

Newsletter

February 2008

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Royalties flowing to Inventors

Orpheus gets a Life!

Inventors Professor Michael Cousins (Pain Management) and Peter Chicco (Biomedical Engineering) are about to receive their first royalty cheques from their contribution to the invention of a Perfusion Simulator - a device to teach perfusionists how to successfully manage heart/lung bypass procedures.

The invention is the brain child of Dr Richard Morris, formerly head of research at the Sydney Medical Simulation Centre, and several associates including Peter Chicco who supplied some nifty electronics.

The perfusion simulator, has been nicknamed 'Orpheus' by the developer. Why 'Orpheus'? You may recall the myth of Orpheus and the Underworld. Well, perfusion is like going down to the underworld where the dead are and bringing them back safely (unless something goes wrong): hence the benefit of practicing on Orpheus.

Australian company Ulco Engineering Pty Ltd has already sold 3 units internationally, and it has been very well received at cardiothoracic conferences.

Michael Cousins is donating his royalty share to The Sydney Medical Simulation Centre (SMSC) to assist in further research. The SMSC and Biomedical Engineering (now called Clinical Technology) are also surprise departmental beneficiaries of these royalties in line with the Area's Intellectual Property Policy

http://www.officeofcommercialisation.com/dnl/NSW_DOH_IP_Policy.pdf

PAPP-A keeps on producing...

Another royalty beneficiary this month is former RNSH researcher Dr Mike Sinosich for his invention 'PAPP- A, Its Immunodetection and Uses'. This was patented by the Area back in the mid 1990's and has been successfully licensed by the Office of Commercialisation to several global companies. Mike's royalty is coming from a Licence Agreement negotiated with Beckman Coulter Inc, and the Department of Fetal Maternal Medicine (Professor Jonathan Morris) is receiving the departmental share of the royalty stream which is going to support various research projects.

You too could earn royalties from your novel research, contact Sandra See to find out more!

Research Success at NSCCH

Activated Protein C (APC) – A Molecule to follow

A molecule discovered in 1976 by a Swedish scientist has recently been "reborn" by RNS researchers as a potential therapeutic agent in arthritis, diabetes and wound healing.

A/Prof Jackson and Dr Meilang Xue from the Sutton Laboratories, RNSH, in collaboration with Prof Phil Sambrook and A/Prof Lyn March (Rheumatology), Prof Greg Fulcher (Endocrinology) and Len Harrison (Melbourne) have had recent success with > \$1M funding to begin in 2008 from the following:

- 1) NHMRC Project Grant
- 2) Juvenile Diabetes Research Foundation, USA
- 3) NHMRC Career Development Award
- 4) Medical Foundation, University of Sydney

The funding is to support research projects to study the cyto-protective effects of APC:

- i) to prevent type 1 diabetes
- ii) as a treatment for arthritis
- iii) to heal chronic wounds.

DO YOU THINK YOU HAVE AN INVENTION? OR DO YOU HAVE ANY QUESTIONS ABOUT RESEARCH COMMERCIALISATION - CONTACT THE OFFICE OF COMMERCIALISATION

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Type 1 Diabetes

The diabetes study is intriguing – cell culture and animal studies using non-obese diabetic mice (a model of human type 1 diabetes) from the Sutton lab have found that administration of APC, a naturally occurring clotting agent, prevents the onset of diabetes. Now that identification of children who are likely to become diabetic is possible, it is feasible that APC may become a therapeutic agent to prevent diabetes. The JDRC in the USA have recognised these interesting findings and have funded this project as an “innovative grant” in 2008. This protein is unique in that it not only targets the abnormal immune response but also directly inhibits inflammation, which is associated with insulinitis. Thus, APC controls the two major processes implicated in the pathogenesis of type 1 diabetes, inflammation and auto-immunity, which may explain how it substantially reduces blood glucose levels and prevents diabetes in non-obese diabetic mice.

An Australian Provisional Patent Application “Treatment for Autoimmune and Inflammatory Conditions” was filed by Northern Sydney Central Coast Area Health Service in January, 2005. In July 2007 a complete patent application was filed in Europe, the United States of America and Australia. NSCCH is seeking to license this technology to a drug development company interested in taking the project to clinical trial stage. For further information contact Sandra See at the Office of Commercialisation, NSCCH.

Arthritis Study

The arthritis study is being funded through the NHMRC Career Development Award to support Dr Meilang Xue’s salary (2008-2011).

Chronic Wound Healing

The wound healing study is the most advanced and involves not only the grant awardees but the collaboration of numerous RNSH staff including Kaley Whitmont, Ian Reid, Johnny Kwei, Melissa O’Brien, Alan Cooper and John Vandervord in various departments including Dermatology, Rheumatology, Endocrinology, Severe Burns Unit, Vascular Surgery, Pharmacy and the Clinical Governance Unit.

Chronic leg ulcers are a major public health burden associated with high direct health-care costs and substantial negative impact on the quality of life of patients and carers. Despite recent advances in wound care many ulcers still fail to heal, leading to serious complications. In 2005, A/Prof Jackson and colleagues published the first report to show that APC promotes cutaneous wound healing in a rodent model, work which was funded by a NHMRC Development Grant. Since that time, research in the Sutton laboratory has resolved mechanisms underlying APC’s actions in wound healing. Recently they gained ethics approval to conduct an open-labeled pilot clinical trial in patients with chronic wounds. The preliminary results of this study conducted by Kaley Whitmont, Sara Tritton and Ian Reid were exciting, with all patients showing dramatic improvement in healing, no adverse reactions were identified.

The combined research team at RNS is uniquely placed to successfully translate this research from bench to bedside, having 1) discovered the effect of APC in wound healing in the laboratory, 2) extensive expertise in designing and

performing clinical trials and 3) a committed group of clinicians for patient referral.

The team is currently running 3 randomised, double blind, placebo controlled clinical trials examining the efficacy of APC on i) split skin grafts, ii) burns, and iii) chronic leg ulcers. The trials are an essential step toward the validation of the therapeutic use of APC in wound healing. Topical application of APC is likely to emerge as a highly cost-effective treatment for this difficult health problem. The results have potential to make an enormous contribution to the international knowledge of wound healing as well as having a significant impact on the patients and the society as a whole with reduced public health burden.

Sydnovate, the commercialisation office of the University of Sydney, is handling the patenting and commercialisation of the wound healing project on behalf of NSCCH. For information contact Dr Kailing Wang on tel: 02 9036 9640.

2008 IP CONFERENCE – Rescheduled



The 2nd Annual IP Management and Commercialisation for Hospitals Conference to be held in Sydney 2008 is being rescheduled to later in the year due to heavy construction work and re-organisation of the RNSH hospital buildings. Further details will be available in the next few months.

INNOVATION IN GOVERNMENT SUMMIT 2008

The Australian Institute for Commercialisation’s inaugural *Innovation in Government Summit 2008* will provide a platform to facilitate the creation of collaboration and information sharing through innovation.

Aimed at government agencies, research organisations and industry, the Innovation in Government Summit provides an opportunity to network with counterparts who may be able to assist with strategies and innovative ideas in a range of areas including health services, shared services, emergency response and general service delivery. For Details visit http://www.ausicom.com/02_cal/details.asp?ID=289

Details of all OOC Investment opportunities can be downloaded from http://www.officeofcommercialisation.com/dnl/OOC_investment_opportunities.pdf

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