

IMAGION BIOSYSTEMS LIMITED

ASX: IBX

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Imagion presents new animal data on MagSense® molecular MRI detection of ovarian cancer at AACR Ovarian Cancer Conference

MELBOURNE — Imagion Biosystems Limited (ASX: IBX), a company dedicated to improving healthcare through the earlier detection of cancer, is pleased to provide highlights from its recent poster presentation at the American Association for Cancer Research (AACR) Special Conference on Ovarian Cancer held in Boston, Massachusetts on October 5-7 where our VP of R&D, Dr. Marie Zhang, presented a poster in relation to Imagion's pre-clinical ovarian cancer research.

Despite systemic efforts around the globe, ovarian cancer remains a 'silent killer'. It is largely asymptomatic until late stage, and presenting symptoms can be vague and similar to those of other common illnesses⁽¹⁾. Unfortunately, there are no tests that are safe and cost-effective enough for a population-based screening program to detect ovarian cancer, and conventional imaging methods like ultrasound are not sensitive enough to detect smaller tumours earlier, only about 20% of ovarian cancers are diagnosed in the early stages⁽²⁾. However, when ovarian cancer is detected by stage II, cytoreductive surgery and conventional chemotherapy can result in far better patient outcomes.

The poster presented from Imagion's preclinical in vivo animal studies show that our MagSense® folate receptor nanoparticles can provide target-specific delivery to cancerous tissue and create molecular T2 contrast in Magnetic Resonance Imaging (MRI) like that already observed in the Company's Phase I study for the detection of metastatic HER2 breast cancer. Notably, multiple different types of orthotopic mice models – where cancer cells are delivered directly into the abdomen or are surgically implanted into the ovaries or fallopian tubes - were investigated. Cancer cells were implanted in the abdomen (intraperitoneal, or IP delivery) and tumours developed over the subsequent 2 weeks. MagSense® folate receptor nanoparticles delivered both to systemic circulation (intravenous or IV delivery) and intraperitoneally accumulated in high concentrations at the ovarian tumour sites, demonstrating successful folate receptor targeting. Moreover, efficient delivery and binding of the MagSense® folate receptor nanoparticles to ovarian tumour cells was detectable using MRI. Success in this model demonstrates that the MagSense® folate receptor nanoparticles has the potential to offer a non-radioactive and non-invasive approach using molecular MRI for earlier detection of ovarian cancer.

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“This is very exciting proof of concept research for Imagion given the lack of early-stage detection for ovarian cancer. To be pioneering this research utilising the widely available MRI modality combined with our MagSense® imaging agent is something our team is proud of,” said Imagion Biosystems’ Chief Executive Officer, Dr. Isaac Bright. “The data presented at this meeting is a continuation of the work that was presented at the AACR annual meeting in April earlier this year. These additional data from the orthotopic animal models have enabled us to complete all the proof-of-concept studies for MagSense® folate nanoparticles in ovarian cancer detection. This progress has paved the way for advancing the program to future IND-enabling studies, whilst also providing the potential future partnership and collaborations opportunities given the need for better detection of ovarian cancer.”

The poster presented at the AACR Ovarian Cancer Conference was entitled, “In vivo Ovarian Cancer Detection using Folate Receptor- α Targeted Iron Oxide Nanoparticles”. The poster outlines results from both in vitro and in vivo specificity studies. These results are an advancement over the Company’s previously reported experiments and include orthotopic metastasis animal models where tumours grow on the ovary, fallopian tubes, and abdominal cavities to simulate metastasis. The in vitro competitive cell binding assay demonstrated that MagSense® folate receptor nanoparticles can specifically target folate receptor alpha, which is overexpressed in over 90% of ovarian cancer patients. Molecular MRI results also demonstrate that MagSense® folate receptor nanoparticles efficiently bind ovarian cancer cells in a pathophysiologic setting that more closely approximates human disease, as MagSense® folate receptor nanoparticle accumulation was 3X – 10X higher in mice with orthotopically implanted tumour than those with flank implanted tumours.

A link to the full poster is available [here](#).

⁽¹⁾ Cancer Council of Australia. ‘[Early detection of Ovarian Cancer](https://www.cancer.org.au/causes-and-prevention)’ <https://www.cancer.org.au/causes-and-prevention>

⁽²⁾ American Cancer Society. ‘[Ovarian Cancer Early Detection, Diagnosis, and Staging](https://www.cancer.org/content/dam/CRC/PDF/Public/8775.00.pdf)’ <https://www.cancer.org/content/dam/CRC/PDF/Public/8775.00.pdf>

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About Imagion Biosystems

Established in 2017 and headquartered in San Diego, California, US, Imagion Biosystems is an ASX-listed company dedicated to developing innovative medical imaging technologies for various cancer types. Imagion Biosystems is advancing clinical development of its MagSense® platform technology to revolutionize cancer diagnosis, introducing molecular imaging to MRI. The Company’s lead program has demonstrated its innovative technology embodied in MagSense® HER2 Imaging Agent (MSH2IA) is safe and well-tolerated in patients diagnosed with HER2+ breast cancer. Imagion Biosystems’ MagSense® pipeline includes prostate cancer, ovarian cancer, and brain cancer programs advancing towards clinical development.

For more information, visit <https://imaginationbiosystems.com/investor-hub/>

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Authorisation & Additional information

This announcement was authorised by the Disclosure Committee of Imagion Biosystems Limited.

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