

Defence Therapeutics Granted CNRI-H from the Canadian Nuclear Laboratories to Accelerate the Development of Its Radio-Immuno-Conjugates Program

Vancouver, British Columbia--(Newsfile Corp. - July 24, 2024) - Defence Therapeutics Inc. (CSE: DTC) (OTCQB: DTCFF) (FSE: DTC) ("Defence" or the "Company"), a Canadian biopharmaceutical company developing novel immune-oncology vaccines and drug delivery technologies, is pleased to announce that its Canadian Nuclear Research Initiative Health ("CNRI-H") Program application was retained and approved by the Canadian Nuclear Laboratories ("CNL") to accelerate Defence's radio-immuno-conjugates project.

Defence's CNRI-H project will focus on the synthesis and evaluation of novel constructs, variations of ^{111}In -AccuTOX®-Trastuzumab. The objective is to demonstrate that AccuTOX® moiety is an essential modification to conventional ^{111}In -Trastuzumab constructs to evade an endosome entrapment and ensure nuclear localization, where ^{111}In will emit Auger Electrons ("AEs") to kill cancer cells, and providing a synergistic effect by unleashing AccuTOX® immune-boosting power. It is expected that these constructs will be lethal to HER2-positive cancer cells specifically and will produce high potency.

Selected AccuTOX® constructs, based on stability, solubility, and biochemical properties, will be conjugated to the trastuzumab antibody, followed by radiolabeled with ^{111}In , and then characterized, *in vitro* and *in vivo*, for its efficacy in killing cancer. The main goal is to identify the biologically active ^{111}In -AccuTOX®-Trastuzumab molecule that will be more potent to treat solid tumor resistant to current HER2-targeting therapy such as therapeutic antibodies (e.g., trastuzumab alone) and antibody-drug conjugate (e.g., Kadcyła®).

In summary, the aim of this CNRI-H collaborative project is:

1. To synthesize AccuTOX®-Trastuzumab antibody conjugates, radiolabel with ^{111}In , and characterize, including structure and cellular analysis (e.g. identification, drug-antibody ratio, specific activity), stability, and cytotoxic effects, *in vitro*.
2. To perform animal studies in rodents, *in vivo*, namely biodistribution, pharmacokinetic profile, and therapeutic potency, using selected ^{111}In -AccuTOX®-Trastuzumab constructs.

"We are proud to have this opportunity to collaborate with the Canadian Nuclear Laboratories and to advancing Defence's radio-immuno-conjugates program for the benefit of the cancer's patients. The CNL scientific team dedicated to our project is very strong and will definitely accelerate and reinforce Defence's strength in this renowned and fast-growing radiopharmaceuticals field," said Sebastien Plouffe, Chief Executive Officer of Defence Therapeutics.

CNRI-H is a program developed by CNL to further the realization of its mission of contributing to the health of Canadians. Through CNRI-H, CNL provides financial support along with its expertise, experience, capabilities and makes this available and accessible to the healthcare community to advance new life saving radiopharmaceutical solutions. CNRI-H is a turnkey solution that integrates both funding and project execution in one award. The goal of the program is to accelerate the optimization of therapeutic isotopes production and the clinical translation of targeted radiopharmaceuticals for the benefit of Canadians whilst increasing the safety and efficacy of therapies that involve radiopharmaceuticals.

According to Allied Market Research, the global radiopharmaceuticals market was valued at \$7.9 billion in 2023, and is projected to reach \$21.8 billion by 2033, growing at a CAGR of 10.6% from 2024 to 2033. And according to Straits Research, the global radioligand therapy market size was valued at USD 12.55 billion in 2023, and it is anticipated to reach USD 21.55 billion by 2032 with a CAGR of 4.62%. The use of radioligands to treat specific cancers is a novel method. It delivers radiation to cancer cells with pinpoint accuracy and minimal side effects on healthy cells, resulting in higher treatment efficacy.

<https://www.alliedmarketresearch.com/radiopharmaceuticals-market-A14458>

<https://straitresearch.com/report/radioligand-therapy-market>

About Defence:

Defence Therapeutics is a publicly-traded clinical-stage 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 inside target cells and favoring their processing and activities. As a result, increased efficacy and potency can be reached against catastrophic illness such as cancer and infectious diseases.

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