



# Advances in Crop Biocontrol



22 April 2021

@BioTechNZ



**We are a purpose driven,  
membership-funded organisation**

Our diverse range of members all share a desire to maximise the ways biotech can help address many of the world's agricultural, environmental and health problems.

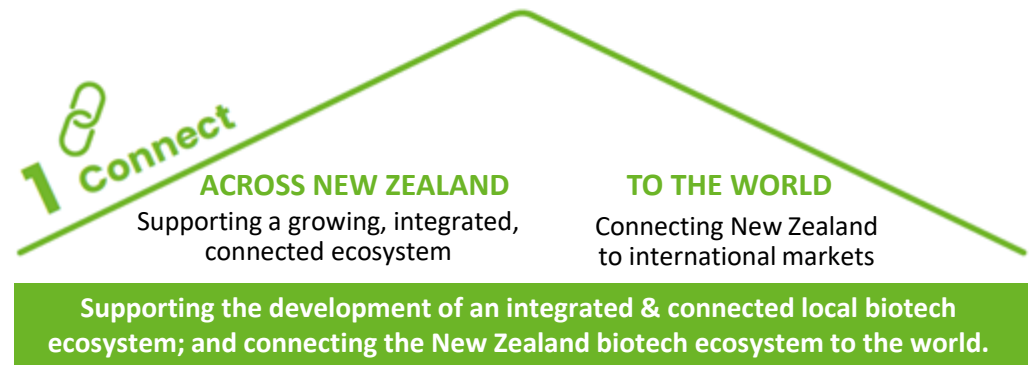
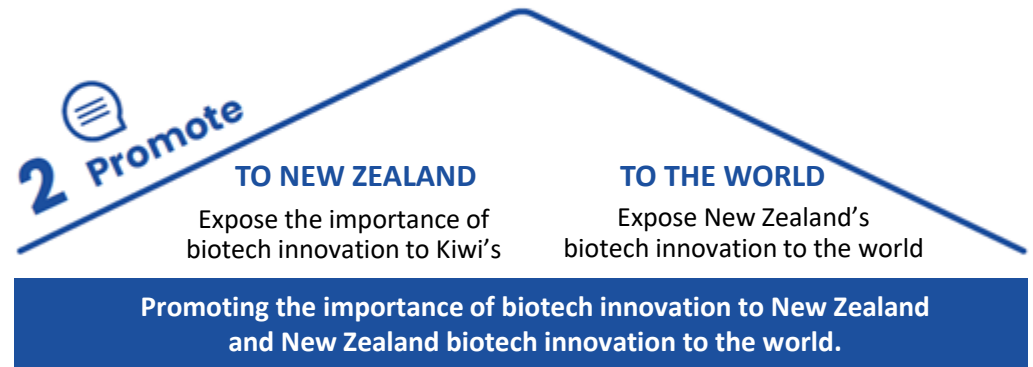
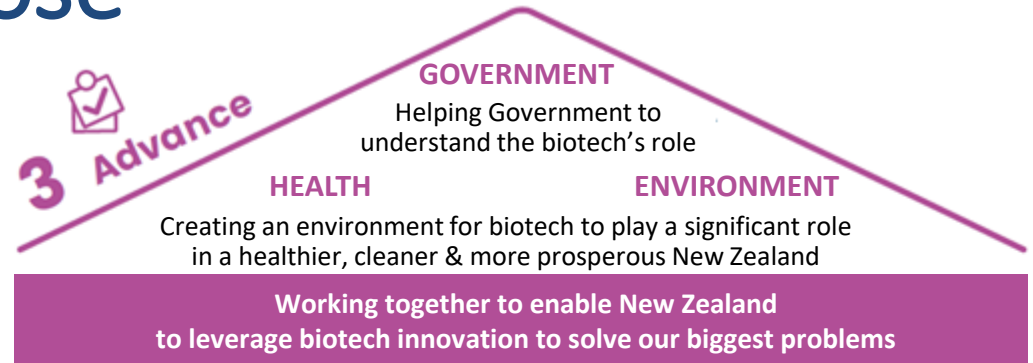


Zahra Champion,  
*PhD*  
Executive Director



# Achieving our Purpose

Creating a  
Healthy, Clean &  
Prosperous New  
Zealand Boosted  
by biotech



# The New BioTechNZ Executive Council

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**MANYA SABHERWAL**

*Cytiva*



**ANDREW TOMPKIN**

*Abbvie New Zealand*



**CRAIG HOUSTON**

*ANZCO Foods*



**DAVID POWELL**

*University of Otago*



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*Victoria University of Wellington*



**OLLIE CRUSH**

*Mint Innovation*



**RYAN KAFOURE**

*Marken*



**TREVOR STUTHRIDGE**

*AgResearch*

# Tech Alliance

CONNECT

PROMOTE

ADVANCE

20

Tech Associations

1,543

Members

The Tech Alliance is a collection of purpose driven, not-for-profit, non-government associations that are funded by members that care about the impact of technology on New Zealand.

The groups within the Tech Alliance are all separate associations however membership of a **Tech Alliance Association** provides some level of access across these different communities and in some cases significant discounts.



# Biotechnology in New Zealand 2020

New Zealand's thriving biotech sector includes companies working on products and technologies to help improve our lives and our planet, plus supporting services. The biotech sector is highly innovative, research and development intensive and is constantly evolving with new companies. This map will be regularly updated, so please contact us with your suggested additions: [info@biotechnz.org.nz](mailto:info@biotechnz.org.nz)



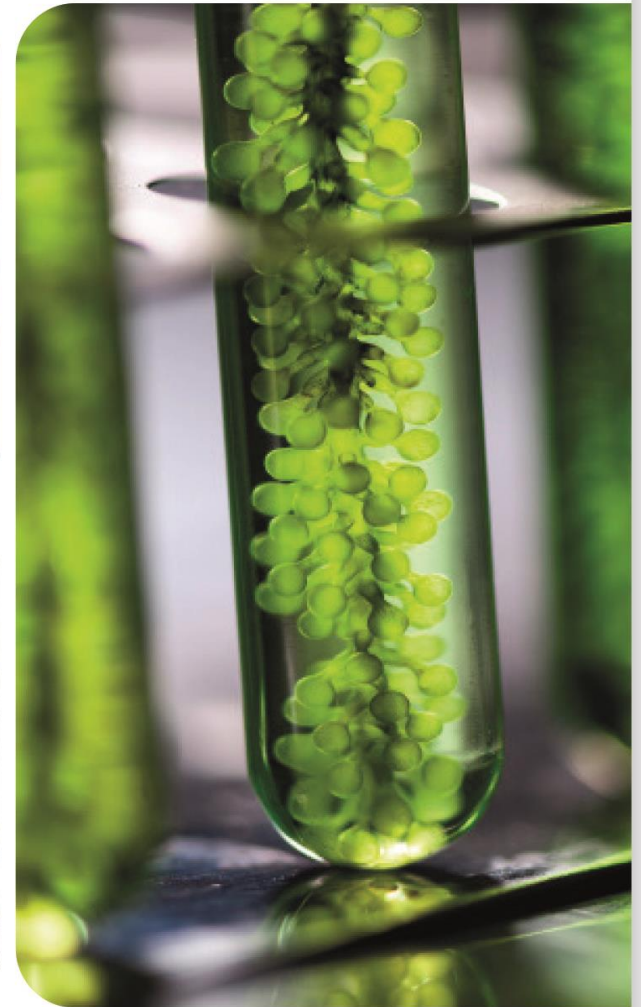
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 NEW ZEALAND

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version 1.1 November 2020

# AOTEAROA NEW ZEALAND BOOSTED BY BIOTECH

## *Innovating for a Sustainable Future*





## Key Highlights

*Growing global demand  
for biotechnology*

Global market worth  
**US\$729b**  
by 2025, Global Market Insights

*New Zealand  
positioned well*

**Ranked 4th**  
in the world for innovation  
potential in biotechnology.

*New Zealand has a small, but growing and vibrant biotech sector*

**211**

Companies

**\$2.7b**

Revenues

**45%**

Based regionally

*Biotechnology  
underpins  
New Zealand*

**\$49.4b**

Bioeconomy

*Plenty of local opportunities from biotech*

*Bark Biorefinery could add:*  
**\$1.8b** to GDP

*Human Clinical Trials could add \$880m to GDP*

*Growth constrained by:*  
**Capital access | GMO regulations | Access to skills**

## The global biopesticides market

Projected to grow from an estimated value of US\$4.3 billion in 2020, to reach US\$8.5 billion by 2025.

This is a small, but rapidly growing part of the almost US\$60 billion global crop protection market.

Crop Protection Chemicals Market Size and Forecasts 2020-2027, Grand View Research, 2020

genetics market was worth US\$6 billion in 2018 and is driven by increasing demand for healthier food and milk products.<sup>53</sup> The focus on animal health is even greater with US\$74 billion expected to be spent globally on animal health by 2027, due to increasing demand for veterinary vaccines and pharmaceuticals, as farming intensifies throughout the world.

**Synthetic Meats:** Considerable research is occurring internationally on potentially replacing traditional meat and dairy products with lab grown substitutes. New Zealand's agricultural sector is key to the economy. It is very important that this topic is debated in New Zealand as substituting meat and dairy, with synthetic foods could potentially reduce the amount of land, water, energy, and greenhouse gas emissions.

### PLANT BIOTECH

New Zealand pastoral, arable and horticulture farmers have relied on new plant breeding innovations for their success. New Zealand products such as the JAZZ™ brand apple and ZESPRI® GOLD Kiwifruit (\$187 million export revenue in March 2020)<sup>54</sup> are well known worldwide. New Zealand has been investing in genetics and varietal development on a range of crop types including onion, pea, wheat, barley, clover and ryegrass.

With the opportunity to use new gene-editing technologies, it would enable New Zealand to speed up innovation in alternative proteins, increase crop yields, reduced costs for food production, reduced need for pesticides, enhanced nutrient composition and food quality, resistance to pests and disease.

### BIOBASED NATURAL SOLUTIONS

A growing global recognition of the harmful effects of agrochemicals and consumer demand for healthy food is underpinning demand for natural solutions, delivered by plant biotechnologies. The European Union (EU) has recently developed a series of targets to dramatically reduce the amounts of chemicals used on European farms by 2030. These include reducing the use of chemical and hazardous pesticides by 50 percent and reducing the use of fertiliser by 20 percent.

## Biotelliga – Biological Crop Protection



**New Zealand company Biotelliga develops agricultural crop protection technologies that minimise environmental and toxicological impacts while maximising crop performance and yield.** With expertise in fungal biology and active biomolecules the firm designs foliar applied biological products and seed integrated solutions.

Biotelliga undertakes research, development and commercialisation of biological products that provide crop protection from biotic and abiotic stress through active biomolecules coated onto seed, or through bioprotective organisms that are inoculated into seed.

With rising demand for biological based crop protection products over synthetic chemistry-based pesticides, Biotelliga is in a position to secure substantial value from its technology development in the large global crop protection market.

**BIOTELLIGA**



<sup>53</sup> Animal Genetics Market Size and Forecasts 2019-2026, Grand View Research, 2019.

<sup>54</sup> Overseas Merchandise Trade: March 2020, Statistics New Zealand, 2020.





# techweek 2021

CONNECTING FOR A  
BETTER FUTURE

TE HONOONO MO TE HEKE MAI PAI AKE

**22 - 30 May 2021**

[techweek.co.nz](http://techweek.co.nz) #techweek2021

## Aotearoa AI Summit

Atamai Iahiko  
Artificial Intelligence



Good for Aotearoa,  
good for the world.

**12 May 2021**

[aotearoai.nz](http://aotearoai.nz)

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