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## EM-PATCH® COSMETIC RESULTS CONFIRMED BY IN VITRO PERMEATION STUDY

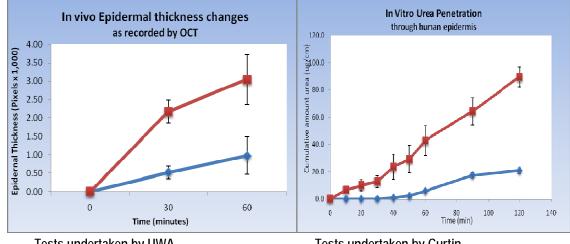
OBJ Limited (ASX: OBJ) is pleased to report that the results of the University of Western Australia human volunteer cosmetic study into enhanced moisturising by eM-Patch<sup>®</sup> reported in April 2009, have been validated by a separate in vitro diffusion study by Curtin University.

Effective moisturising of the skin is a key commercial objective for both the cosmetic and dermatology industries. The natural barrier effect of the skin makes it difficult for moisturising compounds to penetrate the skin while regulatory requirements make it increasingly difficult to market new or potentially more effective compounds.

Emphasis is placed on techniques that can make better use of existing and approved ingredients. The two recent studies by UWA and Curtin used one of the best known moisturising compounds, Urea, showing that the **eM-Patch**<sup>®</sup> technology delivered 7 times more moisturiser into the skin than normal application resulting in a better biological effect.

Dr. Chris Quirk a consulting dermatologist and a Director of the Company said; "OBJ is now able to move forward more confidently in the evaluation of different products in assessing the rate of drug delivery or cosmetic patch performance using this in vivo testing technique." Dr Quirk continued that the OBJ eM-Patch<sup>®</sup> is a painless method of delivery which offers a wide range of possibilities to this particular market sector."

The high correlation between increased penetration and greater cosmetic effect demonstrates the clear benefits of the **eM-Patch**<sup>®</sup> technology in cosmetic and dermatological applications.



Tests undertaken by UWA

Tests undertaken by Curtin

Active delivery (Red) and passive delivery (Blue) show high correlation between OCT results in human volunteer study and In vitro diffusion results

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The study by Curtin University's School of Pharmacy, showed that the **eM-Patch**<sup>®</sup> technology increased penetration of urea by over 20 fold at the 30 to 40 minute points and by almost 7 fold after one hour of application. This result is consistent with the 8 fold increase in hydration related measures observed in human volunteers in the previous OCT study. The combined in vivo – in vitro study demonstrates the ability for the **eM-Patch**<sup>®</sup> system to provide greater cosmetic effects earlier and with less time commitment from consumers and the patient, all of which are believed to be important commercial benefits of the **eM-Patch**<sup>®</sup> technology.

In March 2009 the Company announced results of a multi-technique human volunteer study by the Optical + Biomedical Engineering Laboratory at the University of Western Australia, conducted by Dr Vincent Wallace and his team. That study concluded that the Company's proprietary ETP magnetic array, used in the **eM-Patch**<sup>®</sup> system, enhanced a number of key downstream bio-effects compared with normal topical application. As the study techniques employed were designed to monitor biological changes rather than record rates of diffusion of the active ingredient, no direct correlation between drug delivery and biological effect could be assured.

The recent Curtin University study replicated the conditions of the volunteer study and collected data on actual drug penetration rates through human epidermis, rather than the bioeffects.

The results of this study have confirmed that the downstream biological effects of the human volunteer study had a high correlation with drug delivery rates from the in vitro study.

This establishes an important in vitro-in vivo correlation which validates the reliability of past in vitro results and more recent in vivo studies. The high correlation between in vivo and in vitro results demonstrates enhanced skin penetration leading to enhanced outcomes, which are key factors in the success of cosmetic products to improve skin health, beauty and anti-ageing.

END: For more information:

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## Background to the Announcement

In December 2008, the Company announced that it was reducing its reliance on in vitro, animal and human study methods in preference to newer in vivo techniques recommended to the Company by international experts. The results of the study by the University of Western Australia into the enhanced delivery of the cosmetic compound Urea in vivo, using OCT and skin electrical models, evidenced the success of this strategy. To allow the Company to integrate its past in vitro results with the results from these newer methods, the study at Curtin University set out to replicate the OCT study parameters using in vitro monitoring techniques. Results confirmed that the downstream beneficial effects seen in recent in vivo studies can be related to increased delivery of the active ingredient by **eM-Patch**<sup>®</sup>.

These results allow the Company to link past, present and future results using multiple testing methods together to attract and demonstrate its drug delivery technology to potential partners.

## About eM-Patch®

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The eM-Patch<sup>®</sup> technology and its powered alternative, Dermaportation, are based on magnetic field principals that have been shown in multi-centred university studies to enhance transdermal drug delivery and to reversibly increase dermal permeability for both lipophilic and hydrophilic molecules and peptides. Magnetic fields are believed to interact with the orbital behaviour of ingredient paired electrons and provide enhanced diffusion while induced electro-osmosis and altered water binding enhances permeability and partitioning. eM-Patch<sup>®</sup> is a cost-effective active drug delivery technology suitable for a broad range of applications in the pharmaceutical, dermatological and cosmetic sectors.

OBJ utilises the eM-Patch<sup>®</sup> technology in the design, development and supply of low-cost, highperformance patch products to partner companies using either generic or proprietary active ingredients. Manufacturing will be outsourced to major international patch manufacturers in Europe, USA and Asia. OBJ provides feasibility assessment, patch formulation, patch prototyping and testing services along with intellectual property development. OBJ offers a number of in vitro and in vivo test models for rapid and low cost assessment in development of patch products.

## About OBJ

OBJ Limited (ASX: OBJ) is an early-stage Australian drug delivery company focused on the development and commercialization of transdermal drug delivery technology for use in pharmaceutical, dermatological and cosmetic applications. OBJ's proprietary Dermaportation and ETP technologies use magnetic fields to control drug movement and to alter skin permeability without disrupting the skin barrier.

OBJ maintains research and development facilities in Perth, Western Australia and undertakes independent studies and assessments through a number of respected universities and Contract Research Organisations.