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): June 21, 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 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 June 15, 2017, Selecta Biosciences, Inc. (the "Company") furnished a corporate slide presentation (the "June 15 Presentation") providing additional data from the Company's ongoing, open-label Phase 2 company-sponsored trial, which is assessing the safety, tolerability, pharmacokinetic and pharmacodynamics of SEL-212 in patients with elevated uric acid levels and symptomatic gout (the "Phase 2 Trial").

The Company is now furnishing an updated corporate presentation (the "Updated Presentation"), which is attached to this Current Report on Form 8-K as Exhibit 99.1. In addition to incorporating information from the June 15 Presentation, the Updated Presentation includes, among other things, data with respect to Cohort 7 of the Phase 2 Trial, which were not contained in the June 15 Presentation.

The Company undertakes no obligation to update, supplement or amend the materials attached hereto as Exhibit 99.1.

The information in Item 7.01 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, or the Exchange Act, except as expressly set forth by specific reference in such a filing.

Item 8.01. Other Events.

The Updated Presentation amends (i) the number of patients enrolled in the Phase 2 Trial as of June 12, 2017 from 60 to 62 and (ii) the percentage of patients reporting a gout flare in the first month of treatment from 15% to 14% as a result of the increase in the number of patients.

Item 9.01. Financial Statements and Exhibits.

(d) Exhibits

Exhibit No.	Description
99.1	Corporate presentation of Selecta Biosciences, Inc. dated June 21, 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: June 21, 2017

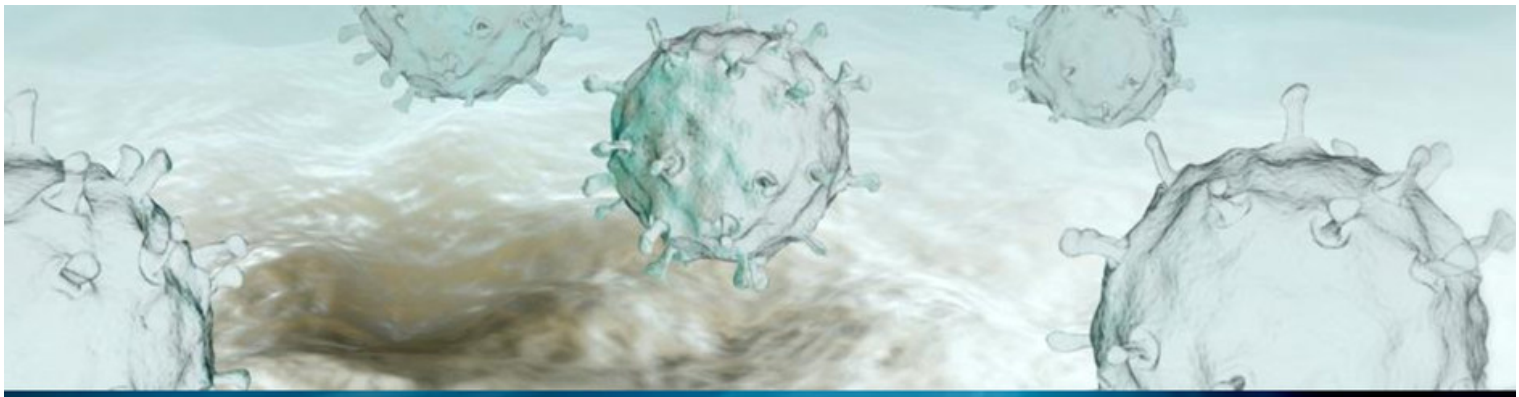
By: /s/ Werner Cautreels, Ph.D.

Werner Cautreels, Ph.D.

President and Chief Executive Officer

EXHIBIT INDEX

Exhibit No.	Description
99.1	Corporate presentation of Selecta Biosciences, Inc. dated June 21, 2017



Corporate Overview

SELECTA Biosciences

June 21, 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 company submits an IND for its lead gene therapy program, MMA, in the first half of 2018, the company's expectations about receiving additional payments from Spark Therapeutics, Inc. under the license agreement and/or the stock purchase 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 May 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.

SELECTA Biosciences

Immunogenicity is Now Recognized as a Serious Challenge for Biologic Therapies

IMMUNOGENICITY'S IMPACT

COMPROMISED EFFICACY
Anti-drug antibodies (ADAs) neutralize therapeutic benefit

SAFETY RISK
Hypersensitivity reactions can impact patients

UNPREDICTABLE RESPONSE
Changed PK/PD through drug-ADA interaction

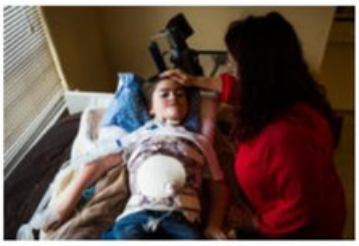
The New York Times

When the Immune System Thwarts Lifesaving Drugs

Patients often produce antibodies to the very treatments keeping them alive, sometimes to disastrous effect.

By GINA KOLATA

May 15, 2017



"Prophylactic immune tolerance induction should be strongly considered in patients who are at risk *of developing immune responses to ERT."*

– **Amy Rosenberg, MD**, Director, Division of Biotechnology Products Review and Research, FDA

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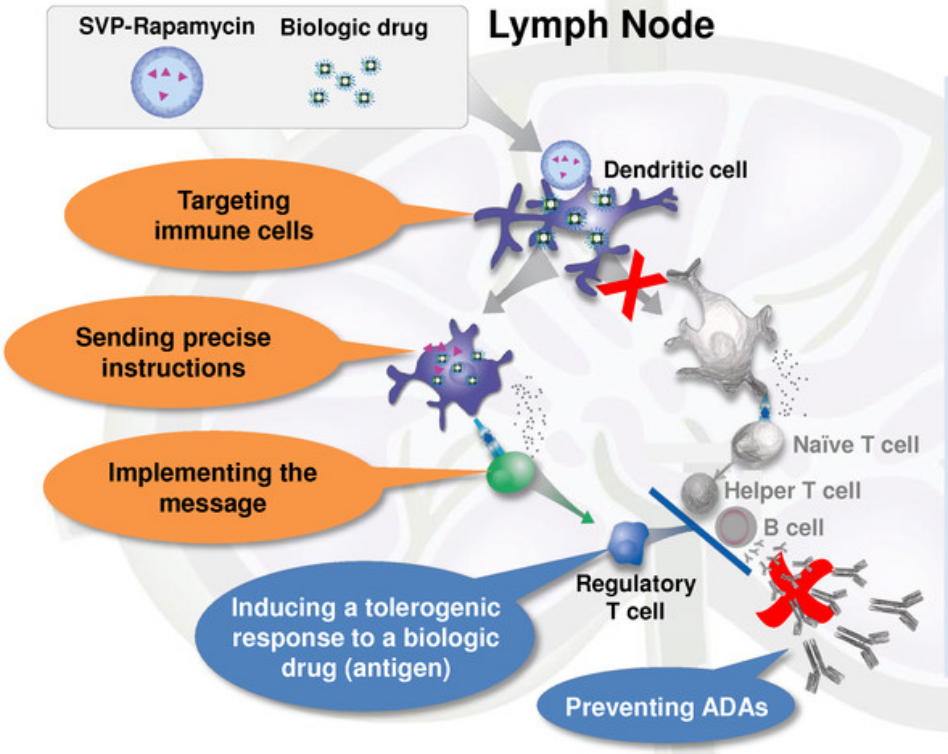
IMAGINE IF
WE COULD…
1. Effectively treat many more patients with existing biologics
2. Enable a new generation of novel non-immunogenic biologics for rare and serious diseases

The Key: Mitigate Anti-Drug Antibodies by Inducing Regulatory T Cells

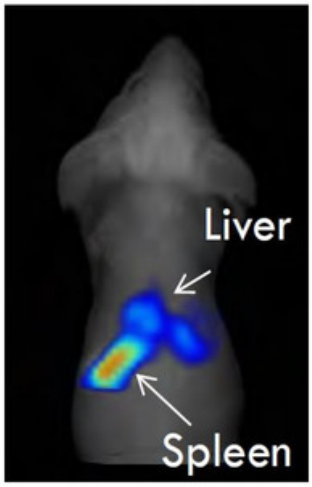


- By dosing "free biologic" separate from SVP-Rapamycin, it distributes broadly to desired sites of action
- Some of the biologic co-localizes with dendritic cells that have taken up SVP-Rapamycin
- The dendritic cells then induce regulatory T cells that circulate throughout the body and suppress immune responses against the biologic (i.e. ADAs)

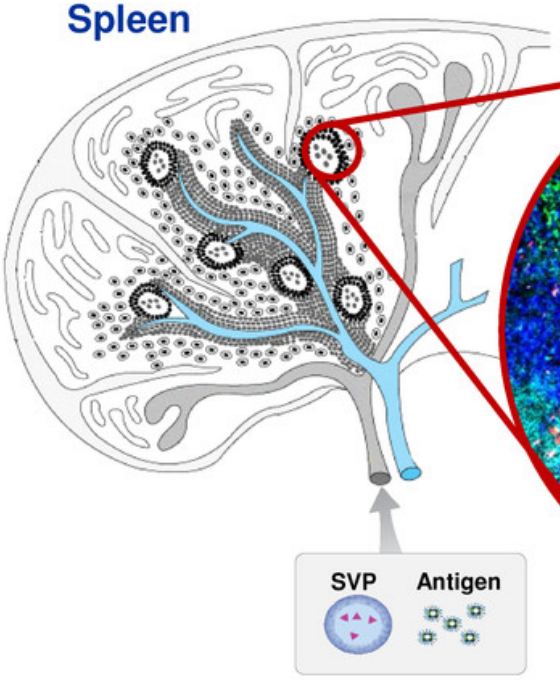
Potential to enable new therapies and improve efficacy/safety of existing biologics

Leveraging Nanoparticles to Deliver Instructions to the Immune System

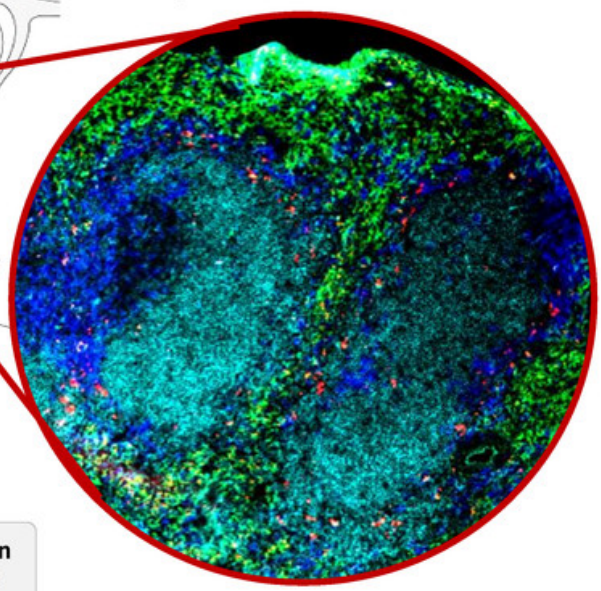
I.V. Injection
(6hr post-injection)



Spleen



Spleen harvested 24 hr after I.V.
Injection of fluorescent NPs



- SVP
- Macrophages
- Dendritic cells
- B cells

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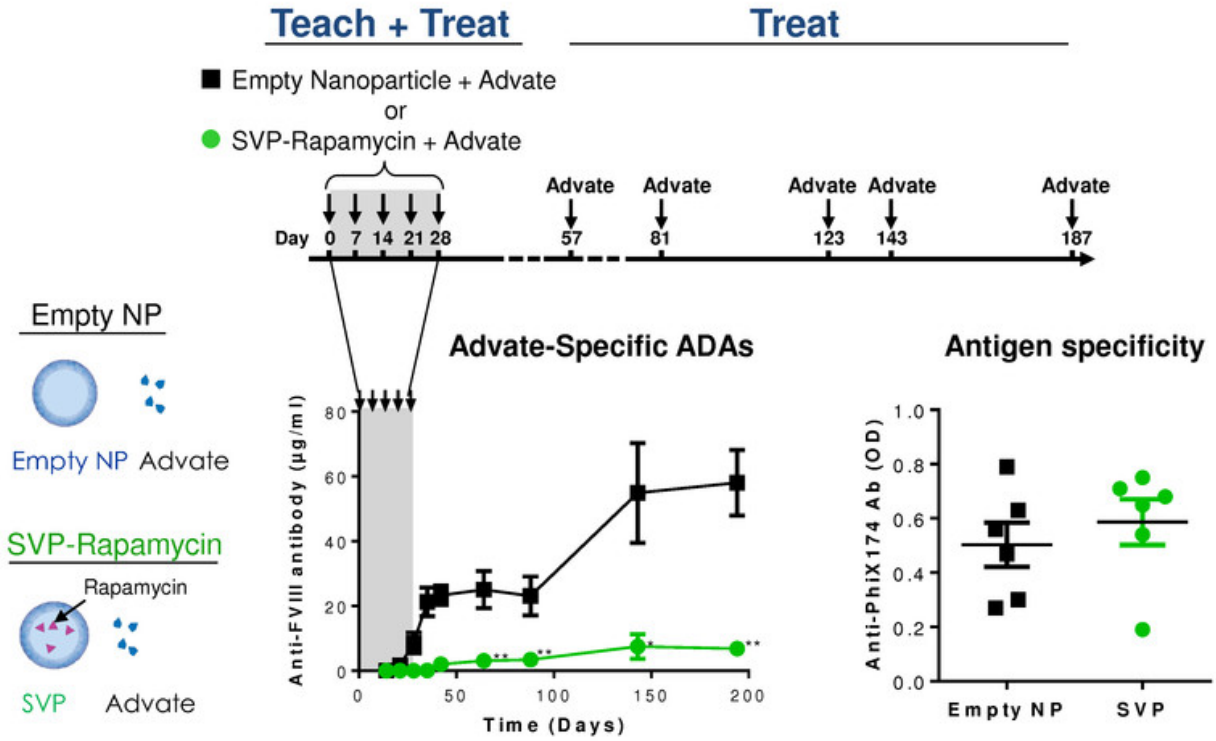
Example of Immune System Education

Antigen-Specific Tolerance Maintained for Over Five Months in Hemophilia A Mice



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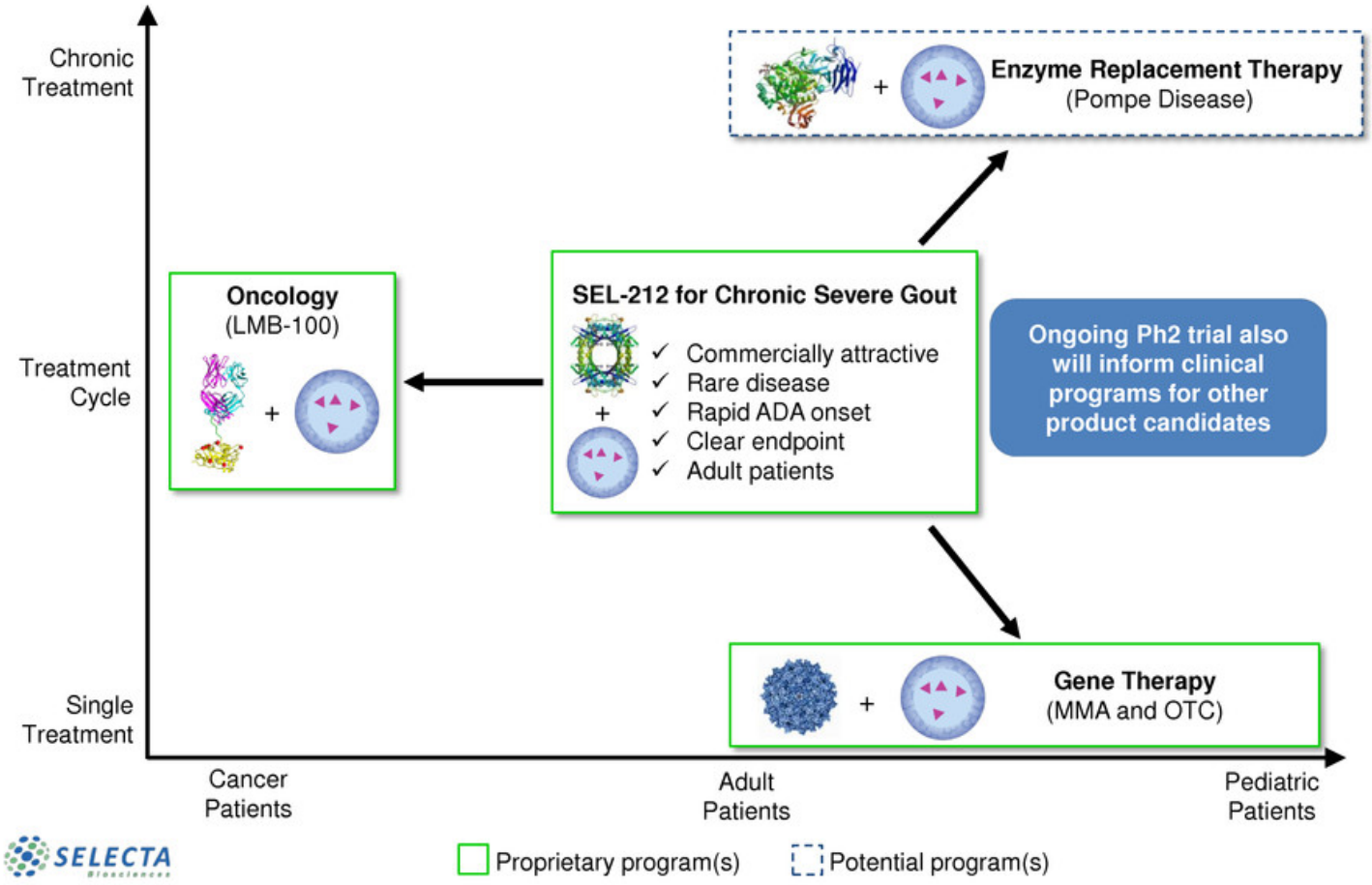
Zhang et al., Cell Immunol, 2016

Plan for SVP Immune Tolerance Platform Expansion




SEL-212 for Chronic
Severe Gout
SELECTA

Selecta's Lead Product Candidate: SEL-212

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

- Uricase is highly effective in breaking down uric acid deposits, but is foreign to the human immune system, causing immunogenicity
- Two approved products (Krystexxa and Elitek) cause inhibitory antibodies in ~60% of patients and carry risk for anaphylaxis

Clear Clinical Path

- Krystexxa approved with less than 500 patients dosed from phase 1-3
- Primary endpoint: serum uric acid level reduction – a robust FDA/EMA-approved endpoint – can be seen rapidly upon dosing, easy to measure, maintenance strongly correlated with low/negative ADA titers
- Adult patient population with rapid enrollment potential

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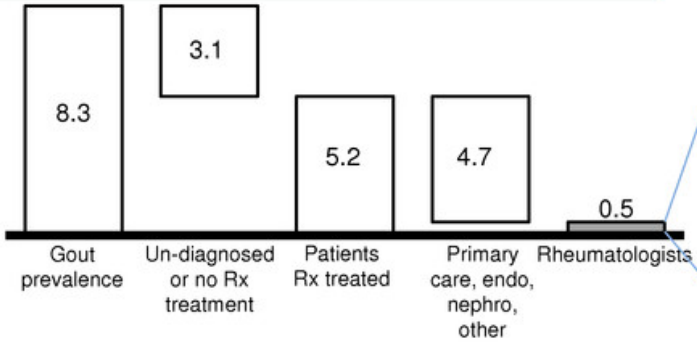
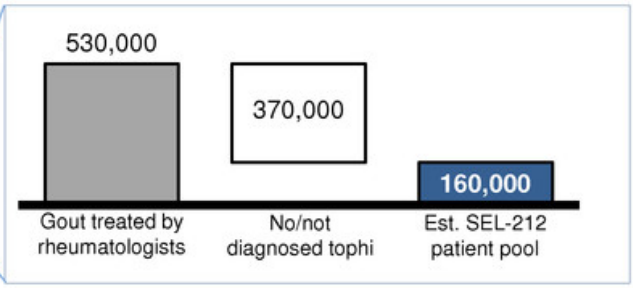
Substantial Unmet Need for Chronic Severe Gout Patients

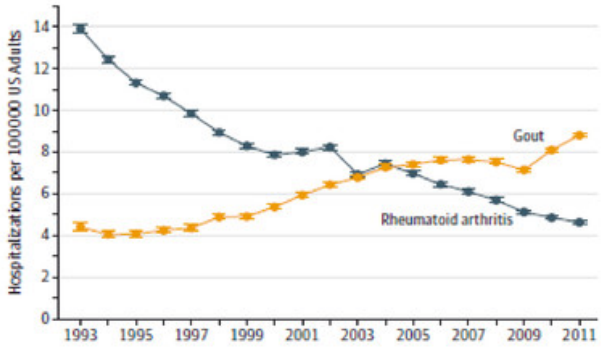
U.S. Gout Patients (million)[1]



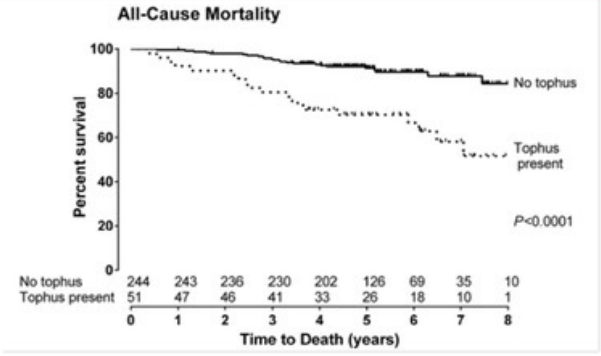
Estimated SEL-212 Target Patient Population[1]



Gout Admissions Now Exceed RA[2]



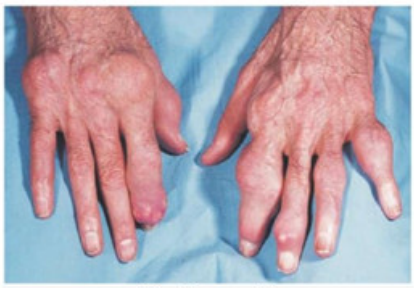
Tophi Significantly Increase Mortality Risk[3]



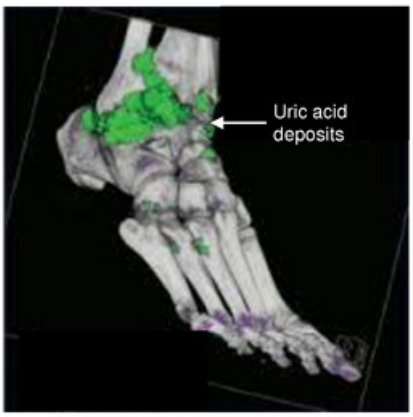
(1) IMS, Desk Research, Selecta rheumatologist interviews, Crystal patient registry
(2) Lim SY et al, Trends in Gout and Rheumatoid Arthritis Hospitalizations in the United States, JAMA, June 2016

(3) Vincent Z et al, Predictors of Mortality in People with Recent Onset of Gout: A Prospective Observational Study, J. Rheumatol, 2017

What is Chronic Severe Gout?



Visible tophi

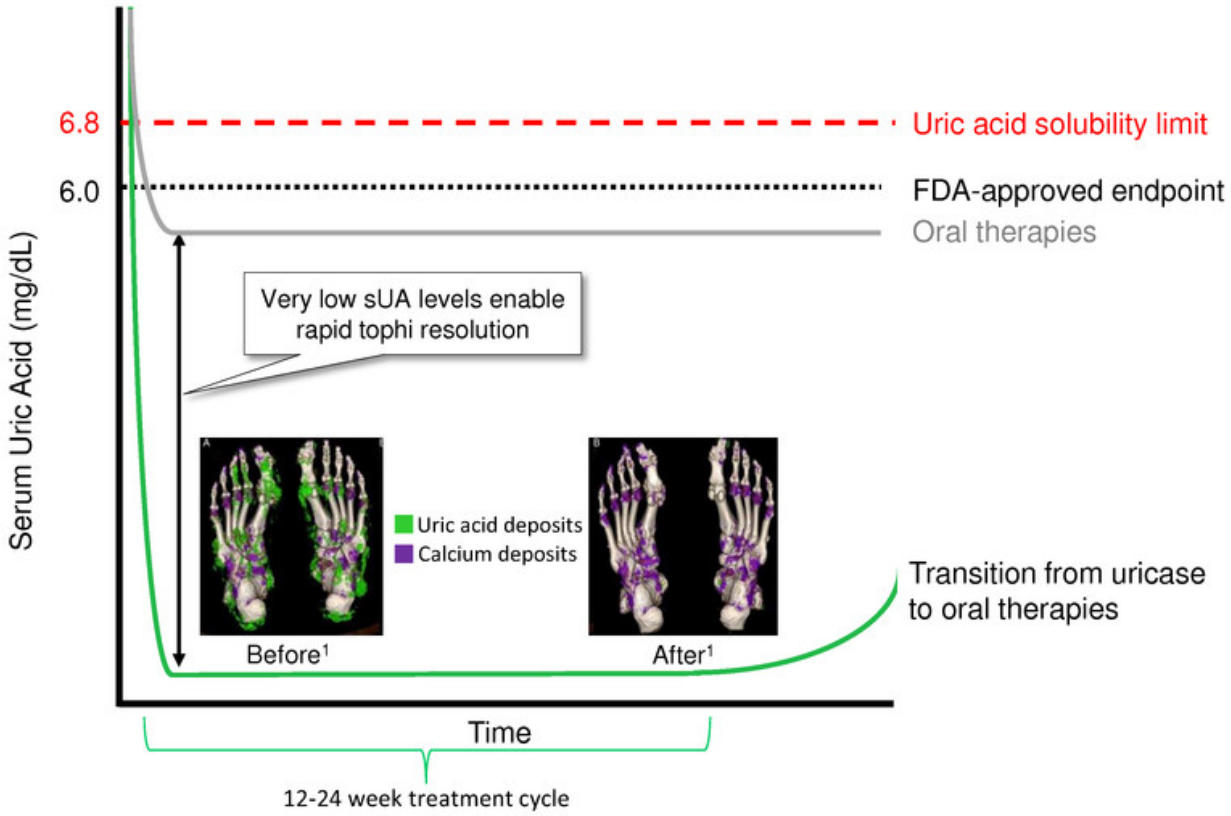


Hidden uric acid deposits

- ~50,000 U.S. gout patients are refractory to standard therapies and most have existing "tophi"[1]
- Over 100,000 additional patients have tophaceous gout and remain symptomatic[2]
- Tophi are hidden or disfiguring inflammatory nodules of crystallized uric acid that form in severe gout patients
  - Tend to form primarily in joints and tissues
  - Source of recurrent flares and debilitating pain that cannot be treated effectively by simply lowering sUA to <6 mg/dL
  - Shown to significantly increase morbidity and mortality if left untreated[3,4]

(1) IMS, Desk Research
(2) Selecta rheumatologist interviews, Crystal patient registry
(3) Choi HK et al, Tophaceous Gout and the Risk of Mortality: A General Population-Based Study, ACR, Sept. 2016
(4) Zhu Y, et al, Comorbidities of gout and hyperuricemia in the US general population: NHANES 2007-2008, Am J Med, July 2012

Resolving Tophi and Uric Acid Deposits with Monthly Uricase Treatments



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

For illustrative purposes only

Phase 1b Demonstrates SEL-212's Clinical Activity for ≥30 Days

0.4 mg/ kg Pegsiticase only

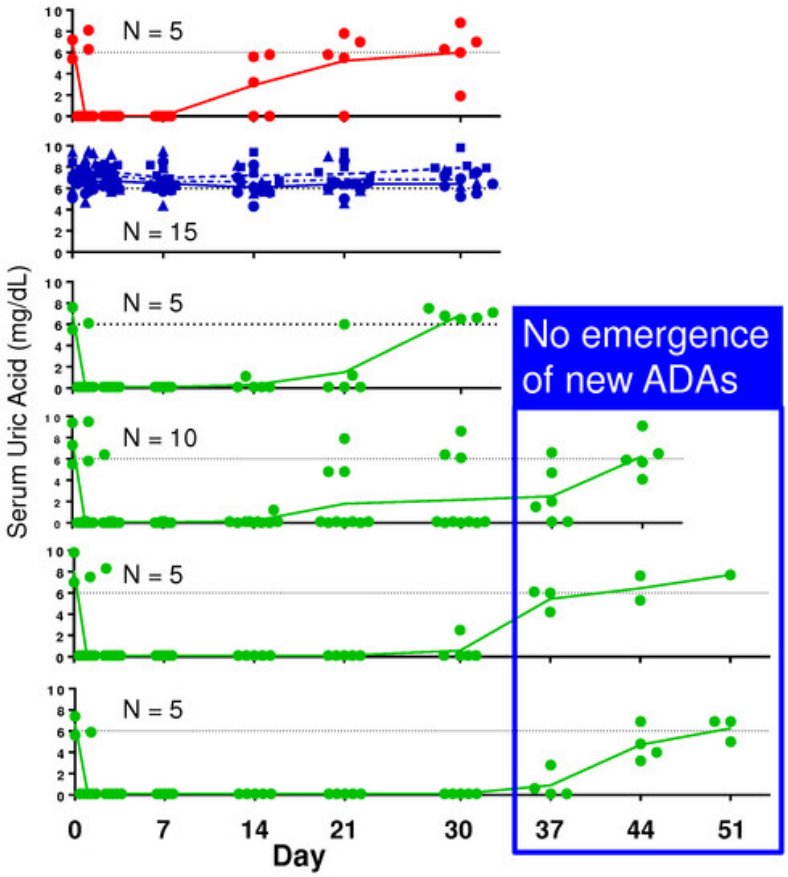
0.03, 0.1, 0.3 mg/kg SVP-Rapamycin only

0.03 mg/kg SVP-Rapamycin
0.4 mg/kg Pegsiticase

0.10 mg/kg SVP-Rapamycin
0.4 mg/kg Pegsiticase

0.15 mg/kg SVP-Rapamycin
0.4 mg/kg Pegsiticase

0.30 mg/kg SVP-Rapamycin
0.4 mg/kg Pegsiticase



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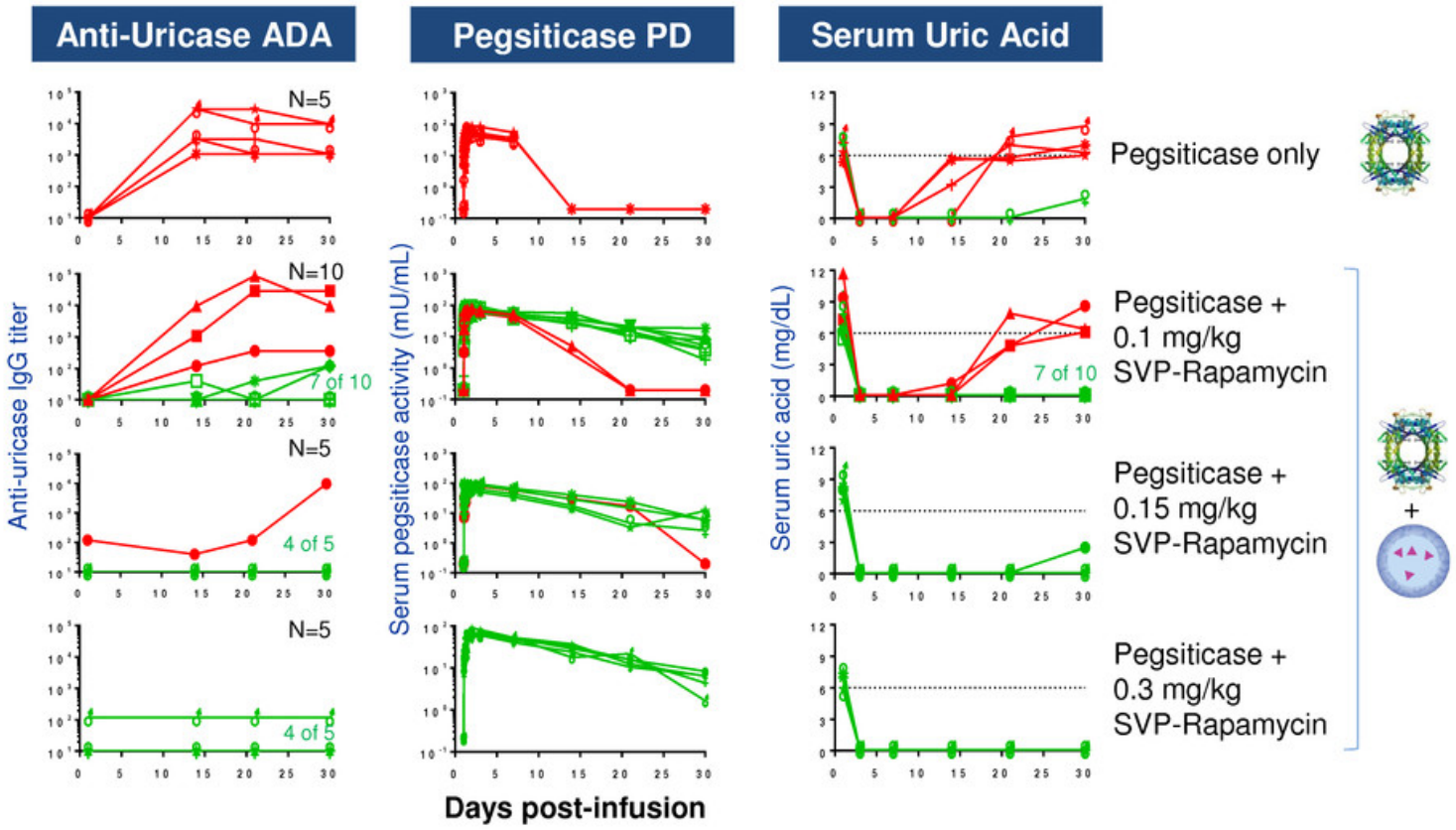
IMVACS 2016 Presentation

Phase 1b Trial Shows Correlation Between ADA Titers, Pegsitocase Activity and sUA



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Clinicaltrials.gov NCT02648269

Clinical Objectives of SEL-212 Program

Phase 1a

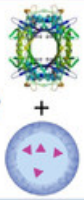
Clinicaltrials.gov NCT02464605

- n = 22
- Single ascending dose of pegsiticase
- Hyperuricemic patients

✓ Define effective monthly dose of pegsiticase

✓ Demonstrate rapid formation and kinetics of ADAs

Phase 1b



Clinicaltrials.gov NCT02648269

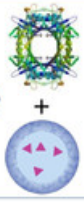
- n = 63
- Single ascending dose of SEL-212
- Hyperuricemic patients

Demonstrate that SEL 212:

✓Mitigates ADAs

✓Enables prolonged control of uric acid for >30 days

Phase 2



Clinicaltrials.gov NCT02959918

- n = 62
- 3 monthly doses of SEL-212 + 2 monthly doses of pegsiticase alone
- Symptomatic & hyperuricemic patients

Demonstrate SEL-212's safety, tolerability and ability to reduce serum uric acid after multiple doses

Nearly 100 patients now dosed with SEL-212

SELECTA Biosciences

Unaudited data as of June 12, 2017; amended following on-site reviews
Clinicaltrials.gov NCT02959918

Phase 2 Trial Overview

Enrollment Criteria	• Patients with symptomatic gout and serum uric acid levels >6 mg/dL
Primary/Secondary Endpoints	• Safety, tolerability and pharmacokinetics of multiple doses of SEL-212 and pegsiticase alone • Reduction of serum uric acid levels • Reduction of ADA levels
Design	• Multiple ascending dose cohorts
Dosing	• Control cohorts: pegsiticase alone every 28 days for up to five doses • All other cohorts: SEL-212 every 28 days for three doses followed by two doses of pegsiticase alone
Stopping Rules	• Dosing stopped upon loss of sUA control at Days 21 after a dose
Trial Completion	• Expected by the end of 2017
As of June 12	• 62 patients dosed at 11 active U.S. clinical sites

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Unaudited data as of June 12, 2017; amended following on-site reviews
Clinicaltrials.gov NCT02959918

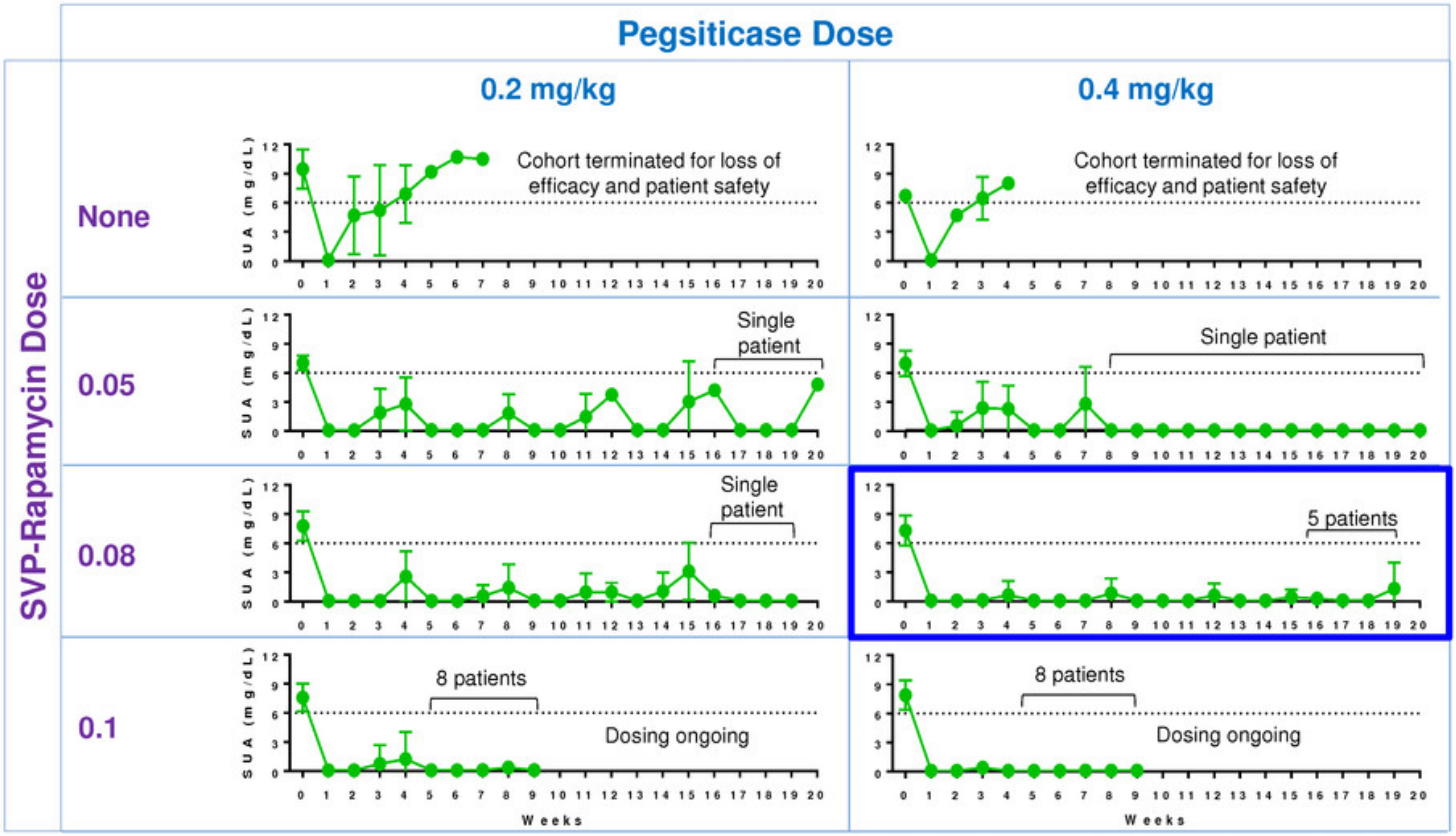
Status of Phase 2 Trial Cohorts

Cohort	Treatment Weeks 0, 4, 8		Treatment Weeks 12 + 16	Status
	Pegsiticase	SVP-Rapamycin	Pegsiticase	
1	0.2 mg/kg	None	0.2 mg/kg	Enrollment terminated
2	0.4 mg/kg	None	0.4 mg/kg	Enrollment terminated
3	0.2 mg/kg	0.05 mg/kg	0.2 mg/kg	Dosing completed
4	0.4 mg/kg	0.05 mg/kg	0.4 mg/kg	Dosing completed
5	0.2 mg/kg	0.08 mg/kg	0.2 mg/kg	Dosing completed
6	0.4 mg/kg	0.08 mg/kg	0.4 mg/kg	Ongoing
7	0.2 mg/kg	0.1 mg/kg	0.2 mg/kg	Ongoing
8	0.4 mg/kg	0.1 mg/kg	0.4 mg/kg	Ongoing
9+	Under design			Planned

SELECTA Biosciences

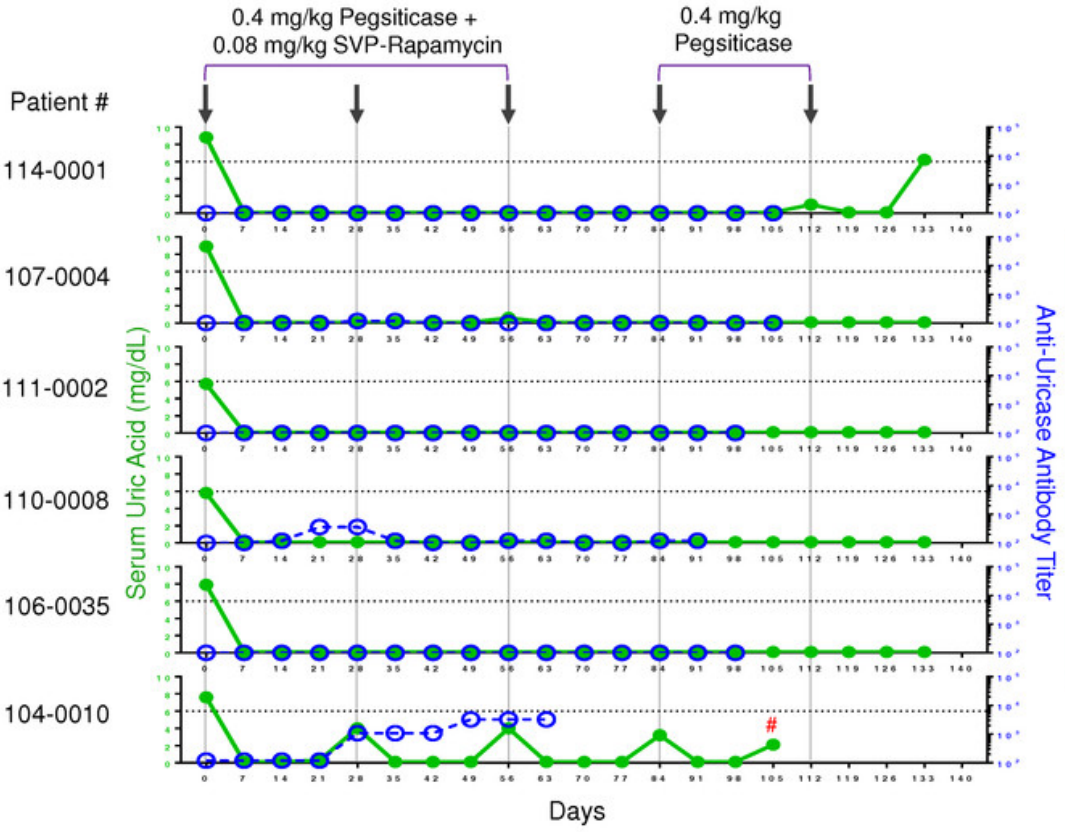
Unaudited data as of June 12, 2017; amended following on-site reviews
Clinicaltrials.gov NCT02959918

Minimal Effective Dose of SEL-212 Now Defined



Excludes data points after dosing is stopped or stopping rules are met
Unaudited data as of June 12, 2017; amended following on-site reviews
Clinicaltrials.gov NCT02959918

Cohort 6: Minimal Effective Dose of SEL-212



- Sustained reduction of sUA after two injections of pegsiticase alone suggests induction of immune tolerance
- Cohort being expanded to 10 evaluable patients

Stopping rules met (sUA level >1 mg/dL at 21 days after dosing)
Unaudited data as of June 12, 2017; amended following on-site reviews
Clinicaltrials.gov NCT02959918

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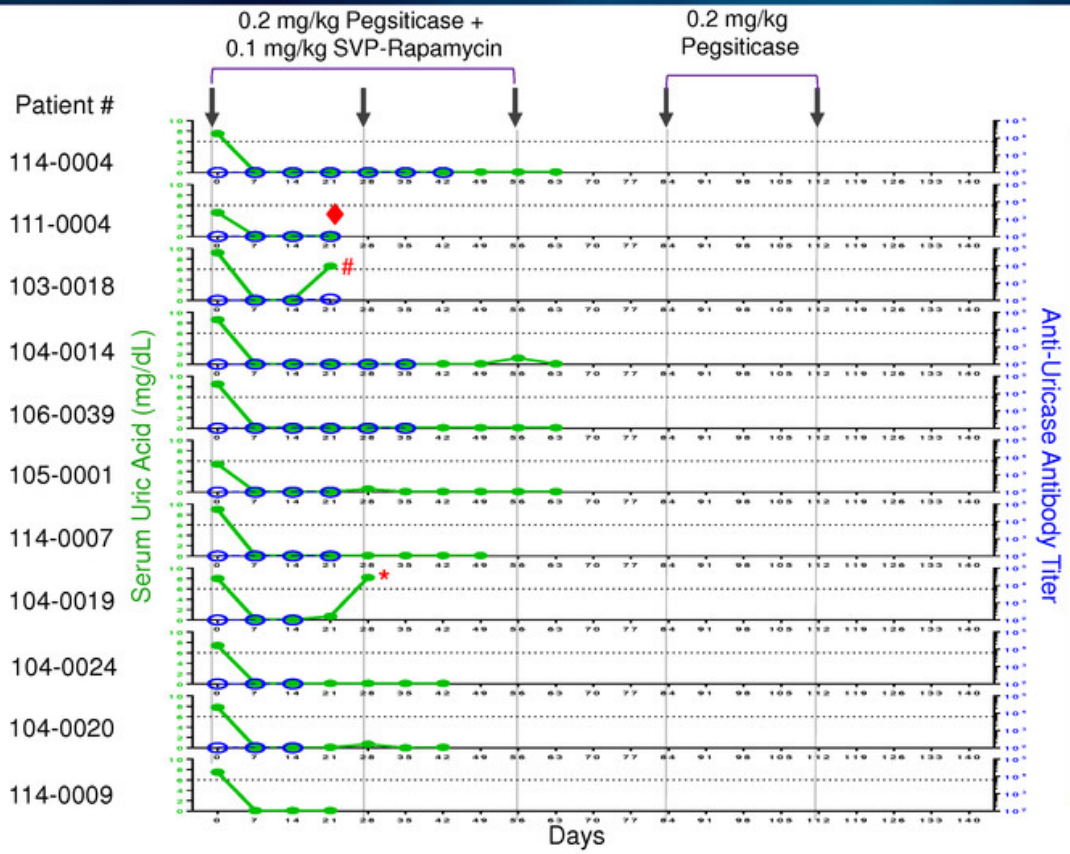
Cohort 7: 0.2 mg/kg of Pegsiticase + 0.1 mg/kg of SVP-Rapamycin

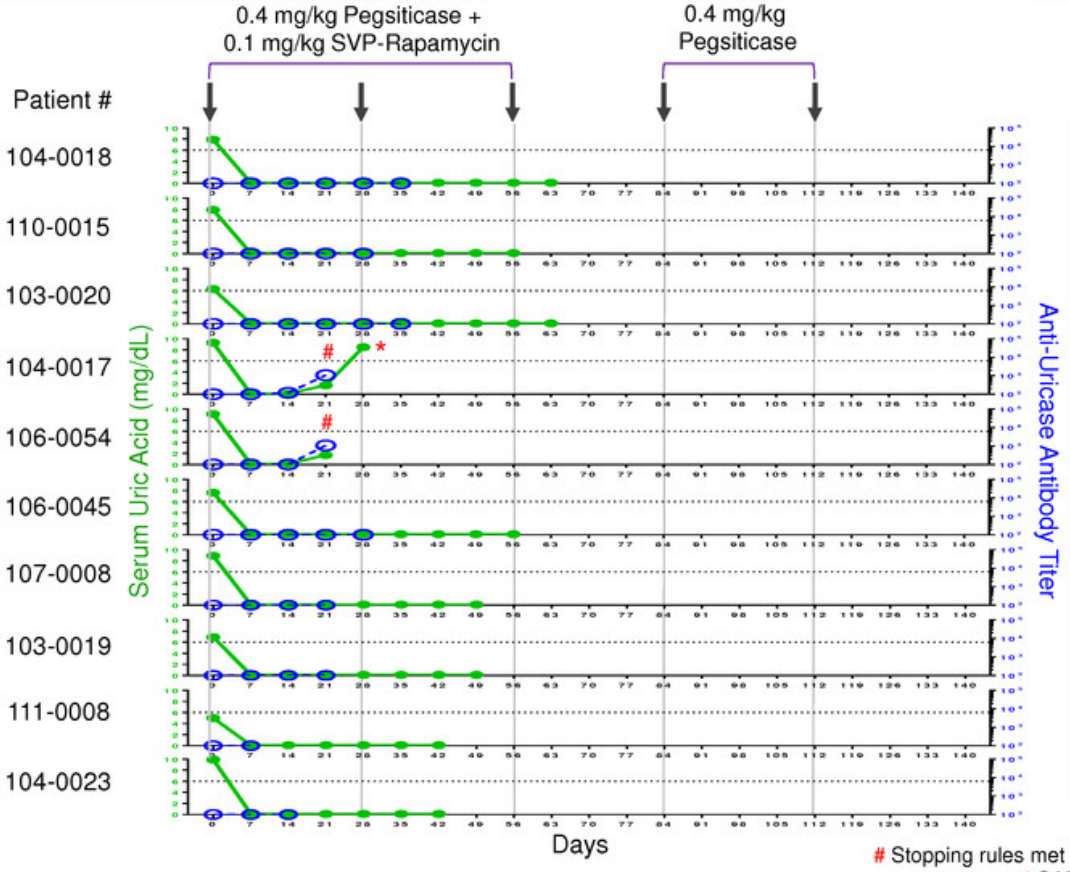


- sUA remains controlled in a majority of patients following repeat doses
- One patient withdrew consent after experiencing cholecystitis (not related to study drug)
- One patient experienced an infusion reaction and fully recovered

♦ Patient withdrew consent
Stopping rules met (sUA level >1 mg/dL at 21 days after dosing)
* SAE (infusion reaction)
Unaudited data as of June 12, 2017; amended following on-site reviews
Clinicaltrials.gov NCT02959918

SELECTA Biosciences

Cohort 8: 0.4 mg/kg of Pegsiticase + 0.1 mg/kg of SVP-Rapamycin

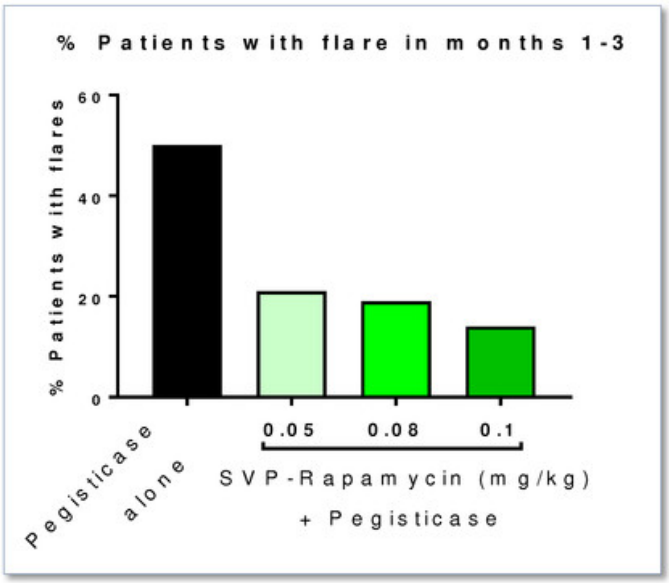


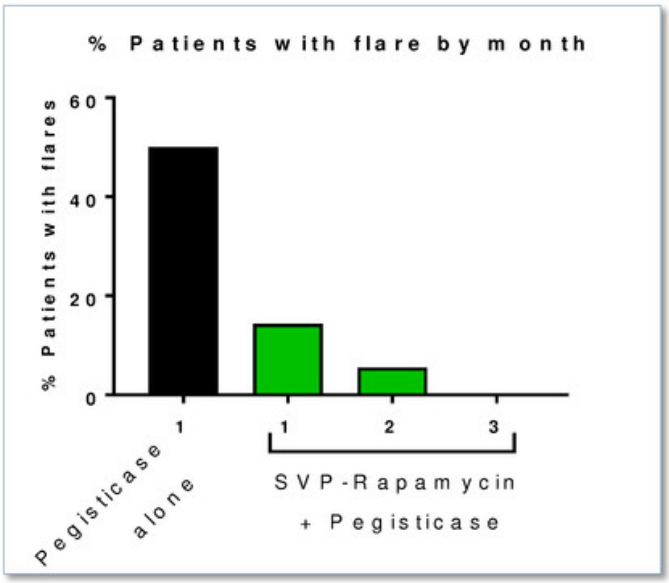
- sUA remains controlled in a majority of patients following repeat doses
- Two patients met stopping rules
- One of these patients was inadvertently re-dosed; experienced an infusion reaction and fully recovered

Stopping rules met (sUA level >1 mg/dL at 21 days after dosing)
* SAE (infusion reaction) due to protocol deviation
Unaudited data as of June 12, 2017; amended following on-site reviews
Clinicaltrials.gov NCT02959918

SELECTA Biosciences

Results to Date Suggest Reduction in Flare Frequency During SEL-212 Therapy





- Urate lowering therapies typically increase the incidence of flares at the beginning of therapy
- Data indicate SEL-212 lowers flares compared to pegsiticase alone

SELECTA Biosciences

Unaudited data as of June 12, 2017; amended following on-site reviews
Clinicaltrials.gov NCT02959918

Phase 2 Safety Overview

- SEL-212 has been generally well tolerated at clinically active doses following repeated administrations
- Eight SAEs reported to date in the trial:
  - Seven infusion reactions, four of which were in cohorts receiving pegsiticase alone or pegsiticase in combination with the lowest dose of SVP-Rapamycin, as expected, and two of which were due to protocol deviations related to dosing errors
  - One was for a patient with history of gall stones who experienced cholecystitis (inflammation of gall bladder caused by impacted gall stones), which was determined not to be related to study drug
- All SAEs were successfully treated and resolved without further issues

Unaudited data as of June 12, 2017; amended following on-site reviews
Clinicaltrials.gov NCT02959918

Phase 2 Adverse Events

Cohort	Entire Study	1	2	3	4	5	6	7	8
N(%)	62	3	3	9	10	6	10	11	10
≥ 1TEAE	50(80.1)	3	2	8	7	5	8	8	9
≥ SAE	8	1	1	2	0	0	1*	1#, 1	1*
Death	0	0	0	0	0	0	0	0	0
Discontinuation due to TEAE	9	1	1	2	0	0	1*, 1	1#, 1	1*
Specific TEAEs									
Infusion reaction	8(12.9)	1	1	2	0	0	1*, 1	1	1*
Gout flare	13(21.0)	3	0	2	2	1	2	1	2
Hyperglycemia[1]	7(11.3)	0	0	2	0	2	1	1	1
Hypertriglyceridemia[1]	7(11.3)	0	0	1	0	3	1	1	1
Infection[1]	11(17.7)	0	1	5	1	0	1	1	2
Tachycardia[1]	3(4.8)	0	0	2	0	0	1	0	0
Headache[1]	8(12.9)	0	0	0	3	0	1	2	2
Hypophosphatemia[1]	4(6.5)	0	0	4	0	0	0	0	0
Stomatitis or oral lesion[1]	3(4.8)	0	0	0	0	1	0	0	2
Leukopenia[1]	8(12.9)	0	0	2	0	2	1	1	2

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Determined not to be related to study drug. Patient underwent a cholecystectomy

*Patient incorrectly dosed; protocol deviation

(1) Observed at single data points, transient in nature and mild or moderate

Unaudited data as of June 12, 2017; amended following on-site reviews

Clinicaltrials.gov NCT02959918


Oncology

Developing a Highly Potent Recombinant Pseudomonas Immunotoxin Targeting Mesothelin

Ownership

- In-licensed LMB-100 from NCI in April 2017
- $50,000 upfront fee; up to $9.25 million in milestones; low single-digit royalties

Rare and Serious Disease

- Virtually all mesotheliomas (~3,000 annual U.S. diagnoses[1]) and pancreatic cancers (~50,000) express mesothelin; high percentage of ovarian, lung, breast cancers
- Certain solid tumors remain hard to treat and have remained evasive to immunotherapy approaches

Benefit of Immunogenicity Mitigation

- LMB-100 induces inhibitory antibodies upon first dose in almost all patients, limiting dosing to one administration cycle; insufficient to control tumor
- Global immunosuppressants ineffective in vast majority of patients
- SVP allows 3+ treatment cycles in pre-clinical models, restoring LMB-100 benefits
- Initial repeat dose data from ongoing SEL-212 Phase 2 bodes well for this application

Clear Clinical Path

- LMB-100 and SVP-Rapamycin both in the clinic today in separate trials
- In discussions with NCI regarding a Phase 1b trial for the combination treatment

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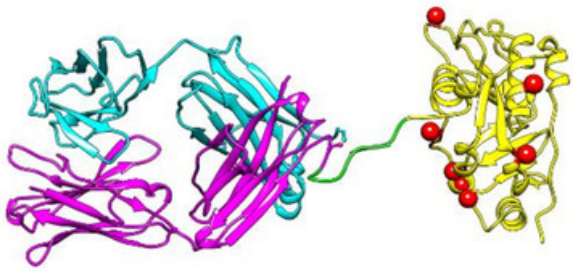
1. Source: American Cancer Society

Immunotoxin LMB-100

- **LMB-100: Pseudomonas exotoxin A linked to antibody Fab targeting mesothelin**
- **Currently in Phase 1 clinical trials**
- **Efficacy is limited by immunogenicity after one or two cycles in most patients**

LMB-100



Anti-mesothelin Fab

Pseudomonas exotoxin A domain III with mutated B cell epitopes

Ira Pastan, M.D.
Head, Molecular Biology Section
National Cancer Institute

Mesothelin is overexpressed on many solid tumors

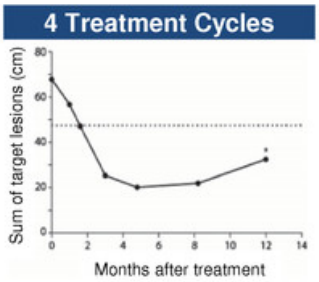
- Mesothelioma (~100%)
- Pancreatic cancer (~100%)
- Ovarian cancer (70%)
- Lung cancer (50%)
- Breast cancer (34%)
- Gastric cancer

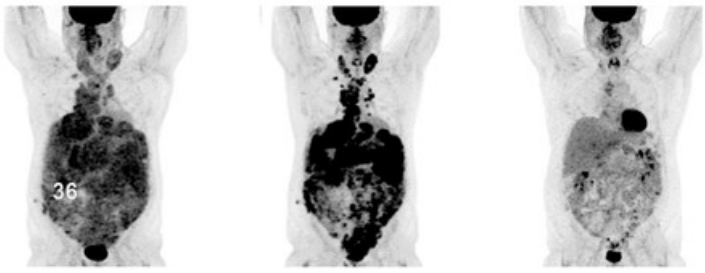
Clinical Activity of LMB-100 Precursor in Mesothelioma

The patients able to receive 4 or more cycles showed major anti-tumor response

Patient 5

- Widely metastatic peritoneal mesothelioma
- Survived 32 months

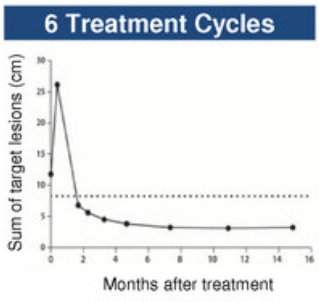


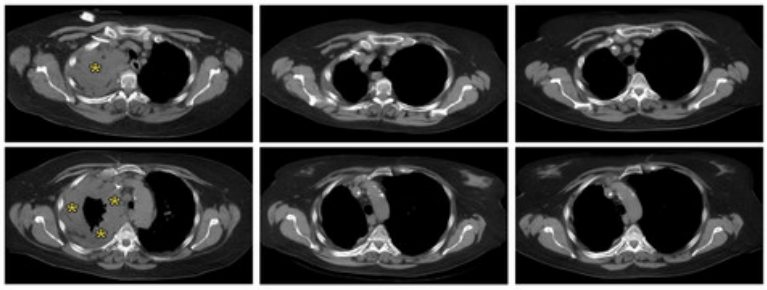


Before treatment | 1.6 months | 8 months

Patient 3

- Extensive pleural mesothelioma
- Survival >64 months (still alive)





Day 12 | 3 months | 15 months

However, immunogenicity limited treatment to 1 or 2 cycles for most patients despite concomitant use of immunosuppressive therapy

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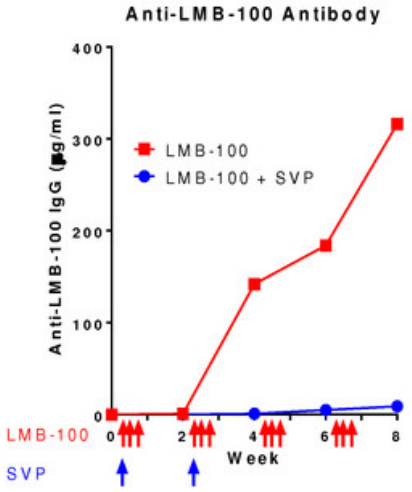
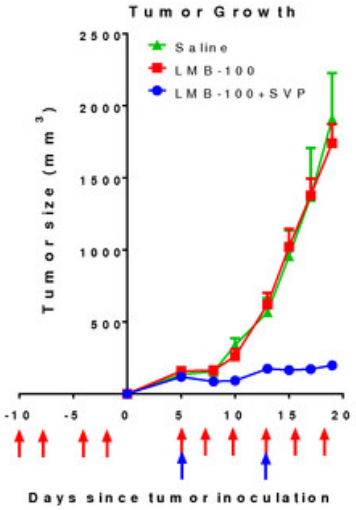
Hassan, Pastan et al. Cancer Research (2014)

Preclinical Data Supports the Benefits of SVP-Rapamycin + LMB-100 Combination Therapy

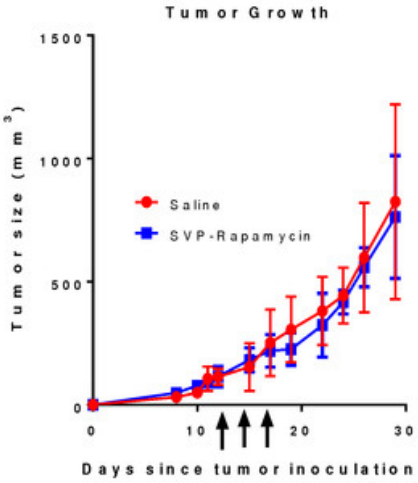
Prevents formation of anti-drug antibodies



Restores LMB-100's anti-tumor response



SVP alone does not accelerate tumor growth



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Data generated in collaboration with Dr. Ira Pastan, NCI


Gene Therapy
SELECTA

Selecta's Proprietary Gene Therapy Programs

Ownership

- Two proprietary gene therapies utilizing AAV and Anc80 + SVP-Rapamycin

Rare and Serious Diseases

- Two inborn error of metabolism: Methylmalonic Acidemia (MMA) and Ornithine Transcarbamylase (OTC) Deficiency
- MMA affects 1 in 25,000-48,000[1]; OTC deficiency affects 1 in 15,000-60,000 worldwide[1]
- Onset in early infancy; significantly reduces life expectancy

Immunogenicity Barrier

- Infants require treatment prior to metabolic crisis to avoid CNS effects; retreatment likely needed as patients grow
- Repeat gene therapy dosing impossible due to neutralizing antibodies to viral capsid
- Cellular immune responses to the liver are an additional potential barrier

Clear Clinical Path

- Targeting IND for lead gene therapy program, MMA, in the first half of 2018
- Collaboration with NIH and Mass Eye & Ear: Access to validated animal models, gene therapy development expertise and patients
- Clinical endpoints include: Methylmalonyl-CoA mutase and MMA levels

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1. Source: NIH

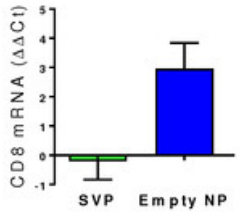
Benefits of ADA Avoidance in Gene Therapy

Inhibiting Liver Inflammation from First Dose

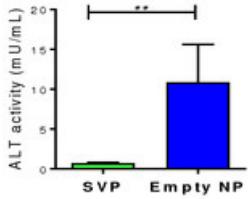
SVP or Empty NP
+ AAV8

Day 0

CD8 T cell Liver Infiltrates



Serum ALT Enzyme Levels



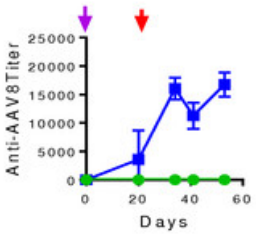
Allowing for Repeat Dosing

SVP or Empty NP
+ AAV8-Luc

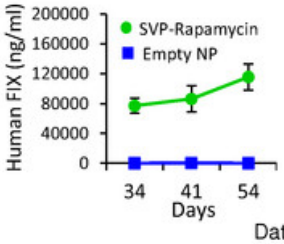
SVP or Empty NP
AAV8-Factor IX

Day 0 21 54

Anti-AAV8 Antibody Titer



Serum Factor IX Expression



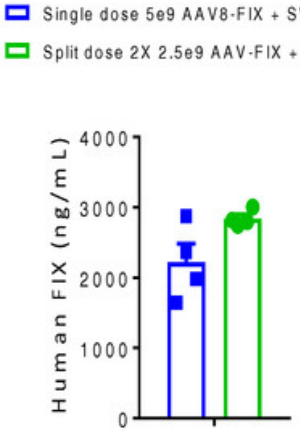
Enabling Dose Titration

5e9 AAV8-FIX +SVP
2.5e9 AAV8-FIX +SVP

2.5e9 AAV8-FIX+SVP

Day 0 10 30

FIX Expression after split dose



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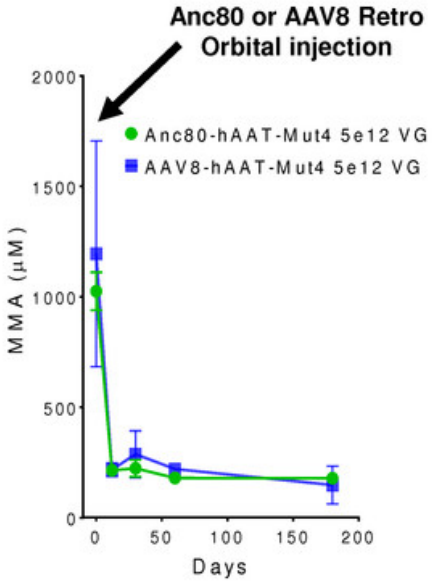
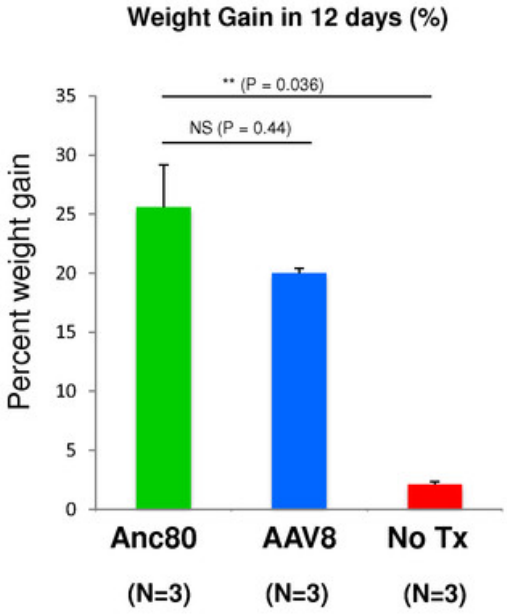
Data generated in collaboration with Dr. Federico Mingozzi, Genethon

Anc80/synMUT Proof of Concept in Mouse Model of MMA at ASGCT 2017

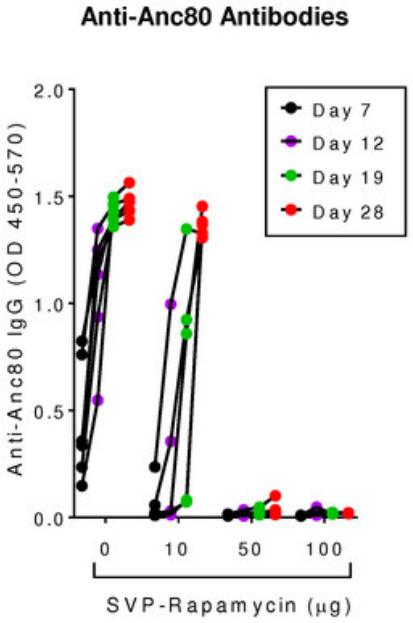
Reducing MMA Levels With Anc80 and AAV8



Increasing Weight Gain Following Treatment



Preventing Anti-Anc80 Antibodies with SVP-Rapamycin



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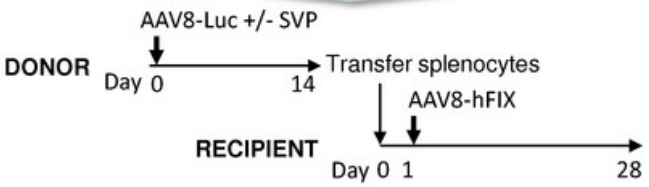
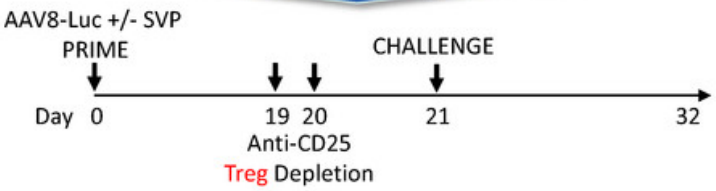
Data generated in collaboration with Dr. Charles Venditti, NIH, and Dr. Luk Vandenberghe, Mass Eye & Ear

Demonstration of the Role of Regulatory T Cells

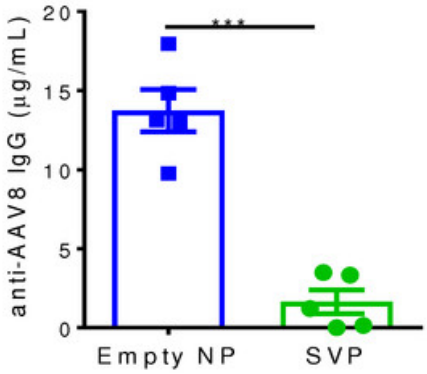
Effect can be Transferred to a Recipient



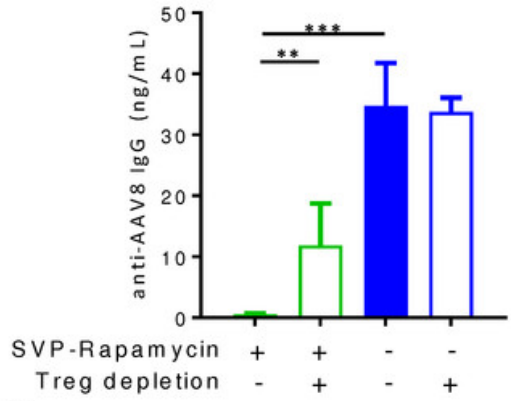
T Reg Depletion Negates Effect



Anti-AAV8 IgG levels in recipient mice (Day +14)



Anti-AAV8 IgG levels (Day 32)



** P < 0.01, *** P < 0.001

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Data generated in collaboration with Dr. Federico Mingozzi, Genethon

Immune Tolerance Pipeline

Indication	Description	Preclinical	Phase 1	Phase 2
Proprietary ADA Mitigation Programs				
Chronic Severe Gout	SVP-Rapamycin co-administered with pegsiticase (SEL-212)			
Mesothelioma & Pancreatic Cancer*	SVP-Rapamycin co-administered with LMB-100			
Methylmalonic Acidemia (MMA)	SVP-Rapamycin co-administered with Anc80 vector			
Ornithine Transcarbamylase Deficiency (OTC)	SVP-Rapamycin co-administered with AAV vector			
ADA Mitigation Program License				
Hemophilia A	SVP-Rapamycin licensed for FVIII gene therapy		Spark THERAPEUTICS	

* LMB-100 is currently being investigated in two Phase 1 clinical trials at the National Cancer Institute (NCI): one of LMB-100 alone in Mesothelioma and one of LMB-100 in combination with nab-paclitaxel in Pancreatic Cancer. Selecta and NCI are currently in discussions regarding a planned Phase 1b clinical trial to evaluate multiple cycles of LMB-100 in combination with SVP-Rapamycin.

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Q1 Financial Overview

(In thousands, except share and per share data)	For the Quarter Ended	
	March 31, 2017	March 31, 2016
Grant & Collaboration Revenue	$137	$2,088
Research & Development Expenses	11,044	6,648
General & Administrative Expenses	3,875	2,381
Net Loss Attributable to Common Stockholders	($15,134)	($9,832)
Net Loss Per Basic Share	($0.82)	($4.52)
Wtd. Avg. Common Shares Outstanding – Basic & Diluted	18,474,227	2,175,037

(In thousands)	As of	
	March 31, 2017	December 31, 2016
Cash, Cash Equivalents, Marketable Securities, Restricted Cash	$68,919	$84,535

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