



Bio21 Molecular Science and  
Biotechnology Institute

30 Flemington Road  
The University of Melbourne  
Victoria 3010 Australia  
Telephone +61 3 8344 2220  
Email info-bio21@unimelb.edu.au  
[www.bio21.org](http://www.bio21.org)

# Innovation & Entrepreneurship

**Developing the next generation of biotech innovators, leaders and products.**

## Innovation in Research

*Just as in human society, the border regions of scientific disciplines are the most exciting when they foster a common culture."*

Prof. Fotis Kafatos, Director, EMBL

The Bio21 Institute embraces a unique set of multidisciplinary research groups to tackle major problems in frontier fields of health-related biotech:

- genetics, molecular epidemiology, molecular biology, biochemistry and cell biology
- analytical and synthetic chemistry
- materials science nano-biotechnology and biophysics
- infectious diseases, dental science, neurodegenerative diseases, molecular pathology, and other clinically linked research groups
- bioinformatics and computational biology.

The new Institute building is designed from the ground up to foster interdisciplinary interactions. Institute researchers collaborate extensively with each other as well as with outside researchers and industry.

## Innovation and Technology

*"One of the major changes in biological science is ...the ever more dominant nature of powerful platform technologies ... Teams not having access to them will inevitably be left behind"*

Prof. Sir Gus Nossal, President AAS

Over \$30M has been invested (cash and in-kind) in major platform technologies in the Institute:

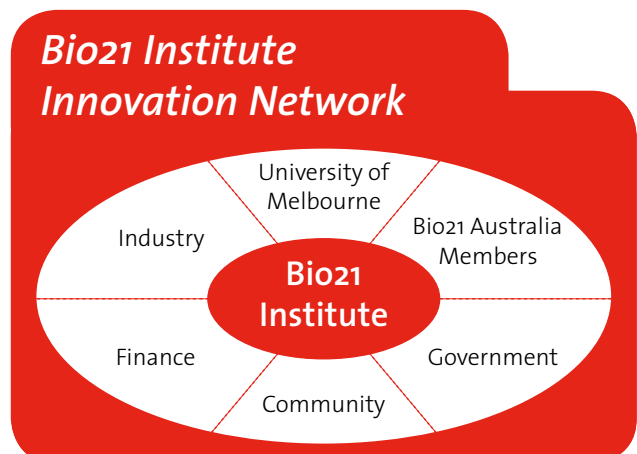
- structural biology NMR spectroscopy; cryo-electron microscopy; x-ray protein crystallography

- Nanobiotech clean room/ nanofabrication and microanalysis facility
- High-resolution electron microscopy (NCRIS facility)
- Functional proteomics (mass spectrometry)
- Metabolomics (NCRIS facility; NMR and mass spectrometry)
- Bio-molecular interaction analysis
- Synthetic, medicinal, analytical chemistry
- Animal research facilities
- Bioinformatics.

The Institute aims to strengthen Australian research by providing broad access to its state-of-the-art technologies, and the experts who can maximise their value. We also offer 'Frontiers in Technology' seminars and practical training workshops.

## Innovation in Industry Engagement

The Institute is committed to broad engagement with external groups to develop Australia's biotech capability, through direct institute participation



and our Innovation Network:

Industry engagement activities are co-ordinated through the Bio-Innovation Division – Our Business Gateway. Significant space and resources are dedicated to external engagement:

- Space for 15 start-ups and industry technology groups in the Business Incubator
- Major industry tenants
- 35 bench spaces in Visitor Labs for visiting researchers and industry scientists.

### Experiencing Entrepreneurship

The Institute offers hands-on learning for budding bio-entrepreneurs:

- Patenting and commercialisation advisory programs
- Link to business schools
  - Melbourne Business School
- YAA Biotechnology Entrepreneur Program (Victorian State Gov't)
- Internships with investors and incubator companies.

Bio21 Institute members who have had experience commercialising inventions include:

- **Eric Reynolds** – Recaldent™, used in chewing gum for strengthening teeth
- **Andrew Holmes** – Light-emitting polymers for ultra-thin screens
- **Bruce Livett** – Peptides from cone shell venom for treating pain and other diseases
- **Carl Schiesser** – New ways to make drug-like molecules
- **Darren Kelly** – Diabetes candidate therapeutics
- **Kevin Barnham** – Neurodegenerative disease candidate therapeutics
- **Paul Mulvaney** – Nanomaterials – based molecular diagnostics
- **Denis Scanlon** – Peptide technology.



*Eric Reynolds*

*Andrew Holmes*

*Bruce Livett*

*Carl Schiesser*