

NEW FORMULATION OF PHOTOSOFT™ THERAPY SHOWS INCREASED EFFECT IN OVARIAN CANCER

- New *in vitro* data shows effectiveness of IVX-P02, an improved formulation of Photosoft™ Oral
- IVX-P02 is 15 times more effective than Photosoft™ Oral at killing ovarian cancer cells
- *in vivo* animal trials to be commenced this year, moving to human clinical trials in 2019

Melbourne, Australia, 25 September 2018: Cancer therapy developer Invion Limited (ASX: IVX, "Invion" or "Company") has released data showing that a new formulation of the Photosoft™ technology is significantly more efficient at killing ovarian cancer cells.

Invion and its research partner, Australia's Hudson Institute of Medical Research, revealed the new data at Australia's major biochemistry and molecular biology conference, ComBio 2018, held in Sydney from 23 to 26 September.

Researchers compared the efficacy of four photosensitisers used in photodynamic therapy, including Photosoft™ Oral and an improved formulation of Photosoft™ called IVX-P02, in *in vitro* tests against ovarian cancer cells.

One of the main findings was that IVX-P02 had a 15-fold greater *in vitro* cytotoxicity (toxic to cells) against ovarian cancer cells, compared to Photosoft™ Oral.

Also, Photosoft™ and IVX-P02 showed enhanced cytotoxicity *in vitro* compared to the two commercially available photosensitisers: Talaporfin and Temoporfin.

Neither Photosoft™ Oral or IVX-P02 showed toxicity towards cells until they were activated.

The new findings also include information on how Photosoft™ kills cancer cells, including where the photosensitiser acts within the cell and the molecular mechanisms induced to kill the cancer cells.

The new data builds on the previous positive results of the study announced on 5 July 2018, which showed the effectiveness of the Photosoft™ Oral.

Invion chief executive Dr Greg Collier says the latest data validates Invion's continued development of the Photosoft™ compound.

"The new version of Photosoft™, IVX-P02, has a greatly improved ability to kill cancer cells, even more so than its predecessors – that's an important finding," Dr Collier said.

"This data lays the groundwork for ongoing preclinical trials of Photosoft™ and IVX-P02 as an indication for chemo-resistant, solid ovarian tumours.

"We are making good progress and could move to clinical trials early next year."

Dr Collier said Invion's licence partner, The Cho Group, will fund the global research and development costs for these programs.

Cancer expert Dr Andrew Stephens, the group head of the Ovarian Cancer Biomarkers Research Group at the Hudson Institute, said the Photosoft™ technology has many potential

ASX ANNOUNCEMENT

applications, particularly in cancer types that are already resistant to current chemotherapies.

Ovarian cancers have 5-year mortality rate greater than 70%, and patients almost universally develop recurrent, chemo-resistant disease. New therapies are urgently needed.

Invion and the Hudson Institute are now ready to start preclinical studies to determine the *in vivo* effects of Photosoft™ Oral and IVX-P02 – not only for the direct treatment of ovarian cancers, but also to induce an anti-tumour immune response which could potentially provide effective protection after treatment.

Invion and the Hudson Institute have received ethics approval to start animal studies in the coming weeks, with the first results expected in the next few months.

The ability of a photosensitising compound such as Photosoft™ to kill cells depends upon both the concentration of the compound and how much light energy is delivered to activate it – which in turn is dictated by both the light intensity and duration of exposure.

The Invion/Hudson Institute study used the same concentration of Photosoft™ Oral and IVX-P02, the same activation time and the same intensity of light.

“All the parameters are identical. Using IVX-P02, you get a 15-fold increase in cell death,” Dr Stephens said.

“That means you can either increase how rapidly you kill the cells, or you can increase the proportion of cells that you kill for the same concentration, in the same amount of time.”

IVX-P02 differs from Photosoft™ Oral in how it is made and synthesised.

About Invion

Invion is a clinical-stage life-sciences company that is leading the global clinical development of the Photosoft™ technology for the treatment of cancers. Invion has been appointed exclusive distributor and licensee in Australia and New Zealand of Photosoft™. The appointment has been made by technology licensor, The Cho Group, a Hong Kong based group that has funded and successfully commercialised a number of unique and advanced technologies. Via an R&D services agreement between the two entities, the research and clinical trials of Photosoft™ are funded by The Cho Group. Invion has an alliance with leading Australian medical research institute, Hudson Institute of Medical Research, for the Photosoft™ research program.

About Photodynamic Therapy (PDT)

Invion is developing Photosoft™ technology as an improved next-generation Photodynamic Therapy. PDT uses non-toxic photosensitisers and visible light in combination with oxygen to produce cytotoxic-reactive oxygen that kills malignant cells, shuts down tumours and stimulates the immune system. In contrast to surgery, or radiotherapy and chemotherapy which are mostly immunosuppressive, PDT causes acute inflammation, expression of heat-shock proteins, and invasion and infiltration of a tumour by leukocytes.

Investor enquiries

Managing Director & CEO, Dr Greg Collier

T: +61 3 9081 6005

E: investor@inviongroup.com