

Immuron Limited
ABN 80 063 114 045

Corporate Details:

ASX Code: IMC

Directors:

Chairman:

Prof. Colin Chapman

Non-Executive Directors:

Prof. Roy Robins-Browne

Mr. Simon Sallka

Dr Elane Zelcer

Chief Executive Officer

Dr Grant Rawlin

Major Shareholder:

Hadasit Medical Research 19.56%

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Website: www.immuron.com

Company Presentation at BIO International Convention

Dr Grant Rawlin, Chief Executive Officer of Immuron Limited (the Company), is attending the BIO International Convention currently being held in Chicago, USA.

This convention is a significant biotechnology and pharmaceutical event with the main emphasis being the development of partnering and commercial relationships and product licensing.

Dr Rawlin will be making a number of presentations on behalf of the Company and attached is a copy of the "Immunotherapy using Polyclonal Antibodies" presentation that Dr Rawlin will be using for his presentations.

Also attending the convention is Dr Elane Zelcer, a Director of the Company, and Dr Einat Zisman, the Chief Executive Officer of Hadasit Research Services and Development Limited, a major shareholder of the Company.



Colin Chapman
Chairman

ASX:IMC

Immunotherapy using polyclonal antibodies

www.immuron.com

May 2010

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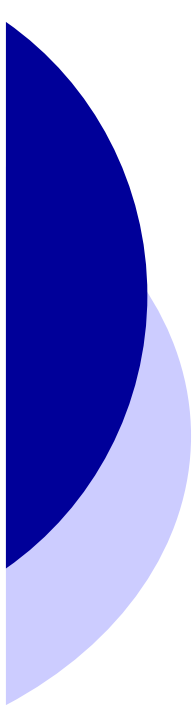


Hadassah Medical Centre

Product
Development

Influenza

Metabolic
Syndrome



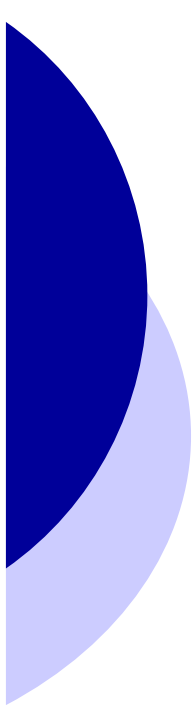
Executive Summary

- Immuron is a publicly listed biopharmaceutical company based in Melbourne, Australia.
- Immuron has already developed and commercialised large scale antibody technology which enables production of tonnes of targeted antibodies used in the treatment and prevention of disease.
- Immuron has already successfully developed and commercialised or licensed product in the pharmacy eg Travelan to Nycomed Pharmaceuticals and has some steady income.
- Immuron has lately joined with Hadassah Medical Centre to develop and commercialise IP from both entities for oral immunotherapies targeting major diseases such as Diabetes II and influenza in human clinical trials.
- The technologies and partnership provides a quick development and clinical testing cycle (<1 year) with returns expected within 18 months.

Immuron: what do we do best?

Immuron makes large-scale targeted polyclonal antibodies that can be used orally to treat many diseases.

- Proprietary vaccines are used to generate highly targeted antibody levels in dairy cattle colostrum (first milk)
- Antibodies are processed from the dairy product under GMP certification suitable for human use in OTC products.
- High safety profile, Self-affirmed GRAS (Generally Regarded As Safe), low manufacturing cost, high volume production established (tonnes not kg).
- Rapid commercialization cycle is possible in particular for oral applications.
- Routinely operate with commercialisation partners



Immuron works with Polyclonal antibodies not monoclonals. Why?

- Polyclonals attach to many parts of their designated target eg bacteria, virus etc. Monoclonals only bind to one part of the designated target.
- Monoclonals are normally developed by Pharmaceutical companies for injection therapies or diagnostics. Monoclonals are too expensive for oral use.
- Immuron has routinely produced tonnes of antibody in a campaign yielding a product suitable for oral pharmaceutical use.
- Colostrum derived antibodies also are accompanied by substances that make them better for oral use either at OTC or medical food and in some markets, prescription levels of regulation.

Cost benefit of Immuron antibody that allows antibody to be used differently

- Monoclonal Antibody \$50,000 / g in gram amounts for injection. (Pharmaceutical)
- Polyclonal serum \$1,000 / g in gram amounts for injection (Pharmaceutical)
- Polyclonal Immuron \$1 / g in tonne amounts for oral use. (OTC and medical food)

Can you make enough?

- Travelan product is manufacturing proof in principle.
 - Sold in Australia/New Zealand (**Nycomed**)
 - Sold in South Africa (**Pharmaco**)
 - Licensed for sale in USA (**Alaven Pharma**)
 - Approved for sale in Turkey (**Biogen**)
- Up to 3 tonnes per season have been made to GMP standards (6 campaigns completed)

JV with Hadassah Medical Centre is a big opportunity for Immuron

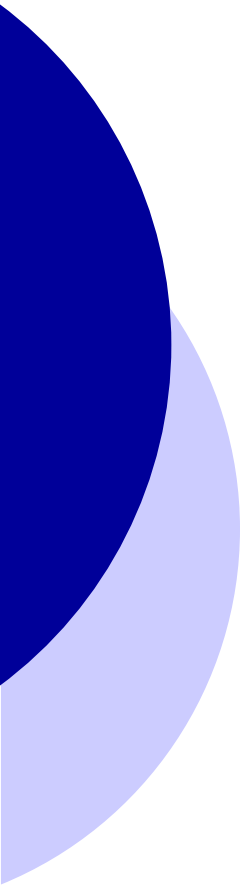
- The commercialisation arm of Hadassah Medical Centre is now Immuron's largest shareholder (19%)
- Hadassah Medical Centre is the biggest hospital and clinical research centre in Jerusalem
- Over 15 years Prof Yaron Ilan of Hadassah developed IP using oral antibody therapy to control important diseases by influencing T regulatory cell populations eg Diabetes II, NASH, Hepatocellular carcinoma. Monoclonals work for this but are too expensive.
- Immuron make antibodies that work in this way in animal models and, additionally when presented within colostrum they work better than monoclonals.
- The partnership makes Hadassah's technology commercially viable and promotes Immuron's technology to target larger commercial markets.

JV with Hadassah Medical Centre is a big opportunity for Immuron

- It gives Immuron privileged access to the Hadassah FDA compliant clinical trial unit and world class medical research.
- Already work between Uni of Melbourne and Hadassah has unexpectedly augmented the Influenza program – now accelerating in both Australia and Israel
- Hadasit (the commercialisation arm of Hadassah) provides business development support to Immuron.
- **Immuron Israel Ltd** has now been established with Directorship from Hadasit and Immuron Limited.
 - Gives expanded access to research/commercialisation grants now
 - Is a home for further collaboration technologies in the future.

Immuron Israel: a strategic investment

- A JV company between Hadasit and Immuron Limited in Australia
 - Manage joint projects with joint funding from Israel and Victoria eg Influenza
 - Act as a business development unit for Europe
 - Develop market for current products in Israel by identifying partners particularly in the dairy sphere.
 - Become a stand alone spin off, an entity for independent money raised on joint projects.



Example 1: Metabolic syndrome

- **Diabetes type 2**
-
- **Fatty liver disease**
 - Atherosclerosis
 - Hyperlipidemia

Type II Diabetes

- **Affects 9 % of the western world's population.**
- Is the fifth leading cause of death.
- The biomedical industry is focused on metabolic disease as it represents one of the greatest areas of unmet need in medicine.
- The potential market for monitoring and treating is estimated **to exceed \$70 billion in 10 years.**

Non-Alcoholic Steatohepatitis (NASH)

- The most common liver disease in the western world.
- Associated with obesity, diabetes, hyperlipidemia.
- Affects 5% of the lean population, 20% of the obese population, and 50% of morbidly obese people.
- **The total U.S. market potential reaches nearly \$22 billion.**



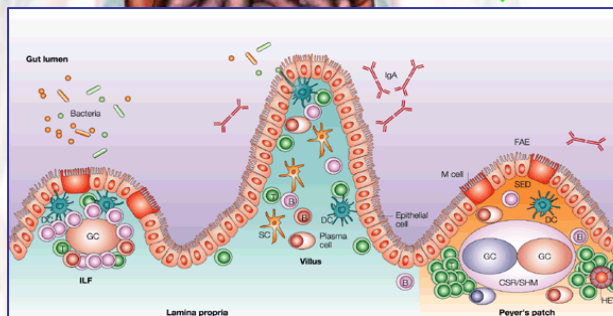
**Disease-specific antibody
+
Colostrum adjuvants**

Target organs

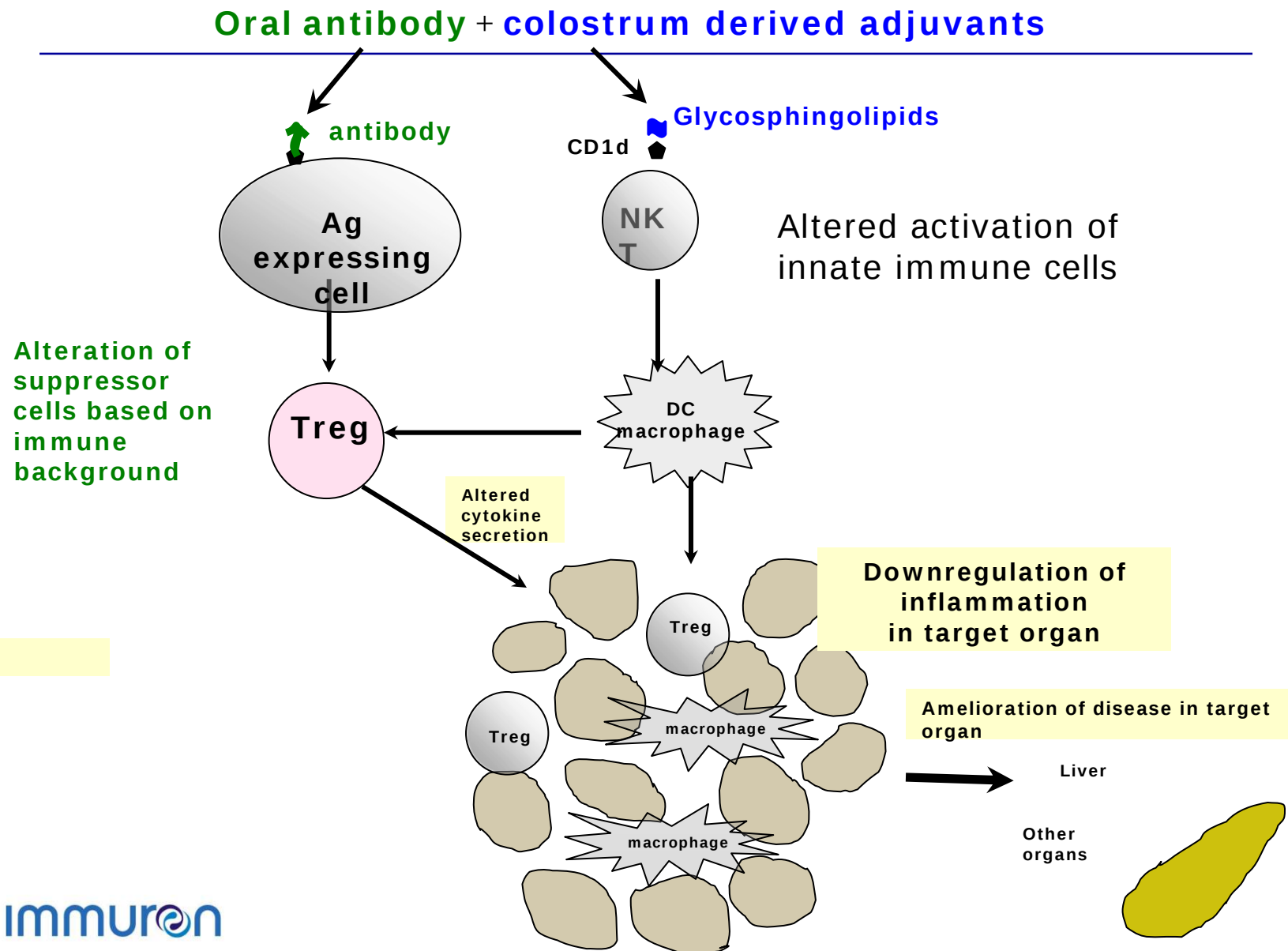
- Pancreas
- Adipose tissue
- Liver
- Brain

Presented in the bowel

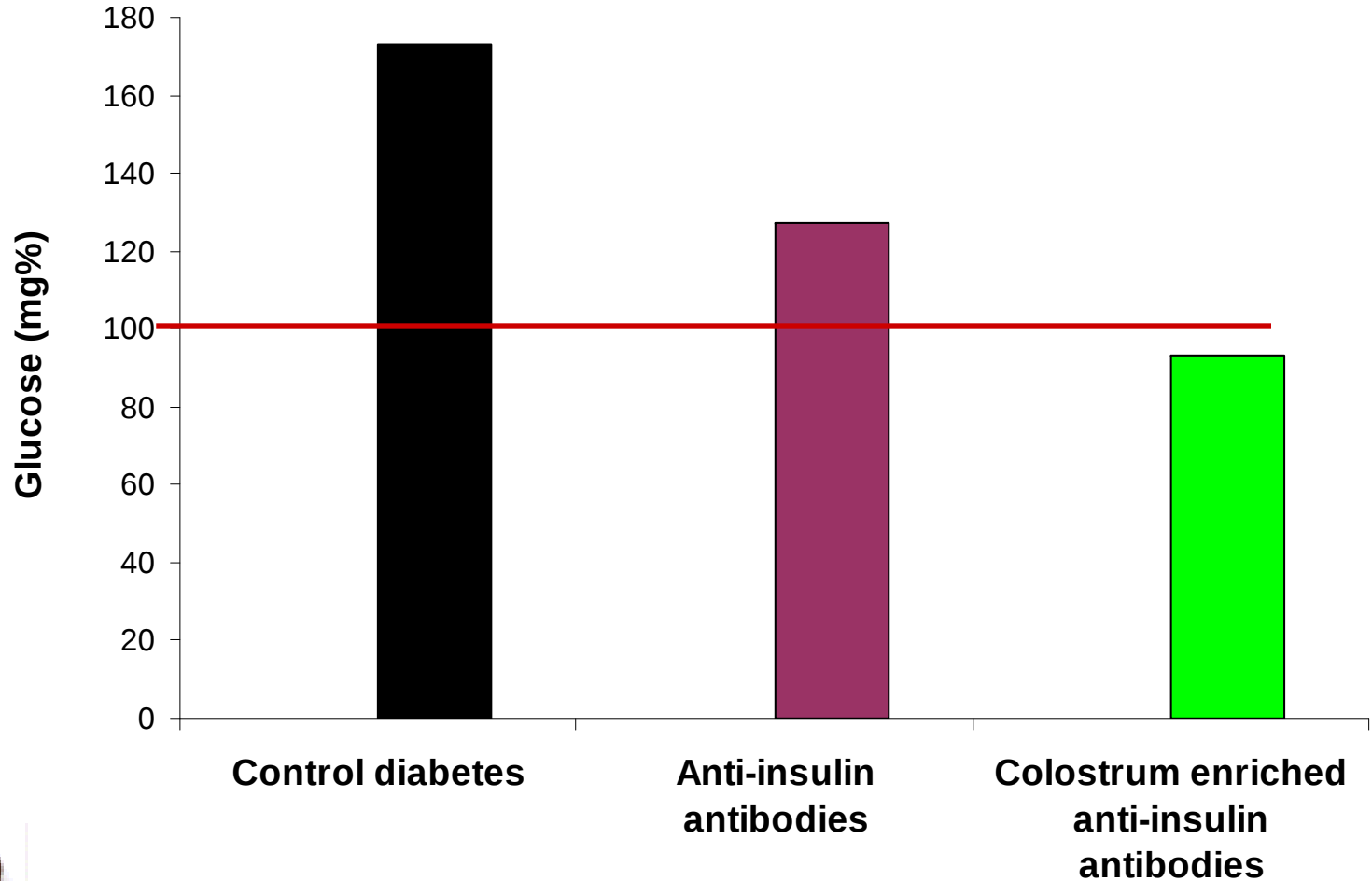
Induction of regulatory



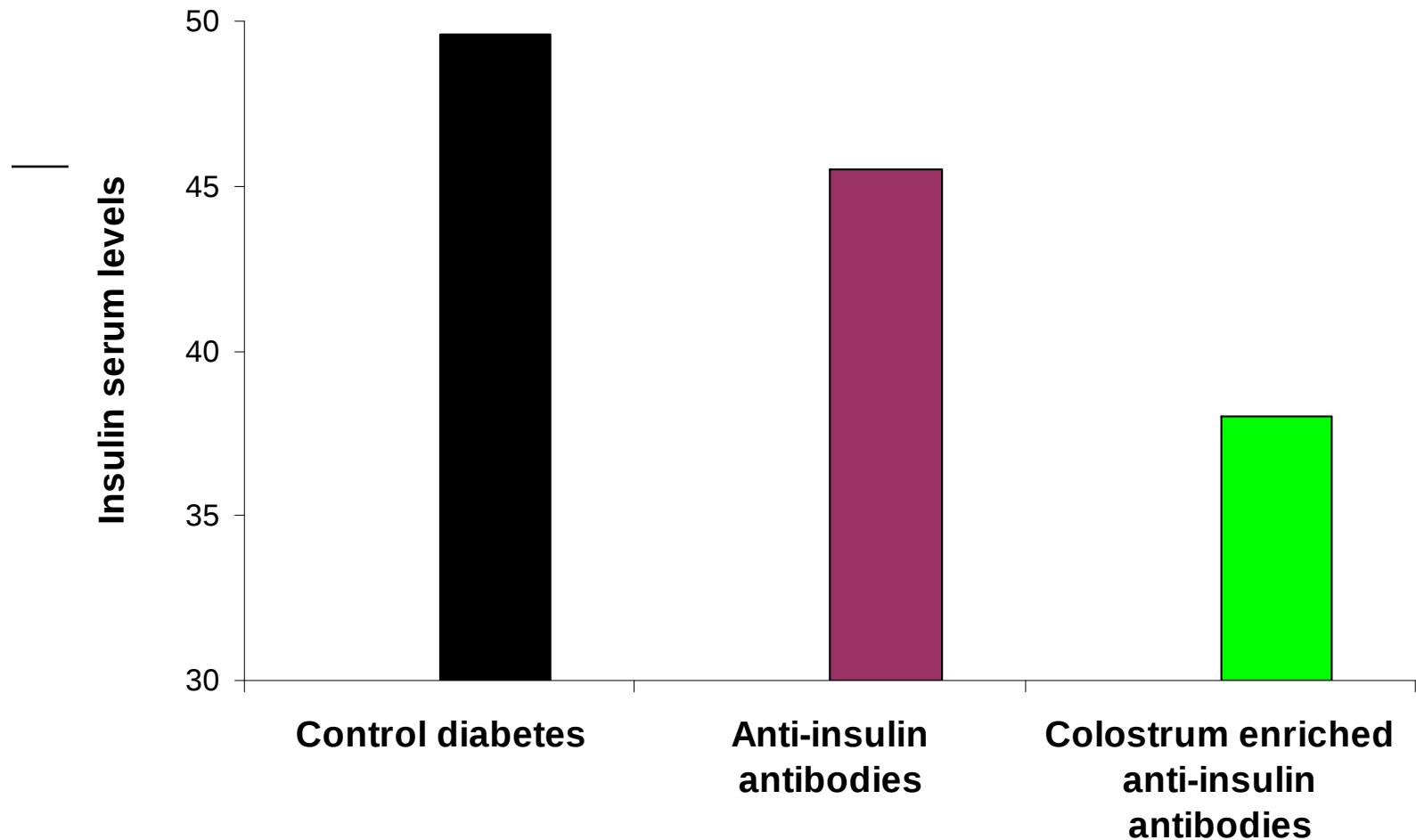
Hadassah's Oral Immunotherapy



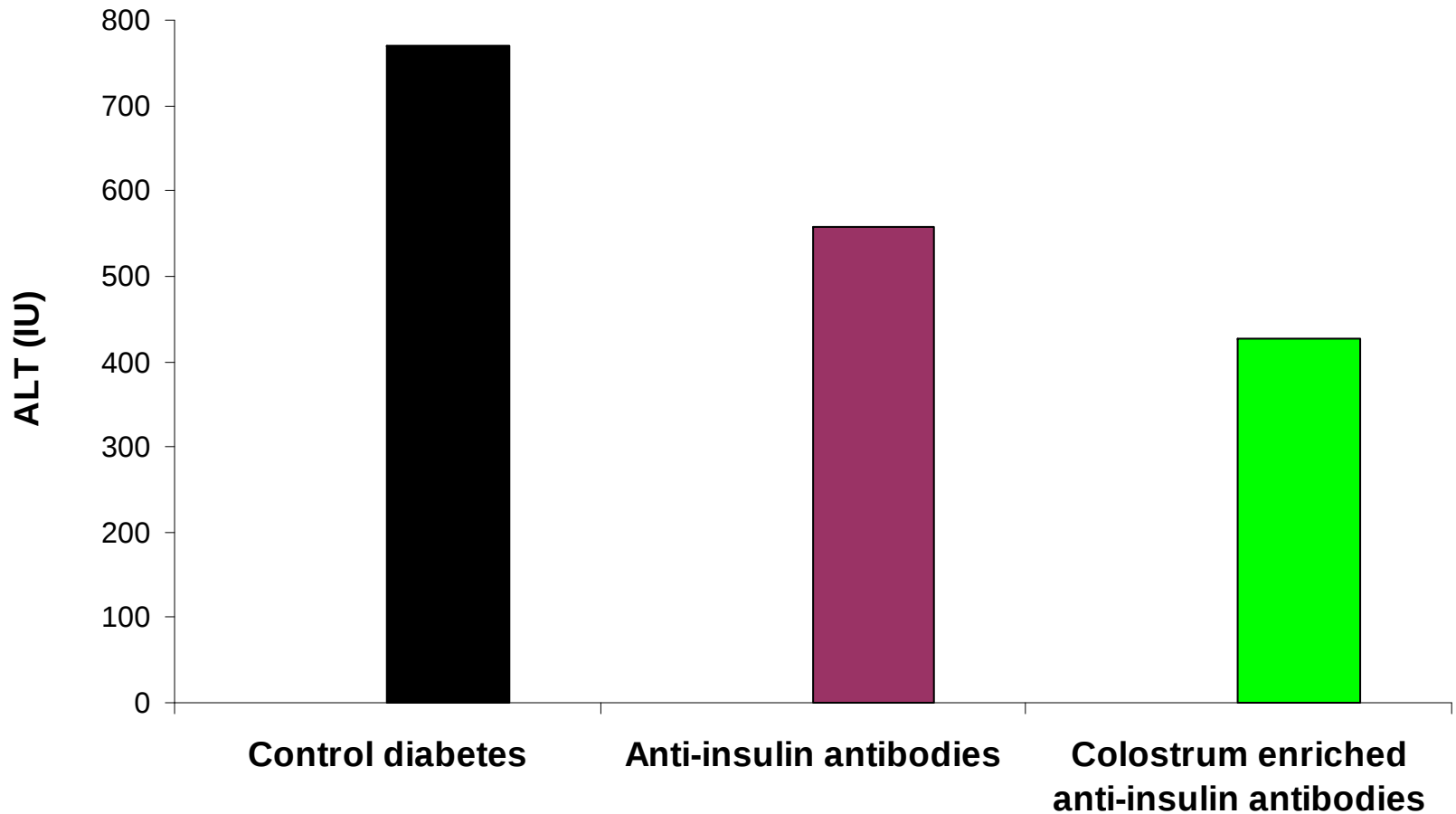
Colostrum enriched with anti-insulin antibodies corrects diabetes in mice



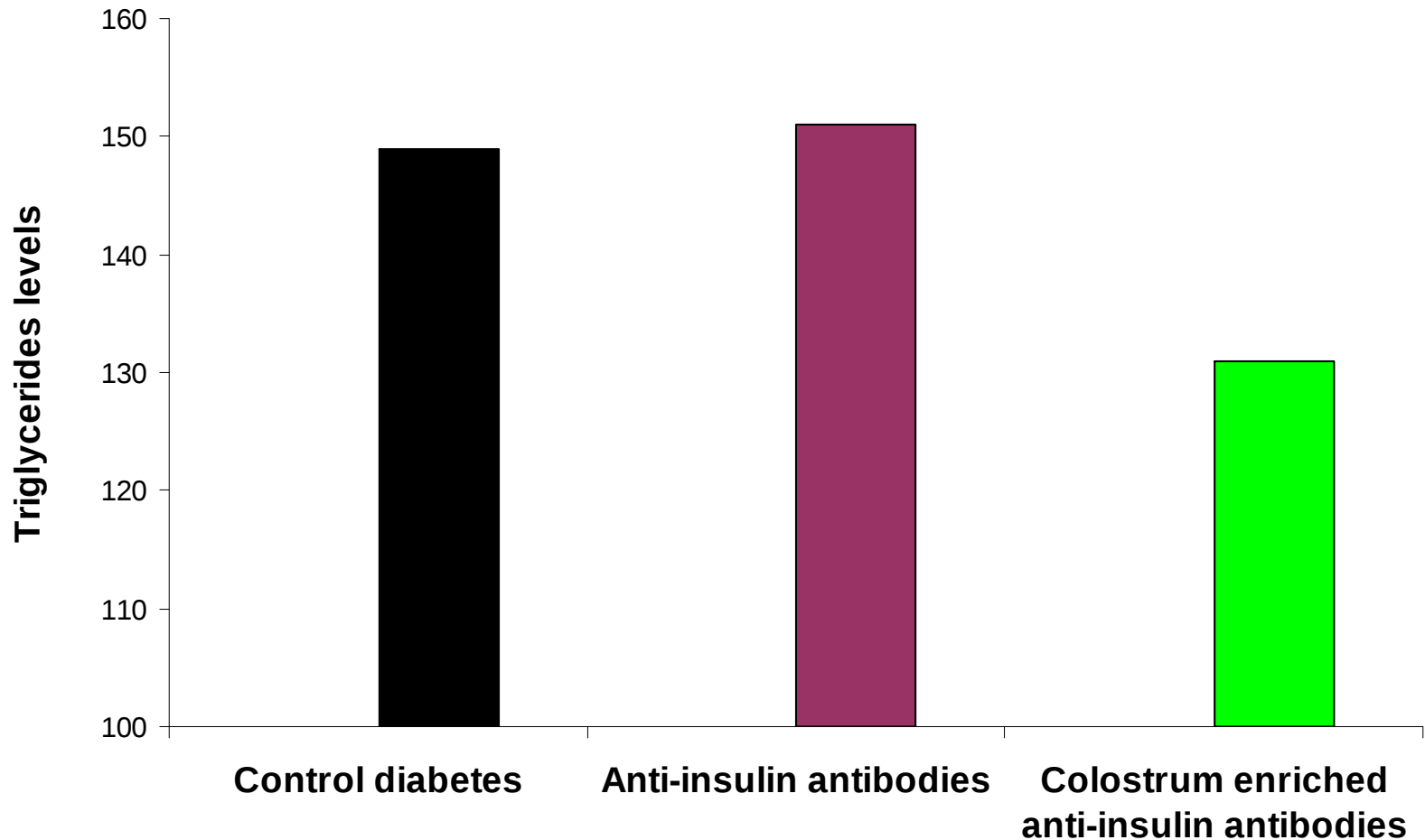
Colostrum enriched with anti-insulin antibodies alleviates insulin resistance in mice



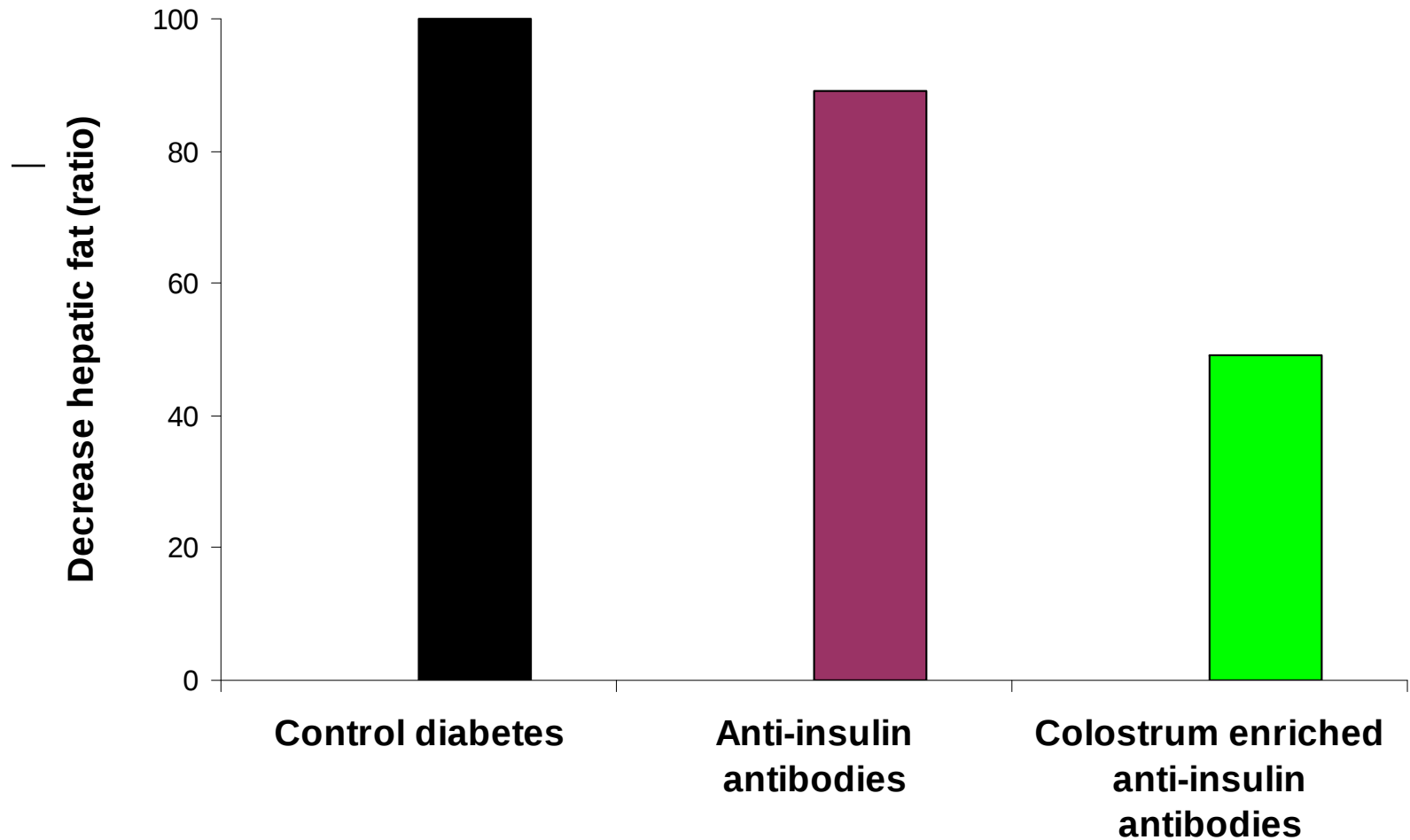
Colostrum enriched with anti-insulin antibodies alleviates liver damage in mice with NASH



Colostrum enriched with anti-insulin antibodies decrease serum lipids in mice with hyperlipidemia

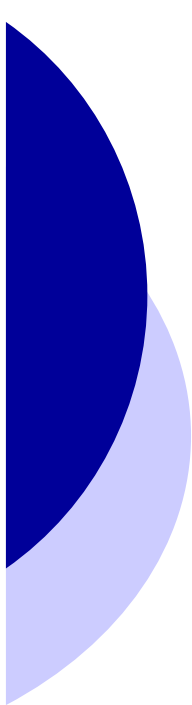


Colostrum enriched with anti-insulin antibodies decrease the fat in the liver in mice



The applications now

- Oral immune modulation (Hadassah technology)
 - Fatty liver (NASH) / Diabetes type 2 (Trial running in March 2010)
 - Hep B associated liver tumours (animal work underway with good results, human trial planned when funded)
- Infectious diseases
 - Travellers diarrhoea (Travelan licensed to 5 countries but niche market)
 - Influenza (animal trials successful: combination of Melbourne and Hadassah work) \$0.5 billion OTC market.
 - C. difficile (laboratory trials and pilot human study successful)
- Anti-inflammatory action in gut (Binding of LPS)
 - Mucositis (in human trial)
 - Inflammatory Bowel Disease (in human trial)
 - HIV adjunct therapy (in human trial -)



Example 2: Influenza OTC product

- Envisaged as an Over The Counter preventative product although the approach works with treatment as well.
- Market estimated as \$0.5 billion (needing 45 tonnes of antibody)
- Work continuing at Melbourne University and at Hadassah.

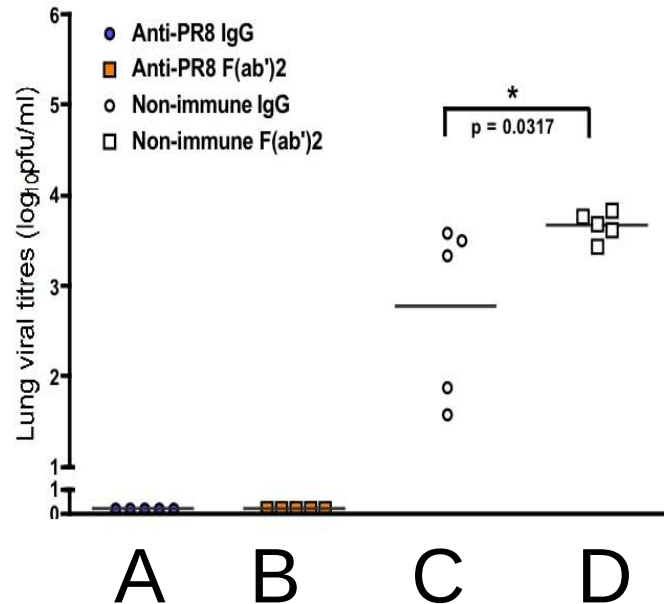
Successful **Prevention** from influenza infection in mouse models

- Groups of 5 mice were treated intranasally with 1mg of immune or non-immune IgG or immune F(ab)'2 fragments
- 48 or 72 hours or 7 days later mice were infected with a lethal dose of PR8 confined to the upper respiratory tract.
- On day 1 post infection, viral loads in the nasal turbinates were determined by plaque assay as a measure of infection.

RESULT

- Mice were 100% protected from infection with virulent influenza virus at 3 days (see Figure 4).
- 80% of mice were protected for 7 days

Successful **Prevention** from influenza infection in mouse models



The two active treatment arms (A and B) showed full protection from infection after 3 days. 80% protection for 7 days.

Successful **Treatment** of existing influenza infections in a lethal mouse model

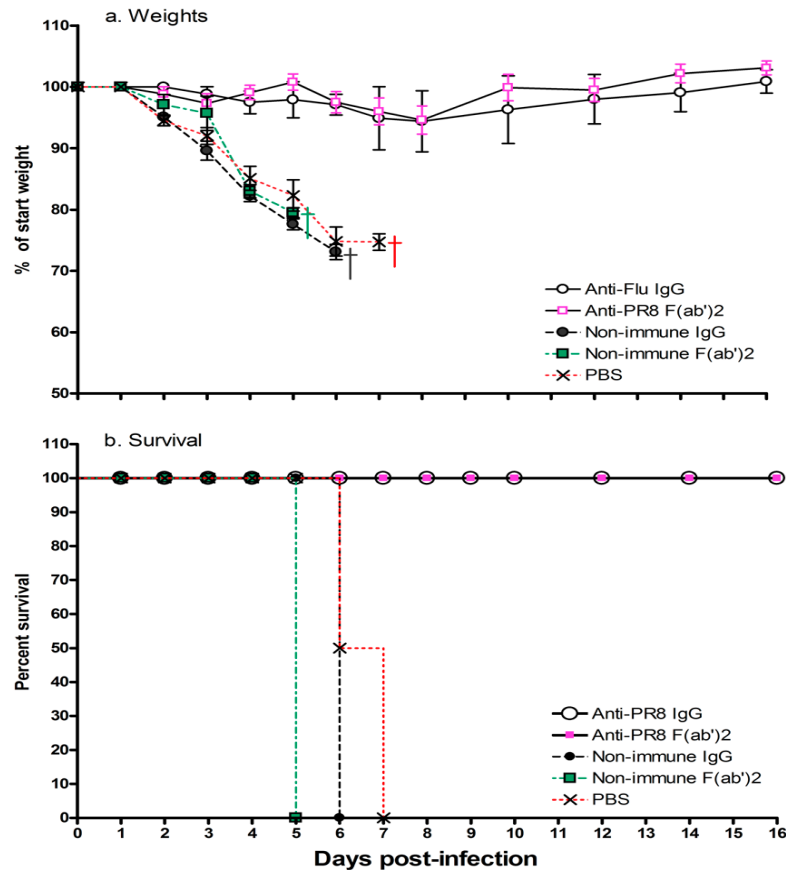
- Groups of 5 mice were infected with a lethal dose of PR8 as a total respiratory tract infection and 24 hrs later the mice were treated intranasally with 1mg of immune or non-immune IgG or F(ab')₂.
- The mice were monitored daily for clinical signs and their weights determined over a 16-day period (Figure 3a). Mice were culled at the humane endpoint and a survival curve plotted (Figure 3b).

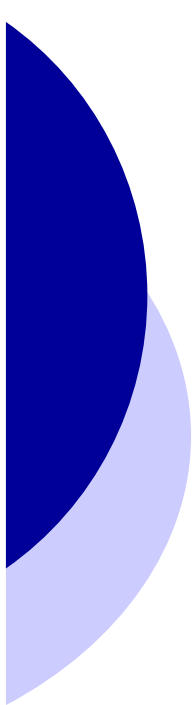
RESULT

- The course of lethal disease was stopped in mice treated with the active preparations, while the disease proceeded in all groups treated with inactive preparations
- There were no significant clinical signs apparent in the treated mice (as indicated by no significant weight loss in these groups).

Successful **Treatment** of existing influenza infections in a lethal mouse model

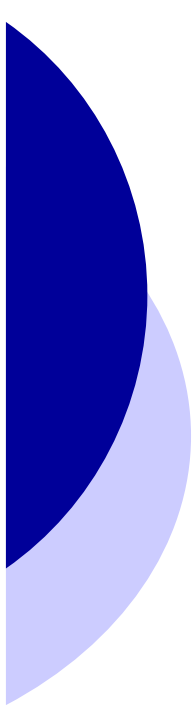
Figure 3





Main Research Partners

- **Hadassah Medical Centre, Jerusalem, Israel**
 - Major Hospital and Medical research centre in 2 campuses in Jerusalem. FDA compliant Clinical trials unit.
 - Globally recognised medically research facility responsible for in excess of 50% of the hospital research conducted in Israel.
 - Joint research and clinical program in oral immunotherapy
 - Hadasit / Hadassah is major (19%) shareholder in Immuron
- **University of Melbourne, Microbiology and Immunology, Australia**
 - Historically developed commercial products against enteric organisms eg Travelan
 - Current research in Influenza Treatment and Prevention
 - Current research in HIV support therapies.



Clinical and Production Partners

- **University of New South Wales**, Australia Centre of Excellence in HIV
 - Clinical trial HIV adjunct therapy
- **Case Western Reserve Medical Centre**, Cleveland
 - Clinical trial HIV adjunct therapy
- **Sourasky Hospital**, Tel Aviv.
 - Sponsored clinical trials in IBD and mucositis treatments.
- **Monash University** Medical Microbiology, Melbourne,
- **Tatura Milk Industries**, Australia (production partner)

Key Events - 2010

	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Results Anticipated
Preclinical					
Hadassah Medical Centre					Ongoing
Uni of Melbourne					Ongoing
Key preclinical events:					
Influenza efficacy mouse data					Qtr 1
Influenza efficacy ferret data					Qtr 2
Diabetes mouse data					Qtr 1
Key Phase II Clinical Trials					
Israel IBD					Qtr 1/2
Israel Mucositis					Qtr 1/2
Israel Diabetes					Qtr 1/2
Israel Hepatitis					Qtr 4
Australia HIV					Qtr 3
US HIV					Qtr 2

Market commercialisation key events: Income growth

Product	Q3	Q4	Q5 (jan 2011)	Q6	Q7	Q8	Q9 (jan 2011)	Q10	
Fatty Liver / Diabetes II therapy	Human Trial results		License with payment		Payment on trial finish			Royalty payment start	
Influenza OTC Product	Ferret results Co-development program agreed	Human results	License with payment						
C.Difficile product	Co-development agreed		Human results	Licensing with payment					
Traveller diarrhoea product	Major Market release USA, Turkey. Income grows	License Europe							Note: product in market in Australia and South Africa

Strong Intellectual Property Base

Patents Issued and Pending in

- Anti-LPS antibody formulation (Joint Hadassah/Immuron work)
- Antibody harvesting and preparation system
- o Cattle ETEC Vaccine formulation
- o Polyclonal Ab Manufacturing
- o Protein Shielding Oral Delivery (eg probiotics)
- o *C.difficile* disease treatment using antibodies (licensed)
- o Influenza prevention and therapy
- o Oral Immunotherapy (Hadassah work owned now by Immuron)

Provisional Patent Applications in

GI Mucositis
HIV/AIDS adjunct therapy

Immuron: 2009 and 2010

Science (always a strong point):

Then: University of Melbourne

Now: Uni Melb and Hadassah, now applies the technology to large commercialisation targets.

Production System (still works):

Then: Developed with TMI

Now: Harvesting again April 2010

Marketing partners with global reach

Nycomed Pharmaceuticals (2010)

Commercialisation expertise:

Then: 'Crying alone in the wilderness'

Now: Reaching through Hadasit network (others)

Board and Management

Prof. Colin Chapman, BPharm, BVSc (Hons) PhD FPS, Executive Chairman
Professor of Pharmacy at Monash University

Dr Grant Rawlin, BVSc, BSc(Vet)(Hons), CEO.

Prof. Yaron Ilan, M.D. Medical Director, Dept of Medicine Hadassah
University Hospital, Medical Director of Immuron.

Dr Elane Zelcer, BSc(Hons), PhD, FAICD. Non-executive Director.

Mr Graeme Stevens ACA, Chief Financial Officer / Company Secretary

Prof. Roy Robins-Browne, MB, BCh, PhD, FRCPA, FRCPath, FASM,
Professor Microbiology and Immunology, University of Melbourne, Non-
executive Director

Mr Simon Salka B. Ec, Non-executive Director, Shareholder relations.

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Hadassah Medical Centre

Product
Development

Influenza

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Forward Looking Statements

This presentation contains forward-looking statements which are subject to risks and uncertainties. These statements include those regarding the therapeutic and commercial potential of Immuron technologies and products in development and commercialization.

Any statement describing the company goals, expectations, intentions or beliefs is a forward-looking statement and should be considered an “at-risk statement”. Such statements involve known and unknown risks and important factors that may cause the actual results, performance or achievements to be different from the statements in this presentation.

Actual results could differ materially depending on a number of factors including, but are not limited to, results of studies and trials, the timing and effects of regulatory actions, ability to penetrate markets, the strength of competition and the effectiveness of patent protection.