



THE UNIVERSITY
OF QUEENSLAND
AUSTRALIA

CREATE CHANGE

UQ Bioproduction Capabilities

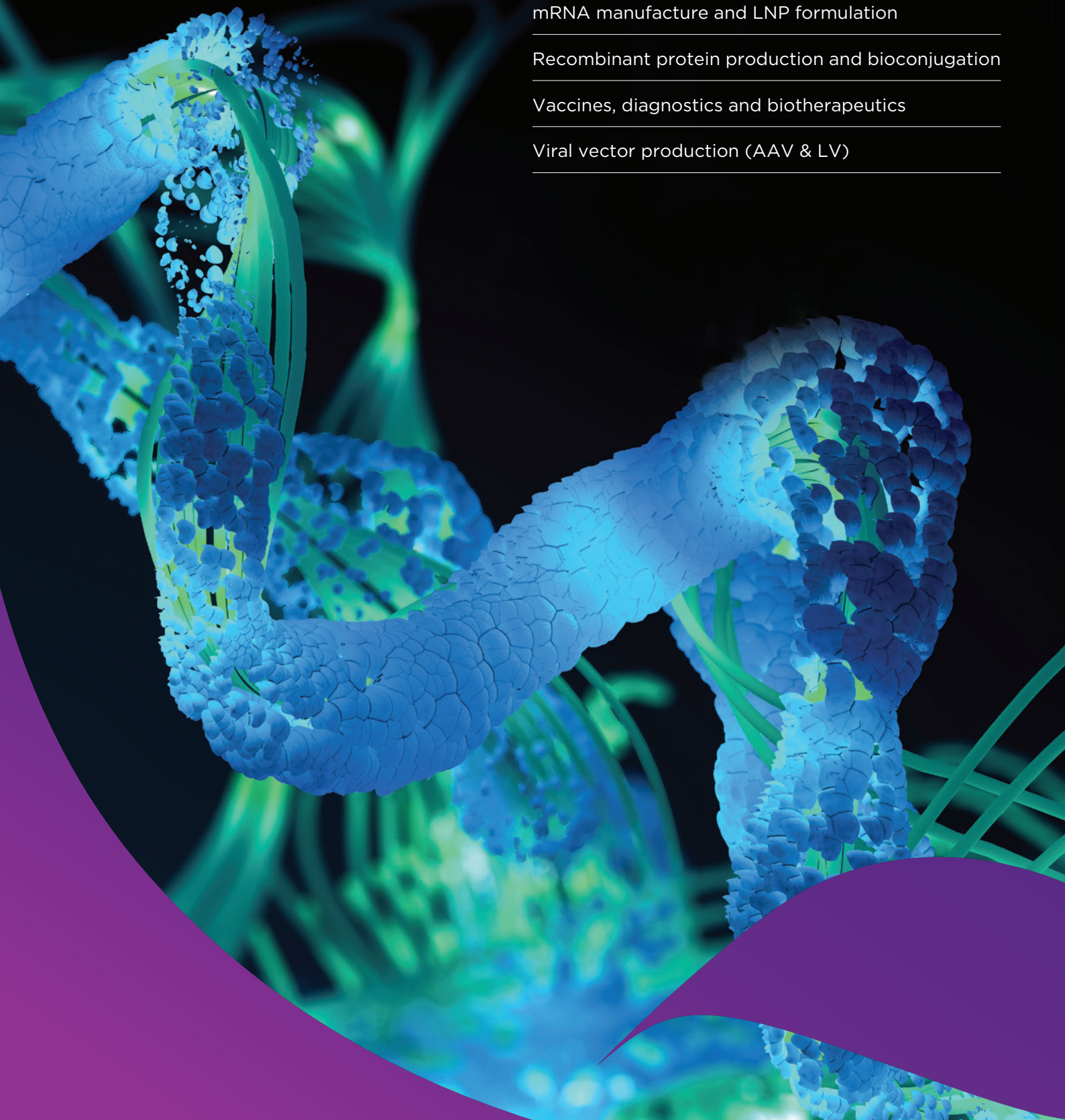
Antibody engineering and discovery

mRNA manufacture and LNP formulation

Recombinant protein production and bioconjugation

Vaccines, diagnostics and biotherapeutics

Viral vector production (AAV & LV)



Bioproduction at UQ



\$30M⁺

Bioproduction Hub



Australia's leading institution for research reputation¹ and commercialisation.

¹Nature Index Tables 2021



50⁺

Research specialists

Advanced manufacturing, new vaccine technologies and associated bioproduction has experienced unprecedented growth following the global pandemic, and delivered significant technological advancements and human health outcomes.

The 2021 Australian biotechnology ecosystem is worth more than \$8 billion in annual revenue¹. Demand within the biotech sector is set to continue with Governments and society looking for sustainable innovation that enables high quality research and delivers translatable outcomes. The pandemic has also highlighted the need to build the complete pipeline within Australia that leverages our world-leading research with a solid supply chain and sovereign manufacturing capabilities.

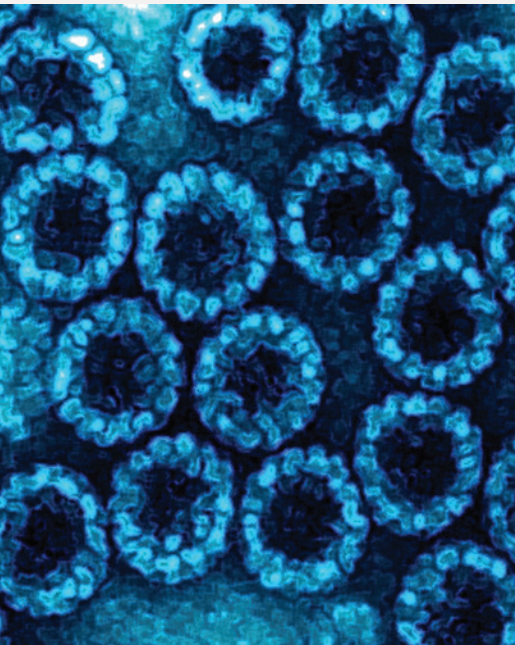
Competition for funding, skilled workforce and resources has created an opportunity for strong partnerships between academia, government organisations and industry. The University of Queensland's bioproduction capabilities form a critical hub of highly skilled researchers,

world-class infrastructure, technology development and expertise in developing scalable bioprocesses.

Internationally recognised, our bioproduction facilities have a proven track record supporting researchers from industry, academia and government both nationally and internationally, delivering over 500 projects annually across a broad spectrum of health and agricultural research applications. Successful projects include mammalian monoclonal antibodies, human and veterinary vaccines, biomaterials, biotherapeutics, diagnostics and enzymes through to stem cell and gene therapies.

Together, our service-oriented facilities build value throughout the development pipeline, assisting researchers to bridge the gap between research and clinical development.

1. Biotechnology in Australia, Strategic plan for health and medicine, Australian Government Department of Health



Advantages of partnering with UQ

- Tailored, innovative solutions using latest protein technologies
- More than 30 years of combined bioproduction experience
- Largest number of protein expression platforms in Australia
- Cost-effective services with industry competitive turnaround time
- ISO 9001 Quality Management System – PEF
- Expert partnership for state and national funding support programs
- Internationally attractive government R&D tax incentives
- UQ World-standard research reputation
- End-to-end mRNA services from design, manufacture and formulation of mRNA

Our services



BASE

Messenger RNA (mRNA)

mRNA sequence design

DNA template

Scaled mRNA manufacture

LNP formulation

QC analysis

Off-the-shelf mRNA (eGFP etc.)

Custom mRNA



NBF

Phage display antibody discovery

Antibody and protein engineering

Molecular engineering

Mammalian cell line development and clonal isolation

Bioprocess design and scale-up

Clinically-enabling Phase I protein production

Analytics and characterisation



PEF

Project consultation and design

Protein production in bacteria, yeast, baculovirus-insect cell and mammalian cells

Molecular engineering

Expression optimisation

Scale up expression

Protein purification

Analytics and characterisation

Protein reagents

Bioconjugation



VVC

Adeno-associated virus and lentivirus production

Project consultation

Vector design

pDNA preparation

Flexible production scales

Chromatographic and non-chromatographic purification

Process development and optimisation

Characterisation



Empowering researchers to develop industry-relevant bioprocesses that deliver impact in the community.

This capability statement represents a snapshot of UQ's bioproduction capabilities. We encourage you to visit our facility websites to learn more.



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