



PHOSPHAGENICS

23 February 2009

**THE MANAGER  
COMPANY ANNOUNCEMENTS OFFICE  
ASX LIMITED**

Dear Sir/Madam

**re : PHOSPHAGENICS SUCCESSFULLY COMPLETES  
PHASE 1 TOPICAL DICLOFENAC STUDY**

Phosphagenics Limited ("Phosphagenics") (ASX: POH; OTCQX: PPGNY) today announced the completion of its Phase 1 diclofenac study, which demonstrated that its patented TPM/diclofenac formulation was safe and well tolerated in humans. The results also indicate that Phosphagenics' formulation can deliver significant amounts of diclofenac deep into the area of application.

Diclofenac is one of the leading products of a class of drugs known as NSAIDs (non steroid anti-inflammatory drugs) with global sales exceeding US \$1.2 billion. It is used to reduce inflammation and pain associated with inflammation of tendons or joints (tendonitis or arthritis) and acute injuries.

As well as evaluating the safety, pharmacokinetics and tolerability of the formulation, the study compared the Phosphagenics TPM/diclofenac formulation with the leading commercial product, Voltaren®, which also contains diclofenac. Absorption of diclofenac was assessed by tape stripping and by measuring diclofenac concentrations in blood. Tape stripping is a standard, non-invasive procedure used to measure the amount of a diclofenac or other drugs in the various layers of the stratum corneum, the outer layer of the skin. The concentration of the drug in the systemic circulation was also measured to determine the amount of diclofenac that had penetrated deeply through the skin to reach the blood, as tape stripping does not measure the amount of diclofenac in the deeper layers of the skin or muscle.

Within 30 minutes of the application of Phosphagenics' patented formulation, diclofenac was detected in the blood of subjects, indicating both rapid absorption and deep penetration.

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In contrast, measurable diclofenac was not detected in any subjects given Voltaren® until 2 hours after application. At that time point, the average plasma concentration of diclofenac in subjects administered the Phosphagenics formulation was seven times greater than those subjects given Voltaren®. Not until four hours after application did the average plasma concentration of diclofenac delivered by Voltaren® reach the same concentration as that delivered by TPM.

There were no significant differences between the concentrations of diclofenac within the stratum corneum in subjects receiving TPM/diclofenac formulation and in subjects receiving Voltaren®.

Dr Esra Ogru, the newly-appointed Chief Operations Officer of Phosphagenics said, "The plasma results provide real encouragement that our TPM technology delivered diclofenac substantially deeper into the target tissue than Voltaren®. As a consequence of the very promising results, Phosphagenics will now conduct a further, more definitive trial that will directly measure the amount of diclofenac in the deeper layers of the skin and perhaps the muscle, which are the appropriate sites to delivery diclofenac in order to reduce inflammation and therefore pain."

Yours faithfully  
Phosphagenics Limited



Mourice R Garbutt  
Company Secretary  
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#### **About Phosphagenics Limited**

Phosphagenics is a Melbourne-based, globally driven biotechnology company focused on the discovery of new and cost effective ways to enhance the bioavailability, activity, safety and delivery of proven pharmaceutical and nutraceutical products.

Phosphagenics' core technology is built around the science and application of phosphorylation, a process where the addition of a phosphate group has been found to enhance the bioavailability, activity and safety of existing pharmaceuticals and nutraceuticals, as well as to assist in the production of drug delivery platforms.

Phosphagenics' shares are listed on the Australian Stock Exchange (POH). An ADR – Level 1 program was established in the U.S. with The Bank of New York Mellon (PPGNY) for U.S. investors to trade in Phosphagenics' stock on the 'over-the-counter' market. In July 2007, this was upgraded to the International OTCQX, a new premium market tier in the U.S. for international exchange-listed companies, operated by Pink Sheets, LLC.

For more information, please visit Phosphagenics' web site at [www.phosphagenics.com](http://www.phosphagenics.com)

**Safe Harbor Statement**

This press release contains forward-looking statements based on current expectations of future events. If underlying assumptions prove inaccurate or unknown risks or uncertainties materialise, actual results could vary materially from the Phosphagenics' expectations and projections. Risks and uncertainties include general industry conditions and competition; economic conditions, such as interest rate and currency exchange rate fluctuations; technological advances and patents attained by competitors; challenges inherent in new product development, including obtaining regulatory approvals; domestic and foreign health care reforms and governmental laws and regulations.

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