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## BioSA Awards recognise leading contributors to bioscience

Mr Graham Walters, Hon Grace Portolesi, Dr Antony Sheehan (award recipient), Mr Victor Previn (award recipient), and Mr Richard Turner

Investment Director of BioSA, Terra Rossa Capital; and Mr Gilbert Michaca, Grey Innovation's CEO, who covered smart product and business development.

The BioSA awards were presented by Minister Portolesi and Mr Graham Walters, BioSA Board member. Mr Victor Previn, winner of the Industry Leader Award and Dr Antony Sheehan, recipient of the Young Achiever Award, were chosen from an outstanding selection of nominees.

Mr Previn is the founder, Chairman and Technical Director of Ellex Medical Lasers Ltd (an ASX listed company) and developed the proprietary technology used in an ophthalmic laser for eye surgery. Over 15,000 of the lasers are currently installed in surgeries and hospitals throughout the world.

The BioSA Industry Leader and Young Achiever Awards were presented by the Hon Grace Portolesi, Minister for Science and Information Economy, during the BioSA Welcome Reception for the AusBiotech Business Development Forum 2013.

Welcome reception presentations were made by Mr Richard Turner, CEO of Zen Energy Systems, who spoke about building a high-tech start-up; Dr Roger Voyle,

Continued next page

## BioSA Awards recognise leading contributors to bioscience

Continued

At the forefront of laser technology, Mr Previn has been a key player in a number of other companies including Quentron Optics, Laserex Ltd, Laserex Technologies, Laserex Systems, Ellex Inc [USA], Ellex Japan, Your Amigo Ltd and Thereitis Pty Ltd. He also networks across a range of industries, fervently supports collaboration between universities and private enterprise, and was an active member of the State Government's Manufacturing Consultative Council, the peak industry body that advises the Government on strategies for growth and sustainability in the manufacturing sector.

A deserving recipient of the BioSA Industry Leader Award, Mr Previn is extremely pleased with his award win.

Mr Previn and his team are currently continuing work on developing a system for treating a debilitating eye disease that is growing at epidemic proportions.

"A holy grail in the industry is to develop a treatment for macular degeneration," Mr Previn explained. "We've been doing a huge amount of research in the last 10 years in this area and we think we have a leading technology for treating early macular degeneration. To bring the technology to market would fulfil a lifetime ambition."

Winner of the Young Achiever Award, Dr Antony Sheehan, is Principal Scientist for Screening Technologies at TGR BioSciences Pty Ltd and led the research and development of TGR's advanced protein detection technologies, ELISA One and DUOplex.



Dr Michael Crouch, Ms Anne Hinton, Dr Antony Sheehan and Dr Ron Osmond from TGR BioSciences Pty Ltd



Mr Don Watton, Mr Victor Previn and Mr Alex Sundich from Ellex Medical Lasers Ltd

"It's recognition for the whole team at Ellex that the bioscience community feel that we've done something significant"

*Mr Victor Previn, Ellex Medical Lasers Technical Director*

Thanks to Dr Sheehan's commitment to developing products to meet market demand and his ability to provide a unique selling point, this ground-breaking technology has attracted major international attention.

Dr Sheehan's contribution to company strategy, together with his strong leadership skills and guidance, has been a key driver in collaborations, commercial grant applications, development of intellectual property, and technology commercialisation. But according to Dr Sheehan it was still a surprise to win.

"The work we've done and the main reason that the award came about was our immunoassay CaptSure platform for measuring proteins. We are currently working on commercialising the platform and are almost at completion of the technical transfer component of that [process]. We're also looking at other opportunities where the CaptSure technology could be commercialised."

This year's BioSA Awards ceremony showcased the depth and expertise of South Australia's bioscience and technology sector and provided a strong indicator for successful days ahead. The BioSA Welcome Reception, attended by over 100 people, provided a great opportunity for those involved in the bioscience and technology industry to network with others in their field.

**For further information please visit [www.tgrbio.com](http://www.tgrbio.com) and [www.ellex.com/australia](http://www.ellex.com/australia)**



# At the cutting edge of imaging

Signostics' second generation ultrasound is set to become a world-leader

Thebarton BioSA Incubator resident, Signostics Ltd, has signed a multi-million dollar agreement with Konica Minolta Medical Imaging. The deal will see Konica Minolta distribute Signostics' newly unveiled personal ultrasound device, the Signos RT, exclusively across Japan, China, India and the USA.

The second generation Signos RT is capable of delivering ultrasound images in real time, improving accuracy, performance and market appeal over the previous model.

"The device allows physicians to immediately assess, at the point-of-care with a patient, the best clinical outcome," said Signostics CEO, Mr Warren Ortmann.

"There is an untapped market opportunity. We haven't yet seen a hand held ultrasound device achieve full market acceptance; we expect the Signos RT will be able to do this."

"Our device is the best on the market, without a doubt," he said.

With the \$3 billion personal ultrasound market expected to continue growing globally, the South Australian developed Signos RT places Signostics as world leader in hand-held ultrasound imaging.

Building on its established distribution network in Europe, Signostics will expand into Asia and the US through its agreement with Konica Minolta.

"When we choose distributors, we choose them based on their passion for our product. When we showed the Signos RT to Konica Minolta in our first meeting, they loved the device," said Mr Ortmann.

Signos RT – Real-time personal handheld ultrasound device

"From there, the commercial deals were arranged as people could see that it had great potential."

In April, Signostics received FDA clearance for the device, a big milestone for the company. It has also signed a key deal with Thermo Fisher Scientific Australia to distribute the Signos RT in Australia and New Zealand.

Whilst the company has many distributors across multiple countries, the Konica deal alone guarantees the sale of 2000 units in the first year, with increases in subsequent years.

"I would expect that in three years Signostics will have significantly increased its revenue figure based on the Konica Minolta agreement alone," Mr Ortmann said.

"These recent deals will enable the company to sustain a positive operating cash flow, and from there anything can happen."

Future investment will result in several jobs being created in South Australia to support technology development for the Signos RT. Currently, Signostics employs 16 FTEs.

"We're looking at our product road map at the moment and it's looking strong, in terms of having products out there that you can attach to the Signos RT."

Already Signostics is working on prototypes of a linear probe that will enable physicians to view veins, arteries and blood flow. Signostics expects the probes to reach the market over the next 12 to 18 months, with further innovative device support to follow.

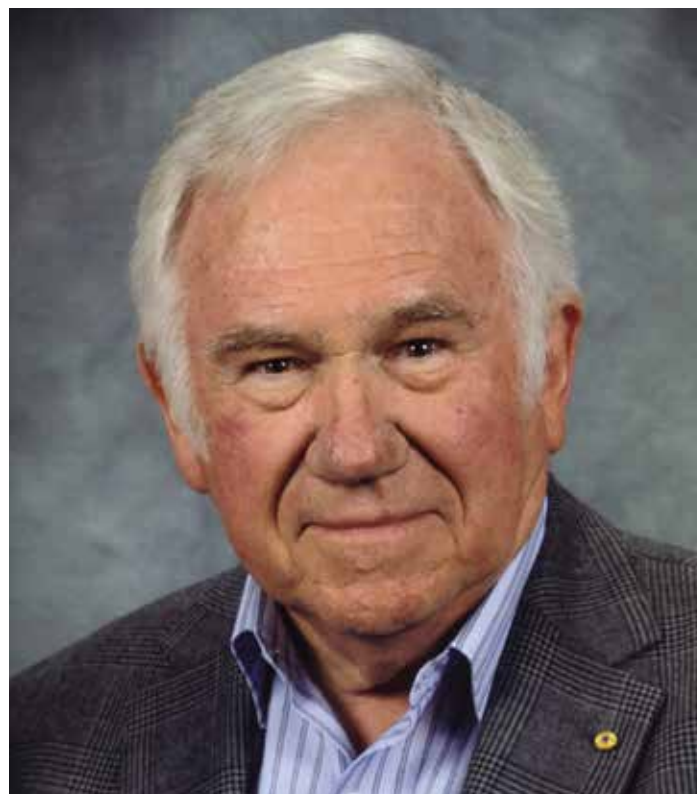
"There are 8.4 million physicians globally. We'd like to put a Signos RT into the hands of every one."

**For further information please visit [www.signostics.com.au](http://www.signostics.com.au)**





Muradel's unique algae harvesting system at the Karratha Pilot Plant



Mr Ollie Clark AM, Chairman, Muradel Pty Ltd

## SA on the road to green biofuel

National collaboration selects Whyalla for innovative biofuel production

A national collaboration that may one day see us powering our trucks, trains and aeroplanes with microalgae, has chosen Whyalla as home to Australia's first demonstration plant for biofuel production using marine microalgae.

In February the Australian Renewable Energy Agency (ARENA) awarded \$4.4 million to South Australian-based company Muradel Pty Ltd, a commercial partnership between the University of Adelaide, Murdoch University and technology development enterprise, SQC Pty Ltd.

"An initial federal grant a few years ago allowed us to set up a pilot plant in Karratha, Western Australia, which we have now operated for two years," said Mr Ollie Clark AM, Executive Director of Muradel.

"From the pilot plant we've amassed a great deal of data that will be incorporated into the design of a larger demonstration plant to be constructed in Whyalla."

By utilising a robust saline-tolerant strain of microalgae, Muradel's technique requires only the plentiful resources of sea water, sunshine and CO<sub>2</sub>. The method grows and processes the micro-organism into "green crude" that can be blended in with standard fossil crude or used as a direct drop-in fuel.

The \$4.4 million grant will form a crucial part of the \$10.7 million investment into Whyalla, with the remainder made up of private enterprise funding sourced locally and internationally through commercial partner, SQC.

"We expect the Whyalla plant to be constructed by the end of the year and to be operating in January," Mr Clark said.

"We are endeavouring to do, in days, what has taken the earth millions of years."

*Mr Ollie Clark AM, Muradel Chairman*

The ARENA grant will take Muradel through to the end of 2014, with the plant expected to provide proof of the technology's economic viability. Muradel would then be looking to transition smoothly into subsequent investment and begin commercial production strategies.

Whyalla was selected as climatically and logistically suitable for Muradel's requirements, and the proposed plant has been met with great enthusiasm by the local community and council.

"The project is being seen by some as something of a rural renewal. What's more, the process does not require arable land or fresh water so we can utilise areas that don't compete with projects requiring those resources," said Mr Clark.

"Following the successful development of the demonstration plant, our next stage of development will be a plant of hundreds of hectares - quite a capital investment in Whyalla. We'd like to make Whyalla the earliest of several centres for this sort of production."

Muradel will be aiming to engineer the plant to have neutral environmental impact by, for example, the use of locally produced renewable energy.

"The crude oil and gas that we extract around the world today was formed from microalgae. We are endeavouring to do, in days, what has taken the earth millions of years."

**For further information please visit [www.muradel.com](http://www.muradel.com)**



## From bench to bedside

South Australia to lead with the creation of a new CRC

The GMP cleanrooms at UniSA's Mawson Lakes campus that will underpin manufacturing activities within the CRC. Picture courtesy of the University of South Australia

The Cooperative Research Centre (CRC) for Cell Therapy Manufacturing, to be based in Adelaide, will capitalise on local strengths to develop new affordable and accessible cell therapies. The \$59 million investment, incorporating \$20 million in Federal Government support, was one of only three new CRCs to be announced for this round.

"Drug development is getting so prohibitively expensive that people are going to look for alternatives, and I think cell therapies provide that," said Dr Sherry Kothari, Managing Director (interim) of the new CRC.

Cell therapy has the potential to touch upon any field of medicine, including healing, autoimmune conditions and transplant acceptance. Already, the CRC has 15 local, national and international partners.

"Though there are other groups around the world looking at cell therapies, we are the first to tackle it from a materials standpoint and to use smart materials to develop therapies and delivery vehicles. That gives us a unique edge."

The bid was led by Professor Rob Short and Dr Kothari from UniSA, one of the primary partners of the new centre. Both researchers have over a decade's experience of working successfully in the translational space, at the materials and biology interface.

"Ten years ago the market wasn't ready for cell therapies," Dr Kothari said. "Yet now we have the expertise, the know-how and the experience of taking these therapies to the marketplace, here in South Australia. We've come full circle; cell therapies is set to become the fourth pillar of medicine after pharmaceuticals, biologics and devices."

From the outset, the CRC's goal is to create a long-lasting legacy that will continue well beyond its funding cycle, fostering graduates in a new entrepreneurial PhD, creating an estimated 2000 jobs and promoting a culture of successful translation of research from bench to bedside.



The newly established Materials and Minerals Science building on UniSA's Mawson Lakes campus that houses the CRC's GMP suite. Picture courtesy of the University of South Australia

"I was attracted to this CRC because it is tangibly connecting the science to commercialisation," said Dr Leanna Read, Chair of the CRC's Board.

"Our IP policy is very industry focused – each project must have a commercial lead from day one, and we will immediately assign new IP to that commercial partner so that it is in the hands of the end user."

The other tangible outcome will be the establishment of an accredited pilot manufacturing facility of international significance at UniSA's new Materials and Minerals Science Building at Mawson Lakes.

"By definition the CRC will have a defined lifespan, but we hope the manufacturing facility will be set up as a permanent test plant that will continue to attract companies and researchers to South Australia," Dr Read said.

"The moral support, funding support, advice on how to build collaborations and the intellectual property strategy, in particular, that BioSA has contributed has been absolutely crucial to the success of this bid."

**For more information please contact Ms Flavia Kuhn, Executive Assistant, CRC Cell Therapy Manufacturing, [flavia.kuhn@unisa.edu.au](mailto:flavia.kuhn@unisa.edu.au)**

# CPR launches large molecule ligand binding assay service

A new laboratory will provide the Asia Pacific region with unprecedented and unrivalled expertise in biologic and biosimilar assay development and validation

Recently launched by leading Adelaide-based Contract Research Organisation, CPR Pharma Services, the new laboratory at the BioSA Incubator in Thebarton, will be home to the region's first ligand binding assay service for biomarkers, monoclonal antibodies, biosimilars and biologics compliant with FDA and EMA requirements for early- and late-phase clinical trials. The addition of this service to the already successful and expanding bio-analytical service currently offered by CPR will provide clients who are developing large molecule technology with local services to speed up trials and save costs on shipping of samples globally.

Given that monoclonal antibodies, proteins, biologics and biosimilars are the growth areas in drug development and look set to continue their prevalence in drug development globally, the new laboratory is an exciting addition to CPR Pharma's extensive range of existing services.

"[This] will further enhance our appeal to [existing and] potential clients who are developing large molecule technology and want to take advantage of the benefits of the region," said Mr Valentine. "CPR is in a unique position as the only company in Australia to offer the full complement of assay development services combined with standard clinical research organisation services... It's really about continuing to complete our suite of services to meet client needs."



Ms Carol Haddad using the Molecular Devices® SpectraMax® Paradigm® Multi-Mode Microplate Detection Platform



CPR Pharma Services Immunoassay Team –  
Back row, left to right: Ms Marina Ross, Mr John Chappell  
Front row, left to right: Ms Michell Cardoso, Ms Carol Haddad

"This will further enhance our appeal to existing and potential clients who are developing large molecule technology and want to take advantage of the benefits of the region."

*Mr Jason Valentine, CPR Pharma Services CEO*

The laboratory will be led by Mr John Chappell, a world-renowned expert in ligand binding assay development, validation and implementation in the drug development field. Mr Chappell comes to CPR with over 20 years' experience working in clinical research organisations including Covance, ClinTrials BioResearch, BAS Analytics, Veeda and ICON. He is also a member of the American Association of Pharmaceutical Scientists Committee (AAPS) and has authored white papers on biosimilar bioanalytical support including pharmacokinetic analysis and immunogenicity assessments.

The appointment of Mr Chappell was the catalyst to realising long-held plans to venture into this new field of laboratory testing, according to CPR Pharma Services CEO, Mr Jason Valentine.

"We've had this immunoassay capability on our agenda for a few years," explained Mr Valentine. "We'd held off until now because we didn't want to just enter the market with a 'me-too' service. We wanted to do a lot of the complex developments in-house and needed someone with significant experience in biomarkers, biologics and biosimilar development. We're really happy to have John on board, driving this new laboratory."

Since commencing at the BioSA Incubator just four years ago, CPR Pharma Services has defied the global financial crisis by forging ahead to become an industry leader in clinical research. The company has delivered a 40 per cent increase in revenue since March 2012 and, due to its new large molecule immunochemistry analytical service, looks set to further cement its reputation on an international scale.

**For further information please visit [www.cprpharma.com](http://www.cprpharma.com)**



# News in brief

## Federal Budget 2013

The Federal Budget 2013, delivered on 16 May by the Federal Treasurer in Canberra, has confirmed the features of the 'Innovation and Industry Policy' released in February - A Plan for Australian Jobs.

The following are some highlights of The Budget:

- \$378.6 million over 15 years for the Venture Australia program, \$350 million of which will make up a new Innovation Investment Fund
- Ongoing support for Commercialisation Australia of almost \$75 million per year over the forward estimates
- Quarterly instalments for the refundable tax offset through the R&D Tax Incentive to come into effect from 1 January 2014, improving cash-flow for small and medium sized enterprises
- 1,811 new registered companies attracted through the R&D Tax Incentive in the 2012 – 13 financial year, taking the pool of registered companies to 9,750 companies and registered R&D activities to \$18.7 billion

**For more information on the Federal Budget 2013 please visit [www.budget.gov.au/2013-14/index.htm](http://www.budget.gov.au/2013-14/index.htm)**

## Latest IIF Announcement – \$200 million for Australian Start Ups

On 27 March, Hon Greg Combet, Minister for Climate Change, Industry and Innovation, announced the three new funds selected under the latest tranche of the third round of the government's Innovation Investment Fund (IIF). \$100 million of Federal Government funding will be matched dollar-for-dollar by private sector investors in Carnegie Venture Capital Pty Ltd, GBS Venture Partners Pty Ltd and Innovation Capital Associates Pty Ltd. The new funds will provide small and medium sized enterprises (SMEs) with greater access to venture capital.

"This is a huge boost for Australian start-ups," Minister Combet said. "These funds will invest at least \$200 million of new capital in start-up businesses."

- **Carnegie Venture Capital Pty Ltd (\$40 million)**
- **GBS Venture Partners Pty Ltd (\$30 million)**
- **Innovation Capital Associates Pty Ltd (\$30 million)**

Innovation Capital Associates recently announced that they will open a new office in South Australia to complement their Sydney and Melbourne offices.

**For more information please visit [www.tinyurl.com/AusIndustryIIFFund](http://www.tinyurl.com/AusIndustryIIFFund)**

# IP news

## Plant patents – eligibility for protection

In the United States, plants may be protected by utility patents, plant patents or plant variety protection. The plant patent system protects new and distinct asexually reproduced plants. In a recent decision<sup>1</sup> concerning plant patent applications, the Supreme Court declined to review a Federal Circuit decision denying patentability of two century-old oak trees. Under the statute, "whoever invents or discovers and asexually reproduces any distinct and new variety of plant, including cultivated sports, mutants, hybrids, and newly found seedlings", may be eligible for a plant patent. The applicant, who had noted the trees' excellent timber quality, found that asexually reproduced trees grew "true to type" and applied for plant patents for his discovery of two new and distinct tree varieties. The Federal Circuit upheld a decision of the Patent Office that the varieties were not patentable, stating that the applicant "... -must have contributed to the creation of the plant in addition to having appreciated its uniqueness and asexually reproduced it". In petitioning for a Supreme Court review, the applicant unsuccessfully argued that "hundreds of issued plant patents on trees ... are now subject to validity challenges because 'creation' was not previously required by the patent office and is not required by the statute".

## Utility patents for plants – exhaustion of rights

On 13 May 2013, the Supreme Court handed down its decision in the well known case involving Monsanto and farmer, Vernon Bowman. Under their patent to Roundup Ready<sup>®</sup> soybean plants, Monsanto grants grower licences to plant the seed (T1) and sell the progeny seed (T2), but not to regrow the progeny (T2). In this case, Monsanto have sued Bowman for patent infringement on the basis that he planted T2 seed. Bowman explained that he bought the seed from a local grain elevator to grow, without knowledge of the variety's identity. Following the Federal Circuit's decision in favour of Monsanto, the Supreme Court confirmed that the Federal Circuit was correct in refusing to find patent exhaustion in patented seeds even after an authorised sale and that patent rights in seeds persist even after an authorised sale has occurred.

<sup>1</sup> Beineke v. Kappos, Supreme Court Decision No 12-580



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# Renowned pharmacologist to lead research & innovation at UniSA

The University of South Australia has appointed Professor Richard Head as its new Deputy Vice Chancellor and Vice President: Research & Innovation

Formerly a leading pharmacologist and Director of the Sansom Institute for Health Research, Professor Head commenced the role of DVCR at the University of South Australia on 7 June. He brings with him a wealth of knowledge and experience gained from a national and international research career spanning over 40 years.

Most recently, Professor Head was the Director of CSIRO Preventative Health Flagship (Australia) where he led a national research program focused on the early detection of, and intervention in, chronic diseases. Prior to this, Professor Head held a number of prominent positions including Chief of CSIRO's Division of Health Sciences and Nutrition, Professor of Pharmacology and Toxicology at West Virginia University Medical Center, Research Fellow with the Department of Medicine at the University of Melbourne, and Postdoctoral Fellow at the Roche Institute of Molecular Biology.

With research interests centred on understanding the protective action of dietary constituents in human health and with 174 publications to his name, Professor Head is looking forward to adding yet another chapter to his illustrious career.

"I'm excited about the role primarily because of the opportunities that we have in South Australia through collaboration between this university and other researchers in universities and research institutions in the state. I believe it to be an extremely important role and opportunity," he said. "I have watched for some years the translation agenda in the University of South Australia – it's one that I feel very comfortable with and that I'd like to contribute to."

When asked what will be at the top of his agenda in his new role, Professor Head said that the translation of research excellence into utility through industry and society, including commercialisation, is of paramount importance. He also believes driving opportunities in both multidisciplinary and interdisciplinary interactions is vital.



Professor Richard Head, Deputy Vice Chancellor & Vice President: Research & Innovation, UniSA

"I have watched for some years the translation agenda in the University of South Australia – it's one that I feel very comfortable with and that I'd like to contribute to"

*Professor Richard Head*

*UniSA Deputy Vice Chancellor & Vice President: Research & Innovation*

"It's about building on existing strengths," he explained, "particularly those with a focus on adoption and delivery of technology. An important role of universities and publicly funded research institutions is to assure that there is interaction with those entities that are involved in the adoption and take-up of technology. Adoption partners range from industries that have the knowledge and capacity to produce material on scale, government in its critical role of policy setting, and non-government organisations such as those in the areas of human health and wellbeing."

Professor Head said that he will also dedicate effort to creating opportunities for early- and mid-career researchers and providing a stimulating environment for those entering research in the social, biological and physical sciences.

**For further information please visit  
[www.tinyurl.com/RichardHead](http://www.tinyurl.com/RichardHead)**