Rakovina Therapeutics Presents Preclinical Data Supporting Potential Broad Anticancer Activity of kt-4000 Series at the American Association of Cancer Research (AACR) Annual General Meeting

VANCOUVER, British Columbia, April 12, 2022 (GLOBE NEWSWIRE) -- Rakovina Therapeutics Inc. (TSX-V: RKV) ("the Company"), a biopharmaceutical company committed to advancing new cancer therapies based on novel DNA-damage response (DDR) targeting technologies, is pleased to announce the Company's poster presentation at the AACR Annual Meeting.

Rakovina Therapeutics presentation entitled *Evaluation of a Novel Class of Bifunctional DNA Alkylating PARP Inhibitors* was delivered during the Combination Therapeutics session on April 11, 2022 and highlights pre-clinical research related to its novel kt-4000 series. The data presented suggested promising activity for bi-functional kt-4000 series compounds.

Rakovina Therapeutics poster presentation will be made available on the company's website following the conclusion of the AACR Annual Meeting.

Presentation Summary and Overview of Rakovina Therapeutics kt-4000 series drug candidates.

kt-4000 represents a novel class of small molecule drug candidates that combine potent inhibition of polyADP-ribose polymerase (PARP) with DNA alkylating functionality in a single molecule.

PARP is a key enzyme in the base-excision repair (BER) pathway, which is an important DNA-damage response mechanism involved in the repair of DNA single-strand breaks. Cells that are deficient in other repair mechanisms, such as homologous recombination (HR) repair, become highly dependent on BER for survival.

PARP inhibitors are important targeted cancer therapies that take advantage of HR-deficient cell's dependence on BER. FDA-approved PARP inhibitors have become important in the treatment of HR-deficient tumors such as BRCA-mutant breast and ovarian cancers. However, PARP inhibitors are less active against HR-proficient cells that are not dependent on BER for DNA-repair.

In published laboratory studies, artificially induced DNA-damage has led to effective killing of HR-proficient cancer cells by PARP-inhibitors. Cancer chemotherapies known as alkylating agents induce DNA single-strand breaks, which activate BER. Published studies demonstrate that when PARP activity is also inhibited, the cell becomes "stalled" leading to cell death by apoptosis.

While this has been effective in a laboratory setting, the combination of the two types of treatment in clinical practice has been limited by toxicity.

Rakovina Therapeutics' kt-4000 series aims to build upon the demonstrated success of the combined mechanism while reducing the potential for multi-drug toxicity.

The data presented demonstrate that, following treatment, representative kt-4000 series drug candidates release an alkylating agent resulting in increased expression of γH2AX, a DNA damage marker, in cancer cells. kt-4000 drug candidates simultaneously exhibit potent PARP inhibition at low nanomolar concentrations. The combined effect leads to G2/M cell cycle arrest and cell death in HR-proficient cancer cells, normally resistant to PARP inhibitor treatment.

“The data presented at the AACR meeting demonstrate that kt-4000 series compounds provide, in a single molecule, potent DNA-damage, inhibition of repair and cell-cycle arrest similar to what was observed in prior laboratory studies employing two separate treatments,” said Dr. Mads Daugaard, Rakovina Therapeutics president and chief scientific officer. “Furthermore, the anti-cancer mechanism observed appears to be distinct from FDA-approved PARP-inhibitors suggesting the potential for broad utility of drug candidates derived from this class.”

Select kt-4000 lead candidates are being advanced to evaluate pharmacokinetics, preliminary safety profile and anti-tumor activity *in vivo.*

About Rakovina Therapeutics Inc.

Rakovina Therapeutics Inc. is focused on the development of new cancer treatments based on novel DNA-damage response (DDR) technologies. The Company has established a pipeline of novel DNA-damage response inhibitors with the goal of advancing one or more drug candidates into human clinical trials and obtaining marketing approval for new cancer therapeutics from Health Canada, the United States Food and Drug Administration and similar international regulatory agencies. Further information may be found at www.rakovinatherapeutics.com

Additional Information

The TSXV has neither approved nor disapproved the content of this press release. Neither the TSXV nor its Regulation Services Provider (as that term is defined in policies of the TSXV) accepts responsibility for the adequacy or accuracy of this release.

Notice regarding forward-looking statements:

This release includes forward-looking statements regarding the Company and its respective business, which may include, but is not limited to, statements with respect to the proposed business plan of the Company and other statements. Often, but not always, forward-looking statements can be identified by the use of words such as “plans”, “is expected”, “expects”, “scheduled”, “intends”, “contemplates”, “anticipates”, “believes”, “proposes” or variations (including negative variations) of such words and phrases, or state that certain actions, events, or results “may”, “could”, “would”, “might” or “will” be taken, occur or be achieved. Such statements are based on the current expectations of the management of the Company. The forward-looking events and circumstances discussed in this release may not occur by certain specified dates or at all and could differ materially as a result of known and unknown risk factors and uncertainties affecting the Company, including risks regarding the medical device industry, economic factors, regulatory factors, the equity markets generally and risks associated with growth and competition. Although the Company has attempted to identify important factors that could cause actual actions, events, or results to differ materially from those described in forward-looking statements, there may be other factors that cause actions, events, or results to differ from those anticipated, estimated or intended. No forward-looking statement can be guaranteed. Except as required by applicable securities laws, forward-looking statements speak only as of the date on which they are made and the Company undertakes no obligation to publicly update or revise any forward-looking statement, whether as a result of new information, future events, or otherwise. The reader is referred to the Company’s most recent

filings on SEDAR for a more complete discussion of all applicable risk factors and their potential effects, copies of which may be accessed through the Company's profile page at www.sedar.com.

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