

ANIMAL BIOSCIENCE

Asset name	Description	Faculty or institute	Partnered or available	TRL 1-3	TRL 4-5	TRL 6-7	TRL 8-9
Animal production							
Tarramba	High-yield, cool-tolerant, low-weed risk leucaena forage legume	UQSc	Licence: LeucSeeds				
Redlands	Psyllid-resistant variety of the leucaena forage legume	UQSc	Licence: LeucSeeds & Carnarvon				
PAC-701 & 901	Winter-adapted lucerne species with disease and pest resistance	UQSc	Licence: PGG Wrightsons				
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				
Animal health							
Cane toad trap	Cane toad tadpole attractant	IMB	Licence: SpringStar				
Rapid nucleic acid extraction	Method for extraction of amplification-ready nucleic acids from crude tissue samples in just 30 seconds	UQSc	Available				
Flocculation diagnostic	A simple and effective amplified DNA diagnostic readout system, particularly suited for in-field testing and diagnostics	UQSc	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				
Molecular clamp	Novel protein vaccine for RSV and other enveloped viruses	SCMB	Available				
VLP vaccine system	Recombinant protein derived low cost VLPs that can display large viral sequences	AIBN	Available				
Tick vaccine	Vaccine for the Australian paralysis tick (Ixodes holocyclus)	QAAFI	Available				
EHEC vaccine	Novel antigens to reduce enterohaemorrhagic E. coli (EHEC) excretion by cattle	UQSc	Available				
Better veterinary anesthesia	Side effect free neurosteroidal anesthesia	UQSc	Available				
Anthelmintic	Natural anthelmintics from microbes for treatment of livestock	IMB	Industry partner				
Natural cattle tick control	Micro-encapsulated tea tree oil formulations for control of cattle tick	QAAFI & UQSc	Available				
Vaccine delivery platform	Nanovesicles for adjuvant-free delivery of subunit antigen vaccines	QAAFI & AIBN	Industry partner				
Rough microcapsules	Silica microcapsules with rough projections to ensure adhesion to fur for active delivery	AIBN	Industry partner				
Silica Nanocapsules	Silica micro/nanocapsules for high active ingredient loading and controllable sustained release	AIBN	Available				
Lysozyme encapsulation	Long-acting, targeted antimicrobial action using a natural antibiotic loaded in silica microcapsules	AIBN	Available				

> UQ Faculty/Institute

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 IMB Institute for Molecular Bioscience | PACE Pharmacy Australia Centre of Excellence
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 UQMed Faculty of Medicine | UQSc Faculty of Science

> Technology Readiness Levels (TRLs)

- 1 Basic principles observed and reported
- 2 Technology concept &/or application formulated
- 3 Analytical and experimental critical function &/or characteristic proof of concept
- 4 Validation in lab environment
- 5 Validation in relevant environment
- 6 Prototype demonstration in relevant environment
- 7 Prototype demonstration in operational environment
- 8 Test demonstration
- 9 Routine use

ABOUT UNIQUEST

UniQuest is Australia's leading university commercialisation entity specialising in the intellectual property of The University of Queensland, one of Australia's leading and most innovative teaching and research universities. Ranked in the world's top-50¹, 100% of UQ's research is at or above world standard.

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

CONTACT US

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PLANTS AND CROPS

Asset name	Description	Faculty or institute	Partnered or available	TRL 1-3	TRL 4-5	TRL 6-7	TRL 8-9
Crops and horticulture							
QuGene	Plant-breeding simulation tools to investigate characteristics of genetic material undergoing repeated cycles of selection	UQSc	Non-exclusive licence and industry partners	●	●	●	●
Aussie colours®	Water-efficient flowering ornamental plants	UQSc	Start-up: Aussie Colours Pty Ltd	●	●	●	●
TT canola hybrids	Triazine tolerant canola variety for high rainfall areas and protoplast fusion hybridization technique	UQSc	Licence: Advanta Seeds	●	●	●	●
XPT-UQ1203	Wheat PHS resistance in elite germplasm using UQ speed breeding technology	UQSc	Licence: Dow AgroSciences	●	●	●	●
XPT-UQ1201	Wheat PHS resistance in elite germplasm using UQ speed breeding technology	UQSc	Licence: PGG Wrightson Seeds	●	●	●	●
O'Hara barley	Multi-disease resistance in elite Scarlett variety using UQ speed breeding technology	QAAFI	Available	●	●	●	●
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	●	●	●	●
High bread	Wheat protein and genomics that give good bread-rising properties	QAAFI	Available	●	●	●	●
FlourMAX	Wheat proteins and genomics associated with high yields of flour on milling	QAAFI	Available	●	●	●	●
Sorghum digestibility	Modified sorghum seed proteins to increase total protein content and digestibility	UQSc	Available	●	●	●	●
SupaSorghum	Protein modification and genomics for increased grain size, protein content and digestibility	UQSc	Available	●	●	●	●
SugarBooster™	Sugarcane varieties with increased sugar content	UQSc	Available	●	●	●	●
Sucrose yield enhancement	Increased sucrose accumulation in sugarcane and sugarbeet of up to 25%	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	●	●	●	●
Strigolactone	Shoot branching control	UQSc	Industry partner	●	●	●	●
Ethylene powder	Novel delivery of ethylene for stimulation and growth promotion	UQSc	Available	●	●	●	●
UAV crop analysis	Power efficient UAV design platform with long flight times, coupled with crop imaging analysis tools	UQEng	Available	●	●	●	●
Plant disease and pest control							
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	●	●	●	●
Pesticide analogues	Novel analogues of commercial herbicides and insecticides to increase efficacy and safety, and reduce target weed and pest resistance	UQSc	Industry partner	●	●	●	●
Flocculation diagnostic	A simple and effective amplified DNA diagnostic readout system, particularly suited for in-field pathogen testing	UQSc	Available	●	●	●	●
Rapid nucleic acid extraction	Method for extraction of amplification-ready nucleic acids from crude plant tissue or soil samples in just 30 seconds	UQSc	Available	●	●	●	●
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	●	●	●	●
AccuSpray	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	●	●	●	●

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POST-HARVEST & FOOD

Asset name	Description	Faculty or institute	Partnered or available	TRL 1-3	TRL 4-5	TRL 6-7	TRL 8-9
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				
Perkii™	A new juice and water, low-calorie probiotic drink using the Progel technology	UQSc	Start-up: Perkii Pty Ltd				
HayRite	Novel bacillus strain for control of mould in cut hay	UQSc	Industry partner				
Healthy baked goods	New baked good recipes incorporating specific, cholesterol-lowering functional food additives from plant cells	UQSc	Industry partner				
Ripestuff™	Ethylene powder for in-transit fruit ripening	UQSc	Available				
Flocculation diagnostic	A simple and effective amplified DNA diagnostic readout system, particularly suited for in-field food safety testing	UQSc	Available				
Rapid nucleic acid extraction	Method for extraction of amplification-ready nucleic acids from crude food samples in just 30 seconds	UQSc	Available				
Isomaltulose synthase	Efficient system for isomaltulose production from sucrose	UQSc	Available				
probisafe	Probiotic lactic acid bacteria which kill/inhibit the growth of salmonella and listeria in 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				
Algal food additives	Natural algal flavour and colour enhancers from cost-effective production systems	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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