

## Phosphagenics +ve on new pain tech

21 February 2013 | News | By BioSpectrum Bureau



**Singapore:** Melbourne-based Phosphagenics completed a pre-clinical study demonstrating that its oxycodone/TPM technology can reduce local pain without the need to deliver oxycodone into the bloodstream.

This discovery has significant commercial implications and the company intends to commence clinical trials in the third quarter of 2013. These trials would be additional to the current oxymorphone and oxycodone patch trials.

The finding stems from TPM's unique ability to deliver molecules in a targeted manner either into the skin or through the skin into the bloodstream, by modifying the formulation. Phosphagenics has formulated TPM to deliver compounds into the skin for its many topical dermatological and personal care applications.

In the pre-clinical study on oxycodone/TPM for localized pain, TPM was formulated to deliver oxycodone into the localized area of application, without spillage into the blood. A topical opioid able to act directly on inflamed tissue, without delivery into the systemic circulation, could eliminate all side effects associated with ingestion of the oral dosage form.

Phosphagenics' CEO, Dr Esra Ogru, said that the company was keen to expand its pain portfolio and progress further trials of topical TPM oxycodone technology. There is no topical opioid product on the market and sales of non-opioid pain drugs prescribed for localized pain exceed \$4 billion annually. Endo Pharmaceutical's market leading topical pain product, Lidoderm, is used to treat neuropathic pain but belongs to a different class of non-opioid analgesic compounds.

Release of the conclusions from this pre-clinical investigation coincides with Phosphagenics' two further clinical trials of its TPM opioid pain patch technology for the systemic treatment and management of chronic pain using oxycodone and oxymorphone. The combined US market for these two compounds, currently administered orally, exceeds 70 percent of the \$5 billion extended-release opioid market. While oxycodone dominates the market, sales of oxymorphone grew by over 17 percent in 2012 to become the third largest opioid in the category.

Dr Ogru said: "Delivering a powerful opioid like oxycodone topically has never been achieved commercially. It has been widely assumed that opioids can only treat pain by systemic delivery, that is, via the blood stream. Our study confirms more recent findings that opioid receptors are up-regulated in tissue in response to pain, particularly pain associated with

inflammation."

Dr Ogru added: "There is no other company in the area of transdermal delivery of pain drugs progressing multiple products with multiple applications. This potential new application of oxycodone to local pain further broadens our pain franchise. We remain committed to our strategy of building a first class pain portfolio comprising a series of compounds with the ability to manage all levels of pain, with various application methods. Underpinning this entire platform is our TPM delivery technology which we are continuously demonstrating enables superior delivery of many compounds."