Corporate Presentation

April 2021

Nasdaq | SELB

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 clinical development of SEL-212, the anticipated timing of the head-to-head trial comparing SEL-212 and pegloticase and related data readouts, the potential of ImmTOR™ to reduce AAV vector immunogenicity and enable re-dosing of AAV gene therapy and other gene therapies without neutralizing antibody formation or loss of therapy expression, the anticipated timing of preclinical toxicology studies or other studies, including clinical trials, in AAV gene therapy, including when results from any study or trial will be available, other gene therapies and initiation of a clinical trial related thereto, the company's plans to develop product candidates to treat IgA Nephropathy and/or primary biliary cholangitis, the timing of commencement, completion, or enrollment of clinical trials for candidates to treat IgA Nephropathy and/or primary biliary cholangitis, the filing of INDs or other regulatory filings related thereto, the potential of SEL-212 to serve unmet needs in chronic refractory gout patients including sustained SUA reduction, reduced flares, and once monthly dosing, the anticipated timing for advancing into or completing Phase 3 as well as the anticipated design of the Phase 3 program, the ability of the company's ImmTOR technology to induce immune tolerance and mitigate antigen-specific neutralizing antibody formation, the scalability of the company's manufacturing processes, the potential of ImmTOR to enable sustained therapeutic activity of biologic therapies, whether current evaluable SEL-212 patients will be predictive of future evaluable SEL-212 patients, whether maintained SUA level reduction correlates with low and/or negative drug-specific antibody titers, 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, anticipated achievement of key milestones for the company's chronic refractory gout and gene therapy programs, the company's ability to execute on its strategic priorities, advance its ImmTOR platform, and grow its strategic partnerships, the potential of ImmTOR to enhance transgene expression, the potential of the company's partnership with Asklepios BioPharmaceutical, Inc. to address unmet medical need in patients with rare diseases, anticipated collaboration with and the receipt of payments from Swedish Orphan Biovitrum AB ("Sobi"), the company's expected cash position and runway, the billion dollar market potential of the chronic refractory gout market, the ability of the company's ImmTOR platform to unlock the full potential of biologic therapies, the potential of SEL-212 to enable sustained efficacy in chronic refractory gout patients and resolve their symptoms, the potential treatment applications for products utilizing the ImmTOR platform in areas such as enzyme therapy and gene therapy, the potential of AAV and non-AAV gene therapies to transform the future in a variety of inherited and acquired diseases, the potential of the ImmTOR 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 ImmTOR technology, potential delays in enrollment of patients, or the ability of patients to continue in our clinical trials due to the COVID-19 outbreak, 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, proprietary programs, licenses or contractual relationships, the ability of Asklepios BioPharmaceutical, Inc. to develop products and make milestone payments, the ability of Sobi to make milestone payments, the company's 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, the possibility that the company's recurring losses from operations and negative cash flows from operations could raise substantial doubt regarding its ability to continue as a going concern, substantial fluctuation in the price of its common stock, including fluctuation in the stock market generally and our stock price specifically due to the COVID-19 outbreak, the company's strategy may change, and the company may not be able to effectively implement its current strategic plan, the size of the company's workforce following the restructuring may not be sufficient, and the company may not be able to effectively attract or retain new employees, risks associated with the restructuring, such as employee claims and the risk that the actual financial and other impacts of the reduction could vary materially from the outcomes anticipated, the impact, if any, of the COVID-19 outbreak on the company's operations, including supply chain and clinical trials, other COVID-19 related risks and other important factors discussed in the "Risk Factors" section of the company's most recent Annual Report on Form 10-K filed with the Securities and Exchange Commission, or SEC, and in other filings that the company makes with the Securities and Exchange Commission. 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

Investment highlights

ImmTOR™ platform designed to give rise to antigen-specific immune tolerance

- Platform has significant potential to mitigate unwanted immune responses in a targeted manner
- Has the capacity to amplify the efficacy of biologic therapies, including redosing of life-saving gene therapies, as well as restore the body's natural self-tolerance in autoimmune diseases

SEL-212 phase 3 clinical program in chronic refractory gout lays groundwork for future success

- ImmTOR has demonstrated clinical efficacy in ameliorating immune response to pegadricase, an immunogenic enzyme that debulks urate crystal deposits but induces anti-drug antibodies
- Validates Selecta's approach, with program serving as proof of concept for ImmTOR pipeline
- SEL-212 was strategically licensed to Sobi in July 2020 for up to $730 million plus royalties

Pipeline of therapeutic enzymes, gene therapies and novel targeted therapies for autoimmune diseases

- Dose-escalation study evaluating ImmTOR with AAV gene therapy ongoing in healthy volunteers, building on compelling non-human primate data; topline data expected in Q4 2021
- First therapeutic AAV gene therapy program in methylmalonic acidemia (MMA) expected to enter clinic in H1 2021 in partnership with AskBio
- Expect to file IND for second therapeutic enzyme approach in IgA nephropathy (IgAN) by the end of 2021. Program aims to build on learnings from SEL-212
- Wholly-owned gene therapy program in OTC deficiency and wholly-owned autoimmune program in Primary Biliary Cholangitis (PBC), both expected to enter clinic in 2022

Partnerships with leading gene therapy and pharmaceutical companies strongly support Selecta approach

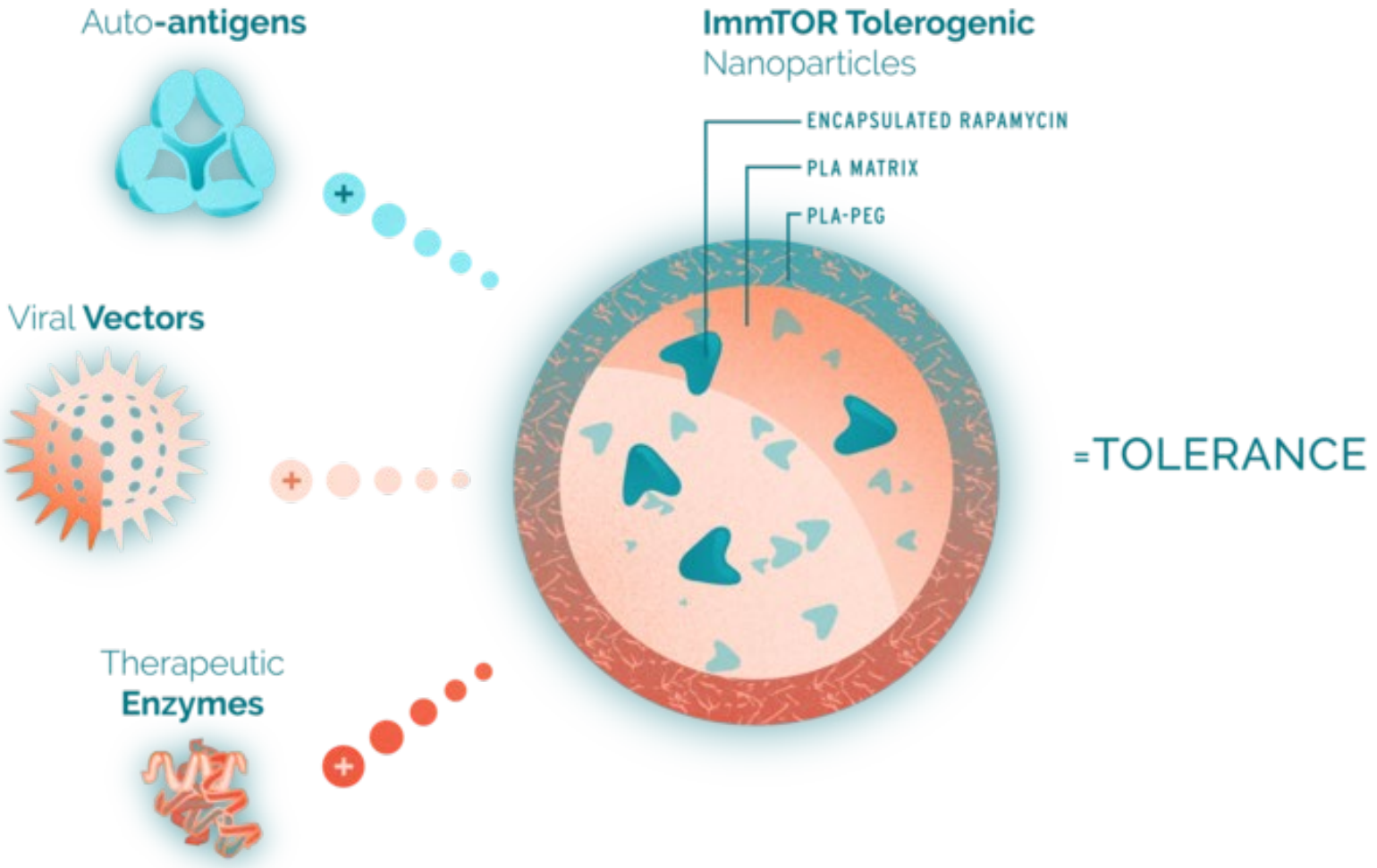
- Partnerships and collaborations with Sobi, AskBio, and Sarepta

Selecta™ Biosciences

ImmTOR
Pioneering
Immune Tolerance Platform

ImmTOR platform gives rise to antigen-specific immune tolerance

ImmTOR combines nanoparticle technology, with an approved anti-inflammatory and immunomodulatory drug, rapamycin, to generate antigen-specific immune tolerance when combined with the antigen of interest



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Pipeline

	Indication	Antigen	Preclinical	Phase 1	Phase 2	Phase 3	Upcoming Milestones	Commercial Rights
AMPLIFYING THE EFFICACY OF BIOLOGIC THERAPIES								
ENZYMES	Chronic Refractory Gout	Pegadricase	SEL-212				Phase 3 data H2 2022	sobi rare strength
ENZYMES	IgA nephropathy (IgAN)	IgA protease					IND filing Q4 2021	Selecta Biosciences
GENE THERAPIES	Methylmalonic acidemia (MMA)	AAV (serotype undisclosed)	MMA-101				Phase 1 trial commencing H1 2021; preliminary data expected H2 2021	Selecta Biosciences / AskBio
GENE THERAPIES	Ornithine Transcarbamylase (OTC) Deficiency	AAV-hOTC	SEL-313				IND filing 2022	Selecta Biosciences
GENE THERAPIES	Pompe disease	Undisclosed						AskBio
GENE THERAPIES	Duchenne muscular dystrophy (DMD)	Undisclosed						SAREPTA THERAPEUTICS
GENE THERAPIES	Limb-girdle muscular dystrophy (LGMD)	Undisclosed						SAREPTA THERAPEUTICS
RESTORING SELF-TOLERANCE IN AUTOIMMUNE DISEASES								
	Primary biliary cholangitis (PBC)	PDC-E2					IND filing 2022	Selecta Biosciences

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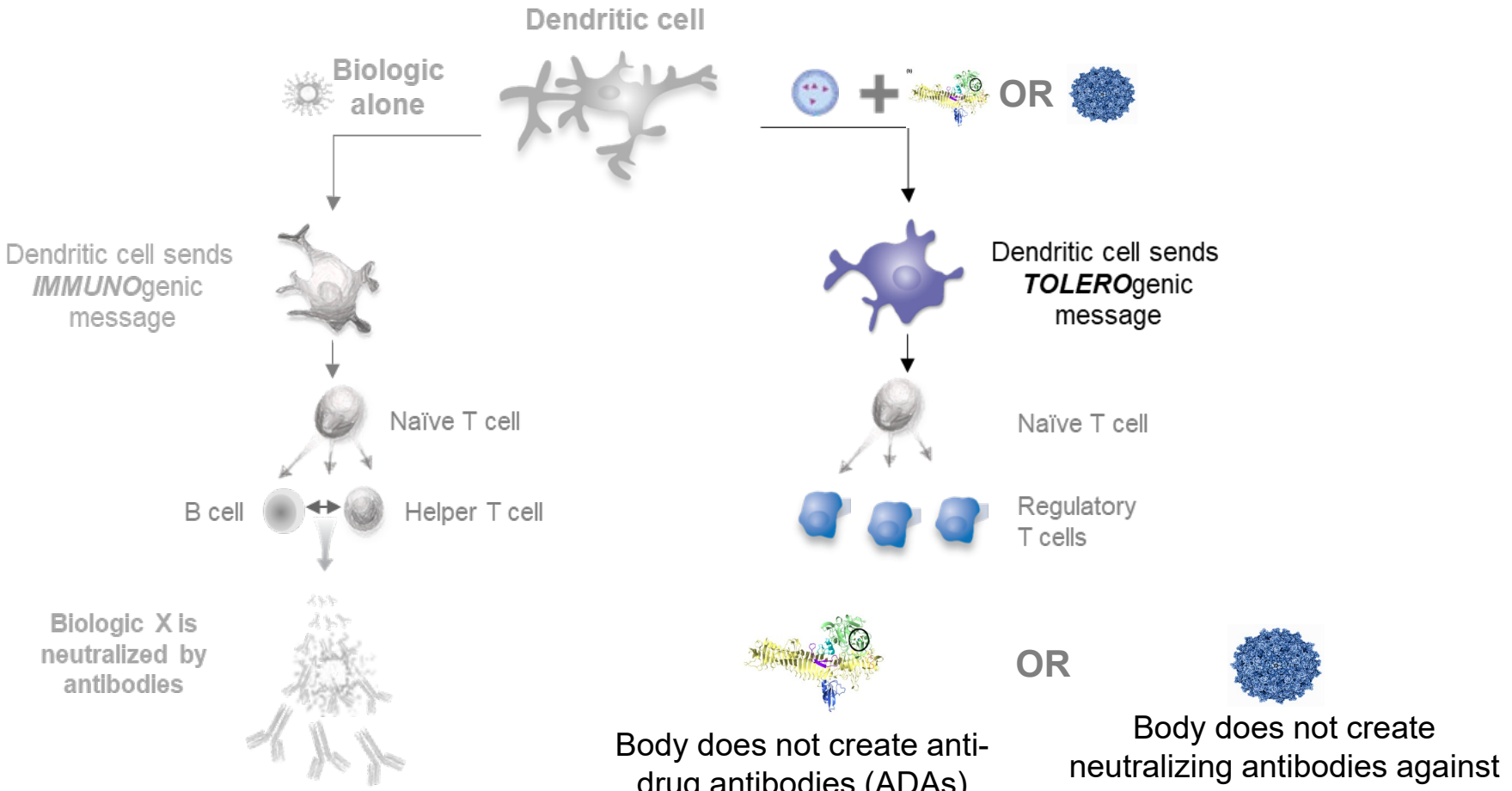
ImmTOR
Amplifying the efficacy of biologic therapies

ImmTOR platform amplifies the efficacy of biologic therapies

ImmTOR loaded with rapamycin is co-administered with the therapeutic enzyme or AAV gene therapy to mitigate the body's immune response



Body does not create anti-drug antibodies (ADAs) against therapeutic enzyme, allowing it to remain active

Body does not create neutralizing antibodies against AAV, potentially enabling redosing

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Enzymatic therapies

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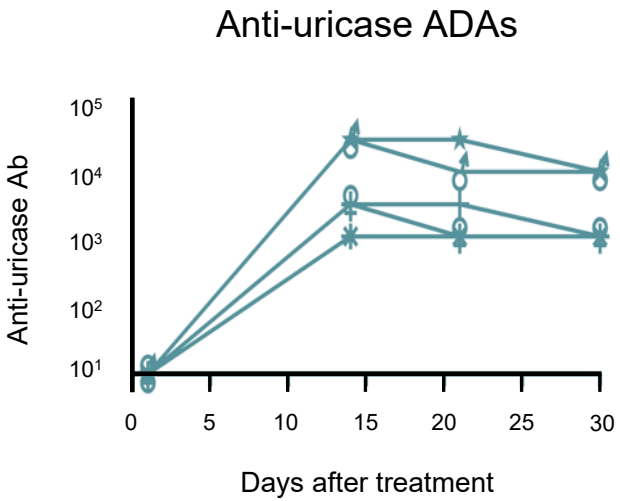
SEL-212 serves as proof of concept for approach in enzymatic therapies

Pegadricase is a highly immunogenic enzyme with only 15% of chronic refractory gout patients maintaining control after four weeks of therapy; ImmTOR increased the response rate to 66% in phase 2 dose finding study

Pegadricase is highly immunogenic when given alone

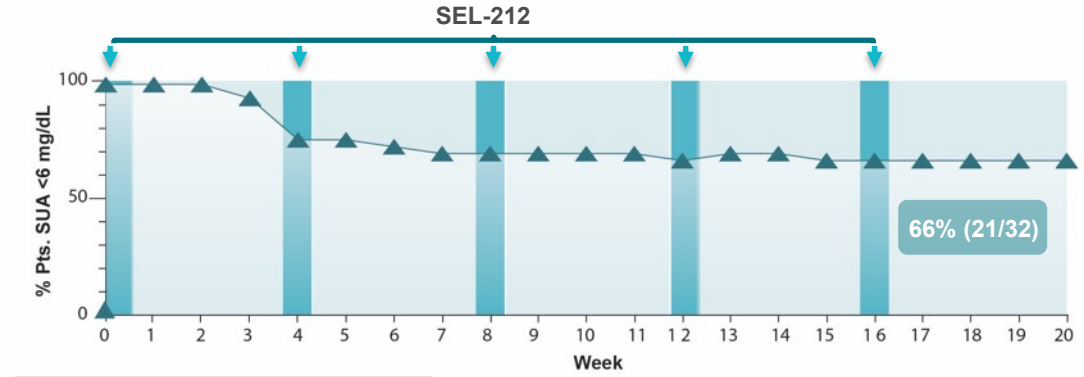


5/5 patients treated with pegadricase alone developed ADAs within 2 weeks of a single treatment

ImmTOR successfully ameliorates immune response to pegadricase and is generally well-tolerated

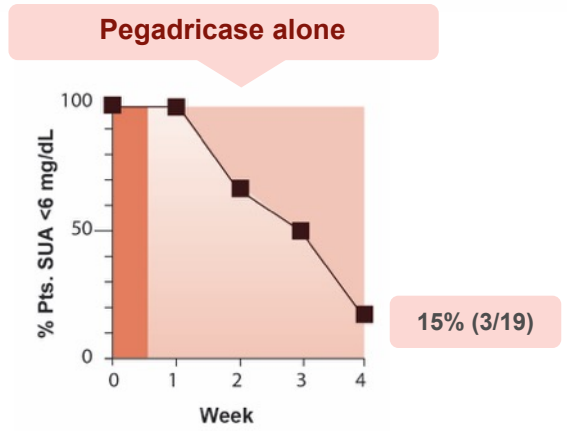
5 monthly SEL-212*

Pegadricase
0.2 mg/kg
ImmTOR
0.1 or 0.15 mg/kg



Pegadricase alone**

Pegadricase
0.2 or 0.4 mg/kg



* Data from 5 monthly dosing cohorts of the SEL-212/201 trial
**Data from pegadricase alone cohorts from the SEL-037/101, SEL-212/101, and SEL-212/201 trials

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Reduction in mean serum uric acid (SUA) in phase 2 COMPARE trial

Statistically significant 48% overall reduction in mean SUA for SEL-212 versus pegloticase

- Treatment with SEL-212 demonstrated a statistically significant greater reduction in mean SUA levels than pegloticase during months 3 plus 6 combined in both PP and ITT data sets
- Baseline SUA levels were not statistically different between SEL-212 and pegloticase

Evaluation Period (Month)	Data Set	Treatment Group	Baseline SUA (mg/dL)	n*	Mean Reduction (mg/dL)**	% reduction of SEL-212 versus pegloticase***	p****
Months 3 and 6 combined	PP	SEL-212	9.00	49	-6.68	-48%	0.003
		pegloticase	8.52	61	-4.51		
	ITT	SEL-212	9.12	64	-6.79	-40%	0.003
		pegloticase	8.47	72	-4.85		

Resolution of tophi is predicted to be correlated to the degree of SUA suppression
(Chui et al Mod Rheumatol 2020)

* Number of patients with SUA assessments

** Reduction in SUA computed by subtracting baseline SUA from mean during treatment period as determined by the area under the SUA time curve divided by the corresponding time interval (mg/dL). Rounded to two decimal points.

*** Computed by (pegloticase – SEL-212) / pegloticase * 100 (rounded to nearest integer)

*** p-value is based on ANOVA with fixed factor for treatment and tophus presence at randomization (Yes/No)

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Patients with tophi at baseline who achieved and maintained reduction of serum uric acid (SUA)

A delta of 19 percentage points observed on SEL-212 versus pegloticase for patients with visible tophi at baseline

Patients with Tophi:

- Represent the most severely affected population of gout patients
- Are less likely to achieve target SUA levels on conventional oral lowering therapies and have increased gout-related emergency room visits, hospitalizations, and gout-related surgeries
- Have increased prevalence of swollen and tender joints and chronic kidney disease
- Have increased risk or mortality

Evaluation Period (Month)	Data Set	SEL-212		pegloticase		Treatment Difference**
		n*	Responder Percent	n*	Responder Percent	Percentage pts
Month 3 and 6 combined	PP	26	58%	26	39%	19
	ITT	35	57%	34	42%	16

* Number of patients with tophi with Responder Assessment

** Treatment difference = SEL-212 percent responder - pegloticase percent responder. Rounded to nearest integer.

** One-sided p-value (SEL-212 > pegloticase) Based on stratified Cochran-Mantel-Haenszel (CMH) test. Stratification factor is tophus presence at randomization (Yes/No)

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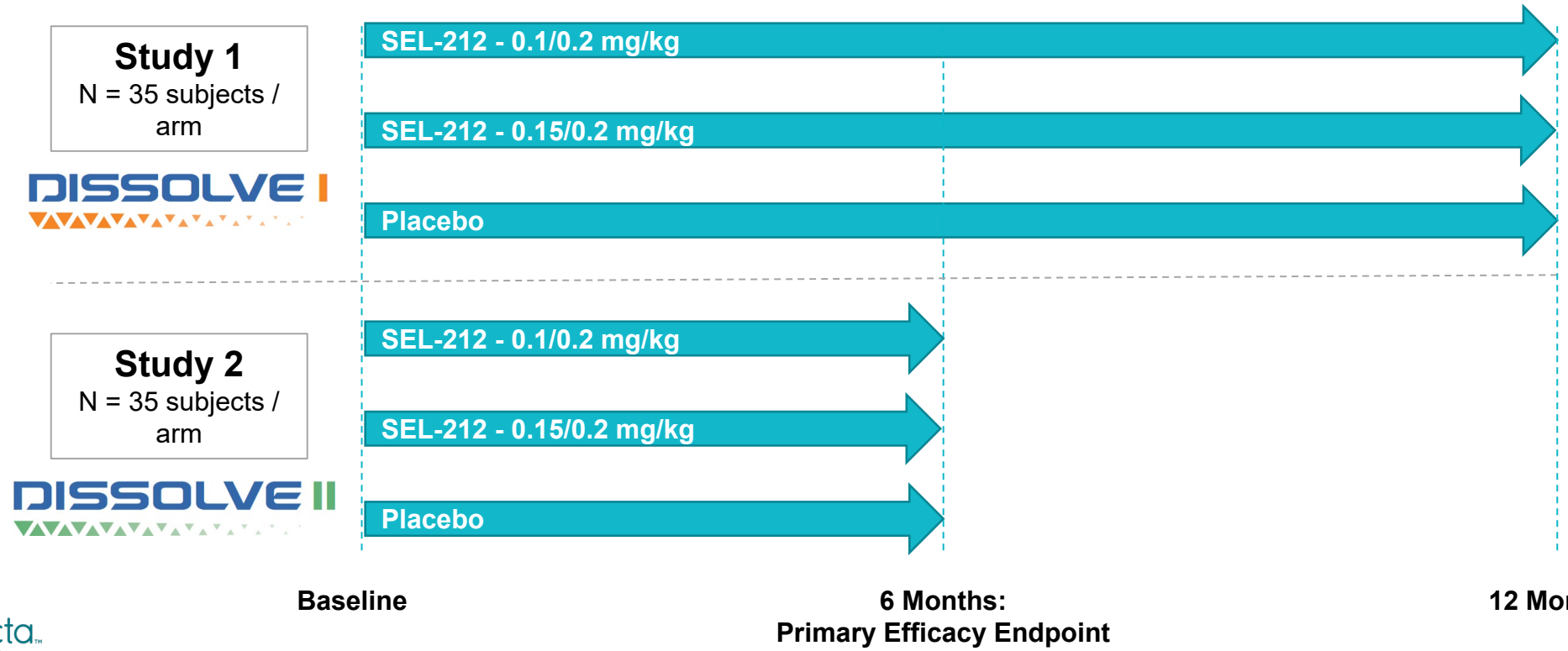
Sources: Khanna et al Arthr Rheumatol 2016, 68, suppl 10; Edwards et al, Rheumatol 2019; Vincent et al J Rheumatol 2017; Perez-Ruiz, Ann Rheum Dis 2014

SEL-212 phase 3 DISSOLVE program design

SEL-212 is being evaluated in a pivotal phase 3 program versus placebo, with topline data expected in 2H 2022

- 2 double blinded placebo-controlled trials of SEL-212 (0.1 mg/kg & 0.15 mg/kg ImmTOR)
  - Both studies have a 6-month primary endpoint of serum uric acid (SUA) < 6 mg/dL at month 6, and DISSOLVE I has a 6-month safety extension; secondary endpoints include tender and swollen joint counts, tophus burden, patient reported outcomes of activity limitation and quality of life and gout flare incidence
- Randomized 1:1:1 against Placebo with a total of 210 Treated Subjects
- First patient randomized and dosed in September 2020
- Topline data from the DISSOLVE program is expected in 2H 2022



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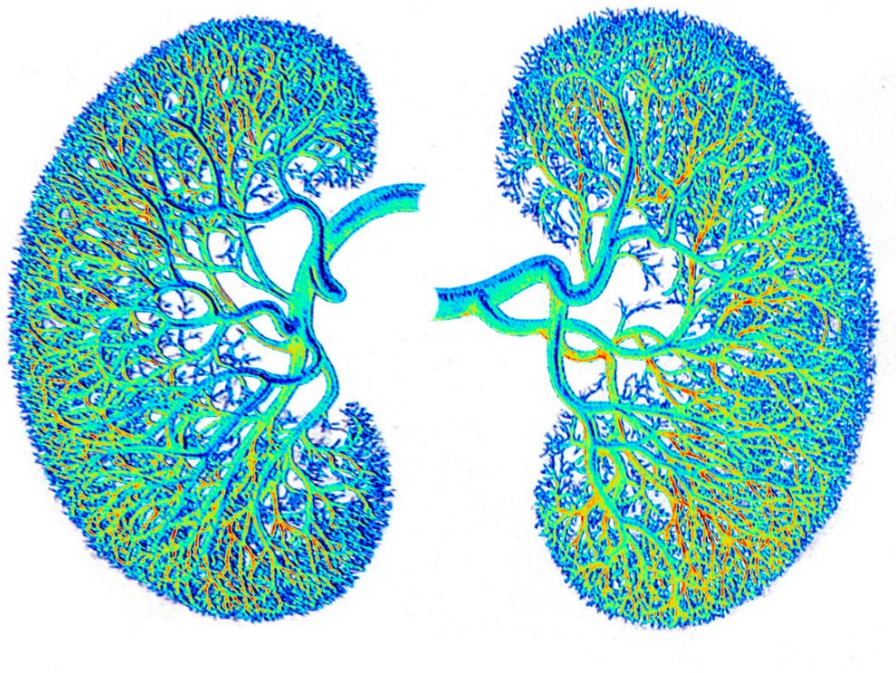
Immunoglobulin A nephropathy (IgAN)

ImmTOR to be co-administered with IgA protease for the treatment of IgAN

- IgA nephropathy a leading cause of chronic kidney disease (CKD) and renal failure with 30-40% of patients reaching end-stage renal disease; approximately 100,000 patients in the U.S. and no approved therapies
- Caused by deposits of the protein immunoglobulin A (IgA) inside the filters (glomeruli) in the kidney which may lead to presence of blood (hematuria) and protein (proteinuria) in urine
- Current treatments are focused on protecting the kidney from further damage by controlling blood pressure, cholesterol, and inflammation but fail to address the root cause of the disease
- Selecta is developing a candidate for the treatment of IgAN combining ImmTOR with IGAN's IgA protease to remove injurious IgA from kidneys and improve markers of renal dysfunction



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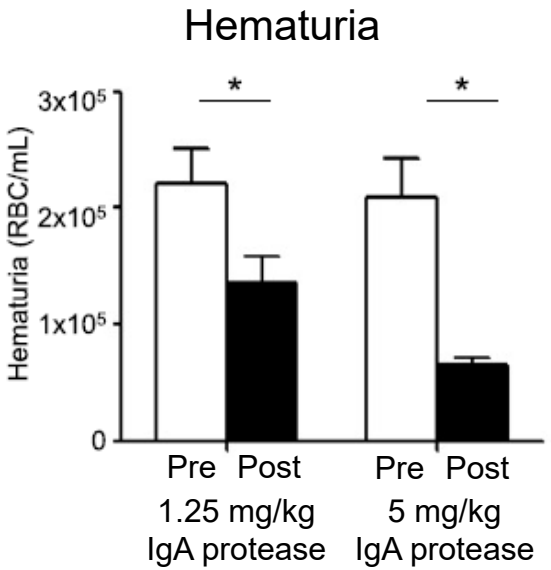
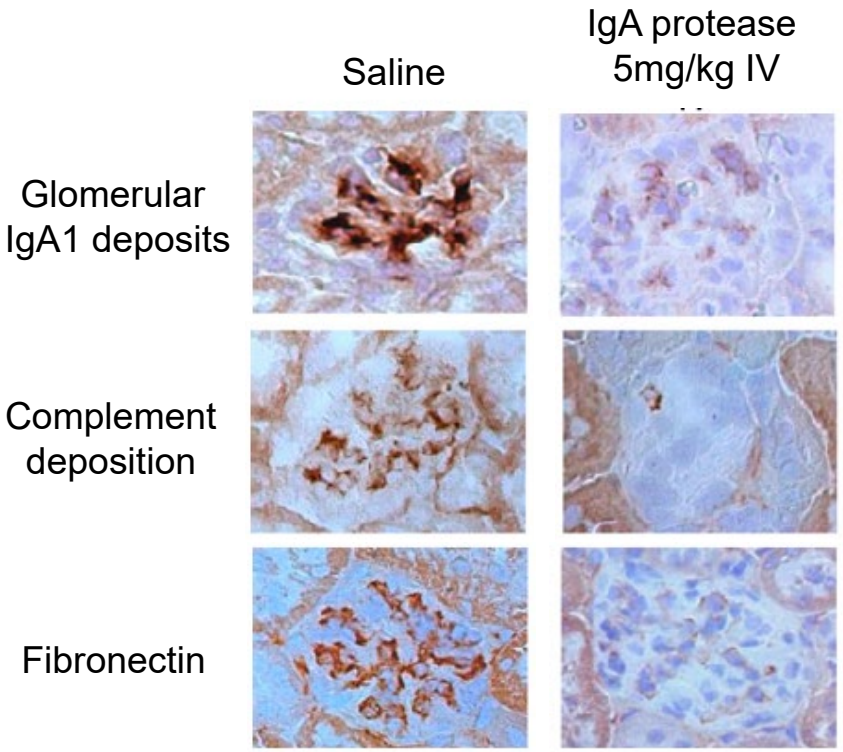
ImmTOR for IgA nephropathy (IgAN): building on SEL-212's success

Leveraging success of SEL-212 program with IGAN's IgA protease

- Selecta intends to co-administer ImmTOR with its proprietary IgA protease to address IgA nephropathy
- Mice expressing human IgA1 and sCD89 develop spontaneous IgA nephropathy
- Treatment with IgA protease clears glomerular IgA1 deposits and associated inflammation and hematuria
- IND for IgAN is expected by the end of 2021





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Adapted from Lechner et al., *J Am Soc Nephrol*, 2016.

Re-dosing of life saving gene therapies

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ImmTOR has the potential to make gene therapies safer and more durable

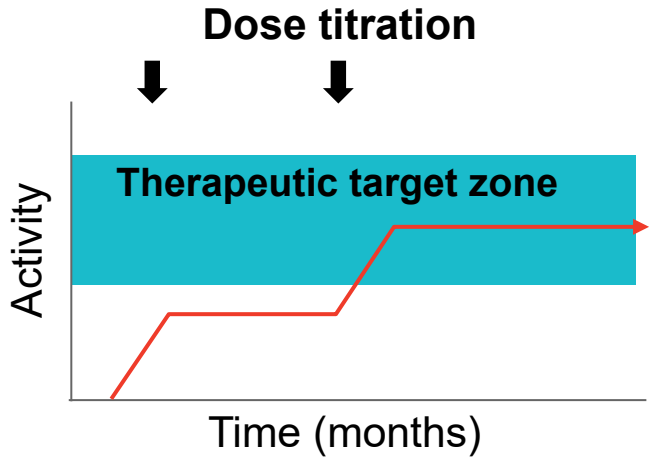
ImmTOR could transform the field of gene therapies in several meaningful ways

Potential for Enhanced Safety Profile

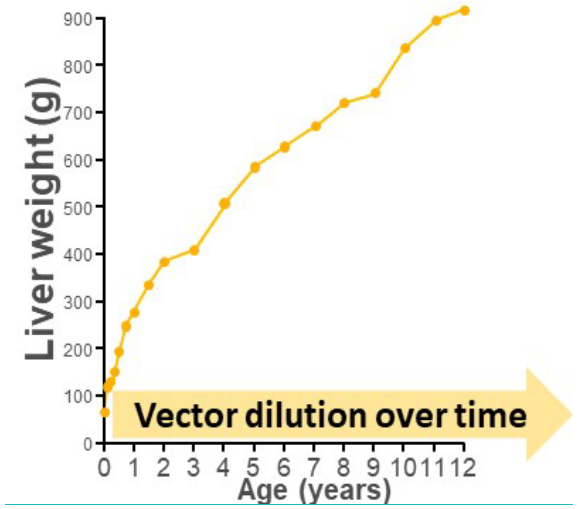
- Potential to administer multiple lower doses to achieve therapeutic benefit without risk of overdosing
- Potential to treat patients with metabolically unstable liver disease

Potential for Increased Durability

- Potential to increase the percentage of transduced cells through repeat dosing
- Potential to enhance hepatic transgene expression via increased trafficking to the liver
- Potential to target systemic diseases in which multiple vector administrations are likely needed to achieve full therapeutic efficacy
- Potential to increase enrollment of patients by attenuating the impact of pre-existing antibodies
- Potential to restore therapeutic expression in pediatric patients as they grow



Rescue of expression



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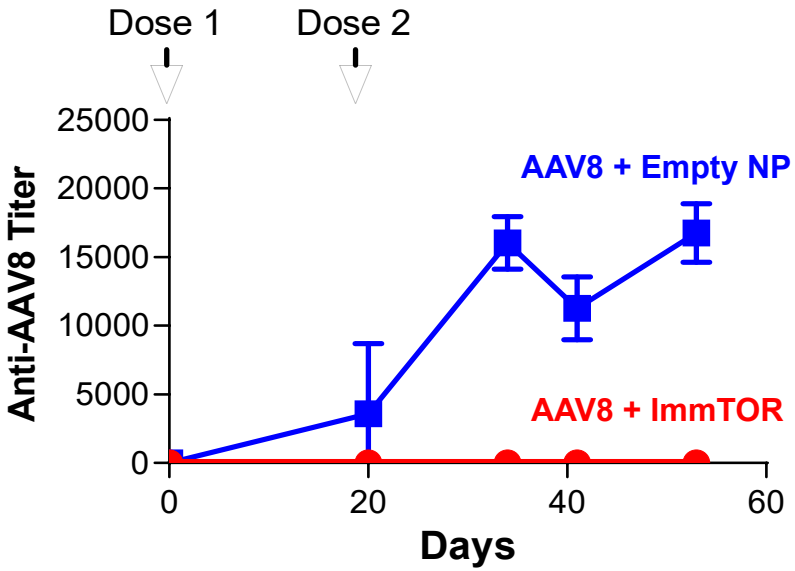
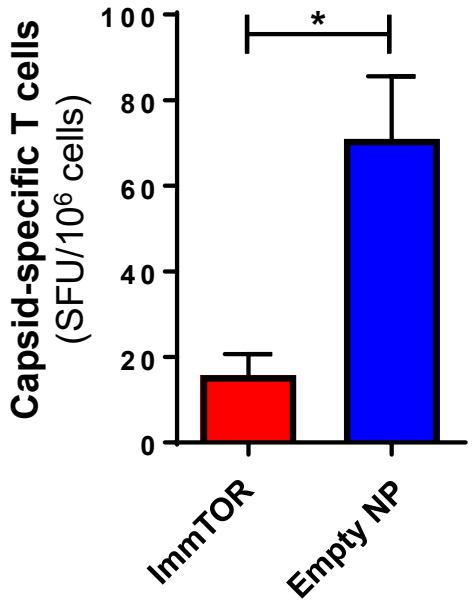
Compelling preclinical data in AAV gene therapy…

Preclinical data indicate ImmTOR induces antigen-specific immune tolerance and mitigates AAV immunogenicity

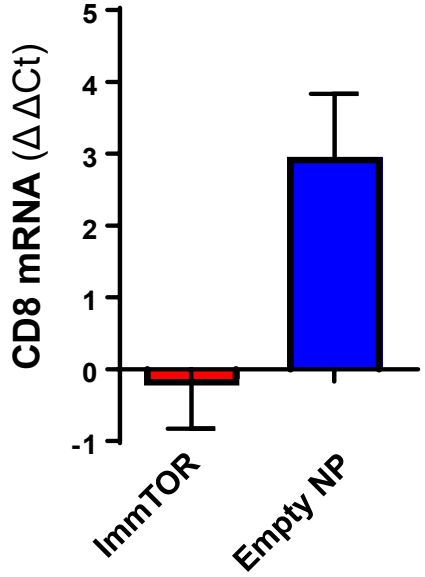
Anti-AAV8 Antibody Titer



AAV-specific splenic T cells



CD8 T cell liver infiltrates



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Meliani et al., *Nature Communications*, In Oct. 2018

…demonstrating the ability to enhance transgene expression and enable repeat dosing

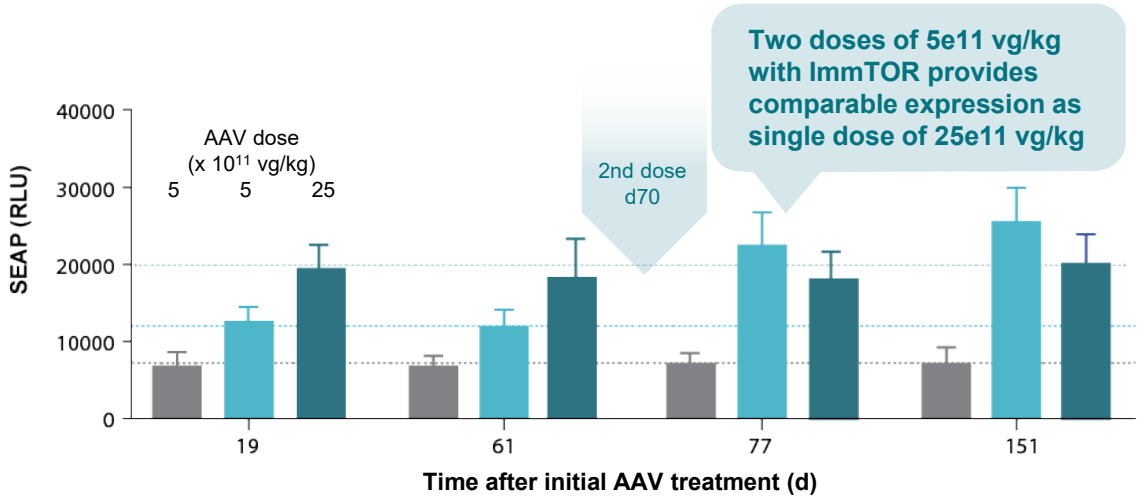
- ImmTOR enhances transgene expression after first and second doses of AAV
- Repeat dosing enabled by ImmTOR is dose sparing

Day 0

5e11 vg/kg AAV-SEAP
5e11 vg/kg AAV-SEAP + ImmTOR
25e11 vg/kg AAV-SEAP

Day 70

5e11 vg/kg AAV-SEAP
5e11 vg/kg AAAV-SEAP + ImmTOR
25e11 vg/kg AAV-SEAP



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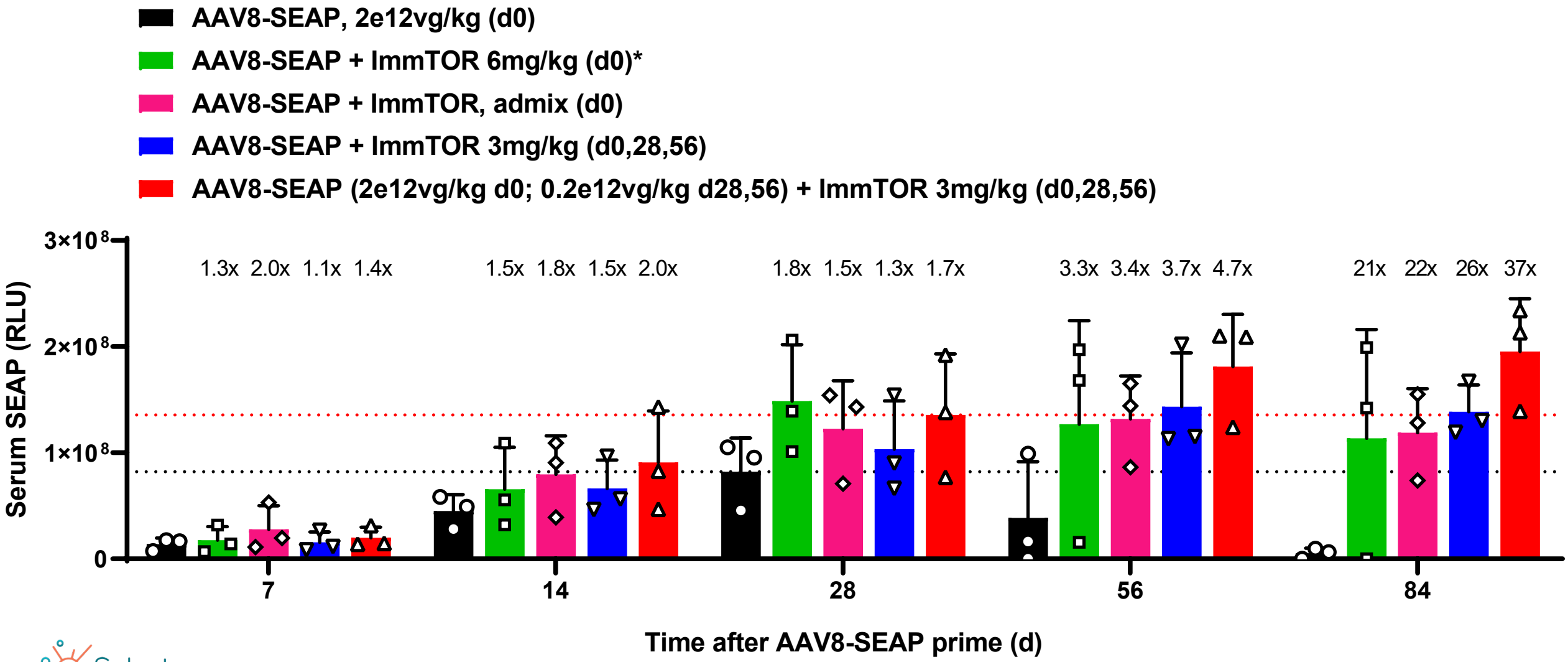
Non-Human Primate (NHP) study to explore optimal treatment regimen with ImmTOR

Durability of transgene expression in ImmTOR treated animals maintained through day 84



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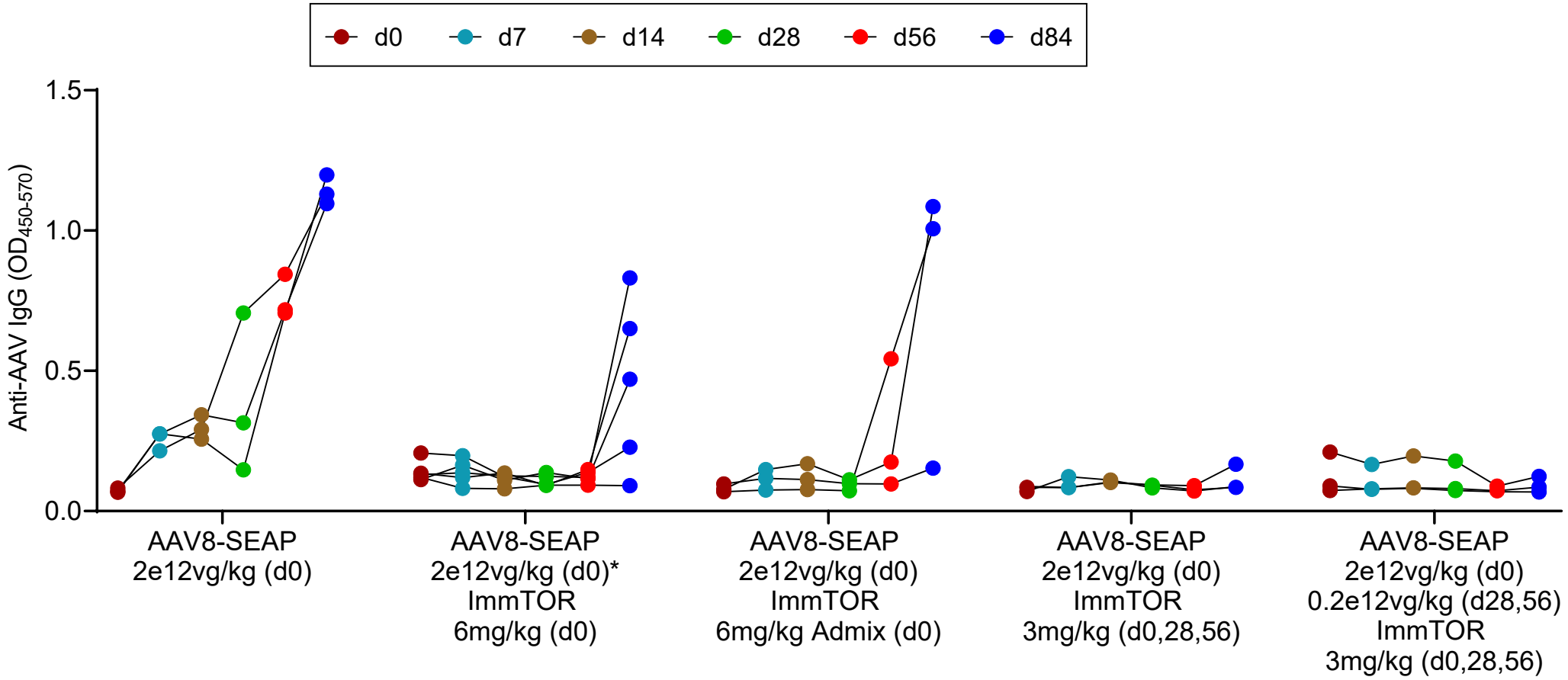
*two monkeys mis-dosed with higher AAV8-SEAP in Group 2 were omitted in this analysis.

Anti-AAV8 IgG data through day 84

Robust inhibition of anti-AAV IgG antibodies in ImmTOR treated animals



*Two monkeys in group 2 were inadvertantly dosed with 1.4x and 1.7x AAV8-SEAP and were replaced with two additional animals. Data for all 5 animals shown

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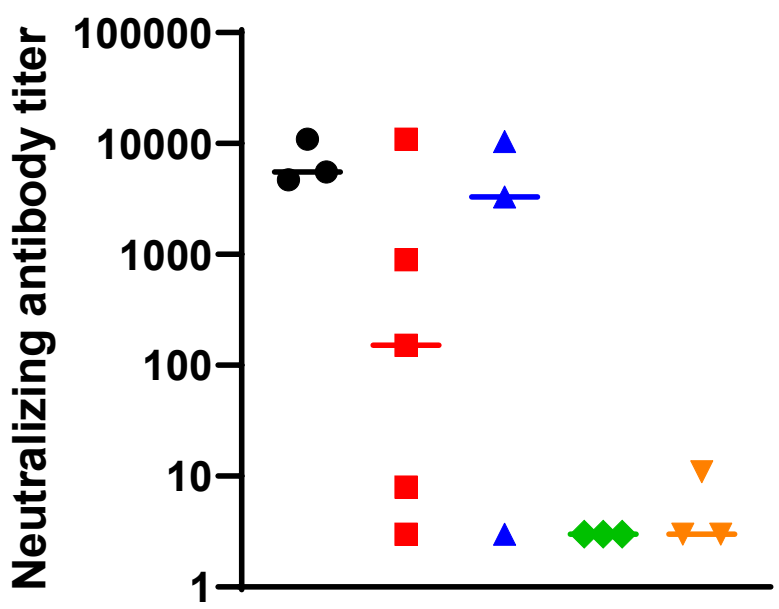
Day 84 neutralizing antibody titer (log scale)

Robust inhibition of neutralizing antibodies in ImmTOR treated animals



- AAV8-SEAP, 2e12vg/kg (d0)
- AAV8-SEAP, 2e12vg/kg (d0) + ImmTOR, 6 mg/kg (d0)
- AAV8-SEAP, 2e12vg/kg (d0) + ImmTOR, 6 mg/kg (d0), Admixed
- AAV8-SEAP, 2e12vg/kg (d0) + ImmTOR, 3 mg/kg (d0, 28, 56)
- AAV8-SEAP, 2e12vg/kg (d0), 0.2e12vg/kg (d28, 56) + ImmTOR, 3 mg/kg (d0, 28, 56)

Selecta Biosciences

Dose escalation study to evaluate ImmTOR in gene therapy

Represents first-in-human dosing of an AAV capsid in combination with ImmTOR

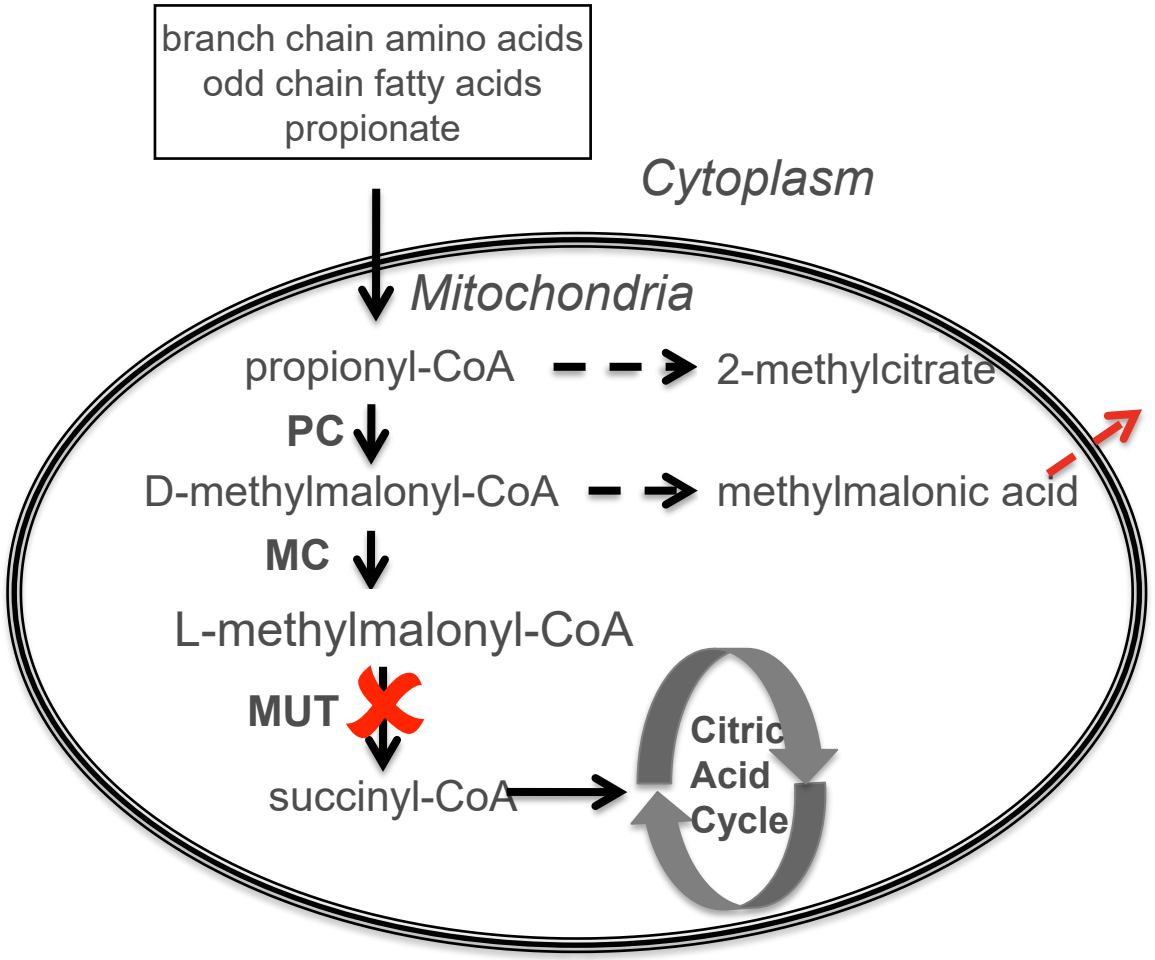
- Selecta and AskBio initiated a Phase 1 dose-escalation trial of SEL-399, an AAV8 empty vector capsid (EMC-101) containing no transgene combined with ImmTOR in the first quarter of 2021
- The study builds upon the learnings from the NHP study, and aims to determine the optimal dose of ImmTOR to mitigate the formation of antibodies to AAV8 capsids used in gene therapies
- Trial expected to enroll 45 healthy volunteers in Belgium
  - Subjects will be randomized in a 3:1 ratio of ImmTOR plus empty AAV8 capsid to empty capsid alone
  - The trial will study single doses of ImmTOR + empty AAV8 capsid (AAV8 dose: 2e12 vg/kg) (ImmTOR doses: 0.15 mg/kg, 0.3 mg/kg, and 0.5 mg/kg)
- Preliminary efficacy will be measured by assessing levels of AAV8-specific neutralizing antibodies at 30, 60, and 90 days
- Topline data expected in the fourth quarter of 2021

Selecta Biosciences AskBio

Initial gene therapy indication: methylmalonic acidemia (MMA)

Strategic collaboration with AskBio: ImmTOR to be co-administered with AskBio's AAV gene therapy candidate, MMA-101, for the treatment of MMA

- Methylmalonic acidemia (MMA) is a rare monogenic metabolic disease with a live birth incidence of ~1:50,000
- Majority of patients have mutations in the mitochondrial methylmalonyl-CoA mutase (MUT) gene
- Metabolic instability, particularly in the liver, can cause hyperammonemia and production of other toxic metabolites
- Metabolic crisis can cause irreversible neurocognitive damage, stunted growth, chronic kidney disease and premature death
- Only effective treatment is liver transplantation at an early age
- Selecta and AskBio are developing an AAV gene therapy (using an AAV vector) for the treatment of MMA. ImmTOR co-administered with AskBio's gene therapy candidate has the potential to amplify its efficacy

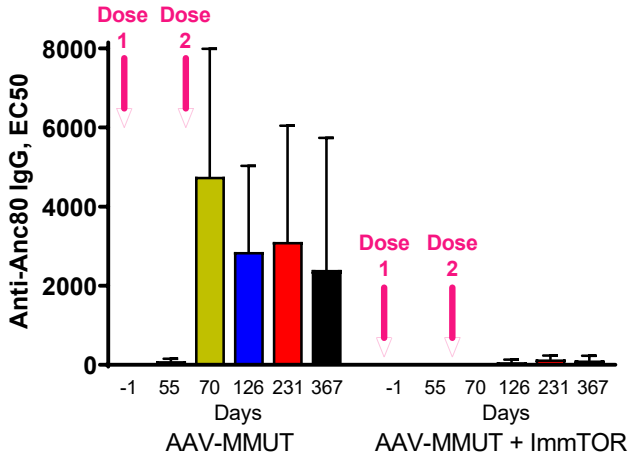


Selecta Biosciences AskBio

ImmTOR mitigates immunogenicity and enhances efficacy with repeated doses in a mouse model of MMA

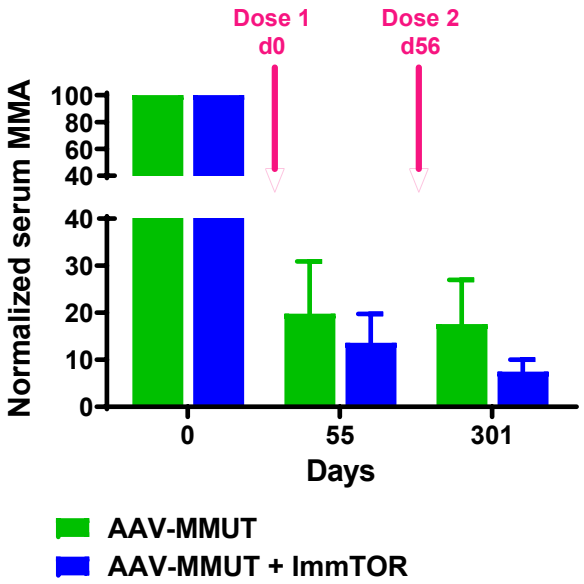
Selecta and AskBio intend to initiate a Ph. 1 clinical trial in MMA in H1 2021 with preliminary data expected in H2 2021

Anti-AAV IgG



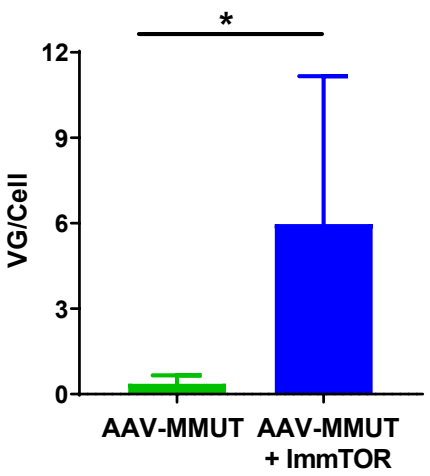
ImmTOR inhibits the development of neutralizing antibodies against AAV, demonstrating an ability to mitigate immunogenicity

Serum MMA



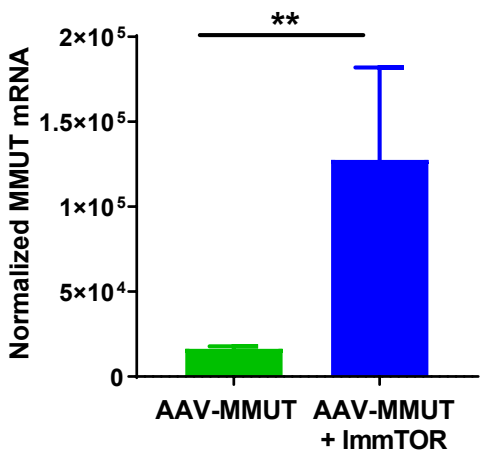
When ImmTOR is co-administered with AAV-MMUT normalized serum MMA is significantly reduced, compared to when AAV-MMUT is administered alone

Hepatic vector genomes



AAV productivity is significantly higher when AAV-MMUT is co-administered with ImmTOR

Hepatic MMUT mRNA



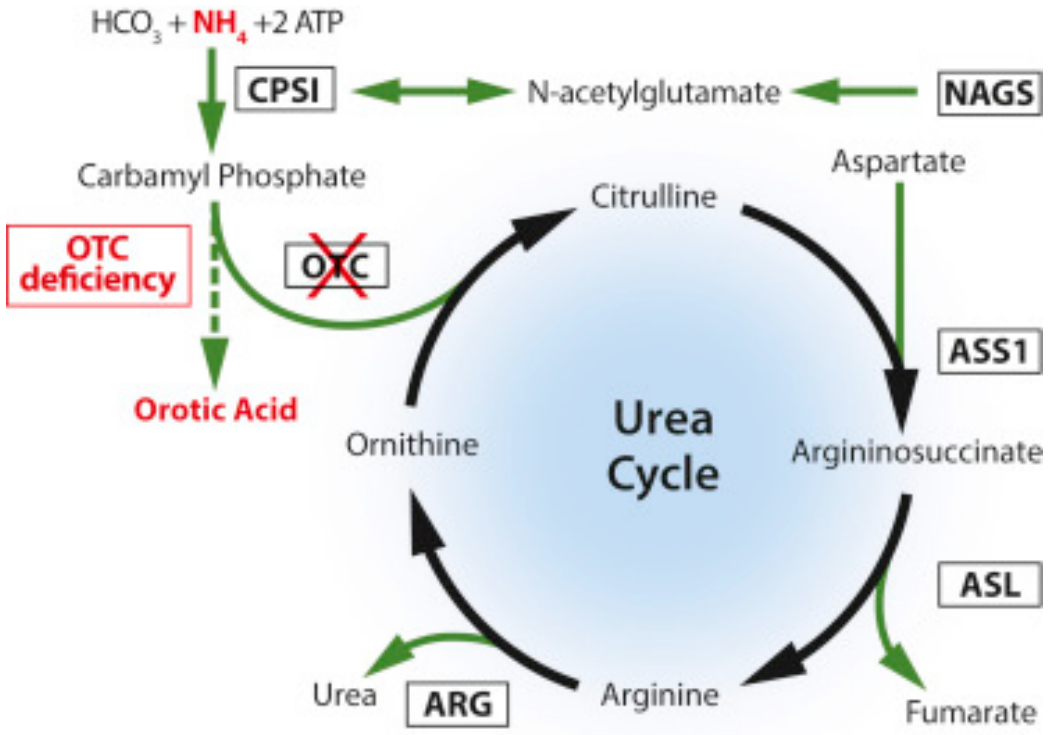
MMUT mRNA levels are significantly higher when AAV-MMUT is co-administered with ImmTOR, demonstrating enhanced efficacy

Selecta Biosciences AskBio

Gene therapy for the treatment of Ornithine transcarbamylase (OTC) deficiency

Selecta intends to advance its wholly-owned program for the treatment of OTC deficiency

- OTC deficiency is a genetic disorder that causes ammonia to accumulate in the blood with an incidence of 1:14,000 to 1:77,000; more prevalent in males (X-linked disorder)
- Mutations in the *OTC* gene, which is critical for proper function of the urea cycle
- The most severe form of the disorder presents within the first few days of life. Severe symptoms include inability to control body temperature and breathing rate, seizures, coma, developmental delays and intellectual disability. Less severe forms of the disorder are characterized by delirium, erratic behavior, aversion to high protein foods, vomiting and seizures
- Only effective treatment is liver transplantation at an early age



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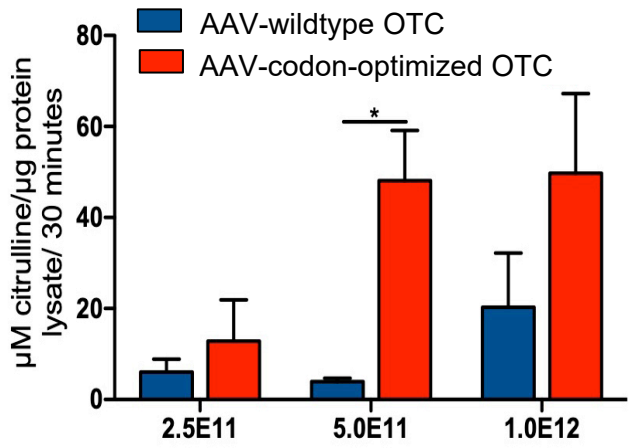
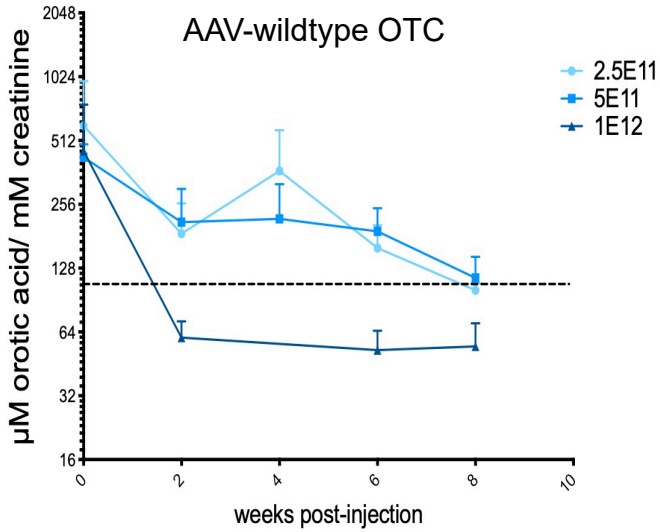
Selecta's codon-optimized transgene

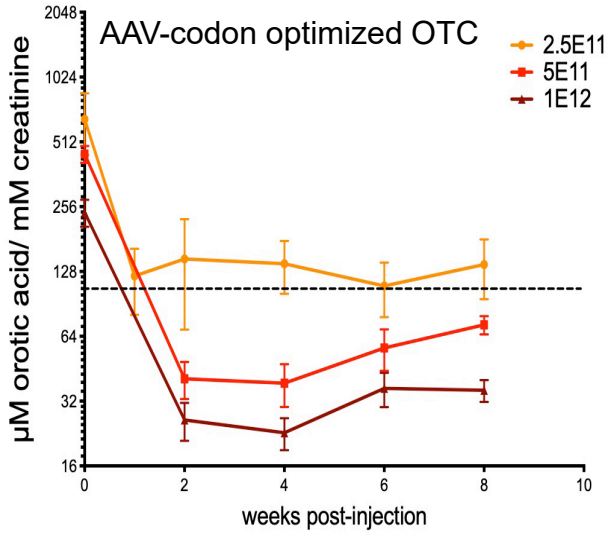
Preclinical data suggest that Selecta's codon-optimized AAV has the potential to lead to a significant increase in transgene expression, potentially enabling higher efficacy

Catalytic activity



Urinary orotic acid



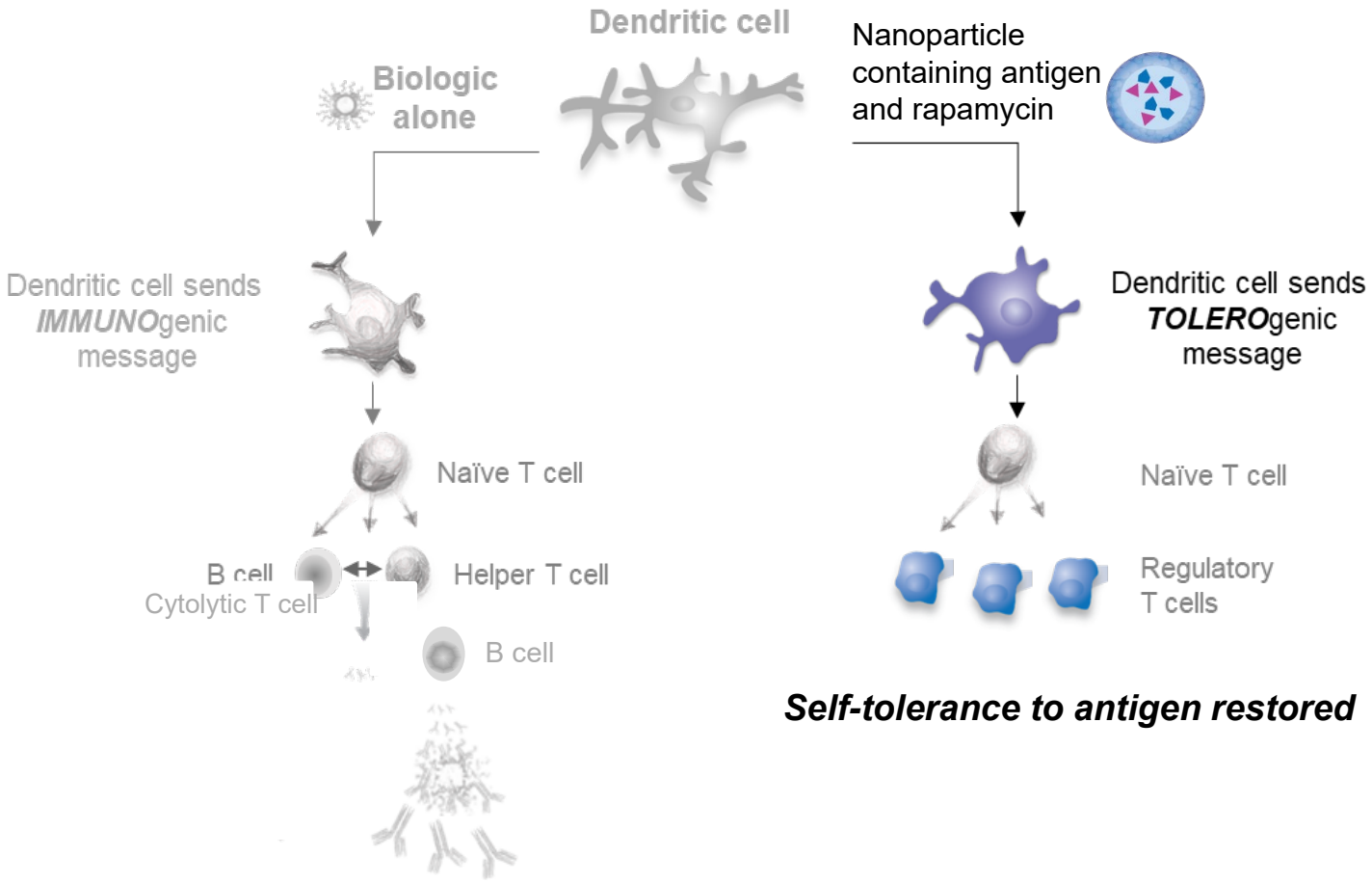


Selecta Biosciences

ImmTOR
Restoring self-tolerance in autoimmune diseases

ImmTOR platform gives rise to antigen-specific immune tolerance

ImmTOR can be co-administered with auto-antigens in a new, highly targeted approach to the treatment of autoimmune diseases characterized by clearly defined auto-antigens



Self-tolerance to antigen restored

Selecta Biosciences

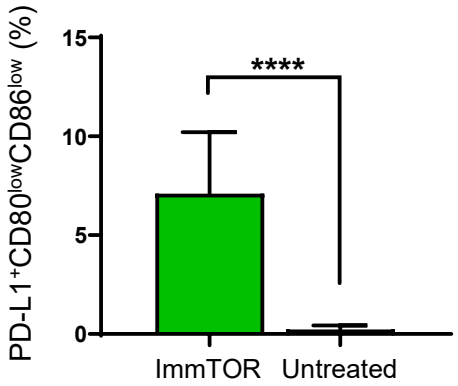
An ImmTOR-based approach to treating primary biliary cholangitis (PBC)

Selecta intends to co-administer ImmTOR with PDC-E2, the auto-antigen implicated in PBC

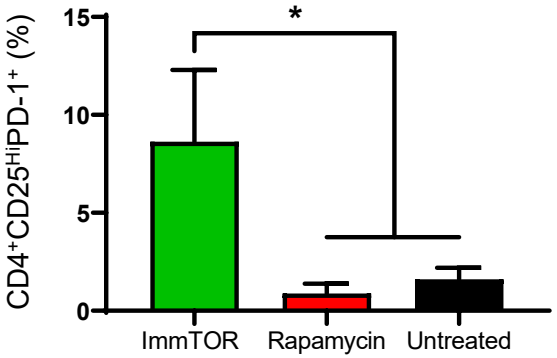
- Autoimmune disorder where the body mistakenly attacks tissue in the liver, leading to inflammation, damage and scarring of the small bile ducts
- Incidence of 1:2500 in the U.S.; more common in females
- Patients with PBC are desperately in need of a highly-targeted, liver-directed approach to treating the root cause of the disorder

ImmTOR is ideally suited to address PBC

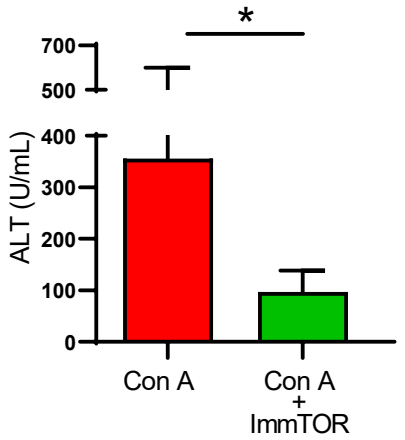
Tolerogenic liver sinusoidal endothelial cells



Hepatic regulatory T cells



Serum liver enzyme in Con A liver inflammation model



- PBC is a T-cell mediated disease driven by a well-defined antigen
- ImmTOR biodistributes to the liver and induces a tolerogenic environment
- ImmTOR shows hepatoprotective properties in liver injury models

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Enhancing value through collaborations

Selecta has entered strategic transactions with leading biopharmaceutical companies to further unlock the value of the ImmTOR platform

Collaboration	AskBio	AskBio	sobi rare strength	SAREPTA THERAPEUTICS
Year	2019	2019	2020	2020
ImmTOR Approach	Enable re-dosing of life-saving gene therapy	Enable re-dosing of life-saving gene therapy	Improving the efficacy of biologics	Enable re-dosing of life-saving gene therapy
Agreement	50/50 Collaboration Agreement	License Agreement (Global)	License Agreement (Global, excluding China)	Research Option and License Agreement (Global)
Indications	Methylmalonic acidemia and other undisclosed indications	Pompe disease	Chronic refractory gout	Duchenne Muscular Dystrophy and certain Limb-Girdle Muscular Dystrophy subtypes

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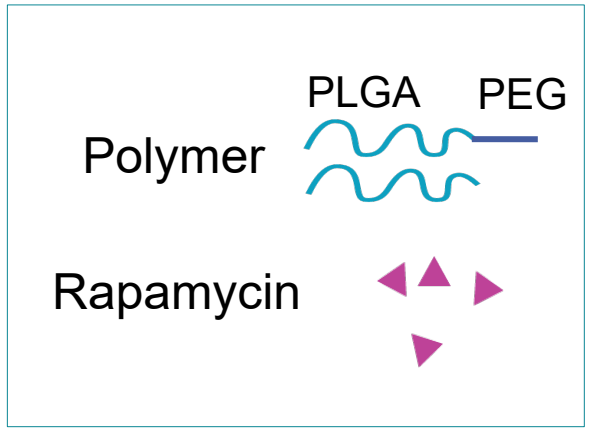
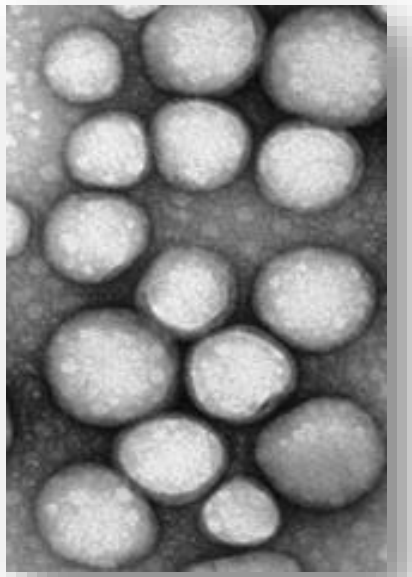
Robust GMP manufacturing capabilities

Proprietary manufacturing process adds additional protection to Selecta's intellectual property

- Well controlled and scalable process
- Validated analytical methods
- Batch to batch consistency
- Multiple GMP batches manufactured and released
- Commercial scale process developed



ImmTOR



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Projected upcoming milestones

Selecta has several near-term milestones across its ImmTOR platform

1H 2021

- IND filing for MMA-101 in Q2 2021 under AskBio collaboration
- Commence MMA-101 phase 1 study

2H 2021

- Preliminary POC data from MMA trial expected by end of 2021
- Topline data from empty capsid study expected in Q4 2021
- IND filing for wholly-owned IgA nephropathy program by end of 2021

1H 2022

Commence phase 1 trial in IgAN

2H 2022

IND filing for OTC deficiency gene therapy program

- Top-line data from Phase 3 program of SEL-212 in chronic refractory gout expected
- IND filing for autoimmune disease program in PBC

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Financial information at a glance

Company has funding into the second quarter of 2023

~$140.1 million

Cash on hand as of December 31, 2020 (1)

Current funding supports:

- Topline data read-out for empty capsid (EMC-101) study
- IND filing for MMA-101 gene therapy program in MMA
- Preliminary clinical data for MMA-101 in MMA
- IND filing for wholly-owned OTC deficiency program
- IND filing for wholly-owned IgA nephropathy program
- Top-line data from Phase 3 DISSOLVE program of SEL-212 in chronic refractory gout

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(1) Includes cash, cash equivalents, and restricted cash.

Experienced management team positions Selecta for success

Carsten Brunn, Ph.D.
President and CEO

Takashi Kei Kishimoto, Ph.D.
Chief Scientific Officer

Brad Dahms
Chief Financial Officer

Peter G. Traber, M.D.
Chief Medical Officer

Lloyd Johnson, Ph.D.
Chief Operating Officer

Kristen Baldwin
Chief People Officer

Selecta Biosciences

Investment highlights

ImmTOR™ platform designed to give rise to antigen-specific immune tolerance

- Platform has significant potential to mitigate unwanted immune responses in a targeted manner
- Has the capacity to amplify the efficacy of biologic therapies, including redosing of life-saving gene therapies, as well as restore the body's natural self-tolerance in autoimmune diseases

SEL-212 phase 3 clinical program in chronic refractory gout lays groundwork for future success

- ImmTOR has demonstrated clinical efficacy in ameliorating immune response to pegadricase, an immunogenic enzyme that debulks urate crystal deposits but induces anti-drug antibodies
- Validates Selecta's approach, with program serving as proof of concept for ImmTOR pipeline
- SEL-212 was strategically licensed to Sobi in July 2020 for up to $730 million plus royalties

Pipeline of therapeutic enzymes, gene therapies and novel targeted therapies for autoimmune diseases

- Dose-escalation study evaluating ImmTOR with AAV gene therapy ongoing in healthy volunteers, building on compelling non-human primate data; topline data expected in Q4 2021
- First therapeutic AAV gene therapy program in methylmalonic acidemia (MMA) expected to enter clinic in H1 2021 in partnership with AskBio
- Expect to file IND for second therapeutic enzyme approach in IgA nephropathy (IgAN) by the end of 2021. Program aims to build on learnings from SEL-212
- Wholly-owned gene therapy program in OTC deficiency and wholly-owned autoimmune program in Primary Biliary Cholangitis (PBC), both expected to enter clinic in 2022

Partnerships with leading gene therapy and pharmaceutical companies strongly support Selecta approach

- Partnerships and collaborations with Sobi, AskBio, and Sarepta

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