Rakovina Therapeutics Presents Preclinical Data on its Novel kt-3000 Series at the 2022 AACR Special Conference on Sarcomas

New data on kt-3000 prototype lead candidate support novel bi-functional mechanism as a potential treatment for Ewing sarcoma and other soft-tissue tumors

VANCOUVER, BC, May 11, 2022 /CNW/ – Rakovina Therapeutics Inc. (TSX-V: RKV) ("the Company"), a biopharmaceutical company committed to advancing new cancer therapies based on novel DNA-damage response (DDR) technologies, is pleased to announce the presentation of new data during the 2022 AACR Special Conference on Sarcomas in Montreal, Canada.

Rakovina Therapeutics' presentation entitled *In vitro efficacy of a novel dual PARP-HDAC Inhibitor in Ewing sarcoma* highlighted the Company's development of its novel kt-3000 series drug candidates as a potential treatment of Ewing sarcoma and other soft tissue tumors.

"These newly presented *in vitro* data suggest promising activity for our novel kt-3000 series drug candidates as a potential treatment for Ewing sarcoma and other treatment-resistant cancers," said Professor Mads Daugaard, PhD, president & chief scientific officer of Rakovina Therapeutics Inc. "Based on these outcomes, select kt-3000 candidates have now been advanced to evaluation of pharmacokinetics, safety and anti-tumour activity *in vivo*."

Ewing sarcoma is a cancer that occurs primarily in the bone or soft tissues and is the second most common type of bone cancer affecting children and young adults. Approximately thirty percent of patients will experience recurrence within five years following treatment. The prognosis for patients with recurrent or progressive Ewing sarcoma is poor with average survival from the time of relapse of only 14 months.

Current treatments for Ewing sarcoma include chemotherapy, surgery and radiotherapy. Long-term side effects of these treatments can include heart and lung problems, emotional and learning difficulties, growth issues and secondary cancers associated with chemotherapy or radiation. The development of new and improved treatments for Ewing sarcoma represents a significant unmet medical need.

FDA-approved poly(ADP)-ribose polymerase (PARP) inhibitors have previously been studied in clinical trials as a potential treatment for Ewing sarcoma but showed only limited clinical benefit. Pre-clinical studies have revealed the potential for synergy in the treatment of Ewing sarcoma by combining a PARP inhibitor with inhibition of histone deacetylase (HDAC) enzymes. In clinical practice, however, the benefits of combination treatments are often limited due to differing pharmacokinetics and overlapping toxicities requiring sequential administration.

Rakovina Therapeutics' kt-3000 series represents a novel class of bi-functional small-molecule drug candidates that has been designed to combine inhibition of both PARP and HDAC in a single molecule as a potentially more viable approach to providing meaningful clinical benefit to patients.

New kt-3000 data presented by Rakovina Therapeutics' researchers at the AACR Special Conference on Sarcomas demonstrate that:

- Rakovina Therapeutics' kt-3283 prototype lead drug candidate exhibits potent bi-functional activity as evidenced by inhibition of PARP and PARylation at a low nanomolar potency plus potent inhibition of HDAC enzyme activity;
- kt-3283 treatment reduced viability of Ewing sarcoma cells >25 fold more potently than an FDA-approved PARP inhibitor or FDA-approved HDAC inhibitor;
- Treatment of Ewing sarcoma cancer cells with kt-3283 resulted in increased S-phase and G2/M cell cycle arrest compared to single-agent treatment with an FDA-approved PARP inhibitor or HDAC inhibitor, or the combination of the two PARP and HDAC inhibitors; and
- The kt-3000 bi-functional anti-cancer mechanism results in significantly higher DNA damage to Ewing sarcoma cancer cells compared to single-agent treatment with a PARP inhibitor or an HDAC inhibitor, both of which caused little or no DNA-damage to Ewing sarcoma cancer cells following equimolar treatment in the same assay.

Rakovina Therapeutics has previously presented preclinical data at peer reviewed scientific meetings demonstrating the potential of kt-3000 series drug candidates against treatment-resistant cancer cell lines. Development of the kt-3000 series is supported, in part, by the St. Baldrick's Foundation Martha's BEST Grant for All, which is aimed at developing new treatments for Ewing sarcoma, an aggressive bone and soft tissue cancer in children and young adults.

Rakovina Therapeutics scientific presentations, including yesterday's poster from the AACR Special Conference on Sarcomas can be found on the Company's website.

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.

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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,

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