ASX Limited
Market Announcements Office

Phosphagenics TPM® Poultry Feed Efficiency Study Reports Positive Data

15 December 2016, Melbourne: Australian drug delivery company, Phosphagenics Limited (ASX: POH; OTCQX: PPGNY), is pleased to announce the results of its poultry performance study in broilers.

The study was conducted at a large research facility in Australia and tested a broad range of TPM® doses across the life-cycle of over 500 birds; assessing a number of performance end-points including: live weight (LW), live weight gain (LWG), average daily gain (ADG) and feed conversion rate (FCR).

The study compared:

(i) "*base feed*" (standard feed without added Vitamin E),
(ii) "*standard Vitamin E feed"* (base feed with 20ppm additional Vitamin E),
(iii) "*high dose Vitamin E feed*" (base feed with 100ppm additional Vitamin E), and
(iv) Multiple "*TPM® enhanced feeds*" (standard Vitamin E feed with addition of 5 different dose levels of TPM®).

The study results demonstrated that compared to "base feed", only the "TPM® enhanced feeds containing TPM® at 10 and 20ppm" and the "high dose Vitamin E feed" statistically improved average live weight (LW at Day 28) and average daily gain (ADG; Day 0-28) at P<0.05. The "TPM® enhanced feed" with 10ppm TPM® was determined to be the "optimal TPM® enhanced feed" for broilers and was shown to produce the largest numerical improvement in LW and ADG across all test groups. The numerical improvements across "standard Vitamin E feed", "high dose Vitamin E" and "optimal TPM® enhanced feed" are summarised in the table below:

	Improvements in LWG (compared to base feed)	Improvement in ADG (compared to base feed)
Standard Vitamin E feed#	3.5%	3.7%
High dose Vitamin E feed#	4.4%*	4.7%*
Optimal TPM enhanced feed#	5.6%*	5.7%*

* Statistically significant at P<0.05 compared to base feed.

#Comparison between any of the 3 treatment groups did not reach statistical significance at P<0.05.

The "optimal TPM® enhanced feed" also produced the largest improvement in feed conversion rate (FCR) of ~3.1% compared to the base feed (statistically significant at p<0.005) and ~2% compared to the 'standard vitamin E feed' (significant at p<0.1). All improvements in LW, ADG and FCR seen in the "optimal TPM® enhanced feed" group were achieved without a significant change in feed intake over the test period.

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The fiscally tight nature of the broiler market means that modest improvements in performance translate into considerable financial benefits and savings to the industry. A recent local poultry industry report indicated that for every 1% improvement in FCR, the financial savings to the Australian industry is ~$9.4 million, a saving that would be 100-fold greater if applied to the global meat production.[1]

Poultry is now the second species in which Phosphagenics has been able to demonstrate in randomized, controlled proof-of-concept studies, that TPM® can provide important potential performance benefits. This latest study further supports the performance data obtained in weaner pigs reported earlier in the year.

"These results are pleasing, and indicate that TPM® when used as a feed additive can potentially deliver a commercially viable benefit to livestock producers," said Dr Roksan Libinaki, General Manager of Phosphagenics' Animal Health & Nutrition business. "The results strengthen our existing data package and support the case that TPM® may provide performance benefits across multiple livestock species. This study provides a good parallel with our previous weaner pig study, showing that TPM® added to feed can promote weight gain and, importantly, improve feed efficiency. We now have results in two species strengthening our position as we engage with potential partners."

Phosphagenics' Chief Executive Officer, Dr Ross Murdoch, said, "This study now provides us with promising data in a second livestock species. Most encouraging is the finding that even relatively high doses of Vitamin E (up to 5 times that found in relatively standard feeds) could not outperform the performance associated with the addition of 10ppm of TPM®. I expect this information to strengthen the value potential of TPM® in the eyes of potential partners in the large and growing broader livestock feed additive market."

Further detailed analysis of the data set is ongoing.

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About Phosphagenics

Phosphagenics Limited is focused on developing and commercialising innovative Human Health, Animal Health and Personal Care products using its proprietary drug delivery system called TPM® (Targeted Penetration Matrix). TPM® is derived from Vitamin E using a unique, proprietary and patented process and has been proven to enhance the solubility and oral, dermal and transdermal absorption of drugs and nutrients.

Amongst its major projects, Phosphagenics' is developing TPM® enhanced patches, gels and injectable products for the human health market and is also developing TPM® to enhance the feed efficiency and health of livestock.

[1] *Cowieson A.J. and Selle P.H, The environmental impact of low feed conversion rations in poultry, Recent Advances in Animal Nutrition – Australia (2011).*

Phosphagenics' shares are listed on the Australian Securities Exchange (POH) and its ADR – Level 1 program in the US is with The Bank of New York Mellon (PPGNY).

Inherent Risks of Investment in Biotechnology Companies

There are a number of inherent risks associated with the development of pharmaceutical products to a marketable stage. The lengthy clinical trial process is designed to assess the safety and efficacy of a drug prior to commercialisation and a significant proportion of drugs fail one or both of these criteria. Other risks include uncertainty of patent protection and proprietary rights, whether patent applications and issued patents will offer adequate protection to enable product development, the obtaining of necessary drug regulatory authority approvals and difficulties caused by the rapid advancements in technology.

Forward-looking Statements

Certain statements in this announcement may contain forward-looking statements regarding Company business and the therapeutic and commercial potential of its technologies and products in development. Any statement describing Company goals, expectations, intentions or beliefs is a forward-looking statement and should be considered an at-risk statement. Such statements are subject to certain risks and uncertainties, particularly those risks or uncertainties inherent in the process of developing technology and in the process of discovering, developing and commercialising drugs that can be proven to be safe and effective for use as human therapeutics, and in the endeavour of building a business around such products and services.

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