



Investor Presentation – Morgan Stanley

Medical life-science company addressing high volume, unmet patient needs

By reading this document, the Recipient acknowledges that the information contained is confidential and has been prepared only to provide information about the investment to the Recipient and its advisers and for no other purpose.

KEY HIGHLIGHTS

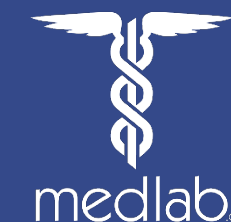


- **NANOCELLE™ CANNABIS (NANABIS™)** *Patent pending, opioid alternative for advanced cancer pain* – In HREC (ethics), for what is potentially one of the most significant trials of its kind.
- **NANOCELLE™ ATORVASTATIN (NANOSTAT™)** *Patent pending, nanoparticle statin* - Successful and repeatable outcomes have been achieved in our 5mg trial. Zenith agreement signed, Bioequivalent studies to commence soon.
- **DEPRESSION** *Patent pending bacterial medicine supporting gut/brain axis*– Significant outcomes with completion of two phase 1 clinical trials using Medlab's NRGBiotic™ (in market). **Phase 2A HREC APPROVED.**
- **DIABETES & OBESITY** *Patent pending bacterial medicine supporting glucose metabolism* – Significant outcomes with completion of initial human trials using new product developed from Medlab's MultiBiotic™ (in market), validated write up underway, trial progression planned.
- **NUTRACEUTICAL SALES:**
 - H1 2017 Sales achieved strong growth over H1 2016
 - December 2016 quarter achieved growth of 28% over the September 2016 quarter
 - Advanced stages of potential JV discussions for a “fighting” brand in retail Pharmacy, allowing Medlab to leverage sales from both back of store (traditional business) and front of store.

About Medlab (ASX. MDC)

- Create innovative new medicines, such as :
 - medicines derived from bacteria
 - bioavailable cannabis (CBD/THC) for the management of pain associated with cancer, HIV/AIDS and chronic diseases such as Chronic Kidney Disease and Diabetes.
- Create next "gen" drug delivery solutions for pharmaceuticals for improved pharmacokinetics, such as statins.

Medlab's Performance



Medlab Clinical was listed on the ASX on 14th July 2015

Jul 2015 \$0.20 - 27 Mar 2017 \$0.90

450% Growth



Financial Results



Medlab's results for the half year to December 2016 reflect the current orientation of management focus towards the research and development program. This adds to costs but they are offset by sales from nutraceuticals, showing the benefits of our business model of combining these two complimentary operations.

CURRENT REPORTING PERIOD:
PREVIOUS CORRESPONDING PERIOD:

Half-Year Ended 31 December 2016
Half-Year Ended 31 December 2015
Amount
\$

Up/Down

Movement

KEY INFORMATION

Revenue from ordinary activities	2,123,668	up	83.4%
(Loss) from ordinary activities after tax attributable to members	(1,704,884)	up	1.4%
Net (loss) attributable to members	(1,704,884)	up	1.4%

We undertake pioneering research.

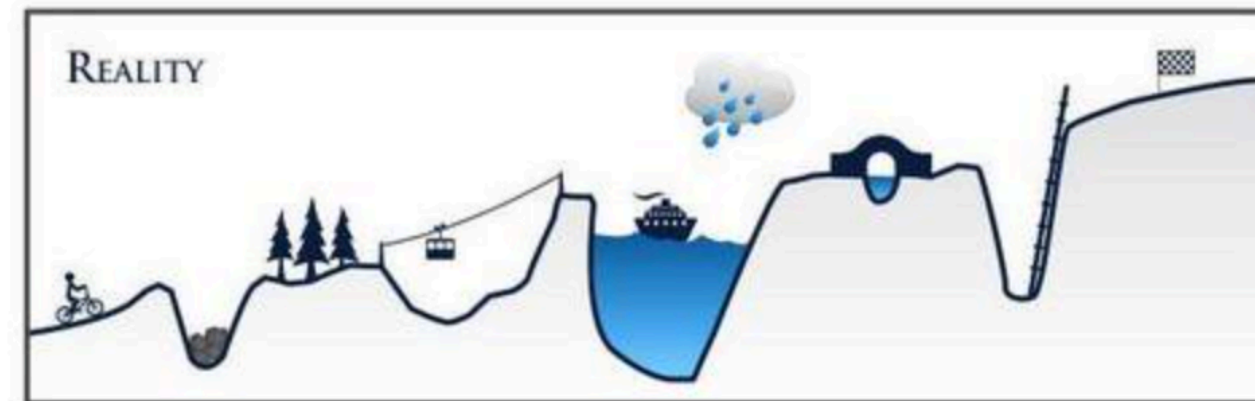
We campaign policy change.

We lead innovation.

- 5 key areas underway and accelerated
- Our potential is in our research
- Short timelines, Phase 2a conclusion is our exit point

Research that takes time, effort and consideration.

**“If it was easy,
everyone would do it.”**





NanaBis™

NanoCelle™ Cannabis (CBD/THC)

For advanced cancer pain

Opioids are Standard Therapy



“OPIOID NATION

About 42 million packs of opioids are sold per year in Australia, including 27 million packs of prescription opioids and 15 million packs of OTC opioids.”

(Australian Doctor Feb 2017)

Cannabis Research – Cancer Pain



A recent (2007) global meta analysis the pooled data from 52 studies that met pre defined quality standards showed that pain was prevalent in cancer patients:

- 64% in patients with metastatic or advanced stage disease.
- 59% in patients on anticancer treatment.
- 33% in patients after curative treatment.

“Nearly one of two patients with cancer pain is undertreated.”

More than one-third of the patients with pain in the reviewed studies graded their pain as moderate or severe.

Reference:

Fisch M, Cleeland C et al. Prospective, Observational Study of Pain and Analgesic Prescribing in Medical Oncology Outpatients With Breast, Colorectal, Lung, or Prostate Cancer, Journal of Clinical Oncology, Vol 30, Number 16, June 1 2012.

van den Beuken-van Everdingen MHJ, de Rijke JM, Kessels AG, Schouten HC, van Kleef M, Patijn J, 2007. Prevalence of pain in patients with cancer: a systematic review of the past 40 years. Ann Oncol 18(9):1437-1449.

NanoCelle™ Cannabis (NanaBis™)



Ethics agreement underway with Royal North Shore Hospital, headed by Professor Stephen Clarke, for one of the most significant studies in treating advanced cancer pain - awaiting final ethics approval.

PICTURES BELOW SHOW THE PROGRESSION OF NANABIS™ FROM PLANT TO PROPOSED PRODUCT

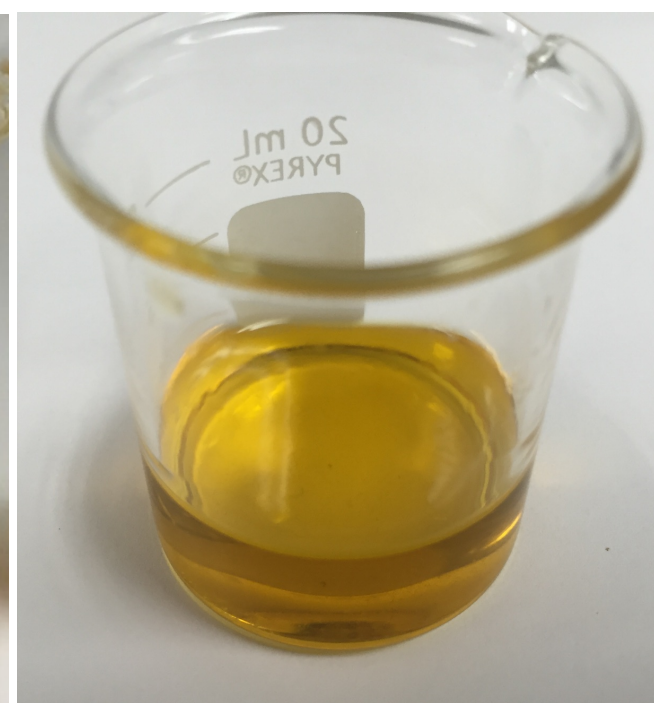
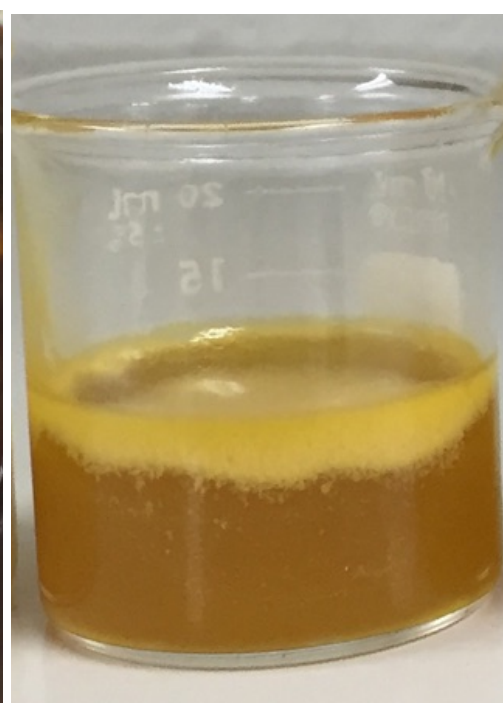
Concentrated 80% Extracts

NanoCelled™ CBD/THC

Plant



Cleaned 80% Extract



Proposed Product



CBD & THC: This is Different!

THC:

- Analgesic
- Anti-spasmodic
- Anti-inflammatory
- Psychotropic

CBD:

- Anti-convulsant
- Anti-psychotic
- Neuroprotective
- Immunomodulatory

Other Cannabinoids:
CBC,CBG,CBN,THC-V/CBC-V

Medlab's research determined both plant species 1:1 ratio for clinical efficacy. Medlab's starting material is 80% concentrate, and represents one of the highest extracts concentrations globally.

NanoCelle™ Cannabis (NanaBis™)



Scheduling is a national classification system controlled by the TGA as to how medicines and poisons are made available to the public. The emphasis is on protecting public health and safety.

Medlab's proposed NanaBis™ will be a Schedule 8 drug (Controlled drug) that can be used alongside or in place of both oxycodone and morphine sulfate (strong pain medication with multiple adverse side effects)

Manufacturing, under Good Manufacturing Practice, will meet Schedule 8 standards.



NanoCelle™ Cannabis (NanaBis™)

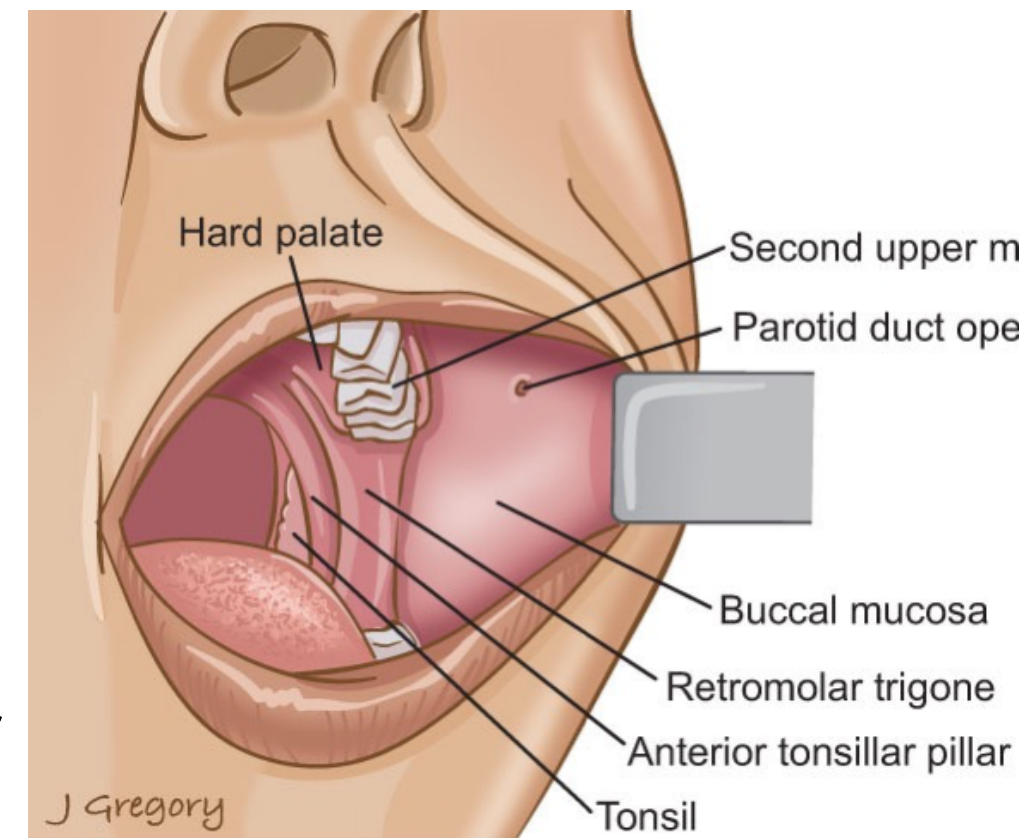


- Easier, more convenient dosing
- Less side effects
- Strong emerging market

2 sprays of NanaBis™ will deliver the active cannabis (2.4mg CBD and 2.6mg THC) to the patient.



In collaboration with the University of Sydney, Sydney Medical School (Professor Stephen Clarke - Oncologist at Northern Cancer Institute/Royal North Shore Hospital)



Progression of NanaBis™ (Nanocelle™ Cannabis)



SUPPLIER AGREEMENT	COMPLETED - APHRIA INC.
MANUFACTURER AGREEMENT	COMPLETED - PHARMACEUTICAL PACKING PROFESSIONALS
GMP AGREEMENTS	COMPLETED
AUTHORITY TO POSSESS	COMPLETED - HEALTH NSW
LICENCE TO IMPORT	COMPLETED
PERMIT FOR SHIPPING	IN PROGRESS - AWAITING APPROVAL - TGA
TRIAL DESIGN	COMPLETED - NEAF, RESEARCH TEAMS
ETHICS APPROVAL	IN PROGRESS - NORTHERN SYDNEY LOCAL HEALTH DISTRICT (ROYAL NORTH SHORE HOSPITAL)
CLINICAL TRIAL APPROVAL	IN PROGRESS – TGA



NanoStat™

NanoCelle™ Atorvastatin

Atorvastatin – Channel 9 News

On Thursday 9 March 2017, Channel 9 News, covered NanoStat™



<http://www.9news.com.au/national/2017/03/09/17/30/mouth-spray-developed-to-tackle-high-cholesterol/?ocid=9newsfb>

Atorvastatin - Market Potential

- Statins market worldwide, predominantly tablets, forecasted at US\$12 billion in 2018
- Market size declining in recent years because statins going off-patent but still big
- In US, 73.5 million adults have high LDL cholesterol, with 26% of adults using statins in 2012
- Globally, raised cholesterol levels are estimated to cause 2.6 million deaths each year, according to the World Health Organization.

Approximately one third of patients
report unwanted side effects
associated with statin use: pain

References:

<http://www.prweb.com/releases/statins-drugs-market/analysis-forecast-2018/prweb10367278.htm>

<http://pubs.acs.org/cen/coverstory/83/8349pharmareview.html>

<http://edition.cnn.com/2016/09/08/health/study-explores-pros-and-cons-of-statins/>

NanoCelle™ Atorvastatin (NanoStat™)

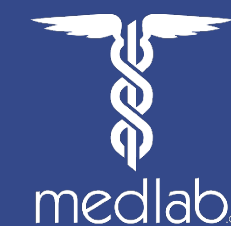


Research outcomes

- Fast absorption < 1 minute
- Lower dose required
- Less side effects when compared to regular Atorvastatin tablets
- Early talks commenced with several multi-nationals.



Progression of NanoStat™ (NanoCelle™ Atorvastatin)



POC	COMPLETED
PHASE 0 SAFETY	COMPLETED
MANUFACTURING AGREEMENT	COMPLETED - PHARMACEUTICAL PACKING PROFESSIONALS
RESEARCH AGREEMENT (Bioequivalence)	COMPLETED - ZENITH
TRIAL DESIGN (Bioequivalence)	COMPLETED - ZENITH
ETHICS APPROVAL (Bioequivalence)	FINALISING SUBMISSION

Other NanoCelle™ Active Pharmaceutical Ingredients



Some 23 API's in prototype

- Insulin
- Testosterone
- Antibiotic
- Progesterone
- Immunosuppressives
- Proton Pump Inhibitors
- Angiotensin Converting Enzyme inhibitor

COVERS MOST MAJOR
DRUG CLASSES

DEMONSTRATES
PORTABILITY OF
NANOCELLE™ AS A
DELIVERY PLATFORM

ALLOWS FOR MULTIPLE
COMMERCIALISATION
OPPORTUNITIES

PATENT
STRENGTHENED &
PUBLISHED USA PATENT
TRADEMARK OFFICE
SEPT 2016



Depression

Depression Market Size

World Health Organisation

- By 2030, depression will be **highest level of disability** of any physical or mental disorder
- **350 million people worldwide**, 5% world population, suffer from depression

United States

- In 2012, **16 million adults** had at least one major depressive episode



References:

<https://mhsa.aihw.gov.au/resources/expenditure/>

<http://www.healthline.com/health/depression/facts-statistics-infographic#2>

Depression Market Size - Australia

- **Government spent \$564 million, or \$24 per person, on subsidised prescriptions in 2015–16, equating to 5.0% of all PBS/RPBS subsidies**
- Prescription for antipsychotics (49.6%) and **antidepressants (36.5%)** accounted for the majority of mental health-related PBS and RPBS expenditure during this time period.



References:

<https://mhsa.aihw.gov.au/resources/expenditure/>

<http://www.healthline.com/health/depression/facts-statistics-infographic#2>

Outcome Of Depression Trials & NRGBiotic™



- Two Phase 1 human clinical trials successfully completed
- Trial period of 16 weeks
- Patients with depression for 2.5 years on SSRI (SSRI – Standard anti-depressant medication) with no symptoms improvement.

Phase 2a study HREC
APPROVED

Depression program
running 8 months ahead
of schedule



**In collaboration with the University of
Queensland school of medicine**

USED IN SUCCESSFUL DEPRESSION TRIALS – NRGBiotic™ effectively improved medical markers and quality of life in patients diagnosed with Depression.

- Currently in AU and NZ markets
- Patent pending
- Clinically trialed to show symptom reduction of Depression in conjunction with SSRI therapy.



Progression of NRGBiotic™ (Depression)



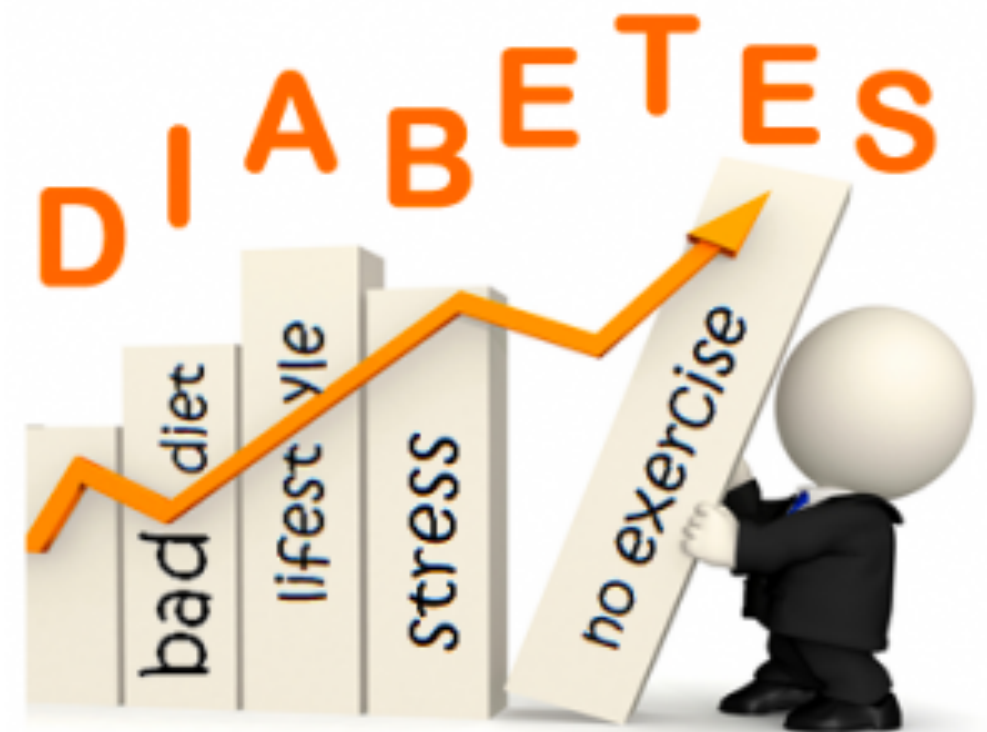
POC	COMPLETED
PHASE 1	COMPLETED
PHASE 1 VARIANTS	COMPLETED
MANUFACTURING AGREEMENT	COMPLETED
PHASE 2A TRIAL DESIGN	COMPLETED
PHASE 2A ETHICS APPROVAL	COMPLETED
MARKET ENTRY	COMPLETED - COMPLETED AS TGA LISTED MEDICINE



Diabetes & Obesity

Diabetes Potential Market

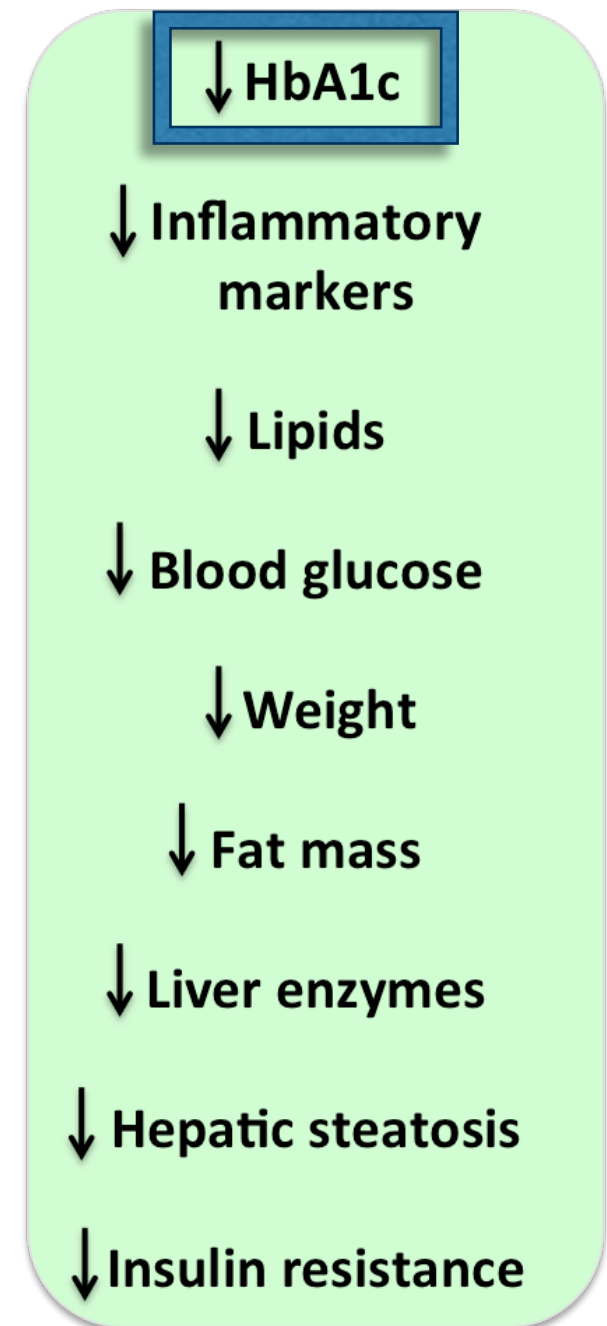
- **Over 25 million people have diabetes in the US**
- **In 2012, 86 million Americans age 20 and older had prediabetes; this is up from 79 million in 2010.**
- **Australia estimates 1.7 Million diabetes patients**
- **A leading medical report in 2012 reports non-adherence rate of 35% to diabetic medication**



Outcomes of Diabetes/Obesity Trial

- 12 week, randomised clinical trial confirms Medlab's probiotic formulation decreased **HbA1c levels (insulin markers)** in study participants.
- 60 Participants split into 2 groups for randomised clinical trial – Controlled group and experimental group

Obesity program running 10 months ahead of schedule



Clinical trial in collaboration with The Boden Institute, University of Sydney

SUCCESSFUL OBESITY TRIALS – Possible new therapy for pre-diabetic and type 2 diabetic patients.

- Based on Medlab's MultiBiotic™ which has been patented for fatty liver disease, currently in AU, HK, CHINA and NZ markets
- New product currently in development



Phase 2A study in the immediate future

Strong IP Portfolio

**2
Patent**

**3
Patents**

**4
Patents**

**5
Patents**

**6
Patents**

**10
Patents**

**14
Patents**

May
2015

July
2015

Aug
2015

Oct
2015

March
2016

May
2016

Sep
2016

Nutraceuticals



Our Nutraceutical range has continued to grow since our listing in July 2015. We currently have 10 of our products under patent, with applications lodged for further patents. Our range is practitioner recommended and endorsed.



RESEARCH, COMMERCIALISATION AND GROWTH

Principal activities focused on 5 key areas:

1. Progressing our **research** programmes
2. Bringing **NanaBis™** (NanoCelle™ Cannabis) **to the AU market.**
3. Bringing **NanoStat™** (NanoCelle™ Atorvastatin) **to the AU market.**
4. Growth in the **nutraceutical** business (*possible JV for “retail” brand*)
5. Development of **trade agreements** with interested third parties,
several already in discussion for Pharmaceutical and nutraceutical.

Board Overview



Michael Hall, Non-Executive Chairman

Early years working in chartered accountants offices, Michael joined Grace Brothers in their development phase and rose to be Head Office Controller. After approximately 8 years at Grace Brothers Michael left to have a short stint with Norman Ross (Harvey Norman) and then onto a private merchant bank. Michael became ill with cancer and his experience with that disease introduced him to the area of nutrition. Michael has been a key player in the successful building of:

- Bioglan Limited sold to AusPharm Limited (1980s)
- HealthComm USA with Dr Jeffrey Bland
- Relaunch of VitaPlex Pty Ltd sold to Health Minders Limited
- PharmaFoods Pty Ltd sold to FIT-BioCeuticals Limited
- FIT-BioCeuticals Limited sold to Blackmores Limited



Sean Hall, CEO & Managing Director

Sean Hall is the CEO at Medlab. Sean has over 20 years' experience in the Australian Healthcare and food industries and early phase drug discovery in Australia and Asia. Sean is best known for building Australia's leading Practitioner prescribed brand, BioCeuticals. The company FIT-BioCeuticals was profitable, dividend paying and generally accepted as a market leader and innovator in the sale of nutraceuticals to practitioners. FIT-BioCeuticals Limited was sold to Blackmores Limited early July 2012. Sean has co-authored a number of peer-reviewed industry papers, lectured at scientific events and developed many patented products. Sean is an active member of Medicines Australia, American Federation for Medical Research (AFMR), American Academy of Anti-Aging Medicine (A4M), AusBiotech, a member of the Scientific Advisory Board for BITs Life Science China, and a Board Member of the International Probiotics Association. Sean has completed Executive Education at Harvard Graduate School of Business, and more recently continuing Medical Education (CME) through Harvard Medical School.



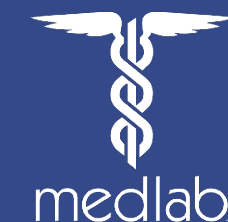
Drew Townsend, Non-Executive Director

Drew is a senior partner in the chartered accounting firm of Hall Chadwick and has been a partner in this firm for over 25 years. He is an experienced chartered accountant and corporate advisor to numerous SMEs. His industry and service specialisations include audits, prospectus preparation, expert reports, due diligence for takeovers and acquisitions and AFSL audits. In undertaking these roles Drew has developed extensive knowledge of ASIC and ASX requirements and regulations. Drew's professional qualifications include:

- Bachelor of Commerce (Accounting & Finance)
- Registered Auditor
- Member of the Governance Institute
- Member of the Australian Institute of Company Directors
- Tax agent
- Member of the Institute of Internal Auditors
- Member of the Institute of Chartered Accountants

He is an experienced director of both private & public companies & is currently chairman of ASX listed Quantum Energy Ltd, a medical & energy technology company.

Management Overview



Alan Dworkin CA, ACSA, GAICD – Chief Financial Officer, Company Secretary

Alan Dworkin is a Chartered Accountant with over 18 years experience in tax, retail, resources and nutraceutical sectors.

Alan is employed by Medlab as Chief Financial Officer and Company Secretary. Prior to this, Alan was employed as the Chief Financial Officer and Company Secretary of FIT-Bioceuticals Limited for over 6 years. Alan has also had experience in ASX listed companies within the resources sector, most recently as Company Secretary of Uramet Minerals Limited.

Alan is a member of the Institute of Chartered Accountants in Australia, the Governance Institute in Australia and the Australian Institute of Company Directors.



Professor Luis Vitetta BSc (Hons), PhD, GradDip IntegrMed, GradDip NutrEnvironMed, Director of Medical Research

- Medlab
- The University of Sydney
- The University of Melbourne
- Swinburne University
- Centre of Molecular Biology and Medicine, Epworth Medical Centre
- The University of Queensland

Luis Vitetta is currently Director of Medical Research at Medlab Clinical Ltd and Adjunct Professor at the University of Sydney, School of Medicine. Luis has 25 years experience on probiotics and gastrointestinal (GIT) health. His area of expertise include: Probiotics / Human Microbiome, Nutraceuticals, Nutrition, Clinical trials / Epidemiology, Integrative Medicine and Complementary and Alternative Medicine. He was the chief investigator & the recipient of a National Institute of Complementary Medicine grant for the NICM Collaborative Centre for Transitional/Preclinical & Clinical Research in Nutraceuticals & Herbal Medicines.



Dr David Rutolo PhD, JD (USA), Chief Science Officer

- InMed Technologies, Beyond BioScience
- Micelle Laboratories
- Anabolic Laboratories
- Wellcorps
- University of Southern California (USC)
- Western State University, College of Law
- University of California, Irvine
- Loyola Marymount University, Los Angeles

David has 35 years experience in research, product development, manufacturing, & technical marketing support in the pharmaceutical & nutritional industry. David is a major contributor to the American functional food & high-profile bottled juice market segments, & he continues to develop health care products specifically designed for the international marketplace. Through a number of private development associations, he consults & formulates nutritional products for Asia, Europe, South America & Australia. David was a Cofounder of Micelle Laboratories, where he served for over 20 years as Executive Vice-President and as a Board Member.

Research Team Medlab



Medlab Clinical Ltd and The University of Sydney, Sydney Medical School

Prof Luis Vitetta
Prof Anthony Linnane
Prof Robert Allen
Dr Elizabeth Steels



PHD Scholars

Talia Palacios
Michael Thomsen
Dr Giselle Cooke
Emma Saltzman



Medlab Clinical Ltd

Sean Hall
Dr Rachel Manuel
Dr Joyce Zhou
Isabelle Ibrahim
Dr Andrea Leong



Medlab Clinical, California U.S.A

Dr David Rutolo



Research Team – Collaborators



The University of Sydney, Sydney Medical School

Prof Stephen Clarke

Prof Andrew McLachlan



The University of Queensland, School of Medicine

Dr Matthew Bambling

Dr Paul Masci

Dr Kong Nan Zhou

A/Prof Glenda Gobe

Dr David Briskey



AIBN

The University of Queensland AIBN

Prof Matt Trau

The University of New South Wales, School of Medicine

A/Prof Jeremy Henson



Southern Cross University

Prof Graham King

WriteSource Medical

Dr Belinda Butcher

Thank You

Sean Hall

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