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): October 23, 2018

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 x

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. x

Item 7.01. Regulation FD Disclosure.

On October 23, 2018, Selecta Biosciences, Inc. (the “Company”) announced new interim data from its ongoing Phase 2 Company-sponsored trial of SEL-212, for the treatment of chronic severe gout, which is assessing single ascending dose safety, pharmacokinetics and pharmacodynamics of SEL-212 in patients with elevated uric acid levels. 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 Company will present the presentation posters ("Presentation Posters") furnished as Exhibits 99.2, 99.3 and 99.4 to this Current Report on Form 8-K, which contains new interim data from patients receiving up to 0.15 mg/kg of SVP-Rapamycin with 0.2 or 0.4 mg/kg of pegadricase from the Phase 2 trial at the 2018 American College of Rheumatology (ACR)/Association for Rheumatology Health Professionals (ARHP) Annual Meeting in Chicago, IL on October 23, 2018.

In connection with the issuance of the press release, the Company is holding a public conference call and webcast on October 23, 2018, at 8:00 a.m. ET, during which the Company will provide the investor presentation attached as Exhibit 99.5 to this Current Report on Form 8-K. The Company undertakes no obligation to update, supplement or amend the materials attached hereto as Exhibit 99.5.

The information furnished under this Item 7.01, including Exhibits 99.1, 99.2, 99.3, 99.4 and 99.5 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, or the Exchange Act, except as expressly set forth by specific reference in such a filing.

Item 8.01. Other Events.

On October 23, 2018, in connection with the presentation and/or distribution of the Presentation Posters, the Company announced new interim data from patients in its Phase 2 trial of SEL-212 receiving five monthly combination doses of SEL-212, consisting of up to 0.15 mg/kg of SVP-Rapamycin in combination with 0.2 or 0.4 mg/kg of pegadricase. In the new cohorts, projections based on the rate of serum uric acid (“SUA”) control for patients who have completed the treatment period suggest that approximately 66% of the evaluable patients may maintain SUA level control below 6 mg/dL throughout five months of therapy with concurrent mitigation of anti-drug antibodies (“ADAs”) against the pegadricase enzyme. However, the Company notes that caution should be exercised in drawing any conclusions from projections of clinical data.

SEL-212 is a monthly combination product candidate being developed as a potential therapy for the sustained control of SUA leading to the removal of urate crystal deposits in patients with chronic severe gout. In the ongoing Phase 2 clinical trial SEL-212 has shown potential reduction of urate deposits in symptomatic gout patients with hyperuricemia as suggested by dual-energy computed tomography (“DECT”). DECT scans of patients enrolled in the Phase 2 clinical trial suggest that a decrease in total urate deposits has occurred progressively over the entire treatment period.

Initiation of urate lowering therapy can increase the incidence of gout flares which can adversely affect patient experience and compliance. Treatment with SVP-Rapamycin, a component of SEL-212, mitigated IL-1β production and neutrophil infiltrates in a monosodium urate-induced model of inflammation in mice. Accordingly, the Company believes that SEL-212 may have potential to reduce gout flares by inhibiting inflammation despite rapid and sustained lowering of SUA.

SEL-212 has been generally well-tolerated in the Phase 2 clinical study.

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 the progress of the Phase 2 clinical trial of SEL-212, whether SEL-212 mitigates immunogenicity and enables sustained control of serum uric acid levels, low rate of gout flares and monthly dosing, the ability of SVP-Rapamycin to mitigate inflammation induced by monosodium urate crystals, the anticipated timing for advancing into Phase 3 (if at all), whether current evaluable SEL-212 patients will be predictive of future evaluable SEL-212 patients, whether projections regarding serum uric acid control for patients who have yet to complete the 20-week study period will be consistent with actual data, whether monthly dosing of SEL-212 leads to significant reduction in uric acid deposits, the potential of SEL-212 to significantly reduce tophi/heavy urate burden and/or rapidly eliminate tissue urate burden, whether SEL-212 has the ability to reduce gout flares frequency initially and over time during SEL-212 therapy, the severity of gout flares experienced by patients receiving SEL-212, and whether SEL-212 will continue to be generally well-tolerated. 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; our dependence on our ability to retain key executives and to attract, retain and motivate qualified personnel; 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 8, 2018, 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 October 23, 2018
99.2	2018 American College of Rheumatology (ACR)/Association for Rheumatology Health Professionals (ARHP) Presentation Poster: Update of SEL-212 Phase 2 Clinical Data in Symptomatic Gout Patients: SVP-Rapamycin Combined with Pegadricase Mitigates Immunogenicity and Enables Sustained Reduction of Serum Uric Acid Levels, Low Rate of Gout Flares and Monthly Dosing
99.3	2018 ACR/ARHP Presentation Poster: Initial Phase 2 Clinical Data of SEL-212 in Symptomatic Gout Patients: Measurement of Dissolution of Urate Deposits Associated with Monthly Dosing of a Pegylated Uricase (pegadricase) with SVP-Rapamycin By Dual Energy Computed Tomography
99.4	2018 ACR/ARHP Presentation Poster: Mitigation of Inflammation Induced By Monosodium Urate Crystals in Mice By Treatment with SVP-Rapamycin
99.5	Corporate Presentation of Selecta Biosciences, Inc. dated October 23, 2018

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: October 23, 2018

By: /s/ Werner Cautreels, Ph.D.
Werner Cautreels, Ph.D.
President and Chief Executive Officer

Selecta Biosciences Presents New Interim Data from Phase 2 Trial of SEL-212, in Development for Chronic Severe Gout, at ACR 2018

- *Interim analysis indicates serum uric acid (SUA) control has been maintained into months four and five with once monthly combination treatment, SUA control projected to be 66% at end of study period*
- *Patient imaging has shown reduction in tissue urate deposits as measured by Dual Energy Computed Tomography (DECT) during SEL-212 treatment periods (months 1-5) and maintenance of SUA near 0 mg/dL*
- *Low flare rates observed to date in new patient cohorts over treatment period*
- *No new safety signals have been observed in the five combination treatment cohorts*
- *Phase 3 program planned to begin in 2018 with proposed dose regimens*
- *Company to host conference call and live webcast today at 8:00 am ET*

Watertown, Mass., October 23, 2018 - Selecta Biosciences, Inc. (Nasdaq: SELB), a clinical-stage biopharmaceutical company focused on unlocking the full potential of biologic therapies by mitigating unwanted immune responses, today presented new interim Phase 2 data from patients receiving SEL-212, a product candidate in development for the treatment of chronic severe gout designed to lower SUA, at the 2018 American College of Rheumatology (ACR)/Association for Rheumatology Health Professionals (ARHP) Annual Meeting in Chicago, IL.

SEL-212 is a combination product candidate designed to sustain control of SUA levels in patients with chronic severe gout, potentially reducing harmful tissue urate deposits which when left untreated can lead to debilitating gout flares and joint deformity. SEL-212 consists of pegadricase (formerly known as pegsiticase), a pegylated uricase, co-administered with SVP-Rapamycin, designed to mitigate the formation of anti-drug antibodies (ADAs). ADAs develop due to unwanted immune responses to biologic medicines, rendering these therapies less potent, which remains an issue across therapeutic modalities and disease states including chronic severe gout.

The interim data reported today at ACR consist of new cohorts of patients that received five monthly doses of SEL-212, at doses of 0.1 or 0.15 mg/kg of SVP-Rapamycin in combination with 0.2mg/kg of pegadricase. In the new cohorts, projections based on the rate of SUA control for patients who have completed the treatment period suggest that approximately 66% of the evaluable patients may maintain SUA level control below 6 mg/dL throughout five months of therapy with concurrent mitigation of ADAs against the pegadricase enzyme. Final data are still pending for five of these patients. Our projection for these five patients is based on the observation that all other patients in these cohorts that had serum uric acid levels <6 mg/dL at week 12 successfully maintained control of SUA through the entire five-month period. However, caution should be exercised in drawing any conclusions from projections of clinical data. Furthermore, the observed sustained maintenance of SUA near 0 mg/dL has led to rapid reduction in tissue urate deposits as measured by DECT imaging. DECT scans were performed as an exploratory measure to evaluate reduction of tissue urate burden in a subset of patients of the Phase 2 trial.

“Today’s reported interim data have met our goal of showing sustained SUA control over the five-month combination period. In addition, SEL-212 provides the added convenience of monthly dosing with a low incidence of flares observed in the Phase 2 clinical trial to date. And importantly, during months four and five of treatment, there have been no new emerging safety findings in the trial,” said Werner Cautreels, Ph.D., President and CEO of Selecta. “The reduction in tissue urate deposits in joints and tissue as shown by our DECT data presented today at ACR represents a potentially important benefit for patients whose disease is not responding to other treatments. With these data now in hand, we believe we are well positioned to execute on our Phase 3 program, which is expected to start later this year.”

Approximately 29% of the patient population treated with SEL-212 in the ongoing Phase 2 trial has experienced gout flares during the first month after treatment with continued reduction of gout flare rates out to month five. 96% of flares have been mild or moderate, and no flares have been reported as a serious adverse event (SAE) nor resulted in discontinuations of the study drug.

SEL-212 has been generally well tolerated at clinically active doses following repeated administrations in the trial. There have been 21 SAEs reported, 11 of which were reported to be not related or unlikely to be related to study drug, nine of which were infusion reactions that were previously reported by the company in June 2018, one of which was an infusion reaction that occurred in the most recent cohorts and one of which was reported to be related to study drug. No infusion reactions have been reported after treatment period two. As far as the Company is aware, all SAEs have been successfully treated without further issues.

Gout is the most common form of inflammatory arthritis with more than 8.3 million patients in the United States having been diagnosed with gout which is caused by high levels of uric acid in the body that accumulate around the joints and other tissues, and can result in flares that cause intense pain. Approximately 160,000 patients in the United States suffer from chronic severe gout, a painful and debilitating condition in which patients are not able to get their SUA levels below 6 mg/dL and therefore have several flares per year and can develop nodular masses of uric acid crystals known as tophi. Elevated SUA levels have been associated with diseases of the heart, vascular system, metabolism, kidney and joints.

Conference Call Reminder
The company will host a conference call via live webcast today at 8:00am ET. The live webcast of the presentation can be accessed 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 1-844-845-4170 (domestic) or 1-412-717-9621 (international) and may access a teleconference replay for one week by dialing 1-877-344-7529 (domestic) or 1-412-317-0088 (international) and using confirmation code 10124095.

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 mitigating unwanted immune responses. Selecta plans to combine its tolerogenic Synthetic Vaccine Particles (SVP™) to a range of biologics for rare and serious diseases that require new treatment options. The company’s current proprietary pipeline includes SVP-enabled enzyme, oncology and gene therapeutic candidates. 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. A Phase 1 trial was initiated for a combination therapeutic candidate consisting of SVP-Rapamycin and LMB-100 (Selecta’s SEL-403 product candidate) for the treatment of patients with malignant pleural or peritoneal mesothelioma. Selecta’s proprietary gene therapy product candidates are bei

ng developed for rare inborn errors of metabolism and have the potential to enable repeat administration. We believe the use of SVP also holds potential 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 2 clinical trial of SEL-212, whether SEL-212 mitigates immunogenicity and enables sustained control of serum uric acid levels, low rate of gout flares and monthly dosing, the anticipated timing for advancing into Phase 3 (if at all), whether current evaluable SEL-212 patients will be predictive of future evaluable SEL-212 patients, whether projections regarding serum uric acid control for patients who have yet to complete the 20-week study period will be consistent with actual data, whether 5-monthly combination doses of SEL-212 have the potential to extend serum uric acid control and maintain safety over the entire treatment period, whether monthly dosing of SEL-212 leads to significant reduction in uric acid deposits, projections based on the rate of SUA control for patients who have completed the treatment period, the potential of SEL-212 to significantly reduce tophi/heavy urate burden and/or rapidly eliminate tissue urate burden, whether patients receiving SEL-212 will be able to complete full therapy cycles over 6 months, whether SEL-212 has the ability to reduce gout flares frequency initially and over time during SEL-212 therapy, the severity of gout flares experienced by patients receiving SEL-212, whether SEL-212 will continue to be generally well-tolerated, the company's commercial plans, the ability of the company's SVP platform, including SVP-Rapamycin, to mitigate unwanted immunogenicity, unlock the full potential of biologic therapies, enable new therapies and improve the efficacy and safety of existing biologics, the potential of SEL-212 to treat severe gout patients and resolve their debilitating symptoms, the potential of SEL-403 to treat mesothelioma, 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 company's plan to apply its SVP platform to a range of biologics for rare and serious diseases, the potential of the company's two gene therapy product candidates to enable repeat administration, the potential of the SVP-Rapamycin platform generally, 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, 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, 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 8, 2018, 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.

Contact Information:

John Leaman, MD
Selecta Biosciences, Inc.
617-231-8081
jleaman@selectabio.com

Sarah McCabe
Stern Investor Relations, Inc.
+1-212-362-1200
sarah@sternir.com

Update of SEL-212 Phase 2 Clinical Data in Symptomatic Gout Patients: SVP-Rapamycin Combined with Pegadricase Mitigates Immunogenicity and Enables Sustained Reduction of Serum Uric Acid Levels, Low Rate of Gout Flares and Monthly Dosing

Earl Sands[1], Alan J. Kivitz[2], Wesley DeHaan[1], Lloyd Johnston[1] and Takashi Kei Kishimoto[1]
[1]Selecta Biosciences, Watertown, Massachusetts; [2]Altoona Center for Clinical Research, Altoona, Pennsylvania

Abstract

Background/Purpose: Pegylated uricases are promising therapies for the treatment of severe chronic gout, but are limited by their immunogenicity. We have previously shown that synthetic vaccine particles encapsulating rapamycin (SVP-Rapamycin) co-administered with pegadricase (formerly known as pegsiticase) prevented the formation of anti-drug antibodies (ADAs) in a dose-dependent manner. A Phase 1b study of SEL-212, a novel combination product candidate consisting of pegadricase and SVP-Rapamycin, demonstrated sustained control of serum uric acid (SUA) for at least 30 days after a single dose. Here we report data on the safety, tolerability, and effects on SUA, ADAs, and gout flares of five monthly doses of SEL-212 in symptomatic gout patients treated with 0.1 or 0.15 mg/kg SVP-Rapamycin in combination with 0.2 mg/kg pegadricase.

Methods: Patients with symptomatic gout (≥1 tophus, gout flare within 6 months, and/or gouty arthropathy) and elevated SUA (≥6 mg/dL) were enrolled in SEL-212 treatment cohorts. Patients reported here received up to five monthly doses of SEL-212 (0.2 mg/kg pegadricase combined with 0.1 or 0.15 mg/kg SVP-Rapamycin). Safety, tolerability, SUA, and ADAs were monitored, and clinical data were collected.

Results: As of 09 Oct 2018, 152 patients had been dosed in the Phase 2 study. All evaluable patients receiving 0.1 or 0.15 mg/kg SVP-Rapamycin administered with 0.2 mg/kg pegadricase who achieved three months of SUA control maintained SUA control in months four and five of combination treatment. Projection for remaining patients in 5 dose cohorts suggest approximately 66% of patients will maintain SUA levels below 6 mg/dL at week 20 after five monthly doses of SEL-212. The sustained reduction of SUA correlated with low or no ADAs. SEL-212 was generally well tolerated and associated with a low rate of gout flare rates. Thirty-five percent of patients treated with five doses of 0.1-0.15 mg/kg SVP-Rapamycin, and only 29% of all current patients in the SEL-212 Phase 2 trial, experienced gout flares after initiation during the first month of treatment with continued reduction of gout flare rates over months two through five. This low rate of gout flares appears to be in contrast with higher incidence of gout flares reported in clinical trials involving other urate lowering therapies.

Conclusion: SEL-212 has been well-tolerated, showing substantially reduced immunogenicity, sustained control of SUA, and low rate of gout flares with repeated monthly dosing.

Disclosures

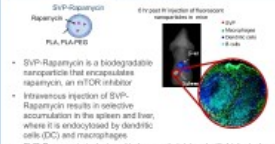
ES, WD, LJ, and TKK are employees and shareholders of Selecta Biosciences

Background

Pegadricase

- Uricases have been shown to be very effective in significantly reducing serum uric acid levels in patients with chronic severe gout
- Uricases are highly immunogenic, compromising their safety and efficacy
- Pegadricase is a pegylated uricase enzyme that is being developed in combination with SVP-Rapamycin to mitigate its immunogenicity

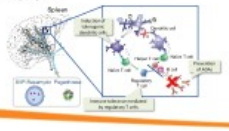
SVP-Rapamycin



- SVP-Rapamycin is a biodegradable nanoparticle that encapsulates rapamycin, an mTOR inhibitor
- Intravenous injection of SVP-Rapamycin results in selective accumulation in the spleen and liver, where it is endocytosed by dendritic cells (DC) and macrophages
- SVP-Rapamycin is designed to be co-administered with biologic drugs to mitigate the formation of ADAs through the induction of immune tolerance and thus enable sustained therapeutic activity of the biologic (Kishimoto et al., 2016, Nature Nanotech)

SEL-212

- SEL-212 is a combination drug comprised of pegadricase and SVP-Rapamycin
- The co-administration of SVP-Rapamycin and pegadricase is designed to induce the formation of regulatory T cells that mitigate the formation of ADAs against pegadricase and enable sustained reduction of serum uric acid (sUA) levels



Results

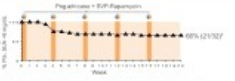
SEL-212/201: Ongoing Phase 2 Clinical Trial

Study description

- Evaluate the safety, pharmacokinetics, pharmacodynamics and immunogenicity of repeated monthly IV infusions of SEL-212 in patients with symptomatic gout and elevated SUA levels (>6 mg/dL)
- Cohorts of patients administered five q28 day IV infusions of 0.2 mg/kg pegadricase in combination with 0.1 - 0.15 mg/kg doses of SVP-Rapamycin
- Monitored for safety, uric acid levels, uricase pharmacodynamic activity, and anti-uricase antibodies (ADAs)
- Male or female subjects ages 21 to 75 inclusive

ClinicalTrials.gov NCT02959619

Patients (%) With Sustained SUA Control



Full 20 week data are **pending for 5 patients in the 5 dose cohorts**

- **16/16 patients (100%) who completed 20 weeks of combination treatment had SUA <6 mg/dL** at 12 weeks and maintained **control through 20 weeks**
- **The 5 patients who are pending had SUA <6 mg/dL at 12 weeks**

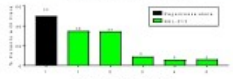
***We project 66% of patients (21/32) will complete the 20 week period with SUA< 6 mg/dL based on rate of SUA control for patients who have completed the treatment period**

SEL-212 Five monthly dose cohorts

COHORT	Treatment Week 0		Treatment Weeks 4, 8, 12, 16		
	Pegadricase	SVP-Rapamycin	Pegadricase	SVP-Rapamycin	Status
1	0.2 mg/kg	0.1 mg/kg	0.2 mg/kg	0.1 mg/kg	Ongoing
2	0.2 mg/kg	0.15 mg/kg	0.2 mg/kg	0.1 mg/kg	Ongoing
3	0.2 mg/kg	0.1 mg/kg	0.2 mg/kg	0.1 mg/kg	Ongoing

- Five monthly dose cohorts demographics:
  - 46 patients with established or symptomatic gout (≥1 tophus, ≥ 1 gout flare in last 6 months, or chronic gouty arthropathy) with hyperuricemia (> 6mg/dL SUA)
  - Average SUA at enrollment/screening: 8.3 mg/dl
  - Average age: 53.6 (range 23-70)
  - Male, 45 (97.8%); Female, 1 (2.2%)
  - Caucasian, 34 (73.9%); African American, 10 (21.7%); Asian 1 (2.2%) and Other 1 (2.2%)
  - Mean BMI at baseline: 34.5 kg/m² (71.7% of patients moderately obese)
  - Mean duration of established or symptomatic gout: 12.5 years.

Incidence of Gout Flares by Month



- Data indicate SEL-212 lowers flares initially and over time during treatment
- Majority of flares occur in months 1 & 2
- There are no new patients who flare after second month

Safety

- SEL-212 has been generally well tolerated at clinically active doses for 5-combination dose cohorts following >130 administrations
- 46 patients in 5-combination dose cohorts have been dosed in the Phase 2 study as of October 9, 2018
- 5 months of combination treatment has not shown any emerging safety signals
- 7 SAEs (5 individual patients) reported in the 5-combination dose cohorts:
  - 4 SAEs were reported not to be or unlikely to be related to study drug
  - 1 SAE was reported to be possibly related to study drug
  - 2 SAEs (infusion reactions) were reported as related or possibly related to study drug, both of which occurred during the infusion of SEL-212 in Treatment Period 2
  - No SAEs occurred in Treatment Periods 4 or 5

Summary

- Projections suggest 66% of patients with SUA control during 5 months of treatment
- Monthly dosing
- Low flare rates
- DECT imaging shows potential to rapidly eliminate tissue urate burden (see poster 2205)
- 5 months combination treatment has not shown any emerging safety signals
- Proposed dose regimens identified for Phase 3 trials

SEL-212 Clinical Development Plan

Acknowledgements

We thank all of the patients that participated in the clinical trial. We are very grateful to the clinical trial site investigators, their staff and the entire Selecta SEL-212 project team

Initial Phase 2 Clinical Data of SEL-212 in Symptomatic Gout Patients: Measurement of Dissolution of Urate Deposits Associated with Monthly Dosing of a Pegylated Uricase (Pegadricase) with SVP-Rapamycin By Dual Energy Computed Tomography

Rehan Azeem[1], Earl Sands[1], Lloyd Johnston[1], Wesley DeHaan[1], Alan J. Kivitz[2], Takashi Kei Kishimoto[1], Justin Park[1] and Savvas Nicolaou[3],
[1]Selecta Biosciences, Watertown, Massachusetts; [2]Altoona Center for Clinical Research, Altoona, Pennsylvania; [3]University of British Columbia, Vancouver, BC, Canada

Abstract

Background: Pegylated uricases are therapies for treatment of severe chronic gout, particularly for rapid resolution of tophi. However, uricases are limited by induction of anti-drug antibodies (ADAs) that can compromise efficacy and safety. SEL-212 is a novel combination product candidate consisting of pegadricase (formerly known as peguricase) co-administered with synthetic vaccine particles encapsulating rapamycin (SVP-Rapamycin). We report initial Phase 2 data on the effect of the intensive lowering of serum uric acid (SUA) levels by SEL-212 on the dissolution of monosodium urate (MSU) crystals in symptomatic gout patients.

Dual-energy computed tomography (DECT) may be used to differentiate urate crystals from calcium by using specific attenuation characteristics, to diagnose gout. DECT uses a computer algorithm to produce color-coded images that render uric acid green, cortical bone blue, and trabecular bone purple. In tophaceous gout patients, DECT may be used for serial volumetric quantification of subclinical tophi to evaluate response to treatment.

Methods: Patients with symptomatic gout (≥1 tophus, gout flare within 6 months or gouty arthropathy) and elevated SUA (≥6 mg/dL were treated with monthly doses of pegadricase (0.2 mg/kg or 0.4 mg/kg) alone or in combination with SVP-Rapamycin (0.05 to 0.15 mg/kg). SEL-212 was infused in 28-day cycles x3 doses followed by challenge with pegadricase alone on 28-day cycles x2 doses, or in 28-day cycles x5 combination doses of SVP-Rapamycin and pegadricase.

To investigate changes in uric acid deposits, DECT scans of hand/wrist, feet/ankles, and knees were performed as an exploratory measure in a subset of patients, during the screening visit, treatment period 3, treatment period 5 or at early termination visit.

DECT images were analyzed by Arthritis Research Canada (ARC) by two DECT Radiologists utilizing a Syngo Via DECT software package.

Results: As of 09 Oct 2018, an initial DECT scan was performed in a subset of 31 of 152 dosed patients, with 19 patients with an available follow-up DECT scan.

The demographics for patients (N=19) who received a follow-up DECT scan were 43 - 71 years old (mean 55.4 years), male 68.5%, African American 47.4%, and Caucasian 52.6%. Mean BMI at baseline was 33.1 kg/m^2, with 63% of patients being obese. Mean duration of gout was 8.0 years.

The mean SUA at the screening visit was 7.9 mg/dl. Time between the initial and most recent/follow-up DECT scan ranged from 77 - 163 days (mean 121 days), with a mean change in total urate volume of -1.18 cm^3 (range: 0.11 to -13.03 cm^3).

Conclusion: SEL-212 has a significant impact on the reduction of urate deposits in symptomatic gout patients with hyperuricemia as confirmed by DECT.

DECT Imaging

- DECT(Dual Energy Computed Tomography) is a sensitive and non-invasive diagnostic tool to quantify tissue urate burden[1,2]

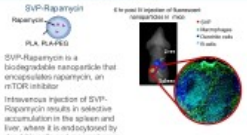
[1]Choi HK et al., Ann Rheum Dis. 2005; 64:1430-12.
[2]Araya EG et al. PMID Open. 2015; 1:e000073.

Background

Pegadricase

- Uricases have been shown to be very effective in significantly reducing serum uric acid levels in patients with chronic severe gout
- Uricases are highly immunogenic, compromising their safety and efficacy
- Pegadricase is a pegylated uricase enzyme that is being developed in combination with SVP-Rapamycin to mitigate its immunogenicity

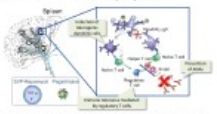
SVP-Rapamycin



- SVP-Rapamycin is a biodegradable nanoparticle that encapsulates rapamycin, an mTOR inhibitor
- Intravenous injection of SVP-Rapamycin results in selective accumulation in the spleen and liver, where it is endocytosed by dendritic cells and macrophages
- SVP-Rapamycin is designed to be co-administered with biologic drugs to mitigate the formation of ADAs through the induction of immune tolerance and thus enable sustained therapeutic activity of the biologic (Kishimoto et al., 2016, Nature Nanotech)

SEL-212

- SEL-212 is a combination drug candidate comprised of pegadricase and SVP-Rapamycin
- The co-administration of SVP-Rapamycin and pegadricase is designed to induce the formation of regulatory T cells that mitigate the formation of ADAs against pegadricase and enable sustained reduction of serum uric acid (SUA) levels



- Ongoing Phase 2 clinical trial of SEL-212 has demonstrated low incidence of ADAs resulting in sustained reduction of serum uric acid (SUA) with monthly dosing (see Abstract 2254)

Results

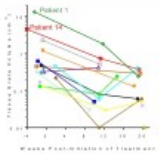
Overview of DECT Scans Performed in SEL-212/201 Study

To investigate changes to uric acid deposits, DECT scans were performed at the following timepoints as an exploratory measure
- Baseline
- After Treatment Period 3
- After Treatment Period 5 or at Early Termination Visit

Baseline DECT scan was performed in 31 dosed patients, with 19 patients undergoing a follow-up DECT scan as of 09 Oct 2018

- Demographics for Patients with Follow-Up DECT Scans
  - Average SUA at enrollment/screening: 7.9 mg/dL
  - Average age: 55.4 (range 43-71)
  - Male, 17 (89.5%)
  - Caucasian: 52.6%; African American: 47.4%
  - Mean BMI at baseline: 33.1 kg/m^2 (63.2% of patients were moderately obese)
  - Mean duration of established or symptomatic gout: 8 years

Change in Tissue Urate Volume with SEL-212 Treatment



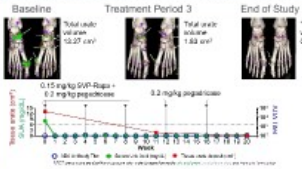
Total Urate Change in Patients with at Least One Follow Up Scan

Patient #	Baseline SUA (mg/dL)	Number of Study Drug Infusions	Initial Urate Volume (cm3)	Final Urate Volume (cm3)	Change in urate volume (%)
1	8.2	5	13.27	0.24	-98.19
2	6.3	2	0.13	0.24	84.62
3	8.5	2	0.62	0.05	-91.94
4	7.8	5	0.00	0.01	NA*
5	7.4	5	1.26	0.13	-89.17
6	9	5	0.09	0.00	-100.00
7	8.7	5	0.06	0.04	NA*
8	8.9	5	0.22	0.06	-72.73
9	7.7	5	0.46	0.40	-13.04
10	8.9	3	2.27	0.51	-77.53
11	8.8	5	0.32	0.42	31.25
12	11.1	2	0.32	0.03	-90.63
13	8.2	5	0.45	0.20	-55.56
14	8	5	4.03	0.37	-91.03
15	8.4	5	0.48	0.06	-87.50
16*	6.5	5	0.13	0.05	-62.54
17*	9.6	5	0.31	0.00	-100.00
18*	8.6	5	0.12	0.00	-100.00
19*	7.5	1	0.09	0.00	NA*

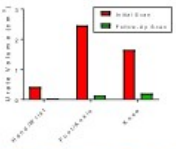
- Patients with available repeat scans are included in this summary
  - For the 31 patients with baseline scans, the range of urate volume at baseline was 0.00 to 61.05 cm^3
  - For the 19 patients with repeat scans as of Oct 9 2018, the range of urate volume at baseline was 0.00 to 13.27 cm^3
- Mean time between the initial and most recent/follow-up DECT scan: 121.2 days (ranged from 77 to 163 days)

*NA = Not Applicable, *Patients in 5 combination dose cohorts

Patient 1 DECT Scan Images Show Significant Reduction of Tissue Urate Burden



Patient 14: Before and After Treatment



Summary

- SEL-212 is a monthly combination product candidate being developed as a therapy for the sustained control of SUA leading to the removal of urate crystal deposits in patients with chronic severe gout
- SEL-212 has been well-tolerated, and, compared to pegylated uricase alone, has mitigated immunogenicity, reduced flare rates, and enabled repeated monthly dosing with sustained control of SUA levels
- SEL-212 has a significant impact on the reduction of urate deposits in symptomatic gout patients with hyperuricemia as confirmed by DECT
- Significant decrease in total urate deposits occurs progressively over the entire treatment period as observed by DECT

Acknowledgements

We thank all of the patients that participated in the clinical trial. We are very grateful to the clinical trial site investigators, their staff and the entire Selecta SEL-212 project team

Disclosures

RA, WD, LJ, TKK, JP, and ES are employees and shareholders of Selecta Biosciences

Mitigation of Inflammation Induced By Monosodium Urate Crystals in Mice By Treatment with SVP-Rapamycin

Pallavi Kolte, Robert LaMothe, Joseph Ferrari, Sheldon Leung, Wesley DeHaan, Earl Sands and Takashi Kei Kishimoto
Selecta Biosciences, Watertown, Massachusetts

Abstract

Background/Purpose: Initiation of urate-lowering therapies is typically associated with an increase in gout flares due to mobilization of pro-inflammatory urate crystals. SEL-212 is a novel combination product candidate consisting of pegadricase (formerly known as pegsticase), a pegylated uricase, co-administered with synthetic vaccine particles encapsulating rapamycin (SVP-Rapamycin) being developed for the treatment of chronic severe gout. Data from the ongoing open-label Phase 2 multidose study of SEL-212 indicate that SVP-Rapamycin mitigates the formation of anti-drug antibodies (ADAs) against pegadricase, enabling monthly dosing and sustained control of serum uric acid (SUA) levels in most patients. Despite rapid and sustained reduction of SUA, patients treated with SEL-212 experienced a low rate of flares. Here we evaluated in animal studies whether SVP-Rapamycin might have a beneficial effect on reducing inflammation induced by monosodium urate crystals (MSU) in addition to its effects on mitigating the formation of ADAs.

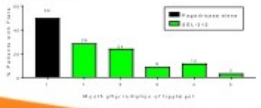
Methods: MSU-induced inflammation was investigated in an air pouch model in C57BL/6 mice. An air pouch was generated on the dorsal aspect of a mouse by injecting sterile air on d0 and d3. Mice were treated intravenously with placebo or SVP-Rapamycin on d7. MSU crystals were injected in the air pouch on d8 and mice were sacrificed 5 hours after MSU injection. Air pouch exudate was analyzed for cellularity and interleukin-1β (IL-1β) levels as markers of inflammation.

Results: Injection of MSU crystals into the air pouch of a mouse has been previously shown to induce an acute inflammatory response characterized by expression of IL-1β and an influx of neutrophils. Intravenous administration of SVP-Rapamycin reduced the generation of IL-1β in the air pouch exudate and the number of Ly6G+CD11b+ neutrophils.

Conclusion: SVP-Rapamycin has been shown to mitigate the formation of ADAs to biologic therapies by inducing tolerogenic dendritic cells and antigen-specific regulatory T cells. Here we demonstrate that SVP-Rapamycin also attenuates inflammatory responses induced by MSU crystals and mediated by innate immune cells. These results may explain why gout patients treated with pegadricase in combination with SVP-Rapamycin experience a low rate of gout flares.

SEL-212

- SEL-212 is a combination drug candidate comprised of pegadricase (formerly known as pegsticase) and SVP-Rapamycin
- SVP-Rapamycin is designed to induce the formation of regulatory T cells that mitigate the formation of anti-drug antibodies (ADA) (Kishimoto et al, 2016, Nature Nanotech)
- Ongoing Phase 2 clinical trial of SEL-212 has demonstrated low incidence of ADAs resulting in sustained reduction of serum uric acid (SUA) with monthly dosing (see Abstract 2254)
- Patients on SEL-212 therapy experienced a low level of gout flares (see Abstract 1294)



Background

Gout Flares

- Acute gout attacks are characterized by a rapid onset of pain in the affected joint followed by warmth, swelling and pain[1]
- 69% of gout patients describe the pain of an attack as "miserable", 23% of patients compare the pain of a gout attack to shattered glass piercing their skin, 28% to breaking a bone, 34% to a severe burn[2]
- Most people with gout will experience repeated bouts over the years

[1]www.uptodate.com/contents/treatment-of-gout-flares
[2]www.webmd.com/arthritis/news/20100611/gout-survey-offers-peek-at-the-pain

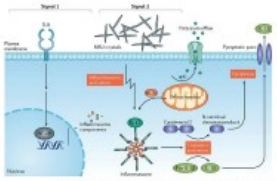
Effect of Urate Lowering Therapies on Gout Flares

- Dispersion of MSU crystals during the initial phase of deposit dissolution exposes the patient to an increased rate of acute flares
- Increased gout flare can adversely affect patient compliance[3]
- Pegylated uricase therapy, which rapidly debulks tissue uric acid, has been reported to induce gout flares in 75% of patients in the first months after initiation of therapy[4]

[3]Becker MA et al., Nucleic Acids 2008 27:585-91
[4]Sundy et al, JAMA, 306 7:711-720

MSU crystals induce activation of the inflammasome

- Monosodium urate (MSU) crystals induce inflammation through activation of NLRP inflammasomes resulting in production of the pro-inflammatory cytokine IL-1β



Ko and Mellinon, Nature Rev Rheumatol, 2017, 13:639-647

Potential effect of SVP-Rapamycin on inflammation

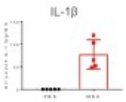
- Rapamycin has been reported to inhibit inflammasome activation[5]
- Here we evaluated the effect of SVP-Rapamycin on inflammation induced by MSU crystals in mice

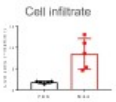
[5]Ko et al., 2017, Oncotarget 8:40817-40831

Results

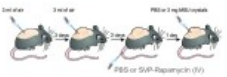
Air pouch model of MSU-induced inflammation

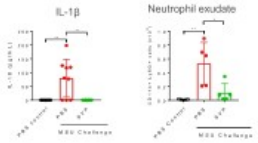
- C57BL/6 mice injected with sterile air subcutaneously on d0 and d3.
- MSU crystals injected into air pouch on d6
- Sacrifice mice after 6 hours to collect exudate





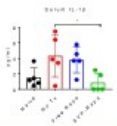
SVP-Rapamycin inhibits MSU-induced inflammation in air pouch





SVP-Rapamycin but not free rapamycin inhibits MSU-induced IL-1β

- C57BL/6 mice I.V. treated with SVP-Rapamycin or free rapamycin
- Injected I.P. with MSU crystals 16 hours after treatment
- Serum IL-1β assessed 6 hours after MSU challenge



Summary

- Initiation of urate lowering therapy can increase the incidence of gout flares which can adversely affect patient experience and compliance
- Here we show that SVP-Rapamycin treatment can mitigate IL-1β production and neutrophil infiltrates in a monosodium urate-induced model of inflammation in mice
- An ongoing Phase 2 clinical trial of SEL-212 has demonstrated low incidence of anti-drug antibodies resulting in sustained reduction of serum uric acid (SUA) with monthly dosing (see Abstract 2254)
- The incidence of gout flares after the initiation of SEL-212 therapy was lower than anticipated (See Abstract 1294)
- SEL-212 may have the additional benefit of reducing gout flares by inhibiting inflammation despite rapid and sustained lowering of SUA

Acknowledgements

We thank Dr. Robert Terkeltaub and Dr. Ru Bryan for helpful discussions

Disclosures

The authors are employees and shareholders of Selecta Biosciences

SELECTA Biosciences

SEL-212 Phase 2 Data Presented at ACR

October 23, 2018

Safe Harbor / Disclaimer

Any statements in this presentation about the future expectations, plans and prospects of Selecta Biosciences, Inc. ("the company"), including without limitation, statements regarding the progress of the Phase 2 clinical trial of SEL-212 and expectations surrounding End-of-Phase 2 meeting with the FDA, whether SEL-212 mitigates immunogenicity and enables sustained control of serum uric acid levels, low rate of gout flares and monthly dosing, the ability of SVP-Rapamycin to mitigate inflammation induced by monosodium urate crystals, the anticipated timing for advancing into Phase 3 (if at all) and expectations surrounding proposed dose regimens, whether current evaluable SEL-212 patients will be predictive of future evaluable SEL-212 patients, whether projections regarding serum uric acid control for patients who have yet to complete the 20-week study period will be consistent with actual data, whether 5-monthly combination doses of SEL-212 have the potential to extend serum uric acid control and maintain safety over the entire treatment period, whether monthly dosing of SEL-212 leads to significant reduction in uric acid deposits, the potential of SEL-212 to significantly reduce tophi/heavy urate burden and/or rapidly eliminate tissue urate burden, whether patients receiving SEL-212 will be able to complete full therapy cycles over 6 months, whether SEL-212 has the ability to reduce gout flares frequency initially and over time during SEL-212 therapy, the severity of gout flares experienced by patients receiving SEL-212, whether SEL-212 will continue to be generally well-tolerated, the design and timing of a head-to-head trial of SEL-*212 and Krystexxa, the company's commercial plans, the ability of the company's SVP platform, including SVP*-Rapamycin, to mitigate unwanted immunogenicity, unlock the full potential of biologic therapies, enable new therapies and improve the efficacy and safety of existing biologics, the potential of SEL-212 to treat severe gout patients, resolve their debilitating symptoms, and to change the chronic severe gout treatment paradigm, the *company's plan to apply its SVP platform to a range of biologics for rare and serious diseases, 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, 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 8, 2018, 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 subs*equent date. The company specifically disclaims any obligation to update any forward-looking statements included in this presentation.

SEL-212 Executive Summary of Available Phase 2 Data

- Evaluable patients who achieved 3-month of SUA control have maintained SUA control in months 4 and 5 of combination treatment
  - Projection for remaining patients in 5 dose cohorts suggest approximately 66% of evaluable patients could have SUA controlled at week 20 after 5 monthly doses

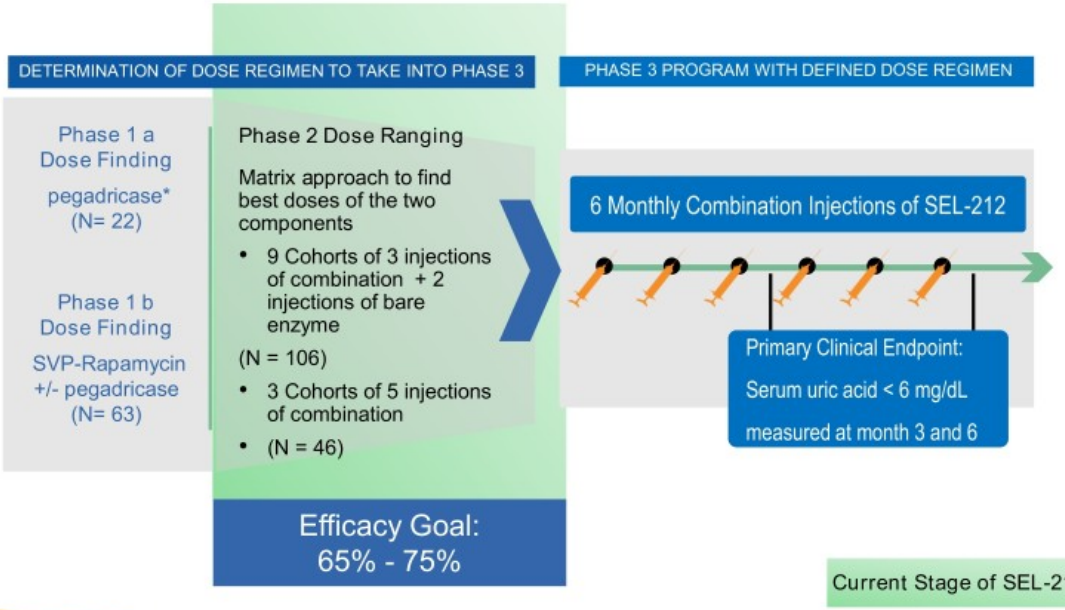
- Based on interim data, 5-monthly SEL-212 combination dose data has resulted in sustained SUA control & favorable tolerability over entire treatment period
  - SUA Control Observed
  - Once monthly dosing
  - Low flare rates
  - No emerging safety signals

- Sustained control of SUA near 0 mg/dL may lead to reduction in uric acid deposits as measured by DECT (Dual Energy Computed Tomography) imaging

- Proposed dose regimens for Phase 3 trials
  - 6 monthly doses of SEL-212 v. Placebo
    - 0.1 mg/kg of SVP-Rapamycin with 0.2 mg/kg of pegadricase*
    - 0.15 mg/kg of SVP-Rapamycin with 0.2 mg/kg of pegadricase

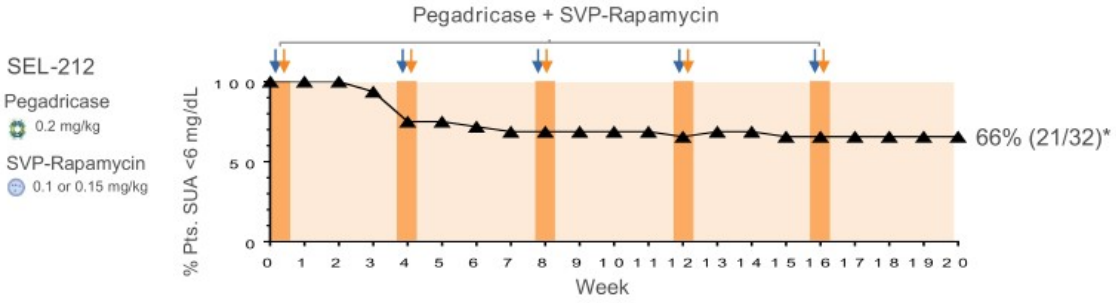
*Previously called pegsiticase; pegadricase is the new United States Adopted Name (USAN)

SEL-212 Clinical Development Plan



Current Stage of SEL-212 Development

Phase 2, 5 Combination Doses Data Projections Suggest 66% of Patients With Control of SUA <6 mg/dL at 5 Months



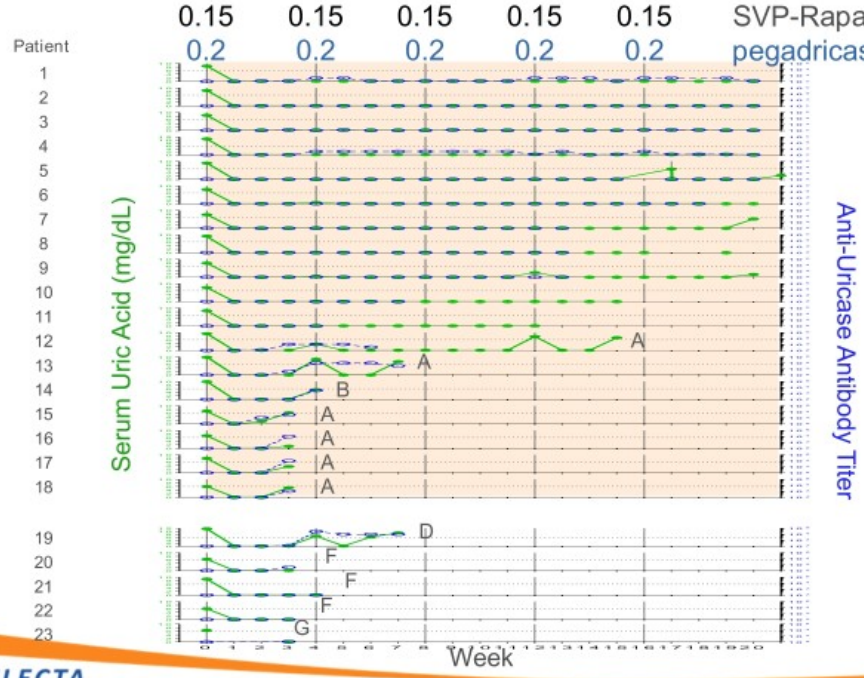
Full 20 week data are pending for 5 patients in the 5 dose cohorts

- 16/16 patients (100%) who completed 20 weeks of combination treatment had SUA <6 mg/dL at 12 weeks and maintained control through 20 weeks
- The 5 patients who are pending had SUA <6 mg/dL at 12 weeks

* We project 66% of patients (21/32) will complete the 20 week period with SUA< 6 mg/dL. Final data are still pending for five of these patients. Our projection for these five patients is based on the observation that all other patients in these cohorts that had serum uric acid levels <6 mg/dL at week 12 successfully maintained control of SUA through the entire five month period. However, caution should be exercised in drawing any conclusions from projections of clinical data.

Week 20 Evaluable patients = patients who received a full first dose and did not discontinue due to any measure other than drug effectiveness or drug related safety

Cohort 13:
0.15 mg/kg of SVP-Rapamycin + 0.2 mg/kg of pegadricase



Week 20 Evaluable patients = patients who received a full first dose and did not discontinue due to any measure other than drug effectiveness or drug related safety

A Stopping rules met

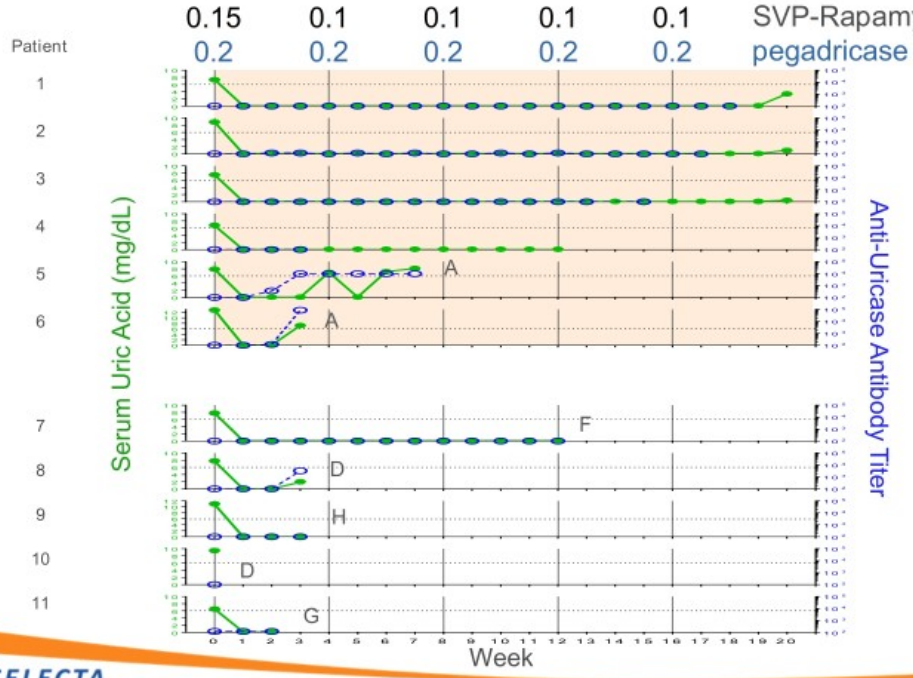
B SAE; infusion reaction

D Withdrawn due to protocol deviation

F Withdrawal of consent

G SAE; non-study drug related

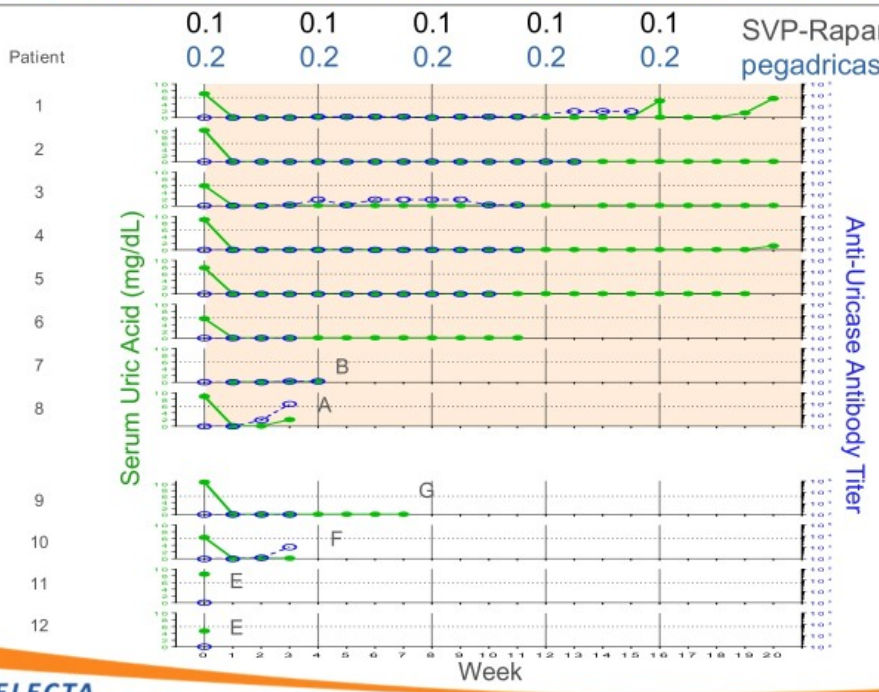
Cohort 15:
0.15 (1st)/0.1 (2nd-5th) mg/kg of SVP-Rapamycin + 0.2 mg/kg of pegadricase



Week 20 Evaluable patients = patients who received a full first dose and did not discontinue due to any measure other than drug effectiveness or drug related safety

- A Stopping rules met
- D Withdrawn due to protocol deviation
- F Withdrawal of Consent
- G SAE; non-study drug related
- H Discontinuation due to TEAE

Cohort 17:
0.1 mg/kg of SVP-Rapamycin + 0.2 mg/kg of pegadricase



Week 20 Evaluable patients = patients who received a full first dose and did not discontinue due to any measure other than drug effectiveness or drug related safety

A	Stopping rules met
B	SAE; infusion reaction
E	Discontinuation due to infusion reaction
F	Withdrawal of consent
G	SAE; non-study drug related

DECT Scans Suggest Potential Reduction of Urate Burden in Phase 2 Study

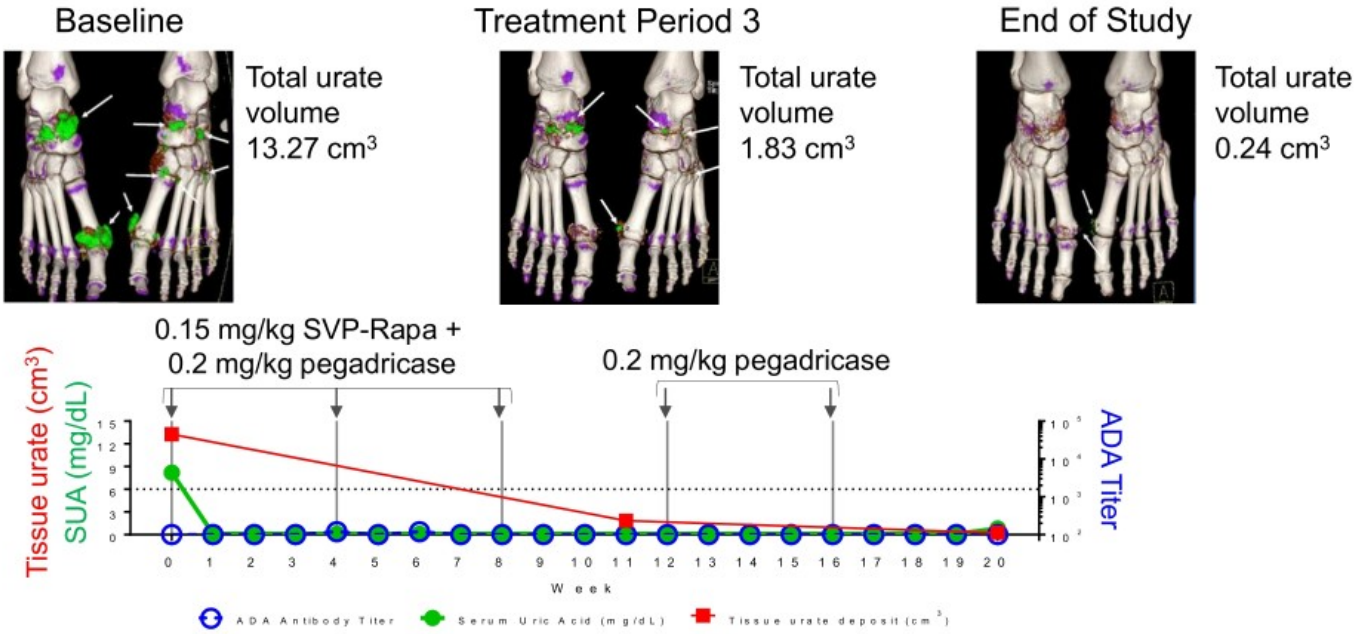
- DECT(Dual Energy Computed Tomography) has been shown to be quantitative measure of tissue urate burden[1,2]
- DECT scans were performed as an exploratory measure to evaluate reduction of tissue urate burden in a subset of patients:
  - at screen
  - at the end of treatment cycle 3
  - at the end of final treatment cycle

Patient #	Baseline SUA (mg/dL)	Number of Study Drug Infusions	Initial Urate Volume (cm3)	Final Urate Volume (cm3)	Change in urate volume (%)
1	8.2	5	13.27	0.24	-98.19
2	6.3	3	0.13	0.24	84.62
3	8.5	2	0.62	0.05	-91.94
4	7.6	5	0.00	0.01	NA*
5	7.4	5	1.20	0.13	-89.17
6	8	5	0.39	0.00	-100.00
7	6.7	5	0.00	0.04	NA*
8	8.9	5	0.22	0.06	-72.73
9	7.7	5	0.46	0.40	-13.04
10	8.9	3	2.27	0.51	-77.53
11	8.8	5	0.32	0.42	31.25
12	11.1	2	0.32	0.03	-90.63
13	8.2	5	0.45	0.29	-35.56
14	6	5	4.53	0.37	-91.83
15	6.4	5	0.48	0.06	-87.50
16^	6.5	5	0.13	0.05	-61.54
17^	9.6	5	0.31	0.00	-100.00
18^	8.6	5	0.17	0.00	-100.00
19^	7.5	1	0.00	0.00	NA*

*NA = Not Applicable, ^Patients in 5 combination dose cohorts

[1]Choi HK et al., Ann Rheum Dis. 2009, 68:1609-12.
[2]Araujo EG et al, RMD Open. 2015, 1:e000075.

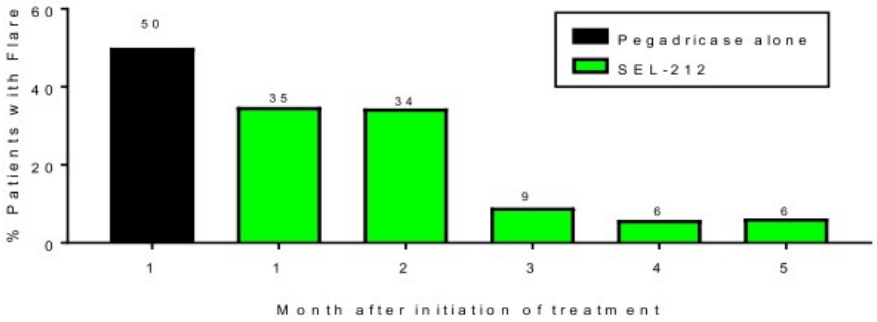
Patient 1 DECT Scan Images Show Reduction of Tissue Urate Burden



DECT uses a computer algorithm to produce color-coded images that render uric acid green, cortical bone blue, and trabecular bone purple

Observed Reduction in Flare Frequency in 5 Combination Cohorts Has Been Consistent With Total Cohort Flare Data

% of Patients in 5 Combination Dose Cohorts by Month

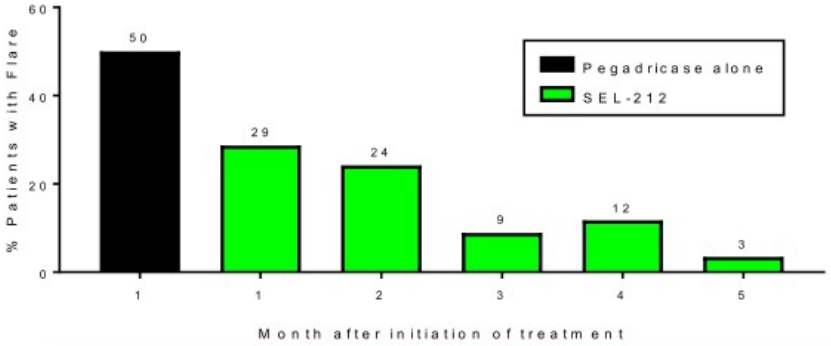


- SEL-212 has lowered flares initially and over time during treatment
- Majority of flares have occurred in months 1 & 2
- There have been no new patients who flare after second month

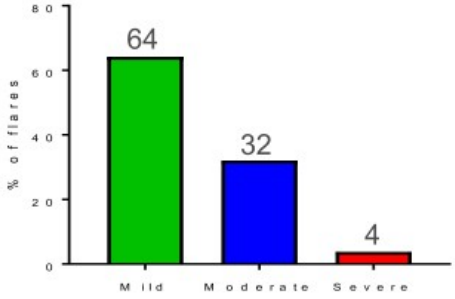
Patients who received a full first dose and completed respective treatment cycle

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

% of Patients from All Cohorts Experiencing Flares by Month



Severity of Flares



- Data indicate SEL-212 has lowered flares initially and over time during treatment
- Majority of flares have occurred in months 1 & 2, and there have been no new patients who flare after second month
- 96% of flares have been mild or moderate in severity
- No gout flares have been classified as SAEs nor resulted in study drug discontinuations

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

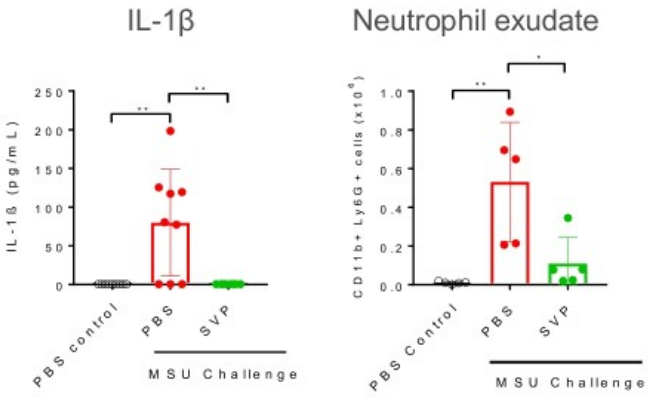
5 Months Combination Treatment Has Not Shown Any Emerging Safety Signals

- SEL-212 has been generally well tolerated at clinically active doses for 5-combination dose cohorts following >130 administrations
- 46 patients in 5-combination dose cohorts have been dosed in the Phase 2 study as of October 9, 2018
- 5 months of combination treatment has not shown any emerging safety signals
- 7 SAEs (5 individual patients) have been reported in the 5-combination dose cohorts:
  - 4 SAEs were reported not to be or unlikely to be related to study drug
  - 1 SAE was reported to be possibly related to study drug
  - 2 SAEs (infusion reactions) were reported as related or possibly related to study drug, both of which occurred during the infusion of SEL-212 in Treatment Period 2
  - No SAEs have occurred in Treatment Periods 4 or 5

Mitigation of IL-1β Production by SVP-Rapamycin in a Preclinical Model of MSU-Induced Inflammation

- Monosodium urate crystals (MSU) are known to cause inflammation by activating the NLRP3-inflammasome pathway resulting in IL-1β production[1]
- Rapamycin has been shown to inhibit activation of NLRP3-inflammasome[2]
- In preclinical study SVP-Rapamycin inhibited IL-1 β production and neutrophil infiltrates in a mouse model of MSU-induced inflammation[3]

Mitigation of MSU-induced inflammation in mice



[1]Liu-Bryan R. et al., Immunol Cell Biol. 2010, 88:20-23
[2]Ko JH, et al., Oncotarget. 2017, 8:40817-40831
[3]Kolte P. et al, Abstract 2250, ACR 2018

Summary and Next Steps

- Projections suggest approximately 66% of patients could have SUA control during 5 months of treatment with monthly dosing of SEL-212
- Low flare rates observed to date
- Potential to rapidly eliminate tissue urate burden based on DECT imaging findings
- 5 month combination treatment has not shown any emerging safety signals
- Proposed dose regimens for Phase 3 trials identified
- End of Phase 2 meeting scheduled, and start of Phase 3 planned in 2018
- Head-to-Head trial designed and expected to be conducted in parallel with Phase 3 pivotal trials
- Commercial plans accelerated

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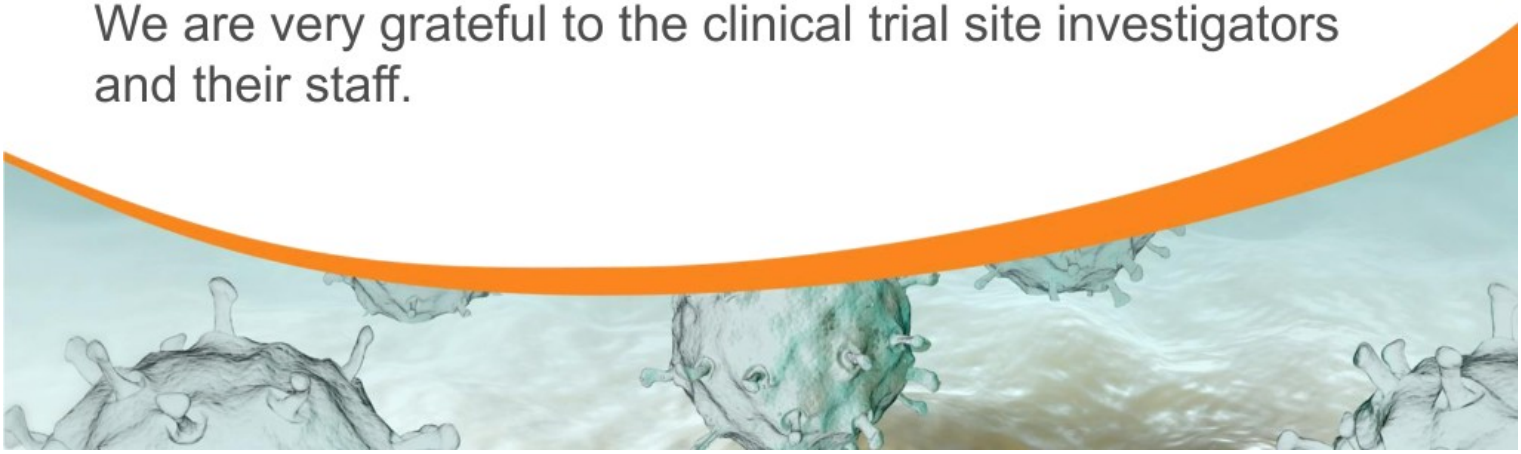
We thank all of the patients that have participated in our clinical program.

We are very grateful to the clinical trial site investigators and their staff.



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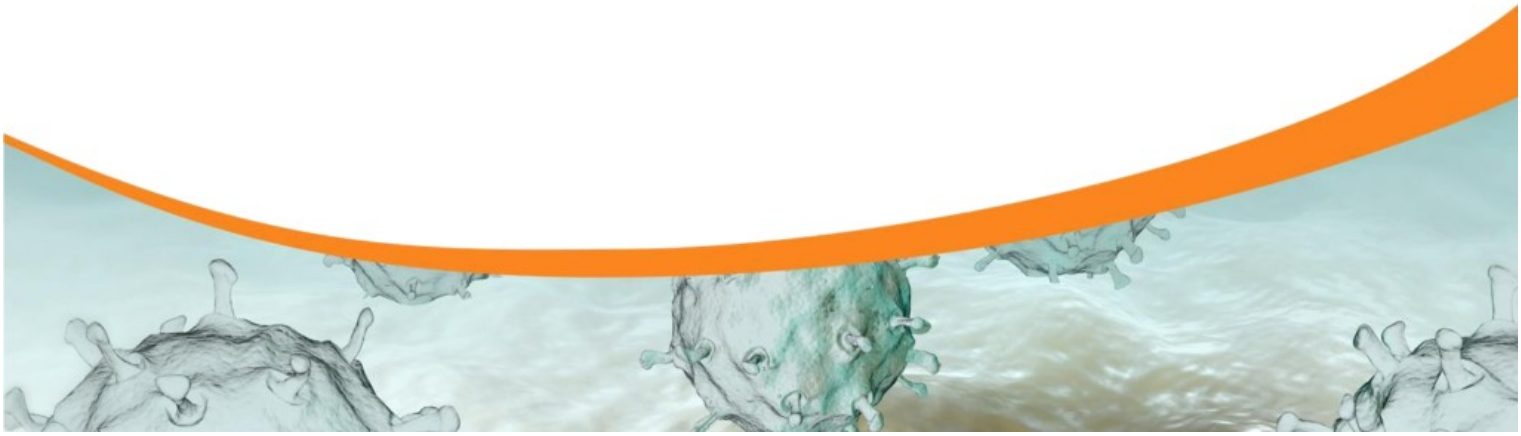
Appendix



SEL-212 Posters Presented at ACR

Monday, October 22, 2018; 9:00 AM - 11:00 AM

- Initial Phase 2 Clinical Data of SEL-212 in Symptomatic Gout Patients: Monthly Dosing of a Pegylated Uricase (pegadricase*) with SVP-Rapamycin Enables Sustained Reduction of Acute Gout Flares

Tuesday, October 23, 2018; 9:00 AM - 11:00 AM

- Mitigation of Inflammation Induced By Monosodium Urate Crystals in Mice By Treatment with SVP-Rapamycin

- Update of SEL-212 Phase 2 Clinical Data in Symptomatic Gout Patients: SVP-Rapamycin Combined with pegadricase Mitigates Immunogenicity and Enables Sustained Reduction of Serum Uric Acid Levels, Low Rate of Gout Flares and Monthly Dosing

- Initial Phase 2 Clinical Data of SEL-212 in Symptomatic Gout Patients: Measurement of Dissolution of Urate Deposits Associated with Monthly Dosing of a Pegylated Uricase (pegadricase) with SVP-Rapamycin By Dual Energy Computed Tomography

*Previously called pegsiticase; pegadricase is the new United States Adopted Name (USAN)