AUSTRALIA WEEK IN CHINA 2016 (AWIC)

INNOVATION ROUND TABLE

NICOLE BRIGG, PRO VICE-CHANCELLOR INTERNATIONAL – April 2016
Macquarie University

AT A GLANCE

5 QS STARS in teaching, employability, research, internationalisation, facilities, innovation, access and specialist subjects
(QS World University Rankings, 2015)

AMONG TOP 2 PER CENT of universities in the world
(Academic Ranking of World Universities, 2014)

9 SUBJECTS ranked in the top 100 globally
(QS World University Rankings by Subject, 2015)

MGSM'S MBA ranked number one in Australia,
68 in the world
(Financial Times, 2015)

$6.7 MILLION awarded in international and domestic scholarships each year

MORE THAN 300 companies on campus or in the adjacent high-tech precinct, providing access to internship and job opportunities

9400 students in PACE (Professional and Community Engagement) since its inception

MORE THAN 156,000 alumni in more than 140 countries

MORE THAN 150 partner universities for student exchange in more than 40 countries

$1 BILLION invested in infrastructure and facilities in recent years

MORE THAN 39,000 students from more than 100 countries

THE ONLY AUSTRALIAN UNIVERSITY with a private hospital on campus
Research Infrastructure and Strengths

- Australian Hearing Hub and university-owned hospital on campus (including clinical trial capability)

- Proteomics started at Macquarie – we remain home to the Australian Proteomics Analysis Facility (APAF).

- A focus on healthcare systems research with the Australian Institute for Health Innovation and the Centre for the Health Economy.

- Highly ranked in Microbiology, Genetics, Evolutionary Biology, Agriculture and Oncology.

- Part of the national Centre for Nanoscale Biophotonics (sensor and diagnostic technologies).
Research strengths

ONE EXAMPLE – SYNTHETIC BIOLOGY

• Synthetic biology is the design and engineering of biologically-based parts, novel devices and systems as well as the redesign of existing, natural biological systems.

• The international Yeast 2.0 project - Macquarie University is the only Australian member alongside international consortium members including the Beijing Genomics Institute, Tianjin University, Tsinghua University, Johns Hopkins and the National University of Singapore.

• Applications in health, energy, environmental science, agriculture and industry. Market for this field worth $20 billion by 2020.

• Strong foundation in Biomolecular and Synthetic Biology Research
Australian first

-Australia’s first and only NFP teaching hospital on a university campus
-Part of Macquarie University Health Sciences Centre (MUHSC) – Australia’s first fully integrated academic health science centre (integrating world-class research, clinical care and education
-Completely Digital Facility
-University Based Facility
-Gamma Knife *(Monique and Doug Thompson Gamma Knife Fund)*
-Cyclotron in a private hospital
-Intra-Operative CT Theatre
-Hybrid Theatre with Angiographic Capabilities
-Zeego Robot

We also are the second hospital in Sydney to own a da Vinci Surgical System and have the most comprehensive Robotic Surgery Program in the country.
A Framing of Futures:
OUR STRATEGIC PRIORITIES

Priority 4
CREATING AN INNOVATION NEXUS WHERE MACQUARIE AND OUR PARTNERS CONTRIBUTE SOLUTIONS TO THE WORLD AND DEVELOP LASTING RELATIONSHIPS
Macquarie Park Innovation District

- Macquarie University Station Precinct included as a "priority precinct" for Sydney
  - mixed use zoning with "academic core" at Macquarie University, to closely integrate academic and research activities with industry
  - approvals for new residential development
- 45,000 employees in the precinct, doubling in 10 years
- Local population growth 7% per year
- Campus 560,000sqm research/commercial space
Corporate Engagement

- Key strategic partner
- Global corporate headquarters and manufacturing on campus since 2010
Australian Hearing Hub
WORLD-LEADING RESEARCH

• TRANS-DISCIPLINARY RESEARCH

• PARTNERSHIPS WITH MAJOR CORPORATIONS

• RESEARCH CLINICS SPANNING HEARING, LANGUAGE AND COGNITION

• CUTTING-EDGE INVESTIGATIONS AT THE INTERFACE OF TECHNOLOGIES AND THE BRAIN

• GLOBAL NETWORK OF RESEARCH COLLABORATIONS
### Macquarie University: Engagement

#### Opportunities for Partners

- **Access to students:**
  - future employees
  - recruitment opportunities
  - casual workforce

- **Research collaborations to solve real world problems**

- **Patent licences, knowledge transfer**

- **Executive education training for employees**

- **Access to international best practice**

#### Opportunities for Macquarie

- **Enhanced student experience:**
  - work placements
  - internships
  - casual job opportunities

- **Research opportunities**

- **Commercialisation, knowledge transfer**

- **Executive education participants**

- **Sponsorship, philanthropic support**

#### Partner benefits

- Macquarie benefits

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*Image: Diagram showing the opportunities for partners and benefits for Macquarie University.*
Office of Commercialisation & Innovation

**What we do**

- **Identify a need**
  We work with our partners to investigate and understand current and future market needs.

- **Create a solution**
  Working with our researchers, we develop robust solutions backed by efficient planning, contract negotiation and risk reduction strategies.

- **Maximum impact**
  We find the best vehicle to translate research outcomes into maximum real-world impact.
Let’s put our heads together

We see a world of potential. Great ideas, waiting for the right opportunities and the right people to turn them into bigger, better things.

As one of Australia’s leading research universities, we bring together the best minds in industry, research and academia. With our expert team and ability to make powerful connections, we can help you achieve your goals.

Innovators

We make it easy for you to turn your innovations into real-world solutions.

Industry

Partner with us to solve your business needs, or explore our current licensing opportunities.

Commercialisation, innovation – what’s the difference?

Commercialisation transfers the results of Macquarie’s research into products and services that benefit industry and the wider community. Innovation translates an idea into something that has concrete value.
Licensing Opportunities

AN EXAMPLE

**Universal system for fluorescently-labelling antibodies**

A purpose-functionalised biomolecule that has the unique property of mediating the attachment of luminescent chelates to immunoglobulins (antibodies) without any prior modification to the antibody, rendering them visible upon illumination with UV light.

Download the full description

**Dual emission fluorescence probes for ultrasensitive ratiometric sensing**

New chemical entities that emit fluorescence at two different frequencies in response to the local environment.

Download the full description
Follow Up and Key Contact

Macquarie’s Director of Commercialisation and Innovation Ms Anna Grocholsky will be in Beijing 15 -18 May 2016 for the Licensing Executive Society International conference (email: anna.grocholsky@mq.edu.au)

LESI 2016
15th - 18th May
Beijing, China
Booming Licensing on the Silk Road