Relay Therapeutics Discloses Anticipated Registrational Path for RLY-4008 in Cholangiocarcinoma and Growing Breast Cancer Franchise at Virtual Analyst and Investor Event

June 27, 2022

End-of-phase 1 meeting with the U.S. Food and Drug Administration (FDA) resulted in alignment on the design of a single arm trial for pan-FGFR (FGFRi) treatment-naïve FGFR2-fusion cholangiocarcinoma (CCA) to potentially support accelerated approval

Interim data from the once daily (QD) dosing schedule shared with the FDA demonstrated confirmed partial responses in eight out of thirteen (62%) FGFRi-naïve FGFR2-fusion CCA patients, including all four of the patients treated at the registrational trial dose of 70 mg QD

Relay Therapeutics discloses three new programs as part of a growing HR+/HER2- breast cancer franchise: selective CDK2 inhibitor, ERα degrader, and chemically distinct pan mutant-PI3Kα (RLY-5836)

Relay Therapeutics continues to expect its current cash, cash equivalents and investments will be sufficient to fund its current operating plan into 2025

CAMBRIDGE, Mass., June 27, 2022 (GLOBE NEWSWIRE) -- Relay Therapeutics, Inc. (Nasdaq: RLAY) a clinical-stage precision medicine company transforming the drug discovery process by combining leading-edge computational and experimental technologies, will announce today the anticipated registrational path for RLY-4008 and three new programs within a growing HR+/HER2- breast cancer franchise at a virtual analyst and investor event from 8:00 a.m. to 9:00 a.m. ET.

“2022 has proven to be an extremely productive year so far for Relay Therapeutics and we’re looking forward to sharing updates across our portfolio today,” said Sanjiv Patel, M.D., Relay Therapeutics’ president and chief executive officer. “We are excited to be announcing the anticipated registrational path for RLY-4008 and the maturation of the data to support that pathway. In addition, building on the foundation of our PI3Kα franchise, we will outline a broad commitment to developing comprehensive treatment options for breast cancer patients. We believe our platform and approach have the potential to address some of the hardest-to-treat diseases and are excited to do just that in the coming years.”

RLY-4008 Regulatory and Clinical Data Update

Relay Therapeutics conducted an end-of-phase 1 meeting with the FDA to discuss next steps for the clinical development of RLY-4008. Based on discussions with the FDA, the Company has decided to move forward with a single arm trial design for FGFRi-naïve FGFR2-fusion CCA at 70 mg once daily to potentially support accelerated approval. The Company also intends to add additional supportive CCA cohorts to an NDA submission, including frontline, FGFRi-experienced and FGFR2 mutation and amplification patients that could potentially facilitate a line and alteration agnostic label if the submission is approved.

The interim data shared with the FDA included a data cut-off of April 19, 2022, from the dose escalation portion of the ongoing study. The interim data included a safety database of 115 patients, with 58 patients treated with the once daily (QD) dosing schedule, and 13 of these patients were FGFRi-naïve FGFR2-fusion CCA patients treated with the once daily schedule ranging from 20 mg up to 70 mg. Also, in addition to the 17 patients previously disclosed at a twice daily (BID) schedule, an additional 40 patients were evaluated with an intermittent dosing schedule, both of which have been deprioritized.

The safety analysis as of the April 19, 2022 cut-off date was consistent with the analysis from the initial October 2021 data disclosure. Most treatment emergent adverse events were expected FGFR2 on target, low-grade, monitorable, manageable, and largely reversible. There were no observed Grade 4 or 5 adverse events. Notable off-target toxicities of hyperphosphatemia and diarrhea continued to be clinically insignificant.

The efficacy analysis from this interim data on the once daily dosing schedule presented to the FDA demonstrated confirmed partial responses in eight out of thirteen (62%) FGFRi-naïve FGFR2-fusion CCA patients across the 20 mg to 70 mg QD cohorts. There were four patients treated at the registrational trial dose of 70 mg QD as of the April 19, 2022 cut-off date, all of which had confirmed partial responses.

An update from the FGFRi-naïve FGFR2-fusion CCA patients treated at 70 mg QD across dose escalation and expansion is expected to be presented at a medical meeting in the second half of 2022. The entirety of the dose escalation data is expected to be presented at a medical meeting or published by the end of the first half of 2023. Lastly, initial data from the non-CCA expansion cohorts is expected to be presented in 2023.

Breast Cancer Portfolio and New Targets

Relay Therapeutics today disclosed three new programs from a growing breast cancer franchise including a selective CDK2 inhibitor, a rationally designed ERα degrader, and a chemically distinct pan-mutant selective PI3Kα inhibitor (RLY-5836).

- CDK2 is a common cause of resistance to the over 50,000 patients a year in the U.S. on CDK4/6 inhibitors and potentially an important PI3Kα combination partner. Relay Therapeutics progressed from first compound synthesized to an advanced CDK2 lead compound with robust selectivity over other CDK family members in less than a year. This program is expected to enter the clinic in Q4 2023 or Q1 2024.
- Leveraging the Dynamo™ platform, Relay Therapeutics has been able to move from the traditional empirical design of

bi-functional degraders to rationally designed molecules. The company expects to nominate an ERα degrader development candidate in 2023.
- As a demonstration of Relay Therapeutics' commitment to PI3Kα mutant inhibition, the Company has designed a selective and chemically distinct pan-mutant PI3Kα inhibitor, RLY-5836. RLY-5836 is expected to be ready to enter the clinic in 2023.

Conference Call Information

Relay Therapeutics will host a live webcast and conference call today beginning at 8:00 am E.T. The virtual analyst and investor event will be webcast live and may be accessed through Relay Therapeutics' website under Events in the News & Events section through the following link: https://ir.relaytx.com/news-events/events-presentations. An archived replay of the webcast will be available following the event.

About RLY-4008

RLY-4008 is a potent, selective and oral small molecule inhibitor of FGFR2, a receptor tyrosine kinase that is frequently altered in certain cancers. FGFR2 is one of four members of the FGFR family, a set of closely related proteins with highly similar protein sequences and properties. Preclinically, RLY-4008 demonstrated FGFR2-dependent killing in cancer cell lines and induced regression in *in vivo* models, while minimal inhibition of other targets was observed, including other members of the FGFR family. In addition, RLY-4008 demonstrated strong activity against known clinical on-target resistance mutations in cellular and *in vivo* preclinical models. RLY-4008 is currently being evaluated in a clinical trial in patients with advanced or metastatic FGFR2-altered solid tumors with a single arm, potentially registration-enabling cohort for pan-FGFR ("FGFRi") treatment-naïve FGFR2-fusion CCA. To learn more about the clinical trial of RLY-4008, please visit here.

About Relay Therapeutics

Relay Therapeutics (Nasdaq: RLAY) is a clinical-stage precision medicines company transforming the drug discovery process by combining leading-edge computational and experimental technologies with the goal of bringing life-changing therapies to patients. As the first of a new breed of biotech created at the intersection of disparate technologies, Relay Therapeutics aims to push the boundaries of what is possible in drug discovery. Its Dynamo™ platform integrates an array of leading-edge computational and experimental approaches designed to drug protein targets that have previously been intractable. Relay Therapeutics' initial focus is on enhancing small molecule therapeutic discovery in targeted oncology and genetic disease indications. For more information, please visit www.relaytx.com or follow us on Twitter.

Cautionary Note Regarding Forward-Looking Statements

This press release contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995, as amended, including, without limitation, implied and express statements regarding Relay Therapeutics' strategy, business plans and focus; the progress and timing of updates on the clinical development of the programs across Relay Therapeutics' portfolio, including the timing of a clinical data update for RLY-4008 and the clinical initiation of Relay Therapeutics' CDK2 program, ERα program and RLY-5836; the expected therapeutic benefits of its programs; whether preclinical or early clinical results of Relay Therapeutics' product candidates will be predictive of future clinical trials; Relay Therapeutics' expectations relating to its current and future interactions with the FDA, including its belief regarding a potential accelerated path to registration and label for RLY-4008; expectations regarding Relay Therapeutics' operating plan, use of capital, expenses, and other financial results during 2022 and in the future; and Relay Therapeutics' cash runway projection. The words "may," "might," "will," "could," "would," "should," "plan," "anticipate," "intend," "believe," "expect," "estimate," "seek," "predict," "future," "project," "potential," "continue," "target" and similar words or expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words.

Any forward-looking statements in this press release are based on management's current expectations and beliefs, and are subject to a number of risks, uncertainties and important factors that may cause actual events or results to differ materially from those expressed or implied by any forward-looking statements contained in this press release, including, without limitation, risks associated with: the impact of the ongoing COVID-19 pandemic, changing macroeconomic conditions or uncertain geopolitical factors where Relay Therapeutics has operations or does business, as well as on the timing and anticipated results of its clinical trials, strategy and future operations; the delay of any current or planned clinical trials or the development of Relay Therapeutics' drug candidates; the risk that the results of its clinical trials may not be predictive of future results in connection with future clinical trials; Relay Therapeutics' ability to successfully demonstrate the safety and efficacy of its drug candidates; the timing and outcome of its planned interactions with regulatory authorities; and obtaining, maintaining and protecting its intellectual property. These and other risks and uncertainties are described in greater detail in the section entitled "Risk Factors" in Relay Therapeutics' most recent Annual Report on Form 10-K and Quarterly Report on Form 10-Q, as well as any subsequent filings with the Securities and Exchange Commission. In addition, any forward-looking statements represent Relay Therapeutics' views only as of today and should not be relied upon as representing its views as of any subsequent date. Relay Therapeutics explicitly disclaims any obligation to update any forward-looking statements. No representations or warranties (expressed or implied) are made about the accuracy of any such forward-looking statements.

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