

## ASX ANNOUNCEMENT

### Final pig trial results - Imugene PRRS vaccine

***Final results confirm the successful preliminary results***

- ***additional benefits revealed***

***Imugene's PRRS vaccine proves highly effective in recent US based trial***

- ***protects pigs from PRRS disease of lungs***
- ***prevents infection in the blood***
- ***reduces viral infection in the lungs***

**10 October 2008, Sydney, Australia:** The Final Report including all results from the recently completed pig trial in the US has been received. The results confirm the preliminary results previously announced and provide additional information indicating the high level of effectiveness provided by Imugene's new modified PRRS vaccine.

The results show that the Imugene vaccine provides a very high degree of protection against the PRRS disease when two doses are administered either orally or by injection.

Porcine Reproductive and Respiratory Syndrome (PRRS) is caused by a viral infection. The major clinical signs are the result of areas of diseased lung (consolidation). To evaluate the severity of an infection, standardised lung lesion scores are generated by scoring the diseased areas in each of the 7 lung lobes from each pig and then generating an average. The lower the average lung lesion score the better, as this indicates a lower level of disease.

Another important measure of PRRS virus infection in pigs is the level and duration of the PRRS virus in the pig's blood (also known as viremia). In normal situations, following exposure to the PRRS virus, a prolonged acute productive infection takes place characterized by viremia that can last several weeks. An effective vaccine administered prior to exposure with the PRRS virus will reduce the percentage of viremia and the duration of viremia.

In addition, clinical illness with the PRRS virus slows weight gain during and after infection. An effective vaccine should result in less clinical illness and therefore better weight gains following infection.

Following challenge with the live PRRS virus, the vaccinated trial pigs compared to the unvaccinated control pigs:

- had much lower lung lesion scores
- no viremia in the group vaccinated by injection
- lower viremia counts in the orally vaccinated group
- fewer pigs with virus isolated from lung samples
- better weight gains over the 14 day post-challenge period

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Registered Office

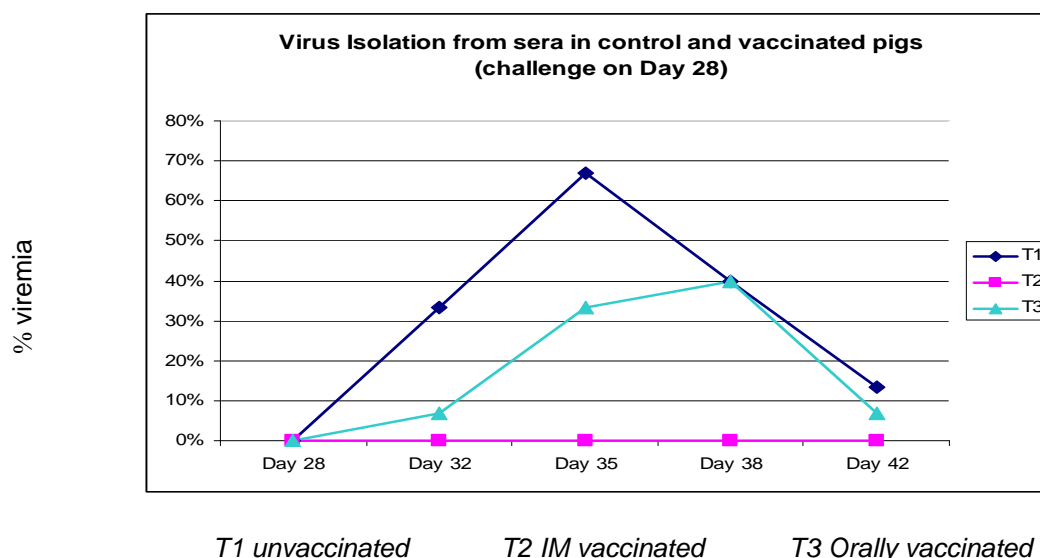
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A summary of the preliminary results for the average lung lesion score and average 14 day body weight gain appears in the following table. The differences between unvaccinated and vaccinated (injected and oral) were statistically significant ( $p=0.000058$  and  $p= 0.000025$  respectively). The differences in weight gain between groups was not statistically significant over the 14 day post challenge period.

	Control group	Oral Vaccine	Injected Vaccine
<b>Average Lung Lesion Score</b>	9.76%	1.31%	1.88%
<b>Average 14 Day Body Weight Gain</b>	5.45kg	6.00kg	6.37kg
<b>% Improvement in weight gain above control</b>	NA	10.1%	16.9%

Graph summarising the Viremia % (infection from the PRRS disease) in each group



Imugene managing director Dr Warwick Lamb said, “These outstanding results show that the modified Imugene PRRS vaccine correctly primed the pigs’ immune system to very efficiently prevent disease from the PRRS virus challenge.

The success of this trial and the compelling results against such a major pig disease is very positive for Imugene’s entire pig vaccine platform. The PRRS vaccine is now our lead product to progress into the regulatory process for the PAV vaccine range with authorities in the US.”

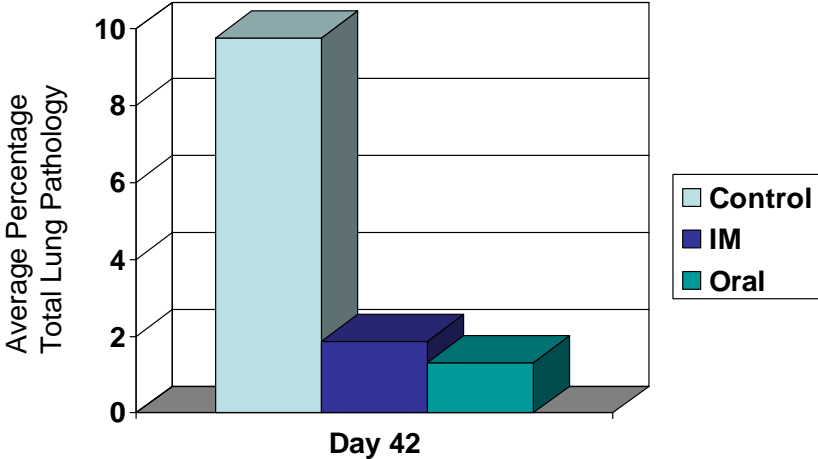
The trials were undertaken at a specialist trial facility in the US. The trial consisted of 45 piglets split into 3 groups. Of the 2 vaccinated groups, one received doses orally, the other via intramuscular injection. Each group received 2 doses, 14 days apart. All groups were challenged with the live PRRS virus 14 days following the second dose vaccine administration.

PRRS is one of the most economically damaging pig diseases worldwide causing industry losses of up to \$1 billion each year. Initially recognised in the US in 1987 the disease spread to Europe in 1990 and subsequently across most of the rest of the world. Australia is one of three countries considered PRRS-free.

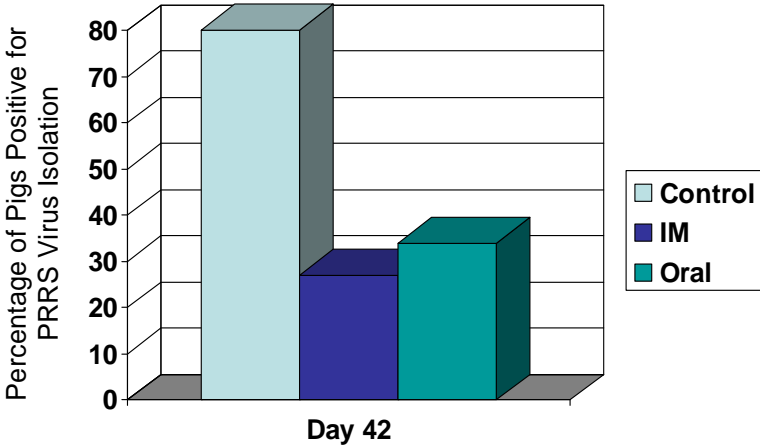
The vaccine is based on Imugene's Porcine Adenoviral Delivery Vector that delivers selected genetic material to the pig to stimulate the immune system to protect against the PRRS virus.

Further representations of the results are detailed below:

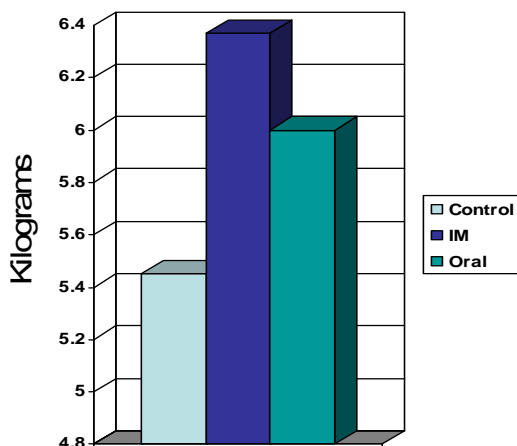
Average Lung Scores



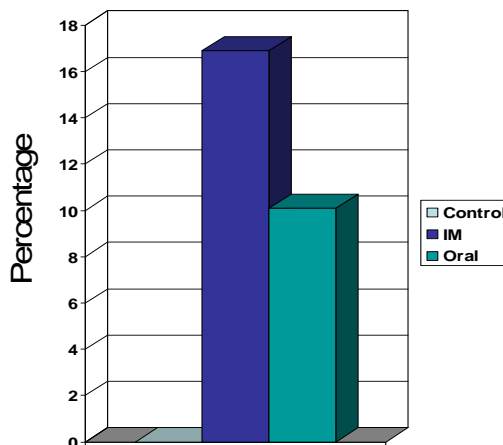
PRRS Virus Isolation from Pig Lungs



Average 14 Day Body Weight Gain



Percentage Improvement in Weight Gain Above Control



## ENDS About Imugene

*Imugene Limited (ASX Code: IMU) specialises in the development and commercialisation of novel animal health products for pigs and poultry. Founded in 2002, Imugene has a stable specialist management and scientific team supplemented with extensive use of specialist consultants and contracted trial facilities in the USA and Australia.*

*Our range of products under development includes vaccines to prevent important livestock diseases and productivity enhancers to improve the economics of raising commercial livestock. These biologically-based products improve the health and welfare of pigs and poultry and reduce or eliminate the use of antibiotics, chemicals and drugs.*

*Imugene owns the worldwide rights to the Fowl Adenoviral Vector Delivery System for poultry and the Porcine Adenoviral Vector Delivery System for pigs.*

*Imugene's poultry and pig portfolio is targeting a worldwide US\$3 billion annual market with four lead vaccine products under development and a strong product pipeline. Consumer demands for disease free and residue free food will bolster Imugene's prospects.*

*For more information please visit the Imugene website [www.imugene.com](http://www.imugene.com)*

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