

13 March, 2012

AOD9604 Shows Positive Results in Cartilage and Muscle Repair Models

Calzada Ltd's ('Calzada') wholly owned subsidiary, Metabolic Pharmaceuticals Pty Ltd ('Metabolic'), is pleased to announce that it has received positive results from *in-vitro* tests conducted on its peptide compound, AOD9604, at the Mt Sinai Hospital, Toronto, Canada under the direction of Professor Marc Grynpas and Professor Rita Kandel. These studies were conducted in separate cartilage and muscle cell experiments using animal cell lines and were designed to explore the further commercial potential of the AOD9604.

Key Research Findings

The research results provide evidence that AOD9604:

1. **Has a positive (anabolic) effect on cartilage tissue formation. AOD9604 was found to enhance cartilage tissue formation by increasing the proteoglycan (cellular matrix) and collagen content of cartilage;**
2. **Enhances the differentiation of muscle progenitor cells (cells that create muscle cells) to muscle cells.**

No cell toxicity was caused by AOD9604 in any of the studies.

What These Results Mean

These results mean that AOD9604 might promote cartilage creation and repair and may have a capacity to enhance muscle formation. This may be particularly useful in fields such as Osteoarthritis and diseases where muscle mass loss is a dominant factor.

In commenting on the research findings Dr Kandel said *"These results are exciting because they provide early stage evidence that AOD9604 may help to repair damaged cartilage and muscle tissue."*

Potential Utility of AOD9604 in Cartilage and Muscle Applications

This encouraging efficacy data when combined with the highly favourable safety profile of AOD9604, proven in toxicology studies and six human clinical trials, provides strong rationale for use of the peptide where cartilage or muscle quality is compromised or in need of repair.

For example, AOD9604 may have potential for support in patients with Osteoarthritis and other diseases in which cartilage and muscle degeneration feature as key pathologies, such as Costochondritis (inflammation of cartilage in the ribs), Sarcopenia (age-related loss of muscle mass) and Cachexia (various muscle wasting syndromes).

It might also be possible to use AOD9604 to promote recovery from trauma, burns and other situations where muscle and cartilage damage occurs in otherwise healthy individuals such as in sports injuries.

AOD9604 could offer advantages as it can be given orally and has an outstanding safety record.

Potential Osteoarthritis Market

The potential uses outlined above target support in conditions, trauma and injuries with very large markets and where there are limited or no adequate treatment options. For instance in the case of Osteoarthritis:

"GlobalData estimates that the global Osteoarthritis (OA) market was worth \$4.4 billion in 2010 and forecasts it to grow at a compound annual growth rate of 3.8% to reach \$5.9 billion by 2018. The current treatment options for OA offer only symptomatic relief and are primarily dominated by generics. There are no disease modifying osteoarthritis drugs (DMOAD) currently approved in the OA therapeutics market and the late stage pipeline also lacks DMOADs Owing to all the above factors the OA therapeutics market is expected to show slow growth till 2018."

Source PRNewswire, 25 Oct 2011.

Dr John Chiplin, a non-executive Director of Calzada, previously CEO of Arana Therapeutics Ltd that ran active programs in Osteoarthritis and Rheumatoid Arthritis has reviewed the Mt Sinai data and commented: *"The early stage experimental data indicates that AOD9604 has a net positive effect on enhancing cartilage tissue formation and therefore may have a role to play in treating Osteoarthritis".*

Intellectual Property

In December 2011 Metabolic lodged two patent applications covering both the new cartilage and muscle applications of AOD9604 addressing both human and veterinary uses.

Strategy

Our licensing team intends, where appropriate, to provide this new cartilage and muscle data to companies that have already been provided with bone treatment and repair data.

Metabolic will review the strategic options for maximizing shareholder value from the new data. Whilst an out-licensing strategy will remain the preferred approach, the Board may consider further value adding outsourced research activities if it can be convinced the value of AOD9604 will be significantly increased. These activities, if adopted, will represent a cost-effective approach to building further value in AOD9604.

For further information please contact:

David Kenley
Chief Executive Officer
Metabolic Pharmaceuticals Pty Ltd
Mobile: 0400 151 490
Email: dkenley@calzada.com.au

About Calzada Ltd

Calzada has 100% ownership of PolyNovo Biomaterials Pty Ltd and Metabolic Pharmaceuticals Pty Ltd. The company is listed on the Australian Securities Exchange (ASX Code CZD).

About PolyNovo Biomaterials Pty Ltd

PolyNovo owns and develops a suite of state of the art biodegradable polymers that have potential applications across numerous medical fields. PolyNovo has licence agreements and alliances with a number of the world's leading medical device companies and also has joint venture arrangements with local experts in the areas of skin repair.

About Metabolic Pharmaceuticals Pty Ltd

Metabolic's major asset is the AOD9604 peptide which has potential applications in the treatment of obesity, bone, cartilage and muscle diseases and repair. AOD9604 is a small 16 amino acid peptide modelled on one active segment of human growth hormone. It has proven excellent safety and tolerability in a total of six human clinical trials involving 925 humans. AOD9604 is being sold in the market as one of the key components of Phosphagenics' cosmetic anti-cellulite cream called BodyShaper™. Metabolic receives royalties from Phosphagenics on worldwide sales of this product and a share of any sub-licensing revenue that may be received.

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