



**BIOMEDICAL
RESEARCH
VICTORIA**

INNOVATING FOR HEALTH

BioMedVic
News
October

MEMBER FEATURE

Printing the Human Body

ST VINCENT'S HOSPITAL MELBOURNE

Imagine replacing an amputated arm with a perfect replica, or swapping a diseased kidney with a freshly printed, healthy organ.

It may sound like sci-fi, but at St Vincent's Hospital in Melbourne a group of biologists, material scientists, biomedical engineers and robotic experts are coming together to make that happen. The Advanced Biofabrication Centre, launched in October, is set to take bionic research and regenerative medicine to the next level.



Cancers, trauma or degeneration can lead to severe disabilities which affect a patient's ability to live independently and continue a productive working life. The cost is not only physical and psychological – in Australia alone these disabilities are estimated to cost \$34.2 billion per year.

What if limbs, tissues and nerves could be engineered from scratch?

Researchers at the Advanced Biofabrication Centre hope to combine capabilities, clinical and research expertise to build biological structures such as organs, bones, brain, muscle, nerves and glands – almost anything that requires repair following disease or physical trauma.

The Centre will let researchers and clinicians explore the real-time development and production of replacement body parts, which could be surgically implanted into patients. Their aim is to eventually 3D print implants in real-time, while a patient is in surgery.

The Advanced Biofabrication Centre is a flagship initiative in the development of the [Aikenhead Centre for Medical Discovery](#). This is an ambitious endeavour, but the Centre's partners envisage a hub of collaboration which fuses medicine, engineering, science and industry - all to revolutionise medical solutions to chronic health problems.



Check out what else is happening at St Vincent's Hospital [here](#).

Left: Ms Brenda Shanahan, Chair of the Aikenhead Centre for Medical Discovery Steering Committee, being shown the Mako surgical robot by Prof Peter Choong at the Advanced Biofabrication Centre launch.

Uniting Victorian Research

At the risk of mixing metaphors, there's never been a better time for a grand coalition of health and medical research organisations such as is represented by Biomedical Research Victoria. Whether it forays into deep space or the human genome, history has shown that a united front will prevail.

Notwithstanding that the component parts will continue to pursue their own agenda, none can claim a 'mortgage' on the source of innovation or to have the exclusive ear of government. Some matters are best addressed, or have a better chance of being resolved, through a collaborative and collegial approach built on mutual respect and recognition of the synergy that can be achieved when all interested parties contribute.

We've all been buoyed by the optimism created by the promise of the Medical Research Future Fund, the vision of the National Innovation & Science Agenda and the Victorian strategies for Health and Medical Research and Medical Technologies and Pharmaceuticals. But I believe that we need a collaborative culture able to withstand turf wars and institutional egos - now more than ever.

For over 15 years BioMedVic has worked to unite Victoria's health and medical research sector and to support the state in becoming a global innovation leader. We have developed state-wide



programs and forums, highlighted in our 2015-2016 Annual Report, which will continue to advance the careers of the next generation of researchers, link industry with academia and infrastructure for innovation, support clinician researchers and entrepreneurs and contribute to shaping Victorian policies and priorities for the sector. I look forward to working with the talented, energetic and good-humoured BioMedVic team in the coming year to deliver benefit to members and advocate effectively for stronger research.

Jan Tennent

Check out our 2015-2016 Annual Report "[Advocating for Stronger Research](#)" to find out more.



BioMedVic Annual Report is now online!

Advocating for Stronger Research

See what we've done in 2015-2016 for Victoria's HMR community [here](#).

All Eyes on Victoria at AusBiotech 2016



The Hon Philip Dalidakis and BioMedVic CEO Jan Tennent greeting international delegates at AusBiotech 2016

We've been busy in the lead up to the AusBiotech 2016 International BioFest conference this month, ensuring our researchers from academia and industry receive the attention they deserve. BioMedVic assisted the Victorian Government with the state's presence at the event which attracted an estimated 2,000 delegates.

BioMedVic organised and managed the roster of the Victorian industry and research participants at the Government's BioIndustry Exhibition booth.

The Director of MedTech and Pharmaceuticals, DEDJTR, Andrew Wear, was thankful for the support:

"Thanks to [@BioMedVic](#) for doing such a great job coordinating activity at the [@VicGovAu](#) booth! [#AusBio16](#) [#BioFest16](#)" he tweeted on October 26.

BioMedVic worked closely with the Victorian Government to promote the research capabilities of BioMedVic members, industry and the wider health and medical research community in the State to international investors and delegates.

As part of the Victorian Government's international Visitor Invitation Program (VIP), BioMedVic delivered a Victorian Capabilities Showcase in the Bio21 auditorium. The five showcased priority areas were drug discovery & development; infectious diseases & immunology; medical technologies; neuroscience; oncology and regenerative medicine. BioMedVic also organised and facilitated a session devoted to Victoria's strength in Clinical Trials to the VIPs.

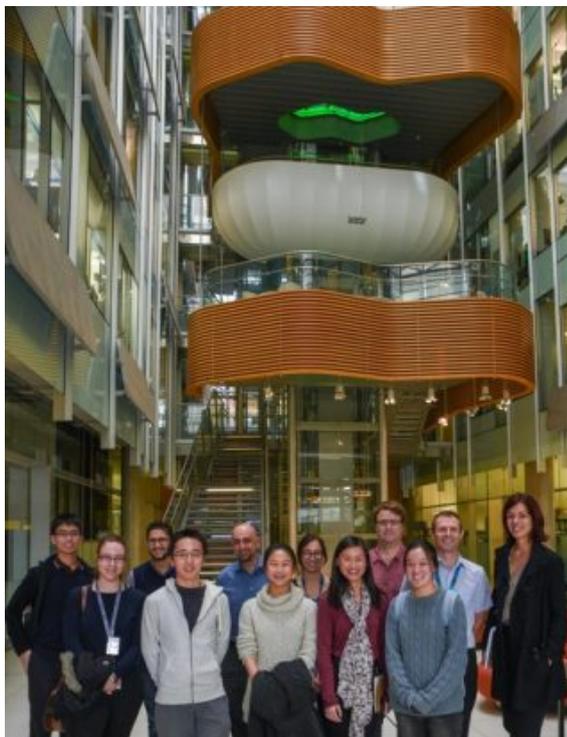
Delegates were impressed by Victorian research – set to grow and become even stronger in the years to come.

A Peak into Industry

Some refer to industry as the “dark side” of science.

But at CSL it’s anything but – as UROP students discovered at the 2016 UROP CSL Tour & Network Event at Parkville’s Bio21 Institute. As the students got a taste of what industry careers are all about, they were quick to ask questions and eager to learn more.

The afternoon kicked off with talks from Eugene Maraskovsky and Pierre Scotney on careers within industry at CSL and the company’s research structure.



UROP alumnus Riley Metcalfe then spoke about his time at CSL during his placement in 2013. He told the audience about what he considered the biggest differences between working in industry and academia – and both work-life balance and rigorous lab notebook keeping got a mention! UROP Kylie Luong, who is currently placed at CSL, gave her insights and talked about her plans for the future.

CSL scientists then led UROPs on a tour of CSL’s impressive Bio21 protein production and purification facilities where they saw where the research happens first hand. And it was difficult to pull them away.

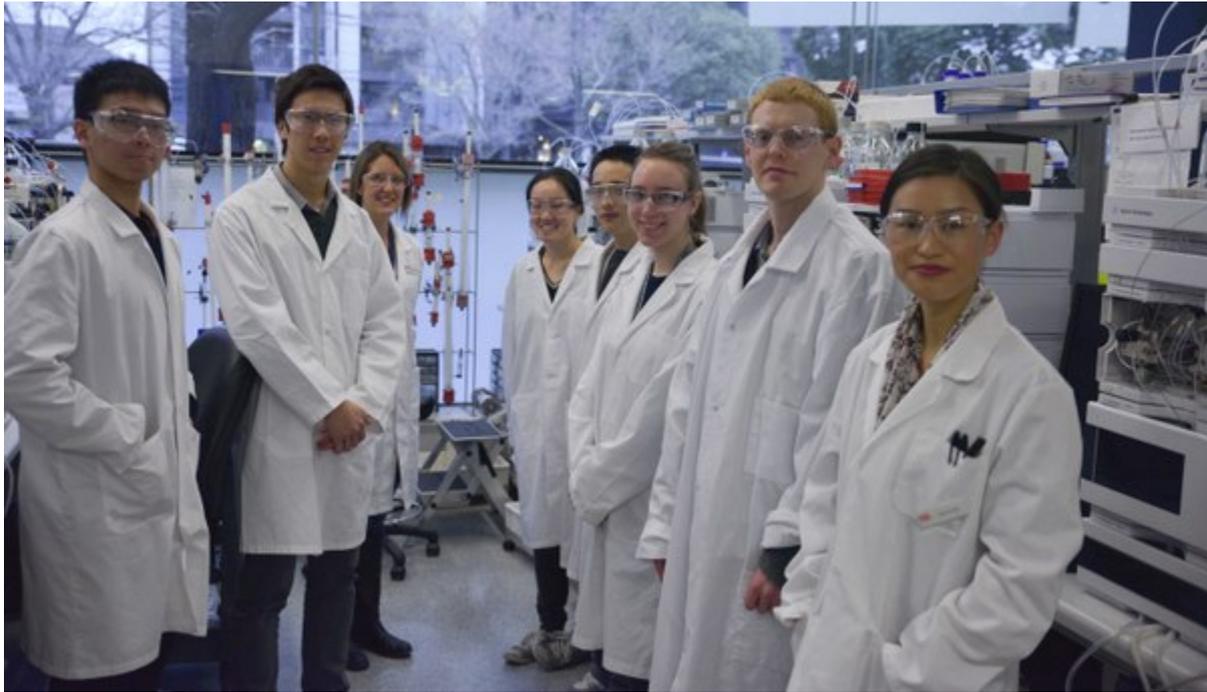
“It was particularly interesting to hear about the way research is structured at CSL, and some of the differences between industry and academia,” said one of the event participants. “Now that I know more about careers in industry, it’s definitely something I will consider in the future.”



Perhaps joining the dark side holds a bright future, after all.

Learn more about UROP [here](#).

(Image credits: Lou Fabri)



UROP Milestone

>600 Jobs Created Since 2004

We've been working hard to get excellent students hands-on experience in research labs. And after a second UROP round in 2016 we've reached a milestone - over 600 gifted, budding scientists in research jobs!



STEMM CENTRAL
commercialisation bootcamp

Design Thinking Masterclass | 10 November

If you would like to attend, register now! Registrations close **Friday at 5pm**. Don't miss out.

Click [here](#) to register. If you are not already registered for the STEMM Central website contact info@stemmcentral.com to create an account.

BioMedVic October Scorecard



Training for Innovation
22 Workshops & Placements

Listening to Members
8 Meetings



Connecting Academia & Industry
4 Events & Workshops

Connecting Clinicians with Industry & Academia
8 Events



Celebrating the Sector
2 Events

Promoting Victoria Globally
4 Conferences & Events



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