



ONCOLOGY RESEARCH INTERNATIONAL LIMITED
ANNUAL REPORT TO SHAREHOLDERS
July 2017

SUMMARY

This Report covers the major activities of the company for the 2106-17 financial year: Science & Technology, Business Development and Operations.

The Company currently has very limited financial resources and has over the last 12 months explored a number of potential capital raising proposals. Our executive team has accepted a reduced remuneration while those fund raising efforts continue. It is challenging to continue our technology research and development without adequate funding and securing funding is a key priority of our company. We will keep shareholders updated on fund raising efforts.

Notwithstanding it has made progress in its technology and ORIL's major emphasis continues to be the treatment of cancers with a high, worldwide, unmet clinical need such as lung, bowel, liver, pancreatic, breast and prostate cancers. Subject to funding the R&D strategy will focus on the development of the new compounds such as ORIL019 for use in immuno-oncology.

1 SCIENCE & TECHNOLOGY

ORIL's major focus has continued to be the treatment of cancers with high unmet clinical need such as liver, lung, pancreatic, prostate, breast and bowel cancers. Given the growing interest and success by pharma in immuno-oncology ORIL has recognized this change in the market and sharpened its interest in the development of its compounds to meet this demand.

1.1 ORIL007 as a single agent

ORIL007 had been selected as the lead candidate for oncology based on a large number of criteria and studies that included *in vitro* and *in vivo* potency and efficacy studies, safety and toxicology profile, ease of manufacture for supply, physical and chemical properties for formulation and delivery.

Oral

ORIL designed a formulation to improve the apparent water-solubility of ORIL007 (one of the most important features of a drug molecule for formulation purposes), for application in oral solid-dose and related formulations. This produced highly encouraging results and a provisional patent application was filed in November 2016 to protect this innovative technology.

ORIL entered into a research collaboration with the Women & Children's Hospital (W&CH) and University of Adelaide, SA into the investigation of the application of ORIL007 (in the novel oral formulation), in colorectal cancer, in both prevention and treatment. The study has now been

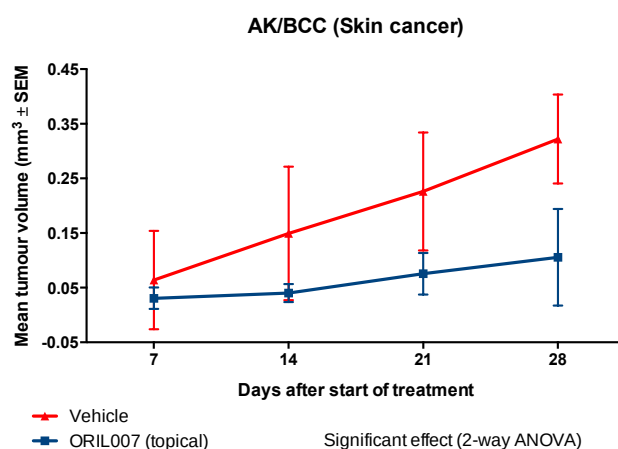
completed with ORIL007 showing no benefit over the placebo in either protection or treatment. The patent application has been discontinued for commercial reasons.

Parenteral

ORIL designed and evaluated new 2nd generation water-soluble compounds as a more viable longer term option. (Refer 1.3 below).

Topical (dermal)

A collaborative study in with experts based at the Translational Research Institute (TRI) at the University of Queensland to investigate the use of ORIL007 in a topical (dermal) product in animal models that closely mimic the clinic situation of skin cancers commenced in 2016. One of these complex studies with the TRI (which took 9-10 months to complete from the commencement of treatment), has been completed with ORIL007 and showed a positive benefit over the placebo in treatment of non-melanoma skin cancers, (actinic keratoses/basal cell carcinoma) as depicted in the graph below.



The second study in the melanoma skin cancer model is still in progress.

The Overall R&D Strategy

During these long studies at the TRI, ORIL undertook parallel, investigative studies in the:

1. Use of ORIL007 in combination with other oncology agents
2. Development of new 2nd generation oncology agents building on the considerable experience and knowledge acquired from the many studies conducted on other ORIL agents. This resulted in the new family of compounds including ORIL019.
3. Investigation of the potential application of these new agents in the developing field of immuno-oncology

1.2 ORIL agents in combination therapy

Increasingly, combination therapy is the preferred choice in the treatment of cancer because optimal combination therapies have the potential to increase efficacy, reduce toxicity or both, and overall cost of treatment when compared with the equivalent monotherapy.

As shown in the table below positive combination outcomes have been demonstrated with ORIL007 with other cancer agents in an ongoing program to optimize combination therapies using ORIL007 as one of the components.

	Breast (metastatic)	Breast (TN)	Colon	Lung	Prostate	Kidney
Cisplatin	Synergy		Additive		Additive	
Docetaxel	Synergy		Additive	Additive	Additive	
Doxorubicin	Additive	Additive	Additive			
5-FU			Additive			
Gemcitabine	Synergy	Additive	Additive	Additive		
Carboplatin				Synergy		
Sorafenib						Synergy

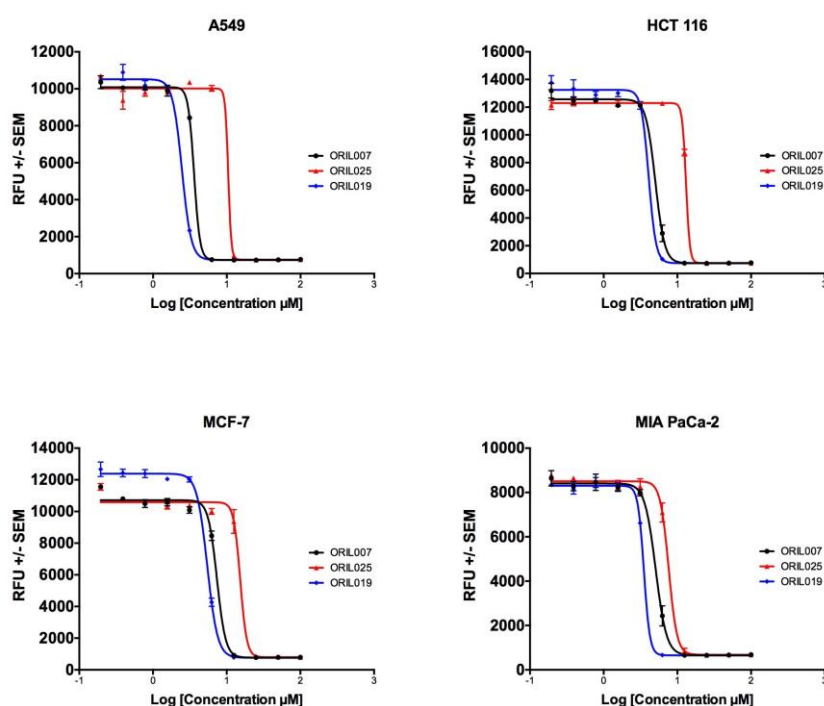
Synergy = the creation of a whole that is greater than the simple sum of its parts

Additive = effects are the simple sum of parts

Other combinations of current and new ORIL compounds with antibodies and immuno-oncology agents are under investigation for application in immuno-oncology therapies. Refer 1.4.

1.3 New chemical entities

Using the knowledge acquired from the medicinal chemistry studies of the earlier ORIL compounds, that is the naturally-occurring family of steroid saponins (such as ORIL007) found in herbs and plants used in Traditional Chinese Medicine ORIL scientists designed and synthesized a number of novel new chemical entities. These new compounds overcome some of the difficult physico-chemical properties of the naturally occurring compounds such as their inherent insolubility and offer other value-adding benefits. Initial results shown in the graphs below are promising in that (for example), ORIL019 has an increased *in vitro* potency in 5 cancer types.



An Australian provisional patent application to protect these new agents was filed in February 2017. These compounds have a number of key features:

- **New chemical entities** with high-value composition of matter **patents** pending
- **Safe** and **potent** against cancer cells
- Immuno-potentiating for use in **immuno-oncology** in combination with other agents
- **Improved solubility** (e.g. water soluble)
- Potential to be administered as an **oral solid dose form** (e.g. powder, tablet capsule etc.)
- Other (commercially confidential) properties

Importantly these new compounds can potentiate the activity of current chemotherapies in the market and have the potential to enhance the action of immuno-oncology therapies (agents that stimulate the body's own immune system to fight cancer). Refer 1.4 below.

1.4 In immuno-oncology

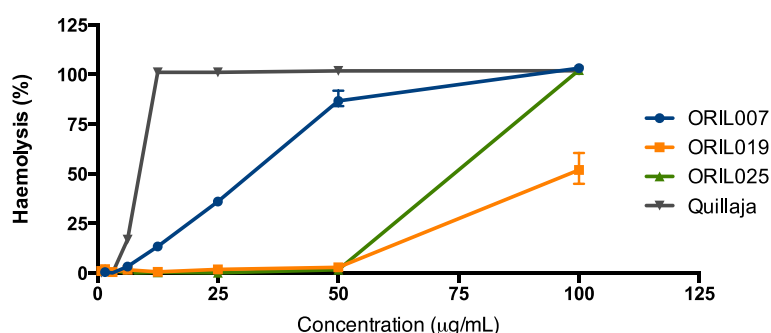
Over the past few years, the majority of the multinational pharma companies have switched focus to the development of immunotherapies for cancer, due to their high efficacy, target specific action and success in the clinic. Further advances in the effectiveness of cancer immunotherapies will require targeting antitumor immune response at multiple levels, which may be accomplished through combination approaches.

Saponins have a history of use as immuno-modulators for immunotherapies. Saponin based adjuvants have the ability to modulate the cell mediated immune system as well as to enhance antibody response. However, their use in the clinic has been limited by their poor water-solubility (making them difficult to formulate) and their toxicity. As the previous graphs and the graph below show, the novel ORIL compounds retain the anti-cancer activity of its earlier compounds while presenting decreased haemolytic activity, when compared to the commercial saponin derived from Quillaja.

Haemolytic activity as measured by reduced lysis of human blood cells is a favourable indicator of safety of various ORIL compounds, compared to a commercial saponin derived from Quillaja (Quil A). (The greater the % haemolysis at a given drug concentration, the greater the haemolytic activity).

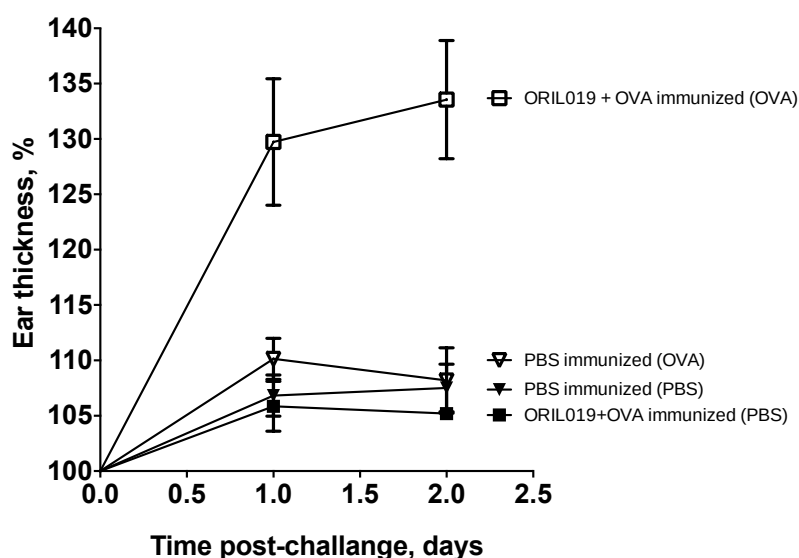
Many saponins such as Quil A have serious drawbacks including high toxicity, undesirable haemolytic effect, poor water-solubility and instability in the aqueous phase, which have limited their use as an adjuvant in vaccination.

The graph below shows the low haemolytic activity of ORIL compounds compared to Quillaja.



In addition, ORIL compounds are found to have the ability to promote the immune response and can thus act as adjuvants for T-cell activation in immuno cancer therapy.

The graph below illustrates that the new ORIL compound ORIL019 has a strong *in vivo* immuno-potentiating effect in the mouse oedema model.



Other investigations to study the *in vivo* potential of ORIL019 in a number of oncology and immuno-oncology models are in progress, as a single agent and in combination with other immuno-oncology therapies.

1.5 Safety studies

A large number of studies are on file (and have been reviewed by an independent toxicology expert) that demonstrate ORIL compounds are well tolerated when administered as single and multiple doses to rodents *via* the oral, topical and parenteral routes.

Recent studies also support that ORIL019 is also well tolerated when administered as single and multiple doses to rodents *via* the oral and intravenous routes.

1.6 Compound Supply

Early on ORIL recognized the difficulty of relying on the vagaries of nature for supply of the naturally occurring saponins and has overcome the supply issues by developing a novel synthetic route to manufacture its compounds for commercial supply, with a patent position. The method of manufacture has been completed in the laboratory, scaled-up for commercial quantities, under international good manufacturing practice (GMP) and at relative low cost.

The support data for the verification and characterization of the key intermediates, analytical method validation has been completed. Importantly this can be used for downstream technology transfer to an approved pharmaceutical active ingredient manufacturer and for the Chemistry, Manufacturing

Control (CMC) section of the IND¹. It is important to note that the US FDA² evaluates the CMC section of the IND before the other sections.

The new compounds are based on ORIL's patented method of manufacture of the related steroid saponins and the majority of the CMC section of the IND is also applicable for the new agents such as ORIL019. A provisional patent application to protect these new agents was filed in February 2017.

1.7 IP Portfolio

The following table below provides an update of the status of the ORIL family of patents. During 2016-17 the ORIL Directors took the decision to discontinue some of the patent families - for commercial reasons only.

Title (Family)	Patent Application No.	Status
Methods and compositions for promoting activity of anti-cancer therapies	PCT/AU2007/001091	Granted in Australia, USA, India, Canada, China, Europe, Eurasia, Mexico, Taiwan and Japan Under examination/pending in Brazil
Methods and compositions for inhibiting angiogenesis	PCT/AU2007/001092	Discontinued
Improved synthesis of a class of steroid saponins	PCT/AU2013/000416	National Phase Entry November 2014. Granted in Australia
Polymorph (ORIL007)	PCT/AU2013/000417	Discontinued
Novel Chemical Entities	2017900427	Filed February 2017
Novel Formulations	2016904406	Discontinued

ORIL's strategy continues to aggressively seek intellectual property protection on proprietary technologies where the scientific, business and legal support for such protection are soundly based. The technology remains 100% owned by the Company.

¹ IND = Investigational New Drug – an application for regulatory approval for new drug to be evaluated in humans

² FDA = USA Food & Drug Administration (regulatory agency)

2 BUSINESS DEVELOPMENT

In April 2016 ORIL engaged the services of Liberi Life Science Consultancy B.V., a company based in The Netherlands to assist ORIL to identify and connect with suitable commercial partner/s for the commercialization of its technology. Liberi has an impressive history of making suitable strategic, international connections between companies, universities, investors etc. Liberi made a large number of presentations to various international companies on behalf of ORIL, some of which led to the signing of a confidentiality agreement to enable exchange of information. To date none has led to a commercial agreement.

In December 2016, ORIL senior executives presented its business opportunity to the Shanghai Entrepreneur Association (SEA) in Shanghai, Peoples Republic of China, an investment group comprising of 100+ Chinese high net worth individuals looking to invest worldwide and with an interest in Australia. This opportunity was in collaboration with the Port Adelaide Football Club (PAFC), organized through its connections in China and part of its strategic business development in China. ORIL was selected from a large number of Australian applicants and was the only biotech company among the 10 presenting groups. The presentation, which was delivered in both English and Mandarin was well received and led to two major leads, one which has since declined the opportunity and ORIL is waiting on a response for the other.

ORIL executives, in collaboration again with the PAFC and also the South Australian State Government, Department of International Trade again presented the business opportunity to Chinese high net worth individuals and entrepreneurs who are seeking up to \$5 million investment in Australia. The event was held at the Adelaide Oval in May 2017, prior to the AFL game and ORIL was the only biotech company among the 6 presenters. The company again received positive feedback and is following up several leads.

Numerous other leads and opportunities have been identified and pursued during the past 12 months and include but are not limited to:

- Biomedical Translation Fund: \$500 million allocated funds from the government's \$500m Biomedical Translation Fund. This is in progress.
- Medical Research Future Fund (MRFF) \$20 Billion Fund. ORIL was advised it did not meet the eligibility criteria
- International groups such as: mid to large Pharma and Biotech companies, Corporations, Family Offices, Foundations, Philanthropists, Venture Capital Funds

To date the company has not been successful in raising the necessary funds.

3 OPERATIONS

During the year the company received a R&D tax offset of \$518,886 with respect to the 10156/16 tax return. The Board of Directors resolved in June 2016 to operate at no fees for the 2106-17 financial year and until ORIL has sufficient funds.

Since July 1st, 2016 the CEO and the R&D Program Manager on have continued on company activities on a monthly basis at a reduced fee to maximize the company's opportunities.

On June 30th 2017 these two contracts were further scaled back to a pre-approved month-by-month basis. Both are continuing at significantly reduced rates to maximize the company's opportunities from its science and technology. In the event that sufficient funds are not raised/available by ORIL to pay any deferred payments both contractors have agreed to not make any claim against the company (ORIL) in respect to deferred invoices.

The company requires \$2 million in immediate funding for its ongoing operations.

4 THE NEXT FEW MONTHS.....

Ongoing operations are dependent on additional funding. All possible actions for fund raising opportunity are being taken by the ORIL executive.

The company is waiting on a number of key proof-of-concept scientific studies in oncology and immuno-oncology to be completed. While the early signs are encouraging the full data are not yet available. Subject to funding the R&D efforts will concentrate on the development of ORIL019 in immuno-oncology.

The Directors are hopeful of attracting investment interest but there is no guarantee and the Directors make no forecast. Our efforts over the past 12 months for venture capital, licence or partnering have not yet been successful.

It is not possible for the company to continue indefinitely and the Board has decided that if insufficient funds have not been raised by the 2017 Annual General Meeting, scheduled for November, the company must seriously consider its future.

Final Thoughts.....

- *The three things that are most essential to achievement are common sense, hard work and stick-to-it-iv-ness.....*
- *Many of life's failures are experienced by people who did not realize how close they were to success when they gave up.*

Thomas Alva Edison (1847-1931)