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Syros Announces Strategic Priorities and Expected Milestones

Updated Clinical Data on SY-1425 in Combination with Azacitidine Expected in Second Half of 2019

Initial Clinical Data from Expansion Cohorts in Ongoing Phase 1 Trial of SY-1365 Expected in Fourth Quarter of 2019

Advancing SY-5609 Toward Clinical Development with Phase 1 Trial Expected to Start in Early 2020

CAMBRIDGE, Mass.--(BUSINESS WIRE)-- Syros Pharmaceuticals (NASDAQ: SYRS), a leader in the development of medicines that control the expression of genes, today outlined its strategic priorities and expected upcoming milestones. The Company will review these priorities in a presentation at the 37th Annual J.P. Morgan Healthcare Conference on Thursday, January 10, 2019 at 9:00 a.m. PST (12:00 p.m. EST).

“2018 was a great year for Syros,” said Nancy Simonian, M.D., Syros’ chief executive officer. “We achieved all our key goals, reporting promising data from both our first-in-class clinical-stage programs, including initial data on SY-1425 in combination with azacitidine in subsets of AML patients genomically defined by our platform as well as the first clinical data supporting CDK7 inhibition as a potentially transformative approach for treating cancer. Building on this momentum, we are entering 2019 with clear strategic priorities to continue to advance and expand our clinical-stage pipeline, including reporting additional data for SY-1425 and SY-1365 and advancing SY-5609, our oral CDK7 inhibitor, toward clinical development. The progress of our clinical programs demonstrates the potential of our leading gene control platform to deliver innovative new medicines that support our vision of becoming an enduring company and providing a profound benefit for patients.”

Expected Upcoming Milestones

SY-1425

- Complete enrollment in mid-2019 in the ongoing Phase 2 study cohort evaluating the safety and efficacy of SY-1425 in combination with azacitidine in *RARA* and *IRF8* biomarker-positive patients with newly diagnosed acute myeloid leukemia (AML) who are not suitable candidates for standard chemotherapy.
- Report updated clinical data in the second half of 2019 on SY-1425 in combination with azacitidine.

SY-1365

- Report initial clinical data in the fourth quarter of 2019 from the expansion portion of

the ongoing Phase 1 trial, which is assessing SY-1365 as a single agent and in combination with standard-of-care therapies in multiple ovarian and breast cancer patient populations.

SY-5609

- Complete IND-enabling studies to support initiation of a Phase 1 oncology trial in early 2020.

Syros also announced today that it has made a portfolio prioritization decision not to pursue further development of SY-1425 in combination with daratumumab beyond completion of the ongoing pilot cohort in the Phase 2 trial.

Financial Guidance
Based on its current operating plans, Syros expects that its existing cash, cash equivalents and marketable securities will enable it to fund its anticipated operating expenses and capital expenditure requirements into 2020. Syros had approximately $113.2 million in cash, cash equivalents and marketable securities as of September 30, 2018.

Presentation at 37th Annual J.P. Morgan Healthcare Conference
Syros will webcast its corporate presentation from the 37th Annual J.P. Morgan Healthcare Conference in San Francisco on Thursday, January 10, 2019, at 9:00 a.m. PST (12:00 p.m. EST). A live webcast of the presentation and subsequent question and answer session can be accessed under Events in the Investors & Media section of the Company's website at www.syros.com. A downloadable copy of the corporate slide presentation is also available on the Events section of the website. A replay of the webcast will be available for approximately 30 days following the presentation.

About Syros Pharmaceuticals
Syros is pioneering the understanding of the non-coding regulatory region of the genome to advance a new wave of medicines that control the expression of genes. Syros has built a proprietary platform that is designed to systematically and efficiently analyze this unexploited region of DNA 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 monogenic 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 SY-1365, a selective CDK7 inhibitor in a Phase 1 clinical trial focused on patients with ovarian and breast cancers. Syros is also developing a deep preclinical and discovery pipeline, including SY-5609, an oral CDK7 inhibitor, as well as programs in immuno-oncology and sickle cell disease. 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 Company's ability to execute on its 2019 strategic plan; the timing for completion of enrollment in and reporting of updated data from the ongoing Phase 2 clinical trial of SY-

1425 in combination with azacitidine; the timing for reporting initial clinical data from the dose expansion portion of the SY-1365 clinical trial; the ability of SY-5609 to complete IND-enabling preclinical studies and the timing for a Phase 1 clinical trial; the Company's ability to fund its planned operations into 2020; and the benefits of Syros' gene control platform and product development pipeline. The words ''anticipate,'' ''believe,'' ''continue,'' ''could,'' ''estimate,'' ''expect,'' "hope," ''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 and SY-1365, 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; successfully progress SY-5609 through IND-enabling preclinical and toxicology studies; 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, including its ability to perform under the collaboration agreement with Incyte; 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' Annual Report on Form 10-K for the year ended December 31, 2017, as updated in its Quarterly Reports on Form 10-Q for the quarters ended March 31, June 30 and September 30, 2018, each of 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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