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The inaugural Sir Zelman Cowen Cancer Research Fellow

The Austin Research Institute and the Trustees of The Sir Zelman Cowen Cancer Foundation are delighted to announce the appointment of Professor Vasso Apostolopoulos as the inaugural Sir Zelman Cowen Cancer Research Fellow.

In recognition of the achievements of Sir Zelman Cowen, the Institute has selected a scientist of exceptionally high quality. Vasso was selected for the outstanding contribution she has made to the science community, having worked on basic and applied cancer research projects, including our cancer vaccine projects, at the Austin Research Institute and at the Scripps Research Institute in the USA.

In 1994 Vasso commenced as a student with Emeritus Professor Ian McKenzie in the Immunology and Vaccine Laboratory, which studies cancer vaccines. Since that time, her determination and dedication has led her to many major discoveries. Her work has been recognised worldwide: she has published over 100 research papers and is an inventor on eight patents. In 2002 she returned from three years at the Scripps Research Institute where her knowledge of crystallography and protein structures were greatly expanded and where she discovered how a major cancer-related protein stimulates the immune system.

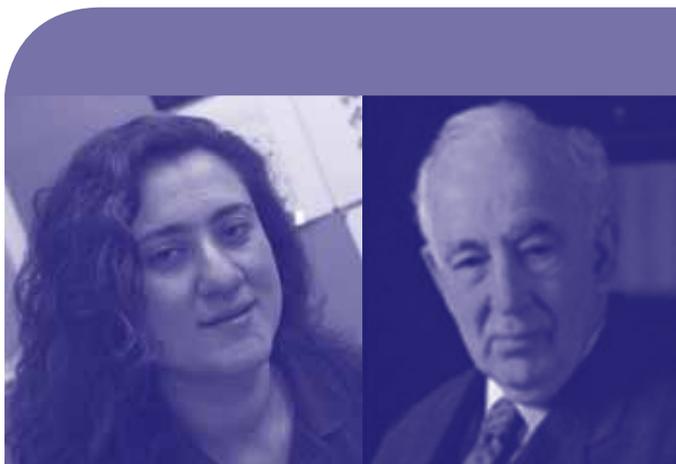
Vasso's achievements have been recognised with over 70 major awards of excellence including Young Australian of the Year (Victoria), Network TEN/Herald Sun Young Achiever of the Year Award, Order of Brigadier General from the President of Greece,

Victorian Tall Poppy Award 2002 and 2004 Victorian Honour Roll of Women inductee.

"We are delighted with the selection of Professor Apostolopoulos as the inaugural Fellow. Her achievements in research are outstanding and her appointment aligns perfectly with the goals of The Foundation to honour Sir Zelman," said Mr Nobby Clark AO, Trustee of The Sir Zelman Cowen Cancer Foundation.

Sir Zelman Cowen is one of the Institute's patrons and an extraordinary Victorian whose life has been one of learning and leadership. As Australia's nineteenth Governor-General, serving from 1977 to 1982, Sir Zelman earned the respect of people across the nation and throughout the world.

With the Institute, The Foundation will assist Vasso in procuring equipment for research programs relevant to cancer, especially relating to cancers of colon/bowel, breast, ovarian, prostate and leukaemia or myeloma.



The inaugural Sir Zelman Cowen Cancer Research Fellow, Professor Vasso Apostolopoulos, and Sir Zelman Cowen, the Institute's patron and founder of The Foundation

Research for Life

Director's Message

This issue of *Research for Life* includes some very exciting news. As part of our programs to undertake new cutting edge research, we are very happy to announce the inaugural Sir Zelman Cowen Cancer Research Fellow. The Trustees of The Sir Zelman Cowen Cancer Foundation are delighted with the selection of Professor Vasso Apostolopoulos. Her research and achievements are detailed on page 1.

The Institute has also been internationally recognised in the sense that we have had Professor Philip Low from Purdue University select the Institute as the ideal place for him to undertake his sabbatical leave. "The ARI was the only institute that had the breadth and quality of research that was complimentary to my work on new drug delivery systems for cancer, infection, transplantation and inflammation," he has told us. Philip is an outstanding and innovative scientist and we were delighted to have him as part of the team.

We continue to strive to maintain the quality of our work, one of the essential parts of which is the quality of our facilities. I've mentioned in the past that we are working very hard to replace our century-old buildings and we are exploring a number of exciting options to ensure that we not only sustain our work, but grow it into new areas where we can apply our immunology based research for the treatment of human disease.

I hope you enjoy this issue.



P MARK HOGARTH PhD
Director and Professor

Retired Board Member gives more than 10 years of support

The Austin Research Institute is fortunate to continue to receive support in various ways from many of its past Board Members and Members - from annual donations to attendance and participation at our fundraising events.

One of the Institute's longest-serving Board Members, Mr Keith Smith, 81, is an excellent example. Mr Smith, who retired after 45 years of experience in the securities industry, was introduced and recommended to the Board by former Board Member, Ms Natasha Davies. Keen to give back to the community after his retirement, he was appointed to the Board in August 1994 and served on it for the next 10 years.

Mr Smith came to the Board with an extensive background in stockbroking. He loved his career and worked as a director and senior investment advisor with Potter Warburg Securities, where he enjoyed analysing the share price of well-managed companies.

In particular, Mr Smith was well regarded for his wise council during Board deliberations, his diligent attendance at meetings (in his 10 years on the Board, he missed only one meeting) and his determination in the pursuit of bench costs from the appropriate bodies for the education of postgraduate students at the Institute. He counts the latter among one of his personal highlights as ensuring the Institute received rightful back payment for its students became one of his main priorities over the years.

He is also proud of what the Institute has achieved since its early days.

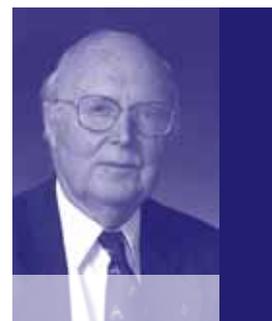
"Over the last decade, there has been recognition on a worldwide scale about the Institute's excellence. The Institute has produced many excellent and exciting research results and I am very proud to have been associated with such a fine team," he said.

Mr Smith was instrumental in helping to raise approximately \$500,000 in his time on the Board, especially for lupus research, and continues to actively generate further support.

He and his wife Lorraine, who live close to the Institute, have been married for over 50 years and have nine children and 19 grandchildren. They share a common interest in art, religion and politics.

The Institute would like to thank Mr Smith for his outstanding contribution to our research and fundraising efforts. We are extremely grateful for his decade-long involvement and wish him all the best.

Right: Retired Board Member, Mr Keith Smith



A sad goodbye

The Institute would like to offer our sincere condolences to the family of Mr Ron Farquhar, who passed away in April. Mr Farquhar, a local resident from Eaglemont, Melbourne, worked as a real estate agent/valuer in Ivanhoe. He was appointed as a Member of the Austin Research Institute in November 1999 and made several large donations to assist our research.

The Institute was also deeply saddened by the death of Ms Sue Jane, who passed away after a courageous battle with cancer on 14 May. Sue was the daughter of Mr Bill Jane, the Chairman of the Austin Breast Cancer Foundation. Our sincere condolences to Sue's husband Oscar and young daughter Georgia and Sue's family - many of whom are part of the Foundation's Bosom Buddies Ball committee.

Research Update

Overview: Inflammatory Diseases

With the onset of winter, the hundreds of thousands of Australians who suffer from one of the 150 types of arthritis will probably experience more arthritic pain and stiffness now more than at any other time of the year.

On a worldwide scale, arthritis affects over three million people or 16.5 per cent of the population and, while it is commonly regarded as the scourge of old age, it also affects young and middle-aged people. With our rapidly ageing population, by 2021 the number of people in Australia with some type of arthritis will be 4.2 million or 18.6%.

The various forms of arthritis are part of a group of diseases called "musculoskeletal" disorders which affect bones, muscles and joints. Three of the most common conditions are osteoarthritis, rheumatoid arthritis (RA) and osteoporosis. The Institute is using sophisticated technologies to design new drugs that treat the earliest phases of inflammation and prevent the damaging chronic effects of rheumatoid arthritis and another inflammatory disease called lupus.

This is part two of a series giving an overview of each of our major research areas. We looked at Cancer in the Autumn 2005 edition. Overviews for Infectious Diseases and Transplantation will appear in future editions.

What is rheumatoid arthritis and lupus?

*Rheumatoid arthritis is a disease whereby the body's immune system attacks the joints. In its mild form, it may cause no more than minor discomfort and does not lead to serious joint deformity. In its most serious form, it causes painful, badly damaged joints. As with other forms of arthritis, no cure has been found. However, advances in scientific research have meant that people with rheumatoid arthritis can be assured of better treatment resulting in much less pain and fewer physical disabilities.

Systemic Lupus Erythematosus (lupus) is an inflammatory disease whereby various

target tissues in the body become inflamed.

Who gets it?

*Most commonly, RA first develops between the ages of 25 and 50, but it is not uncommon among the elderly. A similar form of arthritis affects children. It is three times more common in women than men and often first occurs in women in their 30s.

What causes it?

The causes are not known. It is now thought that an unknown agent triggers the body's immune system. There is a role for genetic or inherited susceptibility but this is very complex and not well understood.

What happens in RA and lupus?

Rheumatoid arthritis and lupus results from overactivity of the body's immune system. For reasons not fully understood, the body's immune system attacks its own organs - in rheumatoid arthritis, the tissues surrounding the joint. White blood cells and antibodies cause inflammation of the joints, particularly of the synovial membrane which lines them. There is an over-production of synovial (joint) fluid and this, combined with the inflammation, causes joints to become swollen and painful. If the process continues, the cartilage and bone is destroyed, causing joint deformities. Blood vessels, eyes, heart and other organs can also be affected. In lupus, the autoimmune reaction affects blood vessels, skin, kidneys and the brain, leading to kidney failure, rashes, sensitivity to sun and other symptoms.

Who suffers from RA and lupus?

More than 200,000 Australians of all ages suffer from rheumatoid arthritis. Lupus affects one in 700 Australians.

What is the Austin Research Institute doing?

Current treatments for chronic inflammatory diseases, such as rheumatoid arthritis, lupus, bleeding disorders, kidney inflammation and allergies, aim to alleviate the symptoms rather than attack the cause

of disease. The Institute is using sophisticated technologies to design new drugs or engineer receptors that treat the earliest phases of inflammation and prevent the damaging effects. Our scientists have identified a human receptor that is involved in the early stages of inflammation and designed a drug to target this receptor and suppress inflammation. This novel approach uses X-ray crystallography to take a 3-D photograph of the cell surface proteins that cause inflammation. Drugs are then designed to fit exactly into the shape and chemistry of the protein, blocking its inflammatory function. Our research now also uses genetically engineered receptors to intercept the abnormal proteins that activate inflammatory cells. The abnormal proteins trigger a "lock" called Fc receptors which normally keep inflammatory cells "locked up" and prevent production of agents that cause inflammatory diseases. In animal models, the method has been effective in ceasing the inflammation process. This research has strengthened the likelihood of developing a highly effective treatment for RA and lupus.

The Institute has inflammation research collaborations with scientists at University of Colorado, Denver, and the Cardezza Institute, Philadelphia, and The Walter and Eliza Hall Institute in Melbourne, but our approach of using the Fc receptors as targets for inflammatory agents is novel globally.

*Information taken from Arthritis Victoria www.arthritisvic.org.au



Above: The team behind the Institute's research into rheumatoid arthritis and lupus

Supporters News

9th Annual Business Breakfast

Over 120 people from the business, government, science and medical communities attended our 9th Annual Business Breakfast on Tuesday 7 June at Crown's River Room.

The Business Breakfast provided an opportunity for our supporters and corporate friends to meet and network over breakfast, enjoy the message of the prominent guest speaker and hear about our research developments.

This year's event was hosted by Ms Sally Capp, a Senior Executive of ANZ and a Board Member of the Collingwood Football Club. The guest speaker was Ms Elizabeth Proust, Managing Director of Esanda (a subsidiary of ANZ). Ms Proust, a successful business woman and an excellent public speaker, presented "Secrets from the Top". She shared details of her life journey and experiences, career highlights, tips for success and advice on what's needed to become a top managing director.

Guests enjoyed the auction of the Stargate Corporation SuperSuite at Telstra Dome to watch a premiership football match for the 2005 AFL Season. There were also several door prizes presented to guests.

Mr Eugene Kopp, the Chairman of Prima BioMed, the principal sponsor, provided an overview of the biotech company's work

and its relationship with the Institute. Director Professor Mark Hogarth concluded the event with research highlights and by announcing the inaugural Sir Zelman Cowen Cancer Research Fellow. (See page 1)

The Institute was delighted with this year's Business Breakfast and would like to thank the principal sponsor Prima BioMed and supporters: Stargate, PaperlinX, Embassy Print Solutions, Roses Only, Herald Sun, Ms Elizabeth Proust, Ms Sally Capp, Mr Brian Capp and Mr Les O'Rourke.

All proceeds from the event have assisted our medical research.



Above: Guest speaker Ms Elizabeth Proust

Our Commercial Partner, Prima BioMed

The Institute and Prima BioMed Ltd have enjoyed a highly successful relationship, based on Prima's commercialisation of some of the Institute's intellectual property. Prima's portfolio consists of:

- * CancerVac - an anti-cancer cell based therapy in human phase II clinical trial for ovarian cancer.
- * Panvax - developing DCTagTM-CEA - an anti-cancer therapeutic vaccine in preclinical development for colon cancer; developing DCTagTM for use as an adjuvant in infectious disease vaccines.
- * Arthron - developing small drug molecule antagonists and a biological therapeutic for use in inflammatory disease.
- * Oncomab - developing human anti-cancer antibodies to a tumour cell target.

In 2004 Prima completed a successful capital raising and all the technologies licensed from the Institute either reached significant commercial milestones or achieved major progress in their development programs.

The year commenced with an announcement of an option/license agreement with Biomira Inc. for part of the CancerVac technology. A Phase IIa clinical trial in ovarian cancer commenced with the first interim results expected early 2006.

A publication by Associate Professor Xing et al in Cancer Research reinforced the basis of the collaboration with Oncomab's development partner, USA-based Medarex Inc.

In Panvax, further peer group recognition in a publication was obtained for the technology, DCTag, a nanoparticle that Prima has a license to develop as an adjuvant for improving immunotherapies and for vaccines. This paper extended the possibilities for commercial development.

Prima's core program with DCTag reached a major milestone - a formula for DCTag linked to a cancer protein expressed on colon cancer cells was completed by the Institute. This will enable preclinical development, as a prelude to a Phase I clinical trial.

Prima announced a collaboration of Arthron with leading pharmaceutical group, AstraZeneca, to validate the role of the receptor Fc γ RIIa in autoimmune diseases. This program endorses the potential of the technology and may progress to license negotiations for AstraZeneca to develop anti-inflammatory molecules.

Prima announced an option to license with USA biotech company, ZymoGenetics Inc, in which ZymoGenetics will undertake research to manufacture a recombinant form of the Fc receptor to be developed as a therapeutic anti inflammatory agent.

The Institute looks forward to maintaining close ties with Prima to ensure optimal outcomes for our technology from this well-established relationship.

Fundraising Update



Donor Recognition

Local Heidelberg resident Adam Bordonaro is helping us in our vision to generate Better Medicines Sooner by becoming a monthly payroll giver.

Adam, a project engineer with Infracon Group Pty Ltd, was interested in making regular donations to a charity that provides an excellent and worthwhile service to the community and people in need. After considering several charities, he decided to support the Institute.

"I wanted to be involved in something that helps people. I have a general interest in the Institute's research and it is clear that the



Above: Payroll Giver Mr Adam Bordonaro

benefits of their research for the wider community are profound," Adam said.

"It was a fantastic feeling to make a firm commitment to the Institute in this way. It's a very gratifying experience to know that what I'm doing will assist a truly worthy cause."

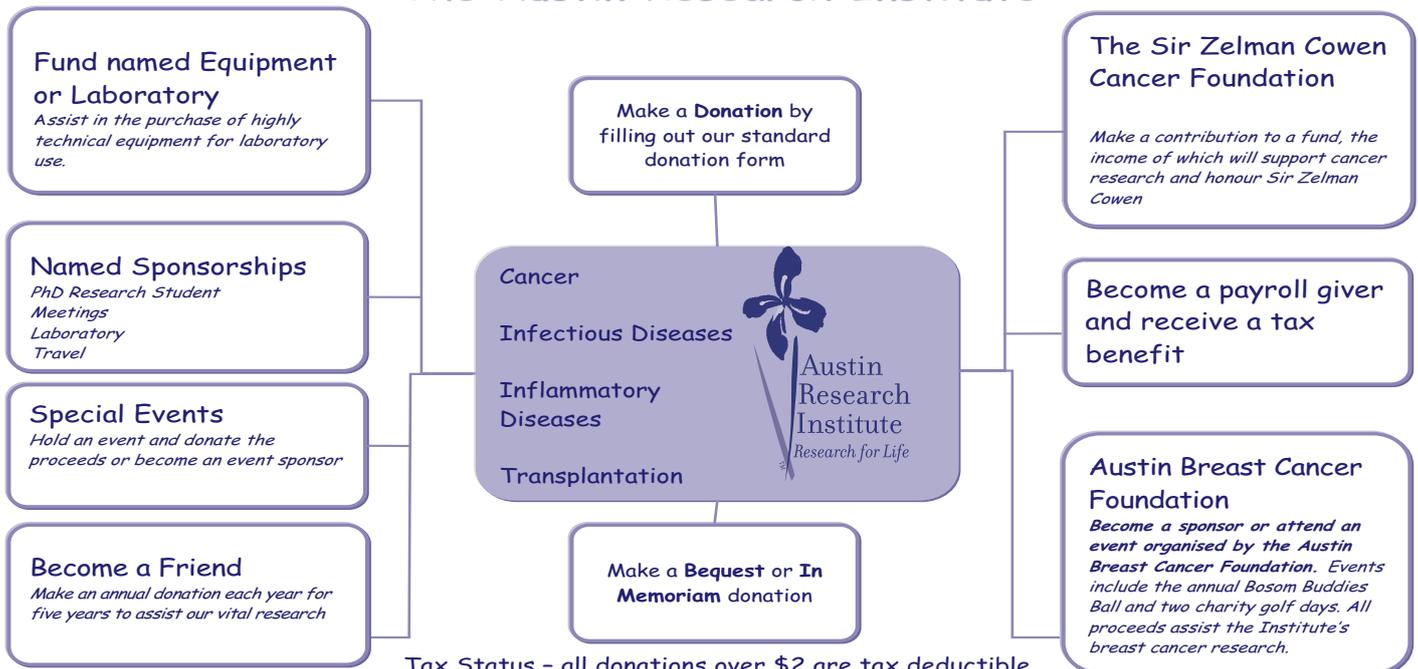
Adam's work in the construction industry keeps him extremely busy. He is currently involved with the Greensborough Bypass Project in Melbourne and rehabilitation and refurbishment work on several of Melbourne's bridges including Princess Bridge and Sandridge Bridge. Adam was excited about the payroll giving procedure because it is easy and convenient.

"Payroll giving is easy. The donations to the Institute are deducted from my bank account on a monthly basis. I receive an annual receipt - as well as an attractive tax benefit."

Like Adam, you can help us develop Better Medicines Sooner by making a regular donation from your wage. It is easy. Decide how much you would like to donate per pay and approach your workplace payroll officer or the Institute to arrange a direct debit. The Institute will issue you an annual receipt for taxation purposes.

For further information on payroll giving, please contact the Development Manager, Ms Alison Sinclair, on 03 9287 0660 or a.sinclair@ari.unimelb.edu.au

There are many ways you can support vital research at The Austin Research Institute



Visiting biochemist from America

In March, the Institute welcomed visiting American biochemist Professor Philip Low, from Purdue University in Indiana.

The research of Professor Low, who is the J.F Foster Distinguished Professor of Chemistry at Purdue University, initially focused on the structure and function of the human erythrocyte membrane but has expanded more recently to include the development of receptor-targeted imaging and therapeutic agents for the diagnosis and treatment of cancer. This latter work has led to 19 patents and two targeted drugs that are currently undergoing clinical trials in the United States for kidney, ovarian, breast, lung, brain and endometrial cancers. Professor Low's laboratory at the university has also developed a targeted drug that will soon begin clinical trials for rheumatoid arthritis.

Professor Low chose to spend six weeks' sabbatical leave at the Institute because of our research work in rheumatoid arthritis, lupus and transplantation and, in particular, our reputation and experience in the area of cancer immunotherapy and related human clinical trials. He commenced collaborative work with several members of our team including one of Australia's leading bioorganic chemists Professor Geoff Pietersz, Associate Professor Magda Plebanski who heads the Vaccine and Infectious Diseases Laboratory, and Professor Mauro Sandrin, whose work in tissue transplantation may provide opportunities for Purdue University to test some of its new drugs in the prevention of organ transplant rejection. Our staff enjoyed the excellent presentations Professor Low made and appreciated the time he spent with many of our researchers

who were interested in learning more about his work.

"My time in Melbourne was well-spent in terms of establishing strong collaborations with some of the Institute's research leaders, and I look forward to the opportunity to work with them on particular research projects in the future," Professor Low said.

In between working at the Institute, taking phone calls from America in the very early hours of the morning and keeping in contact with the 22 members of his laboratory, Professor Low was able to spend time visiting some of Victoria's best tourist attractions. He and his wife Joan hiked at the Grampians and also travelled to Phillip Island, Ballarat, Dandenong Ranges and along the Great Ocean Road.

Professor Low returned to Indiana in April to continue with his research at Purdue University. The Institute wishes him all the best and thanks him for being part of our team, albeit briefly. We know a long-lasting and fruitful collaboration has been made with him.



Above:
American biochemist Professor Philip Low

Do you know anyone who would like to join our mailing list? If so, please pass on our contact details to them. Otherwise, feel free to pass this edition of *Research for Life* onto your friends and help spread the word about our exciting research and fundraising developments. The company you work for may even like to consider sponsoring one of our upcoming events.



Friday 15 July 2005 – Ladies Pamper Night on Nevele R Stud Australian Oaks Night at Moonee Valley

Melbourne Harness Racing, in conjunction with the Austin Breast Cancer Foundation, is pleased to present a Ladies Pamper Night which includes everything a lady could want: masseurs, clairvoyants, beauty services and fashion makeovers. Other features include a showbag giveaway for the first 500 ladies on course and product giveaways. All this, on top of nine fantastic races, makes it a night not to be missed. Your attendance will help support the Austin Breast Cancer Foundation. For more information, please contact Miriam on (03) 9377 2212

Saturday 13 August 2005 – Austin Breast Cancer Foundation's 11th Annual Bosom Buddies Ball – Savoy Ballroom, Grand Hyatt Melbourne, 123 Collins Street, Melbourne.

Proceeds assist breast cancer research.

For more information, please contact Michelle Powell on (03) 9287 0650

Thursday 20 October 2005 – Austin Breast Cancer Foundation's Charity Golf Day (QLD) – Lakelands Golf Club, Gooding Drive, Merrimac QLD.

Proceeds assist breast cancer research.

For more information, please contact Tracey Taylor on 0417 360 898



Kronheimer Building
Studley Road
Heidelberg Victoria 3084
Australia

Tel: 61 3 9287 0666
Fax: 61 3 9287 0600
Web: austinresearch.org.au
Email: enquiries@ari.unimelb.edu.au

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Editor: Michelle Powell

If you do not wish to receive future editions of this newsletter or if you would like additional copies, please contact Michelle Powell on (03) 9287 0650 or michelle@ari.unimelb.edu.au