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FOR IMMEDIATE PRESS RELEASE

AVIPERO announces JB1a reverses tissue damage and induces tissue repair in emphysema.

EDINBURGH, SCOTLAND------AVIPERO (Registered in Scotland SC353945) announced today the results of its first R&D therapeutic platform in non-stem cell tissue repair and regeneration. The principal candidate, JB1a, is an antibody targeting the cell surface adhesion receptor beta1 integrin.

The preclinical study, funded by the Chief Scientist Office for Scotland, describes a novel therapeutic strategy which reverses tissue damage in emphysema. It was demonstrated that targeting beta1 integrin using JB1a shows potent reversal as well as protective effects in a number of *in vitro* and *in vivo* models of tissue damage. In an animal model of emphysema, JB1a reversed structural and functional features of emphysema. Emphysema is a major component of a progressive lung disease known as Chronic Obstructive Pulmonary Disease (COPD) characterised by the destruction of tissue around the smaller lung sacs, called alveoli, making these air sacs unable to hold their functional shape upon exhalation and leading to disabling shortness of breath.

The study results were published this month in the online edition of the international peer-reviewed journal Advances in Pharmacological Sciences under the title: "Allosteric modulation of beta1 integrin function induces lung tissue repair." http://www.hindawi.com/journals/aps/aip/768720 .

Prof. Robert Naylor, AVIPERO's Director, said this data provides a new paradigm for therapeutics in tissue repair and JB1a is an important early-stage compound. "AVIPERO's technology platform of tissue repair biologicals show broad repair and protective effects in a variety of diseases and conditions", explains Prof. Naylor. "JB1a has shown some interesting early-stage results in areas outside of emphysema, for example, arthritis, neurodegeneration and general age-related cellular decline. Such breadth will enable AVIPERO to expand its therapeutic platform and enhance its product pipeline. As the average life span is increasing, it is important to focus on addressing the unmet need of ageing-associated diseases."

Rehab AlJamal-Naylor, AVIPERO's Chief Scientific Officer, founder and inventor on the research project said JB1a was chosen for this research because of its broad and profound cellular protective and repair properties demonstrated previously in numerous models of diseases and tissue from human volunteers. "The generic feature in all the models tested was the increase in mechanical stiffness of the cell that occurs during tissue damage leading to progressive cell death and degeneration. JB1a can reverse functional and structural outcomes through a mechanism involving the mechanical "re-tuning" and allowing normal repair to progress more efficiently" AlJamal-Naylor said.

In the study, mice suffering from emphysema were treated with JB1a once or twice over a 2-week period. At the end of the treatment period, these mice and various control groups were tested for respiratory function, and structure. The JB1a treated mice showed almost complete reversal of loss of lung elasticity, a measure of lung function. The lung pathology was examined for physical evidence of emphysema. JB1a treatment resulted in a reduction in air space enlargement close to normal.

“We are delighted to see the effect of JB1a in these experiments” Prof. Naylor said. “These promising results show that JB1a, albeit at a very early stage of development, can provide a potential treatment for emphysema.”

About AVIPERO Ltd.
AVIPERO Ltd (Registered in Scotland SC353945) is a private biopharmaceutical company established in 2009. Avipero is focused on the development of novel therapeutics for unmet clinical needs, characterised by a loss of cells and tissues. This includes conditions such as Parkinson’s disease (PD), chronic obstructive pulmonary disease (COPD), arthritis and age related cell decline. AVIPERO has a proprietary first-in-class therapeutic platform covered by a strong intellectual property portfolio.

About beta1 integrin
Integrins are membrane spanning proteins facilitating the two way communication between the inside and outside of a cell. Integrins have the capacity to bind a multitude of molecules both inside and outside of the cell. The binding of these molecules results in the transmission of information into and out of the cell, which can influence a host of different cellular functions, including the cells metabolic activity and energy.

Of the many types of integrin receptors, the beta1 integrin is by far the most ubiquitous allowing cells to detect a vast array of stimuli ranging from toxins, protein hormones, neurotransmitters and macromolecules. There have been numerous publications documenting a potential role of beta1 integrin in tissue development and repair in several tissue types. It is clear that beta1 integrin plays a crucial role during postnatal skin development and wound healing, with the loss of epithelial beta1 integrin causing extensive skin blistering and wound healing defects.

About COPD
COPD includes a spectrum of disease that encompasses chronic bronchitis and emphysema, a pair of commonly co-existing diseases of the lung in which the airways become narrowed. The narrowing leads to a limitation of the air flow to and from the lungs causing a shortness of breath. In contrast to asthma, the limitation of airflow is poorly reversible and usually gets progressively worse over time. In both bronchitis and emphysema there is localized lung tissue damage with inflammatory cell infiltration resulting in scarring an increasing thickness of the airway walls. COPD is a progressive illness and can lead to death. The incidence of COPD varies. In the UK there are an estimated 850,000 people with COPD or 1 person in 59 receiving a diagnosis of COPD in their lifetime. In the US the prevalence is higher with an estimated 1 in 20 people being diagnosed, or 5% of the population equating to around 13.5 million people. The WHO estimate that in 2005 around 5% (3 million) of all deaths globally where due to COPD, this is set to increase by around 30% over the next 10 years.

Treatment options are limited and address only the symptoms and not the underlying disease. The mainstay treatments are those primarily used to treat asthma and include the short and long acting bronchodilators and the inhaled anti-inflammatory steroids. More recently a number of anticholinergic drugs and PDE4 inhibitors have found favour in treatment of symptoms. However, their safety track record remains to be established.

About Advances in Pharmacological Sciences
Advances in Pharmacological Sciences is a peer-reviewed, open access journal that publishes original research articles and review articles in all areas of pharmacological sciences. The journal is published by Hindawi Publishing Corporation which is a rapidly growing academic publisher with more than 300 Open Access journals covering a wide range of academic disciplines.

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Statements contained herein, other than those which are strictly statements of historical fact may include forward-looking information. Such statements will typically contain words such as “believes”, “may”, “plans”, “will”, “estimate”, “continue”, “anticipates”, “intends”, “expects”, and similar expressions. While forward-looking statements represent management’s outlook based on assumptions that management believes are reasonable, forward-looking statements by their nature are subject to known and unknown risks, uncertainties and other factors that may cause the actual results, events or developments to be materially different from any future results, events or developments expressed or implied by them.

Such factors include, among others, the inherent uncertainty involved in scientific research and drug development, AVIPERO's early stage of development, lack of product revenues, its additional capital requirements, the risks associated with successful completion of clinical trials and the long lead-times and high costs associated with obtaining regulatory approval to market any product which AVIPERO may develop. Other risk factors include the limited protections afforded by intellectual property rights, rapid technology and product obsolescence in a highly competitive environment and AVIPERO's dependence on collaborative partners and contract research organizations. These factors should be considered carefully. Readers are cautioned not to place undue reliance on such forward-looking statements. Similarly, nothing in this press release is meant to promote a pharmaceutical product or make a regulated claim of efficacy.

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