

**unlocking
nature**

Biotech R&D and Toll Manufacturing in Australia

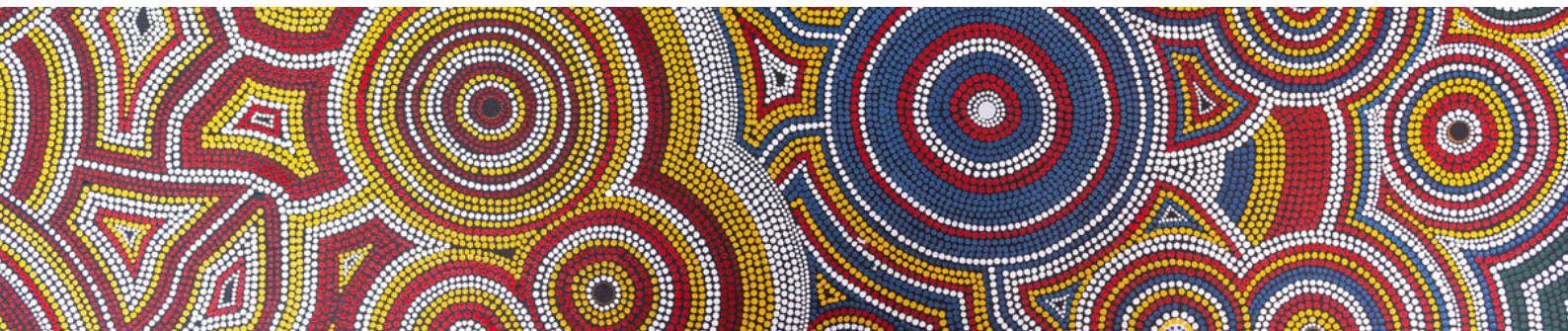
INDUSTRY BIOTECHNOLOGY CENTRE

A multi-stakeholder approach to assist the transition of Australian agriculture to non-synthetic and biologically derived inputs.

PROJECT PARTNERS



AgriBusiness Connect acknowledges the first and continuing custodians of the countries and the grounds upon which we collectively work, create, live and dream. We recognise the unique and enduring relationship that exists between Indigenous Peoples and their traditional territories, and welcome their deep understanding of natural balance and 60,000 year history of circular wisdom. An understanding of interconnectedness and continual regeneration has long informed Indigenous cultures, and the opportunity exists for all organisations to benefit from an Indigenous understanding of living systems, the passing down of knowledge through communities.



VISION

"To empower all Australian industries, starting with agriculture, with a world-class research and toll manufacturing facility for Agricultural biological inputs, collaborating with researchers globally to drive sustainable solutions and position Australia as a biotechnology leader in the Asia-Pacific."

It is proposed to build Australia's first state-of-the-art shared facility for Biotechnological Research & Development and Toll Manufacturing known as the **Industry Biotechnology Centre (IBC)**. Located at the **AATLIS Precinct, Toowoomba**, the centre will be designed to accelerate the discovery and development of new biotechnologies and to provide access to bioengineering capabilities that enable rapid design, building, and testing of solutions.

It is proposed that the facility will incorporate R&D laboratories, glass houses, biotech manufacturing equipment, packaging, warehousing, and dispatch capability.

The first phase of our project development and the purpose of this document is to engage with interested Stakeholders who would like to contribute to the creation of a robust business case including economic impact assessment (EIA) to verify the viability and quantify the benefits of establishing a dedicated domestic biotech research, formulation, and toll manufacturing facility.



Location of the AATLIS Innovation Precinct and existing partners



Challenge

Globally consumers and international trading partners are seeking sustainable and environmentally friendly alternatives to current chemicals that rely heavily on hydrocarbon feedstocks.

The global demand for sustainable and innovative agricultural solutions is rapidly growing, presenting a significant opportunity for Australia's agricultural sector. Uptake of biotech solutions has been inhibited by efficacy constraints, but with the continued R&D activity, this is being addressed.

By embracing biotechnology, Australia can position itself as a global leader in sustainable agriculture. This strategic move will not only address global pressures but also ensure long-term competitiveness and sustainability across various sectors, securing a significant advantage.

Challenge drivers include:



Consumer Demand: Growing consumer preference for sustainable and ethical products drives the need for innovative agricultural solutions.



Regulatory Landscape: Stricter international regulations can limit market access for countries that do not adopt modern agricultural practices.



Climate Change: Biotechnology can help develop crops and livestock that are resilient to climate change, ensuring food security.



Economic Efficiency: Biotechnology can reduce production costs by increasing yields and decreasing reliance on chemical inputs.



Supply Chain Resilience: Biotechnology can enhance domestic food production, reducing reliance on foreign imports and mitigating supply chain risks.



National Sovereignty: Investing in domestic biotechnology capabilities strengthens Australia's agricultural independence.



Environmental Sustainability: Biotechnology can enable more sustainable farming practices, reducing environmental impact.



Investor Confidence: Embracing biotechnology can attract investment, stimulating economic growth in rural areas.



Technological Adoption: Collaborative approaches to research, education and manufacturing can reduce the cost of implementing new technologies.

By addressing these challenges and seizing the opportunities presented by biotechnology, Australia can ensure the long-term sustainability and competitiveness across multiple sectors.



Recent decisions

The Australian Pesticides and Veterinary Medicines Authority (APVMA) has recently taken significant steps to protect public health and the environment. Over the past year, the APVMA has cancelled or restricted the use of several agricultural chemicals, including chlorthal dimethyl, chlorpyrifos, dimethoate, paraquat, and diquat. These decisions were made due to concerns about human health risks, environmental impacts, and exceeding acceptable residue limits.

This decision aligns Australia's stance with other nations like the United States, Canada, and the EU, which have already limited chlorpyrifos use due to safety concerns.

Moreover, Australia's commitment to environmental sustainability and the agricultural industry's long-term health includes efforts to regulate specific pesticides and herbicides.

Industry organisations have emphasised that while chemical usage remains essential for managing crop productivity, the industry must balance it with sustainable practices and reduce environmental impact. This regulatory shift supports Australia's broader goals to advance carbon neutrality and minimise harmful effects on biodiversity.

Scientists work to unravel silent pandemic affecting farmers

In this small rural community, Parkinson's disease is all too common. Many fear that farm chemicals could be behind it.

By Andy Burns, Charlotte King and Jess Davis for ABC Regional Investigations

Landline Public Health

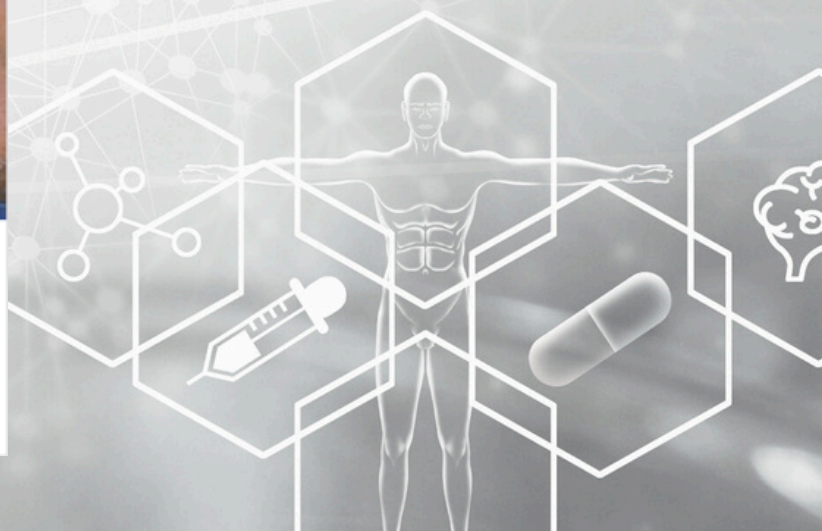
Sat 31 Aug



Leading neurologists say evidence linking paraquat with Parkinson's disease is 'very strong', and they want it...

Dozens of neurologists are calling on the Australian chemicals regulator to ban paraquat, a toxic herbicide that has been linked to the development of Parkinson's disease.

ABC News / Oct 27



The opportunity for industry

The Industry Biotechnology Centre for biological solutions offers an Australian first for industry.

The biological sector is on the cusp of a transformation, and we invite stakeholders to be part of this innovative, first-in-industry collaboration that will redefine how research, technology, and best practices are adopted. This project will set new standards, offering opportunities to embrace disruptive technologies and shape the future, to gain early-mover advantage in this evolving field.



adoption of cutting-edge research



artificial intelligence adoption



collaborative environment



futureproofing with industry 5.0



pioneering common best practice



big data & digitisation



a platform for growth

By articulating a transparent and strategic partnership framework, applicants will not only strengthen their proposals but also improve the potential for long-term success and stimulate regional economic development.



The Australian landscape

Within Australia, Food and Agriculture is likely to be the fastest growing applications of biotechnology in the medium term (2022 Biotechnology Strategic Plan for Health & Medicine, Australian Government). The Australian Biotechnology industry spans from small start-ups to established multi-national companies selling products locally and internationally, all relying on innovative technologies.

As biotech applications gain wider acceptance, the industry is set to expand further. This ongoing evolution highlights the growing role of biotechnology in various sectors.

Market trends

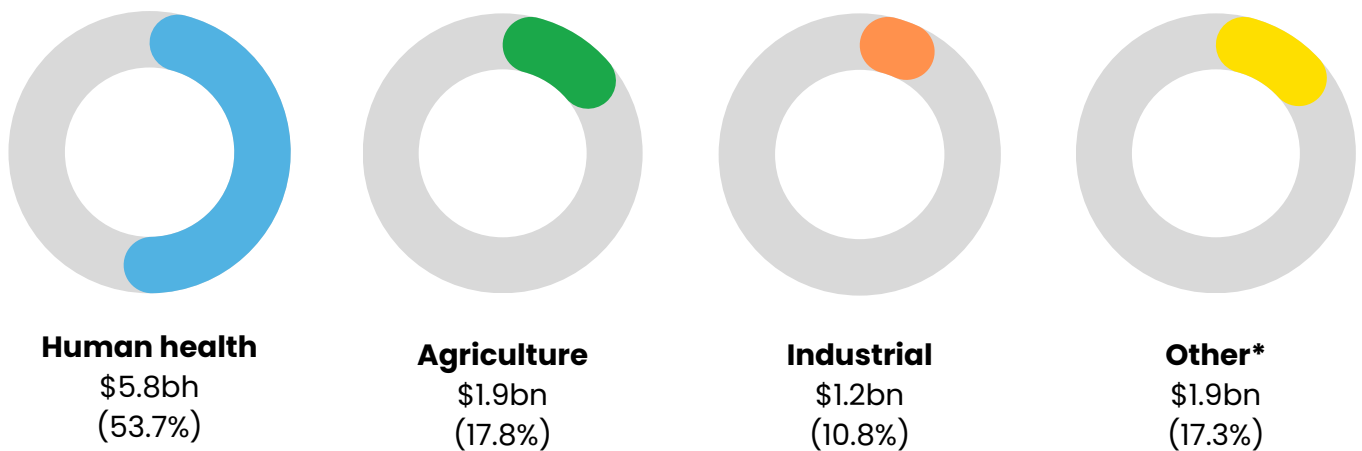
In agriculture, biotechnology plays a growing role in enhancing crop yields, improving resistance to pests and diseases, and reducing environmental impact through sustainable practices. The agricultural biotech market is projected to grow significantly, driven by the need for innovative solutions in food production to address growing ESG and market forces with limited arable land.

Globally, the agricultural and environmental biotechnology market is estimated to be \$88.3bn, with industry projecting to grow 3.4% CAGR 2024–2029. (2023 IBIS World Pty Ltd)

Of the 5 major crop protection companies, biotech revenue between these is \$1.6bn USD, with growth anticipated to reach 17% CAGR to 2035. (2024 Upstream Ag Insights)

Products & services segmentation

Australian biotech industry revenue in 2024 broken down by key product and service lines.



*other industries include:
 environmental and natural resource management
 food production and processing technologies
 other products and services

SOURCE: 2024 IBIS WORLD PTY LTD

In Focus

The Industry Biotechnology Centre is focused on opportunities for Australian agriculture. Other industry segments will also be considered in this exciting collaboration, as leveraging cross-industry synergies and solutions is a proven strength for achieving long-term growth.



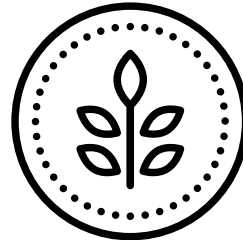
BIOHERBICIDES



BIOFERTILISERS



BIOPESTICIDES



BIOSTIMULANTS



About the Industry Biotechnology Centre initiative

The Industry Biotechnology Centre has been developed with the support of the **Queensland Government's Regional Economic Futures Fund (REFF)**, in association with FKG Group and other supporting partners including AgriBusiness Connect, Phronis Consulting and AATLIS Industrial Precinct.

The Regional Economic Futures Fund is helping Queensland regions seize new-industry development opportunities presented by global decarbonisation.



AATLIS

PHRONIS



Queensland
Government

Roadmap



Why get involved?

Join the Future of Biological Innovation

Be at the fore-front of the biotechnology revolution. This first-in-industry collaboration offers a unique opportunity to drive growth, set new standards, and shape the future of the biological sector.

By engaging with the Industry Biotechnology Centre initiative, stakeholders can:

- Network with industry leaders
- Gain early mover advantages
- Access government support
- Leverage industry insights
- Foster outcome-focused collaboration
- Develop innovative solutions
- Unlocked skilled workforce opportunities

Project Partners



AATLIS



**Queensland
Government**

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