ASX Release

21 May 2010

Immuron Ltd
ABN 80 063 114 045

Corporate Details:

ASX Code: IMC

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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%

Presentation at Dairy conference by Immuron CEO: "Influenza prevention: Immunotherapy using polyclonal antibodies from cattle".

Melbourne and Sydney, Australia, 21st May, 2010.

Attached are the presentation slides to be used today by Immuron CEO, Dr Grant Rawlin at the 25th Annual Dairy Industry Association of Australia, Victorian State Conference in Melbourne.

In the presentation Dr Rawlin will discuss Immuron's work on preventing influenza infection, showing the outcome of successful mouse challenge studies and discussing the role of ferret challenge and human clinical trials in leading to a commercial outcome.

He will also describe the role of the mutually intended collaboration between Immuron and Nycomed, a global pharmaceutical company, to bring this technology to the large (>$2 billion) world market.

ENDS

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About Nycomed: **Nycomed** is a privately owned pharmaceutical company that provides medicines for hospitals, specialists and general practitioners, as well as over-the-counter medicines in selected markets. Nycomed is one of the top 25 global pharmaceutical companies and 16th in rank world-wide for consumer healthcare products with a total net turnover of more than 3.5 billion Euro (AU$6 billion). Nycomed Australia, based in Sydney, has grown quickly over the last 7 years to achieve over AU$100 million turnover and employs 100 staff locally. Nycomed is most active in the areas of gastroenterology, respiratory diseases, pain management and tissue management. A key corporate strategy within Nycomed is to license in new promising products and to work with innovative partners to co-develop their concepts to a profitable conclusion.

About Immuron Limited, Immuron is a biopharmaceutical company focused on oral immunotherapy using dairy-derived polyclonal antibody products for humans. Current products target infectious diseases of the gastrointestinal tract, while more recent projects are targeting immunotherapy to influence chronic diseases such as diabetes type 2 and fatty liver (NASH), and to prevent and treat respiratory infection with influenza. Immuron's main scientific alliances are with Hadassah Medical Centre (Israel) and University of Melbourne (Australia).

Prof. Colin Chapman
Chairman

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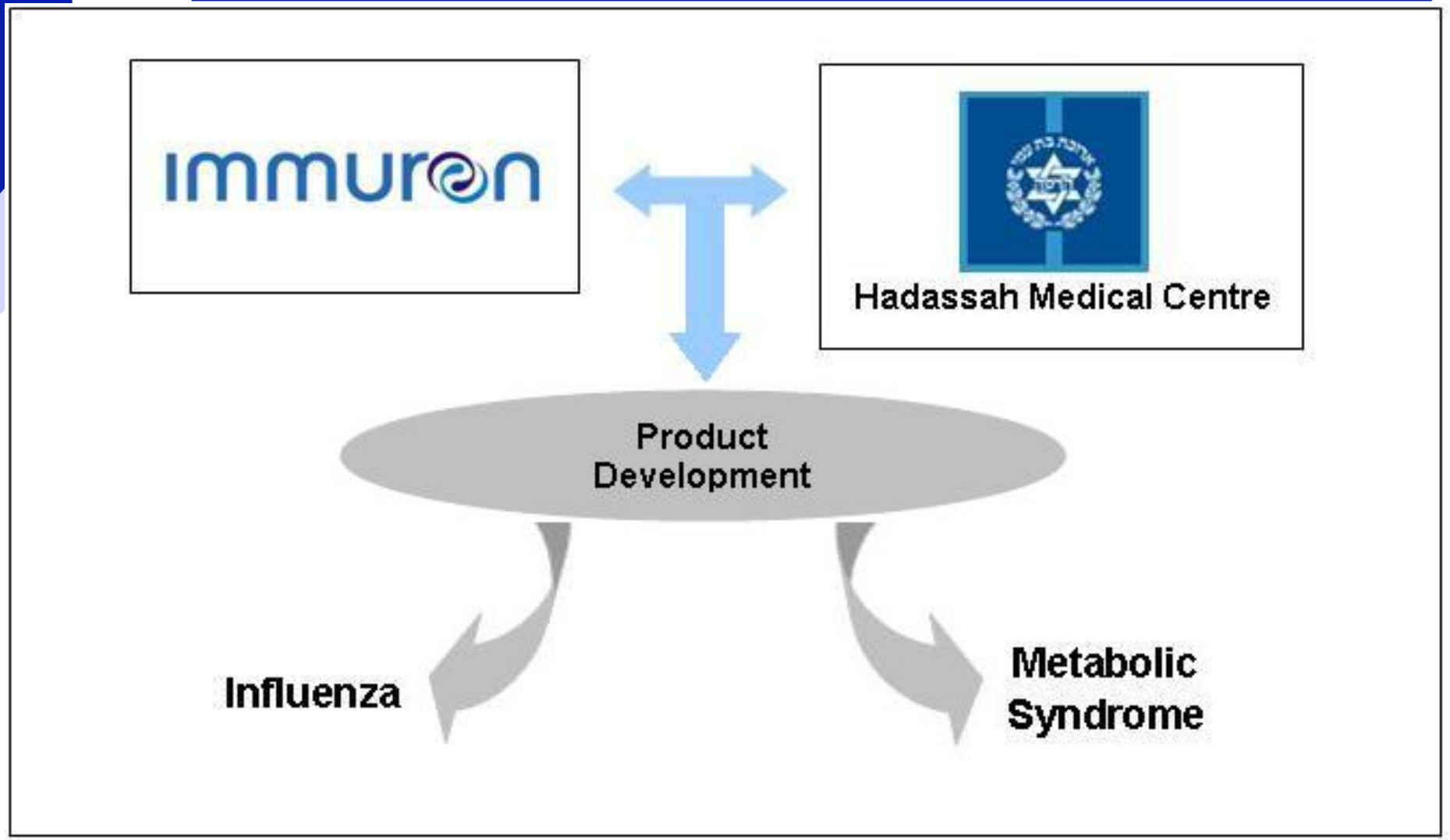
ASX:IMC

Influenza prevention: Immunotherapy using polyclonal antibodies from cattle

Dr Grant Rawlin, CEO
www.immuron.com

April 2010


immuron
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 growing 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 Influenza product could be commercialised within 2 years due to likely OTC status.

Immuron: what do we do best?

Tonnes of targeted polyclonal antibodies that can be used on mucosal surfaces to treat diseases.

- Proprietary registered veterinary vaccines are used to generate highly targeted antibody levels in dairy cattle colostrum (first milk). Approximately 400g per animal.
- Antibodies are processed from the dairy product under GMP certification suitable for human use in OTC products yielding 40+% IgG polyclonal against target.
- 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 and production partners eg TMI

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
- Up to 3 tonnes per season have been made to GMP standards (6 campaigns completed).
- Harvesting in the Goulburn Valley now

The applications now

- Infectious diseases
  - Travellers diarrhoea *E. coli*.
  - **Influenza** (animal trials successful: combination of Melbourne and Hadassah work).
  - C. difficile (laboratory trials and pilot human study successful)
- 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)
- Anti-inflammatory action in gut (Binding of LPS)

Influenza Prevention: an OTC product

- Envisaged as an Over-The-Counter preventative product although the approach works with treatment as well.
- Work continuing at Melbourne University (Prof. Brown) and at Hadassah (Profs Ilan and Wolf) on a nasal spray product
- Overall global influenza treatment/vaccine market is over US$2 billion, OTC cold and flu pharmacy market in Australia alone is $150 million.
- How much antibody to service the global market? In the region of 45 tonnes of powder (depends on final dose).

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 (Note: later experiments at 0.2 mg dose showed similar protection results)

- 1,2, 3 or 7 days later mice were infected with a **lethal dose** of PR8 **H1N1 influenza virus** confined to the upper respiratory tract (a model of natural infectious route in humans).

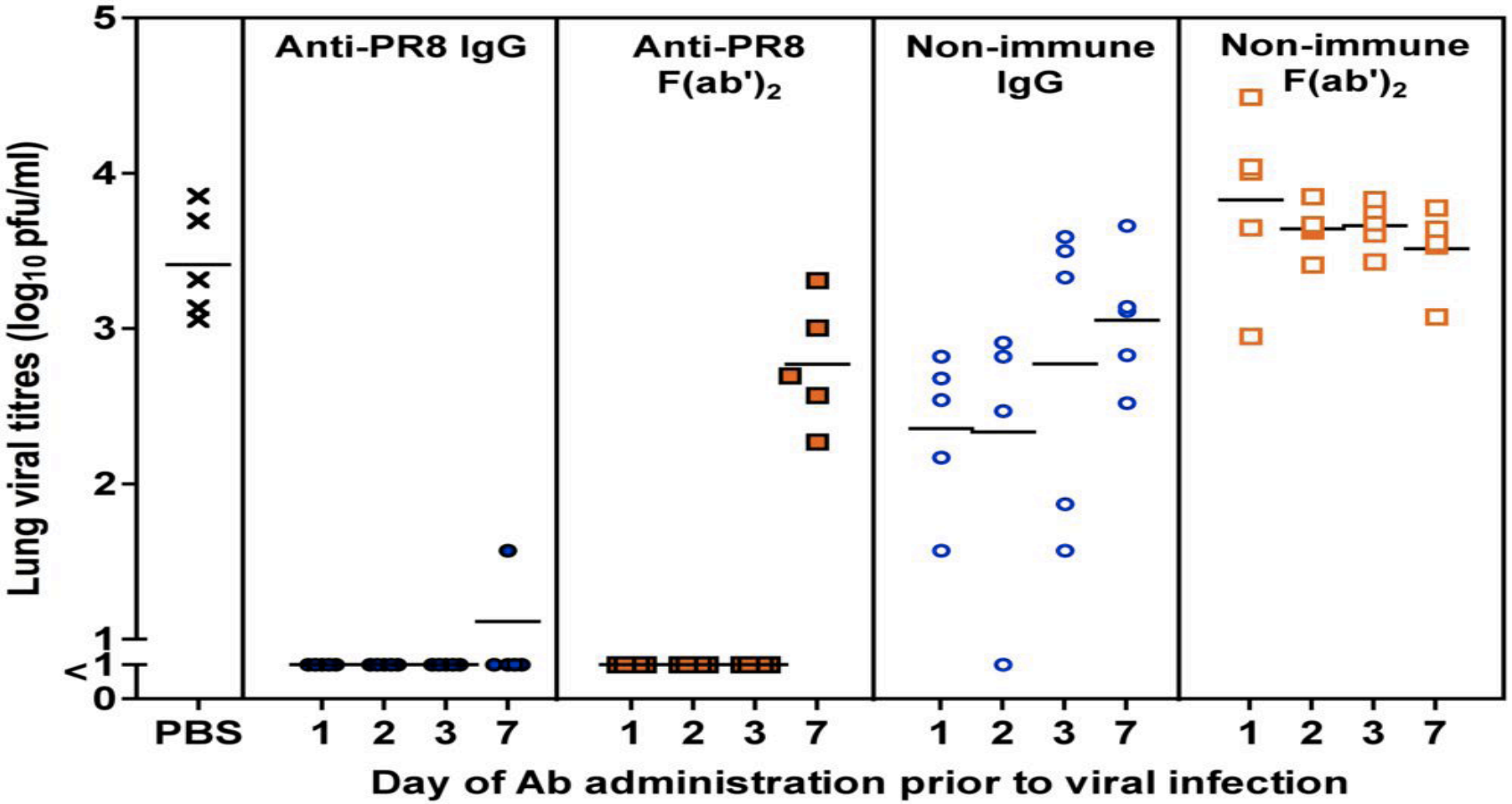
- On day 1 post infection, viral loads in the nasal turbinates were determined by plaque assay as a measure of infection.

RESULT

- Mice were 100% protected from infection with virulent influenza virus at 3 days.

- 80% of mice were protected for 7 days

Preventing infection up to 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 H1N1 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 $(ab')_2$.

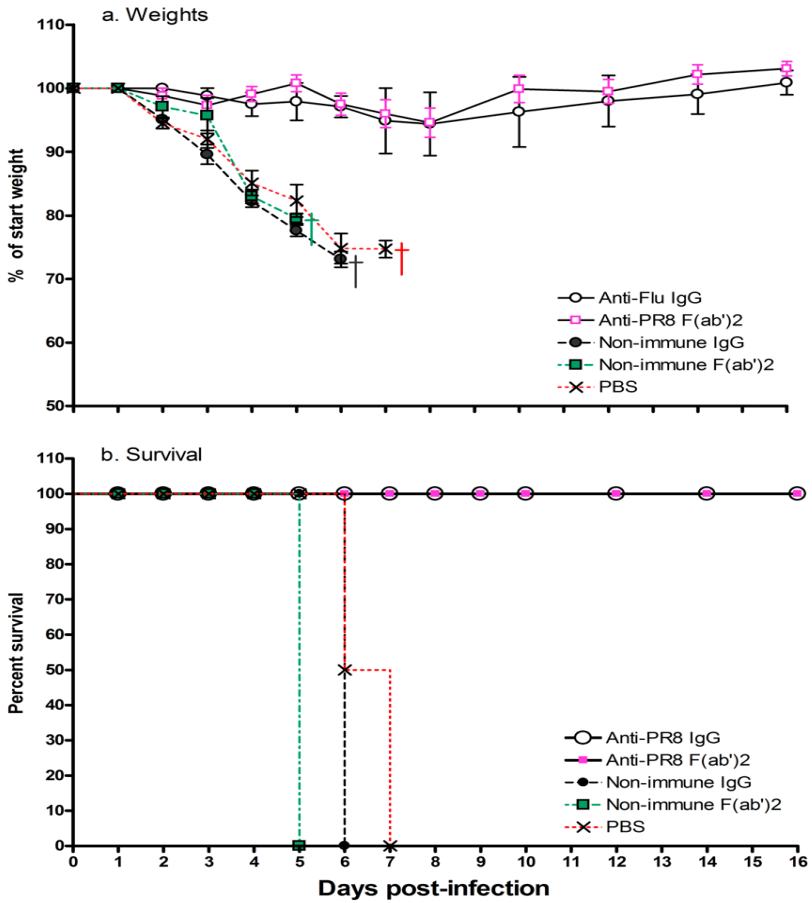
- The mice were monitored daily for clinical signs and their weights determined over a 16-day period (upper graph). Mice were culled at the humane endpoint and a survival curve plotted (lower graph).

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



Dose definition and on to humans

- Up to 7 day protection has now been achieved at 0.2 mg per mouse.
- What about humans? … mice do not buy drugs…
- Now testing in the gold standard animal model at CSIRO (accepted as a direct parallel for challenge in humans)

Lets ask **The Ferret**!

Ferret testing: Protection experiments

- Linking to successful mouse work
- Define dose rate for larger animal
- Use other H1N1 variants eg New Caledonia (current circulating strain)
- Investigate dosing methods

Where to from there?

- Continue investigating beneficial effects on cell-mediated immune system. (Hadassah Medical Center)
- Just how does it protect for up to 7 days?
- Formulation/delivery development
- Safety/physiology trial in humans
  - Already approved at Hadassah Medical Center
- **Commercial Strategy**: Partnering with a larger company to take it to market.

Main Research Partners on Influenza

- **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**
  - Current research in Influenza Treatment and Prevention
- **CSIRO Animal Health, Geelong**
  - Running infectious study in ferrets

Commerialisation: Announced today

- **Nycomed** and **Immuron will collaborate** to develop this technology with the aim of taking it to the global market.
- **Nycomed** is a Swiss-based Global Pharmaceutical company. 15th biggest in revenue in the world OTC market and top 25 overall pharma company. US$6 billion turnover.

Thank you

Chagall windows Hadassah Medical Center, Jerusalem