Regulus Therapeutics Announces FDA Acceptance of Investigational New Drug (IND) Application for RGLS8429 for the Treatment of Autosomal Dominant Polycystic Kidney Disease (ADPKD)

Company remains on track to initiate Phase 1 clinical study in second quarter 2022

SAN DIEGO, May 11, 2022 /PRNewswire/ -- Regulus Therapeutics Inc. (Nasdaq: RGLS), a biopharmaceutical company focused on the discovery and development of innovative medicines targeting microRNAs (the "Company" or "Regulus"), today announced that the U.S. Food and Drug Administration (FDA) has accepted its Investigational New Drug (IND) Application for RGLS8429 for the treatment of Autosomal Dominant Polycystic Kidney Disease (ADPKD), enabling the Company to initiate its planned Phase 1 clinical study of RGSL8429 in healthy volunteers.

"With FDA's acceptance of our IND and the Phase 1 trial preparations well underway, we look forward to advancing this program which ultimately may provide a transformative treatment option for patients with ADPKD," said Jay Hagan, President and Chief Executive Officer of Regulus Therapeutics. "We are on track to initiate the study in the second quarter and expect data from the healthy volunteer study and initiation of dosing in patients with ADPKD in the second half of this year."

The Company will conduct a Phase 1 single-ascending dose (SAD) study in healthy volunteers to assess safety, tolerability and pharmacokinetics of RGLS8429. Following the SAD study, the Company plans to initiate a Phase 1b multiple ascending dose (MAD) study in adult patients with ADPKD to assess safety, tolerability and pharmacokinetics of RGLS8429, and to evaluate the efficacy of RGLS8429 treatment across three different dose levels including changes in polycystins, cystic kidney volume (htTKV), and overall kidney function.

About ADPKD

ADPKD, caused by mutations in the PKD1 or PKD2 genes, is among the most common human monogenic disorders and a leading cause of end-stage renal disease. The disease is characterized by the development of multiple fluid filled cysts primarily in the kidneys, and to a lesser extent in the liver and other organs. Excessive kidney cyst cell proliferation, a central pathological feature, ultimately leads to end-stage renal disease in approximately 50% of ADPKD patients by age 60. Approximately 140,000 individuals are diagnosed with the disease in the United States alone, with an estimated global prevalence of 4 to 7 million.

About RGLS8429

RGLS8429 is a novel, next generation oligonucleotide designed to inhibit miR-17 and to preferentially target the kidney. Administration of RGLS8429 has shown robust data in preclinical models, where clear improvements in kidney function, size, and other measures of disease severity and demonstrated a superior pharmacologic profile compared to Regulus' first-generation compound in preclinical studies.

About Regulus

Regulus Therapeutics Inc. (Nasdaq: RGLS) is a biopharmaceutical company focused on the discovery and development of innovative medicines targeting microRNAs. Regulus has leveraged its oligonucleotide drug discovery and development expertise to develop a pipeline complemented by a rich intellectual property estate in the microRNA field. Regulus maintains its corporate headquarters in San Diego, CA.

Forward-Looking Statements

Statements contained in this presentation regarding matters that are not historical facts are "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995, including statements associated with the Company's planned initiation of clinical trials involving RGLS8429 for the treatment of autosomal dominant polycystic kidney disease. Because such statements are subject to risks and uncertainties, actual results may differ materially from those expressed or implied by such forward-looking statements. Words such as "believes," "anticipates," "plans," "expects," "intends," "will," "goal," "potential" and similar expressions are intended to identify forward-looking statements. These forward-looking statements are based upon Regulus' current expectations and involve assumptions that may never materialize or may prove to be incorrect. Actual results and the timing of events could differ materially from those anticipated in such forward-looking statements as a result of various risks and uncertainties, which include, without limitation, 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, and the risk additional toxicology data may be negative. In addition, while Regulus expects the COVID-19 pandemic to adversely affect its business operations and financial results, the extent of the impact on Regulus' ability to achieve its preclinical and clinical development objectives and the value of and market for its common stock, will depend on future developments that are highly uncertain and cannot be predicted with confidence at this time, such as the ultimate duration of the pandemic, travel restrictions, quarantines, social distancing and business closure requirements in the U.S. and in other countries, and the effectiveness of actions taken globally to contain and treat the disease. These and other risks are described in additional detail in Regulus' filings with the Securities and Exchange Commission, including under the "Risk Factors" heading of Regulus most recently quarterly report on Form 10-Q. All forward-looking statements contained in this press release speak only as of the date on which they were made. Regulus undertakes no obligation to update such statements to reflect events that occur or circumstances that exist after the date on which they were made.

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