

AUSTRALIAN

# RESEARCH



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# Imugene Limited (IMU)



Sector	Industry Group	Sub Industry	Disease Target
Life Sciences	Biotechnology	Biopharmaceutical	Infectious diseases in Poultry/ Pigs. Pet Flea Control

## Company Overview

Imugene is an animal health biopharmaceutical company developing and commercialising biological products for the intensive farming industries of pigs and poultry.

Imugene's products have advantages over existing products including:

- (i) substantially improving the health of animals through greater efficacy;
- (ii) cost effectively improving productivity and profitability of intensively farmed animals; and
- (iii) reducing consumer exposure to antibiotic, hormone and chemical residues by using safe biodegradable, biological treatments, thereby reducing development of antibiotic resistant 'superbugs'.

Detailed information on Imugene, its products and strategy is contained on the company's website: [www.imugene.com](http://www.imugene.com)

## Strategy

Global commercialisation of Imugene's portfolio of biological products using subcontracted manufacturing, existing veterinary distribution networks and a limited number of sublicense agreements with the top global animal health companies.

To gain early cash flows, product option agreements have been signed with Merial, the world's second largest animal health company. These agreements allow Imugene to focus on commercialising other products within its portfolio to maximise profits and shareholder returns.

## Key Executives

**Graham Dowland** (B Comm, ACA), Executive Chairman: Has over 15 years experience as executive director in assisting public companies listed in Australia, Canada and the UK particularly during development phases.

**Dr Warwick Lamb** (BVSc M Vet Clin Stud FACVSc), Managing Director: A specialist veterinarian with 15 years experience, including R&D contract projects with major international veterinary pharmaceutical companies.

**Dr Michael Sheppard** (BSc Hons PhD), Chief Scientific Officer: A molecular biologist (who with Dr. Kevin Fahey), was a key initiator of production animal compounds at CSIRO, and has gained international commercial experience in the USA with the world's largest pharmaceutical company, Pfizer.

**Dr Paul MacLeman** (MBA, BVSc, Post Grad Cert Eng, FAICD), Chief Operating Officer: A production animal veterinarian with over 15 years international experience in animal health biopharma financing, management, product commercialisation and strategic development of technology portfolios.

**Dr Kevin Fahey** (BSc MSc PhD FASM), Chairman – Commercialisation R & D; Scientific Advisory Board: Has had a distinguished international corporate and scientific career, most previously as Scientific Director – Research Investments for Pfizer Global R&D (USA).

## Key investment information

Market Cap: \$21.5M

### Capital Structure (M)

Ord shares on issue: 130.6  
Options (fully diluted): 20.0  
Convertible notes/other: 0.0

Price as at 02-Aug: \$0.17  
12 month H/L: \$0.11 - \$0.38  
Market turnover (pa): \$29.0M  
Official listing date: Nov-93

### Substantial Shareholders

Queensland Investment Corp 6.4%  
Graham Dowland 5.2%

### Cash Position

Cash (as at Jun -05 ): \$4.3M  
Years with planned expenditure: 2  
R&D as % expenditure: 70%

## Company contact



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Chief Operating Officer

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## Main Company R&D Projects - Major Technology & Market

### 1: Poultry Productivity Enhancer

Target Market: Global poultry market  
>US\$1B

Stage: Commercial  
contracts/commercial &  
regulatory trials

Target Date: 2006-2007

There is a growing need to enhance the productivity of meat animals globally. There is also a world wide government mandated reduction in the use of chemical growth promotants. This product has raised growth rates 15% in all husbandry systems and would be given to every bird, not just for disease control. The product will be cheap, safe and easy to administer.

### 2: Pig Diarrhoea Treatment

Target Market: Pig gut disease >US\$450M

Stage: Scale-up/Regulatory trials

Target Date: 2006

The Receptor Mimic product binds and neutralises disease-causing toxins. Bacterial toxins are the major cause of diarrhoea and loss in weaning piglets. This has been controlled through the use of antibiotics. Antibiotics are being banned, potentially leading to large losses unless a safe, reliable alternative can be found. The product is effective, residue free, has no effect on beneficial bacteria in the gut and cannot contribute to antibiotic resistance. These biological RMT products have a much faster path to market than drugs.

### 3: Imugene Pipeline

Target Market: Vaccines and other products  
for global production animal  
markets >US\$1.5B

Stage: Proof of Principle to  
commercial contracts

Target Date: 2006-2008

Imugene is developing a number of other vaccines for poultry and pigs. The targets have been selected for high unmet need & value and technology synergies. The lead pig product PRRS addresses a disease affecting 80% of pig herds worldwide, has no competitors and could be alone in a US\$400Mpa market. Further RMT products are also being developed. All Imugene products share strong intellectual property positions, are residue free, cost effective, can be administered via feed, water, aerosol or injection to produce a targeted immune response.

## Aegis Comments

**Market Position:** IMU has two platform technologies, adenoviral vector vaccines (AVVT) and Receptor Mimic Technology (RMT), aimed at preventing pig and poultry diseases and promoting growth. Increasing global regulation favouring biological alternatives to antibiotic use in the animal food chain underlies IMU's potential. Merial, a US\$2B in sales, animal health company is negotiating to become IMU's first major global sub-licensing partner (for 3 vector vaccines). IMU plans to take RMT products to market itself. A flea vaccine for companion animals is also in early stage development.

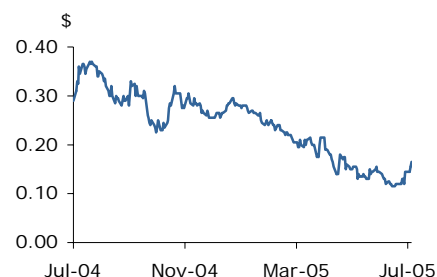
**Milestone Record:** In the Jun-05 quarter, IMU improved scale-up processes in Poultry Productivity Enhancer (PPE) production; optimised the PPE product formulation; responded to regulator queries about the PPE submission data; finalised sub-licensing negotiations for PPE; optimised the Bird Flu trial vaccine; and prepared to ship PRRS vaccine to major animal health companies for trial evaluations. Earlier, a large PPE trial showed excellent weight gain and feed conversion results.

**Risk Profile:** IMU's risk is mitigated as the development and approval of animal health products typically takes less than half the time required for human drugs. As biologicals, RMT products don't need toxicity tests, making them even easier and quicker to approve. Both RMT and AVVT have increasing patent grants in major territories. IMU plans to mitigate cash needs by early product sub-licensing. IMU had \$4.3M cash at Jun-05, projected to last 2 years.

### Grower pigs



### Share price performance



Source: IRESS



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