Regulus Announces Key Goals Under its 'Clinical Map Initiative' for 2015

Accelerates RG-101 for HCV with Dual-Track Clinical Development Strategy; Top-Line, Single Dose, 4 mg/kg Results as Well as 2mg/kg Extended Follow Up Results from Ongoing Study to be Reported in Early February 2015

Aims to Advance microRNA Therapeutics Portfolio and Regulus microMarkersSM Division

LA JOLLA, Calif., Jan. 8, 2015 /PRNewswire/ -- Regulus Therapeutics Inc. (NASDAQ:RGLS), a biopharmaceutical company leading the discovery and development of innovative medicines targeting microRNAs, today announced key goals for 2015 under its 'Clinical Map Initiative' to advance its microRNA therapeutics portfolio and biomarkers platform.

"Regulus enters 2015 with the scientific and financial strength to realize the transformative potential of microRNAs. As such, we've set aggressive goals for the year focused on creating a clear path to value for what we believe to be our greatest opportunities," said Kleanthis G. Xanthopoulos, Ph.D., President and CEO of Regulus. "Under our 'Clinical Map Initiative', we are focusing our near term efforts on accelerating RG-101 for HCV with a Phase II dual-track clinical development strategy, while advancing our overall therapeutics pipeline and aligning our biomarker efforts to streamline our clinical development decisions."

Key Goals Under Regulus' 'Clinical Map Initiative' for 2015

- **'Clinical Map' of RG-101 for HCV Defined: Dual-Track Strategy Accelerates Phase II Development; Multiple Data Read-Outs in 2015.** Following the favorable interim results reported in October 2014 from its ongoing clinical study, Regulus has accelerated development of RG-101, a wholly-owned, GalNAc-conjugated anti-miR targeting microRNA-122 ("miR-122") for the treatment of HCV. Regulus is pursuing a Phase II dual-track development strategy (i) to investigate RG-101 in combination with oral agents to potentially shorten treatment durations, optimize clinical outcomes and potentially improve responses in certain underserved HCV patient populations; and (ii) to investigate RG-101 further as a single agent to determine whether HCV viral cures are achievable with monotherapy treatment (single or multiple doses of RG-101). In the near term, Regulus expects to file both a Clinical Trial Application and an Investigational New Drug application for RG-101 with the goal to initiate the above described studies in Europe and the United States in the second quarter of 2015.
    - *Multiple Data Read-Outs for RG-101 in 2015*. In early February 2015, Regulus expects to report new results from part IV of its ongoing clinical study of RG-101: viral load reduction and interim safety from the 4 mg/kg dose cohort (16 total HCV patients; 14 receiving a single administration of RG-101, 2 receiving placebo), as well as extended follow up results from the 2 mg/kg cohort. In the second quarter of 2015, Regulus expects to report full results from the ongoing study at a medical meeting. In the fourth quarter of 2015, Regulus plans to report viral load reduction and safety data from the Phase II program, as described above.

- **'Clinical Map' of RG-012 for Alport Syndrome Emerging; Near Term Focus on ATHENA Enrollment, Phase I Study to Initiate in 1H 2015.** RG-012 is a single-stranded, chemically modified oligonucleotide that binds to and inhibits the function of microRNA-21 ("miR-21") for the treatment of renal dysfunction in Alport syndrome patients. Alport syndrome is a life-threatening, genetic kidney disease driven by mutations in specific collagen. By inhibiting miR-21, which is highly overexpressed in animal models of Alport syndrome, RG-012 is intended to act by reducing the severity of fibrosis, which then may reduce the rate of decline of renal function in Alport syndrome patients.
    - *Near Term Efforts Focused on ATHENA*. Regulus plans to focus its near term efforts on enrolling up to 120 Alport syndrome patients in its global ATHENA natural history of disease study, which is designed to characterize the natural decline of renal function (as measured by established renal markers) in Alport syndrome patients over time. The data from ATHENA should provide the clinical basis for the design of a Phase II proof-of-concept study to monitor the therapeutic effect of RG-012 on the decline in renal function in patients with Alport syndrome. The ATHENA study is being conducted at thirteen clinical sites worldwide, with multiple active sites in the United States, France and Germany, and additional sites anticipated to be active in Australia, Canada and other countries in Europe.
    - In addition to enrolling patients in ATHENA, Regulus plans to initiate a Phase I study in the first half of 2015 to evaluate the safety and tolerability of RG-012 in healthy volunteers.

"2015 will be an important year for the advancement of our clinical portfolio, with key data read outs on the horizon for RG-101 and other programs," said Paul Grint, M.D., Chief Medical Officer of Regulus. "While

aggressively moving forward with RG-101 this year, we also aim to expand our clinical pipeline to include opportunities in oncology and orphan diseases, such as Alport syndrome, where we believe we can build significant value for the portfolio."

- **microRNA Therapeutics Portfolio and Regulus microMarkers[SM] Goals for 2015**
    - **Advance microRNA Therapeutics Pipeline; Nominate At Least One Candidate for Clinical Development in 2015.** Regulus continues to pursue several undisclosed microRNA targets, namely for oncology and orphan disease indications. In addition to its internal research efforts, Regulus aims to advance certain programs with its strategic alliance partners, microRNA-103/107 for the treatment of metabolic diseases and microRNA-19 for oncology indications with AstraZeneca, microRNA-221 and miR-21 for hepatocellular carcinoma and miR-21 for renal fibrosis (RG-012) with Sanofi. In 2015, Regulus expects to nominate at least one additional microRNA candidate for clinical development, either independently or with a partner.
    - **Expand Regulus microMarkers[SM] Work to Support 'Clinical Map' of RG-101, RG-012 and Partners' Programs.** Regulus' microMarkers[SM] division utilizes a highly reproducible, proprietary technology platform to extract, profile, and analyze microRNAs from small volumes of different bodily fluids to differentiate disease from healthy patient samples and to identify microRNAs as potential biomarkers for disease. Regulus microMarkers[SM] has profiled over 3,000 clinical samples in a wide variety of disease states and has formed a research collaboration with Biogen Idec, an additional large pharmaceutical partner (undisclosed), and multiple academic research institutions.
        - To support the 'Clinical Map' of RG-101, Regulus microMarkers[SM] plans to profile serum samples from the healthy volunteers and HCV patients in the ongoing clinical study of RG-101 to identify potential microRNA signatures, which may aide in accurately predicting a patient's response to RG-101 therapy.
        - Regulus microMarkers[SM] believes that it has identified a microRNA signature in urine that may discriminate mutant mice from wild type mice early in disease progression in a kidney fibrosis model. These findings suggest that profiling microRNAs in urine may be a useful biomarker approach to support the 'Clinical Map' of RG-012. As part of the ongoing ATHENA study, Regulus microMarkers[SM] plans to profile urine and blood samples from the Alport syndrome patients to potentially identify a clinically useful microRNA signature.
        - To support its collaborators and academic research partners, Regulus microMarkers[SM] aims to utilize its robust technology platform to profile and analyze microRNAs in different bodily fluids including plasma, serum, whole blood, urine and cerebrospinal fluid. As part of its ongoing collaboration with Biogen Idec, Regulus microMarkers[SM] will profile whole blood samples of patients treated with a Biogen Idec multiple sclerosis therapy to identify potential microRNA signatures.

"Regulus aims to pursue opportunities both internally and with our strategic partners where we can apply our oligonucleotide drug discovery and development expertise to validated microRNA targets," said Neil W. Gibson, Ph.D., Chief Scientific Officer of Regulus. "Specifically in 2015, our goal is to nominate at least one additional microRNA candidate for clinical development and expand our biomarkers work to support our clinical pipeline and our collaborators' programs."

About Regulus

Regulus Therapeutics Inc. (*NASDAQ:RGLS*) is a biopharmaceutical company leading the discovery and development of innovative medicines targeting microRNAs. Regulus has leveraged its oligonucleotide drug discovery and development expertise to develop a well-balanced microRNA therapeutics pipeline complemented by a maturing microMarkers[SM] biomarkers platform and a rich intellectual property estate to retain its domain dominant leadership in the microRNA field. Under its 'Clinical Map Initiative', Regulus is developing RG-101, a GalNAc-conjugated anti-miR targeting microRNA-122 for the treatment of chronic hepatitis C virus infection, and RG-012, an anti-miR targeting microRNA-21 for the treatment of Alport syndrome, a life-threatening kidney disease driven by genetic mutations with no approved therapy. Regulus is also advancing several programs toward clinical development in orphan disease indications, oncology and fibrosis. Regulus' commitment to innovation has resulted in multiple peer-reviewed publications in notable scientific journals and has resulted in the formation of strategic alliances with AstraZeneca and Sanofi and a research collaboration with Biogen Idec focused on microRNA biomarkers. Regulus maintains its corporate headquarters in La Jolla, CA. For more information, please visit http://www.regulusrx.com.

Forward-Looking Statements

Statements contained in this press release 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 regarding the expected ability of Regulus to undertake certain activities and accomplish certain goals (including with respect to its 'Clinical Map Initiative' goals, including development and other activities related to RG-101 and RG-012 and with respect to the nomination of at least one microRNA candidate for clinical development in 2015), the projected timeline of clinical development activities, and expectations regarding future therapeutic and commercial potential of Regulus' business plans (including Regulus' expected future activities in 2015), technologies and intellectual property related to microRNA therapeutics and biomarkers being discovered and developed by Regulus. 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. These and other risks concerning Regulus' financial position and programs are described in additional detail in Regulus filings with the Securities and Exchange Commission. 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.

To view the original version on PR Newswire, visit:http://www.prnewswire.com/news-releases/regulus-announces-key-goals-under-its-clinical-map-initiative-for-2015-300017721.html

SOURCE Regulus Therapeutics Inc.

For further information: Amy Conrad, Senior Director, Investor Relations and Corporate Communications, Regulus Therapeutics Inc., 858-202-6321, aconrad@regulusrx.com; Media Contact: Liz Bryan, Spectrum Science, lbryan@spectrumscience.com, 202-955-6222 x2526
