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): November 7, 2017

SELECTA BIOSCIENCES, INC.

(Exact name of registrant as specified in its charter)

Delaware	**001-37798**	**26-1622110**
(State or other jurisdiction of incorporation or organization)	(Commission File Number)	(I.R.S. Employer Identification No.)

480 Arsenal Way
Watertown, MA 02472
(Address of principal executive offices) (Zip Code)

(617) 923-1400
(Registrant's telephone number, include area code)

N/A
(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:

- o Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
- o Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
- o Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
- o 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 ☒

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 2.02. Results of Operations and Financial Condition.

On November 7, 2017, Selecta Biosciences, Inc. (the "Company") announced its financial results for the quarter ended September 30, 2017. The full text of the press release issued in connection with the announcement is furnished as Exhibit 99.1 to this Current Report on Form 8-K.

The information contained in Item 2.02 of this Form 8-K (including Exhibit 99.1 attached hereto) shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended (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, as amended (the "Securities Act"), or the Exchange Act, except as expressly provided by specific reference in such a filing.

Item 7.01. Regulation FD Disclosure.

In connection with the issuance of the press release, the Company is holding a public conference call and webcast on November 7, 2017, at 8:30 a.m. ET, during which the Company will provide the investor presentation attached as Exhibit 99.2 to this Current Report on Form 8-K. The investor presentation will include additional data from the Company's ongoing Phase 2 company-sponsored trial, which is assessing single ascending dose safety, pharmacokinetic and pharmacodynamics of SEL-212 in patients with elevated uric acid levels. The Company undertakes no obligation to update, supplement or amend the materials attached hereto as Exhibit 99.2.

The information furnished under this Item 7.01 (including Exhibit 99.2 attached hereto) shall not be deemed "filed" for purposes of Section 18 of the Exchange Act, or otherwise subject to the liabilities of that section, nor shall it be deemed incorporated by reference into any filing under the Securities Act or the Exchange Act, except as expressly provided by specific reference in such a filing.

Forward-Looking Statements Disclaimer

This Current Report on Form 8-K (the "Current Report") contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. All statements contained in this Current Report that do not relate to matters of historical fact should be considered forward-looking statements, including without limitation statements regarding our ability to determine appropriate SEL-212 dose regimens for our Phase 3 program and our expectations surrounding the initiation of our Phase 3 program. These forward-looking statements are based on management's current expectations. These statements are neither promises nor guarantees, but involve known and unknown risks, uncertainties and other important factors that may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements, including, but not limited to, the following: the uncertainties inherent in the initiation, completion and cost of clinical trials including their uncertain outcomes; the unproven approach of our SVP technology; undesirable side effects of our product candidates; our reliance on third parties to manufacture our product candidates and to conduct our clinical trials; our inability to maintain our existing or future collaborations or licenses; our inability to protect our proprietary technology and intellectual property; potential delays in regulatory approvals; and availability of funding sufficient for our foreseeable and unforeseeable operating expenses and capital expenditure requirements. These and other important factors discussed under the caption "Risk Factors" in our Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission, or SEC, on August 11, 2017, and our other reports filed with the SEC could cause actual results to differ materially from those indicated by the forward-looking statements made in this Current Report. Any such forward-looking statements represent management's estimates as of the date of this Current Report. While we may elect to update such forward-looking statements at some point in the future, we disclaim any obligation to do so, even if subsequent events cause our views to change. These forward-looking statements should not be relied upon as representing our views as of any date subsequent to the date of this Current Report.

Item 9.01. Financial Statements and Exhibits.

(d) Exhibits

Exhibit No.	Description
99.1	Press Release issued on November 7, 2017
99.2	Corporate slide presentation of Selecta Biosciences, Inc. dated November 7, 2017

SIGNATURES

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.

SELECTA BIOSCIENCES, INC.

Date: November 7, 2017

By: /s/ Werner Cautreels, Ph.D.

Werner Cautreels, Ph.D.

President and Chief Executive Officer

Selecta Biosciences Announces Third Quarter 2017 Financial Results and Provides Corporate Update

- *Patient Data From Ongoing Phase 2 Trial to be Presented Today at the American College of Rheumatology (ACR) 2017 Annual Meeting*
- *Preparations for Phase 3 Program Underway*
- *Received $7.5 Million From Spark Therapeutics*
- *Strengthened Senior Management Team*
- *Company to Host Conference Call Today at 8:30 a.m. ET*

Watertown, Mass., November 7, 2017 - Selecta Biosciences, Inc. (NASDAQ: SELB), a clinical-stage biopharmaceutical company focused on unlocking the full potential of biologic therapies by avoiding unwanted immune responses, today reported financial results for the third quarter ended September 30, 2017 and provided a corporate update.

“I am excited by the progress we have made to advance SEL-212 closer to its Phase 3 program and by the recent additions to senior management in support of this important milestone,” said Werner Cautreels, Ph.D., CEO and Chairman of Selecta. “In our ongoing Phase 2 trial, the data show that SEL-212 exhibits strong clinical activity and continues to be generally well tolerated. We now are in the process of enrolling what we believe will be our final Phase 2 patients.

“In the field of gene therapy, we were pleased to have recently received $7.5 million from Spark Therapeutics, bringing the aggregate payments resulting from our December 2016 license agreement to $30 million. Meanwhile, progress continues to be made with our proprietary MMA and OTC deficiency gene therapy programs, as highlighted by promising preclinical data presented by our collaborators at the ESGCT meeting in October,” Dr. Cautreels continued. “Based on our continued evolution, we recently enhanced our management team by adding a Chief Commercial Officer as well as a new Chief Financial Officer and Head of Corporate Strategy. With these accomplishments behind us and planning for our Phase 3 already underway, we believe we are positioning Selecta for a transformative 2018.”

SEL-212 Program Update

In the fourth quarter of 2016, Selecta began enrolling patients with symptomatic gout and elevated serum uric acid levels in an open-label, multiple ascending dose Phase 2 clinical trial of SEL-212. The primary and secondary endpoints for this trial include safety, tolerability, pharmacokinetics, reduction of serum uric acid levels and reduction of anti-drug antibody (ADA) levels. Data also are being collected regarding flares and other patient-related observations. Patients are being enrolled in multiple ascending dose cohorts with the primary goal to identify the dose regimens to take forward into Phase 3.

As of October 23, 2017, a total of 79 patients have been dosed in the Phase 2 trial at 15 active U.S. clinical sites. Dosing had been completed in an initial eight cohorts in the trial. A summary of clinical activity from the trial as defined by the primary clinical endpoint (i.e., serum uric acid levels below 6 milligrams per deciliter) and safety information as of October 23, 2017 is as follows:

- **Control and Low SVP-Rapamycin Dose Cohorts** (Cohorts receiving five monthly doses of pegsiticase alone or three monthly doses of 0.2 mg/kg or 0.4 mg/kg of pegsiticase + 0.05 mg/kg of SVP-Rapamycin followed by two monthly doses of pegsiticase alone): As previously reported and as expected, dosing of patients in the control cohorts receiving pegsiticase alone was stopped early due to a loss of clinical activity caused by the immunogenicity of the enzyme. Clinical activity was lost by Week 12 in the majority of patients receiving pegsiticase in combination with the 0.05 mg/kg dose of SVP-Rapamycin.

- **Mid SVP-Rapamycin Dose Cohorts** (Cohorts receiving three monthly doses of 0.2 mg/kg or 0.4 mg/kg of pegsiticase + 0.08 or 0.10 mg/kg of SVP-Rapamycin followed by two monthly doses of pegsiticase alone): A majority of patients in these cohorts maintained clinical activity while receiving the combination therapy through Week 12. These results are consistent with the level of clinical activity observed through Day 30 at a similar SEL-212 dose level in Selecta's Phase 1b trial. At the 0.1 mg/kg dose level, half of the patients that maintained clinical activity through week 12 also maintained clinical activity through week 20.

- **Higher SVP-Rapamycin Dose Cohorts** (Cohorts receiving three monthly doses of 0.4 mg/kg of pegsiticase + 0.125 or 0.15 mg/kg of SVP-Rapamycin followed by two monthly doses of pegsiticase alone): Dosing of patients in these cohorts is now ongoing. At a similar dose level in Selecta's single ascending dose Phase 1b trial, 100 percent of patients achieved clinical activity through Day 30.

ADA levels in the trial continue to strongly correlate with serum uric acid levels. Data show that SVP-Rapamycin reduces the formation of ADAs in a dose-dependent manner, enabling pegsiticase to maintain its clinical activity.

Approximately 24 percent of patients receiving SEL-212 reported a gout flare during their first month of the trial. This is followed by a decline in flare rates during the remainder of the therapy. By comparison, 50% of patients reported a flare during the first month in the control cohorts receiving pegsiticase alone before treatment was stopped due to loss of efficacy and safety.

SEL-212 has been generally well tolerated at clinically active doses following repeated administrations in the trial. There have been 11 serious adverse events reported, four of which were reported to be not related or unlikely related to study drug and seven of which were infusion reactions that were previously reported by the company in its June 2017 data readout. All SAEs were successfully treated and resolved without further issues.

Additional patient data from these cohorts will be included in a presentation entitled "Selecta Q3 2017 Conference Call Presentation" that will be posted to Selecta's website by 8:30 a.m. ET this morning. To access this presentation, please visit www.selectabio.com, select Investors & Media and then Events & Presentations.

Selecta plans to present additional data from this trial at a medical meeting in the first quarter of 2018, participate in an End-of-Phase 2 Meeting with the U.S. Food and Drug Administration (FDA) during the first half of 2018 and initiate its Phase 3 program in 2018.

Other Recent Business Highlights and Activities

- Received Payment From Spark Therapeutics: In December 2016, Selecta and Spark Therapeutics entered into license and stock purchase agreements providing Spark Therapeutics with exclusive worldwide rights to SVP-Rapamycin for co-administration with gene therapy vectors for Hemophilia A and up to four additional pre-specified and undisclosed indications. On October 31, 2017, Selecta received a payment of $2.5 million under the license agreement and proceeds from share purchases under the stock purchase agreement in the amount of $5.0 million, or $7.5 million in the aggregate, bringing the total amount of proceeds received by Selecta from Spark Therapeutics to $30 million. Selecta also is eligible to receive up to $430 million in milestone payments for each indication. In addition, Spark Therapeutics will pay Selecta tiered mid-single to low-double-digit royalties on worldwide annual net sales of any resulting commercialized gene therapy.

- Strengthened Senior Management Team: In October 2017, Selecta announced two important additions to its management team to further the company's development with the appointment of John Leaman, M.D., as the company's new Chief Financial Officer, Treasurer and Head of Corporate Strategy, and the addition of Stephen Smolinski to the newly created role of Chief Commercial Officer. Dr. Leaman most recently served as Head of Corporate Development at InfaCare Pharmaceutical Corp., a specialty pharmaceutical company that was recently acquired by Mallinckrodt plc. Mr. Smolinski most recently served as Vice President and Head of Sanofi/Genzyme's North American Rheumatology Business Unit.

Third Quarter Financial Results:

- Revenue: For the third quarter of 2017, the company's total revenue was less than $0.1 million, which compares with $1.0 million for the third quarter of 2016. The decline is primarily the result of reduced revenue recognized from the company's nicotine vaccine candidate grant award from the National Institute on Drug Abuse.

- Research and Development Expenses: Research and development expenses for the third quarter of 2017 were $9.5 million, which compares with $6.0 million for the third quarter of 2016. The increase is primarily the result of greater clinical costs related to the company's Phase 2 trial of SEL-212, planning for the SEL-212 Phase 3 program and incremental headcount-related expenses.

- General and Administrative Expenses: General and administrative expenses for the third quarter of 2017 were $4.4 million, which compares with $2.5 million for the third quarter of 2016. The increase is primarily the result of greater headcount and related salaries needed to support a clinical-stage public company.

- Net Loss: For the third quarter of 2017, Selecta reported a net loss attributable to common stockholders of $(14.7) million, or $(0.66) per share, compared to a net loss of $(7.7) million, or $(0.43) per share, for the same period in 2016.

- Cash Position: Selecta had $104.8 million in cash, cash equivalents, short-term deposits, investments and restricted cash as of September 30, 2017, which compares with a balance of $113.0 million at June 30, 2017. Selecta continues to expect that its cash, cash equivalents, short-term deposits, investments and restricted cash will be sufficient to fund the company's operating expenses and capital expenditure requirements into mid-2019.

About Chronic Severe Gout, SEL-212 and Selecta's Ongoing Phase 2 Trial
According to market research, more than 500,000 gout patients in the U.S. are treated by rheumatologists and approximately 160,000 of these patients have chronic severe gout. These patients typically have an inflammatory build-up of uric acid deposits called tophi in their joints and tissue that causes pain, inflammation of joints and debilitating flares. If untreated, these deposits also can potentially exacerbate kidney and cardiovascular disease and increase morbidity. In fact, a study published in 2016 involving more than 600 patients diagnosed with tophaceous gout showed a 60% increased risk of mortality when compared to more than 2,800 patients without tophi.[1]

Published data show that uricase enzymes have the unique ability to rapidly eliminate uric acid crystal deposits and tophi in patients with chronic severe gout.[2] However, since these are biologic enzymes that are recognized as "foreign" by the immune system, anti-drug antibodies (ADAs) are induced in most patients early in their treatment, compromising efficacy and safety as well as preventing further administrations.

SEL-212 (SVP-Rapamycin in combination with the uricase enzyme pegsiticase) is designed to be the first monthly uricase treatment and the first uricase treatment that avoids immunogenicity. It is intended to remove the patient's uric acid burden through a short induction treatment cycle, thereby improving acute symptoms such as pain, inflammation of joints and debilitating flares. Selecta also envisions that additional SEL-212 treatment cycles could be re-administered if severe gout symptoms were to recur.

In the fourth quarter of 2016, Selecta began enrolling patients with symptomatic gout and elevated serum uric acid levels in an open-label, multiple ascending dose Phase 2 clinical trial of SEL-212. More information about the trial (NCT02959918) is available at www.clinicaltrials.gov.

Conference Call Reminder
Selecta management will host a conference call at 8:30 a.m. ET today to provide a corporate update and review the company's third quarter financial results. Investors and the public can access a live and archived webcast of this call via the Investors & Media section of the company's website, http://selectabio.com. Individuals may also participate in the live call via telephone by dialing (844) 845-4170 (domestic) or (412) 717-9621 (international) and may access a teleconference replay for one week by dialing (877) 344-7529 (domestic) or (412) 317-0088 (international) and using confirmation code 10113768.

About Selecta Biosciences, Inc.
Selecta Biosciences, Inc. is a clinical-stage biopharmaceutical company that is focused on unlocking the full potential of biologic therapies by avoiding unwanted immune responses. Selecta plans to combine its tolerogenic Synthetic Vaccine Particles (SVP™) with a range of biologics for rare and serious diseases that require new treatment options. The company's current proprietary pipeline includes SVP-enabled

[1] Vincent Z et al, Predictors of Mortality in People with Recent Onset of Gout: A Prospective Observational Study, ACR, Sept. 2016
[2] Araujo E, Bayat S, Petsch C, Matthias E, Faustini F, Kleyer A, Hueber A, Cavallaro A, Lell M, Dalbeth N, et al. June 2015. Tophus resolution with pegloticase: a prospective dual-energy CT study. Rheumatic & Musculoskeletal Diseases.

enzyme, oncology and gene therapies. SEL-212, the company's lead candidate in Phase 2, is being developed to treat severe gout patients and resolve their debilitating symptoms, including flares and gouty arthritis. Selecta's oncology candidate, SEL-403, leverages a potent recombinant immunotoxin (LMB-100) that is in a Phase 1 program targeting pancreatic cancer and mesothelioma. Its two proprietary gene therapy product candidates, SEL-302 and SEL-313, are being developed for rare inborn errors of metabolism and have the potential to enable repeat administration. The use of SVP is also being explored in the development of vaccines and treatments for allergies and autoimmune diseases. Selecta is based in Watertown, Massachusetts. For more information, please visit http://selectabio.com and follow @SelectaBio on Twitter.

Forward-Looking Statements

Any statements in this press release about the future expectations, plans and prospects of Selecta Biosciences, Inc. ("the company"), including without limitation, statements regarding the progress of the Phase 1/2 clinical program of SEL-212, the potential of SEL-212 to treat severe gout patients and resolve their debilitating symptoms, the company's plans to participate in a medical meeting in the first quarter of 2018 and to present data concerning the Phase 2 of SEL-212, whether the company will determine an appropriate dose of SEL-212 for a Phase 3, whether the company will hold an End-of-Phase 2 meeting in the first half of 2018, whether the Phase 3 trial will be initiated in 2018 or at all, the company's ability to unlock the full potential of biologic therapies, the potential applications for products utilizing the SVP platform in areas such as enzyme therapy, gene therapy, oncology therapy, vaccines and treatments for allergies and autoimmune diseases, the potential of the company's two gene therapy product candidates to enable repeat administration, the sufficiency of the company's cash, cash equivalents, investments, and restricted cash and other statements containing the words "anticipate," "believe," "continue," "could," "estimate," "expect," "hypothesize," "intend," "may," "plan," "potential," "predict," "project," "should," "target," "would," and similar expressions, constitute forward-looking statements within the meaning of The Private Securities Litigation Reform Act of 1995. Actual results may differ materially from those indicated by such forward-looking statements as a result of various important factors, including, but not limited to, the following: the uncertainties inherent in the initiation, completion and cost of clinical trials including their uncertain outcomes, the unproven approach of the company's SVP technology, undesirable side effects of the company's product candidates, its reliance on third parties to manufacture its product candidates and to conduct its clinical trials, the company's inability to maintain its existing or future collaborations, licenses or contractual relationships, its inability to protect its proprietary technology and intellectual property, potential delays in regulatory approvals, the availability of funding sufficient for its foreseeable and unforeseeable operating expenses and capital expenditure requirements, substantial fluctuation in the price of its common stock, a significant portion of the company's total outstanding shares have recently become eligible to be sold into the market, and other important factors discussed in the "Risk Factors" section of the company's Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission, or SEC, on August 11, 2017, and in other filings that the company makes with the SEC. In addition, any forward-looking statements included in this press release represent the company's views only as of the date of its publication and should not be relied upon as representing its views as of any subsequent date. The company specifically disclaims any obligation to update any forward-looking statements included in this press release.

Selecta Biosciences, Inc. and Subsidiaries
Consolidated Balance Sheets
(Unaudited)
(In thousands, except for shares and par value)

	September 30, 2017	December 31, 2016
Assets		
Current assets:		
Cash and cash equivalents	$ 72,151	$ 58,656
Short-term deposits and investments	32,237	25,485
Restricted cash	76	78
Accounts receivable	—	215
Prepaid expenses and other current assets	2,888	2,382
Total current assets	107,352	86,816
Property and equipment, net	2,055	2,047
Restricted cash and other deposits	316	316
Other assets	—	122
Total assets	$ 109,723	$ 89,301
Liabilities and stockholders' equity		
Current liabilities:		
Accounts payable	$ 1,519	$ 3,882
Accrued expenses	6,547	3,921
Loans payable, current portion	—	4,067
Deferred revenue, current portion	3,256	1,836
Total current liabilities	11,322	13,706
Non-current liabilities:		
Deferred rent and lease incentive	168	222
Loans payable, net of current portion	20,954	7,977
Deferred revenue, net of current portion	10,953	12,439
Other long-term liabilities	1,250	—
Total liabilities	44,647	34,344
Stockholders' equity:		
Preferred stock, $0.0001 par value; 10,000,000 shares authorized; no shares issued and outstanding at September 30, 2017 and December 31, 2016, respectively.	—	—
Common stock, $0.0001 par value; 200,000,000 shares authorized; 22,120,507 and 18,438,742 shares issued and outstanding as of September 30, 2017 and December 31, 2016, respectively.	2	1
Additional paid-in capital	266,836	211,125
Receivable from stock option exercises	—	(75)
Accumulated deficit	(197,353)	(151,576)
Accumulated other comprehensive loss	(4,409)	(4,518)
Total stockholders' equity	65,076	54,957
Total liabilities and stockholders' equity	$ 109,723	$ 89,301

Selecta Biosciences, Inc. and Subsidiaries
Consolidated Statements of Operations and Comprehensive Loss
(Unaudited)
(In thousands, except share and per share data)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2017	2016	2017	2016
Grant and collaboration revenue	$ 27	$ 1,048	$ 190	$ 5,153
Operating expenses:				
Research and development	9,504	6,021	31,542	18,669
General and administrative	4,377	2,495	13,155	7,294
Total operating expenses	13,881	8,516	44,697	25,963
Loss from operations	(13,854)	(7,468)	(44,507)	(20,810)
Investment income	165	98	379	121
Loss on extinguishment of debt	(673)	—	(673)	—
Foreign currency transaction gain (loss), net	(30)	(51)	(113)	(429)
Interest expense	(268)	(311)	(847)	(931)
Other expense, net	(16)	4	(16)	(78)
Net loss	(14,676)	(7,728)	(45,777)	(22,127)
Other comprehensive loss:				
Foreign currency translation adjustment	(1)	15	79	416
Unrealized gain (loss) on securities	5	16	30	16
Comprehensive loss	$ (14,672)	$ (7,697)	$ (45,668)	$ (21,695)
Net loss	(14,676)	(7,728)	(45,777)	(22,127)
Accretion of redeemable convertible preferred stock	—	—	—	(4,566)
Net loss attributable to common stockholders	$ (14,676)	$ (7,728)	$ (45,777)	$ (26,693)
Net loss per share attributable to common stockholders				
Basic and diluted	$ (0.66)	$ (0.43)	$ (2.31)	$ (3.39)
Weighted average common shares outstanding				
Basic and diluted	22,082,207	18,108,014	19,803,551	7,881,625

Contact Information:
Jason Fredette
Selecta Biosciences, Inc.
617-231-8078
jfredette@selectabio.com

Third Quarter 2017 Conference Call

Nasdaq: SELB

November 7, 2017

Safe Harbor / Disclaimer

Any statements in this presentation about the future expectations, plans and prospects of Selecta Biosciences, Inc. *("the company"),* including without limitation, the progress of the Phase 1/2 clinical program of SEL-212, the potential of SEL-212 to treat severe gout patients and resolve their debilitating symptoms, the ability of SVP-Rapamycin to induce immune tolerance against pegsiticase, the ability of SEL-212 to improve acute symptoms during a short induction cycle, the ability of SEL-212 to be re-administered if severe gout symptoms recur, whether the company will determine an appropriate dose of SEL-212 for a Phase 3, whether the company will advance to a Phase 3 for SEL-212 at all, the ability of the *company's* SVP platform, including SVP-Rapamycin, to mitigate immune response and create better therapeutic outcomes, the potential treatment applications for products utilizing the SVP platform in areas such as enzyme therapy, gene therapy, oncology therapy, vaccines and treatments for allergies and autoimmune diseases, the potential of the *company's* two gene therapy product candidates to enable repeat administration, whether the SEL-212 program informs the development of other product candidates, the contributions of employees, the company's expectations about receiving additional payments from Spark Therapeutics, Inc. under the license agreement, the sufficiency of the *company's* cash, cash equivalents, investments, and restricted cash and other statements containing the words *"anticipate," "believe," "continue," "could," "estimate," "expect," "hypothesize," "intend," "may," "plan," "potential," "predict," "project," "should," "target," "would,"* and similar expressions, constitute forward-looking statements within the meaning of The Private Securities Litigation Reform Act of 1995. Actual results may differ materially from those indicated by such forward-looking statements as a result of various important factors, including, but not limited to, the following: the uncertainties inherent in the initiation, completion and cost of clinical trials including their uncertain outcomes, the availability and timing of data from ongoing and future clinical trials and the results of such trials, whether preliminary results from a particular clinical trial will be predictive of the final results of that trial or whether results of early clinical trials will be indicative of the results of later clinical trials, the unproven approach of the *company's* SVP technology, potential delays in enrollment of patients, undesirable side effects of the *company's* product candidates, its reliance on third parties to manufacture its product candidates and to conduct its clinical trials, the *company's* inability to maintain its existing or future collaborations or licenses, its inability to protect its proprietary technology and intellectual property, potential delays in regulatory approvals, the availability of funding sufficient for its foreseeable and unforeseeable operating expenses and capital expenditure requirements, substantial fluctuation in the price of its common stock, a significant portion of the *company's* total outstanding shares have recently become eligible to be sold into the market, and other important factors discussed in the *"Risk Factors"* section of the *company's* Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission, or SEC, on August 11, 2017, and in other filings that the company makes with the SEC. In addition, any forward-looking statements included in this presentation represent the *company's* views only as of the date of its publication and should not be relied upon as representing its views as of any subsequent date. The company specifically disclaims any obligation to update any forward-looking statements included in this presentation.


IMAGINE IF WE COULD…
1. Effectively treat many more patients with existing biologics
2. Enable a new generation of novel non-immunogenic biologics for rare and serious diseases

Spark Therapeutics License Agreement

- December 2016 agreement provides Spark Therapeutics with exclusive worldwide rights to Selecta's SVP technology for up to five gene therapy targets
- Initial focus on combination of SVP with Spark's Hemophilia A gene therapy
- Among the largest gene therapy and SMID-cap to SMID-cap biotech deals announced to date
- Subject to the terms of the license agreement, Spark agreed to pay to Selecta:
  - $30 million of initial cash payments and investments in Selecta equity; final $7.5 million received on Oct. 31, 2017
  - Up to $430 million in milestone payments for each target
  - Mid-single to low-double-digit royalties on worldwide annual net sales of any resulting commercialized gene therapy

SEL-212: Advancing a Potential New Treatment Option for Chronic Severe Gout Patients Toward Phase 3

Ownership

- In-licensed pegsiticase in 2014; combined with SVP-Rapamycin to form SEL-212

Rare and Serious Disease

- ~160,000 adults with chronic severe gout treated by U.S. rheumatologists
- Debilitating flares and joint-damaging arthritis caused by uric acid deposits; risk of renal and cardiovascular disease

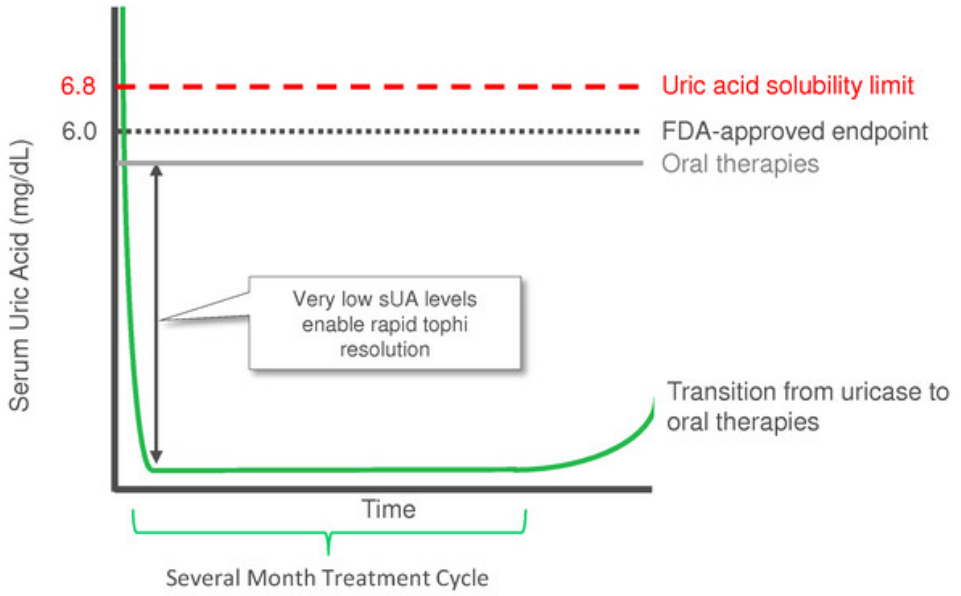
Immunogenicity Barrier

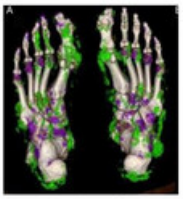
- Uricases are highly effective in breaking down uric acid deposits, but are foreign to the human immune system, causing immunogenicity that can negate efficacy and present safety risks

Clear Clinical Path

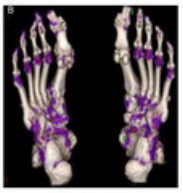
- Serum uric acid level reduction – a robust FDA/EMA primary endpoint for approval – can be seen rapidly upon dosing, easy to measure, maintenance strongly correlated with low/negative ADA titers
- Adult patient population with rapid enrollment potential

Objective: Treat Patients by Rapidly Resolving Their Uric Acid Deposits and Tophi





Before[1]



After[1]

Uric acid deposits

Calcium deposits

For illustrative purposes only

(1) Arujo EG et al, Tophus resolution with pegloticase: a prospective dual-energy CT study, RMD Open, 2015

Advancing SEL-212 Toward Phase 3

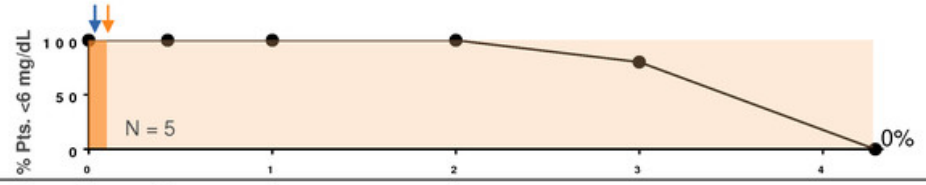
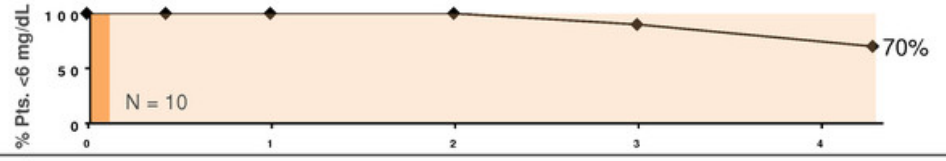
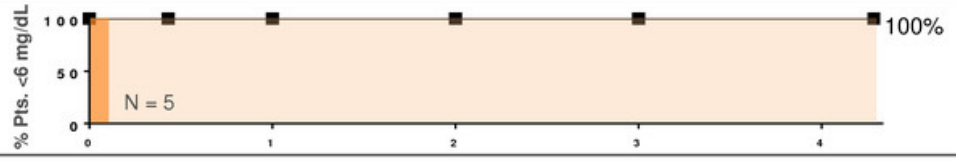
Phase 1a Single Dose	Dose (mg/kg):	0.1	0.2	0.4	0.8	1.2

= Pegsitacase; = SVP-Rapamycin

Advancing SEL-212 Toward Phase 3

= Pegsiticase; = SVP-Rapamycin

Phase 1b Shows Greater Clinical Activity With Higher Single SVP-Rapamycin Doses

Dosing	% of Patients With SUA <6 mg/dL
0.4 mg/kg 0.03 mg/kg	
0.4 mg/kg 0.10 mg/kg	
0.4 mg/kg 0.15 mg/kg	

Week

= Pegsiticase; = SVP-Rapamycin

Phase 2 Trial Overview

Enrollment Criteria	• Patients with symptomatic gout and SUA levels >6 mg/dL
Primary/Secondary Endpoints	• Safety, tolerability and pharmacokinetics of multiple doses of SEL-212 and pegsitacase alone • Reduction of SUA levels • Reduction of ADA levels
Design	• Multiple ascending dose cohorts

Dosing	• Control cohorts: pegsitacase alone every 28 days for up to five doses
	• All other cohorts:
	  • Three “teach & treat” doses of SEL-212 every 28 days followed by
	  • Two “treat” doses of pegsitacase alone

Stopping Rules	• Dosing stopped upon loss of SUA control at Days 21 after a dose
As of October 23	• 79 patients dosed at 15 active U.S. clinical sites

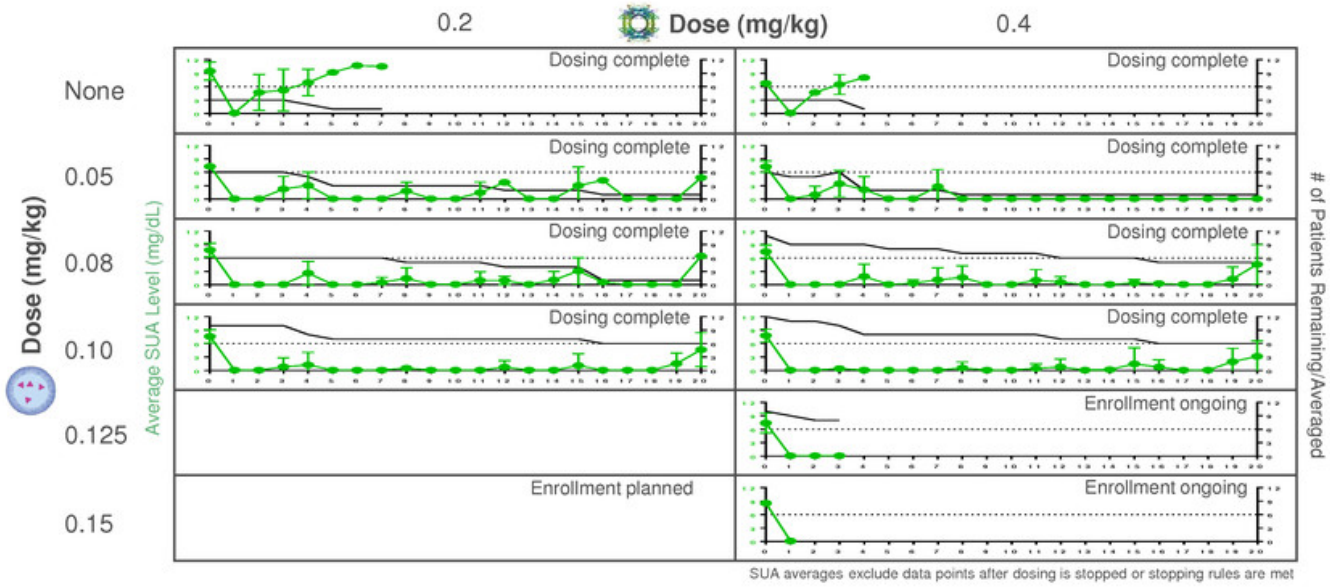
Phase 2 Trial Overview

Enrollment Criteria	• Patients with symptomatic gout and SUA levels >6 mg/dL
Primary/Secondary Endpoints	• Safety, tolerability and pharmacokinetics of multiple doses of SEL-212 and pegsitacase alone • Reduction of SUA levels • Reduction of ADA levels
Design	• Multiple ascending dose cohorts

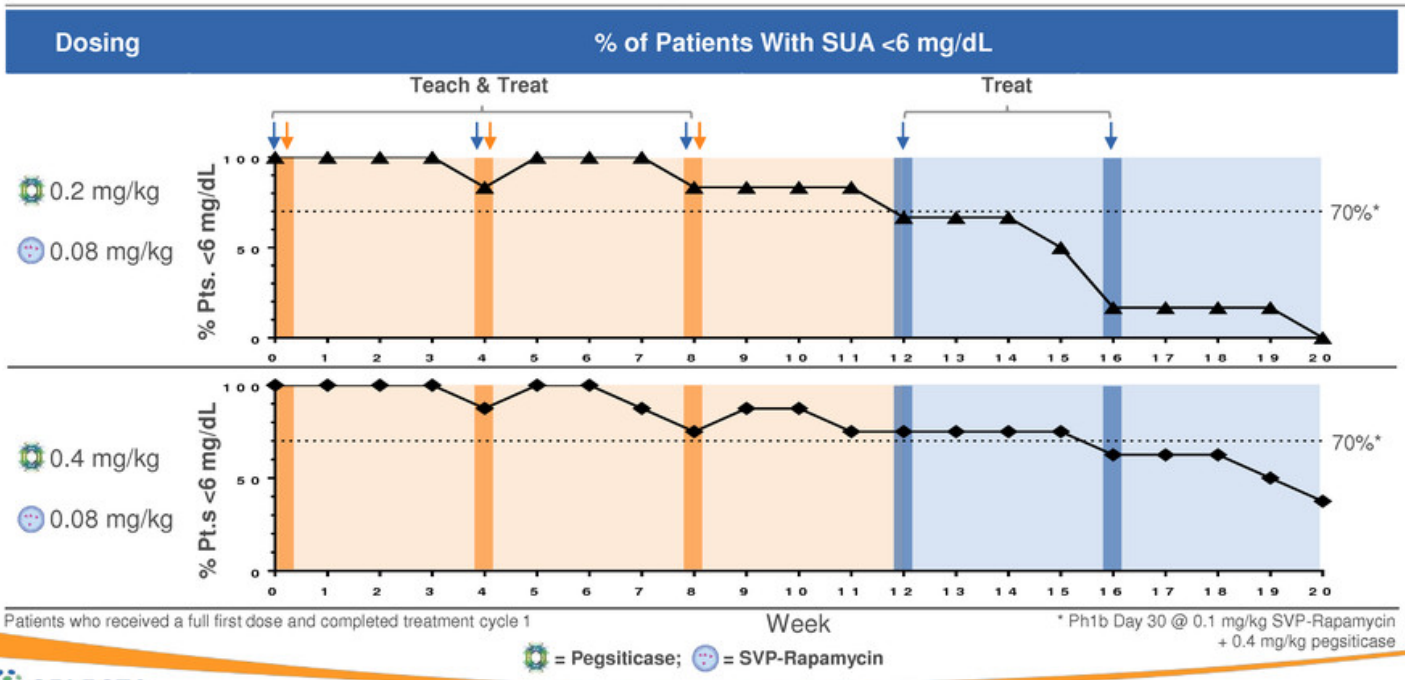
Dosing	• Control cohorts: pegsitacase alone every 28 days for up to five doses
	• All other cohorts:
	  ◦ Three "teach & treat" doses of SEL-212 every 28 days followed by
	  ◦ Two "treat" doses of pegsitacase alone

Stopping Rules	• Dosing stopped upon loss of SUA control at Days 21 after a dose
As of October 23	• 79 patients dosed at 15 active U.S. clinical sites

Average SUA Levels for Phase 2 Cohorts



Cohort 5 & 6 Clinical Activity

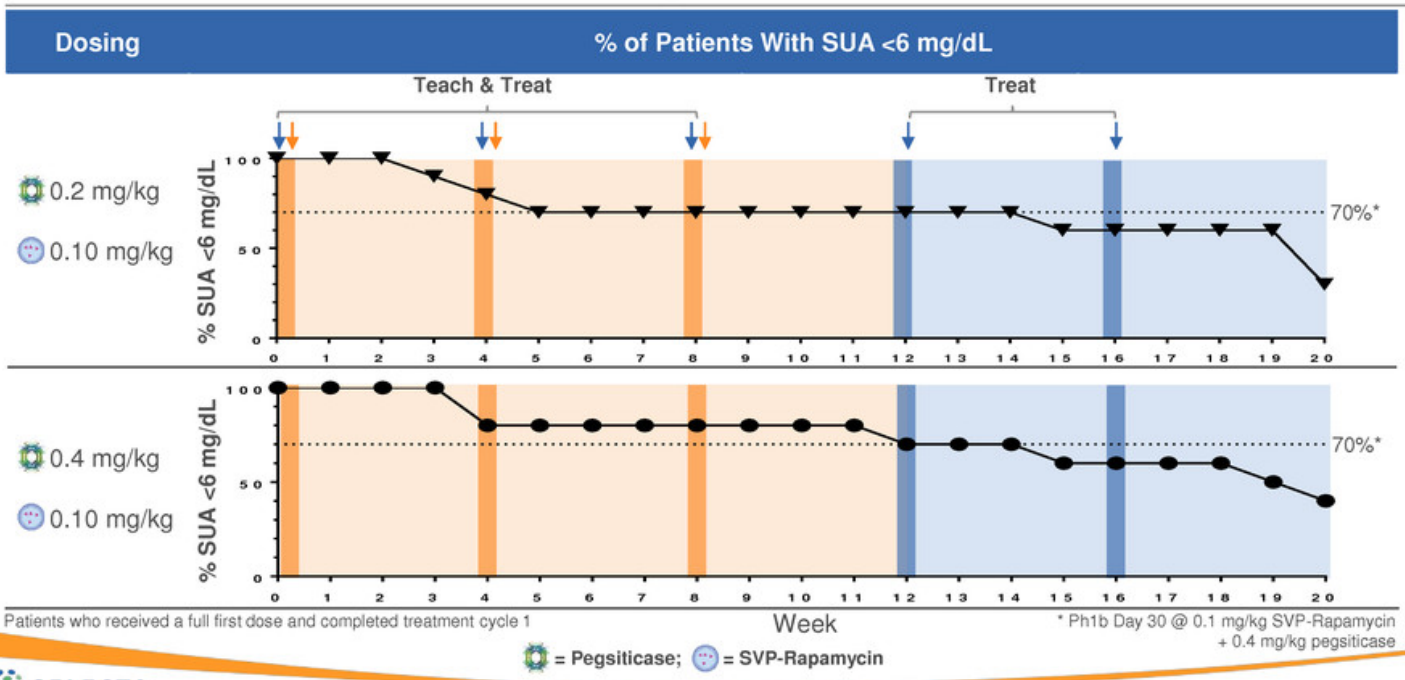


Patients who received a full first dose and completed treatment cycle 1

* Ph1b Day 30 @ 0.1 mg/kg SVP-Rapamycin + 0.4 mg/kg pegsiticase

= Pegsiticase; = SVP-Rapamycin

Cohort 7 & 8 Clinical Activity

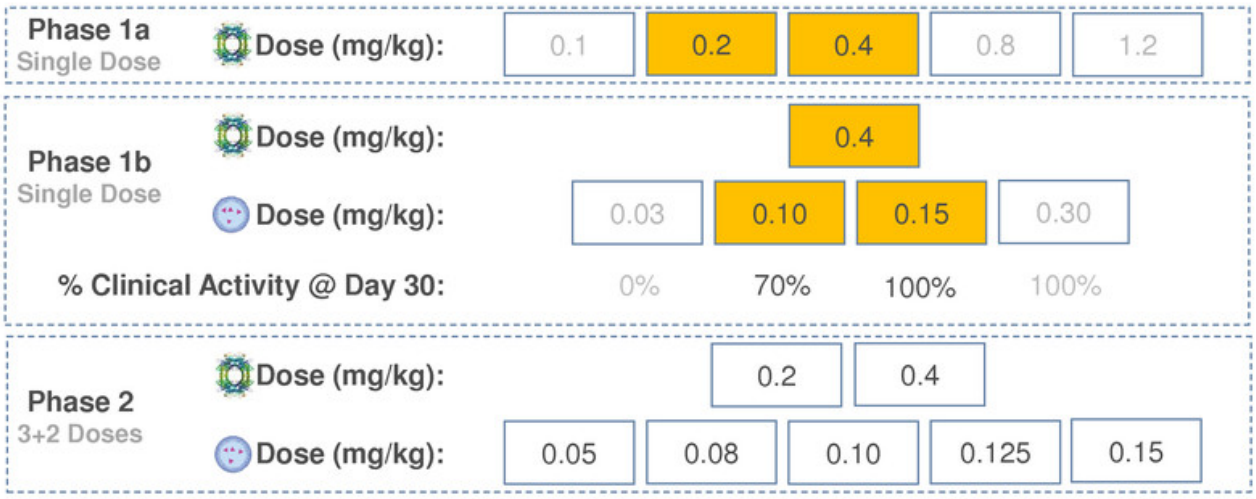


Patients who received a full first dose and completed treatment cycle 1

* Ph1b Day 30 @ 0.1 mg/kg SVP-Rapamycin + 0.4 mg/kg pegsiticase

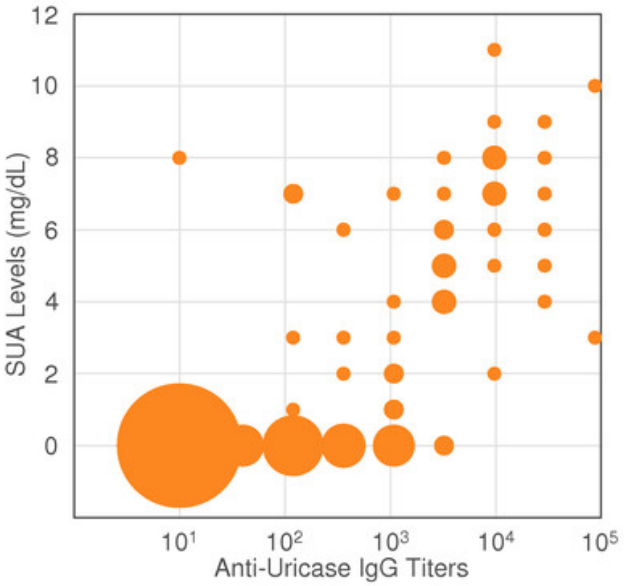
= Pegsiticase; = SVP-Rapamycin

Advancing SEL-212 Toward Phase 3



= Pegsiticase; = SVP-Rapamycin

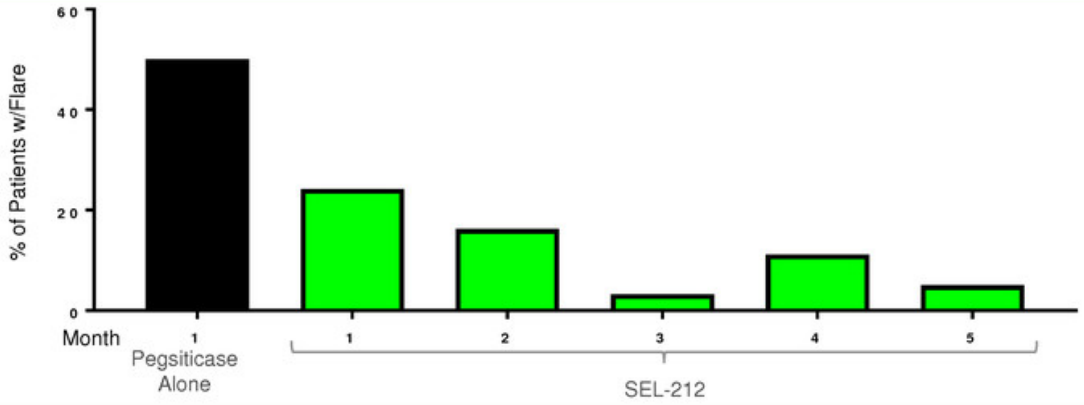
SUA Levels vs. ADA Titers



SUA levels vs. ADA titers at day 21 after each dose for all patients in cohorts 1-8

Data Continue to Suggest Reduction in Flare Frequency During SEL-212 Therapy

% of Patients Experiencing Flares by Month



- Data indicate SEL-212 lowers flares initially and over time during treatment
- Urate lowering therapies typically increase the incidence of flares at the beginning of therapy

SEL-212 Generally Well Tolerated at Clinically Active Doses

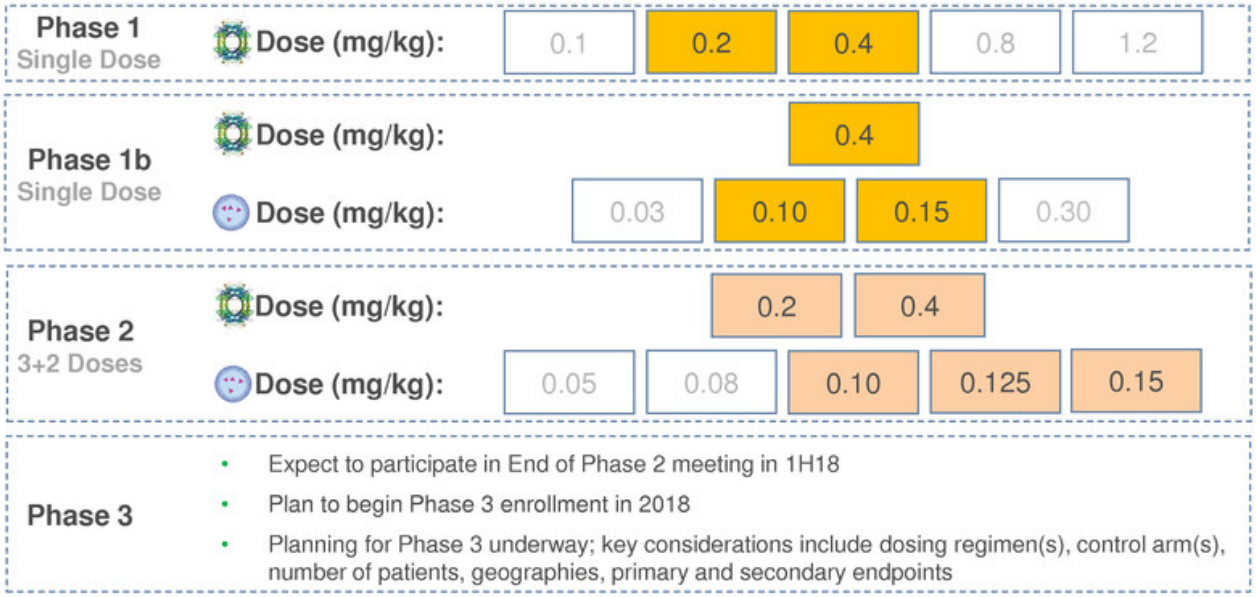
- SEL-212 has been generally well tolerated at clinically active doses following >200 administrations
- SAEs reported in the Phase 2 trial:
  - Four were reported not to be or unlikely to be related to study drug:
    - Two patients with a history of gall stones experienced cholecystitis (inflammation of gall bladder caused by impacted gall stones); (reported not to be related to study drug)
    - One patient experienced a post-Micturition autonomic response during administration (reported not to be related to study drug)
    - One patient experienced peripheral edema (reported as unlikely to be related to study drug)
  - Seven infusion reactions:
    - Four in cohorts receiving pegsiticase alone or pegsiticase in combination with the lowest dose of SVP-Rapamycin, as anticipated
    - Two due to protocol deviations related to dosing errors
    - One during a repeat dose of SEL-212 in a higher dose cohort
    - Each of these SAEs occurred prior to Selecta's June data report
    - None occurred after treatment period 2
- All SAEs were successfully treated and resolved without further issues

SEL-212 Generally Well Tolerated at Clinically Active Doses

Cohort Pegsitricase+SVP-Rapa	Entire Study	1 0.2	2 0.4	3 0.2+0.05	4 0.4+0.05	5 0.2+0.08	6 0.4+0.08	7 0.2+0.1	8 0.2+0.1	10^ 0.4+0.125	12^ 0.4+0.15
N	79	3	3	9	10	6	11	11	12	10	4
≥ 1TEAE	63	2	2	6	8	6	10	10	12	7	0
SAE	11	1	1	2	0	0	2(1#, 1*)	1	4(3#, 1*)	0	0
Death	0	0	0	0	0	0	0	0	0	0	0
Discontinuation due to TEAE	15	1	1	2	0	0	3	2	4	2	0
Specific TEAEs											
Anemia[1]	13	0	0	1	0	2	3	2	3	2	0
Gout Flare	37	3	0	2	2	3	3	9	12	3	0
Headache[1]	14	0	0	0	4	1	1	5	1	2	0
Hyperglycemia[1]	8	0	0	1	0	2	2	1	1	1	0
Hypophosphatemia[1]	5	0	0	5	0	0	0	0	0	0	0
Hypertriglyceridemia[1]	11	0	0	1	0	3	1	1	2	3	0
Infection[1]	15	0	1	7	1	1	1	1	3	0	0
Infusion reaction	11	1	1	2	0	0	2(1*, 1)	2	2(1*, 1)	1	0
Leukopenia[1]	15	0	0	2	0	4	1	2	5	1	0
Stomatitis or oral lesion[1]	10	0	0	0	0	1	1	0	5	3	0
Tachycardia[1]	4	0	0	3	0	0	0	0	0	1	0

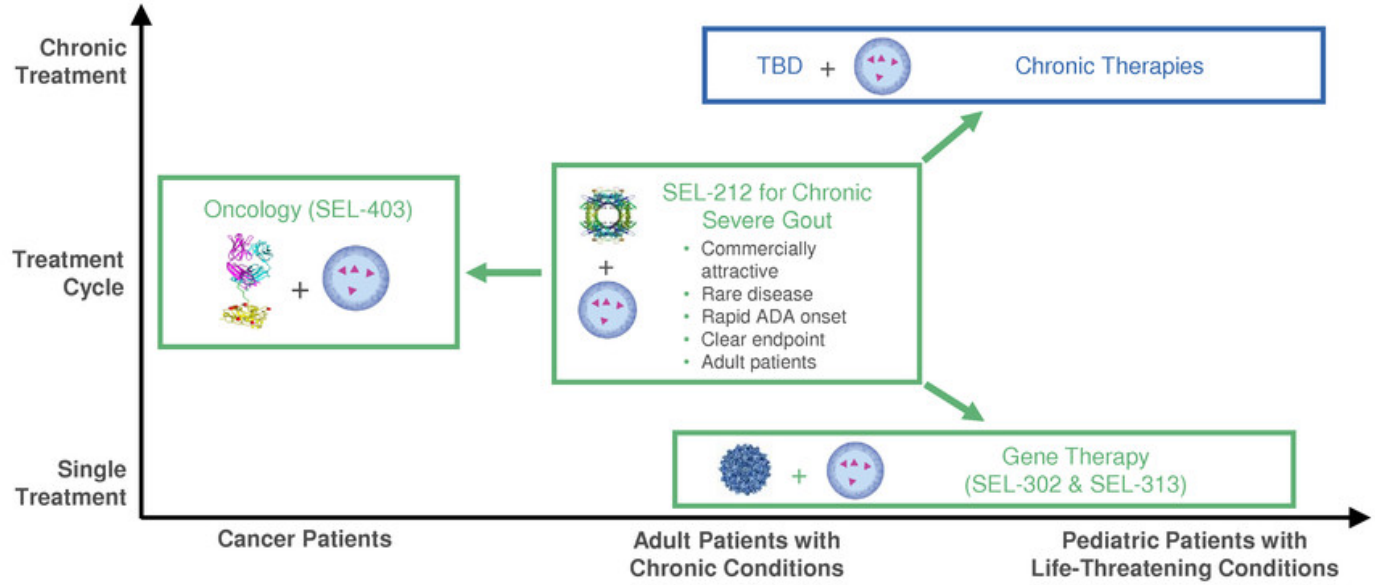
[1]Observed as single events, transient in nature and mild or moderate. #Reported as not related to study drug. *Patient incorrectly dosed; protocol deviation. ^Dosing for cohorts is ongoing.

Advancing SEL-212 Toward Phase 3



= Pegsiticase; = SVP-Rapamycin

SEL-212 Program is Informing the Development of Other Product Candidates



Important Additions to Selecta's Management

Stephen Smolinski
Chief Commercial Officer

- Deep commercial expertise and knowledge of the immunology and rheumatology spaces
- Most recently served as VP and Head of Sanofi/Genzyme's North American Rheumatology Business Unit, leading the development of commercialization plans for KEVZARA®
- Previously served as Group VP of Immunology & Inflammation, Global Strategic Unit at Sanofi and held senior commercial roles at Roche-Genentech, Bristol-Myers Squibb, Johnson & Johnson and Savient Pharmaceuticals, Inc.

John Leaman, M.D.
Chief Financial Officer & Head of Corporate Strategy

- 15+ years of financial, operations, corporate strategy and M&A experience at life sciences companies
- Most recently served as Head of Corporate Development at InfaCare Pharmaceutical Corp., a specialty pharmaceutical company that was acquired by Mallinckrodt plc
- Previously was Chief Financial Officer of Medgenics, Inc., a publicly traded biotech company, and held senior roles at Shire plc and Devon Park Bioventures, a life sciences VC firm
- Began career at McKinsey & Company

3Q17 Financial Overview

(In thousands, except share and per share data)	For the Quarter Ended	
	September 30, 2017	September 30, 2016
Grant & Collaboration Revenue	$27	$1,048
Research & Development Expenses	9,504	6,021
General & Administrative Expenses	4,377	2,495
Net Loss Attributable to Common Stockholders	$(14,676)	$(7,728)
Net Loss Per Basic & Diluted Share	$(0.66)	$(0.43)
Wtd. Avg. Common Shares Outstanding – Basic & Diluted	22,082,207	18,108,014

(In thousands)	As of	
	September 30, 2017	June 30, 2017
Cash, Cash Equivalents, Marketable Securities, Restricted Cash	$104,780	$113,045

Cash runway into mid-2019

SELECTA Biosciences

Thank You