UNITED STATES SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

FORM 8-K

CURRENT REPORT Pursuant to Section 13 or 15(d) of The Securities Exchange Act of 1934

Date of Report (Date of earliest event reported): January 6, 2019

Syros Pharmaceuticals, Inc.

(Exact Name of Registrant as Specified in its Charter)

Delaware (State or Other Jurisdiction of Incorporation) **001-37813** (Commission File Number) **45-3772460** (IRS Employer Identification No.)

620 Memorial Drive, Suite 300 Cambridge, Massachusetts (Address of Principal Executive Offices)

02139 (Zip Code)

Registrant's telephone number, including area code: (617) 744-1340

(Former Name or Former Address, if Changed Since Last Report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions (*see* General Instruction A.2. below):

Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)

Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)

Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))

Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (§230.405 of this chapter) or Rule 12b-2 of the Securities Exchange Act of 1934 (§240.12b-2 of this chapter).

Emerging growth company \square

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Item 7.01 Regulation FD Disclosure

From time to time, we intend to conduct meetings with third parties in which our current corporate slide presentation is presented. A copy of this slide presentation, dated January 2019, is furnished as Exhibit 99.1 to this Current Report on Form 8-K. The information responsive to Item 7.01 of this Form 8-K and Exhibit 99.1 hereto shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934 (the "**Exchange Act**") or otherwise subject to the liabilities of that section, nor shall it be deemed incorporated by reference in any filing under the Securities Act of 1933 or the Exchange Act, except as expressly set forth by specific reference in such a filing.

Item 8.01 Other Events.

On January 6, 2019, the Company issued a press release announcing its 2019 business objectives. The full text of this press release is filed as Exhibit 99.2 to this Current Report on Form 8-K and is incorporated herein by reference. The information contained on the websites referenced in the press release is not incorporated herein.

Item 9.01 Financial Statements and Exhibits.

Exhibit No.	Description				
99.1	Slide presentation dated January 2019				
99.2	Press release dated January 6, 2019				
	2				

SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

SYROS PHARMACEUTICALS, INC.

Date: January 7, 2019

By: <u>/s/ Nancy Simonian</u> Nancy Simonian President & Chief Executive Officer



Forward-looking statements

This presentation contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995 that involve substantial risks and uncertainties. All statements, other than statements of historical facts, contained in this presentation, including statements regarding our strategy, research and clinical development plans, collaborations, future operations, future financial position, future revenues, projected costs, prospects, plans and objectives of management, are forward-looking statements. The words "anticipate," "believe," "estimate," "expect," "intend," "may," "plan," "predict," "project," "target," "potential," "will," "would," "could," "should," "continue," and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words.

We may not actually achieve the plans, intentions or expectations disclosed in our forward-looking statements, and you should not place undue reliance on our forward-looking statements. 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 whether or when Incyte will exercise any of its options or any option exercise fees, milestone payments or royalties under the Incyte collaboration will ever be paid, our ability to: advance the development of our programs, including SY-1425 and SY-1365, under the timelines we project in current and future clinical trials; demonstrate in any current and future clinical trials the requisite safety, efficacy and combinability of our drug candidates; successfully progress SY-5609 through IND-enabling preclinical and toxicology studies; replicate scientific and non-clinical data in clinical trials; excessfully develop a companion diagnostic test to identify patients with the *RARA* and IRF8 biomarkers; obtain and maintain patent protection for our drug candidates and the freedom to operate under third parties, including our ability to perform under the collaboration agreement with Incyte; manage competition; manage expenses; raise the substantial additional capital needed to achieve our business objectives; attract and retain qualified personnel; and successfully execute on our business strategies and long-term vision; risks described under the caption "Risk Factors" in our Annual Report on Form 10-K for the year ended December 31, 2017, as updated in our Quarterly Report 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 (SEC); and risks described in other filings that we may make with the SEC in the future.

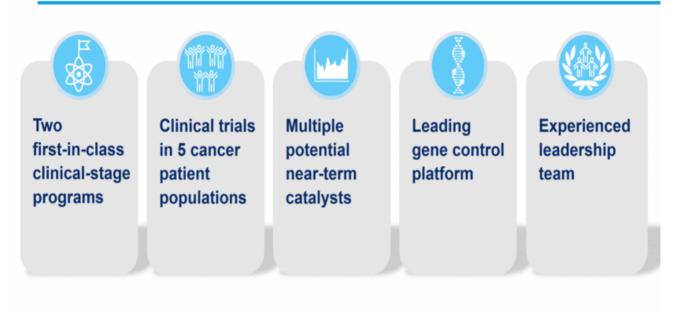
Any forward-looking statements contained in this presentation speak only as of the date this presentation is made, and we expressly disclaim any obligation to update any forward-looking statements, whether because of new information, future events or otherwise.

Our Vision

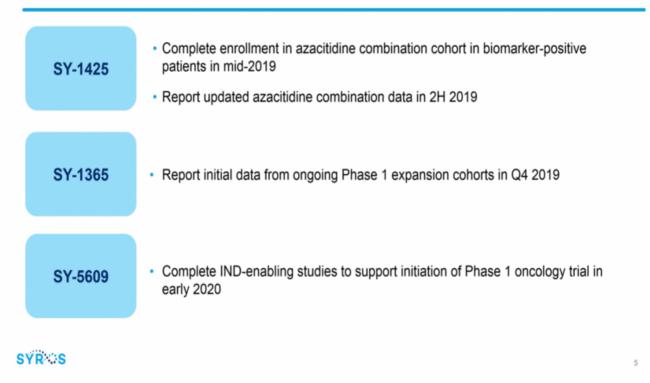
To create unparalleled value for patients, employees and shareholders by creating transformative medicines for severe disease through our world-leading expertise in gene control and our exceptional people and culture



Syros today: Clear vision, growing pipeline, pioneering platform and disciplined execution



Multiple clinical milestones in 2019 and beyond



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	Program	Indication	Drug Discovery	IND- Enabling	Early Clinical	Mid- Clinical	Pivotal	Commercial Rights
RARα agonism	SY-1425 (RARα agonist)	AML						Syros (North America and Europe)
CDK Inhibition	SY-1365 (CDK7 inhibitor)	Ovarian cancer						
		HR+ breast cancer						
	SY-5609 (Oral CDK7 inhibitor)	Cancer		-				
	CDK12/13 Inhibitor	Cancer						Syros (Global)
Cancer	Macrophage target	Immuno-oncology						
		Cancer/Immuno-oncology	•					
Monogenic Disease	Undisclosed target	Sickle cell disease						
		Monogenic diseases	•					
MPNs		Myeloproliferative neoplasms	•					Incyte (Global)

Deep and growing pipeline with multiple potential first-in-class programs

SYR:S SY-1425 is approved in Japan as Amnolake® (tamibarotene) for patients with relapsed/refractory APL

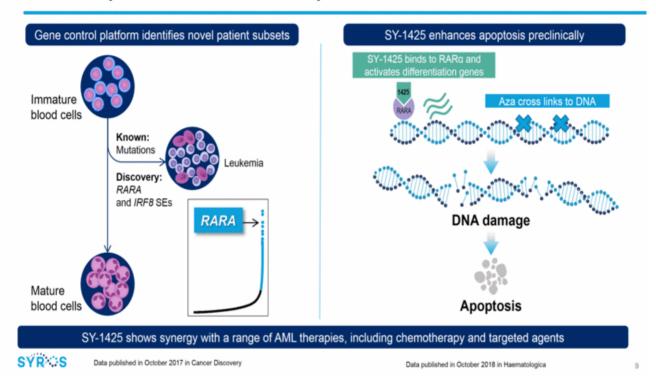
SY-1425: First-in-class selective, oral RAR α agonist supported by promising initial clinical data

Acute Myelogenous Leukemia (AML) and Myelodysplastic Syndromes (MDS)



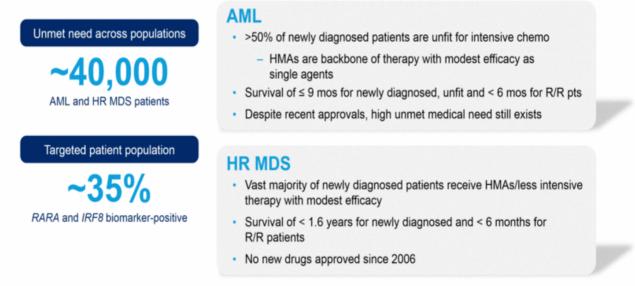
- Approximately one-third of AML and higher-risk MDS patients with novel biomarkers identified using our platform
- · In Phase 2 trial in combination with azacitidine
 - Initial data shows high response rates, rapid onset of action and no increased neutropenia in biomarker-positive patients
 - Additional clinical data expected in 2H 2019
- Significant opportunity in multi-billion dollar AML and HR MDS market
 - Ongoing need for well-tolerated combination therapies to extend survival and improve quality of life

SY-1425 has broad combination potential across *RARA* and IRF8 biomarker-positive AML and HR MDS patients



Significant need for well-tolerated oral therapies that extend survival and improve quality of life

Fast-growing AML and HR MDS market is projected to be > \$1 billion market this year

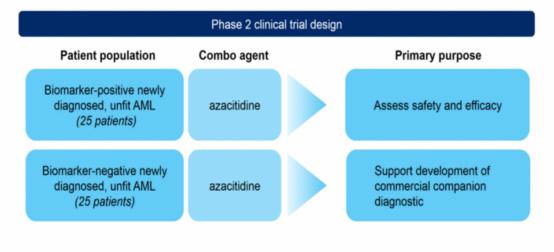


2018 incidence in the U.S. and the EU 5 (UK, Germany, France, Spain and Italy) from Decision Resources Group. Annual sales forecast from Decision Resources Group Sources: NCCN guidelines AML (Feb 2018); Clinical Lymphoma, Myeloma & Leukemia, 16:625-36 (2016); Blood 120:2454-2465 (2012)

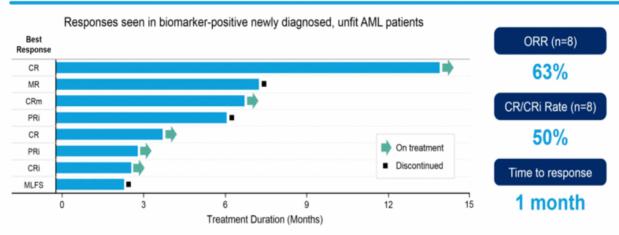
SYR S

Ongoing Phase 2 trial evaluating SY-1425 in combination with azacitidine in newly diagnosed, unfit AML patients

- · Promising initial data presented at ASH 2018
- · Additional data expected in second half of 2019



Initial data shows SY-1425 in combination with azacitidine has high response rates and rapid onset of action in biomarker-positive AML patients



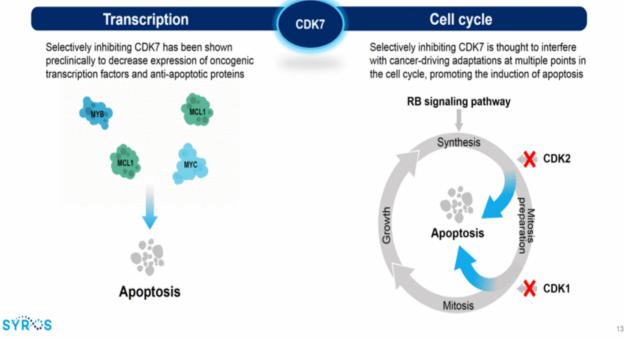
- · Elderly, high-risk population with median age of 76 and more than half having poor-risk cytogenetics
- · Generally well-tolerated with no increased neutropenia

SYR S

- Initial data compare favorably to single-agent azacitidine, which shows a response rate of 18-29%¹ in unfit AML patients with initial response generally occurring after four cycles²
- Initial data support RARA and IRF8 biomarkers for patient selection, with 17% ORR in biomarker-negative cohort (n=6)

Data as of Oct. 29, 2018 snapshot presented in December 2018 at ASH Annual Meeting ¹ Fenaux et al, JCO 2010; Dombret et al, Blood 2015; Vidaza[®] (azacitidine) Prescribing Information, Celgene Revision 09/2018. ² Thepot et al, AJH 2014.

Building an industry-leading franchise in selective CDK7 inhibition



SY-1365: First-in-class selective CDK7 inhibitor with broad potential in a range of difficult-to-treat solid tumors and blood cancers

Difficult-to-treat solid tumors and blood cancers



- · Potent, covalent and highly selective
- Preferentially kills cancer cells over non-cancerous cells in preclinical models
- Currently in Phase 1 clinical trial as single and combination agent in ovarian and breast cancers
 - Dose escalation data demonstrated proof-of-mechanism at tolerable doses and early signs of clinical activity
 - Initial data from expansion cohorts expected in Q4 2019
- Broad potential in additional solid tumors and blood cancers

Expansion cohorts in Phase 1 trial explore SY-1365 as single agent and in combination in multiple ovarian and breast cancer patient populations

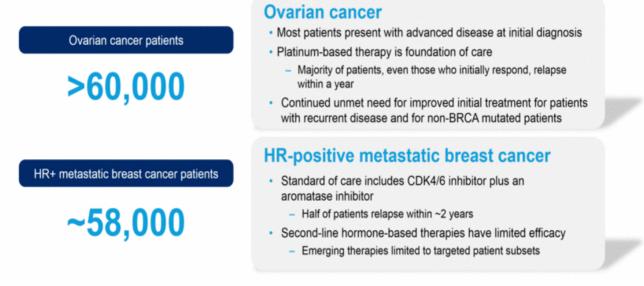
- · Completed dose escalation in advanced solid tumor patients and opened expansion cohorts in fall 2018
- Primary objectives of expansion are efficacy and further evaluation of safety, dose and schedule
- Initiated expansion cohorts at 53 and 80 mg/m²; exploring once and twice weekly regimens
- Initial data from expansion cohorts expected in Q4 2019

Ongoing expansion cohorts

Patient population	Single/combo agent	Target enrollment
Relapsed ovarian cancer, 3+ prior lines	Single agent	N=24
Relapsed ovarian cancer, 1+ prior lines (platinum sensitive)	Combination with carboplatin	N=24
Primary platinum refractory ovarian cancer	Single agent	N=12
HR+ metastatic breast cancer, CDK4/6 inhibitor resistant	Combination with fulvestrant	N=12
Solid tumors accessible for biopsy	Single agent	N=30

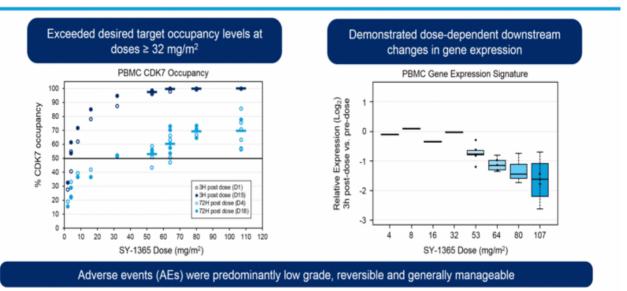
Significant need for new therapies in ovarian cancer and HR-positive metastatic breast cancer

Ovarian and HR-positive breast cancers represent > \$8 billion fast-growing market



2018 incidence in the U.S., Japan and the EU 5 (UK, Germany, France, Spain and Italy) from Decision Resources Group. Annual sales forecast from Decision Resources Group. Sources: NCCN Guidelines Ovarian Cancer (Mar 2018). Gabra H. EJC Suppl. 2014 Dec;12(2):2-6. and Herzog TJ and Monk BJ. Onitilo AA et al., Clin Med Res 2009; 7(1-2):4-13. Rugo HS et al., JCO 2016; 34: 3069-3103. Finn RS et al., N Engl J Med 2016; 375(20): 1925-1936. Faslodex USPI

SY-1365 demonstrated proof-of-mechanism at tolerable doses in dose escalation portion of ongoing Phase 1 trial



- · Most frequent related AEs include headache, nausea, vomiting and fatigue
- · No reports of neutropenia

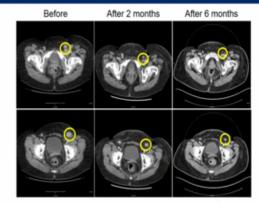


SY-1365 demonstrated early evidence of clinical activity

SY-1365 demonstrated 37% disease control rate (CR+PR+SD)

- Clinical activity per RECIST 1.1 criteria observed in 7 of 19 evaluable patients
 - 1 confirmed PR (clear cell ovarian cancer patient) observed at 80 mg/m² BIW
 - 6 stable disease (2 ovarian, 2 breast and 2 endometrial cancer patients), mostly at doses ≥ 32 mg/m² BIW
- Duration of treatment ranged from 50 - 127 days

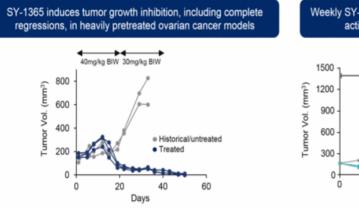
CT images of heavily pretreated stage IV clear cell ovarian cancer patient



- Confirmed PR after 2 cycles (31.8% reduction at C3D1)
- Remained on study in PR in 7th month of SY-1365 treatment as of data snapshot (49% decrease at C7D1)
- Best response to prior therapies was stable disease

SYR:S Data presented in November 2018 at EORTC-NCI-AACR Symposium

SY-1365 shows anti-tumor activity as single agent and in combination with standard-of-care in ovarian models, supporting ongoing clinical investigation



- Responses observed in 10/17 (59%) models, irrespective of BRCA status or PARP inhibitor sensitivity
- · Sensitivity to SY-1365 was associated with low expression of BCLXL and RB pathway alterations
 - Approximately 2/3 of high-grade serous ovarian cancer patients have RB alterations1

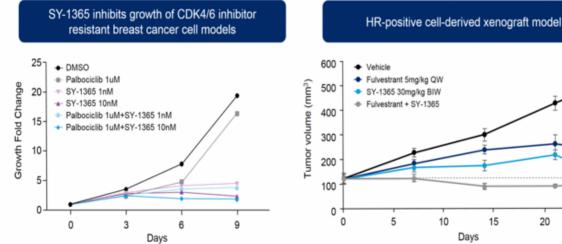


Data presented in April 2018 at the American Association of Cancer Research (AACR) Annual Meeting ¹TCGA Ovarian Cancer Integrated Analysis, Nature 2011 Data presented in November 2018 at EORTC-NCI-AACR Symposium

Weekly SY-1365 in combination with carboplatin enhances activity in ovarian cancer xenograft models Vehicle QW*3 Dosing - 30mpk SY-1365 QW 50mpk Carboplatin QW + 50mpk Carboplatin + 30mpk SY-1365 QW 10 20 Days

 SY-1365 inhibited DNA repair and transcription of HRR genes in preclinical models, inducing an HRD-like state that may increase sensitivity to DNA-damaging agents and DNA repair inhibitors

SY-1365 shows anti-tumor activity and synergy with fulvestrant in HR-positive breast cancer models, including CDK4/6 inhibitor resistant models



Approximately 1/3 of HR+ breast cancer patients have RB/cell cycle alterations post CDK4/6 inhibitors

Data presented by Syros' collaborators at Dana-Farber Cancer Institute in December 2018 at San Antonio Breast Cancer Symposium

SYR S

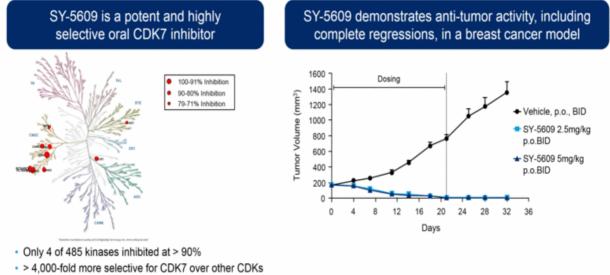
25 15 20 Days

In vitro synergy was seen in several HR+ breast cancer cell lines

Source: Jeselsohn et al, 2018; Data from collaboration with Dana-Farber Cancer Institute

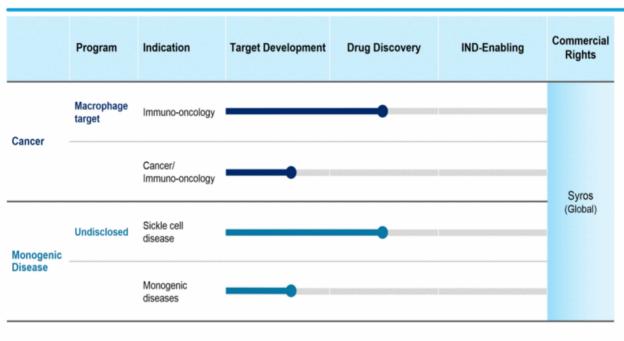
SY-5609: A potent and highly selective oral CDK7 inhibitor

- · Significant opportunity for adding an oral approach across a range of solid tumors and blood cancers
- · Expect to initiate a Phase 1 oncology trial for SY-5609 in early 2020



SYR S

Data presented in November 2018 at EORTC-NCI-AACR Symposium



Robust early-stage pipeline to fuel long-term growth

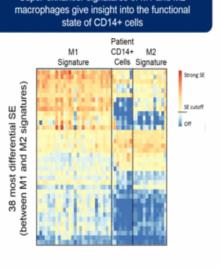
SYR S

Immuno-oncology strategy: Modulate tumor and immune cells to pro-inflammatory state to promote tumor killing

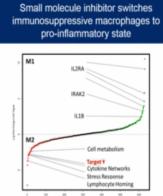
- Analyzed regulatory genomes of tumor and immune cells (breast, ovarian, pancreatic, colorectal, glioblastoma)
- Small molecule inhibitor that switches macrophages to pro-inflammatory state in preclinical studies
- Identified additional targets on tumor and immune cells for modulation

Data presented in October 2017 at the American College of Surgeons (ACS) Clinical Congress

SYR S

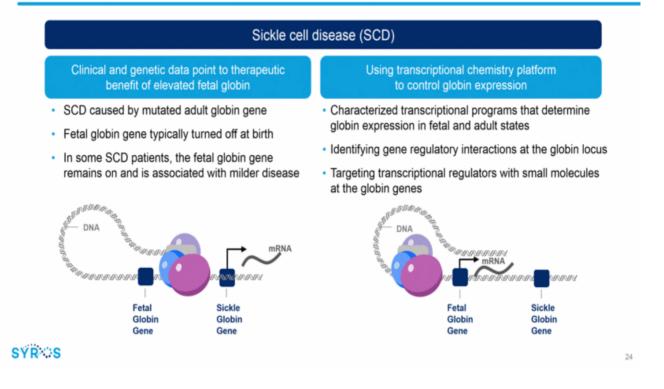


Super-enhancer signatures of M1 and M2

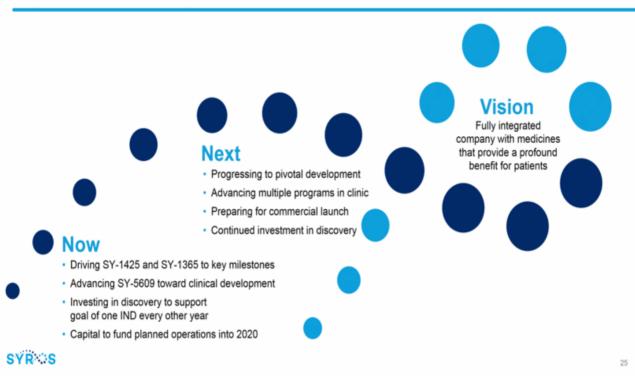


Syros-developed inhibitors of Target Y have shown tumor growth inhibition in *in vivo* preclinical models

Monogenic disease strategy: Alter expression of a single gene for therapeutic benefit











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., January 6, 2019 — 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 INDenabling 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 gualified personnel; and successfully execute on its business strategies; risks described under the caption "Risk Factors" in Svros' Annual Report on Form 10-K for the year ended December 31, 2017, as updated in its Quarterly Reports on Form 10-O 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.

Media Contact:

Naomi Aoki Syros Pharmaceuticals 617-283-4298 naoki@syros.com

Investor Contact:

Hannah Deresiewicz Stern Investor Relations, Inc. 212-362-1200 hannahd@sternir.com