

## LETTER TO SHAREHOLDERS

MAY 2016

ASX: MDC

THANK  
YOU

RECENT  
ACHIEVEMENTS

NANOCELLE™  
PLATFORM

### Dear Shareholder

On behalf of the Company, we would like to thank you for your continued support and provide an update on the Company.

### RECENT ACHIEVEMENTS

- Significant progression has been made in our NanoCelle™, small particle delivery platform with positive blood results showing NanoCelle™ Atorvastatin absorbs quickly into the human bloodstream and is utilised according to expectations. (see Page 2).
- Management is very excited to report, after consultation with various stakeholders, a clear pathway has been established for NanoCelle™ Cannabis Project to progress to human trials; this project is well ahead of schedule (see Page 2).
- Significant results in our cell culture studies for Obesity using a multistrain probiotics to reduce lipid accumulation (in particular, Non-Alcoholic Fatty Liver Disease (NAFLD)) has accelerated human trials which are expected to be completed December 2016. Further NAFLD investigation is planned. (see Page 3).
- Management is very happy to announce our Phase I Depression project is ahead of schedule, showing strong positive results. Plans are underway to migrate to a Phase IIa study as soon as practical. (see Page 3).

### RESEARCH UPDATE

#### NANOCELLE™ PLATFORM

Management is pleased to formally introduce our patent filed proprietary small particle pharmaceutical delivery platform, NanoCelle™.

NanoCelle™ is designed to bypass the body's digestive/metabolic pathways by allowing the Active Pharmaceutical Ingredient (API) to be absorbed via a buccal (fleshy interior of the cheek) or a nasal delivery system. It undergoes less degradation, compared to an API swallowed and digested normally in the stomach.

An example of this is the use of a generic (off patent) pharmaceutical, such as Atorvastatin (Brand name is Lipitor) for cholesterol lowering properties, which is currently taken by swallowing a tablet. Using the NanoCelle™ platform, the API is repurposed as a spray approximately 1/10 the dose yielding similar, if not the same cholesterol lowering properties. This translates to less side effects associated with pharmaceutical use, and lower cost per dose. Further, once the NanoCelle™ platform is combined with the pharmaceutical ingredient, the generic (off patent) pharmaceutical can be patented.

NanoCelle™ particle sizes are extremely small, ranging from 0.004 to 0.09 micron. By comparison the size of a red blood cell is approximately 7-8 micron.

NanoCelle™ has been shown to preserve the API against decomposition/oxidation, meaning improvements in shelf life and overall viability of the product.

Inclusive of the Cannabis project, Management is happy to report approximately 23 different API's are being investigated for NanoCelle™ suitability, with the majority of the API's under consideration being generic in nature.

To date, several multi-nationals have indicated interest in the NanoCelle™ platform.

CANNABIS

CANNABIS

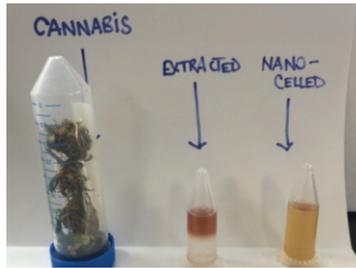
We are pleased to advise that the isolation of Cannabis active compounds (CBD and THC) and characterisation of dose requirements for human trial products have been completed. Extraction methods have also been developed to preserve CBD and THC purity.

There are many interested parties involved in moving from the laboratory to human trials, but we are pleased to report a clear pathway has been established for human pain management trials. Trials are anticipated to commence this calendar year.

The pictures below demonstrate that whilst the Cannabis active compounds (CBD and THC) are "NanoCelled" in Medlab's proprietary small particle delivery platform, the product is protected against aging and loss of viability; in short the NanoCelle™ Cannabis product offers greater shelf-life as opposed to either the plant or a simple extracted product.



0 Weeks



6 Weeks

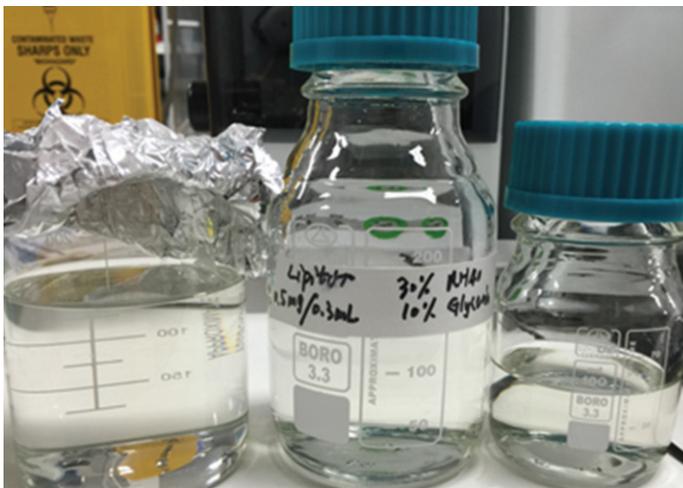


15 Weeks

NANOCELLE™ APPLICATION

NANOCELLE™ APPLICATION FOR MAJOR OFF-PATENT DRUG USE

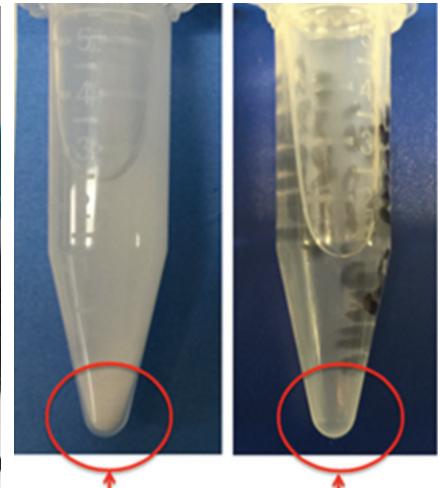
The preliminary data from Phase 0 human trials on NanoCelle™ Atorvastatin spray have been successful. The data shows significant absorption from after 1 minute of spray use. Management is progressing with accelerated human trials.



Atorvastatin (Lipitor) (1232015ATO) NanoCelled Size 89.31 nm Conc. 0.1 mg/mL Preservatives inc.

Atorvastatin (Lipitor) (12142015ATO30) NanoCelled Size 14.37 nm Conc. 1.67 mg/mL Preservatives inc.

Atorvastatin (Lipitor) (12142015ATO25) NanoCelled Size 14.62nm Conc. 10 mg/mL Preservatives inc.



Atorvastatin (Lipitor) Crystal sedimentation in water

Atorvastatin (Lipitor) (102015ATO) NanoCelled Size 11.41nm Conc. Mg/mL

Management is pleased to announce Ethics approval for NanoCelle™ Insulin with trial recruitment in the planning stage. Like NanoCelle™ Atorvastatin, NanoCelle™ Insulin is a spray.

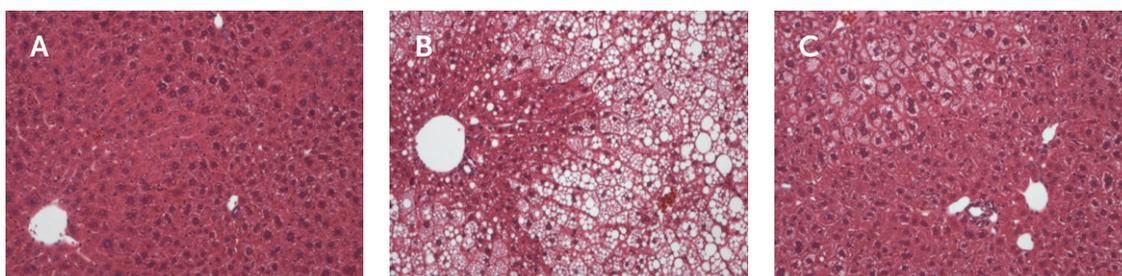
Significant advancements in the Medlab's NanoCelle™ line means approximately 15 generic pharmaceuticals are at various stages of development. The NanoCelle™ program is well ahead of schedule and as such, Medlab has commenced early stage discussions with several multi-nationals.

Patent filing is now complete.

## OBESITY PROJECT

In collaboration with The University of Sydney, Sydney Medical School and Boden Institute of Obesity, Nutrition, Exercise and Eating Disorders, cell culture studies to date show a significant (86%) reduction in lipid accumulation with a multi-strain probiotic.

Completed animal studies show marked reduction in liver fat deposits (NAFLD) over 20 weeks in mice fed a high fat diet and a multi-strain probiotic. Results were published in May 2016. These findings suggest that probiotics may have a therapeutic effect in reducing gut promoted obesity and associated metabolic abnormalities. We are progressing to human studies, specifically targeting nonalcoholic fatty liver disease (NAFLD).



Liver histology **A:** Mouse fed a standard chow diet with very little fat deposits; **B:** Mouse fed a HFD with large fat droplets; **C:** Mouse fed a HFD with probiotics supplementation showing significant reduction in fat droplets.

**Phase IIa - 12 Week Trial: Focus pre-diabetes, Type 2 Diabetes and Obesity** (In collaboration with The University of Sydney, Sydney Medical School and Boden Institute of Obesity, Nutrition, Exercise and Eating Disorders):

A Multi-strain probiotic formulation – (patent protected) is currently undergoing a placebo controlled clinical phase IIa trial with obese and pre diabetic subjects. The primary outcome for the trial is to achieve an improvement in inflammatory markers associated with obesity and insulin resistance. The estimated date of completion is November 2016.

## DEPRESSION PROJECT

In collaboration with The University of Queensland, School of Medicine, we have completed a phase I pilot “probing” study testing the efficacy of Orotic Acid in patients with long term depression who were not responding to traditional medical therapies. Outstanding preliminary results have been achieved. Over the 8-week trial, patients diagnosed with treatment resistant depression have had a positive response (back to normal levels) shown by a validated psychiatric assessment tool.

A second study currently underway (50% complete), is a Phase 1 pilot study utilizing both Orotic Acid and a multi-strain probiotic in patients with long term depression who were not responding to traditional medical therapies. To date, the results are very encouraging.

## IP PORTFOLIO

At the time of writing we have:

- Filed 7 Patents
- 4 Provisional Patents
- 2 Granted Patents
- 1 Under Examination

**NUTRACEUTICALS**

Our Nutraceutical branded products continue to grow. As at now we have 17 products, domestic and global with another 4 expected June 2016.

Date	Products Released	
July 2015 - released prior to IPO	Nanocelle™ B12 Nanocelle™ D3 Enbiotic™ MultiBiotic™ NRGBiotic™	Under Patent Under Patent Under Patent Under Patent
August 2015	Biotic Jnr™ GastroDaily™ ORSBiotic™ W8Biotic™	Under Patent Under Patent Under Patent
October 2015	BioClean EPA:DHA + CoQ10 BioClean EPA:DHA + Plant Sterols	
January 2016	<sup>12</sup> Mg Optima™ Relax	
February 2016	Nanocelle™ Activated B12	Under Patent
March 2016	SB 5B™ BioticNatal	
April 2016	NOS	
May 2016	Manuka-C	



Existing Medlab range

**AWARDS**

In April 2016, AI Global Media Ltd, a UK based scientific publisher informed us that we were awarded Best Early-Phase Chronic Disease Drug Discovery Company.



**CONCLUSION**

Once again, we would like to thank you for your on-going support and we will report again in the next 3-4 months. The management team is extremely proud of what we have achieved since listing. Our research is extremely exciting and we are looking forward to making further strides in both our research and nutraceutical business.

Sean Hall  
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Chairman

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