

Friday, 16th September 2005

FOR IMMEDIATE RELEASE

Results of Study – Transdermal delivery of Voltaren™

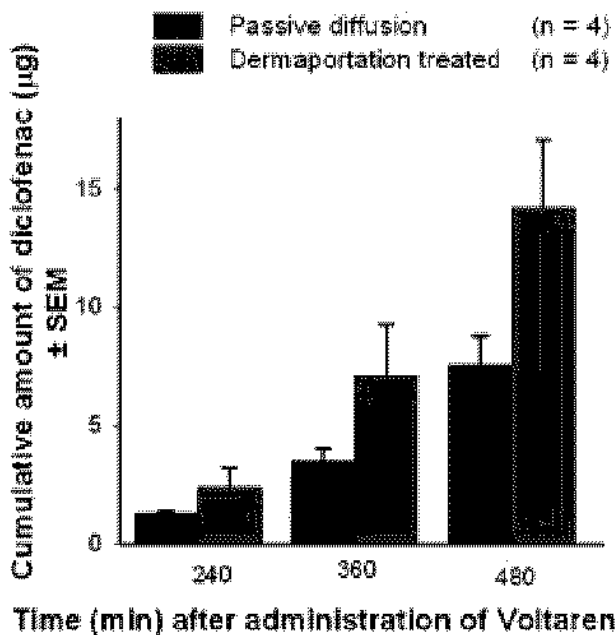
OBJ Limited (OBJ) advises that it has received a report from the Western Australian Biomedical Research Institute outlining the results of an independent study into the effect of the OBJ's Dermaportation technology on the transdermal availability of the widely used topical anti-inflammatory medication Voltaren Emugel (™Novartis Consumer Health Australasia Pty Ltd).

Experimental Protocol:

Overview: Voltaren Emugel (Novartis Consumer Health Australasia Pty Ltd) was applied to the surface of human epidermis for a contact period of up to 8 h. Dermaportation applied for 30 min from time 30 min to 60 min was compared to passive diffusion. Diclofenac penetrating the epidermis would diffuse into a receptor fluid of phosphate buffered saline. The receptor fluid was analysed for diclofenac content by high performance liquid chromatography (HPLC).

In vitro epidermal penetration:

Human skin was obtained following abdominoplasty surgery under existing approval from the Human Research Ethics Committee of Curtin University. Skin from a female donor was used in this study. The epidermis was heat separated from the dermis using standard procedures (Kligman and Christophers 1963).

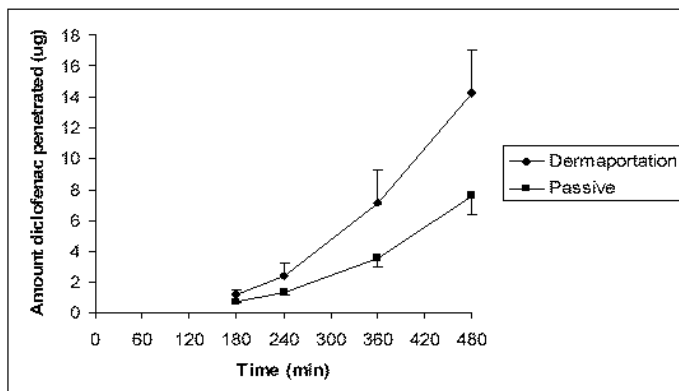


Cumulative amount of diclofenac penetrating human epidermis following application of Voltaren Emugel with Dermaportation (30 - 60 min) or passive diffusion: mean ± sem, n = 4

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*Diclofenac content in samples prior to 180 min was below the limit of detection

The epidermis was mounted in Franz-type diffusion cells with the stratum corneum facing the donor compartment. Skin integrity was determined by conductance measurement. The receptor compartment was filled with phosphate buffered saline pH 7.4, stirred continuously and maintained at 37°C throughout the experiment.

Voltaren gel (Batch Number WE179 EXP 09 2007: approx 1 g containing 1.16% w/w diclofenac diethylammonium salt equivalent to 1% diclofenac sodium) was applied to the donor side of the epidermis. Dermaportation was applied from time 30 to 60 min. Samples were removed from the receptor fluid at time 0, 30, 60, 90, 120, 150, 180, 240, 360, 480 min. At each time point the receptor fluid volume was replaced with fresh phosphate buffered saline preheated to 37°C.

Dermaportation and passive cells (no Dermaportation) were conducted in quadruplicate using skin from the abdominal region of a female donor. The content of diclofenac in receptor fluid samples was analysed by HPLC with ultraviolet detection using a validated assay procedure.

Reference

Kligman A, Christophers E. Preparation of isolated sheets of human stratum corneum. Arch Dermatol 88: 70-73 (1963)

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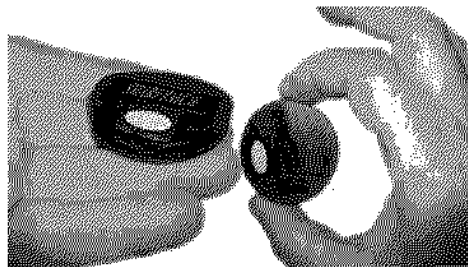
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Background to the Announcement

OBJ Limited is a drug delivery company, developing electronic "drug patch" technologies that allow drugs, therapeutic agents and cosmetic compounds to be delivered more effectively and more efficiently through-the-skin.

The company had previously announced a 600% increase in the rate of delivery of the drug caffeine and a 70% reduction in the delivery times for the anaesthetic drugs lignocaine and prilocaine hydrochloride. More recently, it had demonstrated precise control over drug delivery rates and recent finding added an additional time-based control mechanism previously not seen in the drug delivery sector.



OBJ maintains a continuous drug patch and drug delivery program that includes a number of commercially significant anti-inflammatory, anti-pain, anti-oxidant and anti-cancer drugs, as well as a number of cosmetic compounds.

Illustrated above is the OBJ 'smart' coin-sized drug patch system currently under development to improve the drug delivery and efficacy of a range of existing commercial drugs.

Sustainable Benefits

Through-the-skin delivery of drugs, hormones, vitamins, vaccines, anti-bodies and anti-aging molecules provides economic, safety and efficacy benefits to the pharmacology, medical, veterinary and cosmetic industries. Cost reductions are achieved through self administration, reduced administration costs and regulatory costs with a corresponding increase in safety and patient compliance.

Side effects may be reduced in many cases by localized delivery and programmed delivery rates. Needle stick injuries and needle disposable problems can be eliminated while the reduction in the level of skill required for application can significantly reduce total cost of administration.

Independence of Results

OBJ contracts its drug and technology testing programs to independent and respected organisations, such as Western Australian Biomedical Research Institute, Western Australian Institute for Medical Research, Curtin University of Technology and Murdoch University,

The high level of independence and international accreditation means that the results attributable to OBJ's proprietary technology can be published and presented at major medical and scientific conferences and forums.

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