August 21, 2017

Syros Receives FDA Orphan Drug Designation for SY-1425 for Treatment of AML

CAMBRIDGE, Mass.--(BUSINESS WIRE)-- Syros Pharmaceuticals (NASDAQ: SYRS), a biopharmaceutical company pioneering the discovery and development of medicines to control the expression of disease-driving genes, today announced that the U.S. Food and Drug Administration (FDA) has granted orphan drug designation to SY-1425 for the treatment of acute myeloid leukemia (AML). SY-1425, an oral first-in-class selective retinoic acid receptor alpha (RARα) agonist, is currently in a Phase 2 clinical trial in genomically defined subsets of patients with AML and myelodysplastic syndrome (MDS).

“Treatment of AML remains a significant unmet medical need, with many patients lacking adequate therapeutic options,” said David A. Roth, M.D., Syros’ Chief Medical Officer. “We believe that SY-1425 may provide a meaningful benefit for subsets of AML patients whose disease is driven by abnormally high expression of the *RARA* or *IRF8* genes. Receiving orphan drug designation is an important regulatory milestone in the development of SY-1425. We’re pleased with the continued progress of the ongoing Phase 2 clinical trial, and we look forward to presenting initial clinical data in the fourth quarter of this year.”

The FDA's Office of Orphan Drug Products grants orphan status to support development of medicines for the treatment of rare diseases that affect fewer than 200,000 people in the United States. Orphan drug designation may provide certain benefits, including a seven-year period of market exclusivity if the drug is approved, tax credits for qualified clinical trials and an exemption from FDA application fees.

Using its gene control platform, Syros discovered subsets of AML and MDS patients with super-enhancers associated with *RARA* or *IRF8*. Syros identified proprietary biomarkers related to these super-enhancers. These super-enhancers are believed to drive overexpression of the *RARA* or *IRF8* genes, locking cells in an immature, undifferentiated and proliferative state, leading to disease. In preclinical studies, SY-1425 promoted differentiation of AML cells with high *RARA* or *IRF8* expression and inhibited tumor growth and prolonged survival in patient-derived xenograft models of AML with high *RARA* expression. Syros estimates that about one-third of AML and MDS patients have either the *RARA* or *IRF8* biomarker, or both.

The ongoing Phase 2 clinical trial of SY-1425 is assessing the safety and efficacy of SY-1425 as a single agent in four AML and MDS patient populations, as well as in combination with azacitidine, a standard-of-care therapy, in newly diagnosed AML patients who are not suitable candidates for standard chemotherapy. All patients in the trial are prospectively selected using biomarkers for high expression of *RARA* or *IRF8*. Additional details about the trial can be found using the identifier NCT02807558 at www.clinicaltrials.gov.

About Syros Pharmaceuticals
Syros Pharmaceuticals is pioneering the understanding of the non-coding region of the genome to advance a new wave of medicines that control expression of disease-driving genes. Syros has built a proprietary platform that is designed to systematically and efficiently analyze this unexploited region of DNA in human disease tissue to identify and drug novel targets linked to genomically defined patient populations. Because gene expression is fundamental to the function of all cells, Syros' gene control platform has broad potential to create medicines that achieve profound and durable benefit across a range of diseases. Syros is currently focused on cancer and immune-mediated diseases and is advancing a growing pipeline of gene control medicines. Syros' lead drug candidates are SY-1425, a selective RARα agonist in a Phase 2 clinical trial for genomically defined subsets of patients with acute myeloid leukemia and myelodysplastic syndrome, and SY-1365, a selective CDK7 inhibitor in a Phase 1 clinical trial for patients with advanced solid tumors, including transcriptionally dependent cancers such as triple negative breast, small cell lung and ovarian cancers. Led by a team with deep experience in drug discovery, development and commercialization, Syros is located in Cambridge, Mass.

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, including without limitation statements regarding the therapeutic benefit of SY-1425 as a single agent and in combination with azacitidine; the reporting of initial clinical data from the ongoing Phase 2 clinical trial of SY-1425 in the fall of 2017; and the benefits of Syros' gene control platform. The words "anticipate," "believe," "continue," "could," "estimate," "expect," "intend," "may," "plan," "potential," "predict," "project," "target," "should," "would," and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. Actual results or events could differ materially from the plans, intentions and expectations disclosed in these forward-looking statements as a result of various important factors, including Syros' ability to: advance the development of its programs, including SY-1425, under the timelines it projects in current and future clinical trials; demonstrate in any current and future clinical trials the requisite safety, efficacy and combinability of its drug candidates; replicate scientific and non-clinical data in clinical trials; successfully develop a companion diagnostic test to identify patients with the *RARA* and *IRF8* biomarkers; obtain and maintain patent protection for its drug candidates and the freedom to operate under third party intellectual property; obtain and maintain necessary regulatory approvals; identify, enter into and maintain collaboration agreements with third parties; manage competition; manage expenses; raise the substantial additional capital needed to achieve its business objectives; attract and retain qualified personnel; and successfully execute on its business strategies; risks described under the caption "Risk Factors" in Syros' Quarterly Report on Form 10-Q for the quarter ended June 30, 2017, which is on file with the Securities and Exchange Commission; and risks described in other filings that Syros makes with the Securities and Exchange Commission in the future. Any forward-looking statements contained in this press release speak only as of the date hereof, and Syros expressly disclaims any obligation to update any forward-looking statements, whether because of new information, future events or otherwise.

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Source: Syros Pharmaceuticals