

AUSTRALIAN

# RESEARCH



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# Imugene Limited (IMU)



Sector	Industry Group	Sub Industry	Disease Target
Life Sciences	Biotechnology	Animal Health Products	Infectious Diseases of Poultry & Pigs

## Company Overview

Imugene is an animal health biopharmaceutical company developing and commercialising biological products for the intensively farmed pig and poultry industries.

Imugene's products have advantages over existing 'health improving' products, including

- (1) substantially improving the health of animals;
- (2) improving productivity and profitability for poultry and pig producers; and
- (3) 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 biological products through sublicense agreements with the top global animal health companies.

The 'Poultry Productivity Enhancer', Imugene's most advanced product, has recently been sublicensed to Merial, one of the world's largest animal health companies (annual sales of US\$1.8B and employs 5,000 people).

Merial will now drive the regulatory, development, marketing and distribution of the product worldwide using its vast resources.

A further contract was recently signed with Teva Pharmaceuticals to develop a vaccine against coccidiosis in poultry. Cocci is one of the most common and costly diseases in poultry.

Imugene will receive license fees and royalty income on product sales without further expenditure on the product, thereby maximising profits and shareholder returns.

## Key Executives

**Graham Dowland** (BComm, 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. Has gained international commercial experience in the US with the world's largest pharmaceutical company, Pfizer.

**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: \$20.9M

### Capital Structure (M)

Ord shares on issue: 130.6

Options (fully diluted): 15.6

Convertible notes/other: 0.0

Price as at 28-Apr: \$0.16

12 month H/L: \$0.11 - \$0.26

Market turnover (pa): \$17.6M

Official listing date: Oct 02

### Substantial Shareholders

Queensland Investment Corp 6.4%

Graham Dowland 5.2%

### Cash Position

Cash (as at Mar-06): \$3.1M

Years with planned expenditure: 2

R&D as % expenditure: 70%

### Company contact



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

### 1: Poultry Productivity Enhancer

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

Stage: Merial sub-licensed for  
global market

Target Date: 2007

There is a growing need globally to improve the productivity of meat animals - without using chemical growth promotants (antibiotics). The Imugene product increases chicken growth by 15%, using significantly less feed and is applicable to all poultry farms. The product is non-chemical, is inexpensive to manufacture, safe for animals and humans and has the advantage of administration (i.e., in drinking water) to large numbers of birds quickly and cheaply.

### 2: Bird Flu

Target Market: Global Poultry Market  
>US\$500M

Stage: Proof of Concept

Target Date: 2006/7

Developing an effective vaccine against the current bird flu is a priority for Imugene. The vaccine under development has major advantages - safety and ability to be used on a mass scale as the vaccine can be delivered through water or feed. Trials are underway to determine the dosage to achieve the most effective antibody response.

Different vaccines are under development for broilers and layers/breeders.

### 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 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. A research contract was recently signed with Teva Pharmaceuticals to develop a vaccine against coccidiosis in poultry.

### 4: Pig Diarrhoea Treatment

Target Market: US\$450M

Stage: scale up and efficacy trials

Target Date: 2007/8

The Receptor Mimic Technology (*RMT*) product binds and neutralises disease-causing toxins. Bacterial toxins are the major cause of diarrhoea and loss in weaning piglets. This has been treated to date, with mixed results, by antibiotics.

## Aegis Equities Comments

**Market Position:** IMU made a quantum leap forward in the Dec-05 quarter, executing deals with two global pharmas. Merial, one of the world's largest animal health companies, licensed IMU's Poultry Productivity Enhancer (*PPE*). Teva's animal health unit, Abic, will develop a vaccine against poultry coccidiosis using IMU's patented Adenoviral Vector Technology. A successful vaccine will lead to a license deal. IMU's patented Receptor Mimic Technology is initially targeting Post-Weaning Diarrhoea in pigs. IMU's products are residue-free, non-antibiotic and chemical-free, in line with worldwide consumer demand for higher quality food and increasing regulatory bans on antibiotic use.

**Milestone Record:** In Mar-06, IMU commenced a PPE dose ranging and safety trial after receiving clearance from Australia's Gene Regulator. Merial is an ideal PPE partner, having global sales of US\$1.7B, an experienced sales and marketing team, worldwide distribution and market leading status. Merial will pay IMU royalties on future PPE sales. IMU's PRRS vaccine is being evaluated by major animal health companies. IMU is progressing a bird flu vaccine at La Trobe.

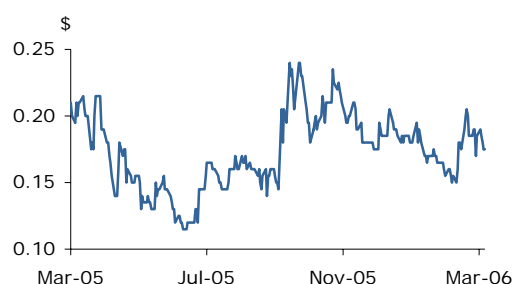
**Risk Profile:** Merial's milestone payments, due when the PPE meets development targets, mitigate financial risk. Animal health products typically take less than half the time to bring to market than human drugs, lowering development risk. IMU's biological products do not need toxicity tests, making them even easier and quicker to approve. IMU had \$3.1M cash at Mar-06, projected to last two years.

### Commercial poultry shed



Source: Imugene

### Share price performance



Source: IRESS



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