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Bodyguard excels in clinical trial & consumer research studies

OBJ Ltd: is pleased to report that The University of Queensland (UQ) has completed its clinical trial examining the efficacy of OBJ's Bodyguard Kneeguard (Kneeguard) against the world's largest selling topical non-steroidal anti-inflammatory drug product (Product) with the Company's primary objectives being successfully met.

The follow-up post usage consumer study conducted by Ipsos Australia to examine purchase intent, overall liking, value and uniqueness of Kneeguard (Consumer Study) has also been completed.

The Clinical Trial revealed:

- The Kneeguard significantly improved performance in the Aggregated Function Score (AFS) [physical function test] over a two week period.
- The Kneeguard was also equivalent to the Product for the sport and function components of the KOOS (knee injury and osteoarthritis outcome score) questionnaire.
- The Kneeguard achieved a statistically greater reduction in worst pain score (32%) compared to the Product (17%) after just two weeks usage.

Participants in the clinical trial reported higher skin irritation levels with the Bodyguard product; however the Company believes it has already addressed this issue with the adoption of a new Hydrogen gel technology, which is expected to eliminate this issue and further enhance efficacy of Kneeguard.

The consumer Study research found that:

- Participants indicated a preference for Kneeguard over using the Product.
- Kneeguard outperformed the Product on a number of KPIs including purchase intent, NPS (being a measure of participants' intent to recommend the product), value and uniqueness.
- 3 in 10 users consider Kneeguard to be the best product they have ever tried and more than one in four claim they would definitely buy the starter kit.
- Kneeguard is perceived to be good value.
- The key strengths of Kneeguard are its ease of use, wearability, comfort, aesthetic and its ability to reduce knee pain over time.

The clinical trial showed that Kneeguard, using OBJ's all-natural, drug-free Lubricen formulation significantly improved physical function in individuals

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with a history of knee injury. It also reduced pain in this group to a greater degree than the comparator product



Furthermore, results of a consumer trial conducted on the majority of trial participants was very strongly in favour of increased performance and purchasing intent using the Bodyguard approach.

The double-blinded clinical trial of 114 males aged between 40 and 55 confirmed the initial successful pilot study conducted in 2014.

The aims of the UQ trial and consumer response were:

- To determine if daily use of Kneeguard will improve physical function in individuals who engage in regular exercise but have knee discomfort related to previous knee injury and surgery; and
- To compare the improvement of physical function with OBJ's Kneeguard TGA approved Lubricen formulation and Bodyguard's wearable strap system on participants' mobility directly against the improvement produced by the world's biggest selling topical non-steroidal anti-inflammatory drug product.
- Measure satisfaction rating of participants with the Bodyguard system against present alternative treatments.
- Measure purchasing preferences of participants between the Kneeguard device and present alternative treatments.

Trial participants underwent a number of physical tests in the clinical laboratory with performance on a battery of running tests being one of two primary measures of interest. The Kneeguard substantially improved performance in the aggregated function score (AFS) over the course of the trial, as well as providing an equivalent improvement in the knee injury and osteoarthritis outcome score (KOOS) than the Product.

An important secondary finding saw a significant improvement in the worst pain experienced over the past by patients using Kneeguard after just two weeks of usage. The effect of Kneeguard in this case was superior to that of the Product (32% reduction against 17% reduction).

Importantly, this trial provides valuable data that a prospective partner will be able to use as Claims Support for any potential products launched

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in the future, further distinguishing Bodyguard from existing drug based products in the market.

To measure the satisfaction rating and purchasing preferences of participants, OBJ engaged independent consumer research firm Ipsos Australia to interview the majority of participants in the trial. Ipsos concluded that Kneeguard performed in the top third of pain relief products in relation to customer intent to purchase. Trial participants also confirmed a strong preference for purchasing Kneeguard over the Product. The key strengths of Kneeguard as reported by participants were its efficacy, ease of use and comfort.

It was also observed that although Kneeguard involves an ongoing purchasing commitment, the pod refills are considered to be good value, particularly when compared with existing products available.

User experience was also pronounced with 51% of the Kneeguard users giving it a four or five star rating, compared with neutral feelings regarding its alternatives, with one in three giving it a three star rating.

The FDA-compliant double blind clinical trial was conducted by Professor Bill Vicenzino of the University of Queensland with the support of Professor Tony Wright.

Professor Wright commented:

"The Body Guard trial results are very positive in demonstrating an improvement in function that is at least equivalent to the results achieved with a gold standard topical non-steroidal and a reduction in pain that was greater than the comparator treatment. This is a very positive development for this new and innovative approach to managing joint degeneration.

"There is an opportunity for further product development and evaluation over a longer time frame but this is undoubtedly an important step forward in developing a very innovative approach for a significant healthcare problem".

OBJ Managing Director Jeff Edwards said:

"These results confirm the potential that our Bodyguard technology products can provide a safe, effective and easy to use method of restoring and maintaining a physically activity lifestyle, even for those already suffering from joint pain. While the use of such a wearable technology product represents a large shift in consumer behaviour, the feedback from the trial participants highlights the appeal of this new approach to joint health maintenance can bring."

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Joint pain has traditionally been managed with topical and oral NSAIDs, however increasing longevity and more active lifestyles are rendering this approach unsustainable both from a regulatory, safety and consumer need standpoint. Topical NSAIDs are generally not suitable for use for more than 14 days, which is inappropriate for a degenerative condition that many will suffer for more than 20 years. OBJ's approach of treating the underlying causes of joint pain using natural drug-free ingredients provides a new means of managing joint degeneration in the long term while supporting healthy aging.

In many countries (such as in the USA) topical anti-inflammatory drugs are prescription only or available in limited quantities in order to limit the potential for adverse side effects.

OBJ developed the Lubricen formulation for the Bodyguard range, utilising key naturally occurring macro-molecules including glucosamine, hyaluronic acid and chondroitin sulphate, in preference to utilising non-steroidal drugs. Lubricen was formulated with the assistance of Professor Adrian Davis of the London School of Pharmacy and has already received TGA approval. Lubricen is designed to restore joint lubrication and energy absorption and to alleviate consequential discomfort in degenerated knee function and be available for sale "over the counter" in non-prescription products.

The ingredients that power OBJ's Lubricen formulation are all well characterised and have decades of established safety in humans. However the ability of these ingredients to compete directly against potent drugs has been limited by poor bioavailability due to normal metabolic processes. Using OBJ's proprietary through-the-skin delivery technology, Bodyguard was able to deliver effective amounts of these essential joint

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enhancement ingredients directly into the joint space, and in doing so, bypass first-pass liver metabolism that until now has limited the efficacy of these ingredients.

OBJ is currently developing Bodyguard products for all the major joints of the body as well as wearable technology products for optimised local exercise preparation and recovery.

OBJ plans to distribute the Bodyguard products, when fully developed, through its existing network of international consumer goods partners. These excellent trial results, together with now very advanced pre-production samples in various colours and designs, will be tabled firstly to Procter & Gamble (P&G) who has an exclusive first right to review the results. Depending on the outcome of the P&G analysis, the company may then meet with several other potential distributors who have expressed strong interest in the Bodyguard program to assess the available data and samples.

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About OBJ

OBJ develops proprietary magnetic micro-array drug delivery and product enhancement technologies for the pharmaceutical, healthcare and consumer goods sectors.

OBJ partners companies in the design and development of next generation products using physical science rather than chemistry to provide new levels of product performance without the cost of reformulation or new ingredient approvals.

OBJ offers a portfolio of proprietary technologies and supports partners by providing IP-protected market exclusivity, expertise in magnetic array design, feasibility and efficacy and claims testing, engineering and production.

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ABOUT OBJ'S TECHNOLOGIES

OBJ has developed a platform of physical enhancement technologies based on low-cost magnetic micro-arrays that influence the movement and penetration of drugs, active ingredients and formulations at the molecular level.

Complex 3-D array and moving magnetic fields have the ability to repulse certain molecules to enhance diffusion and to alter the permeability of certain biological and non-biological targets.

OBJ develops low cost micro-array film technology that utilises diamagnetic repulsion, induced permeation and energy redirection to offer a new way of managing the speed, depth of penetration and delivery of active ingredients in a wide range of pharmaceutical and consumer products.