florey medical research fund

Faculty of Health Sciences

THE UNIVERSITY OF ADELAIDE AUSTRALIA

November 2004

The Florey Medical Research Fund welcomes bequests and donations to expand its ability to fund medical research now and in the future

Florey Medical Research Fund

In commemoration of Baron Howard Florey, the Florey Medical Research Fund was established in 1991; it works in partnership with the University of Adelaide's Faculty of Health Sciences to support research and research training in the Medical School.

Every third year the Florey Research Grant of $450,000 is awarded to a team of established researchers conducting innovative health science research that has broad importance to the community. Funds are also provided to enable a world leader to deliver the prestigious annual Florey Lecture, and scholarships are available to support medical students completing undergraduate research degrees.

The success of this organisation relies heavily on the support of the general public and especially that of the community of University medical graduates and academics. The Florey Medical Research Fund operates with only two part-time staff and a group of committed volunteers.

Robert Pontifex, Executive Manager

The Medical Foundation Chairman Retires

Associate Professor Robert Bauze has announced his retirement as President of the Board of The Medical Foundation and Chair of the Florey Medical Research Fund Committee of Management.

In 1988 he was appointed as President of the Medical Foundation and Chairman of the Committee of Management, and has been serving the Foundation with enthusiasm and energy ever since.

In 1991 Robert Bauze became a founding member of the Florey Group – one of thirty individuals and companies who gave substantial funds to cover establishment and administrative costs for the ongoing support of medical research and other related activities by The Adelaide Medical School.

The Medical Foundation and The Florey Medical Research Fund owes Robert Bauze an enormous debt of gratitude.

THE FLOREY ADELAIDE MALE AGEING STUDY – an update

Right: Associate Professor Gary Wittert, Sean Martin, George Hatzinikolas, Matthew Haren, Sue Rogers, Dr Peter O'Loughlin, James Smith and Sue O'Connor at Port Power's Headquarters

Left: A volunteer (left) is screened for cholesterol, watched by Hon. Lea Stevens, MP, Minister for Health, Jane Schillington from Pfizer (administering the test), Associate Professor Gary Wittert and Duncan McFetridge, MP, Member for Morphett

In 2003 the Florey Adelaide Male Ageing Study received $450,000 from the Florey Medical Research Fund and the University of Adelaide, along with support from Bayer, the Northern Community Health Foundation, Department of Human Services, Institute of Medical and Veterinary Science, Eli Lilly, Astra Zeneca, Pfizer, Mayne Pharma and *In - Business* magazine. This is believed to be the most comprehensive study of ageing men conducted in Australia.

To date, data has been collected from 600 men and a second round of randomly selected men aged between 35 and 80 commenced in May 2004. The analysis of the first set of data obtained reveals a high prevalence of obesity, chronic physical and psychological disease, and a high prevalence of risk for cardiovascular disease.

Associate Professor Gary Wittert, Head of the Department of Medicine, and lead investigator notes that obesity appears to be the common factor responsible for much of the poor health of Adelaide males. Erectile and sexual dysfunction are also common disorders and relate to obesity and other cardiovascular risk factors that are causing significant misery and distress.

South Australia has the oldest age profile in Australia and this demographic feature has significant economic and social consequences. This study will therefore provide information that will influence future planning and delivery of men's health care and policy information in South Australia.

Associate Professor Wittert used the Ageing Study as his subject when he delivered the annual Florey Lecture in October 2004.

Art – on show:

Extraordinary Art Exhibition

In June this year the Florey Medical Research Fund held a very successful Art Exhibition which raised $25,000. Over 400 contributors, ranging from professional artists, art students, amateur artists, school children and kids from kindergartens, put paint to canvas and donated their works to raise funds for medical research.

An overwhelming response came from willing painters from the Central Art Studios, Helpmann Academy, Ruth Tuck School of Art, Jane Disher Art School, Prince Alfred College, St Peters College, Scotch College, Loreto School and Kensington Gardens Pre-school.

Every canvas painted was the same size, and every canvas was the same price – just $250.00 – but there was a catch! No painting was identified with its artist's name, so every painting purchased was for the love of the painting. There were many very lucky buyers who bought paintings by well-known professionals for a fraction of their worth.

Enjoying the Florey Fund art exhibition: (top) Maura McConnell and Delores Paul (above) Sam Oster and Sharon Van Kerckhoven

FLOREY WINE

This year's **Florey Wine Offer** brings you quality wines at the same price as 2003. Just $130.00 per dozen for fine wine from Pertaringa, made by Geoff Hardy.

Ideal for drinking now or cellaring for years to come.

To order call Robert Pontifex on 8303 6386 or Judi Turner on 8303 5211

The Florey Bachelor of Medical Science Scholarship

This Award is offered annually to support a medical student to undertake a research component for the degree of Bachelor of Medical Science; this degree is equivalent to an Honours Degree in other programs. In 2004 two awards were made to Ann Yeoh and Karen McGlaughlin.

Ann Suk Jing Yeoh

Topic: **Transcription factor, NFκB and cytokine Cox-2 expression in the irradiated colorectum is associated with the subsequent histopathologic changes**

In 2004 Ann has worked with the Mucositis Research Group and supervisors Dr Dorothy Keefe and Dr Rachel Gibson. This important research focuses on an investigation of the damage caused to healthy colonic tissue when radiation is used on a colorectal tumour site.

Radiation therapy is a common treatment for patients with cancers in the colon, and the damage caused to surrounding healthy tissue leads to many distressing side effects i.e. mucositis (the clinical term for pain and ulceration occurring along the gastrointestinal tract as a result of cancer treatment). A significant number of cancer patients experience the unpleasant outcome of pain, bleeding and fecal incontinence. The mechanisms behind these side effects in the colon remain unclear.

This study, one of the first to employ the use of human colorectal tissue samples, initiates an investigation into the 'why and how' of radiation-induced side effects in the colon. It is based on the realisation that the alimentary tract, from mouth to anus is formed from one tube in the growing embryo, and therefore mechanisms of mucositis that occur in the mouth should be the same as those that occur in the colon.

Results from this study have been promising, indicating that there are indeed similarities between mechanisms of mucositis in the mouth and in the colon. A better understanding of these mechanisms will contribute towards the treatment of the side effects of the cancer therapy experienced by the patient.

In 2003 Ann also undertook a Summer Vacation Research Scholarship with the Cancer Council of South Australia exploring the topic: 'Does Keratinocyte Growth Factor (KGF) alter the expression of apoptotic and proliferative proteins in the gastrointestinal tract of the DA rat with Breast Cancer?'

Karen Lee McGlaughlin

Topic: **An analysis of genotype-phenotype correlation in Apert syndrome**

Karen is an MBBS student undertaking an Honours Program in the Department of Craniofacial Surgery. She has contributed to numerous publications and abstracts, and papers have been presented at conferences in Australia, New Zealand and Korea. Karen is Chair of Research of the Adelaide University Surgical Society.

Apert syndrome was described by Eugene Apert in 1906 and is characterised by abnormalities of the skull and facial bones, and limb anomalies including fusion of the fingers and toes. Other major anomalies that have been reported to occur within Apert syndrome include abnormalities of the central nervous system, cleft palate, and involvement of the long bones in the arms.

Although early familial data suggested a genetic origin to Apert syndrome, the technology allowing genetic sequencing in these patients has only recently become available. It is now known that in the majority of cases Apert syndrome occurs as the result of one of two mutations of the fibroblast growth factor receptor 2 (FGFR2) gene.

There have only been a few studies that have examined the genotype-phenotype correlation within Apert syndrome and these have produced conflicting results. The correlation with genotype of cleft palate occurrence, severity of fusion of the fingers and toes and craniofacial appearance following surgery have been reported, however, these results have not been substantiated by other groups. Due to the paucity of available data in the existing literature it is not possible to establish whether a genotype-phenotype correlation exists and to determine whether different management protocols are required to achieve optimal outcomes within the two genotypic groups.

This retrospective study aims to evaluate the morphology and determine if a genotype-phenotype correlation exists in Apert syndrome particularly in respect to craniofacial aspects and limb anomalies. Surgical outcomes will also be examined within the two genotypic groups.

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