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# Pasithea Therapeutics Reports Positive Pharmacodynamic Results Demonstrating Robust Target Engagement from its Ongoing Phase 1 Clinical Trial of PAS-004

-- PAS-004 shows up to 91% inhibition of pERK, confirming substantial target engagement--

-- One patient in cohort 4A with stage 4 KRAS G12R mutated pancreatic cancer achieves over 5 months of stable disease with tumor volume reduction of -9.8% --

MIAMI, May 06, 2025 (GLOBE NEWSWIRE) -- Pasithea Therapeutics Corp. (NASDAQ: KTTA) ("Pasithea" or the "Company"), a clinical-stage biotechnology company developing PAS-004, a next-generation macrocyclic MEK inhibitor for the treatment of neurofibromatosis type 1 (NF1) and other MAPK pathway driven cancer indications, today announced positive interim pharmacodynamic (PD) data from its ongoing Phase 1 trial of PAS-004 in advanced cancer patients. The data includes results from cohorts 3 and 4A, evaluating 8mg and 15mg capsules, as well as cohort 4B evaluating 4mg tablets, and demonstrates strong target engagement consistent with PAS-004's favorable pharmacological profile.

Inhibition of ERK phosphorylation (pERK) is widely recognized as a gold-standard PD biomarker for assessing MEK inhibitor activity. To evaluate target engagement, pERK levels were measured in peripheral blood mononuclear cells (PBMCs) collected from patients at baseline and steady-state at day 22.

Preliminary results demonstrate robust pERK inhibition, with reductions in pERK levels of up to 91% even at the 8mg dose level, in line with a previous developed PK/PD model, confirming substantial target engagement in patients receiving PAS-004.

Pharmacodynamic activity is supported by encouraging preliminary clinical observations, with several patients achieving stable disease and tumor shrinkage while on PAS-004 treament. Notably, one patient in cohort 4A (15mg capsule) with stage 4 KRAS G12R-mutated pancreatic cancer, having progressive disease while on three prior lines of therapy, achieved a tumor volume reduction of -9.8% over 5 months of PAS-004 treatment and currently remains on study.

"With today's update, we are pleased that PAS-004 has demonstrated clinically meaningful reductions in pERK levels at dose levels that are both well-tolerated and safe, with no rash observed," said Dr. Tiago Reis Marques, Chief Executive Officer of Pasithea. "We believe PAS-004's profile offers the potential to finely modulate MAPK pathway activity, enabled by its previously reported long half-life and favorable pharmacokinetic (PK) profile with a Cmax/Cmin ratio below 2. We're also encouraged by the emerging clinical signals we're seeing across multiple cancer types and look forward to sharing further safety, PK and PD data in the coming months."

The ongoing Phase 1 clinical trial is a multi-center, open-label, dose escalation 3+3 study design to evaluate the safety, tolerability, pharmacokinetic (PK), pharmacodynamic (PD), and preliminary efficacy of PAS-004 in patients with MAPK pathway driven advanced solid tumors with a documented RAS, NF1 or RAF mutation or patients who have failed BRAF/MEK inhibition (NCT06299839).

**About Pasithea Therapeutics Corp.**

Pasithea is a clinical-stage biotechnology company focused on the discovery, research and development of innovative treatments for central nervous system (CNS) disorders, RASopathies and MAPK pathway driven tumors.

**Forward Looking Statements**

This press release contains statements that constitute “forward-looking statements” made pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. These forward-looking statements include statements regarding the Company’s ongoing Phase 1 clinical trial of PAS-004 in advanced cancer patients, the Company’s planned Phase 1/1b clinical trial of PAS-004 in adult NF1 patients, and the safety, tolerability, pharmacokinetic (PK), pharmacodynamics (PD) and preliminary efficacy of PAS-004, as well as all other statements, other than statements of historical fact, regarding the Company’s current views and assumptions with respect to future events regarding its business, as well as other statements with respect to the Company’s plans, assumptions, expectations, beliefs and objectives, the success of the Company’s current and future business strategies, product development, pre-clinical studies, clinical studies, clinical and regulatory timelines, market opportunity, competitive position, business strategies, potential growth opportunities and other statements that are predictive in nature. Forward-looking statements are subject to numerous conditions, many of which are beyond the control of the Company. While the Company believes these forward-looking statements are reasonable, undue reliance should not be placed on any such forward-looking statements, which are based on information available to the Company on the date of this release. These forward-looking statements are based upon current estimates and assumptions and are subject to various risks and uncertainties, including risks that future clinical trial results may not match results observed to date, may be negative or ambiguous, or may not reach the level of statistical significance required for regulatory approval, as well as other factors set forth in the Company’s most recent Annual Report on Form 10-K, Quarterly Report on Form 10-Q and other filings made with the U.S. Securities and Exchange Commission (SEC). Thus, actual results could be materially different. The Company undertakes no obligation to update these statements whether as a result of new information, future events or otherwise, after the date of this release, except as required by law.

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