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ASIA EDITION

Ã¢â?¬Å?APAC is one of the fastest-growing photodynamic therapy markets globallyÃ¢â?¬Â•

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Australia's Invion Group is emerging as a leader in the development of next generation precision photodynamic technology (PDT), known as Photosoft, for a range of cancers and other diseases. The minimally invasive treatment promises to provide a potentially more affordable option for millions of people in developed and developing markets. At the recently held BioAsia Taiwan 2025 event, which highlighted the ongoing demand for precision oncology solutions in underserved Asian markets, BioSpectrum Asia took the opportunity to interact with Thian Chew, Chief Executive Officer, Invion Group to find out more about how the company is revolutionising the oncology market with its new products and technology.



What are the major highlights at Invion Group in 2025? Are you planning to launch new products this year and beyond?

Photosoft is a platform technology and Invion has an active clinical pipeline, which is validating multiple applications of our lead cancer drug candidate INV043 across several indications. We now have human data on two distinct cancers – prostate cancer and non-melanoma skin cancer (NMSC). This makes our technology unique because it is unusual to see one drug showing promise on more than one type of cancer.

The investigator-led Phase II prostate cancer trial in Melbourne, Australia, demonstrated a 40–44 per cent response rate and the treatment only had mild side effects and was well tolerated by participants who underwent six rounds of the treatment administered systemically.

Invion has also commenced a Phase I/II NMSC trial in Queensland, Australia, and early results look promising. The findings found no adverse events or pain in the first six patients, and they responded positively to the treatment with an observable reduction in the NMSC lesion size after just one round of treatment.

Additionally, the potential to use INV043 as a diagnostic tool was further demonstrated during trial. While red light of 660nm would activate INV043 to generate Reactive Oxygen Species (ROS) to kill the cancer, violet light of 405nm causes cancer cells to fluoresce.

Having an effective diagnostic tool may help surgeons more accurately identify and remove cancers to minimise the risk of either missing some of the cancer margin or cutting too much of the healthy tissue.

The human data from the two trials support the preclinical findings. *In vivo* studies showed INV043 was safe, non-scarring and non-toxic and only accumulates in cancer cells and not healthy tissue.

The next exciting major development will be the launch of our anogenital cancer trial in partnership with the world-renowned Peter MacCallum Cancer Centre (Peter Mac) in Melbourne.

Anogenital cancers, which includes penile, vulvar and anal cancers, are rare cancers with limited treatment options. As such, this gives Invion the opportunity to explore the possibility of obtaining “orphan drug designation” from the United States Food and Drug Administration (FDA) to fast track future trials in the US.

How is the company strengthening its presence in the Asia-Pacific market?

The Asia Pacific is a key market for us. The company has secured a number of partnerships in the region and is looking for other opportunities for collaboration to advance the development of our platform technology, Photosoft.

In South Korea, we have partnered with a leading pharmaceutical group, Hanlim Pharm. Co., Ltd. to fund and undertake preclinical studies targeting glioblastoma and oesophageal cancer.

Invion also struck a similar agreement with Dr.inB Co., Ltd. to fund and conduct preclinical studies and human Proof-of-Concept trials on Human Papillomavirus (HPV). There is no cure for HPV, which is linked to cervical and anogenital cancers.

These agreements align with our strategy to partner with companies that can provide expertise and non-dilutive funding to advance the development of Photosoft across multiple opportunities. These include exploring avenues to partner beyond human cancers as well.

What are the current challenges facing the photodynamic therapy (PDT) market globally? Where does the Asia Pacific region stand?

PDTs have been around for decades, and some old photosensitisers have been approved by the US FDA. It involves the use of a photosensitive drug and a light source to activate the drug, but severe side effects (such as pain, toxicity, etc.) and other limitations of these earlier generation drugs have hampered their widespread use.

Invion's Photosoft technology has the potential to overcome many of these shortcomings. Initial results from the first six patients in the Phase I/II NMSC trial did not find any adverse events or pain, and patients responded positively to the treatment with an observable reduction in the NMSC lesion size.

Recently, we have observed interest returning to the PDT market, driven by rising cancer rates and demand for minimally invasive treatments. Some of the challenges we face are limited awareness among clinicians, inconsistent treatment protocols across geographies and uneven reimbursement structures, particularly in emerging markets.

Asia-Pacific is one of the fastest-growing photodynamic therapy markets globally. Factors driving this growth include rising cancer rates in high-population countries, such as China and India, and the growing need for more cost-effective targeted therapies.

The costs of new FDA approved drugs in 2023 jumped 35 per cent from the previous year to a median price of $300K. The nature of many new therapies that often are highly personalised to small number of patients (sometimes even one), are harder to scale and therefore become more expensive options.

With government budgets and consumers under pressure during these challenging economic times, we believe Photosoft will help address a substantial unmet need since it is a small molecule that works across multiple cancers, and therefore, is a highly scalable solution.

How is Invion Group leveraging new opportunities in PDT compared to competitors?

Invion is pioneering a new generation of PDT. Unlike earlier versions of PDT, our Photosoft platform is engineered for superior tumour selectivity, immune system engagement and real-time imaging and diagnostic integration. These features allow us to offer a safer, more effective, and more precise alternative to other PDT agents — positioning us ahead in a competitive and fast-growing market.

Preclinical results undertaken by our research partners, Peter Mac and Hudson Institute of Medical Research, showed that our technology completely regressed a range of cancers, such as triple negative breast and ovarian cancers and stimulated the body's immune system to continue fighting the cancer.

Invion has developed a portfolio of patent protected compounds. Its lead drug candidate is INV043, a novel photosensitiser which has the potential to work as a theragnostic (therapy and a diagnostic) tool. Red light activates the photosensitive drug while violet light causes the cancers to fluoresce.

Invion Group is focusing on cancers, atherosclerosis, and infectious diseases. Are you exploring new disease categories?

Yes. In addition to trials in prostate, NMSC, and anogenital cancers, we've partnered with leading companies in Asia to explore Photosoft's utility in brain cancer, oesophageal cancer and HPV-related diseases.

Do you have plans to enter emerging markets, such as India?

Emerging markets like India represent a potential significant strategic opportunity for Invion to expand the global reach of our Photosoft technology. India's large and growing population, increasing cancer burden, and rising healthcare investment create a strong demand for accessible and effective treatments.

Importantly, healthcare systems in emerging markets are actively seeking cost-efficient solutions that can be deployed at scale. Photosoft, with its non-invasive, light-activated mechanism of action, offers a compelling alternative to expensive personalised treatments, such as immunotherapies and targeted biologics, which are often unaffordable and logistically complex in low-to-middle-income regions.

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