

### ANIMAL BIOSCIENCE

Asset name	Description	Faculty or Institute	Status	TRL 1-3	TRL 4-5	TRL 6-7	TRL 8-9
<b>Animal Production</b>							
Tarramba	High yield, cool tolerant, low weed risk Leucaena forage legume	UQSc	Licence: LeucSeeds				
PAC-701 & 901	Winter adapted lucerne species with disease and pest resistance	UQSc	Licence: PGG Wrightsons				
Redlands	Psyllid resistant variety of the Leucaena forage legume	UQSc	Licence: LeucSeeds & Carnarvon				
PACL-501	Highly persistent variety of grazing Lucerne	UQSc	Licence: PGG Wrightsons				
Probiotic livestock feed	Novel bacillus inoculation of livestock feed for probiotic gains	UQSc	Industry partner				
Algae livestock feed	Cost-efficient algae production systems for livestock feed and supplements	UQSc	Available				
Natural feed additives	Novel additives for preservation of animal feed	QAAFI	Industry Partner				
Rumen Efficiency	Ruminant nutritional products to optimise feed efficiency and reduce methane emissions	UQSc	Industry Partner				
Rough microcapsules	Natural antibiotic delivery for feed supplements	AIBN	Industry Partner (Asia Pac)				
Maternal Trait Markers	Functional genetic markers for maternal beef cattle reproductive traits	QAAFI & UQSc	Industry partner				
<b>Animal Health</b>							
Cane toad trap	Cane toad tadpole attractant	IMB	Licence: SpringStar				
Molecular Clamp	Novel protein vaccine for RSV and other enveloped viruses	SCMB	Available				
Single Drop Genomics	Rapid, general purpose genomic testing assay requiring very little equipment for on-site testing for pathogens	UQSc & AIBN	Licence: Xing Technologies				
Rough microcapsules	Silica microcapsules with rough projections to ensure adhesion to fur for active delivery	AIBN	Industry Partner				
VLP Vaccine System	Recombinant protein derived low cost VLPs that can display large viral sequences	AIBN	Available				
Vaccine delivery platform	Nanovesicles for adjuvant-free delivery of subunit antigen vaccines	QAAFI & AIBN	Industry Partner				
Anthelmintic	Natural anthelmintics from microbes for treatment of livestock	IMB	Available				
Tick vaccine	Vaccine for the Australian paralysis tick (Ixodes holocyclus)	QAAFI	Available				
Natural cattle tick control	Micro-encapsulated tea tree oil formulations for control of cattle tick	QAAFI & UQSc	Available				
Better veterinary anesthesia	Side effect free neurosteroidal anesthesia	UQSc	Available				
Lysozyme Encapsulation	Long-acting, targetted antimicrobial action using a natural antibiotic loaded in silica microcapsules.	AIBN	Available				

#### UQ Faculty / Institute

AIBN Australian Institute for Bioengineering & Nanotechnology | CILR Centre of Excellence for Integrative Legume Research  
 IMB Institute for Molecular Bioscience | PACE Pharmacy Australia Centre of Excellence  
 QAAFI Queensland Alliance for Agriculture and Food Innovation | UQDI Diamantina Institute | UQMed Faculty of Medicine  
 UQSc Faculty of Science

#### Technology Readiness Levels (TRLs)

- |  |  |
|--|--|
| 1 Basic principles observed and reported   | 5 Validation in relevant environment                 |
| 2 Technology concept &/or application formulated                                     | 6 Prototype demonstration in relevant environment    |
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| 4 Validation in lab environment  | 8 Test demonstration                                 |
|  | 9 Routine use  |

### ABOUT UNIQUEST

UniQuest is the main commercialisation company of The University of Queensland, one of Australia's leading and most innovative teaching and research universities. Ranked in the world's top-50<sup>1</sup>, 100% of UQ's research is at or above world standard.

UniQuest specialises in the transfer of UQ's world-class intellectual property, research outcomes and expertise. UniQuest has a 30 year track record, including the commercialisation of the HPV vaccine Gardasil®, the Triple P Positive Parenting Program, image technology used in two-thirds of the world's MRI machines and Spinifex Pty Ltd – a biopharmaceutical company acquired recently in one of Australia's largest ever biotech deals.

To learn more, visit [www.uniquest.com.au](http://www.uniquest.com.au)

1 - As measured by the QS World University Rankings (46) and the Performance Ranking of Scientific Papers for World Universities (45)

### CONTACT US

Contact UniQuest and discover how you can connect with UQ research:

**Duncan Ferguson**  
 Director, Commercial Engagement (Agriculture)

d.ferguson@uniquest.com.au  
 +61 407 733 619

**Cameron Turner**  
 Director, Commercial Engagement (Food)

c.turner@uniquest.com.au  
 +61 437 448 773

### PLANTS AND CROPS

Asset name	Description	Faculty or Institute	Status	TRL 1-3	TRL 4-5	TRL 6-7	TRL 8-9
<b>Crops and Horticulture</b>							
TT Canola Hybrids	Triazine tolerant canola variety for high rainfall areas and protoplast fusion hybridization technique	UQSc	Licence: Advanta Seeds				
Aussie Colours®	Water efficient flowering ornamental plants	UQSc	Start-up: Aussie Colours Pty Ltd				
QuGene	Plant breeding simulation tools to investigate characteristics of genetic material undergoing repeated cycles of selection	UQSc	Non-exclusive Licence and Industry partner				
XPT-UQ1203 Wheat	PHS resistance in elite germplasm using UQ speed breeding technology	QAAFI	Licence: Dow AgroSciences				
QuGrains	Rapid trait introgression platform for plant breeding	UQSc & QAAFI	Available				
Ruhbi™ Bayberry	New fruit for the western world - high yielding, sweet and high in antioxidants	UQSc	Licence: PVA (Aus & NZ); AIGN (ROW)				
Ecoturf	Hard wearing, industrial strength landscaping grass	UQSc	Industry partner				
Avostock	Platform for clonal propagation of avocado rootstock	QAAFI	Industry partner				
XPT-UQ1201 Wheat	PHS resistance in elite germplasm using UQ speed breeding technology	QAAFI	Licence: PGG Wrightson				
O'Hara barley	Multi-disease resistance in elite Scarlett variety using UQ speed breeding technology	QAAFI	Available				
High Bread	Wheat protein and genomics that give good bread rising properties	QAAFI	Available				
Sorghum Digestibility	Modified sorghum seed proteins to increase total protein content and digestibility	UQSc	Available				
Strigolactone	Shoot branching control	UQSc	Industry partner				
SugarBooster™	Sugarcane varieties with increased sugar content	UQSc	Licence: Wilmar & Syngenta				
Ethylene powder	Novel delivery of ethylene for stimulation and growth promotion	UQSc	Available				
Sucrose Yield Enhancement	Increased sucrose accumulation in sugarcane and sugarbeet	UQSc	Available				
Midas Maize	Maize and popcorn varieties rich in zeaxanthin for novel food products with reduced artificial colours and macular health benefits	QAAFI	Available				
SupaSorghum	Protein modification and genomics for increased grain size, protein content and digestibility	UQScI	Available				
UAV crop analysis	Power efficient UAV design platform with long flight times, coupled with crop imaging analysis tools	UQEng	Available				
FlourMAX	Wheat proteins and genomics associated with high yields of flour on milling	QAAFI	Available				
<b>Plant Disease and Pest Control</b>							
Di-Bak Parkinsonia	Fungal bioherbicide and novel application method for woody weed control	UQSc	Start-up: BioHerbicides Australia (Aus)				
Nexgen Plants	Novel platform for development of virus resistant varieties for major crops using transgenic, cisgenic and marker assisted breeding methods	UQSc	Start-up: Nexgen Plants Pty Ltd				
OAIP	Orally active insecticidal peptides from spider venom	IMB	Industry partner				
Bioclay	Nanoparticle delivery platform for application of RNAi mediated crop protection	QAAFI & AIBN	Industry partner				
Single Drop Genomics	Rapid, general purpose genomic testing assay requiring very little equipment for on-site testing for pathogens	UQSc & AIBN	Licensed: Xing Technologies				
Fungal biocontrol	Growth promotion and biocontrol of fungal pathogens with novel bacillus species	UQSc	Available				
Caterpillar biocontrol	Platform for improvement of baculovirus production yields for economical biopesticides	AIBN & UQSc	Industry partner				
AcquSpray	Spray precision calculator to maximise agrochemical spray quality and minimise drift	UQSc	Available				
Rough microcapsules	Silica microcapsules with rough projections to ensure adhesion to plants for active delivery	AIBN	Available				
Nanocapsules for active delivery	Silica micro/nanocapsules for controllable sustained release of active ingredients	AIBN	Available				
Cyclotides	Plant derived biopesticides and stable peptide structures for bioengineering new pesticides	IMB	Available				
Natural Fungal Protection	Novel mechanisms and compounds for plant protection against fungal pathogens	UQSc & IMB	Available				
Rootstock Virus Resistance	Modified plant rootstocks that deliver broad-spectrum enhancement of the natural defence response of the whole plant (rootstock and scion) against virus attack	UQSc	Available				

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### POST HARVEST & FOOD

Asset name	Description	Faculty or Institute	Status	TRL 1-3	TRL 4-5	TRL 6-7	TRL 8-9
HayRite	Novel bacillus strain for control of mould in cut hay	UQSc	Industry partner				
Perkii™	A new juice and water, low calorie probiotic drink using the ProGel technology	UQSc	Start-up: Perkii Pty Ltd				
ProGel	Micro-gel encapsulation of active food supplements, human and animal drugs requiring liquid stable, low cost, scaleable taste masking and controlled release	UQSc	Start-up: ProGel Pty Ltd				
Ripestuff™	Ethylene powder for in-transit fruit ripening	UQSc	Industry partner				
Isomaltulose synthase	Efficient system for isomaltulose production from sucrose	UQSc	Commercial engagement				
Algal food additives	Natural algal flavour and colour enhancers from cost-effective production systems	UQSc	Available				
Probisafe	Probiotic lactic acid bacteria which kill/inhibit the growth of Salmonella & Listeria on fresh food products.	UQSc	Available				
Low fat cheese	Low fat cheese with the texture and moisture of full fat cheese	UQSc	Available				
Long life fresh milk	Non thermal pasteurization for extending shelf life of fresh milk. Opportunity to transport fresh milk further for packaging in local markets	UQSc	Available				
Rapid cheese	Probiotic bacteria that produce cheesy flavour and aroma in milk culture within 24hrs	UQSc	Available				
Cold spreadable butter	Butter that is spreadable straight from the fridge but resistant to melting with reduced propensity for going rancid.	UQSc	Available				
Algae food products	Food products using whole fresh unprocessed microalgae. Strains with optimum cell wall structure for digestibility matched with high yielding bioactives.	UQSc	Available				

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