

Wednesday 30 September, 2015

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ASX Market Announcements  
ASX Limited  
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**RE: NEW INDEPENDENT CLINICAL DATA ON ADHERIUM  
SMARTINHALER™ PLATFORM IN PAEDIATRIC ASTHMA**

Please see attached an announcement summarising data from three independent clinical studies which support the use of the Adherium Smartinhaler™ platform in paediatric asthma. The studies are being presented at the prestigious European Respiratory Society International Congress, being held in Amsterdam.

Kind regards



Bronwyn Le Grice  
Joint Company Secretary

[ASX: ADR](#)**Company Overview**

Adherium is a global leader in digital health technologies which address sub optimal medication use in chronic disease.

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Mr Garth Sutherland (Group CEO)  
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Mr Jeremy Curnock Cook  
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## New Independent Data on Adherium Smartinhaler™ Clinical Outcomes Shows Increased Adherence and Reduction in Severe Attacks

*..Three independent studies support the positive impact of Smartinhaler™ platform in paediatric asthma  
...144% increase in adherence, a 14.9% increase in lung function and a 37% reduction in oral steroids indicating  
reduced severe exacerbations*

*..Data disclosed at prestigious European Respiratory Society International Congress in Amsterdam*

*..Adds to data on Adherium's Smartinhaler™ medication sensors published in Lancet Respiratory Medicine*

**Melbourne, Australia, 30 September:** Adherium Limited (ASX: ADR), a global leader in digital health technologies which address sub-optimal medication use in chronic disease; today announced that data from three independent studies demonstrating the efficacy of the Company's Smartinhaler™ platform in paediatric asthma management will be presented at the European Respiratory Society International Congress, taking place 26-30 September in Amsterdam, The Netherlands.

These clinical outcomes build on the data previously published in Lancet Respiratory Medicine in January 2015, which showed use of the Smartinhaler™ platform increased adherence to preventative medication by 180% and reduced use of reliever medication by 45%<sup>1</sup>.

Adherium Group Chief Executive Officer, Garth Sutherland said, "These studies clearly show the impact that the application of Adherium's Smartinhaler™ platform can have on the health outcomes of children with asthma. Most notably, the Sheffield study showed a substantial reduction in the need for oral steroids, indicating a significant reduction in severe attacks, and an increase in lung function"

"Asthma can be a debilitating condition and independent studies have consistently demonstrated that our Smartinhaler™ platform can transform the lives of children. These three studies are a valuable contribution to the growing bank of clinical outcomes data which supports the use of Smartinhaler™ medication sensors in improving health outcomes and medication adherence in chronic respiratory disease" he said.

The three studies which will be presented as part of *Oral Presentation Session 499 Paediatric asthma and allergy: e-health in management*, taking place on 30 September are summarised below:

### **Randomised control trial to investigate whether electronic adherence monitoring with reminder alarms and feedback can improve clinical outcomes in childhood asthma**

Dr Robert Morton (Clinical Research Fellow, University of Sheffield)

Abstract number: OA4772

Interim data from the study being undertaken at the University of Sheffield has demonstrated that use of the Smartinhaler™ platform substantially increases adherence and significantly reduces the number of oral steroid courses required over the period. The interim data shows that at 12 months:

- a 144% increase in adherence in the Smartinhaler™ group vs control arm;
- a 37% reduction in the number of oral steroid courses required in the 12 months from 2.7 to 1.7, a clear marker of reduced severe exacerbations; and

<sup>1</sup> Chan AHY, Stewart AWS, Harrison J, Camargo C, Black PN, Mitchell EA. The effect of an inhaler with ringtones on asthma control and school attendance in children. Lancet Respir Med. January 21 2015. [http://dx.doi.org/10.1016/S2213-2600\(15\)00008-9](http://dx.doi.org/10.1016/S2213-2600(15)00008-9)

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- a 14.9% increase lung function as measured by FEV<sub>1</sub> (mean forced expiratory volume in 1 second % predicted) which increased from 87% to 100%.

### **Exploring the attitudes of adolescents with asthma towards monitoring and sharing of data on their inhaler use**

Mr Sam Howard (PhD student, University of Nottingham)

Abstract number: OA4773

This study investigated the attitudes of adolescents with asthma towards an Adherium Smartinhaler™ medication sensor in comparison to existing monitoring methods such as self-reporting.

Data from the study showed that both adolescents and parents were significantly positive towards having inhaler use monitored and shared with family or healthcare providers. Interviews with the adolescents showed that adolescents were enthusiastic about utilising the device to prove their independence and demonstrate responsibility for their asthma.

### **Improvement in asthma control and airway inflammation during a period of electronic monitoring**

Dr Anja Jochmann (Royal Brompton & Harefield NHS Foundation Trust)

Abstract number: OA4775

Self-assessment of adherence was compared against electronic monitoring via the Smartinhaler™ Platform in a study of 50 children with difficult asthma.

The study demonstrated significant improvement in key indicators following use of Smartinhaler™ including significant improvements in lung function (FEV<sub>1</sub>), lung inflammation (FENO), and in quality of life questionnaire results (mPAQLQ).

**\*\*ENDS\*\***

## **ABOUT ADHERIUM**

Adherium (ASX:ADR) is an Australian Securities Exchange listed company which develops, manufactures and supplies digital health technologies which address sub-optimal medication use and improve health outcomes in chronic disease.

The Company's proprietary Smartinhaler™ platform has been independently proven to improve medication adherence and health outcomes for patients with chronic respiratory disease.

Adherium has the broadest range of "smart" medication sensors for respiratory medications globally. Adherium Smartinhaler™ medication sensors attach to prescription inhalers to provide reminders and monitoring of inhaler usage.

The SmartinhalerLive™ platform uses wireless communications technology to provide real time data collection and reporting from Smartinhaler™ medication sensors.

Currently clinicians do not have a system to record medication usage and rely heavily on patient feedback, which can be inaccurate. Having access to accurate and objective data enables physicians to identify sub-optimal medication adherence and suggest more effective treatment plans for patients.

Clinical outcomes data has proven that the Smartinhaler platform can improve adherence by up to 59% in adults and 180% in children with asthma. In addition, severe episodes were reduced by 60% in adults with asthma. Both groups benefited from improved quality-of-life as a result of their improved adherence, demonstrating a substantial gain over current best practice treatment.

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The Smartinhaler™ platform has so far been used in 40 projects (clinical, device validation or other) and has peer reviewed clinical outcomes data resulting from 14 studies. The Company has received FDA 510(k) notifications for clearance to market and CE Marks for its devices and software, which allows it to sell these devices into international markets.

Adherium is a provider of digital health solutions to pharmaceutical, remote patient monitoring and clinical trials companies and organisations.

[www.adherium.com](http://www.adherium.com)

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