

# Defence Releases Peer-Reviewed Publication of Its Preclinical Data on AccuVAC-D001L In Cell Reports Medicine Journal

Vancouver, British Columbia--(Newsfile Corp. - February 28, 2022) - Defence Therapeutics Inc. (CSE: DTC) (FSE: DTC) (OTC Pink: DTCFF) ("**Defence**" or the "**Company**"), a pre-clinical biotechnology company developing various products for the immune-oncology space, is pleased to announce the publication of its first peer-reviewed study on the potency of AccuVAC-D001<sub>L</sub>. AccuVAC-D001<sub>L</sub> is one of Defence's dendritic cell (DC) vaccine products designed to treat established T-cell lymphoma developed from Defence's patented Accum<sup>TM</sup> technologies. This study, which was published in the prestigious journal of *Cell Reports Medicine*, is entitled, "**Promoting antigen escape from dendritic cell endosomes potentiates anti-tumoral immunity**", and can be directly accessed at the following address: <https://doi.org/10.1016/j.xcrm.2022.100534>"

There is currently only one FDA-approved DC vaccine available on the market and it is dedicated to the treatment of prostate cancer. However, the vaccine did not deliver the hoped-for clinical outcome due to major hurdles related to antigen presentation by DCs to responding T cells. This is where Accum<sup>TM</sup> technology shows itself as a major advantage, as it provides the cues needed to bypass the number one enemy of any given antigen: endosomal entrapment.

The study, which was led by the VP of research and development at Defence, Dr. Rafei, presents insights of how Accum-linked antigens escape DC endosomes, which results in their efficient processing by the proteasomal complex. T cells are thus effectively activated culminating in potent control of established tumors or even their complete regression in certain cases. A more detailed analysis of treated tumors further revealed re-activation of the host immune system within the tumor microenvironment resulting in the recruitment of potent effector cells such as CD8 lymphocytes, NK cells, as well as endogenous DCs. The latter population is particularly important as it may further amplify the triggered anti-tumoral response by participating in capturing and presenting additional tumor-derived antigens.

Compared to the existing standard DC vaccine, Defence's intratumoral delivery of AccuVAC-D001<sub>L</sub> affected the tumor microenvironment tipping the balance in favor of cytotoxic T lymphocytes at the expense of the suppressive regulatory T cells. These preclinical findings represent a giant step in the field of DC vaccination and may provide the impetus to recycle past DC vaccines with failed clinical efficacy.

The key highlights of the AccuVAC-D001<sub>L</sub> study are:

- The use of Accum-linked antigens enhances processing and presentation of immunogenic peptides.
- Delivery of AccuVAC-D001<sub>L</sub> elicits potent effector T cell responses.
- Therapeutic vaccination using AccuVAC-D001<sub>L</sub> controls pre-established lymphoma.
- The vaccine boosts tumor-infiltrating lymphocytes and increases the CD8/Treg ratio.

"This prestigious peer-reviewed publication provides important validation of our first DC vaccine candidate, and demonstrates the advantages of using our Accum<sup>TM</sup> antigen formulation to enhance the anti-tumoral response of DC-based vaccination," said Mr. Plouffe, Chief Executive Officer of Defence Therapeutics.

In summary, AccuVAC-D001<sub>L</sub> is developed by Defence's scientific team and engineered to overcome most of DC vaccine shortcomings using Defence's Accum<sup>TM</sup> Technology platform. The triggered

durable and potent memory response combined with the observed favorable safety profile positions this DC vaccination platform as a base for future cancer vaccination strategies. The use of Accum-antigen formulations provides a versatile framework for a wide range of other DC vaccines to target multiple cancer indications. The human AccuVAC-D001<sub>L</sub> is currently being generated in a clean room installation in preparation for the melanoma Phase I trial expected to start in Q4 of 2022.

### **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<sup>TM</sup> 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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