Cancer Treatments – Blocking Cancer Cell Growth

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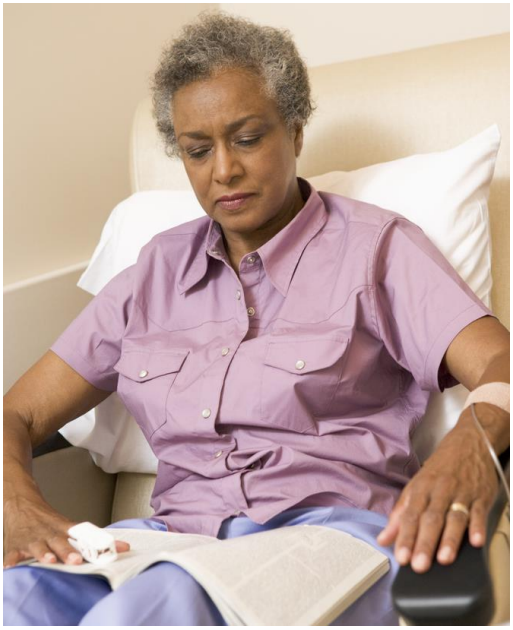
Development of novel anti-cancer drugs

The Technology

UNSW researchers have pursued a rational-based drug design approach in order to produce compounds that inhibit adenine nucleotide translocase 'ANT'. The first investigational drug is an intravenous prodrug GSAO discovered in 1999. An understanding of its pharmacokinetic and pharmacodynamic properties led to the design in 2006 of a more potent analogue of the active metabolite, PENAO. A key feature of the compounds is that they only inhibit ANT when cells are in the proliferative stage and not in growth quiescent cells.

GSAO was tested in a Phase I trial in cancer patients and found to be generally well tolerated. PENAO demonstrated greater efficacy in preclinical studies and has now enter clinical testing. It is likely that PENAO becomes the first in class ANT inhibitor to be approved if it demonstrates sufficient clinical safety and anti-tumour activity.



Technological Stage

A Phase 1 dose-escalation clinical trial in patients with advanced solid tumours, partly funded by the Cancer Institute NSW, has commenced at the Peter MacCallum Cancer Centre in Melbourne, Australia with promising results.

Partnering Opportunity

UNSW is seeking to partner with a biopharmaceutical company to further develop its lead candidate PENAO. Having spent a good part of a decade investigating the mitochondrion the inventors Professor Phil Hogg and Dr Pierre Dilda are keen to established a broader partnership with a leading biopharmaceutical company in the area of mitochondrial inhibitors.

PENAO is available to be optioned or licensed under a suitably structured collaboration or licence agreement.

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