

#### JANUARY 11, 2016

ASX Market Announcements ASX Limited Level 4 North Tower, Rialto 525 Collins Street Melbourne VIC 3000

#### **RE: EBD BIOTECH SHOWCASE PRESENTATION & CORPORATE OVERVIEW**

Please see attached an investor presentation and corporate overview prepared for the presentation by Group CEO, Garth Sutherland, and associated meetings arranged by the Company at the EBD Biotech Showcase in San Francisco.

In addition, the Company is pleased to inform shareholders of a new website for the Company's Smartinhaler<sup>™</sup> platform has been launched at www.smartinhaler.com.

Kind regards

Bronwyn Le Grice

Joint Company Secretary

#### ASX: ADR

**ABN** 24 605 352 510

#### **Company Overview**

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

#### Directors

Dr J Doug Wilson (Chair) Mr Garth Sutherland (Group CEO) Prof. John Mills Mr Jeremy Curnock Cook Mr Bruce McHarrie Mr Bryan Mogridge Dr William (Bill) Hunter

Joint Company Secretaries Mr Rob Turnbull Ms Bronwyn Le Grice

**Registered Office** Level 12, 15 William Street Melbourne VIC 3000 Australia

NZ Office Level 2, 204 Quay Street Auckland 1010 New Zealand

Investor Relations Contact Ms Bronwyn Le Grice +61 424 862 600

Email investors@adherium.com

Website www.adherium.com www.smartinhaler.com

# Adherium<sup>®</sup> Investor Presentation

se only

Garth Sutherland, Group CEO January 11, 2016



# **Forward Looking Statement**

The following material is of a general nature and has only been prepared as a presentation aid. This presentation does NOT contain all of the information that may be required for evaluating Adherium Limited ACN 605 352 510 (Adherium®), its assets, prospects or potential opportunities.

This presentation may contain budget information, forecasts and forward looking statements in respect of which there is NO guarantee of future performance and which of themselves involve significant risks (both known and unknown). Actual results and future outcomes will in all likelihood differ from those outlined herein.

Forward-looking statements are statements that are not historical facts. Words such as "expect(s)", "feel(s)", "believe(s)", "may", "anticipate(s)" and similar expressions are intended to identify forward-looking statements. These statements include, but are not limited to, statements regarding future results, regulatory approvals, production targets, sales, staffing levels etc. All of such statements are subject to risks and uncertainties, many of which are difficult to predict and generally beyond the control of the Company, that could cause actual results to differ materially from those expressed in, or implied or projected by, the forward-looking information and statements.

These risks and uncertainties include, but are not limited to: (i) the possible delays in and the outcome of product development, (ii) risks relating to possible partnering or other like arrangements, (iii) the potential for delays in regulatory approvals, (iv) the unknown uptake and market penetration of any potential commercial products and (vi) other risks and uncertainties related to the Company's prospects, assets / products and business strategy. This is particularly the case with companies such as Adherium which operate in the field of developing and commercializing devices. You are cautioned not to place undue reliance on these forward-looking statements that speak only as of the date hereof, and we do not undertake any obligation to revise and disseminate forward-looking statements to reflect events or circumstances after the date hereof, or to reflect the occurrence of or non-occurrence of any events.

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# About Adherium®

# Transforming Chronic Disease Management

Adherium<sup>®</sup> designs, develops and manufactures digital health solutions which address sub-optimal medication use in chronic disease

# **Our Vision**

Our vision is to be the largest global provider of medication use data, empowering patients, healthcare professionals, and payers in the effective management of chronic disease



# **Leading Digital Health Solutions**

Adherium's 1st solution Smartinhaler<sup>™</sup>, is a digital health solution for inhaled medicines used in the treatment of chronic respiratory diseases

# **Proven in Clinical Trials**

Smartinhaler<sup>™</sup> technology has been supplied to the global clinical trials market for >10 years

# **Positioned for Growth**

Positioned for strong growth with AstraZeneca Supply & Development Agreement and increasing demand from clinical trial and commercial channels

# **Strong Financial Position**

Adherium® listed on the Australian Securities Exchange (ASX) in August 2015 and raised US\$25M, resulting in a current market capitalisation of US\$65M.

# **About Adherium®**

**Three Business Verticals** 



# **Threefold Approach**

Three Business Verticals Addressing Major Unmet Market Needs



# Respiratory

- Market dominance with Smartinhaler™
- US\$34B Annual Preventable US Healthcare Costs

# **Other Chronic Diseases**

- New chronic diseases and drug delivery modalities
- US\$200B Total US Savings Opportunity from IoT Technologies

# Data

- · Monetize exponentially growing database
- The impact of data on the global healthcare system is expected to be profound

Source: "The Digital Revolution comes to US Healthcare" Goldman Sachs (2015) Internet of Things. Vol.5.

# Adherium<sup>®</sup> Threefold Approach

Three Business Verticals Addressing Major Unmet Market Needs

RESPIRATORY	D A T A	OTHER CHRONIC DISEASES
Market Dominance in Chronic Respiratory Disease Management with Smartinhaler™	Monetise exponentially growing database (driven by proliferation of data generating devices in market)	Application of Adherium <sup>®</sup> technology to new chronic diseases and drug delivery modalities
Smartinhaler™ the key platform, rolling out internationally Global distribution channel agreement in place and expanding EU & US sales & marketing hubs to be established Full pipeline of innovation that will generate more, new, valuable data	Significant quantities of incoming data arriving daily Establishing a dedicated data team to mine and extract value from data Existing commercial agreements enable monetization of data through value added reporting Control over sensor through to back end databases provide Adherium <sup>®</sup> with agility to add new sensor data	Smartinhaler™ Platform building blocks are directly transposable Experience in design, development, regulatory approvals, manufacturing, pricing and commercialization, all directly applicable Existing and new channel partnerships provide multiple opportunities Target applications include precision and personalized medicine and chronic diseases costing > \$5K per patient p.a.
Multinational Pharmaceutical & Medical Technology Companies Payers – Governments & Insurers Hospitals Disease Management Organizations Clinical Trials	Multinational Pharmaceutical & Medical Technology Companies Payers – Governments & Insurers Technology Companies	Multinational Pharmaceutical & Medical Technology Companies Payers – Governments & Insurers Hospitals Disease Management Organizations Clinical Trials

# About Smartinhaler™

The World's Broadest Range of Medication Sensors, Software and Data for Chronic Respiratory Disease Management



# The Market

Every Year in the US Asthma and COPD Cause More Than...

Asthma causes ...

14m Doctors visits

439,000 Hospital Stays

US \$56B

Cost of Asthma to US Society

COPD causes ...

1.5m ED Visits

699,000 Hospital Stays

US \$50B

In the US, Total Cost COPD

# **Compelling Clinical Need**

Inhaled corticosteroid therapies are effecting in the majority of patients, but adherence is poor.

L\_1 Horne, R. (2006). Compliance, adherence, and concordance: implications for asthma treatment. CHEST Journal, 130(1\_suppl), 65S-

<sup>2</sup> Royal College of Physicians. (2014). Why asthma still kills: the National Review of Asthma Deaths (NRAD) Confidential Enquiry Report: London: RCP

<sup>3</sup> Williams et al. (2004). Relationship between adherence to inhaled corticosteroids and poor outcomes among adults with asthma. Journal of Allergy and Clinical Immunology, 114(6), 1288-1293.

# **The Clincal Need**

plans<sup>1</sup>

Medication Adherence is a key issue in the treatment of chronic respiratory disease

34%

<50%

Asthma deaths linked to sub-optimal adherence<sup>2</sup>

Children adhere to prescribed treatment

60%

Reduction in hospitalizations from increased adherence<sup>3</sup>

# The Solution: Adherium<sup>®</sup> Smartinhaler<sup>™</sup>

The broadest range of medication sensors for inhaled medications globally

#### Disease Management Solutions

Smartinhaler™ provides a sophisticated disease management solution for the treatment of chronic respiratory diseases

## **Advanced Sensor Technologies**

Advanced sensor technologies that provide the doctor and patient with objective data and interventions regarding patient medication usage and drug delivery technique

## Pharmaceutical Brand Extension

Provides pharmaceutical companies with brand-extension for blockbuster drugs, including those drugs that are coming off patent



# Globally Proven Performance

Smartinhaler<sup>™</sup> technology has been used by organizations around the world for over 10 years

International regulatory approvals in place including 510(k) clearance to market & CE Mark

#### Smartinhaler™

Gold standard electronic monitoring of respiratory medication use



# Smartinhaler<sup>™</sup> Improves Clinical Outcomes

3 randomized control trials have demonstrated improved adherence using the Smartinhaler™ improves clinical outcome in asthma, including reduced exacerbations and improved quality-of-life

## Foster et al. (2014)

Inhaler reminders improve adherence with controller treatment in primary care patients with asthma



# Smartinhaler<sup>™</sup> Improves Clinical Outcomes

3 randomized control trials have demonstrated improved adherence using the Smartinhaler™ improves clinical outcome in asthma, including reduced exacerbations and improved quality-of-life

## Chan et al. (2015)

The effect of inhaler with ring tones on asthma control and school attendance in children



# Smartinhaler<sup>™</sup> Improves Clinical Outcomes

3 randomized control trials have demonstrated improved adherence using the Smartinhaler™ improves clinical outcome in asthma, including reduced exacerbations and improved quality-of-life

#### Morton et al. (2015 Interim Data)

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

# 144%个

Adherence in the Smartinhaler™ group vs control arm;

37%↓

Oral steroid courses required in the 12 months from 2.7 to 1.7, a clear marker of reduced severe exacerbations

100%

Restoration of lung function as measured by FEV1 (mean forced expiratory volume in 1 second % predicted)

# **Device Reliability**

97-100% accuracy in recording device actuationswith 100% accuracy in reminders5 studies have demonstrated high reliability

#### The Research

Burgess et al. (2006).

In vitro evaluation of an asthma dosing device: the smart-inhaler

Patel et al. (2012)

Six-month in vitro validation of a metered-dose inhaler electronic monitoring device: implications for asthma clinical trial use

#### Foster et al. (2014).

The reliability and patient acceptability of the SmartTrack device: a new electronic monitor and reminder device for metered dose inhalers

Gradinarsky & Loof (2014).

Inhalation adherence monitoring using smart electronic add-on device: Accuracy evaluation using simulated real-life test program

Pilcher et al. (2015).

Three-month validation of a Turboinhaler electronic monitoring device: implications for asthma clinical trial use

# Market dominance in respiratory disease





Market Dominance in Respiratory Disease via Smartinhaler™



**Global Pharma Companies** 

Multiple commercial and development

AstraZeneca

projects underway

# Vertical 1 Channels to Market

02

# **Global MedTech Companies**

Market evaluation study in progress with multinational client

Distribution to Hospital, Physicians, Pharmacies and Patients

03

Payers & DMO's

**Insurance Agencies** 

**Disease Management Organizations** 

Governments



# Pharma as a Customer

Connected Devices the New Playing Field

In latest biopharma-med tech pairing, Teva snaps up respiratory compliance tracker Gecko

Fierce Medical Devices, September 25, 2015 | By Stacy Lawrence

AstraZeneca Global Supply And Development Agreement

Long term, global agreement 10 years, worldwide, all AZ affiliates

**Supply & Development** Devices, Software, Data, Innovation, Embedded Solutions

**Data Analysis** Commercial Model for Data Monetization

Investment 5.64% Shareholder US\$3m Investment in IPO

# 

# Vertical 1

# Smartinhaler<sup>™</sup> Commercial Strategy

2015				2016				2017				2018	8			2019			
Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1		Q3	Q4	Q1	Q2	Q3	Q4
	raZenec reemen							Sca	ale out a	cross m	ultiple d	lrug de	elivery plat	forms	1				
						2 <sup>nd</sup> Maj	jor Agre	ement						Market E	Expansi	ion			
									3 <sup>rd</sup> Majo	r Agreei	ment			М	arket E	xpansior	1		
	I	PO			Ma for align	arket Sc ed tech		s	>			Веу	ond-the-Ir/	ıhaler M	arket E	ntry			
				EU Sale	es Hub	U	JS Sale	s Hub											

#### International Commercialization

- Two new major commercial agreements within 18 months, and then a third thereafter
- Secure >50 international clinical projects in the next 24 months
- These provide major distribution channels for sales of devices, software and services

#### New Channels to Market & Market Expansion

- Expand commercial activities through new channels to market: Multinational medtech, Pharmacy, Hospital & Disease Management Organizations
- Geographical expansion into new jurisdictions

#### In Market Sales & Marketing Hubs

• Establish sales & marketing hubs in key northern hemisphere markets

Market Leaders Through Innovation and Product Development

**01** Smaller, Sleeker, Faster, Better

Miniaturization, Increased sensors, Industrial design, Greater feature Sets

**03** Software & Applications

Mobile applications for iOS & Android Integration Web Services, Data Management, Data security 02 Smartinhaler™ inside

Embedded solution for blockbuster treatments



Data mining & Analytics Performance data for commercial customers

# 

# Vertical 1

# Smartinhaler™ Technology Strategy



#### Next Generation Smartinhaler™ Technology

- World leading industrial design partners
- Expanding R&D team across hardware, software and data analytics
- Smartinhaler<sup>™</sup> inside an embedded solution
- Cutting edge communication and data management systems
- New devices for new medications developed by pharma

#### Reimbursement

 Support commercial clients by pursuing reimbursement in major markets

#### World Class Data Analytics capacity

- Build leading data analytics team
- Monetize the growing data asset

# Vertical 2 Monetizing the Data Asset

Leveraging the Exponential Growth in Data Generated by Adherium<sup>®</sup> Devices Globally



Exponential Growth of the Data Asset

Adherium's devices are designed to generate, capture and communicate data.

Increasing the number of devices deployed exponentially increases the volume of data collected by Adherium<sup>®</sup> servers.

This data represents an ever broadening and deepening asset of population wide medication use data.



Monetizing the Data Asset

Smartinhaler<sup>™</sup> data ownership resides with Adherium<sup>®</sup>

Tens of thousands of devices deployed globally report data back to our servers on a daily basis

Bevelop & deploy new market leading devices into international markets

Data generating devices contribute to the Adherium<sup>®</sup> Internet of Things, exponentially growing the data asset base of the company. 2 Expand Smartinhaler™ databases through international commercialization

Substantial and rapidly growing respiratory data sets

**04** Leverage data to realize value

New commercial and scientific breakthroughs only achievable through a critical mass of data Data Analytics and provision of large dataset reports to key channels to market

# Vertical 3 Beyond Respiratory

Transforming Patient Health in Chronic Disease



# The Internet of Things and Chronic Disease management

The cost of healthcare is becoming prohibitive but, there is a digital solution



The Internet of Things and Chronic Disease Management

**8/10** healthcare dollars are spent on chronic disease

**54%** Americans 50-64 & 27% of Americans older than 65 use smartphones

Total US Healthcare Savings from Digital Technologies estimated at **US\$300B+** 

The Healthcare Internet of Things can create a **\$30B+** market by 2025



Application of Adherium<sup>®</sup> Platform to Other Chronic Diseases

**Targeting New Disease Areas** 

Target new disease areas where annual disease costs are >\$5k per patient per annum e.g. Cardiovascular disease, Diabetes

02

## Leverage Whole-of-Platform Knowledge

Leverage whole-of-platform knowledge

Key skill sets in understanding of patient behavior

Sensors, design, validation

Software, applications and data analytics

03

# Accelerate Commercialization through Partnerships

Leverage existing and new commercial relationships beyond the inhaler

Identify and secure key development partners

Growth by acquisition



# Why Adherium<sup>®</sup> ?



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# **Intellectual Property**

Globally Registered Innovation

TECHNOLOGY	PATENT STATUS
SmartTurbo2 (incl. Turbu+™)	PCT International; national filings to follow, NZ (granted)
Communications accessory for a compliance monitor	US (granted); EP (pending); NZ (granted)
Adherence monitors with cap detect function	PCT International; national filings to follow, NZ (granted)
Loosely coupled pMDI adherence monitor	US and EP (pending), NZ (granted)
Adherence monitors utilizing external optical dose counter	NZ (granted) and US (pending)
Adherence monitors with device recognition function	NZ (pending); PCT International; national filings to follow.
New generation adherence monitors for DPIs	PCT International; national filings to follow.
Dose detection through cap removal and acoustic sensors	PCT International; national filings to follow.
Adherence monitor utilizing 2-switch cap detect	NZ provisional; PCT Int. and national filings to follow

TECHNOLOGY	DESIGN STATUS
SmartTurbo2 and SmartTurbo3	REGISTERED: European Community, Australia, NZ, China, Pending: US
SmartHandy™ for HandiHaler®	REGISTERED: NZ, Australia, Europe, Pending: China
SmartTouch™ for Easi-Breathe®	REGISTERED: NZ, China and Europe
SmartTouch™ for Symbicort® v.1	REGISTERED: NZ, Pending: Europe and the USA
SmartTrack®	REGISTERED: NZ
SmartDisk®	REGISTERED: NZ
SmartTouchAV	Pending: Europe, NZ, China and the USA
SmartTouch™ for Symbicort® v.2	Pending: NZ; foreign filings to follow
Adherence monitor for Ellipta®	Pending: NZ; foreign filings to follow

\*NZ-only granted patents are not included (i.e., Ring Tones and Web Services)

Easi-Breathe® is a registered trademark of Ivax Research Inc./Norton Healthcare. HandiHaler® is a registered trademark of Boehringher Ingelheim. Ellipta® is a registered trademark of GSK. Turbu+11 is a trademark of AstraZeneca.



# In Summary An Unparalleled Opportunity

Electronic monitoring and interventions will become the

- We have tens of thousands of devices deployed globally, and an international client base
- PUThe technologies behind Adherium® Smartinhaler™ can be rapidly developed for other chronic diseases

The Company has required regulatory approvals in all major markets

- The Company is well capitalized, and has a strong cash position to Support its global growth strategy
- The Company is accelerating rapidly, and leveraging its leadership in respiratory disease to move into new chronic diseases and the monetization of its data assets

- Revenues will be derived from a number of channels:
  - Multinational pharmaceutical & medical technology companies
  - ✓ Distribution to hospitals, doctors and pharmacies
  - ✓ Clinical trials
  - ✓ Disease management groups
  - ✓ Health care providers and insurance
- Adherium<sup>®</sup> is expanding rapidly with hubs in UK and USA, increased marketing and data analysis, design, regulatory capabilities
- More than a decade of experience gives us the best possible chance of success

# **Corporate and Financial Information**



# Adherium<sup>®</sup> Trading Summary

August 2015 Listing through to December 31, 2015



# Adherium<sup>®</sup> Leadership

**Experienced Team and Board** 

# **Executive team**

Garth Sutherland Founder & Group CEO

Rob Turnbull

Chief Financial Officer

# Bronwyn Le Grice

Head of Commercial Development

# Nigel Devine

VP Production & Development

Maggie Scott Head of Clinical Operations

Nancy She Head of Procurement & Logistics

**Chris Mander** Head of Regulatory & Quality

# **02** Board of Directors

**Dr Doug Wilson** MB, ChB, PhD, FRACP, FRCPA Chairman

Jeremy Curnock Cook MA Non Executive Director

Prof John Mills AO SB MD FACP FIDSA FRACP ARCPA

Independent Non Executive Director

Dr William (Bill) Hunter BSc, MSc, MD Independent Non Executive Director

**Bruce McHarrie** BCom, FCA, GAICD Independent Non Executive Director

**Bryan Mogridge** BSc, ONZM, FNZIOD Independent Non Executive Director

Garth Sutherland MSc. Group CEO, Executive Director

# **Our Shareholders**

# Top 20 Shareholders December 31, 2015

RANK	ΝΑΜΕ	%
1.	ONE FUNDS MANAGEMENT LIMITED	16.64
2.	K ONE W ONE LTD	7.68
3.	CITICORP NOMINEES PTY LIMITED	7.63
4.	MR GARTH SUTHERLAND	7.06
5.	ASTRAZENECA AB	5.64
6.	NATIONAL NOMINEES LIMITED	5.60
7.	ICE ANGELS NOMINEES LTD	4.12
8.	NZVIF INVESTMENTS LIMITED	3.13
9.	UBS NOMINEES PTY LTD	2.96
10.	HSBC CUSTODY NOMINEES (AUSTRALIA) LIMITED	2.81
11.	J P MORGAN NOMINEES AUSTRALIA LIMITED	2.58
12.	HSBC CUSTODY NOMINEES (AUSTRALIA) LIMITED-GSCO ECA	2.44
13.	CURE KIDS VENTURES LTD	2.42
14.	HSBC CUSTODY NOMINEES (AUSTRALIA) LIMITED - A/C 3	1.99
15.	UBS NOMINEES PTY LTD	1.77
16.	NATIONAL NOMINEES LIMITED <db a="" c=""></db>	1.68
17.	BRISPOT NOMINEES PTY LTD <house 1="" a="" c="" head="" no="" nominee=""></house>	1.50
18.	UBS WEALTH MANAGEMENT AUSTRALIA NOMINEES PTY LTD	1.10
19.	MOGRIDGE & ASSOCIATES LTD	1.05
20.	ROSS ALAN SUTHERLAND + VALERIE MARY SUTHERLAND + GARTH CAMPBELL SUTHERLAND	0.75

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# Thank you

