

# Defence's AccuTOX(R) And Antigen Cross-Presentation: Discovery Leads Towards the Development of a Groundbreaking Platform

Vancouver, British Columbia--(Newsfile Corp. - October 25, 2023) - Defence Therapeutics Inc. (CSE: DTC) (FSE: DTC) (OTC Pink: DTCFF) ("**Defence**" or the "**Company**"), a leading Canadian biopharmaceutical company specialized in the development of immune-oncology vaccines and drug delivery technologies, is pleased to announce the discovery of a novel function for its lead anticancer injectable drug AccuTOX® in the context of cell-based cancer vaccine engineering.

The objective of the Accum® technology is to improve the accumulation of biomolecules such as antibodies, proteins or genetic material in target cells. Defence has discovered that the delivery of unconjugated Accum® exerts powerful and potent anti-cancer properties. This observation led to the engineering of AccuTOX®, a lead Accum® variant capable of halting the growth of pre-established lymphoma, melanoma and cervical cancer when co-delivered with different immune-checkpoint blockers.

The AccuTOX® mode of action summarized as follow: i) disruption of endosomal membranes, ii) production of reactive oxygen species, iii) inducing of genotoxic effect resulting in irreversible DNA damage, and iv) triggering immunogenic cell death, which can activate the immune system leading to the development of anti-tumoral immune responses. As such, AccuTOX® not only destroys cancer tumor cells from inside-out, but it can also stimulate an immune response to protect the host from subsequent tumor re-growth.

Surprisingly, transcriptomic analysis conducted on tumor cells treated with AccuTOX® unveiled yet another therapeutic and positive effect: antigen cross-presentation. This process is very important in the context of cancer immunotherapy as it will lead the team to the future design of cell-based anticancer vaccines, capable of priming CD8 T cells, which in turns can trigger cancer destruction. In fact, the Defence team has recently completed an *in vitro* study demonstrating how low AccuTOX® concentrations can indeed reprogram mesenchymal stromal cells to behave like antigen presenting cells akin to Defence's lead ARM vaccine. Once validated, Defence can advance with an optimized second-generation of its ARM vaccine.

"This recent observation is indeed exciting and groundbreaking as it demonstrates how a single agent, AccuTOX®, can be used as an anticancer injectable at a specific concentration on a target, and as an agent suitable to engineer a cell-based vaccine when used at lower concentration on additional indications", adds M. Plouffe, the CEO of Defence Therapeutics.

Additional studies are currently ongoing to further investigate the cross-presenting potency of AccuTOX®. The versatility of AccuTOX® is adaptable to various cancer indications as well as widen the scope of AccuTOX® application by providing a line of novel therapeutic products.

## About Defence:

Defence Therapeutics is a publicly-traded biotechnology company working on engineering the next generation vaccines and ADC products using its proprietary platform. The core of Defence Therapeutics platform is the ACCUM® technology, which enables precision delivery of vaccine antigens or ADCs in their intact form to target cells. As a result, increased efficacy and potency can be reached against catastrophic illness such as cancer and infectious diseases.

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