



# Corporate Presentation

January 2024

## **Rēclūdo (Latin)**

*transitive verb III conjugation*

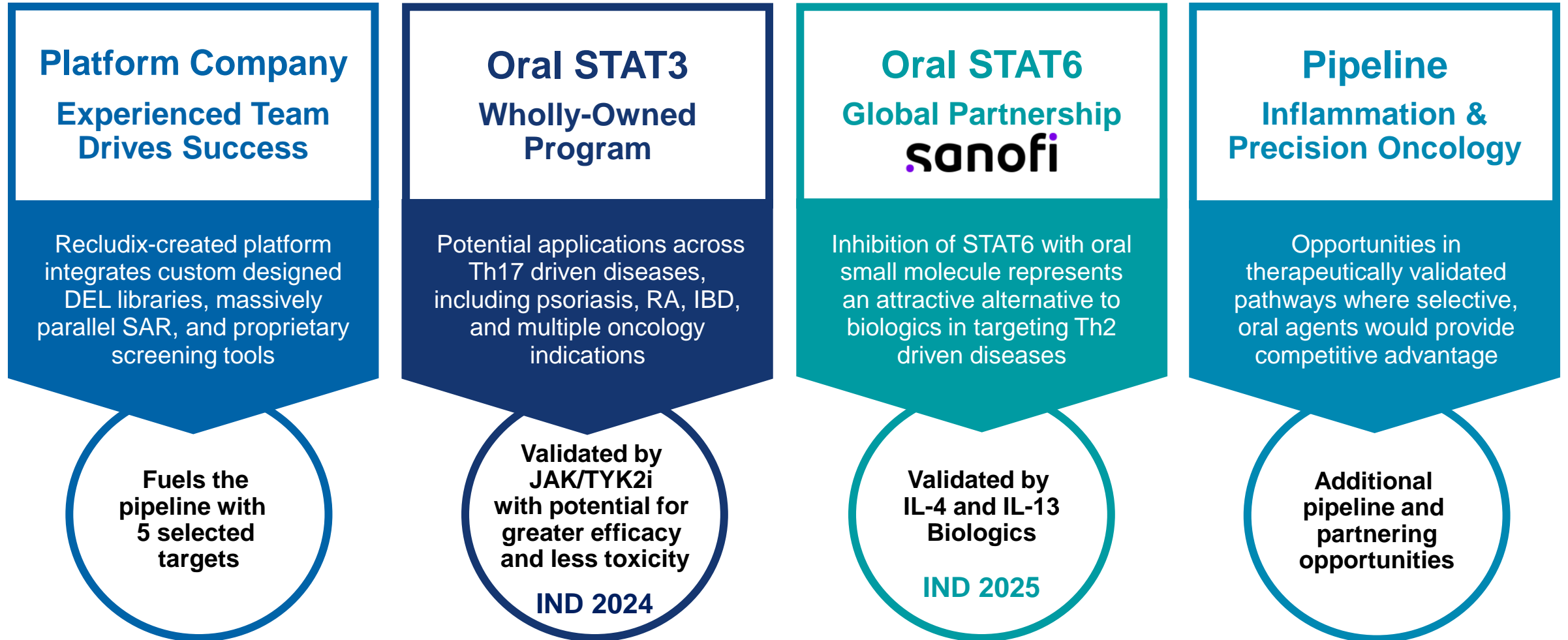
*1 to open*

*2 to open up, to disclose, to reveal, to unlock*

# Unlocking New Therapeutic Possibilities



# Unlocking Previously Undruggable SH2 Domains of High Value Targets in Inflammatory Diseases and Cancer



# Experienced Leadership and Top Tier Investors



**Nancy Whiting, Pharm.D.**

CEO

Seagen, GSK  
Adcetris®, Tukysa®, Padcev®, Tivdak®



**Patrick Zarrinkar, Ph.D.**

CSO

Wellspring, Pfizer, Blueprint, Ambit, GNF, MIT



**Catherine Bovenizer, C.P.A.**

SVP, Finance

Renova, Apricus, Ambit, Senomyx, Ligand, GeneFormatics



**Matt Caldemeyer, MBA**

CBO

Everest Medicines, Ambrx, Array, Amgen, Lilly



**Brian Hodous, Ph.D.**

SVP, Chemistry

Accent, Blueprint, Merck-Serono, Amgen, MIT  
Ayvakit™



**Daniel Treiber, Ph.D.**

SVP, Discovery Technology

Eurofins, Discoverx, Ambit, MIT



**Paul Smith, Ph.D.**

SVP, Biology

Connect Biopharm, Incyte, Merck Serono, Novartis  
Opzelura™



**Nick Lydon, Ph.D.**

Co-Founder, Board Member

Blueprint, AnaptysBio, Ambit, Amgen, Kinetix,  
Novartis/CIBA-GEIGY  
Gleevec®, Lasker-DeBakey Award, Japan Prize

## \$102M Series A



**Nick Lydon**

# Strategic Collaboration with Sanofi for STAT6 Inhibitor

## Strategic Collaboration to Advance Novel Oral STAT6 SH2 Domain Inhibitor

- Recludix will conduct preclinical research and early clinical development
- Sanofi will assume worldwide clinical development and commercialization from Phase 2 onwards
- Up to double-digit royalties on future sales
- Recludix has certain US co-promotion activities

**\$125M**

Near-term payments

**50%**

Option to participate in 50% U.S. Profit Share

**>\$1.2B**

Potential future development and sales milestones

***Validates Recludix Approach to Developing Selective Oral STAT SH2 Domain Inhibitors***

# SH2 Domains Have Previously Been Deemed “Undruggable”

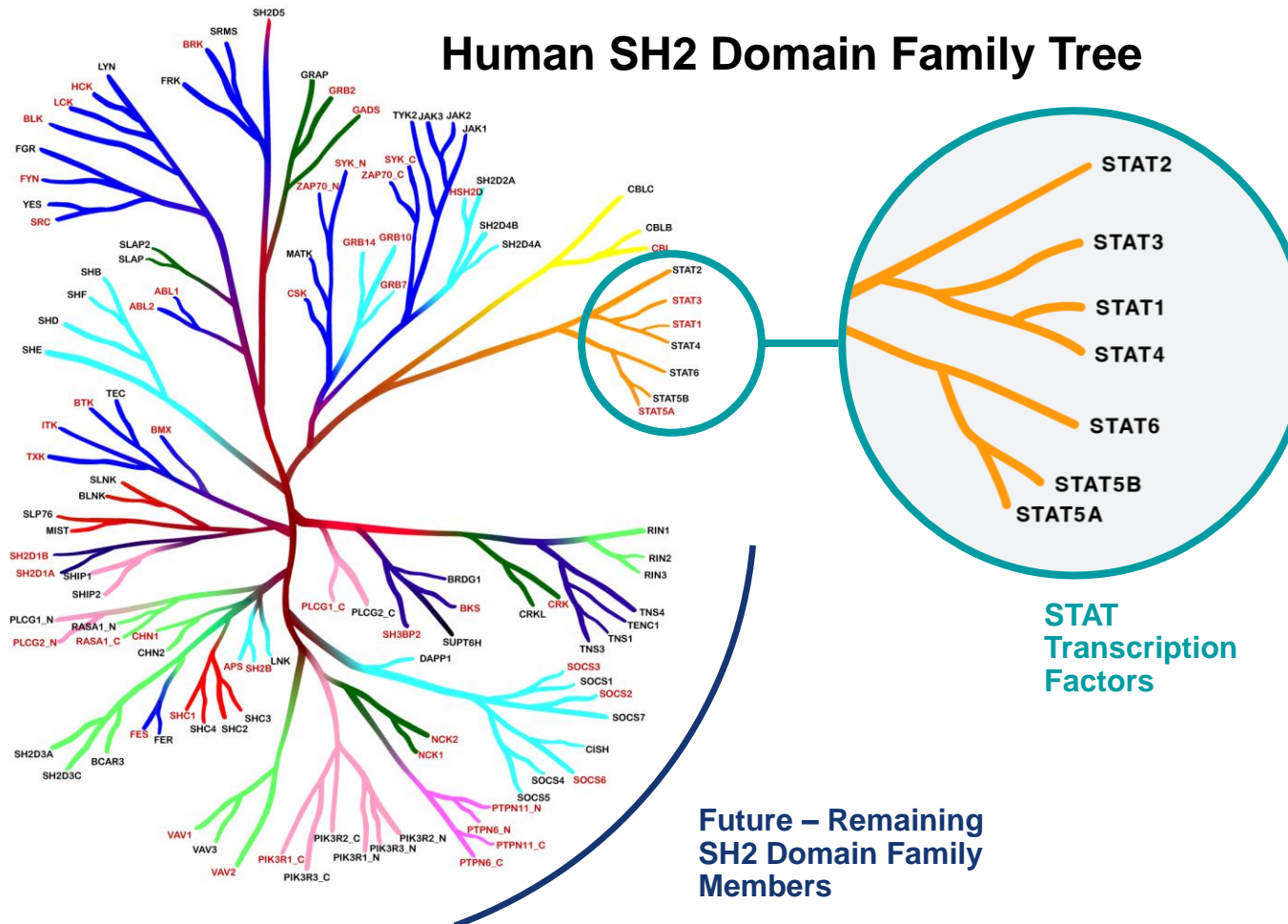
**Src Homology 2 (SH2) domains are highly conserved protein domains that have long been recognized as attractive drug targets**

- Small protein modules made up of ~100 amino acids
- 120 human SH2 domains
- Play a key role in regulating the location and activity of proteins and in cellular signal transduction
- Mediate protein-protein interactions by binding to phospho-tyrosine containing motifs



# Significant Opportunity in Targeting SH2 Domain Proteins

Initially Focused on STAT3, STAT6 and 3 Additional Targets



## 1. STAT Transcription Factors

- Strong biological validation for STAT3 and STAT6
- Downstream in the JAK/STAT pathway; selective STAT inhibitors likely to be more targeted with fewer side effects

## 2. Undisclosed

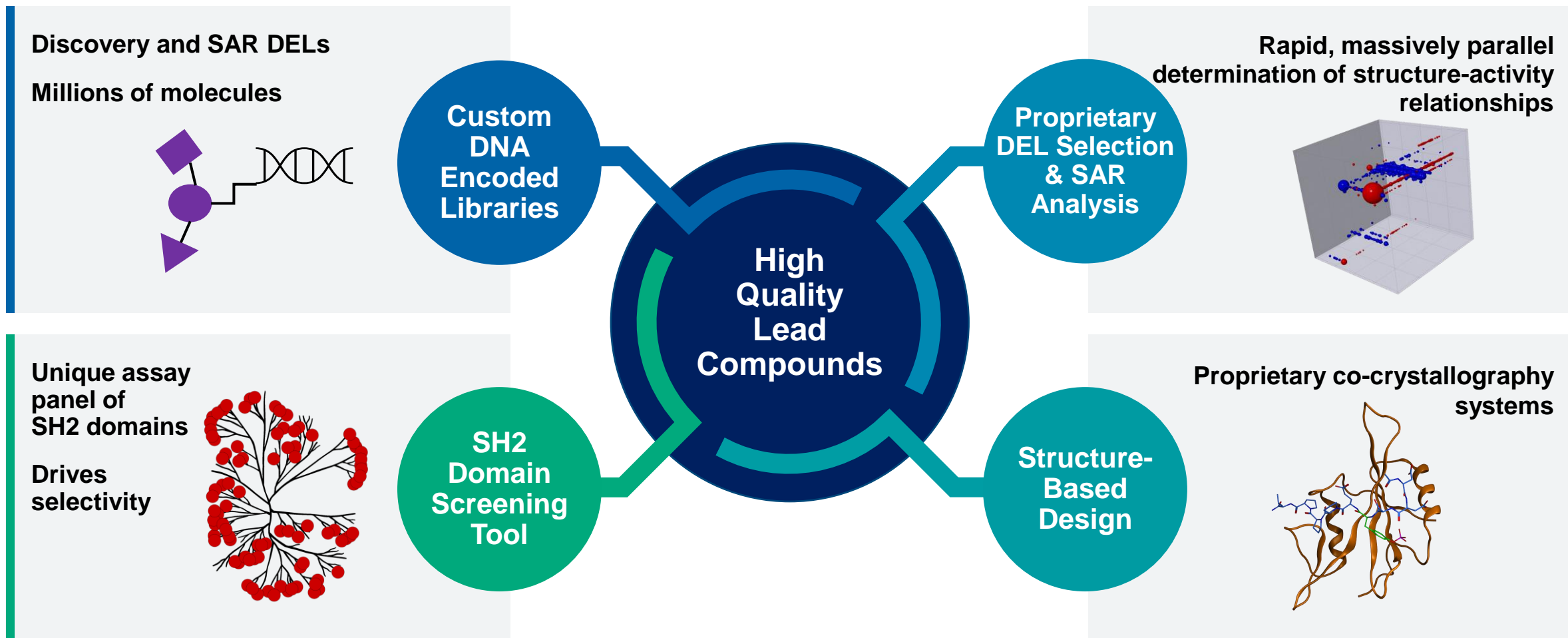
- Plays a central role in both cancer and autoimmune diseases

## 3. Future - Remaining SH2 Domain Family Members

- Additional compelling targets enable a sustainable pipeline



# Recludix Platform: Integrated Proprietary Technologies & New Chemical Approaches



**STAT3**

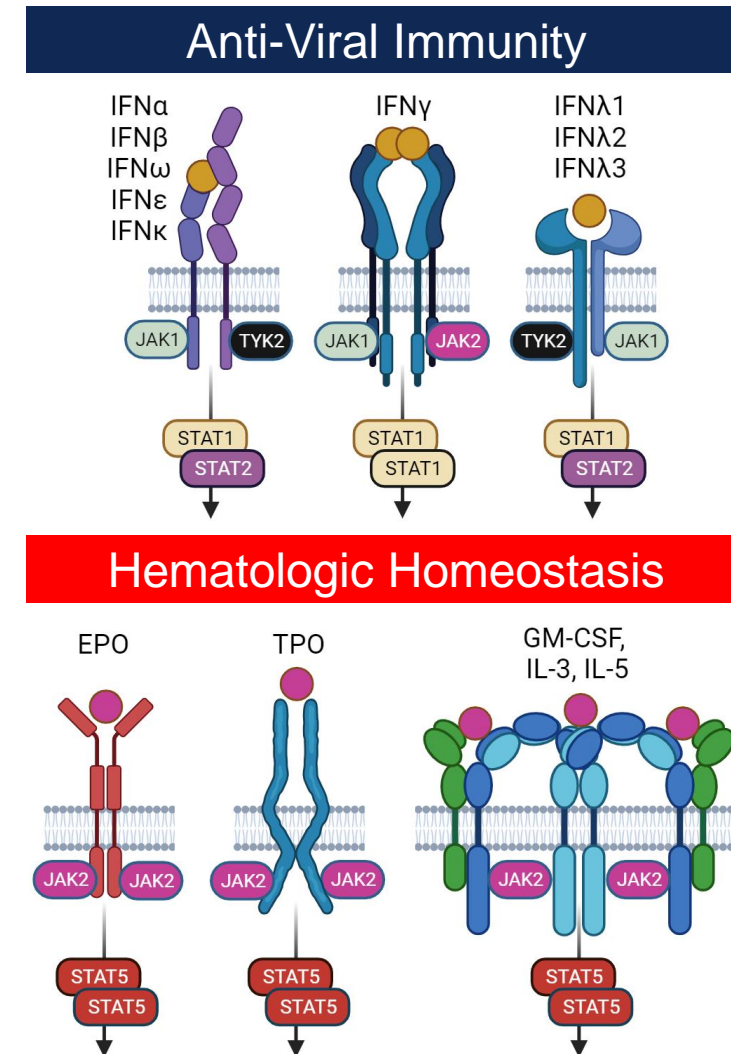
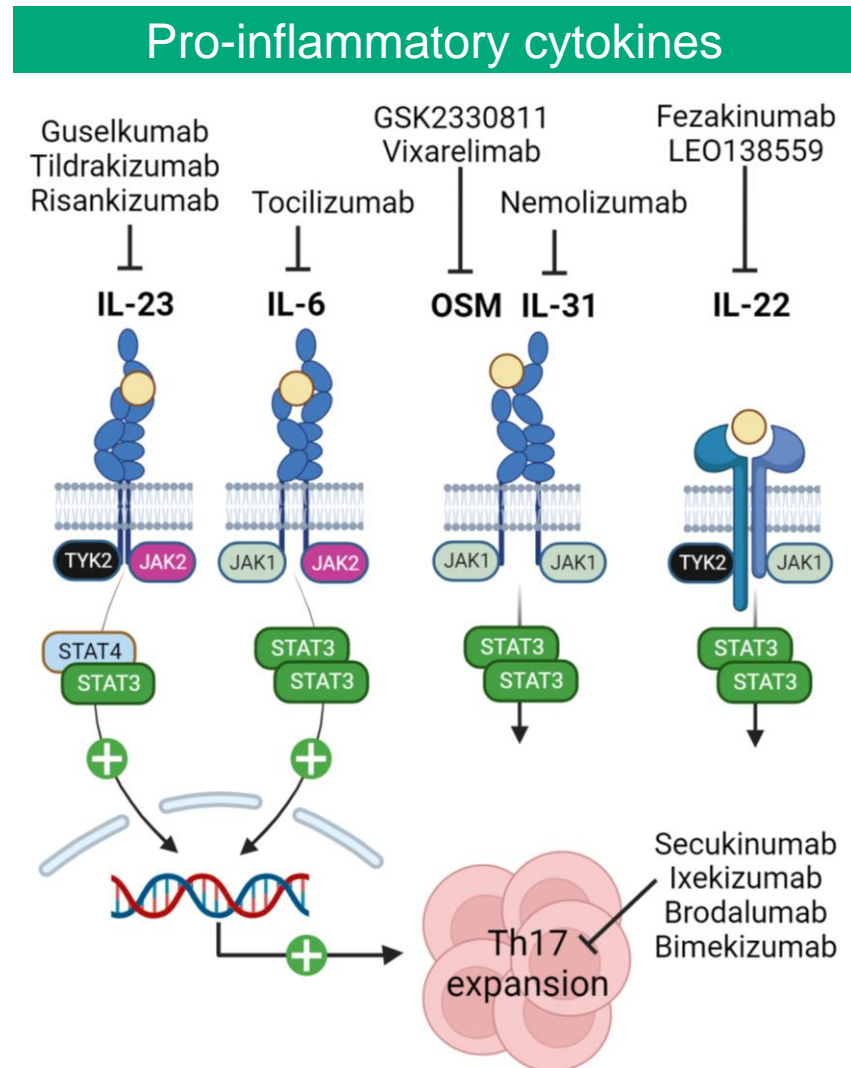


# STAT3 is a First and Best-In-Class Opportunity to Selectively Inhibit Th17 Inflammatory Disease Pathways

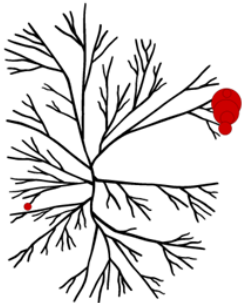
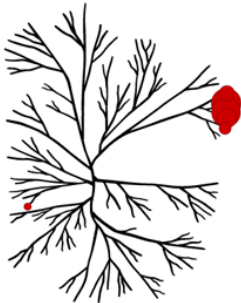
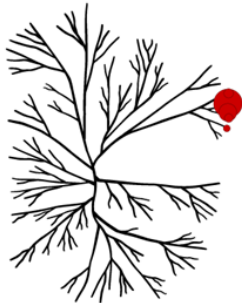
- STAT3 is a key driver of Th17 inflammatory cells which cause multiple inflammatory diseases such as psoriasis, rheumatoid arthritis, ulcerative colitis, Crohn's disease and thyroid eye disease
- Increased selectivity by targeting STAT3 has the potential to provide both greater efficacy and less toxicity than JAK and TYK2 inhibitors
- A selective, oral STAT3 inhibitor has potential to replace JAK/TYK2 inhibitors and biologics for multiple inflammatory diseases with large market opportunities
  - JAK inhibitor global sales >\$4.7B annually, despite Black Box safety warnings.
  - STELARA®, an injectable IL-12/23 inhibitor, annual sales >\$9.7B in 2022
- STAT3 inhibitors also have significant opportunity in cancer settings as STAT3 is activated in >70% of human cancers

# Selective STAT Inhibition Targets Key Inflammatory Cytokines and Downstream Th17 Cell Pathogenesis

STAT3 targeting avoids pathways important for viral immunity and hematologic homeostasis unlike JAK/TYK2 inhibition



# Recludix Has Identified Multiple Highly Potent, Selective and Orally Bioavailable STAT3 Inhibitors

	REX-4019	REX-5376	REX-7117
<b>Biochemical Potency</b> (SH2scan $K_D$ )	0.28 nM	0.15 nM	0.16 nM
<b>Cellular Potency</b> (pSTAT3 $IC_{50}$ in human PBMCs)	5.1 nM	0.72 nM	1.2 nM
<b>Biochemical STAT Family Selectivity</b>	~15X vs. STAT1 >300X vs. STAT2/4/5/6	~2X vs. STAT1 >150X vs. STAT2/4/5/6	~20X vs. STAT1 >500X vs. STAT2/4/5/6
<b>Cellular Selectivity</b> (PBMCs)	>10X vs. STAT1 >100X vs. STAT2/4/5/6	~2X vs. STAT1 ~20X vs. STAT2 >300X vs. STAT4/5/6	~20X vs. STAT1 >500X vs. STAT2/4/5/6
<b>SH2 Domain Selectivity</b>			

# STAT3 Inhibition Impairs Th17 Cells and Differentiates From JAK/TYK2 Inhibitors in Functional T Cell Assays

		T cell function				Hematologic homeostasis	
		General Adaptive Immune response	Defense against viruses and bacteria	Defense against extracellular pathogens	Defense against parasites and mediation of antibody responses	Erythropoiesis	Thrombopoiesis
		T Cell Activation (CD25)	Th1 Cell Function (IFN $\gamma$ )	Th17 Cell Function (IL-17A)	Th2 Cell Function (IL-5)	EPO-Induced STAT5-Driven Transcription	TPO-Induced STAT5-Driven Transcription
STAT3 Inhibitors	REX-4019	>10,000 nM	>2,000 nM	48 nM	>3,000 nM	>10,000 nM	>10,000 nM
	REX-5376	>10,000 nM	>2,000 nM	11 nM	>3,000 nM	>10,000 nM	>10,000 nM
	REX-7117	>10,000 nM	>2,000 nM	14 nM	>3,000 nM	>10,000 nM	>10,000 nM
IL-6 Antagonist	Tocilizumab	>1,000 nM	>1,000 nM	In progress	>1,000 nM	>1,000 nM	>1,000 nM
IL-23 Antagonist	Risankizumab	>1,000 nM	>1,000 nM	In progress	>1,000 nM	>1,000 nM	>1,000 nM
TYK2 Inhibitor	Deucravacitinib	>3,000 nM	260 nM	34 nM	~3,300 nM	3,200 nM	250 nM
JAK Inhibitors	Tofacitinib	340 nM	74 nM	20 nM	20 nM	340 nM	200 nM
	Upadacitinib	39 nM	36 nM	8.0 nM	4.4 nM	69 nM	20 nM
	Baricitinib	110 nM	210 nM	15 nM	15 nM	57 nM	40 nM

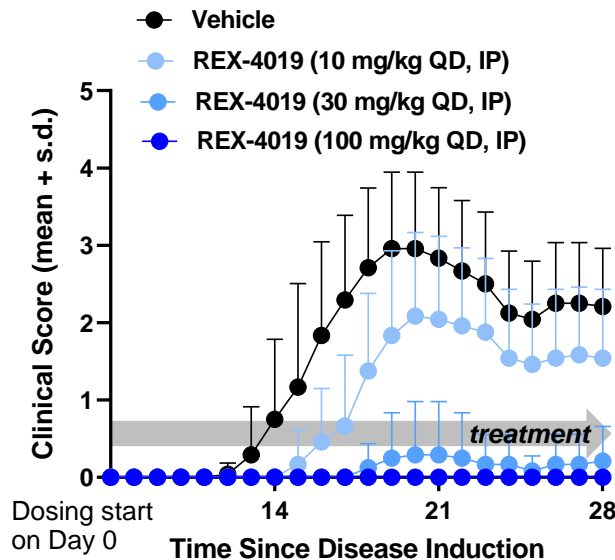
Selectivity relative to Th17 inhibition:   >30X   10-30X   <10X

# Prophylactic and Therapeutic Dose-Dependent Efficacy in the Th17-dependent EAE Model

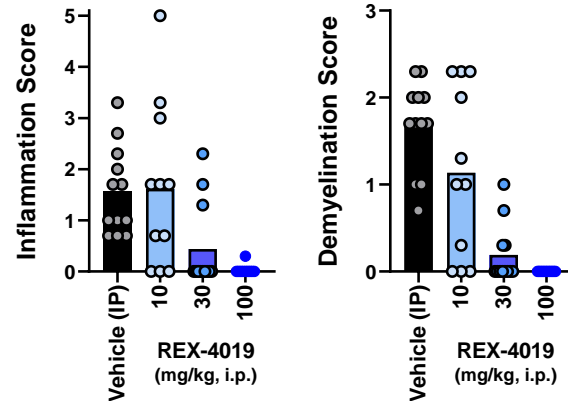
## Prophylactic

## Semi-Therapeutic

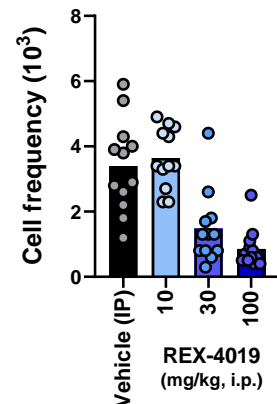
### Neurological symptoms



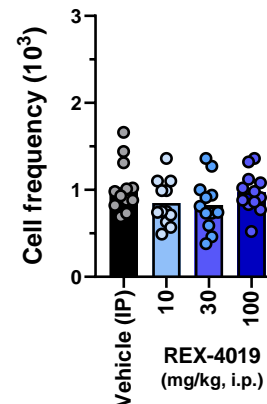
### CNS tissue pathology



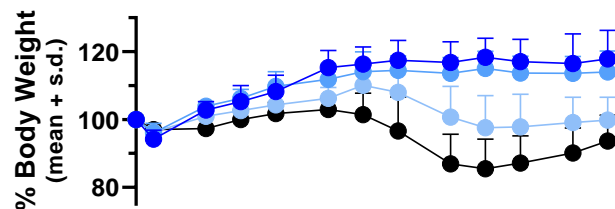
### CNS Infiltrating Th17 cells



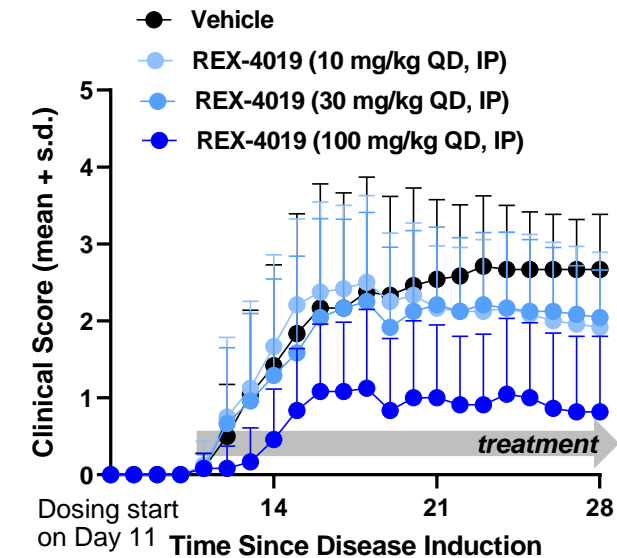
### Peripheral Treg cells



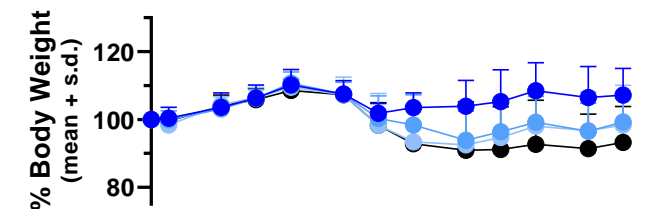
### Inflammation-induced cachexia



### Neurological symptoms

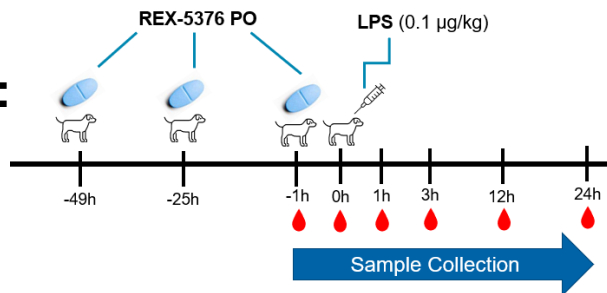


### Inflammation-induced cachexia



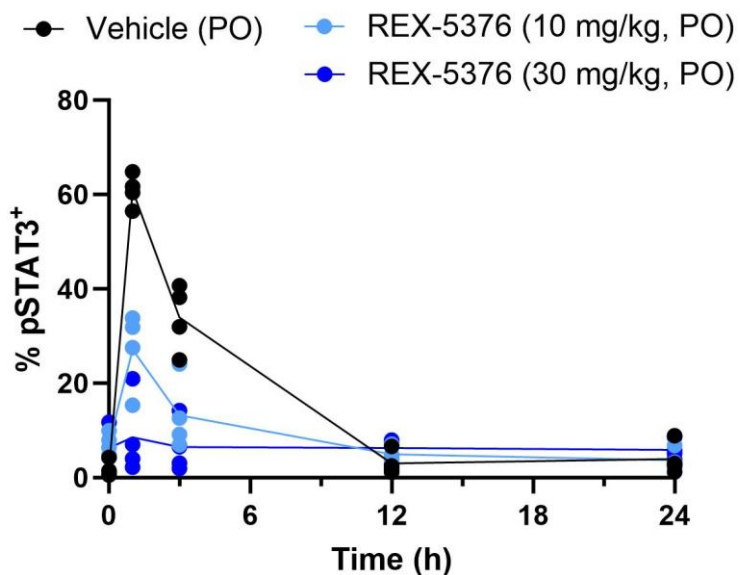
# Oral STAT3 Inhibition Significantly Reduces an IL-6 Dependent LPS-Induced Inflammation in Dogs

## Study Design:

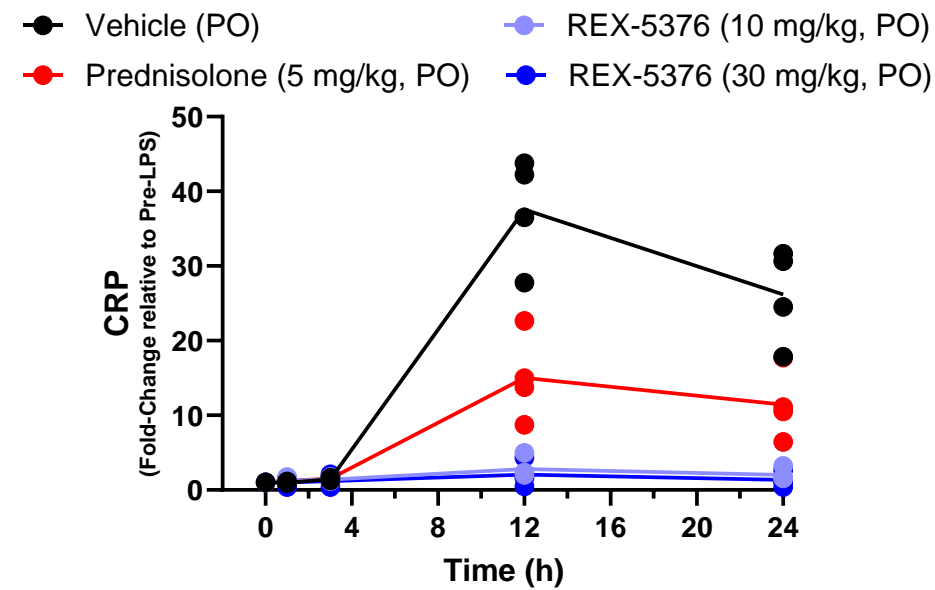


- LPS challenge drives pSTAT3 activation, immune activation, and IL-6 dependent CRP production
- Oral REX-5376 inhibits endogenous pSTAT3 signaling and abrogates CRP induction

## PBMC pSTAT Activity



## Serum CRP

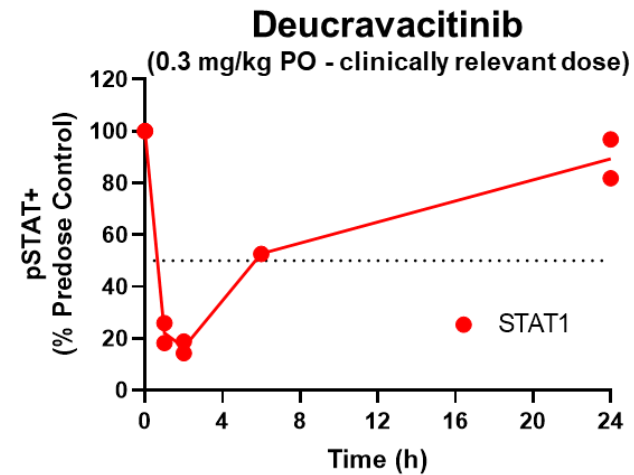
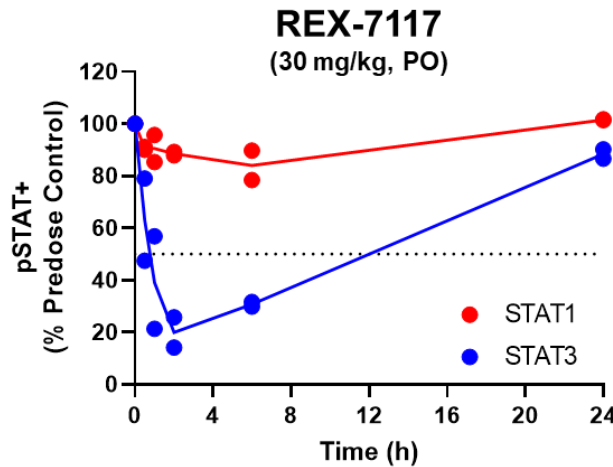
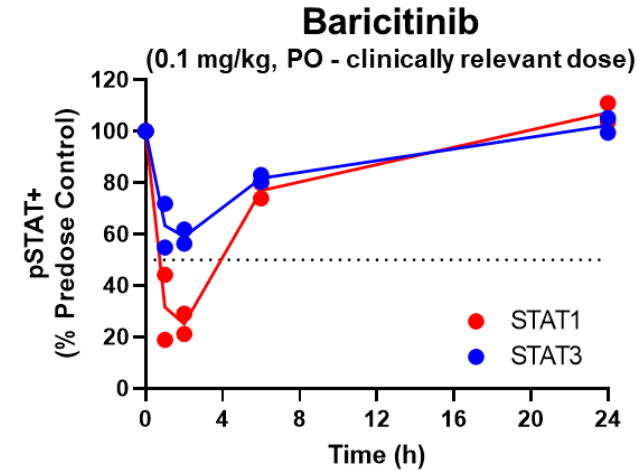
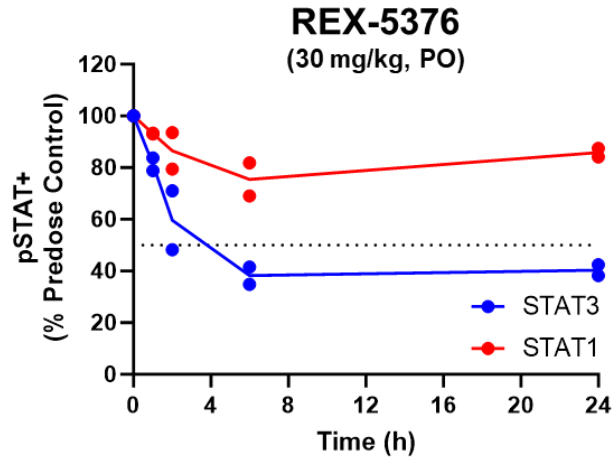


Oral STAT3 inhibition effectively impairs IL-6 mediated inflammatory responses



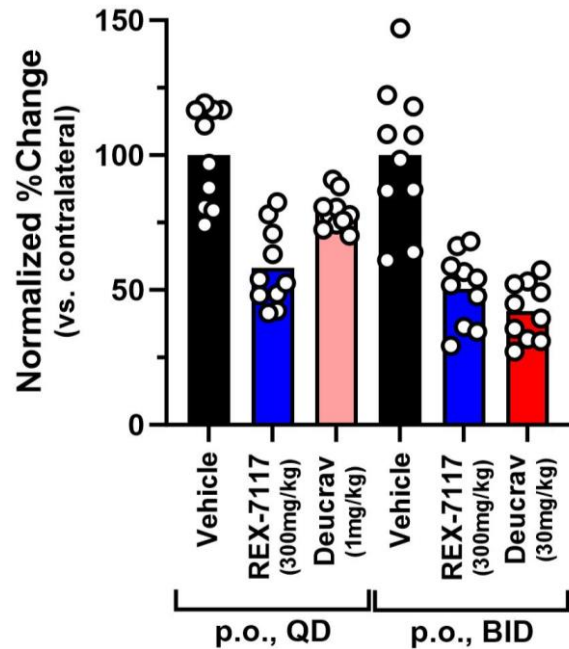
# Recludix Oral STAT3 Compounds Characterized by Selective and Sustained Target Inhibition

- Dog PBMCs evaluated for *ex vivo* pSTAT1/3 activity following single day oral dosing

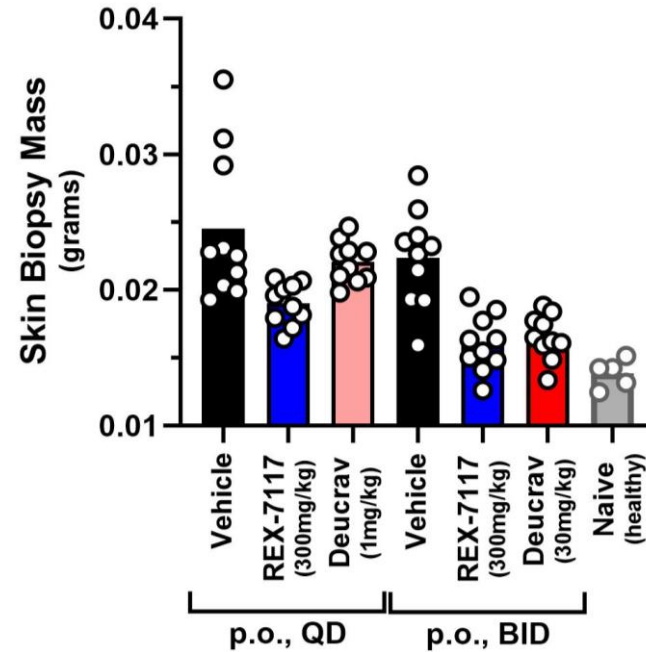


# REX-7117 Is Efficacious After Oral Dosing in IL-23-Induced Th17 Model of Psoriasis

## Tissue Inflammation



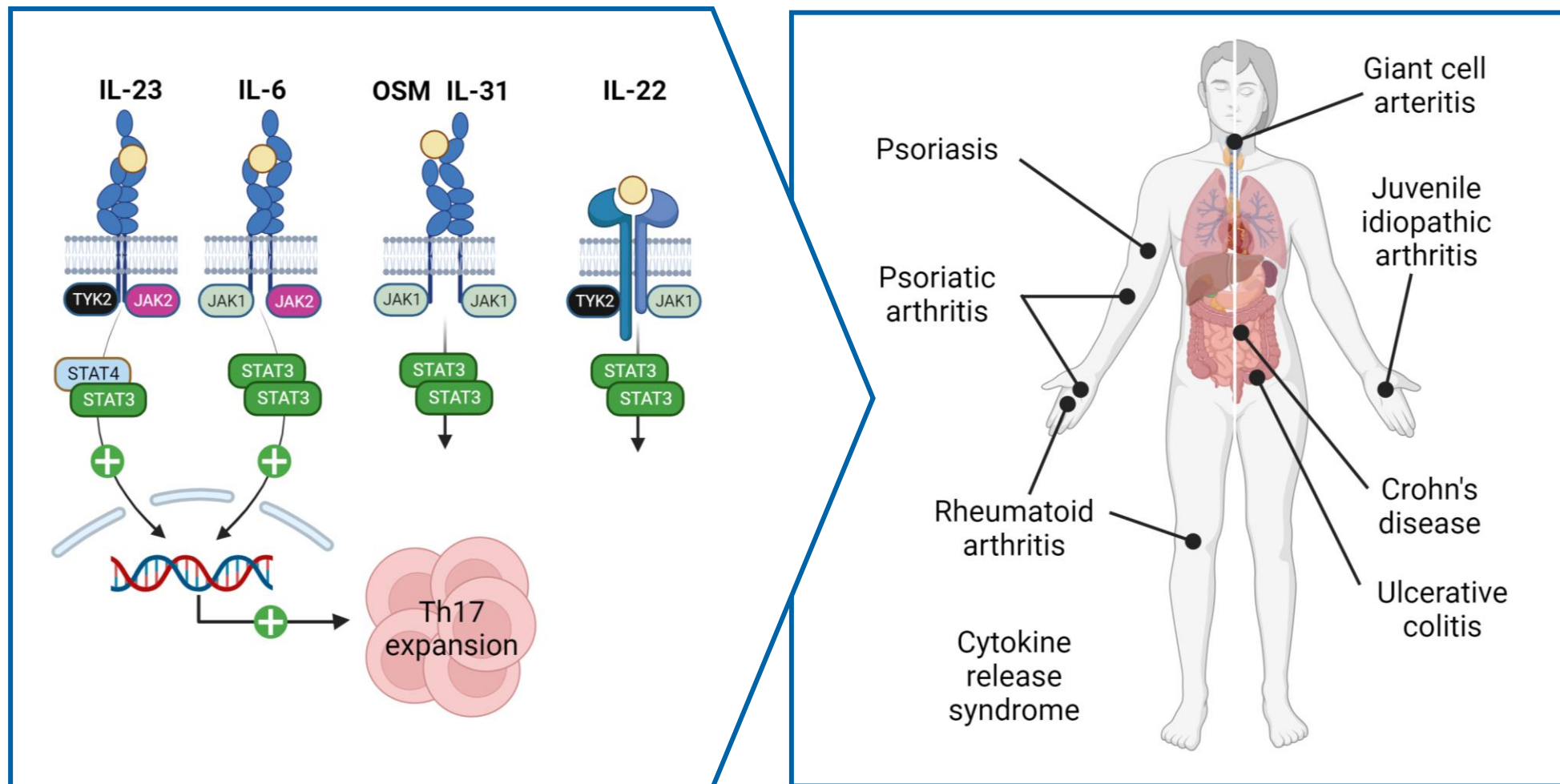
## Tissue Weight



- Once daily REX-7117 (300mg/kg) was superior to the clinically-relevant dose of deucravacitinib (1mg/kg)
- Twice daily REX-7117 (300mg/kg) was comparable to the supra-clinical dose of deucravacitinib (30mg/kg twice daily)
- REX-7117 achieves near maximum inhibition of inflammation

Orally targeting STAT3 provides significant inhibition of Th17 mediated skin inflammation

# STAT3 Inhibition Has Potential Clinical Applications Across Multiple I&I Diseases

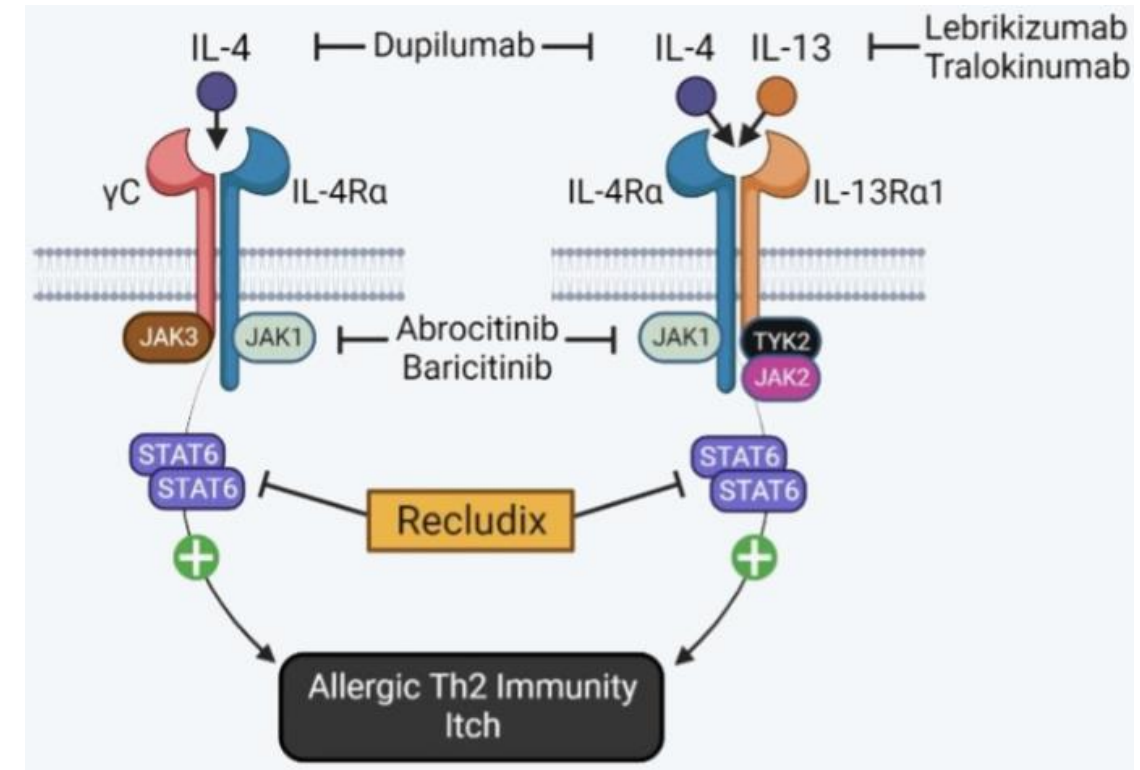


Leveraging clinically validated mechanisms with selective STAT3 inhibition

**STAT6**

# STAT6 – First and Best-In-Class Opportunity to Selectively Inhibit Th2 Inflammatory Disease Pathways

- STAT6 is a critical driver of Th2 inflammatory cells and is the only STAT utilized by IL-4 and IL-13 signaling
- IL-4/IL-13 biologics have demonstrated efficacy in Th2 diseases such as atopic dermatitis, asthma, and COPD
- While JAK inhibitors have utility in Th2 disease, increased selectivity gained by targeting STAT6 has the potential to provide both greater efficacy and less toxicity
- A selective, oral STAT6 inhibitor has potential to complement and/or replace biologics in multiple Th2 diseases with large market opportunities
  - DUPIXENT®, an injectable IL-4Ra inhibitor, annual sales >\$8B in 2022

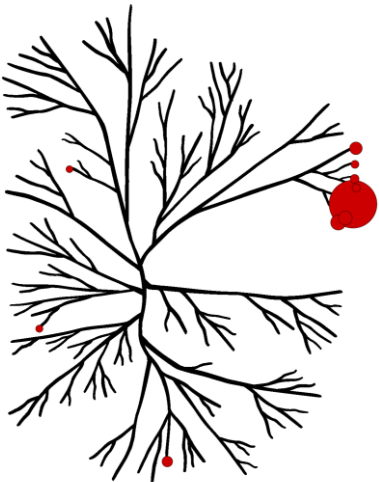


# STAT6 Early Lead Compound REX-4671 is Potent and Selective in Biochemical and Cellular Assays

Current Lead Compounds Further Optimized

## REX-4671

Biochemical Potency (SH2scan K <sub>D</sub> )	Cellular Potency (pSTAT6 IC <sub>50</sub> in human PBMCs)	Biochemical STAT Family Selectivity	Cellular Selectivity (PBMCs)	SH2 Domain Selectivity
0.025 nM	1.3 nM	>1,000X vs. STAT1/2/3/4/5	>1,000X vs. STAT1/2/3/4/5	





# STAT6 Inhibitor Phenocopies Dupilumab In Functional Assays and Differentiates From JAK Inhibitors

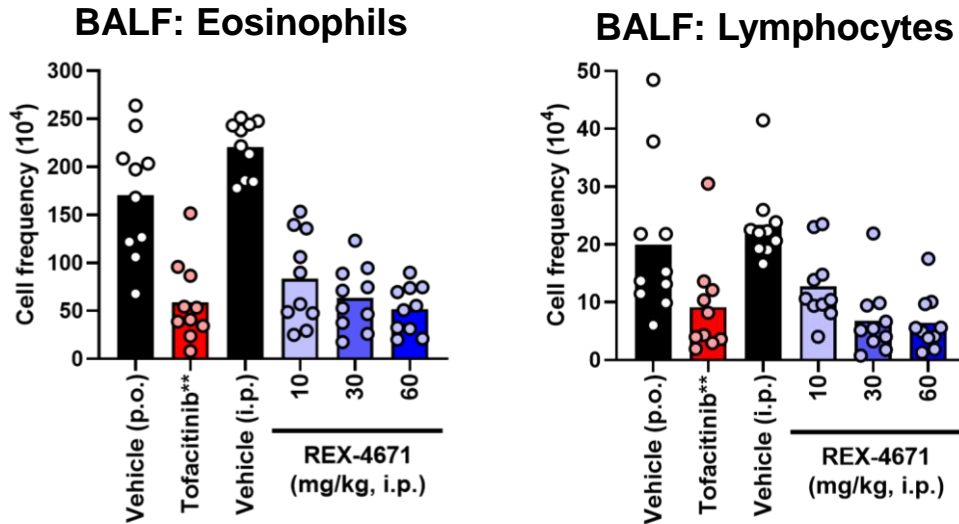
Direct selective STAT6 inhibition provides greater selectivity than currently approved JAK inhibitors

		T cell function				Hematologic homeostasis	
		General Adaptive Immune response	Defense against viruses and bacteria	Defense against extracellular pathogens	Defense against parasites and mediation of antibody responses	Erythropoiesis	Thrombopoiesis
		T Cell Activation (CD25)	Th1 Cell Function (IFN $\gamma$ )	Th17 Cell Function (IL-17A)	Th2 Cell Function (IL-5)	EPO-Induced STAT5-Driven Transcription	TPO-Induced STAT5-Driven Transcription
STAT6 Inhibitor	<b>REX-4671</b>	>10,000 nM	>3,000 nM	>10,000 nM	20 nM	>10,000 nM	>10,000 nM
IL-4/IL-13 Antagonist	Dupilumab	>10,000 nM	>1,000 nM	>1,000 nM	22 nM	>1,000 nM	>1,000 nM
JAK Inhibitors	Abrocitinib	1,300 nM	900 nM	81 nM	81 nM	3,200 nM	2,800 nM
	Upadacitinib	39 nM	36 nM	8.0 nM	4.4 nM	69 nM	20 nM
	Baricitinib	110 nM	210 nM	15 nM	15 nM	56 nM	42 nM

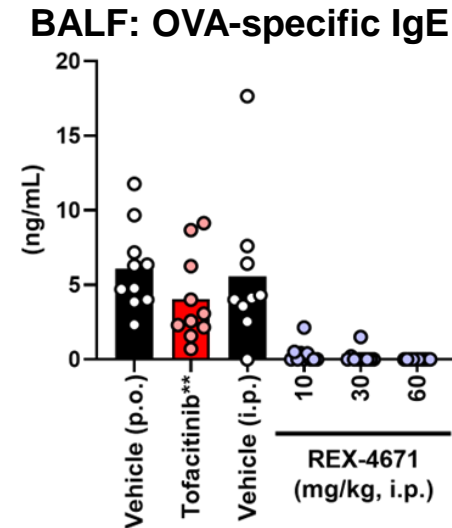
Selectivity relative to Th2 inhibition:   >30X   10-30X   <10X

# Reduction of Lung Inflammation in Ovalbumin Asthma Model

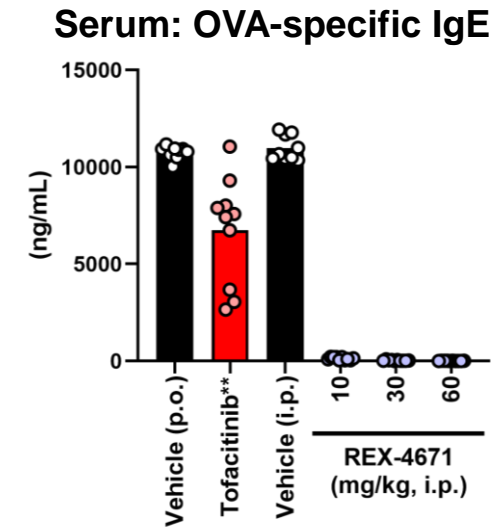
## Lung immune cell infiltration



## Lung IgE immunity



## Systemic IgE immunity



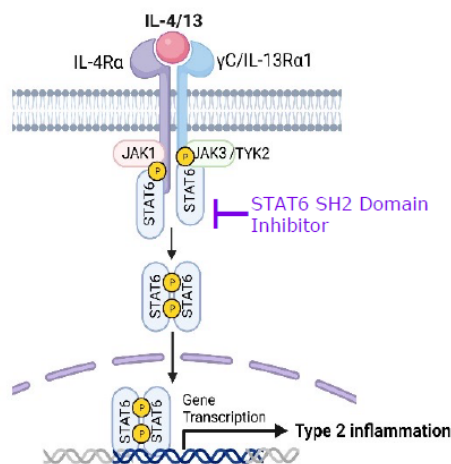
\*\*Tofacitinib 30 mg/kg p.o.

- Prophylactic REX-4671 treatment reduced pathogenic immune cell infiltration and IgE levels
- Improvements in lung function and histopathology in REX-4671 treated animals also observed
- REX-4671 abrogates serum IgE immunity, a clinical biomarker of treatment response in asthma and dermatitis

# Oral STAT6 Compounds Characterized by Selective and Sustained Target Inhibition

Program partnered with Sanofi

## STAT6 pathway inhibitor: an *oral* small molecule that blocks type 2 IL-4 and IL-13 pathways



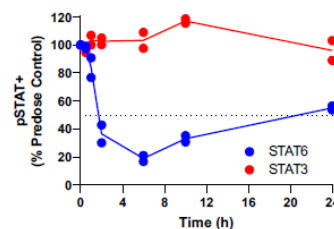
*STAT6 SH2 domain inhibitors selectively target type 2 cellular responses and differentiate from JAK inhibitors*

T Cell Function (IC50)	STAT6 inhibitor	IL-4/13 antagonist <sup>1</sup>	JAK inhibitor <sup>1</sup>
Th2	26nM	26nM	4nM
Th17	>100X	>35X (highest tested)	2X
Th1	>100X	>35X	9X

### Hematological homeostasis

EPO-STAT5	>300X	>35X	17X
TPO-STAT5	>300X	>35X	5X

*Durable and selective pSTAT6 inhibition following single oral dose of STAT6 SH2 domain inhibitor in preclinical model*



STAT6 inhibitor offers potential for *antibody-like efficacy* with oral convenience in type 2 diseases

Strong human *genetic evidence* for critical role of STAT6 with associated GWAS and gain of function mutations driving allergic disease<sup>2,3,4,5</sup>

Entered strategic collaboration with Recludix Pharma to advance novel oral STAT6 SH2 domain inhibitors with *IND projected in 2025*

1. Corporate presentation, Recludix Pharma, JPM HealthCare Conference, Jan 2023. 2. Baris et al., JACI 152, 2023. 3. Sharma et al., J Exp Med 220, 2023. 4. Takeuchi et al., JACI 151, 2023. 5. Suratannon et al., JACI 151, 2023.

# Strong Progress in Advancing STAT3 and STAT6 Inhibitors Towards the Clinic

## Near Term Milestones

- Complete toxicology studies
- Generate additional in vivo efficacy data in other models of inflammatory disease
- Nominate development candidates for STAT3 and STAT6
- Initiate Phase 1 clinical trials for STAT3 (2024) and for STAT6 (2025)



**Thank you**

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Unlocking New Therapeutic Possibilities

