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ASIA EDITION

We're Creating a Personalised Anti-Cancer Vaccine From the Patient's Own Tumour

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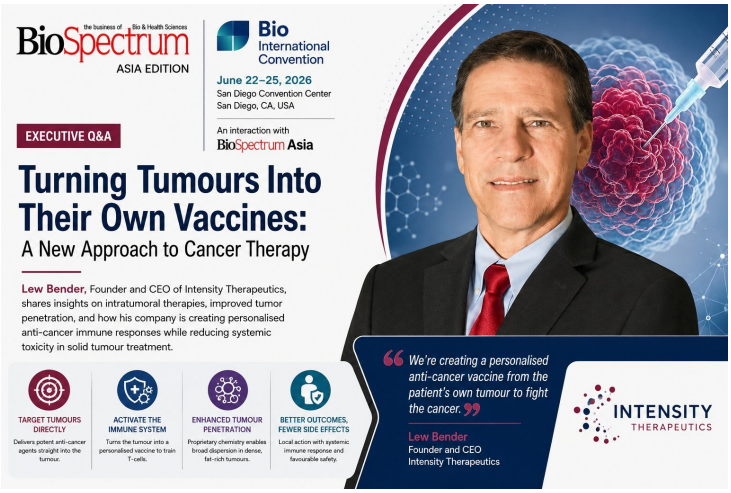
Lew Bender, Founder and CEO of Intensity Therapeutics, discusses intratumoral therapies, personalised anti-cancer immune responses, and why the future of solid tumour treatment may begin inside the tumour itself.



Despite decades of advances in oncology, many solid tumours remain difficult to treat effectively without exposing patients to significant systemic toxicity. As researchers search for ways to improve efficacy while reducing treatment-related harm, intratumoral therapies are gaining attention for their ability to attack cancer directly while simultaneously activating the body's immune system. **In this conversation with BioSpectrum Asia during BIO International Convention 2026, Lew Bender, Founder and CEO of Intensity Therapeutics,** explains how novel tumour-penetrating chemistries are overcoming longstanding barriers in solid tumour treatment, why personalised immune activation could transform cancer care, and what emerging innovations excite him most as oncology enters its next chapter.

What advantages do intratumoral therapies offer compared with conventional systemic treatment approaches?

For decades, treatments like chemotherapy and immunotherapy have been effective but often come with significant, sometimes permanent, side effects because they use a whole-body approach to the therapy. We are advancing a novel and precision targeted approach with intratumoral therapy designed to treat solid tumors directly.. Historically, tumor injection has been difficult because many tumors, including sarcomas, breast, and pancreatic cancers, are dense, pressurized, and contain a high percentage of fat. Traditional water-based drugs will not disperse or be absorbed effectively in such an environment.

Intensity's lead investigational therapy, INT230-6, is built on a proprietary chemistry platform that enables anti-cancer agents to become soluble in both fat and water simultaneously. By combining cisplatin and vinblastine, two potent IV-given chemotherapeutics with a diffusion and cell-penetration enhancer, after direct injection into the tumors, we're able to achieve broad dispersion throughout the tumor and drive the agents into cancer cells. This localized approach allows us to kill tumor cells directly while largely avoiding systemic exposure, reducing side effects. Importantly, as tumors begin to die, the immune system can recognize the cancer and mount a systemic response, potentially targeting both injected and non-

injected tumors, resulting in a precision medicine that can still have a positive systemic outcome for patients, even in the most challenging cancer types.

This systemic response is crucial to ensure tumor death, control in uninjected tumors, cancer eradication, and reduced toxicity.

How can improved tumor penetration contribute to better clinical outcomes while reducing off-target toxicities?

Standard of care for metastatic cancer has largely been systemic, delivering drugs through the bloodstream, IV or orally, to reach the entire body. While this is effective for blood cancers, the approach is limited for many cancers, especially when tumors are large, have few blood vessels, and have several metastases. The tumor microenvironment is characterized by high internal pressure and dense structural barriers that are physically unamenable to water drugs to enter when dosed systemically or locally. Furthermore, many of these tumors are immunologically cold, meaning they have evolved to be resistant to penetration by immune cells, the body's defence system. The cancer cells, being from the patient's own tissue, often lack the signals needed to attract immune cells to a meaningful degree, allowing the cancer to grow undetected. When we administer potent immunotherapies intravenously, we often face a common Catch-22: we must increase the dose to force the drug to bind to more immune cells, but those high concentrations of activated immune cells circulate through the body, causing off-target toxicities that damage healthy organs without the cancer being attacked in a meaningful manner. Millions across the country who unfortunately develop cancer face an untenable dilemma: face the complications from cancer or a highly toxic treatment that could leave their bodies permanently damaged.

The true power of our product isn't just the delivery throughout a tumor to kill the cancer; it's the biological programming of the immune cells that follows. After direct injection, the drug saturates the cancer cells with the potent agents and causes tumors to die in a manner that creates chemicals personalized to the patient's cancer. Those chemicals become recognized by certain immune cells that can train T-cells. The immune system effectively begins to recognize the cancer. The agents in our drug product, cisplatin and vinblastine sulfate, have dual killing and immune-activating mechanisms of action. With the proper dose into the tumor, these drugs can cause the majority of cancer cells to die in an immunologically activating manner. When we inject a combination of cancer-killing agents directly into a tumor, we are essentially creating a personalized anti-cancer vaccine from the patient's own cancer to fight the cancer. Once educated, these immune cells enter the bloodstream to seek and destroy cancer cells in the injected tumor and distant, untreated parts of the body with favorable safety. In mice, the effects of our drug are protective for the life of the animal.

What limitations of current standards of care continue to drive innovation in solid tumor treatment?

Solid tumors are dense, contain a high level of fat, and lack an organized vascularity. Using drugs systemically, such as chemotherapies, to treat patients for bulky disease often results in poor outcomes. Many cancers also do not respond to immunotherapy.

Current cancer treatments can be harsh for the patients. Sometimes treatment itself can be almost as bad as the cancer, but doctors are left with little choice but to provide their patients the best chance to keep the patient alive. We believe our new approach can help cancer patients to live longer without the fear of serious harm to their bodies or other side effects from their treatment. A lot of cancer patients in remission will have permanent health issues. We want patients to have cancer treatment without the fear of complications from the treatment itself. We want our patients to come out the other side of cancer therapy undamaged. We've created something that will potentially take care of the patients in a way that could both save their lives and not torture them or cause them to have permanent harm.

Intensity Therapeutics has progressed from startup to late-stage clinical development. What lessons from that journey would you share with emerging biotech entrepreneurs?

Most importantly, I've learned and begun to understand that acceptance of a new technology takes time. We've had positive clinical results to date and the progress has been incredibly rewarding. Biotech is not for the faint of heart. You have to believe in your idea and be ready to fight for it.

When someone offers you capital, take it and value your programs appropriately. A company is always behind the eight ball in raising capital. If you have a good story, a good cause, and know how to get in front of the right audience, being a biotech entrepreneur can be incredibly rewarding. Knowing how to pitch investors is as important as the science and your drug development skills. I spend a lot of my time trying to communicate better to investors.

What developments in cancer therapeutics are you most excited about as the industry gathers at BIO 2026?

New chemistries in cancer can make a meaningful impact and difference in the lives of patients, and I can’t wait to see what comes out of this conference. For example, Revolution Medicines' new targeted therapy drug, which was a chemistry success, has had a major impact on pancreatic cancer outcomes. Our novel chemistry looks to be a solution to the half-century problem of creating a viable intratumoral product that can increase patients' survival, reduce the risk of the disease returning, and allow cancer patients to live better lives after their treatment without unnecessary complications.