

**Investment Brief for
Predict Response and Increase
Effectiveness of Cancer Chemotherapy**

**NSW
AREA HEALTH
SERVICES**

Office of Commercialisation

**For further information under a Confidential Disclosure
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Predict Response and Increase Effectiveness of Cancer Chemotherapy

Summary

A simple protein-based method to determine resistance to chemotherapy and potentially sensitize patients to platinum or taxol-based chemotherapeutics or alternative cancer drugs has been developed. Using the technology the researchers have been able to regulate the sensitivity of cloned cells to platinum chemotherapy. This technology offers the opportunity to develop a simple diagnostic test to predict likely response to therapeutic drugs used to treat common forms of cancer. It also offers the opportunity to develop adjunct therapies to increase sensitivity of chemotherapy drugs.

Professor Paul Harnett, Network Director of Cancer Services, SWAHS and his team have spearheaded the research in this area based on a clearly identified clinical need.

Benefits

This technology offers the opportunity to create a unique position in this market - a provider of treatment methodologies and a personalized medicine approach to patients suffering from common cancers including:

- Predict response and increase effectiveness of cancer chemotherapy
- Protein-based tools to determine tumour-response to chemotherapy: A new advantage in treatment of cancer

The Technology

Our clinical research team has developed a technology to measure and manipulate the sensitivity of human cancer to chemotherapy drugs.

The technology exploits proteins; both in their association with sensitivity to chemotherapy agents, and in their capacity to be used as tools to manage chemotherapy drug resistance - either directly, or in a pharmaceutical combination or genetic construct.

Applications

The technology may be embodied in novel products, including:

- Patient-screening diagnostics - to select the most effective chemotherapy drug for a given patient (particularly platinum-, and potentially anthacycline- and taxane-based drugs).
- Novel pharmaceuticals with a variety of mechanisms - to increase cancer sensitivity to chemotherapy.
- Pre-clinical research tools - to assess and refine efficacy of NME's for chemotherapy.

The protein association with chemotherapy resistance has been proven in specific cancer patients as well as specific tumour cells, and potentially has applications across a range of cancers.

Market

Chemotherapeutics are the most used drugs to treat cancer worldwide and the estimated market size is greater than \$US5bill. Market share in established chemotherapeutics is diminishing, due to generic competition after extensive patent expiries, and due to novel agents that exploit chemotherapy resistance. Forty percent of operable and 80% of inoperable cancers can be chemo-resistant, creating opportunities for new sensitizing agents and adjuncts that improve efficacy of current chemotherapy. The FDA is fast-tracking adjuncts to chemotherapy, including the chemo-sensitiser 'Phenoxodiol' (Marshall Edwards/Novogen).

IP Position

A PCT application was filed in December 2005 and is fully owned by Sydney West Area Health Service.

Commercialisation

We seek a partner to licence our technology for further development, and to manufacture, distribute and sell diagnostics and novel pharmaceuticals using the technology. The licensee may partner with our clinical professionals for further research, pre-clinical development of NME's and to fast-track regulatory approvals through clinical trials.