. Tom Ryan is an intensive care unit doctor who has been asking the same question his whole professional life. Why do some of his patients get critically ill after infection, while many others deal with the bacteria without enduring septic shock? Tom harnessed the power of cytokine mRNA analysis and applied it to his unique group of patients who are extremely well phenotyped. He has been very successful in this regard, as evidenced by his five publications this year - and don't be surprised if you see him invent a new test from St James' ICU that will forewarn you that your patient will become critically ill after bacterial infection.

Paul Brown published in the New England Journal of Medicine. Paul is a haematologist who, with others, described how an antibody against complement interferes with the destruction of red cells seen in paroxysmal nocturnal haemoglobinuria. This may sound esoteric, however, it is a most impressive application of science to clinical care and was the topic for his discussion at St. James' grand rounds, which was the best grand rounds this columnist has ever attended. James O'Donnell is also a haematologist and he is a rainmaker. By that I mean that he has achieved a large amount of grant funding this year. Consequently, he spends a lot of time trying to find lab space for his very large research team. The reason why he is so well funded is because he has a track record of successfully answering questions that may impact on the health of his patients. He has defined genetic and biochemical mechanisms of patients who do not clot blood properly.

The editors of Nature must have Alan Irvine on a retainer. This dermatologist published in Nature Genetics last year on an important skin molecule called Filaggrin. It is hard to believe that he is fulltime doctor, looking after patients who will go on to benefit from his scientific breakthroughs.

I do not know any doctor in St. James' who would not want to be involved in research and, given the constraints of my space here I am going to have to leave out an awful lot of my colleagues who have achieved outstanding things over the last year, and I apologise to them. But let me finish with two medical students Paul Calner and Johan Lundebye. I cannot believe my luck to have worked with these students over the last four years and this year they achieved a Nature citation. The lung cancer multi-disciplinary team of St. James' is dedicated to finding new tests and treatments for lung cancer and these medical students made it happen when they collected data and samples that generated a new test. This gene test improves the accuracy of broncoscopy two-fold for diagnosing lung cancer. And they did this in their spare time.

St. James' does not fly alone. A lot of the studies above work through important college, local and global collaborations. But I do hope they make it clear to you that being a doctor also means that contributing scientifically is within your grasp, and I suggest that you give this important challenge a go.