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Premier's Science and Research Fund supports reproductive science project

Preeclampsia, intrauterine growth restriction and pre-term birth affect almost one in five women pregnant for the first time, and in three per cent of cases the conditions are life-threatening to the mother and/or baby. However they are all conditions that Prof Gus Dekker and Dr Claire Roberts believe can be managed or avoided.

In March 2005, Prof Dekker and Dr Roberts were awarded \$2.37 million over three years by the Premier's Science and Research Fund to develop diagnostic tests to predict a couple's risk for these conditions.

Dr Roberts says that certain genetic problems can be assessed prior to pregnancy from a blood sample from each of the parents. For this project, Prof Dekker and Dr Roberts are screening blood samples from 6,000 mothers, fathers and babies to identify clinical, molecular and genetic factors that indicate the capacity of the placenta to develop. The aim is to arrive at a robust clinically useful predictive test by combining the clinical and biochemical data.

The research also proposes to scrutinise the cord blood and look at the genes of the baby and the blood of the mother and father to determine what copy of the genes the baby has taken.



Prof Gus Dekker and Dr Claire Roberts

Dr Roberts explains that we inherit one copy of each gene from the mother and the father. In some genes, one copy is "switched off" so only the mother or the father's copy is expressed.

"We've found that the growth factor (IGF-II) that promotes placental development is expressed through the father's gene. His gene remains active while the mother's gene is switched off, and we believe that this gene contributes to poor placental development.

"With these blood samples, we aim to identify and screen for the genes and proteins that adversely affect the development of the placenta and are the cause of these common conditions. And with a sample size of this magnitude, we also have the statistical power to develop accurate tests," said Dr Roberts.

Their research has already discovered new molecular markers (indicators) that may affect placental development. Furthermore, they believe that in these three conditions there are low levels of key proteins in the blood which means the placenta has a poor capacity to develop and transport nutrients to the foetus. Therefore the foetus' capacity to grow is adversely affected.

Prof Dekker and Dr Roberts commenced their research collaboration at the University of Adelaide where, as a scientist in the Placenta Research Group in the University's Department of Obstetrics and Gynaecology, Dr Roberts' research focused on the role of Insulin-like Growth Factor II (IGF-II) in pregnancy and its role in placental development and invasion.

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Her research was of particular interest to Prof Dekker who originally hails from Holland. His international experience as an obstetrician together with a proclivity for discovery science, led to an interest in developing tests that prevent birth complications and the mother's death.

"When intrauterine growth restriction occurs during the neonatal period, for example, the insufficient development of the placenta results in a restriction of foetal growth. With this comes a greater chance of death or illness in childhood and illness, obesity, Type II diabetes, and cardiac problems in adulthood", says Prof Dekker.

Dr Roberts explains that treating the mother with IGF-II within the first trimester of pregnancy may enhance the capacity of the placental cells to invade the mother's cells in the uterus and improve flow into the placental arteries.

"During pregnancy, the blood flow from the heart increases by 30 to 40 per cent and 30 to 40 per cent of that blood goes to the placenta. When IGF-II is not present, then the blood flow is poor, and these three conditions are all mostly caused by an ineffective placenta," Dr Roberts said.

The research team proposes that if a test could tell the doctor that the mother is high risk, then she can be watched more closely before symptoms manifest and therefore minimise the severity of the complications. This allows the high-risk women to be intensely monitored and the low-risk less so, thereby enabling the medical team to most effectively use medical resources (financial and clinical).

"If IGF-II is found to be an effective therapeutic, then together with early diagnostic tests, we may be able to promote normal placental development which will prevent or minimise the severity of these conditions."

Recruitment for the study commences in August for first time mothers over the age of 18. For further information, contact Dr Claire Roberts on (08) 8303 3118.

Sansom Institute Appointment

Professor Ross McKinnon has been appointed as Director of the newly formed Sansom Institute and Professor of Pharmaceutical Biotechnology at the University of South Australia.

Vice Chancellor and President of UniSA, Prof Denise Bradley says Prof McKinnon was appointed following an extensive worldwide search.

"Ross' background as a pharmacist in both hospital and community settings, combined with his broad research interests and experience, will serve him well in his new role."

Preeclampsia explained

The diagnosis of preeclampsia in a pregnant woman follows symptoms of high blood pressure in which all organs including the brain, liver and kidneys are affected, damaging the physiology of these organs. Damaged kidneys are unable to filter blood properly which leads to the presence of protein in urine and swelling (oedema) in other parts of the body. In life-threatening and severe cases, the only way to save the life of the mother and child is by delivering early, which can result in further complications for the new baby. One third of women with preeclampsia deliver growth restricted babies and it occurs in seven to eight per cent of first pregnancies. Alarmingly, the chance of preeclampsia occurring in the second pregnancy with the same father is more than 50 per cent.

Statistics and figures

Preeclampsia affects 5 to 10 per cent of all pregnancies. This translates to approximately 10 to 20 million women who become pregnant each year. Life threatening complications of preeclampsia to mother and baby occur in approximately 3 per cent of all pregnancies.

Treatment

The only identifiers of preeclampsia are symptoms, and at the point where symptoms develop there are only poor interventions available that can attempt to manage the mother's high blood pressure.

About the Premier's Science and Research Fund

Through the Premier's Science and Research Fund, the South Australian Government provides \$3 million per annum for projects that have the potential to generate 'transformational' outcomes. In this instance, the funding was for research that could potentially make a significant difference to life-long health.

Jenny Neszpor, Executive Officer for the Premier's Science & Research Council, says that in assessing applications, the Council looks for projects that are collaborative and inter-disciplinary. "The projects should not just involve research, but also the application of research outcomes that are aligned with South Australia's strategic interests, and that develop focussed cells of expertise within the State," said Ms Neszpor.

The Council's aim is to develop people with world-class knowledge, and to put South Australia on the map for its excellence in undertaking and applying science and research. The next round of applications is expected to be called in July this year, visit www.innovation.sa.gov.au. For further information, visit www.bioinnovation.com.au

Previously, Prof McKinnon held the position of Associate Prof of Pharmaceutical Biotechnology. He is also the founding Director of the South Australian Clinical Pharmacogenetics Initiative, Director of the Centre for Pharmaceutical Research and co-founder of pharmaceutical company, PharmaQest.

Prof McKinnon says that the Sansom Institute will unite successful research concentrations including biomedical and pharmaceutical science, quality use of medicines and medicines policy and biomolecular studies.

"The Sansom Institute will provide vital leadership in assisting Australia with the transition from 'molecular science' to 'convenient and cost-effective medicines,'" Prof McKinnon said.

After completing his PhD studies in molecular carcinogenesis at Flinders University, Prof McKinnon was awarded a NHMRC CJ Martin Fellowship, resulting in an opportunity for postdoctoral training at the Centre for Environmental Genetics in Cincinnati, USA.

"Since joining UniSA in late 1995, Ross has established a national and international profile for research focusing on genetic modifiers of individual response to drug therapy and in silico prediction of drug metabolism," Prof Bradley said.

"We congratulate Ross on his appointment and look forward to his contribution to research leadership in SA."

Two new companies builds Adelaide biotech muscle

The establishment of two new Adelaide-based biotechnology companies further enhances the emerging global reputation of South Australia's fastest growing industry sector.

With assistance from Bio Innovation SA, The Queen Elizabeth Hospital Research Foundation (TQEHRF) has recently established two biotechnology companies to commercialise exciting research programs.

TQEHRF's Executive Director, Mr Maurice Henderson says the creation of BenEphex Biotechnologies and Atherogen Biotechnology (and earlier, Viswa Biotechnology) are an indication of the world-class research being undertaken at TQEH here in Adelaide – and is a reflection of the supportive creative environment at the hospital.

"Thanks to the support of Bio Innovation SA, research capabilities have been turned into commercial realities," Mr Henderson said.

"This is another example of our strategy to unlock the labs and open the State's world-class research to the wider community."

Atherogen Biotechnology

Atherogen Biotechnology will further develop the hospital's research program investigating links between a person's genetic makeup and the risk of suffering a Lacunar Stroke which occurs in the brain's small blood vessels. Researchers are hopeful that they will develop a diagnostic test to detect those who are at a higher risk of suffering a stroke later in life.

BenEphex Biotechnologies

BenEphex Biotechnologies will focus on the development of treatments to assist sufferers of breast, colon and prostate cancer – and other epithelial cancers.

In particular they are targeting a protein that is found on the outside of tumour cells and not normal cells.

Dr Sally-Anne Stephenson, a Senior Research Fellow in the Department of Haematology/Oncology at The Queen Elizabeth Hospital says data indicates that targeting the protein with an antibody has a dramatic impact on the growth of epithelial tumour cells.

"The antibody alters the function of this tumour protein in such a way that the tumour cell dies," Dr Stephenson said.

"Our research team will focus on designing and producing an antibody which will bind strongly to the protein on the cancer cells," she said.

"We still have a long way to go and look forward to the future challenges".

Adelaide – UK Tech Transfer Alliance

Plant Biosciences Ltd (PBL) of Norwich in the UK, and Bio Innovation SA have recently announced a strategic technology transfer alliance to assist South Australian bioscience researchers and companies to tap into PBL's international networks.



Dr Martin Miller and Dr Jan Chojecki

The alliance follows a recent visit by PBL's Managing Director, Dr Jan Chojecki, who presented at Bio Innovation SA's first Networking Forum for 2005. Dr Martin Miller, Director of Agricultural Biotechnology at Bio Innovation SA, said the alliance with PBL will help identify international technology development and licensing opportunities for the South Australian bioscience community.

"There is also a very real possibility of linking related technologies to create critical mass for commercialisation," said Dr Miller.

Dr Chojecki was equally enthusiastic having met with scientists while visiting Adelaide. He believes that much can be gained through collaboration with Australian researchers and companies.

PBL was established in 1994 by the Gatsby Charitable Foundation and the John Innes Centre. By 2002 PBL had become the leading independent IP management and technology transfer company in the UK, managing a broad portfolio of life sciences, with particular strengths

in plant and microbial science. In 2004, PBL was awarded £18m from the UK Government's Department of Trade and Industry which has enabled PBL to begin a program to invest funds directly to enhance the development status of emerging biotechnology. Also in 2004, the UK Government's principal organization for funding public sector bioscience research, the Biotechnology and Biological Sciences Research Council (BBSRC), became a shareholder in PBL, with a £2 million investment in the company.

Bio Innovation SA will facilitate contact between interested parties in South Australia and PBL as well as helping PBL establish links in the State. Bio Innovation SA will carefully monitor progress of these contacts and where needed, assist in deal creation.

For further information about the concept or to arrange discussions with PBL, please contact Dr Martin Miller on 08 8303 7142 or e-mail martin.miller@bioinnovationsa.com.au, or visit PBL's website at www.pbltechnology.com.

The University of Adelaide means business

Adelaide Research & Innovation (ARI) is a company you are going to hear a lot more about as it positions itself as a “place of choice for doing business”.



Mr Mark Szolga

ARI Pty Ltd is the University of Adelaide’s commercialisation company that helps translate research into the public arena through various mechanisms.

Following a major restructure in 2001, the University’s research branch and Luminis were brought together to form ARI, creating a one-stop-shop, from the inception of a grant through to commercialisation of new technology.

Without a similar model in Australia, ARI is looking to Oxford and Boston to determine how adaptable their models are for the University of Adelaide and ARI.

ARI’s Managing Director, Mr Mark Szolga says the calibre of technologies being developed at the University of Adelaide is one of Adelaide’s best kept secrets.

“We have a wealth of biotechnology intellectual property coming through and great staff with incredible skills,” Mr Szolga said.

It is fitting that Mr Szolga now holds the reins of this new entity – he was one of its creators back in 2001. Having worked in the US and UK for 12 years in finance and business development, Mr Szolga returned to Adelaide and joined the University of Adelaide for six months to review the then commercial company, Luminis.

Having been at the helm since mid 2004, Mr Szolga is excited by the University of Adelaide’s capability and the task ahead of him to exploit all the opportunities.

“Commercialisation is only one aspect of knowledge transfer. ARI’s role is to try and find alternative funding streams for researchers and to get ideas from the academic arena to the public domain,” he said.

With everything from early technology assessment to closing license deals and creating a number of spin-outs on his plate, Mr Szolga is encouraged by the mix of activity and is keen to develop and grow that solid activity base.

While commercialisation is a key focus, ARI also recognises the importance of making industry and the public aware of the benefits of research conducted by the University of Adelaide. A related opportunity is contract research and consulting services made available to industry via ARI.

“Where I see us growing in the next 12 months to two years is continuing to create better links with industry and for ARI to be recognised in the marketplace as a partner of choice for business,” Mr Szolga said.

“Our aim is to marry investment and skills to help take various technologies forward.”

Heading up a team of 13 people, Mr Szolga says ARI has the right ingredients for success: “massive knowledge pool, great people and fantastic expertise”.

“The market’s understanding of opportunity has steadily grown over the past few years and I am confident you will hear a lot more about the University of Adelaide and Adelaide Research & Innovation.”

Australian Society for Medical Research

The ASMR Medical Research Week® provides an opportunity for medical researchers to collaborate with business, commercialise their research and secure sources of funding for their research.

As a post-doctoral researcher at Adelaide University, investigating the structure and function of enzymes involved in metabolism, and as Chair of the SA Division of Australian Society for Medical Research (ASMR), Dr Steven Polyak sets a great example for young researchers to become involved with the ASMR.

“The ASMR helps to promote the importance of health and medical research to the general public, school groups, amongst scientists and politicians”, says Dr Polyak.

ASMR Medical Research Week® is aimed at a diverse audience and includes a Public Expo in Rundle Mall, free public lecture on Healthy Ageing and a Scientific Meeting which is open to researchers from all institutions.

“Our Scientific Meeting is the only such meeting in Adelaide that brings together all health and medical researchers and gives young scientists the opportunity to present their work in a professional context,” Dr Polyak said.

Transforming the Industry

More than 20 years ago, pre-eminent scientist Dr Peter Cooper discovered a natural vaccine adjuvant. However, he was before his time and his ideas languished until a chance meeting with Professor Nikolai Petrovsky

Although he had identified a sugar in dahlia flowers that was a good alternative to the traditional vaccine adjuvants, Dr Cooper's ideas did not progress until they were embraced and resuscitated by Prof Petrovsky who has since spent the last five years researching this natural adjuvant with phenomenal results.

In 2004, Prof Petrovsky formed Vaxine Pty Ltd, a biotech company with a mission to develop Dr Cooper's adjuvant and use it in vaccines for world-wide application. Vaxine was successful in receiving BIF and START grants from the Australian government and is currently under consideration by the US Government's National Institute for Health for a multi-million dollar grant to develop its natural adjuvant for vaccines to be used in defence against potential bioterrorism agents such as Q fever, smallpox, anthrax and Japanese encephalitis virus. Vaxine sees its adjuvant as a natural alternative to the traditional aluminium hydroxide adjuvants currently used in most vaccines.

With his relocation to Adelaide with his young family, Prof Petrovsky now drives Vaxine's research activities from his laboratory at Flinders Medical Centre/Flinders University where he coordinates a national and international network of collaborators.

For more information, contact Prof Nikolai Petrovsky at nikolai.petrovsky@flinders.edu.au.

"This year, we're delighted to have the support of Bio Innovation SA as a major sponsor of this year's Scientific Meeting. This will help to strengthen ties between the medical research and biotech communities."

The plenary speaker for the meeting is Prof R. John Aitken who is a leading reproductive biologist. Prof Aitken will speak on the importance of DNA damage on sperm development and decreasing fertility rates in men, and the overall impact upon our society.

The society is open to all medical researchers, from students and basic researchers through to clinicians, and represents a range of institutions including universities, hospitals and research institutes. Annual membership costs \$97.50 (student subsidies are available).

Attendance to most ASMR Medical Research Week® activities is free and all are welcome. For more information, visit www.asmr.org.au

Firstly, what is an adjuvant?

Adjuvants are compounds that enhance the immune response to a vaccine; this makes the vaccine more effective. Most adjuvants are generic in that they can be used in more than one vaccine.

Tell us about Vaxine Pty Ltd

Vaxine Pty Ltd was established to develop and commercialise vaccines based on Australian research. Vaxine's initial interest was in commercialising a special polysaccharide (sugar) based adjuvant called inulin that is derived from the roots of the dahlia plant. Because it is derived entirely from sugar, inulin is much safer and less toxic than traditional aluminium hydroxide adjuvants.

Vaxine is currently in the process of setting up human trials for Hepatitis B and flu vaccines containing its inulin adjuvants and results are expected from the Hepatitis B study before the end of this year. Already, we are well on the way to turning from being largely an adjuvant company to being a fully fledged vaccine company with a strong pipeline of vaccine products, ready to go into human clinical trials.

What is your professional background?

I became an Endocrinology Specialist at the Royal Melbourne Hospital and then received a PhD in immunology through the Walter Eliza Hall Institute. I was in Canberra for six years working at Canberra Hospital as a clinical endocrinologist with adjunct professorial appointments at University of Canberra and the Australian National University whilst running a research group studying ways to prevent Type 1 diabetes. It was there that I met Dr Peter Cooper who sparked my interest in adjuvants derived from natural sources. I then received a grant to establish a company to commercialise vaccines, which preceded my move to Adelaide.

Why South Australia?

Quite simply, it was the opportunity both for myself to use my expertise to help build and develop diabetes services in the Southern Adelaide region whilst at the same time providing Vaxine with an solid research base at Flinders, with access to well-qualified staff. It also gives us the opportunity to collaborate closely with other Adelaide-based biotech companies and research groups.

Canberra is small and the competition for qualified staff is very high so most biotech companies that start there eventually move to the larger cities, usually Sydney, Melbourne, or Brisbane to expand. We chose Adelaide because we identified that the universities here produce excellent scientists who could help to build the company. Furthermore, we were impressed by the fact that Adelaide has successfully cultivated a strong biotech industry, it has a culture of innovation and good business, which is demonstrated by the number of listed biotech companies that have succeeded in South Australia.

ASMR Medical Research Week® 6 – 12 June 2005

Monday 6 June

Gala Dinner, Ayer's House, North Tce

ASMR medallist and guest speaker Prof Julian Savulescu, (Uehiro Professor of Applied Ethics, Director, The Oxford Uehiro Centre for Practical Ethics, University of Oxford, UK).

Wednesday 8 June

ASMR Public EXPO, Rundle Mall

Thursday 9 June

Public Lecture "Healthy Ageing", Palace Nova Eastend Cinemas, Rundle St

Wednesday 15 June

ASMR MRW Scientific Meeting, Adelaide Entertainment Centre, Port Rd, Hindmarsh

Plenary Speaker Prof John Aitken, University of Newcastle, NSW Meeting includes Ross Wishart Award and New Investigator Awards.

Intercontinental career in Science

Tanzanian born of Indian parents with a Portuguese surname, Professor Chris Franco has forged a successful career in science that has taken him from India, to Scotland, England, Germany and now Australia.



Prof Franco has been living and working in Adelaide for the past 14 years and is the Head of the Department of Medical Biotechnology within Flinders University's School of Medicine.

He is also Masters Co-ordinator and Associate Dean of International Programs for the Faculty of Health Sciences and still finds time to pursue his research interests in actinomycetes and fermentation technology research.

An applied Microbiologist, Prof Franco was educated at the University of Bombay, India, Heriot-Watt University and the University of Strathclyde (both in Scotland). After completing a post-doctoral position at the University of Manchester, he moved to the University of Tübingen in Germany and started working on what was to become his principle focus, actinomycetes, a form of fungi-like bacteria found predominantly in soils and some plants used extensively in drug discovery, particularly in the development of antibiotics.

That led to a valuable opportunity to take his skills into the private sector, joining Hoechst, which later became Aventis, where he worked for a decade, both in Frankfurt and at the Aventis Research Centre, Bombay, in a drug discovery role. Excelling in this position, Prof Franco was responsible for 11 patents for new compounds in that 10-year period; with two going on for further development into antibiotics.

A member of the team that developed the first integrated Biotechnology Honours program in Australia, Prof Franco also played an integral role in the creation of the Masters in Biotechnology and is now co-ordinator of that program at Flinders University.

"We are continually improving the program to ensure it is relevant to modern society and industry and ensure that biotechnology is applied," Prof Franco said.

And this approach is working very well with over 50% of Honours graduates doing a PhD, while many others obtain jobs in the biotech/pharmaceutical industry sector.

Prof Franco is also the current GRDC (Grains Research and Development Corporation) Eureka Prize winner for his research into endophytic actinomycetes to control root diseases of wheat. The research team includes Dr Justin Coombs, Mr Phil Michelsen, Ms Vanessa Conn and Perth-based Dr Margaret Roper.

"The team is currently working with GRDC on a commercialisation strategy and talking with companies that produce inoculants," Prof Franco said.

Another part of Prof Franco's work is collaborating within the CRC for Bioproducts on using plant cells to make useful therapeutic molecules.

"We're using growing plant cells in fermenters, as part of bio-processing, to make useful compounds in the medical field for pharmaceuticals, nutraceuticals and cosmetics," Prof Franco said.

Prof Franco says he's enjoying his work and loves living in Adelaide.

"We were living in crowded Bombay and my wife and I yearned for a better lifestyle to raise our children (son Sean and daughter Zarah)."

"So, in 1991 we migrated to Australia and we haven't looked back. I am extremely happy and proud to call Adelaide home."

Contact Prof Chris Franco on 08 8204 5764 or email chris.franco@flinders.edu.au

Since becoming a Member of Parliament, Ms Maywald has held the position of South Australian Leader of The Nationals. Her Parliamentary roles have included membership of the Environment, Resources and Development Committee, the Murray River Select Committee, the Emergency Services Select Committee, the Heroin Rehabilitation Select Committee, the Economic and Finance Committee and she was the inaugural Chair of the Natural Resources Committee.

Family activities and the duties of Member for Chaffey absorb most of Ms Maywald's time, however her other interests include community activities, sporting activities especially golf and water skiing, and wine appreciation, as well as maintaining a keen sense of humour.

New Science Minister



South Australian Member for Chaffey, Hon Karlene Maywald, has become the State's new Minister for Science and Information Economy.

Ms Maywald was first elected to the seat of Chaffey, which encompasses the Riverland and Northern Mallee regions, in October 1997 and then re-elected in February 2002.

Taking SA Bioscience to the world

A delegation of 30 South Australians will head to Philadelphia, USA, next month to promote South Australian bioscience excellence at BIO 2005.



Australian Pavilion at BIO 2004

BIO 2005, the world's largest biotechnology conference and exhibition, is being held from 19 – 22 June and is expected to attract over 17,000 life science professionals from around the world.

BIO 2005 comprises conference symposia, partnering sessions, an industry exhibition and several events designed especially for international delegates including the global biotechnology forum and country presentations.

This year's event also includes a special program for academia – the Innovation Poster Corridor – where a number of research posters will be presented. The posters will cover both biomedical and agbio research and several South Australians are currently awaiting the outcomes of their applications to present.

Six South Australian organisations – Australian Centre for Plant Functional Genomics Pty Ltd, BresaGen Ltd, GroPep Ltd, SARDI, University of Adelaide and Bio Innovation SA – will be exhibiting on the Australian pavilion which will showcase a diverse cross-section of Australia's bioscience industry. The exhibit will also include the much anticipated Australian wine networking extravaganza.

\$1.2m to ease the pain of kidney stones

Thanks to a \$1.2 million grant, researchers at Flinders University are working towards finding out just how kidney stones form and how they can be prevented.

A Flinders University research team, led by Chief Medical Scientist, Professor Rosemary Ryall from the Department of Urology has been awarded the grant by major funding body for medical science in the United States, the National Institutes of Health (NIH).

Prof Ryall says the focus of the ground breaking research is the formation of insoluble crystals of calcium oxalate found in kidney stones. These crystals commonly appear in urine but are harmlessly excreted from the body most of the time.

Those attending from SA include company, research institution, university and government representatives. The delegation also includes the winners of the Bio Innovation SA BIO 2005 Travel Scholarships – Dr Alec Morley, Monoquant Pty Ltd; Dr Anne Hamilton-Bruce, Atherogen Pty Ltd / Queen Elizabeth Hospital; Dr Cuong Tran, Women's & Children's Hospital; Dr Jason Able, University of Adelaide, and Ms Olgatina Bucco, CSIRO Health Sciences and Nutrition.

Although most people have finalised their travel arrangements and have set up partnering meetings, there is still time for others to join the SA delegation to BIO 2005.

For further information about attending BIO 2005, please contact Natasha Crichton, Marketing & Communications Manager, Bio Innovation SA on 08 8217 6415, e-mail natasha.crichton@bioinnovationsa.com.au or visit www.bio.org/events/2005.

Occasionally the process goes wrong and the ureter (the tube that links the kidney and bladder) becomes blocked, causing back pressure on the kidney and resulting in pain and discomfort.

"Our previous research discovered that proteins are found in the crystals when they form in the urine," Prof Ryall said.

It is thought these proteins encourage proteases (proteins that eat other proteins) to break down and destroy the crystal structure.

The research has progressed thanks to seed funding from the Flinders Medical Centre Foundation and more recently, funding from the Urological Foundation of Australasia.

"This new NIH funding will allow us to investigate the role of proteins and how they make the crystals more susceptible to being broken down in the body."

For further information, contact Prof Rosemary Ryall on 08 8204 4191 or e-mail rose.ryall@flinders.edu.au



Coming Events

Bio Innovation SA Networking
Forum CSI Adelaide – Forensics
in South Australia

12 May
Grainger Studio,
Hindley Street, Adelaide
www.bioinnovationsa.com.au

ASMR Medical Research Week
6 – 12 June
Various Adelaide venues
www.asmr.org.au

BIO 2005
19 – 22 June
Pennsylvania Convention Centre
Philadelphia, USA
www.bio.org/events/2005

BioMedical Innovation
Partnering Conference
1 July
Royal Institution of
Great Britain London, UK
www.biomedical-innovation.co.uk

2nd International Greek
Biotech Forum
1 – 3 July
Athens, Greece
www.igbf.gr

Australian Biotech Summit
26 – 27 July
Convention & Exhibition
Centre, Sydney
www.acevents.com.au/bio2005

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The Foundation of a Healthy Society

Facilitating multidisciplinary developmental research to promote the well-being of Australia's infants, children and adolescents.



Healthy Development Adelaide (HDA) was established in 2004 by the University of Adelaide.

Led by Professors Robert Norman and Caroline McMillen, HDA incorporates members from all five Faculties across the University from various disciplines and areas of expertise.

HDA exists as a 'research cluster' and brings together government, industry, community and external research groups related to health and development by facilitating interdisciplinary research and communication.

Prof Robert Norman says the group intends to build the profile of research on healthy development within South Australia as well as recruiting postgraduate students and provide a mechanism for communication and cross-disciplinary research between its members.

"HDA is unique within South Australia and focuses on multidisciplinary research at a basic, clinical, social and

population level to aid in the healthy development and wellbeing of Australia's future generations," Prof Norman said.

Prof Caroline McMillen says the HDA has helped build relationships with government bodies, external research groups, health service providers and community and industry groups.

"Some members have already had success in research funding and beginning new projects," she said.

The HDA will continue to provide opportunities to identify priority health areas relevant to Healthy Development on a global level, as well as cross-disciplinary links and collaborations - and to highlight the key research priorities in South Australia.

For further information about HDA and upcoming orations or research days, please call 8222 6878 or visit the HDA website at www.adelaide.edu.au/hda.



Cancer Innovation Centre for South Australia

A new \$14.5million Centre for Innovation in Cancer is to be built at Flinders Medical Centre. The multi-story complex will have a particular focus on cancer prevention and will house research and clinical laboratories, clinical oncology and patient care clinics, community support facilities and a therapeutic spa.

The public fund-raising campaign has been initiated by a \$2.5million contribution from the South Australian government. The Centre is a partnership between the Flinders Medical Centre, Flinders University and Flinders Medical Centre Research Foundation.