



THE UNIVERSITY
OF QUEENSLAND
AUSTRALIA

CREATE CHANGE

Institute for
Molecular Bioscience

Microbes Australia

LIVING LIBRARY TO SAVE LIVES

The definitive living library of Australian microbes,
providing new knowledge and products, to save lives
and advance a successful bioeconomy





The Vision

MICROBES AUSTRALIA will assemble the definitive living library of Australian microbial (i.e. bacterial and fungal) biodiversity.

MICROBES AUSTRALIA will engage with stakeholders across academia, government, industry, philanthropy and the public, providing unprecedented access to a fully annotated Australian microbial resource. This will in turn foster scientific research with broader participation and greater levels of investment, delivering new knowledge, including new treatments for human, animal and crop diseases, and new solutions to environmental challenges.

Microbes Australia will house a library of >100,000 cryopreserved bacteria and fungi, with fully annotated genomes and metabolomes, and value added biological profiling. A paradigm shift in capacity and capability, Microbes Australia will enable smarter, bigger and better resourced engagement with a wide array of stakeholders.

ACADEMIA: Microbes Australia will accelerate research & research training in microbiology, chemistry, ecology, pharmacology, genomics, medicine, agriculture and many more disciplines.

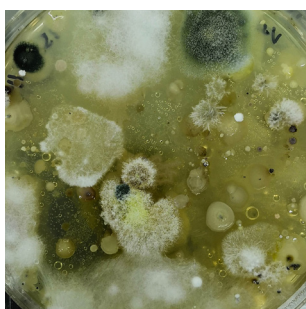
GOVERNMENT: Microbes Australia will consolidate, safeguard and grow existing and new microbe collections, upgraded with state-of-the-art annotation, in support of economic and environmental management, and policy development.

INDUSTRY: Microbes Australia will provide ready access to a pre-assembled, pre-annotated and pre-authorised living resource, rich in chemical and genetic diversity, and the expertise needed to

access embedded high value chemistry. Microbes Australia will be attractive to the pharma and agrochemindustries, as they search for new and improved products, to target drug resistant diseases and other unmet needs.

PHILANTHROPY: Microbes Australia will inspire investment in innovative solutions to intractable problems in human health (i.e. neurodegenerative and infectious diseases, pain and rare cancers) and the environment (i.e. control of invasive pest animals, insects and plants, and bioremediation of industrial, urban and rural waste).

PUBLIC: Microbes Australia will initiate an Australia wide citizen science initiative, Soils for Science, to engage and inform the public on the origin and use of antibiotics, the challenge of antibiotic resistance, the urgent need for new antibiotics, and the value of soil and soil microbes as a means to discover next generation antibiotics (see separate Soils for Science flyer).



From left: microbial isolation plates (x2), microbioreactor cultivation, molecular network analysis

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