



Solagran Limited

Solagran Limited
ACN 002 592 396
Level 11
492 St Kilda Road
Melbourne 3004
Victoria
Australia
Tel 61 3 9820 2699
Fax 61 3 9820 3155

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Company Announcement
Influenza Virus Trials Reveal Another Major Application for *Bioeffective R*

The Directors of Solagran Limited are pleased to provide a summary of the initial results of a series of studies undertaken to assess the immune system enhancing properties of *Bioeffective R*. These trials were conducted at the Institute of Influenza in St Petersburg (<http://www.influenza.spb.ru>). The trials team was led by Dr V. P. Sukhinin MD, PhD, the Head of the Department of Molecular Virology and Head of the Laboratory of Pathomorphology of Viral Infections, together with Dr V. V. Zarubaev PhD, the Head of the Laboratory of Molecular Antiviral Chemotherapy.

The results presented in this announcement relate to the use of *Bioeffective R* to increase resistance of experimental animals to the Influenza A Virus (strain A/Aichi/2/68 (H3N2)). Data relating to the use of *Bioeffective R* to increase resistance to Adenovirus, a pathogen associated with many common illnesses, are still being processed.

Two outcomes from the influenza study were particularly significant. The first was that a single dose of Ropren (the finished form of *Bioeffective R*) administered 2 days before infection with the influenza virus, enhanced animal survival rate significantly. The second was that a single dose of Ropren was able to stimulate production of serum interferon, and led to the increase of the level of interferon for 5 days post infection.

Improved Survival Rates

The animals (white mice) in the trial were divided into experimental groups and exposed to the H3N2 virus at 1 of 3 dosage levels: lethal, sub-lethal, or infectious.

For animals in the control group:

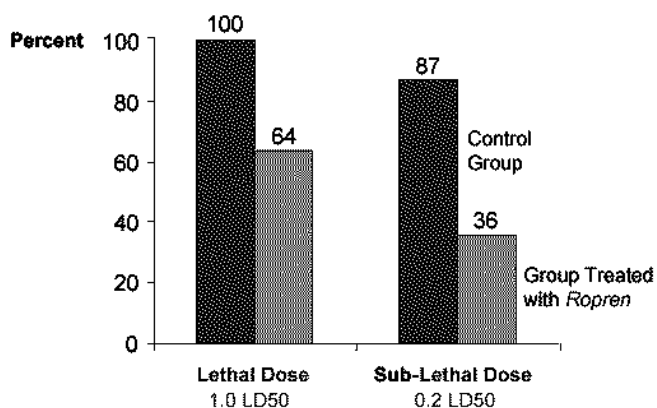
- 100% exposed to the lethal dose died within 14 days (as expected)
- 87% exposed to the sub-lethal dose died
- None exposed to the infectious dose died, but all of the animals exhibited serious lung damage

For the animals treated with Ropren:

- 64% receiving the lethal dose died during the 14 days of the experiment
- 36% of those exposed to the sub-lethal dose died within 14 days
- None exposed to only the infectious dose died

Detailed morphological analysis showed that animals treated with Ropren exhibited only minor, localised areas of damage to lung tissue, whereas the control animals demonstrated extensive spread of damage. Those exposed to the lethal dose exhibited levels of lung damage similar to that for the animals in the control group exposed to the lowest level infectious dose.

Effect of Ropren Treatment on Mortality Rate of Mice Exposed to Influenza



Stimulation of Natural Interferon Production

During the trial, the scientists noticed that after administration, Ropren appeared to be pooled and stored in reserves in the body, suggesting potential for a prolonged effect. To study this effect, a special investigation of the effect of Ropren on long-term changes in interferon levels was conducted.

Analysis of blood serum taken 1, 3 and 5 days following a single administration of Ropren showed a 2 to 3 fold increase in the level of interferon which was maintained for up to 5 days. This compares favourably with the well-known anti-viral drug Cycloferon (10-carboxy-9-methylacridanone), which maintains the increased level of interferon for only 3 days.

Solagran has now identified 3 main therapeutic areas for *Bioeffective R*. These are:

- Liver disease
- Neurodegenerative disorders
- Immunological disorders

While commercialisation is closest in relation to products for the treatment of liver disease, the Board considers immunological applications to be potentially the most exciting. The ability to enhance the immune system means that *Bioeffective R* could be employed to build resistance against a number of dangerous viral pathogens currently of concern throughout the world – including bird flu. This in turn may potentially obviate the need to continually develop new vaccines as viruses mutate over time.

Dr Sukhinin and Dr Zarubaev concluded that: “given that Ropren has successfully completed clinical trials for other applications, its efficacy together with low toxicity means that the drug can be recommended for use in clinical practice for prevention of influenza and for prevention of immunodeficient states...”

The Board expects to be in a position to report the results of the Adenovirus trials soon.

Peter Stedwell
Director
On behalf of the Board of Directors

Solagran Limited

Solagran Limited is an Australian company founded in 1995 with the objective of commercialising the results of a research and development program that commenced in Russia in the 1930s, and which has continued, uninterrupted, until the present day. The focus of the research program has been the extraction and utilisation of the "live elements" of tree foliage. Solagran has collectively trademarked these substances using the term Bioeffectives®.

Solagran's technology permits it to obtain many different Bioeffectives from tree and plant sources. One of the highest value Bioeffectives is a class of organic substances known as polyprenols. Polyprenols are naturally occurring precursors of dolichol, which is found in all of the vital organs of the human body, and which plays an essential role in cell metabolism and in supporting the immune system.

Solagran has committed significant resources to the development and testing of Bioeffective R – a Bioeffective comprising polyprenols. Experimental and trials results show that Bioeffective R has a very positive effect on damaged liver cells.