Kura Oncology Identifies Farnesylated Proteins Associated with CXCL12 Expression, Potential Biomarker of Clinical Benefit from Tipifarnib in Lymphoma Indications

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– Tipifarnib is a farnesyl transferase inhibitor that downregulates CXCL12 –

– Gene expression of the exclusively farnesylated RHOE and PRICKLE2 proteins associated with CXCL12 expression –

– Pre-treatment tumor CXCL12 expression identified as a potential biomarker of clinical benefit in patients with DLBCL and CTCL –

– CXCL12 pathway biomarkers could enable multiple registrational strategies for tipifarnib –

SAN DIEGO, April 02, 2019 (GLOBE NEWSWIRE) -- Kura Oncology, Inc. (Nasdaq: KURA), a clinical-stage biopharmaceutical company focused on the development of precision medicines for oncology, reported new findings regarding the mechanism of action of the Company's lead drug candidate tipifarnib and its potential clinical applications. These findings are being presented today at the American Association for Cancer Research (AACR) Annual Meeting 2019 in Atlanta. A copy of the poster is available on Kura's website at www.kuraoncology.com.

Tipifarnib is a potent and selective farnesyl transferase inhibitor currently in a registration-directed clinical trial in patients with head and neck squamous cell carcinoma (HNSCC) that carry mutations in HRAS, an exclusively farnesylated oncogene. Tipifarnib has also been shown to downregulate production of the chemokine CXCL12 in tumor models and cancer patients. New findings, presented today, suggest that gene expression of the exclusively farnesylated proteins RHOE (RND3) and PRICKLE2 is strongly associated with CXCL12 expression in bone marrow stroma, which may provide a mechanistic rationale for why the CXCL12 pathway is a therapeutic target of tipifarnib and other farnesyl transferase inhibitors.

In addition, an analysis of a subset of patients from a previously conducted Phase 2 trial of tipifarnib in patients with relapsed and refractory lymphomas identified pre-treatment tumor CXCL12 expression as a potential biomarker of clinical benefit in patients with diffuse large B-cell lymphoma (DLBCL) and mycosis fungoides, the most common form of cutaneous T-cell lymphoma (CTCL). This observation is consistent with similar findings from Kura in other indications such as peripheral T-cell lymphoma (PTCL), acute myeloid leukemia (AML) and pancreatic cancer. CXCL12 and its receptors, CXCR4 and CXCR7, have been implicated in cancer progression and poor prognosis across a large spectrum of solid tumor and hematologic indications.

"The target of farnesyl transferase inhibitors has been elusive for several decades. These findings provide key evidence supporting the inhibition of the CXCL12 pathway as a mechanism of action mediating the activity of tipifarnib in the clinic," said Antonio Gualberto, M.D., Ph.D., Head of Development and Chief Medical Officer of Kura Oncology. "CXCL12-expressing cancers represent a major unmet medical need, and we believe that CXCL12 pathway biomarkers could enable registrational strategies for tipifarnib in multiple hematologic and solid tumor indications."

In December 2018, Kura reported activity from an ongoing Phase 2 trial of tipifarnib in patients with relapsed or refractory PTCL, including a significant association between CXCL12 expression and clinical benefit, as well as proof-of-concept in angioimmunoblastic T-cell lymphoma (AITL), an aggressive form of PTCL often characterized by high levels of CXCL12 expression. The Company anticipates providing an update on this trial, including duration of response data from the AITL cohort and additional data from the CXCL12-high PTCL cohort, in mid-2019.

About Tipifarnib

Kura Oncology's lead drug candidate, tipifarnib, is a potent and highly selective inhibitor of farnesylation, a key cell signaling process implicated in cancer initiation and development. Tipifarnib was previously studied in more than 5,000 cancer patients and showed compelling and durable anti-cancer activity in certain patient subsets, however no molecular mechanism of action had previously been determined that could explain its activity across a range of diverse clinical indications, including squamous tumors that carry mutant HRAS, as well as in lymphoid, myeloid and solid tumors that do not carry HRAS mutations. Leveraging advances in next-generation sequencing as well as emerging information about cancer genetics and tumor biology, Kura is seeking to identify those patients most likely to benefit from tipifarnib.

About Kura Oncology

Kura Oncology is a clinical-stage biopharmaceutical company committed to realizing the promise of precision medicines for the treatment of cancer. The Company's pipeline consists of small molecule drug candidates that target cancer signaling pathways where there is a strong scientific and clinical rationale to improve outcomes by identifying those patients most likely to benefit from treatment. Kura's lead drug candidate is tipifarnib, a farnesyl transferase inhibitor, for which the Company has initiated a registration-directed trial of tipifarnib in recurrent or metastatic patients with HRAS mutant HNSCC. In addition, tipifarnib is being evaluated in multiple other Phase 2 clinical trials in solid tumor and hematologic indications. Kura's pipeline also includes KO-947, an ERK inhibitor, currently in a Phase 1 dose-escalation trial, and KO-539, a menin-MLL inhibitor, which is anticipated to enter into a Phase 1 clinical trial in the second quarter of 2019. For additional information about Kura, please visit the Company's website at www.kuraoncology.com.

Forward-Looking Statements

This news release contains certain forward-looking statements that involve risks and uncertainties that could cause actual results to be materially different from historical results or from any future results expressed or implied by such forward-looking statements. Such forward-looking statements

include statements regarding, among other things, the efficacy, safety and therapeutic potential of tipifarnib, the conduct, results and timing of clinical trials of tipifarnib, including Kura Oncology's Phase 2 clinical trial of tipifarnib in patients with PTCL, plans regarding future clinical trials and development and commercial activities, the regulatory approval path for tipifarnib and expectations regarding biomarkers related to tipifarnib. Factors that may cause actual results to differ materially include the risk that compounds that appeared promising in early research or clinical trials do not demonstrate safety and/or efficacy in later preclinical studies or clinical trials, the risk that Kura Oncology may not obtain approval to market its product candidates, uncertainties associated with performing clinical trials, regulatory filings and applications, risks associated with reliance on third parties to successfully conduct clinical trials, the risks associated with reliance on outside financing to meet capital requirements, and other risks associated with the process of discovering, developing and commercializing drugs that are safe and effective for use as human therapeutics, and in the endeavor of building a business around such drugs. You are urged to consider statements that include the words "may," "will," "would," "could," "should," "believes," "estimates," "projects," "promise," "potential," "expects," "plans," "anticipated," "intends," "continues," "designed," "goal," or the negative of those words or other comparable words to be uncertain and forward-looking. For a further list and description of the risks and uncertainties the Company faces, please refer to the Company's periodic and other filings with the Securities and Exchange Commission, which are available at www.sec.gov. Such forward-looking statements are current only as of the date they are made, and Kura Oncology assumes no obligation to update any forward-looking statements, whether as a result of new information, future events or otherwise.

Contacts

Company:
Pete De Spain
Vice President, Investor Relations &
Corporate Communications
(858) 500-8803
pete@kuraoncology.com

Investors:
Robert H. Uhl
Managing Director
Westwicke Partners, LLC
(858) 356-5932
robert.uhl@westwicke.com

Media:
Jason Spark
Managing Director
Canale Communications
(619) 849-6005
jason@canalecomm.com

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