



# Corporate Presentation

September 2024



# Disclaimer and FLS

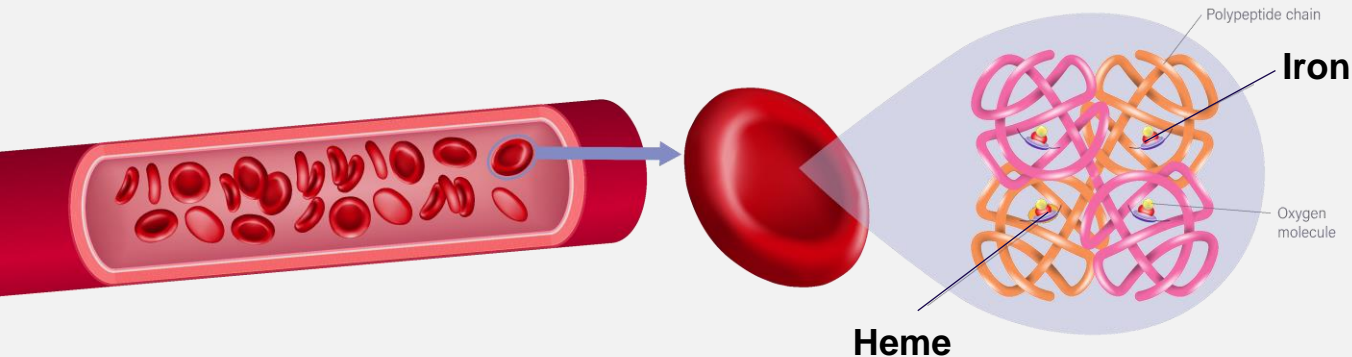
This presentation contains “forward-looking statements” within the meaning of the Private Securities Litigation Reform Act of 1995, including, but not limited to, express or implied statements regarding Disc’s expectations with respect to its AURORA Phase 2 and BEACON Phase 2 clinical trials of bitopertin and the results thereof, its Phase 1b/2 clinical trial of DISC-0974 in patients with MF and NDD-CKD patients with anemia, its initial SAD data in its Phase 1 clinical trial of DISC-3405 in healthy volunteers; projected timelines for the initiation and completion of its clinical trials, anticipated timing of release of data, and other clinical activities; and Disc’s belief about operating expenses and that it will have capital to fund Disc well into 2027. The use of words such as, but not limited to, “believe,” “expect,” “estimate,” “project,” “intend,” “future,” “potential,” “continue,” “may,” “might,” “plan,” “will,” “should,” “seek,” “anticipate,” or “could” or the negative of these terms and other similar words or expressions that are intended to identify forward-looking statements. Forward-looking statements are neither historical facts nor assurances of future performance. Instead, they are based on Disc’s current beliefs, expectations and assumptions regarding the future of Disc’s business, future plans and strategies, clinical results and other future conditions. New risks and uncertainties may emerge from time to time, and it is not possible to predict all risks and uncertainties. No representations or warranties (expressed or implied) are made about the accuracy of any such forward-looking statements.

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**Bitopertin, DISC-0974, and DISC-3405 are investigational agents and are not approved for use as therapies in any jurisdiction worldwide**

# Targeting Fundamental Pathways of Red Blood Cell Biology using Validated Mechanisms



Iron and heme metabolism are critical pathways in hematology with genetically-validated targets

Key points of intervention across a wide range of diseases

## Spectrum of Hematologic Diseases Addressable by Disc Portfolio

*Severe Rare (000s)*

*Moderate Prevalence (100K+)*

*Widely Prevalent (MMs)*

**Diamond-Blackfan Anemia**

**Erythropoietic Porphyrrias**

Beta-Thalassemia

**Anemia of Myelofibrosis**

**Myelodysplastic Syndromes**

Sickle Cell Disease

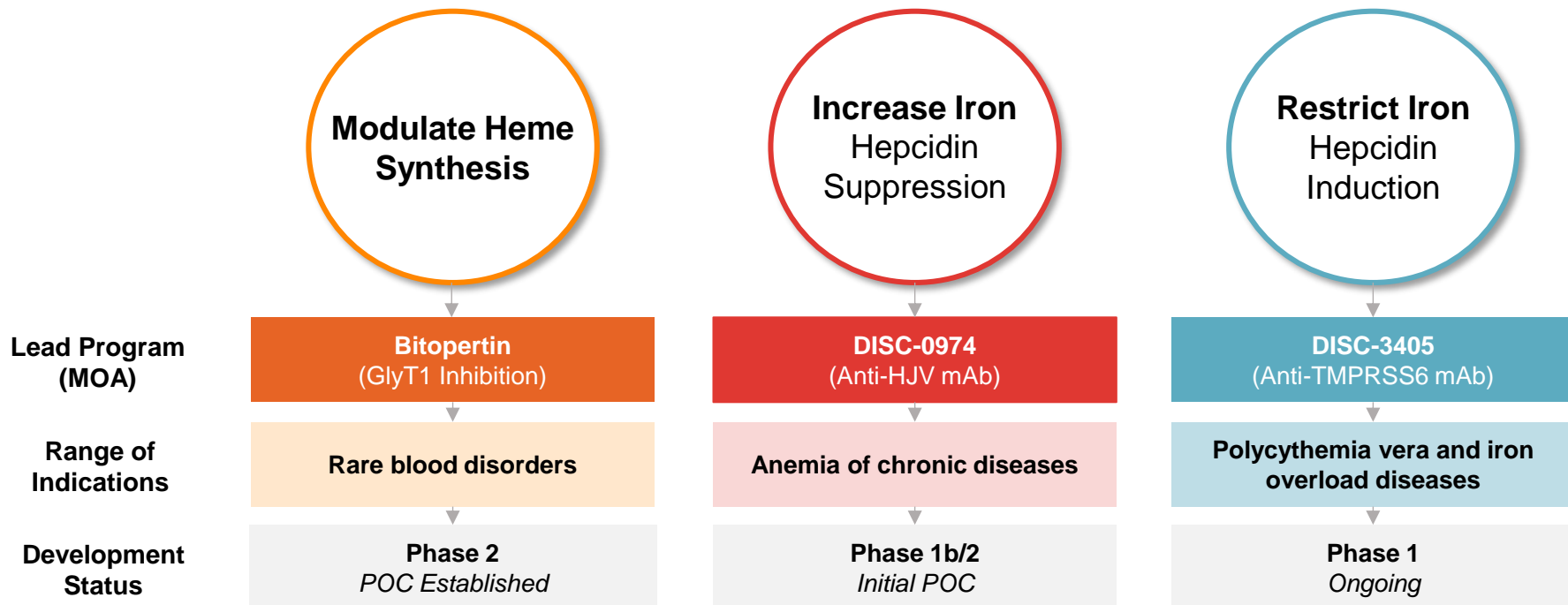
Polycythemia Vera

Hereditary Hemochromatosis

IBD Anemia

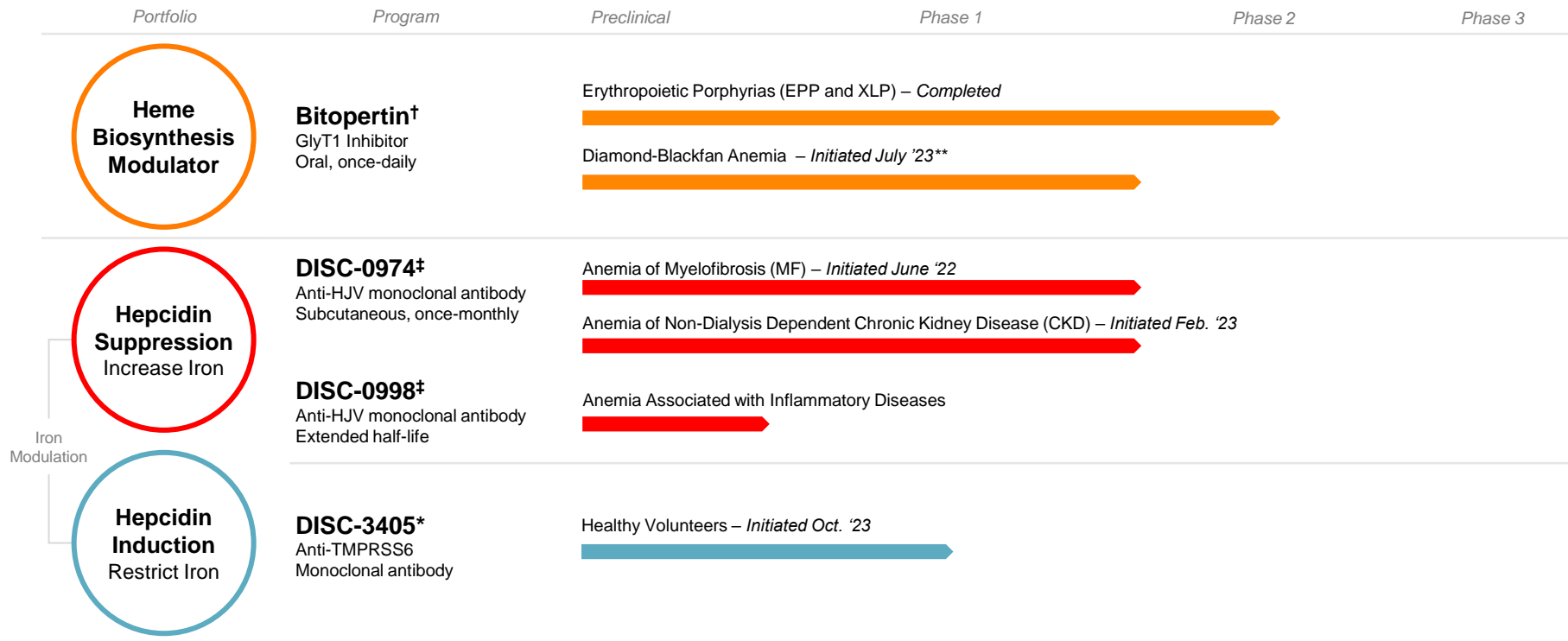
**CKD Anemia**

# By Targeting Heme and Iron, Disc's Portfolio Can Address a Wide Range of Hematologic Disorders






# Disc's Hematology-Focused Pipeline

Multiple programs in development with pipeline-in-a-product potential



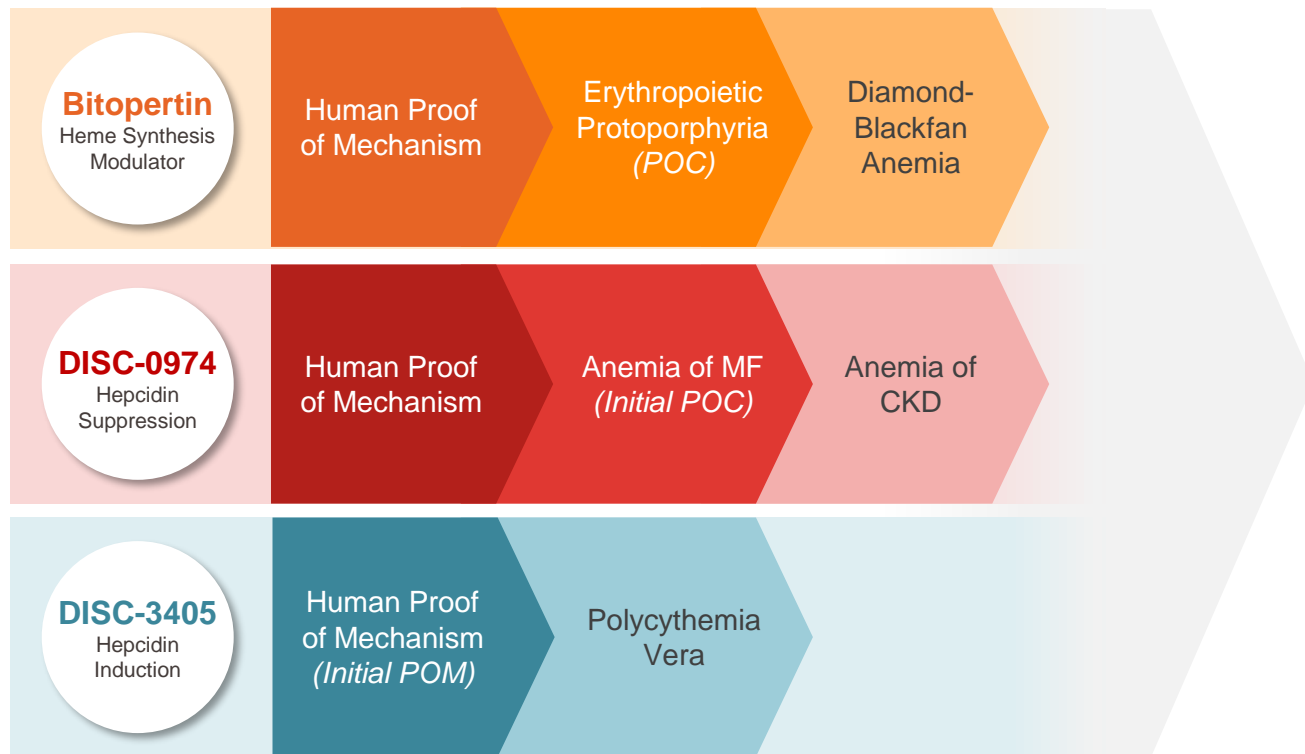
# Projected Upcoming Milestones and Events

Multiple additional data catalysts anticipated in the next 18 months

Program	Indication	H1 2024	H2 2024	2025
 <p><b>Bitopertin</b> Heme Synthesis Modulator</p>	<b>Erythropoietic Porphyrias (EPP and XLP)</b>	<ul style="list-style-type: none"> <li>Phase 2 AURORA Data (March-April)</li> </ul>	<ul style="list-style-type: none"> <li>Guidance from End of Ph 2 Meeting (Q4)</li> </ul>	<ul style="list-style-type: none"> <li>Phase 3 Initiation Pending Regulatory Feedback</li> </ul>
	<b>Diamond-Blackfan Anemia (DBA)</b>		<ul style="list-style-type: none"> <li>Initial Phase 2 Data</li> </ul>	
 <p><b>DISC-0974</b> Hepcidin Suppression</p>	<b>Anemia of Myelofibrosis (MF)</b>	<ul style="list-style-type: none"> <li>Updated Phase 1b Data</li> </ul>	<ul style="list-style-type: none"> <li>Final Phase 1b Data</li> <li>Initiate Phase 2 Study</li> </ul>	<ul style="list-style-type: none"> <li>Phase 2 Topline Data</li> </ul>
	<b>Anemia of Chronic Kidney Disease (CKD)</b>		<ul style="list-style-type: none"> <li>Phase 1b SAD Data (hemoglobin)</li> </ul>	<ul style="list-style-type: none"> <li>Phase 1b/2a Multiple Dose Topline Data</li> </ul>
 <p><b>DISC-3405</b> Hepcidin Induction</p>	<b>Polycythemia Vera and Diseases of Iron Overload/ Ineffective Erythropoiesis</b>	<ul style="list-style-type: none"> <li>Phase 1 SAD Data</li> </ul>	<ul style="list-style-type: none"> <li>Phase 1 SAD/MAD Data</li> </ul>	<ul style="list-style-type: none"> <li>Phase 2 in PV Initiation</li> </ul>

*Supported by a strong cash position with runway well into 2027*

# Disc Portfolio Provides Strong Foundation for Growth



## Other Iron and Heme Disorders

Beta Thalassemia

Other Porphyrias

Myelodysplastic Syndromes

Sickle Cell Disease

Hereditary Hemochromatosis

Anemia of IBD

Anemia of Cancer

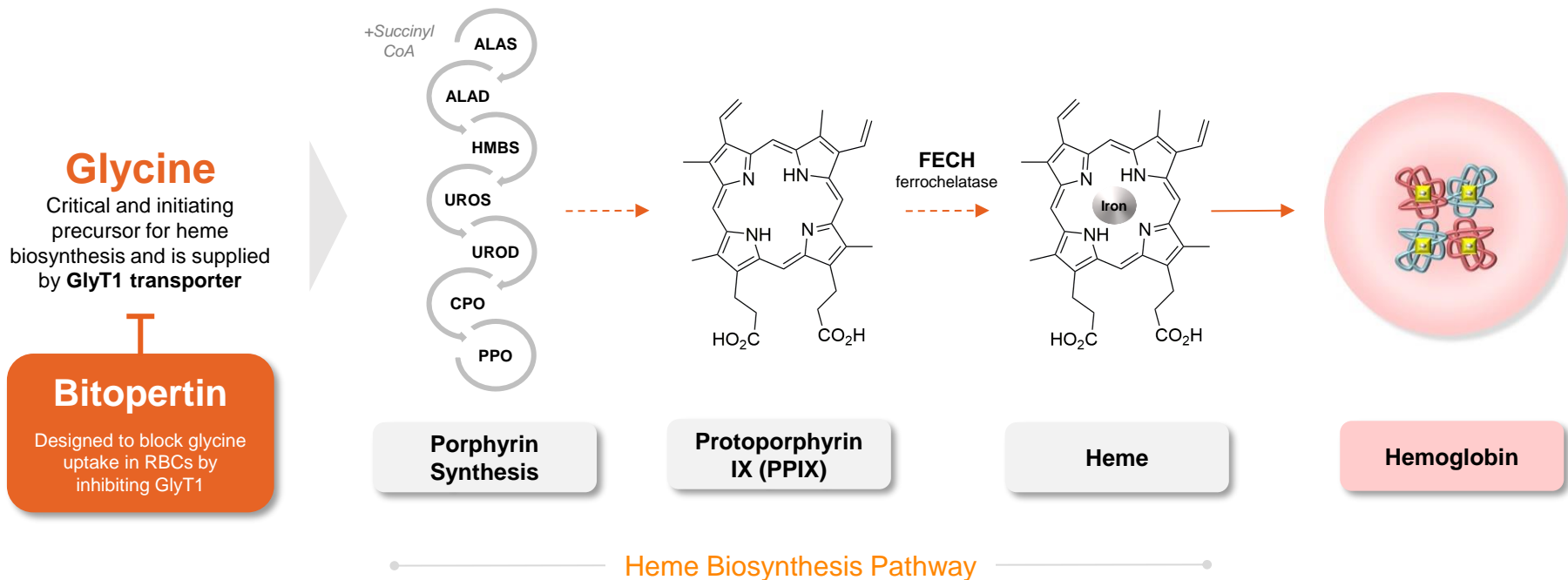




**Bitopertin**  
**GlyT1 Inhibitor**  
Heme Biosynthesis  
Modulation

# Bitopertin: Investigational Oral, Selective GlyT1 Inhibitor

In multiple clinical trials by Roche, bitopertin was observed to modulate heme biosynthesis by blocking uptake of glycine in erythrocytes



# Erythropoietic Protoporphyrria (EPP)

Rare, debilitating and lifelong condition characterized by extreme pain and damage to skin caused by light

Genetic condition caused by defective heme biosynthesis – deficient enzyme ferrochelatase

- Lifelong and presents in early childhood
- Caused by accumulation of toxic metabolite PPIX
- XLP, mechanistically similar disease, also PPIX-related

Debilitating and potentially life-threatening

- Skin: severe, disabling pain attacks (days), edema, burning
- Hepatobiliary disease: gallstones, liver dysfunction or failure
- Psychosocial well-being (fear, anxiety) and development

No cure or disease-modifying treatment

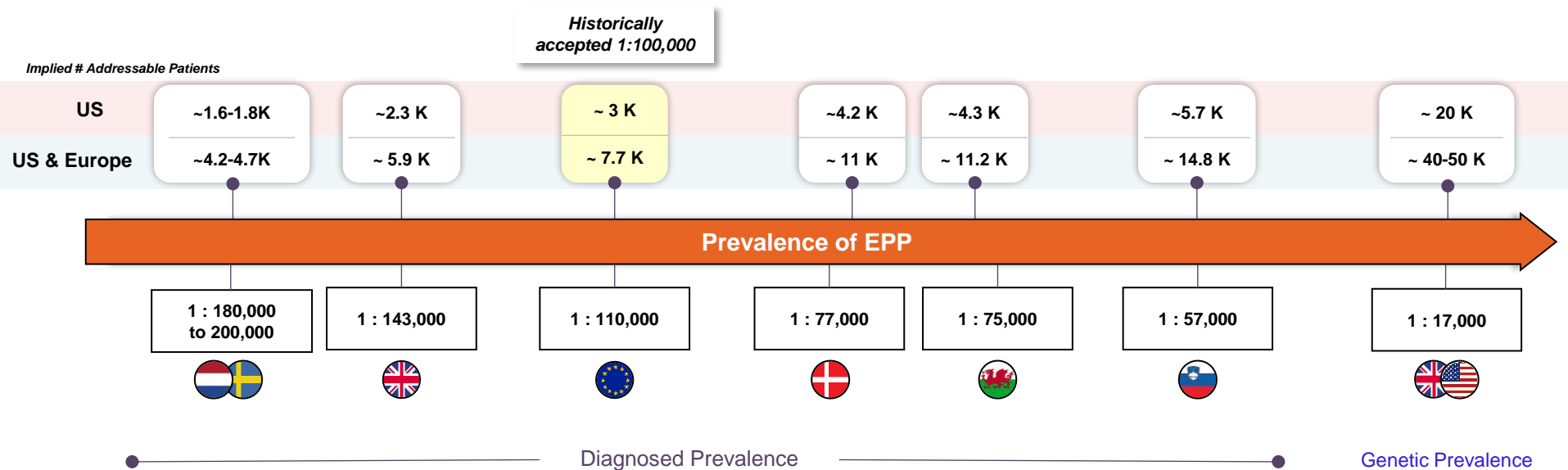
- Avoid sun / light, protective clothing, window tinting, Zn/Ti Oxide
- One FDA-approved agent, afamelanotide, a surgically-implanted tanning agent



Image sources: Daily Mail Australia (2019); FDA Scientific Workshop on EPP (2016); Buonuomo et al. (2014) Arch Dis Child

# Historical EPP estimates likely underrepresent prevalence

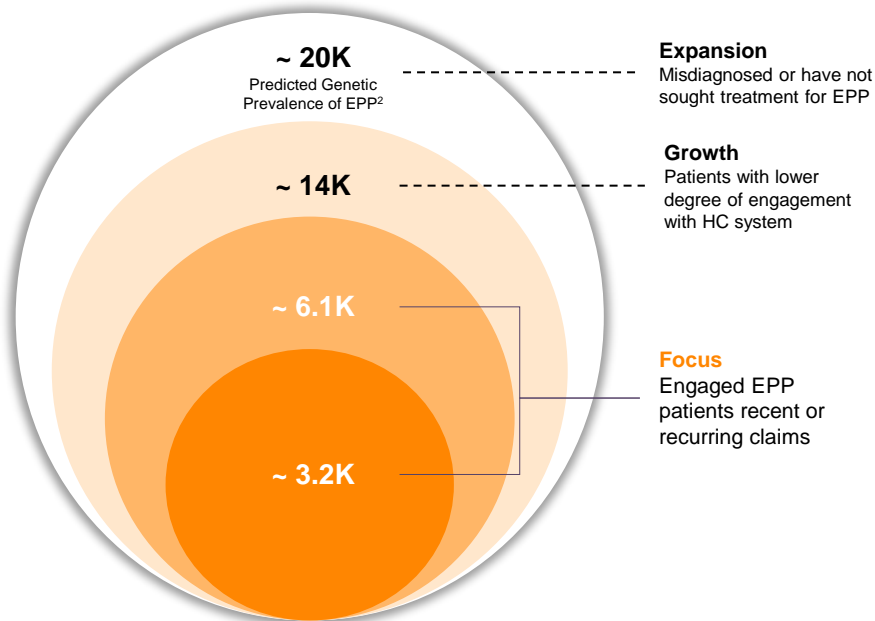
Based on methodology reported in literature and patient journey



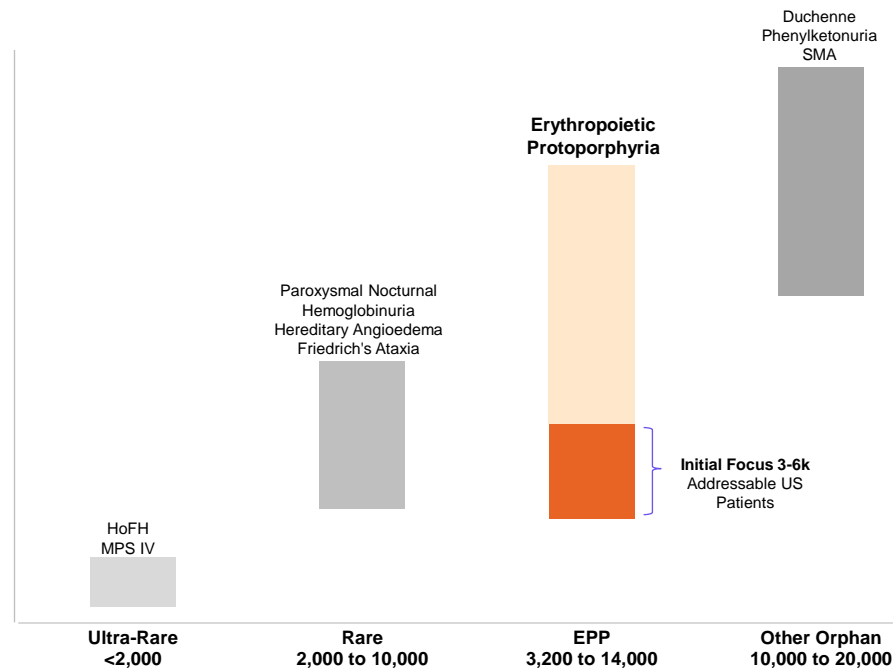
# EPP Prevalence: Est. 3-6K addressable patients in the US

Based on analysis of ICD-10 codes in claims data

## Prevalence of EPP Patients in the U.S.

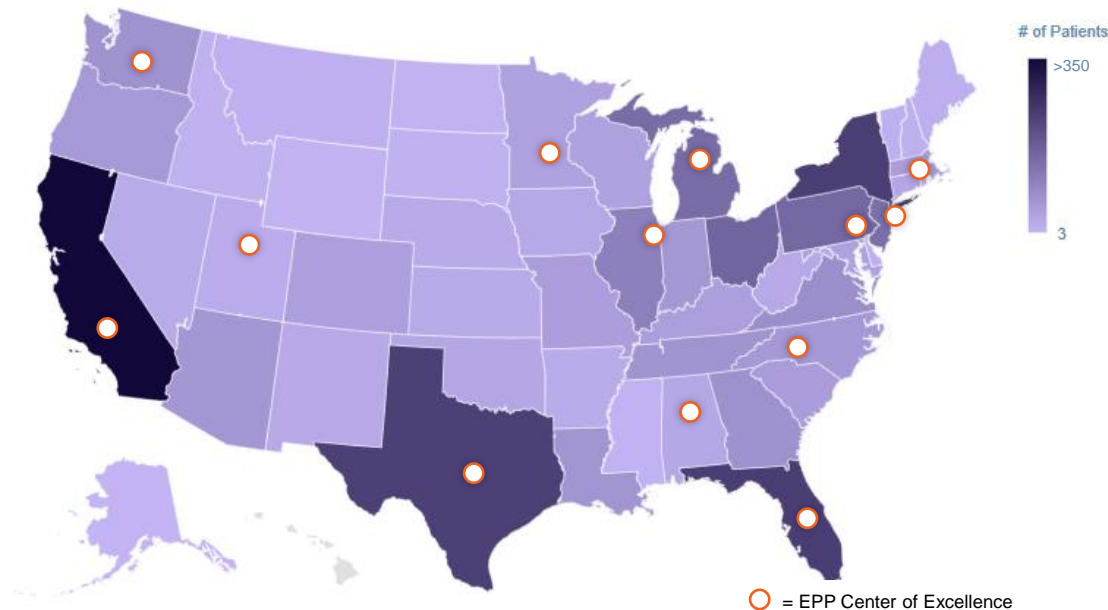


## US EPP Prevalence Comparable to Major Rare Diseases



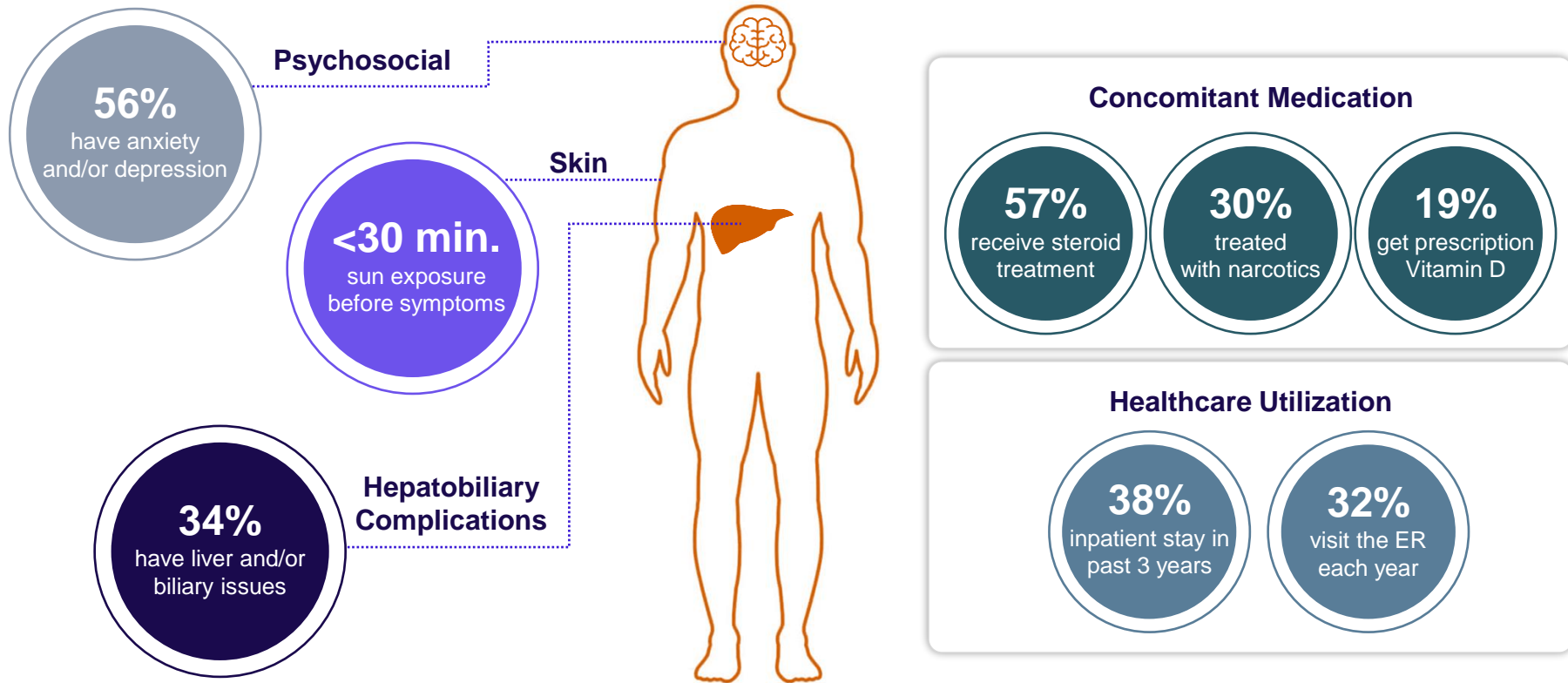
# EPP patients are identifiable and can be addressed through a highly efficient operating model

## Distribution of EPP Patients



*Concentration of patients in key accounts enables a targeted and efficient field force*

# Real world data confirm EPP has a significant impact on patients' lives across multiple domains



# PPIX is a Driver of Disease in EPP / XLP Patients

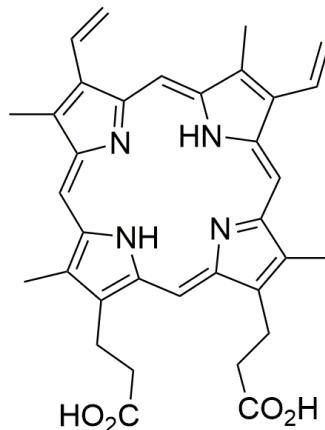
Toxic and photo-active metabolite accumulates in RBCs and is transported to skin and other organs, causing damage

## Skin

- Porphyrin ring absorbs light and **emits energy and heat**
- Oxidative damage to endothelial capillaries and surrounding tissue, perivascular edema, complement activation
- Pain, burning sensation, swelling, inflammation, chronic skin lesions

## Psychosocial

- Issues with focus and concentration
- Lack of sleep, physical and social isolation
- Significant lifestyle modification, fear and anxiety



**Protoporphyrin IX**

## Hepatobiliary

- PPIX accumulation in bile canaliculae, causing oxidative damage
- Cholelithiasis requiring surgery or impaired liver function (~25%) and end-stage liver disease requiring transplant (2-5%)
- Clinical and biochemical surveillance

## Other Complications

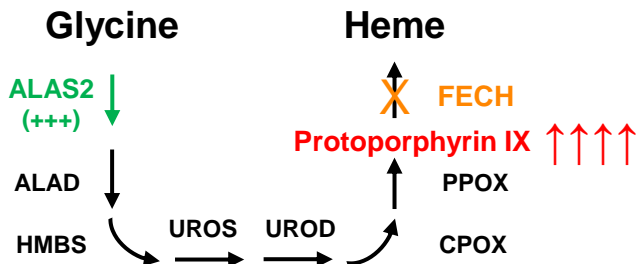
- Nutritional deficiency resulting in osteoporosis and propensity for fractures, chronic alterations to skin (e.g. fragile), mild anemia



# Bitopertin: Potential Disease-Modifying Treatment

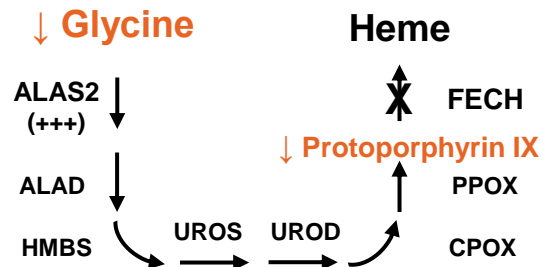
Designed to reduce disease-causing PPIX by limiting uptake of glycine into developing erythrocytes

**EPP and XLP Patients**  
High PPIX Levels



Mutations result in reservoir of pathologically high levels of PPIX

**Bitopertin Treatment**  
Designed to Reduce PPIX Levels

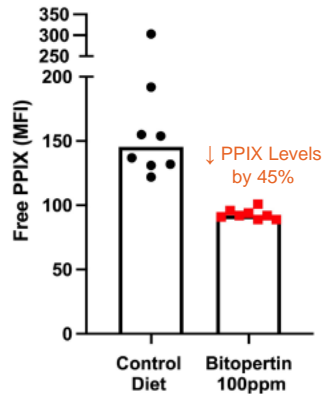


Potential first disease-modifying treatment for EPP and XLP

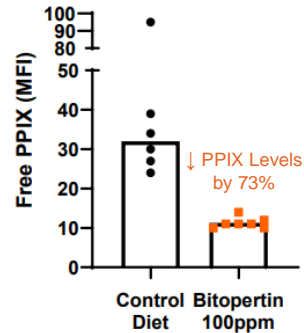
# Bitopertin Reduced PPIX in Models of EPP / XLP

## Effects on PPIX have the potential to be disease-modifying

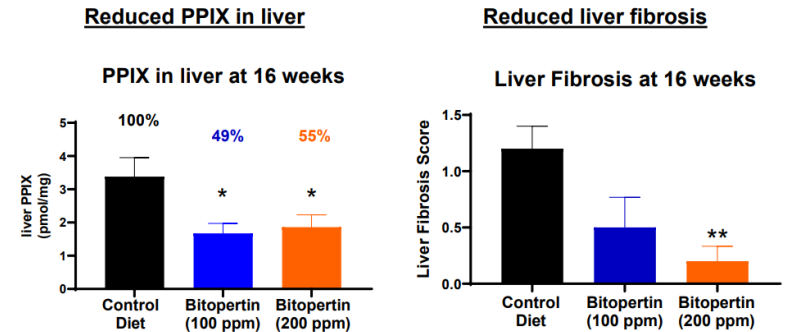
**In vivo - EPP Model (Mouse)**  
FECH<sup>m1pas</sup> Missense Mutation



**In vivo - XLP Model (Mouse)**  
ALAS2<sup>Q548X</sup> Gain-of-Function Mutation



**In vivo - EPP Model (Mouse)**  
FECH<sup>m1pas/m1pas</sup> Mutation



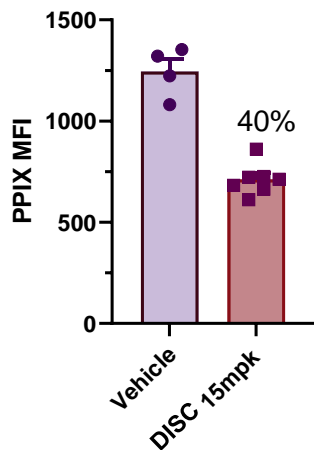
Bitopertin reduced PPIX, the driver of disease pathophysiology, and, based on the data, is expected to be disease-modifying

- Reductions in PPIX levels of  $\geq 30\%$  reported in literature to have a major impact on photosensitivity in patients†
- Bitopertin has been shown in an animal model of EPP (data presented at ASH 2022) to reduce liver fibrosis

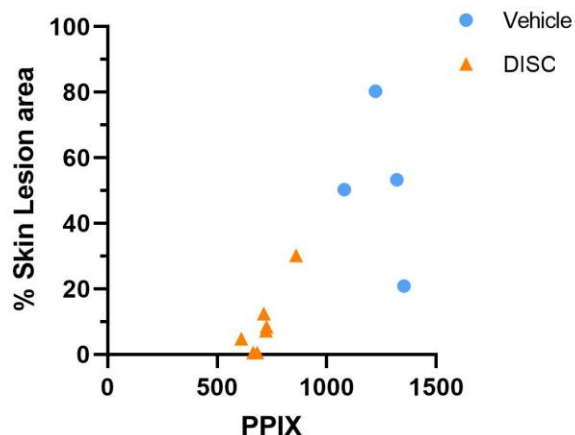
# PPIX in EPP: Phototoxicity in Mice

GlyT1 inhibition significantly ameliorated skin lesions after UV exposure and degree of skin lesion correlated with PPIX levels

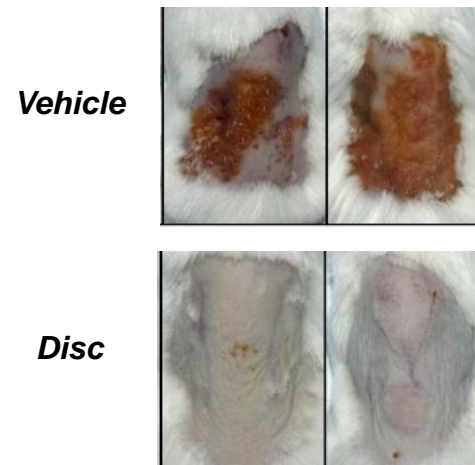
D14 PPIX



PPIX vs Skin lesion%



Skin Lesions at Day 18



# Bitopertin Robust Data Package

Extensive non-clinical, CMC and clinical development has already been completed

## Non-Clinical

- ✓ Genetic toxicity and Safety pharmacology
- ✓ Long-term GLP toxicology
- ✓ Juvenile GLP toxicology studies supporting patients  $\geq 2$  y/o
- ✓ Carcinogenicity studies
- ✓ Full reproductive GLP toxicology
- ✓ Metabolites fully qualified

## CMC

- ✓ Commercial-scale production
- ✓ Optimized oral formulation (tablet and capsule)
- ✓ Highly stable molecule (at least 5 years)

## Clinical

- ✓ Healthy volunteer studies
- ✓ Drug-drug interaction studies
- ✓ Hepatic impairment
- ✓ Renal impairment
- ✓ TQT (heart rhythm) study
- ✓ Pharmacokinetics in patients of Asian descent
- ✓ 30+ Other clinical trials

# EPP Phase 2 Development Program

## BEACON and AURORA Studies



- > **EPP and XLP**; N = 26 (22 adults, 4 adolescents)
- > **Australia** (study opened July '22)
- > **Open-Label, randomized, 24-week study**



- > **EPP**; N = 75 (fully enrolled)
- > **US** (study opened October '22)
- > **Double-blind, placebo-controlled, 17-week study**

**Trial endpoints:** Changes in blood PPIX levels, time in daylight without pain, light tolerance, time to prodromal symptom (TTPS), QOL, safety / tolerability

**Data availability:** Fully enrolled; Updated data presented June 2024; Guidance from end of Phase 2 regulatory interaction to be provided in Q4 2024

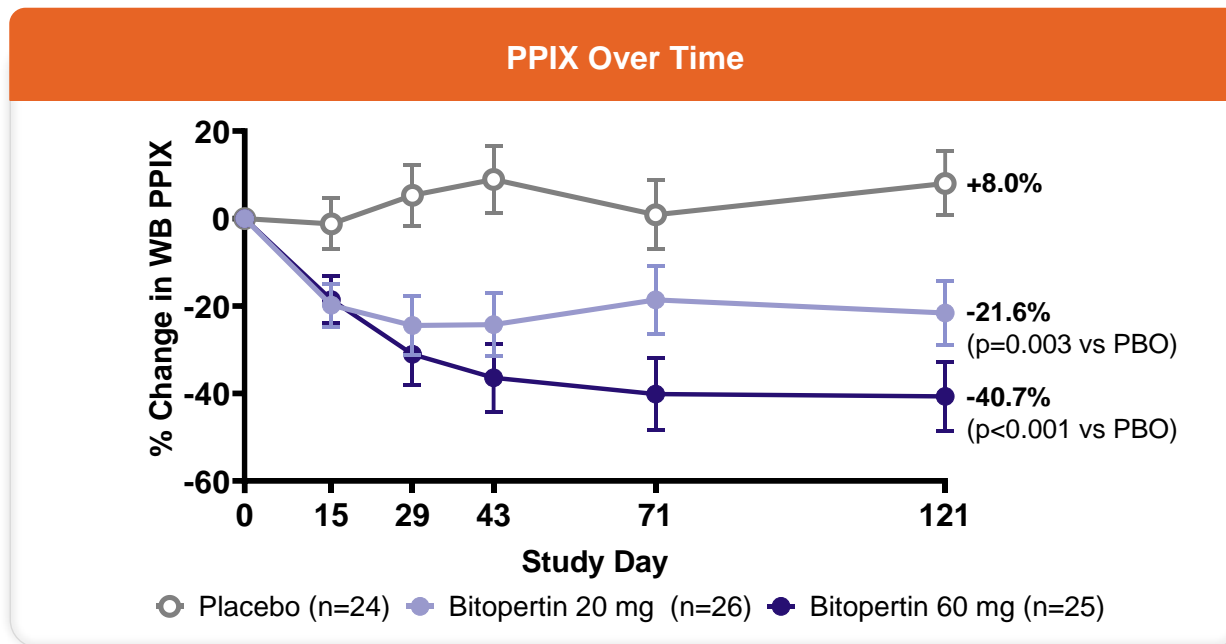
# AURORA Study: Disposition and Baseline Characteristics

	Placebo (n=24)	Bitopertin 20 mg (n=26)	Bitopertin 60 mg (n=25)
<b>Randomized</b>	24	26	25
<b>Completed Study</b>	24	26	22
<b>Discontinued Prior to Day 121</b>	0	0	3
<b>Characteristic</b>			
<b>Mean Age, years</b>	42.3	45.0	47.8
<b>Female, n (%)</b>	12 (50%)	14 (54%)	12 (48%)
<b>White, n (%)</b>	24 (100%)	24 (92%)	24 (96%)
<b>Baseline PPIX, Mean ± SE (ng/mL)</b>	8,691 ± 903	8,155 ± 1,337	10,597 ± 983
<b>Daily Sunlight Exposure (hr), Mean (range)</b>	1.29 (0.18, 3.31)	1.17 (0.26, 4.03)	1.07 (0.04, 2.78)
<b>Time to Prodrome, n (%)</b>			
< 30 min	9 (38%)	9 (35%)	8 (32%)
≥ 30 min	15 (63%)	17 (65%)	17 (68%)

# AURORA Met Primary Endpoint

## Statistically significant reductions in whole-blood (WB) metal-free PPIX

- Bitopertin reduced PPIX levels consistent with BEACON, taking ~6-8 weeks to reach max reduction
- Significant reductions observed in both 20 mg and 60 mg doses

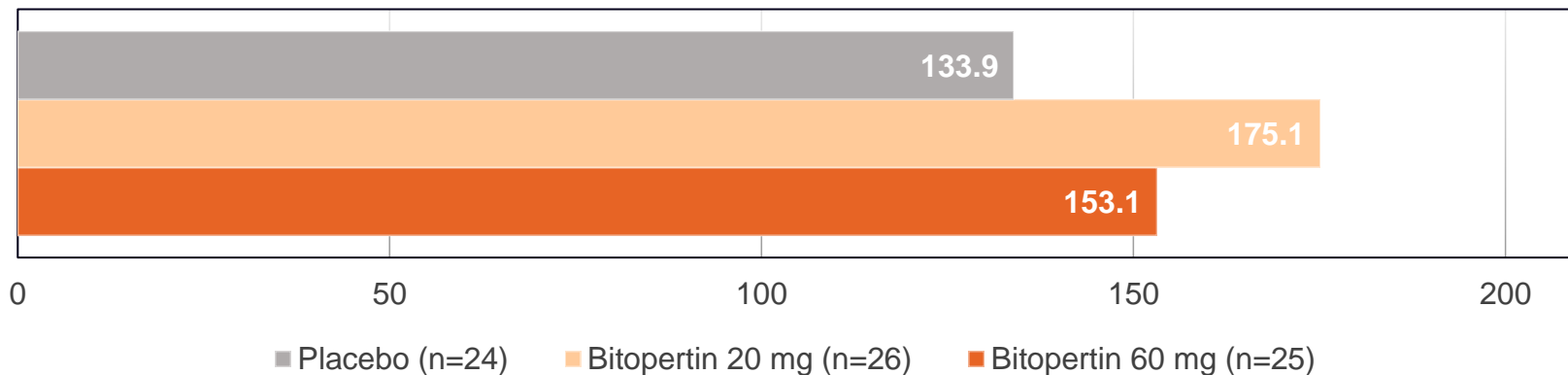


# Updated AURORA Data: Key Secondary Endpoint

## Cumulative time in light without pain

- ⊗ Bitopertin treatment effect similar to BEACON results
- ⊗ Did not meet statistical significance due to strong performance of placebo arm

**Mean Cumulative 4-month Total Time in Light Without Pain (hr)**



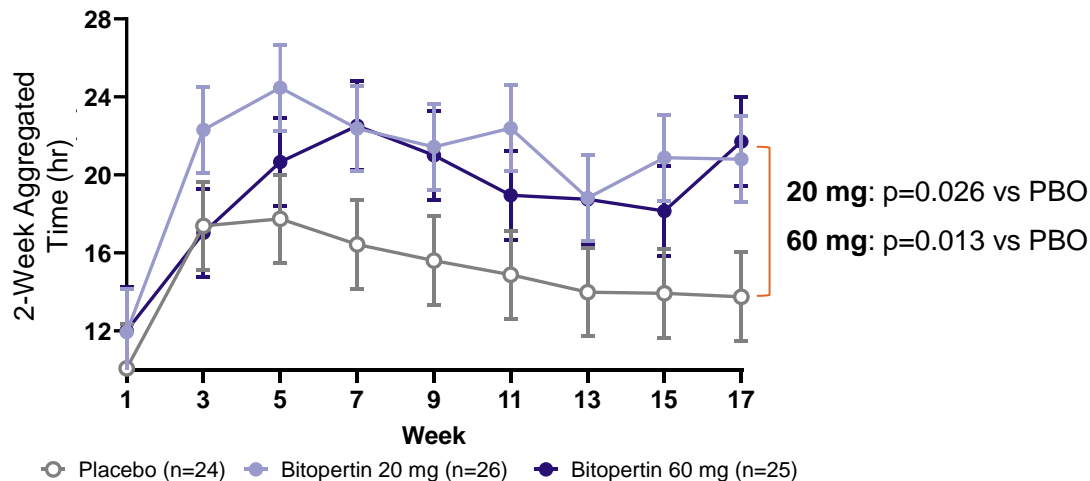


# Updated AURORA Data: Time in Light Without Pain

## Post-hoc longitudinal analysis adjusted for baseline

- Statistically significant improvements in daily time in light compared to placebo
- Meaningful changes in daily time in light relative to baseline

Sunlight Exposure Over 2-Week Intervals

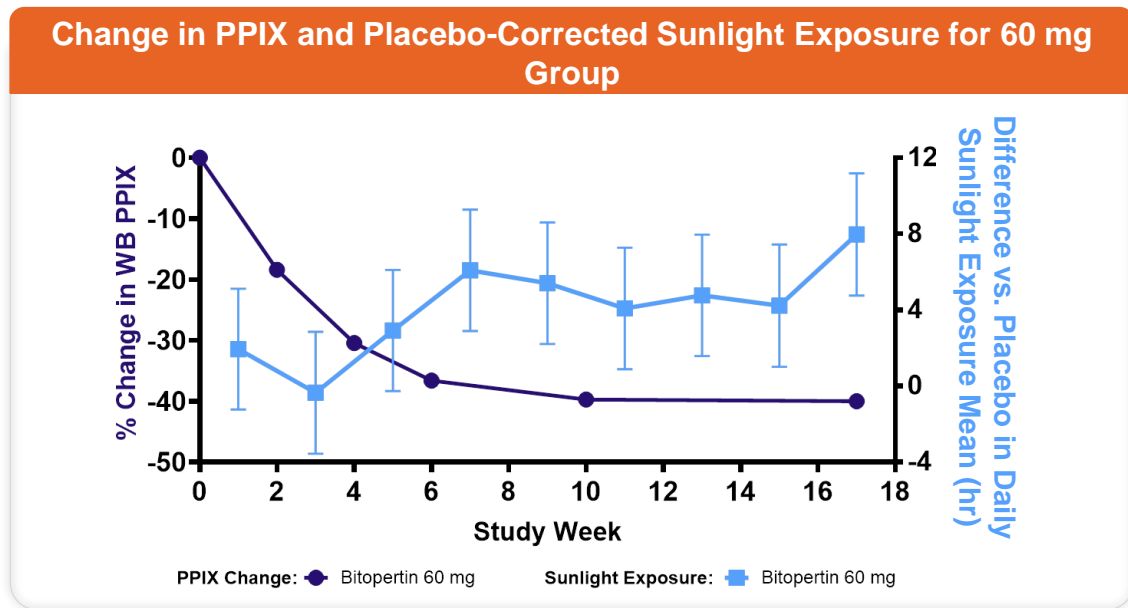


### Change from Baseline

Bitopertin 60 mg (n=25)	2.0x
Bitopertin 20 mg (n=26)	1.9x
Placebo (n=24)	1.1x

# Updated AURORA Data: Light Tolerance

- Timing of PPIX reduction aligns with the time course of increases in sunlight tolerance



# Updated AURORA Data: Phototoxic Reactions with Pain

- Dose-dependent reduction in rate of phototoxic reactions with pain, reaching statistical significance in the 60 mg dose group
- Max pain score reduced with bitopertin

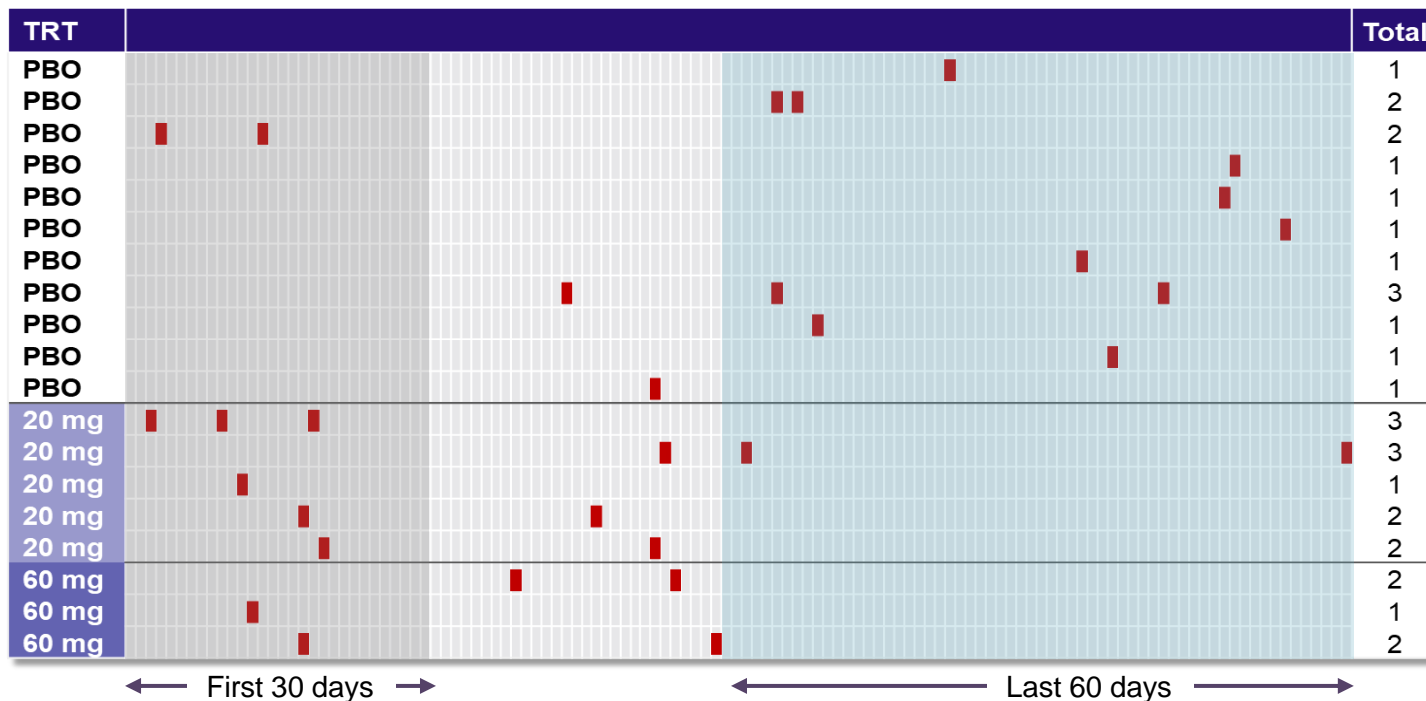
## Incidence Rate Ratio of New Phototoxic Reactions with Pain vs. Placebo



	Screening (2-4 weeks)		Double-Blind Period (17 weeks)		
	# of New Reactions	# of Participants	# of New Reactions	# of Participants	Median Max Pain Score
<b>Placebo (n=24)</b>	4	2 (8%)	15	11 (46%)	5.0
<b>Bitopertin 20 mg (n=26)</b>	11	8 (31%)	11	5 (19%)	4.0
<b>Bitopertin 60 mg (n=25)</b>	8	6 (24%)	5	3 (12%)	3.5

# Updated AURORA Data: Phototoxic Reactions with Pain

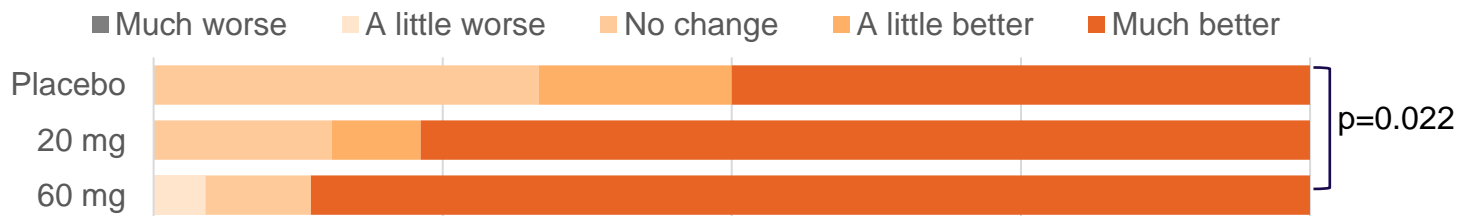
- Consistent with profile for PPIX reductions reaching a nadir, time course of phototoxic reactions showed greater bitopertin treatment effect during the last 60 days of study



# Updated AURORA Data: Patient-Reported Outcomes

- Dose-dependent improvements in Patient Global Impression of Change (PGIC), reaching statistical significance in the 60 mg dose group at end of study
- Improved PGIC responses are associated with greater reductions in PPIX

**PGIC:** “Since the start of the study, how would you rate the change in your EPP?”



% PPIX Change	PGIC Response				
	Much worse	A little worse	No change	A little better	Much better
N	0	1	14	6	48
Mean (SD)	-	43.8	6.7 (64.9)	-0.4 (15.2)	-25.9 (31.7)

# Updated AURORA Data: PPIX Change and Light Tolerance

- Greater PPIX reductions in bitopertin participants reporting no phototoxic reactions (-36.5%) vs phototoxic reactions (-4.0%)
- PPIX reductions associated with improvements in multiple measures of light tolerance

## Tertiles of PPIX Change



Light Tolerance Measure (Mean ± SD)	Tertile 1 (-88% to -38%)	Tertile 2 (-38% to -7%)	Tertile 3 (-7% to 190%)
Cumulative total time in sunlight without pain (hr)	161.1 ± 142.6	124.5 ± 68.3	117.5 ± 83.2
Average time in sunlight without pain (hr)	1.61 ± 1.32	1.20 ± 0.72	1.16 ± 0.83
Change from baseline in time to prodrome (min)	117.4 ± 148.6	109.4 ± 121.1	64.1 ± 123.8

# Safety and Tolerability

- No serious adverse events reported with bitopertin
- Stable hemoglobin levels
- Favorable safety profile consistent with prior studies enrolling >4000 participants

	Placebo (n=24)	Bitopertin 20 mg (n=26)	Bitopertin 60 mg (n=25)
<b>Participants with any TEAE, n (%)</b>	18 (75%)	20 (77%)	22 (88%)
<b>TEAEs leading to discontinuation, n (%)</b>	0	0	2 (8%)
<b>SAEs, n (%)</b>	1 (4%)	0	0
<b>Common TEAEs</b>			
Dizziness, n (%)	4 (17%)	4 (15%)	11 (44%)
Median Duration (days)	2.0	4.5	5.0
Nausea, n (%)	2 (8%)	1 (4%)	4 (16%)
Alanine aminotransferase increased, n (%)	3 (13%)	1 (4%)	2 (8%)

# Summary of EPP Bitopertin Data

## BEACON and AURORA Studies

### AURORA

- Significant reductions in PPIX  
40% vs placebo
- Time-dependent, 2x improvements  
in pain-free time in sunlight
- Significant 75% reduction in rate  
of phototoxic reactions vs placebo
- Significant improvement in PGIC  
vs placebo

◆-----◆  
**Targets underlying  
pathophysiology of EPP**  
-----◆

◆-----◆  
**Significant improvement  
in sunlight tolerance**  
-----◆

◆-----◆  
**Functional benefit by reducing  
debilitating phototoxic reactions**  
-----◆

◆-----◆  
**Significantly improved  
how patients feel**  
-----◆

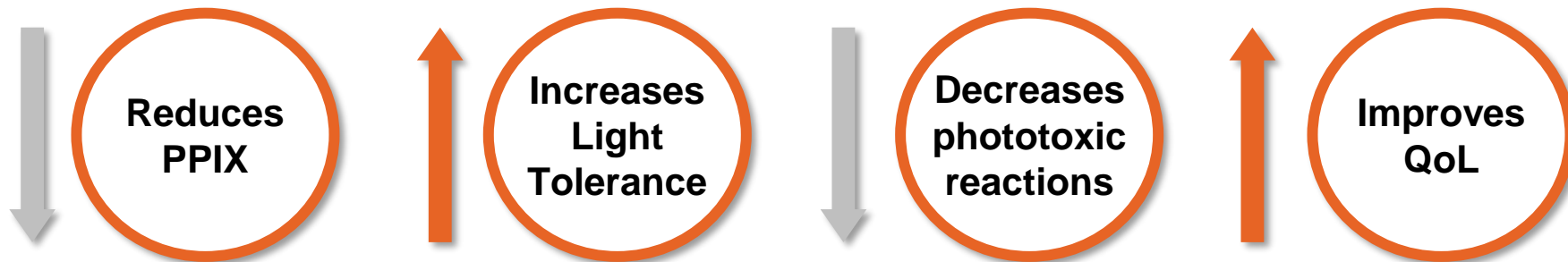
### BEACON

- Significant reductions in PPIX  
>40% vs baseline
- Significant 3x increase in sunlight  
tolerance (time to prodrome)
- 92% reduction in number of  
phototoxic reactions vs baseline
- Nearly all (95%) participants reported  
improvements in PGIC



# Summary of Updated Bitopertin Data

Bitopertin demonstrated meaningful impact on key aspects of EPP



## ➤ Next Steps

- Guidance from end of Phase 2 meeting expected to be provided in Q4 2024; initiation of a pivotal study in 1H 2025
- Range of available endpoints to bring to regulators that address the placebo effect
  - *Options include:* longitudinal analysis of time in sunlight, phototoxic pain reactions, PPIX, composites of multiple endpoints, and others

# Diamond Blackfan Anemia

## Genetic condition caused by defective erythropoiesis

- Mutations in ribosomal protein genes (classically RPS19)
- Heme/globin imbalance: excess heme accumulation leading to toxicity as globin synthesis is delayed

## Characterized by severe anemia that presents in infancy

- Anemia, fatigue, delayed growth, cardiac or renal defects, risk of malignancy
- Patients may also have distinct physical features / congenital abnormalities (i.e., cleft palate, thumb and upper limb abnormalities, short stature, microcephaly)

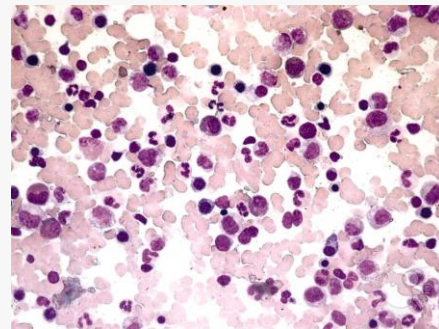
## No approved treatments for DBA

- Patients receive steroids and blood transfusions to manage their condition
- Median life expectancy is 38 years, with 25% mortality by age 50

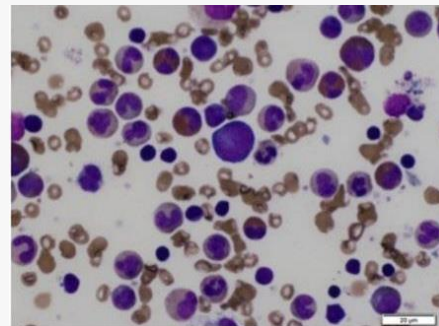
## Rare disease with an incidence rate of 5-7 per 1 million live births

- Estimated worldwide prevalence of 5,000

**Normal**



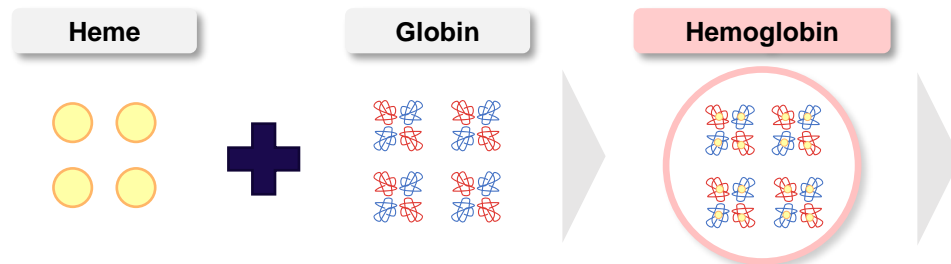
**DBA**



# Diamond Blackfan Anemia: Heme Toxicity

## Normal Erythropoiesis

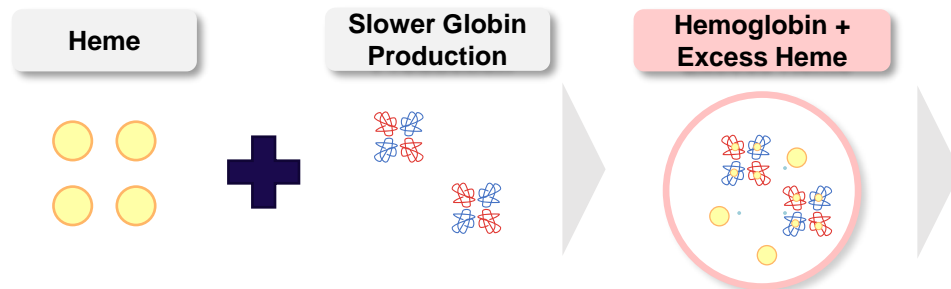
**Glycine**  
Critical and initiating precursor  
for heme biosynthesis and is  
supplied by **GlyT1 transporter**



**Complete  
Maturation**

## DBA Erythropoiesis

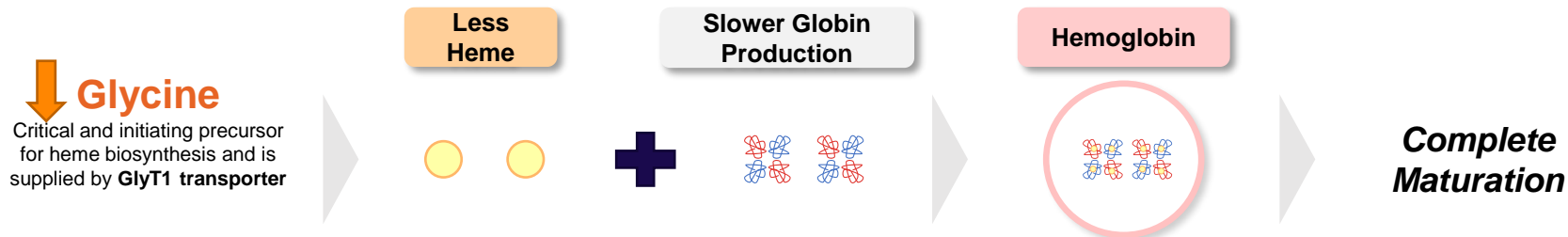
**Glycine**  
Critical and initiating precursor  
for heme biosynthesis and is  
supplied by **GlyT1 transporter**



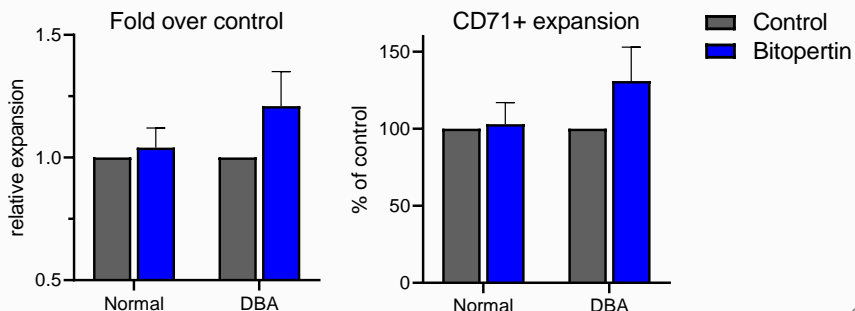
**Heme  
toxicity and  
cell death**

# Bitopertin in Diamond Blackfan Anemia

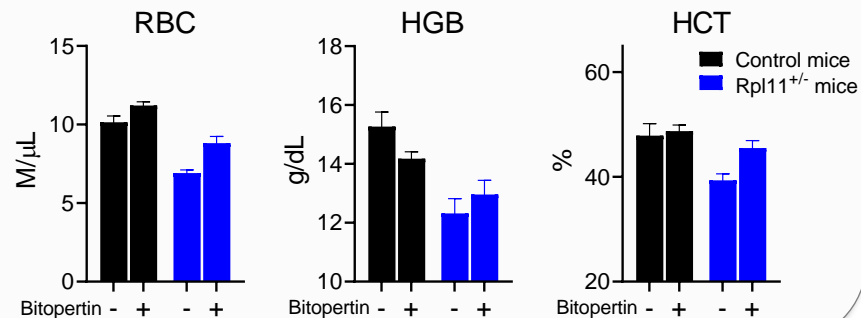
By slowing the influx of glycine, bitopertin lowers heme production, reducing the amount of excess heme and preventing cell death



Primary human marrow in erythroid differentiation cultures treated with 10 ng/ml bitopertin for 7 days



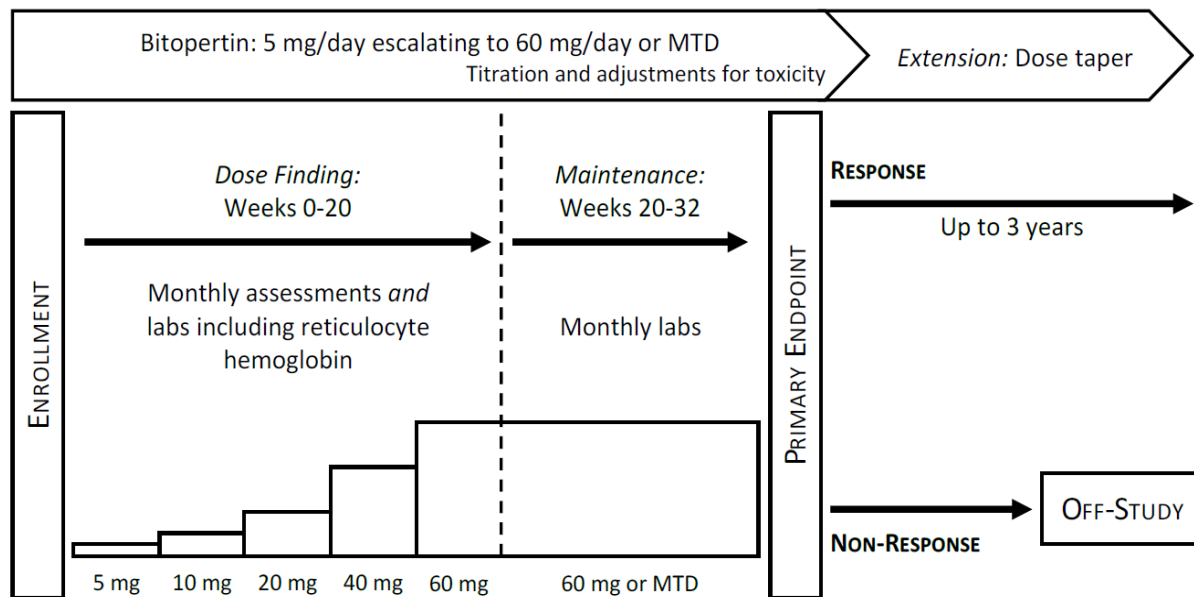
Rpl11 haploinsufficient mice were treated with 100 ppm bitopertin in chow (20 mg/kg/d) for 8 weeks



# Diamond Blackfan Anemia Phase 2 Clinical Trial

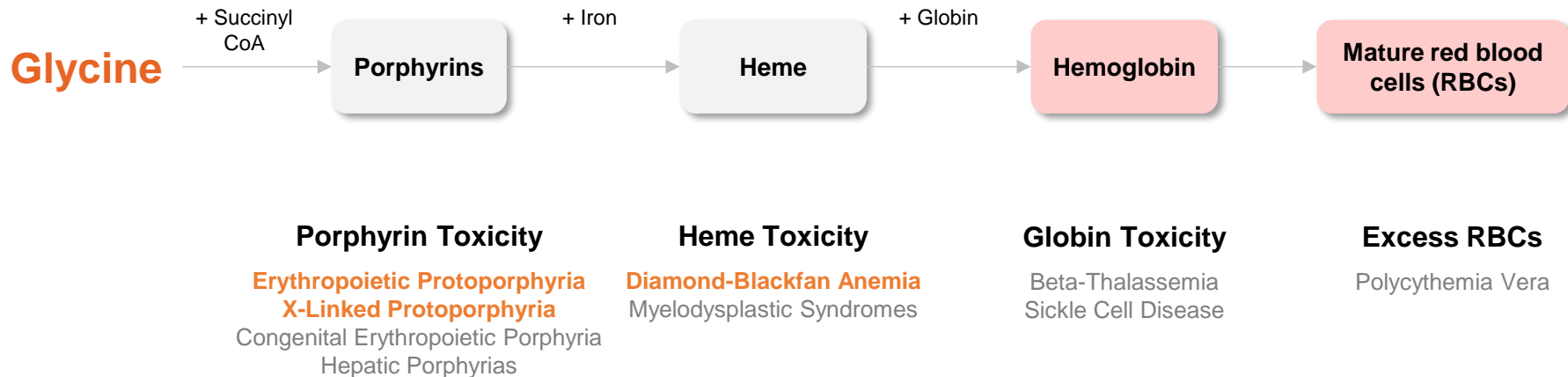
*IIT conducted by the NIH under CRADA with Disc*

- Single-arm, dose-escalation study with extension
- N=15-25 patients with steroid-refractory and/or relapsed disease, or steroid intolerant
- Response defined as >50% reduction in RBC transfusions over 8-week period or an increase in pre-transfusion hemoglobin of >1.5 g/dL



# Multiple Additional Potential Applications of Bitopertin

Inhibiting heme synthesis with bitopertin has potential to address a wide range of hematologic diseases





# Hepcidin Modulation

Iron Homeostasis

# Iron is Fundamental to RBC Biology

Hepcidin is a regulatory hormone that plays a central role in iron metabolism and homeostasis

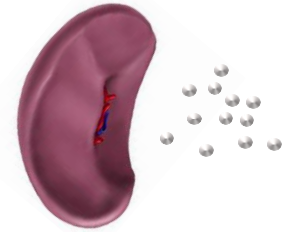
Induced by Inflammation

## Hepcidin

Gatekeeper Function: Blocks iron absorption and recycling



**GI Tract**  
Iron Intake



**Spleen**  
Iron Storage

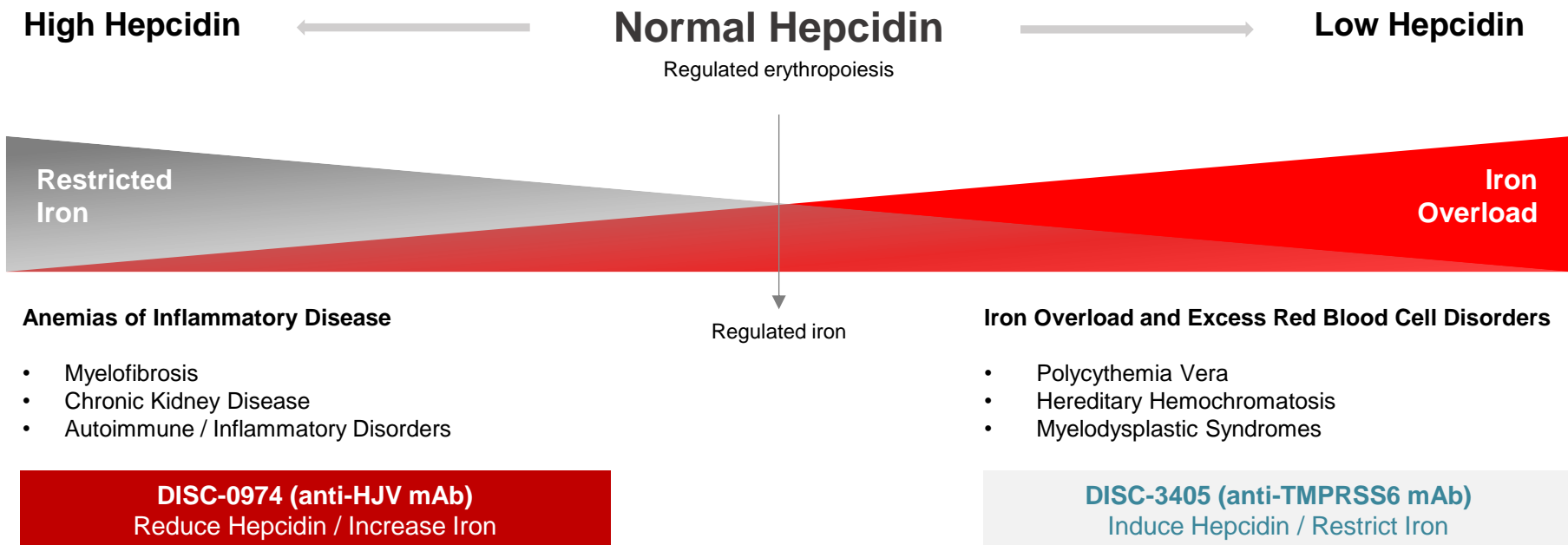


**RBC Production in  
Bone Marrow**



# Hepcidin is a Therapeutic Target for Diseases

Dysregulated hepcidin drives a wide range of hematologic diseases

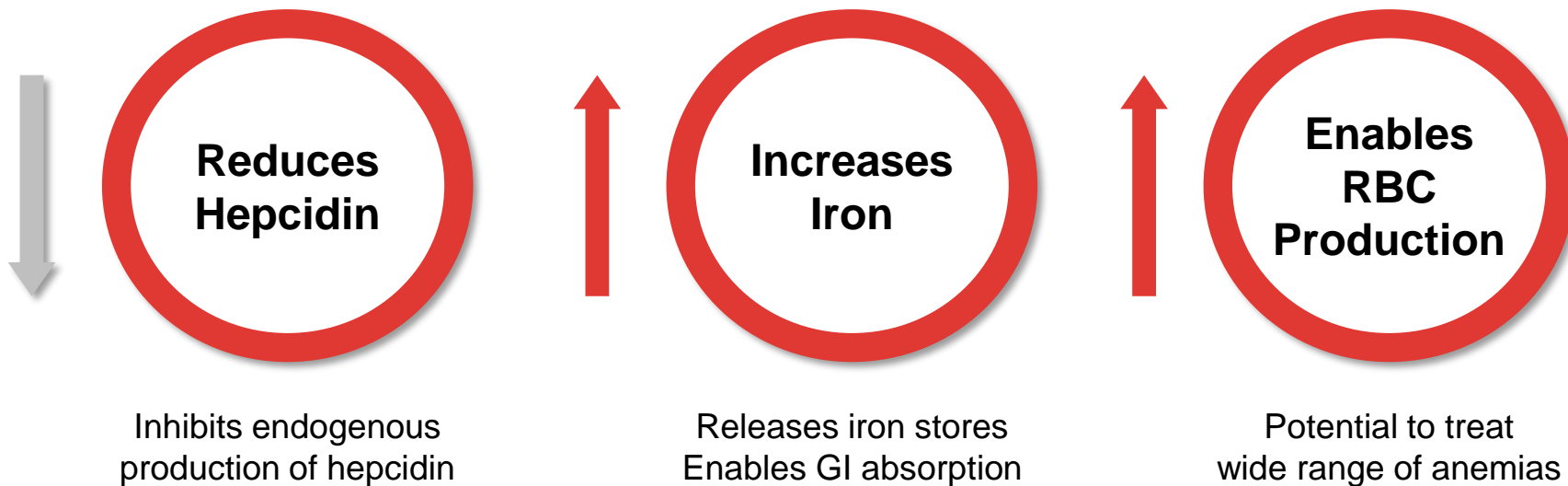




**DISC-0974**  
Anti-HJV mAb  
Hepcidin Suppression

# DISC-0974: Novel Anti-HJV mAb to Suppress Hepcidin

Designed to enhance iron availability to address a wide range of hematologic disorders



# Significant Opportunity in Anemia of Inflammation

Numerous chronic diseases associated with anemia from high hepcidin

Anemia Types	US Prev.	Est. % Anemic
<b>Myelofibrosis (MF)</b>	16-18.5K	87%
<b>Chronic Kidney Disease (CKD)</b>	37 MM	17-50%
Inflammatory Bowel Disease	1.6 MM	25-35%
Anemia of Cancer	17 MM	35-80%
Systemic Lupus Erythematosus	210K	50%

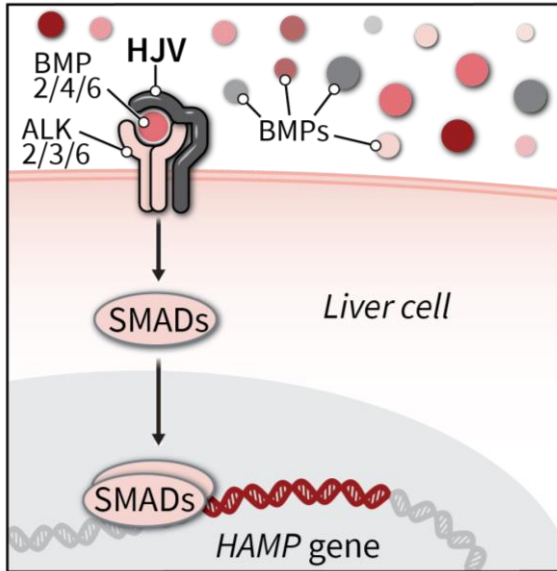
- **Anemia of inflammation** is the 2<sup>nd</sup> most common form of anemia
- **Estimated 40% of all anemias** are driven by or have an inflammatory component
- **Hepcidin is up-regulated** and correlates with anemia, driven by inflammation

**Bold** = ongoing Disc trial

Sources: Weiss (2019); Maccio (2014); Tefferi (2012); Lupus Foundation; Stauffer (2014); Filmann (2014); Koutroubakis (2015); Crohn's and Colitis Foundation

# Targeting Hemojuvelin (HJV) to Suppress Hepcidin

Critical and specific target for hepcidin expression



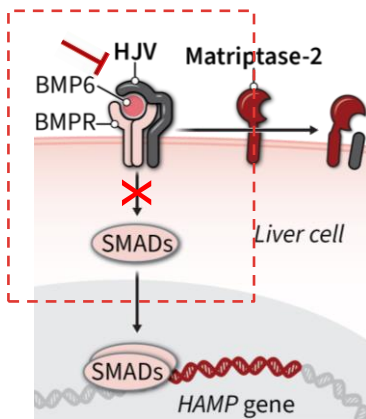
Inhibiting Hemojuvelin (HJV) Prevents Hepcidin Expression and Increases Iron

- **Genetic validation** in patients with Juvenile Hemochromatosis (lower hepcidin and elevated iron levels)
  - Loss-of-function mutations in HJV are phenotypically indistinguishable from mutations in *HAMP* (hepcidin) gene
- **Functionally specific** to hepcidin / iron
- **Tissue specific** expression primarily in the liver

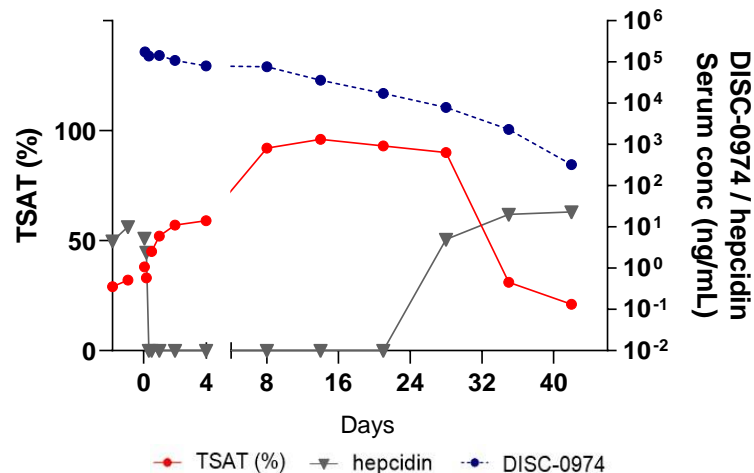
# DISC-0974 Mechanism of Action

Designed to reduce hepcidin and increase serum iron levels

DISC-0974 mAb binds to and prevents signaling through hemojuvelin (HJV) co-receptor



Potent and rapid effects on hepcidin and iron with single 5 mg / kg dose (NHP)

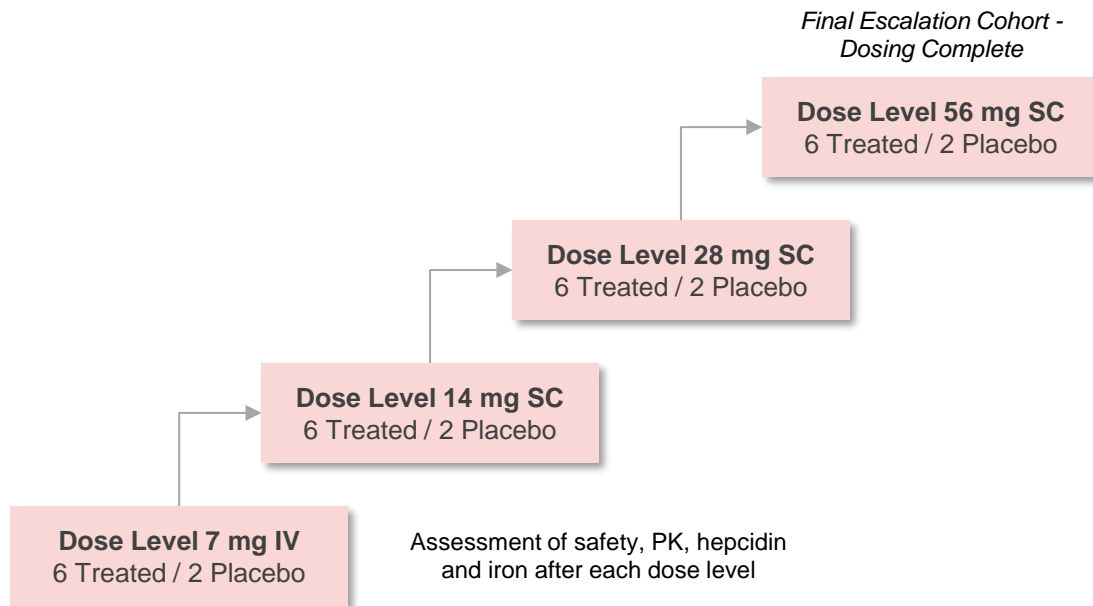


# Phase 1 SAD Trial in Healthy Volunteers

Established proof-of-mechanism based on hepcidin and iron parameters

## Trial Design

- Single-ascending dose in  $\geq 32$  healthy volunteers
- Key outcome measures:
  - Safety and PK
  - Hepcidin level, serum iron level, % TSAT
- Dose escalation until TSAT  $> 40\%$  for at least 2 weeks
- Dose levels: 7 mg dose (IV); 14, 28 and 56 mg doses (SC)

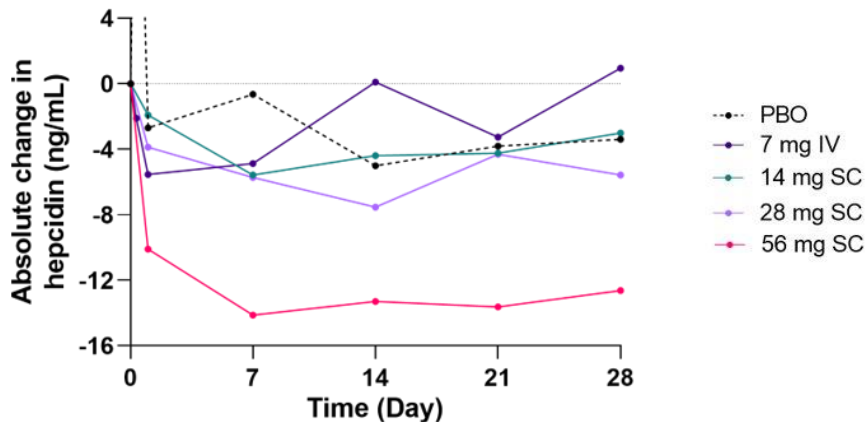


# DISC-0974 Phase 1 SAD Data

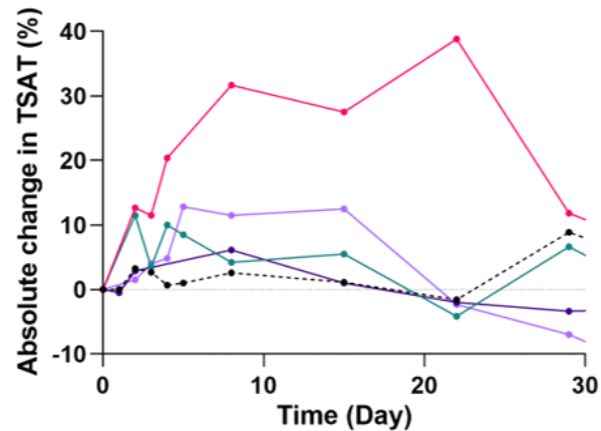
Dosing of DISC-0974 demonstrated a reduction of hepcidin and iron mobilization



DISC-0974 Reduced Hepcidin Production



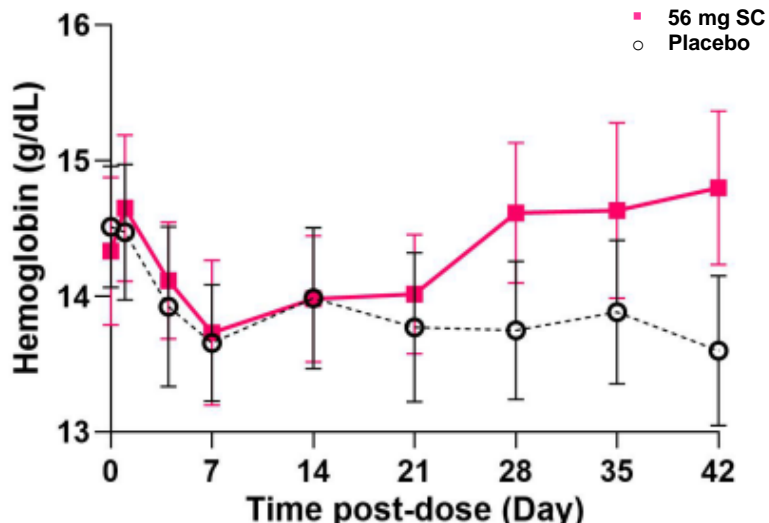
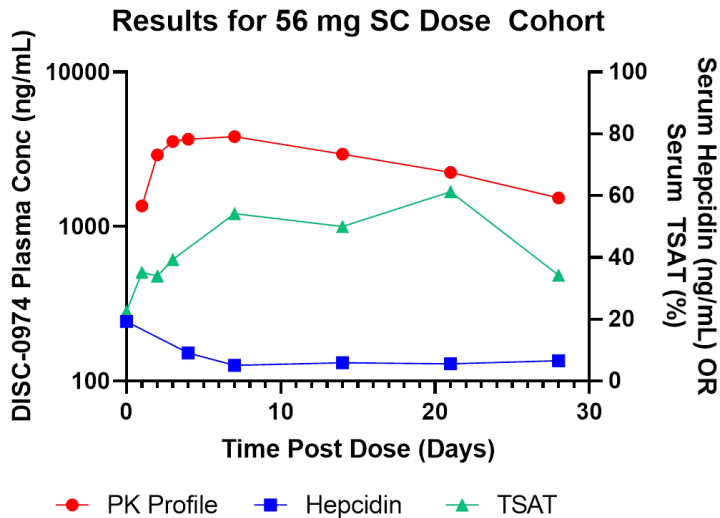
DISC-0974 Increased TSAT





# DISC-0974 Phase 1 SAD Data (cont.)

Top dose (56 mg) pharmacodynamic activity improved key clinical parameters (> 1g/dL Hgb)



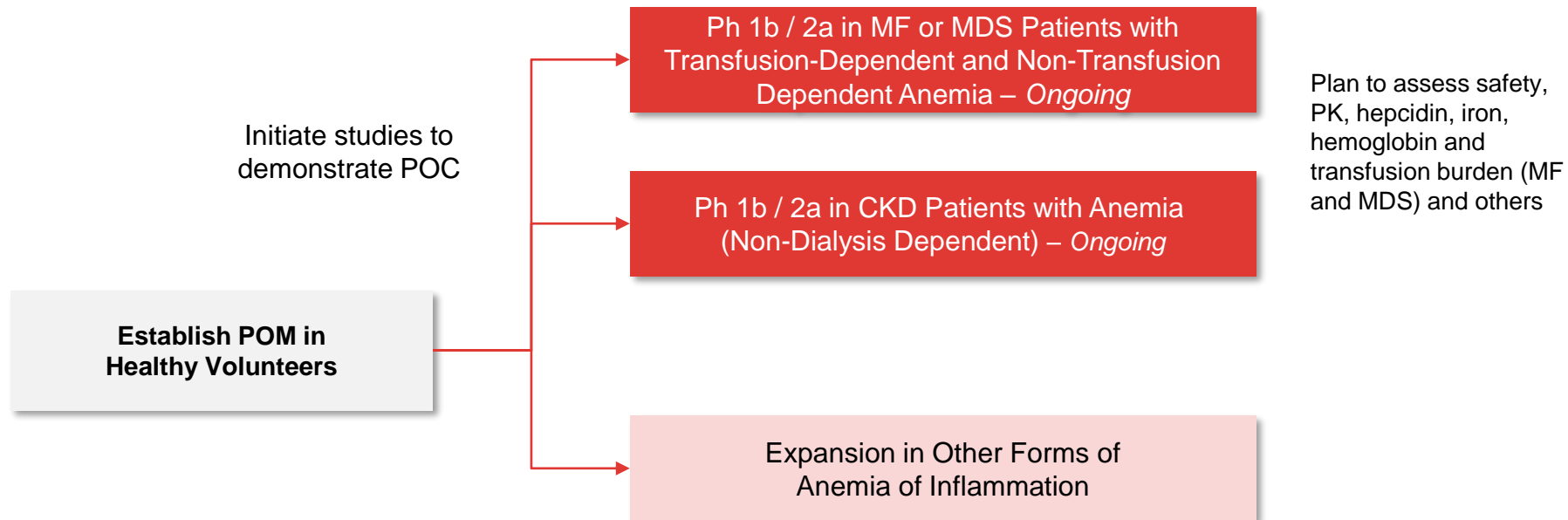
# DISC-0974 Phase 1 SAD Safety

Safety profile was consistent with selective target biology and preclinical studies; no serious or AEs > Grade 1

	Total n=42	Pooled Placebo n=10	7 mg IV n=8	14 mg SC n=6	28 mg SC n=6	28 mg IV n=6	56 mg SC n=6
Diarrhea	1 (2.4)	1 (10.0)	0	0	0	0	0
Dizziness	2 (4.8)	0	0	0	0	1 (16.7)	1 (16.7)
Dyspepsia	1 (2.4)	0	0	0	0	0	1 (16.7)
Eye pruritis	1 (2.4)	0	0	0	1 (16.7)	0	0
Peripheral swelling	1 (2.4)	0	0	0	0	1 (16.7)	0
Headache	1 (2.4)	0	0	0	1 (16.7)	0	0
Myalgia	1 (2.4)	0	0	0	0	0	1 (16.7)
Nasal congestion	1 (2.4)	0	0	0	0	0	1 (16.7)
Pain in extremity	1 (2.4)	1 (10.0)	0	0	0	0	0
Seasonal allergy	1 (2.4)	0	0	0	1 (16.7)	0	0
Vessel puncture site bruise	1 (2.4)	1 (10.0)	0	0	0	0	0
Vomiting	1 (2.4)	1 (10.0)	0	0	0	0	0

# DISC-0974 Development Strategy

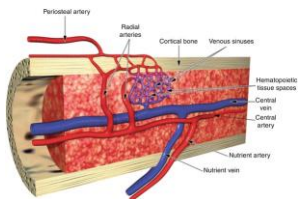
Aim to demonstrate POC in anemia of MF and CKD



# Hepcidin is a Key Driver of Myelofibrosis (MF) Anemia

Anemia is severe and prevalent in MF and can limit treatment

## Anemia of MF



### > Est. # Patients

- 25,000 patients (US)
- ~87% are anemic; severe and require transfusion

### > Etiology of Anemia

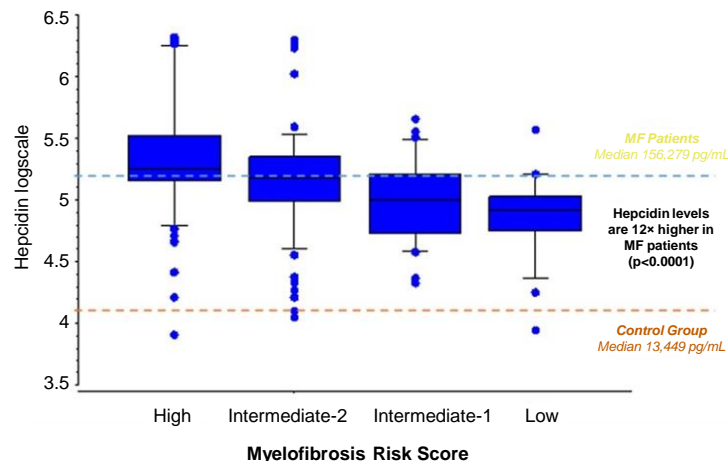
- High hepcidin from inflammation
- JAK inhibitors worsen anemia; loss of marrow function

### > Unmet Medical Needs

- Severe and difficult to treat; high transfusion burden
- No approved or effective anemia therapy
- Anemia limits optimal JAK inhibitor treatment

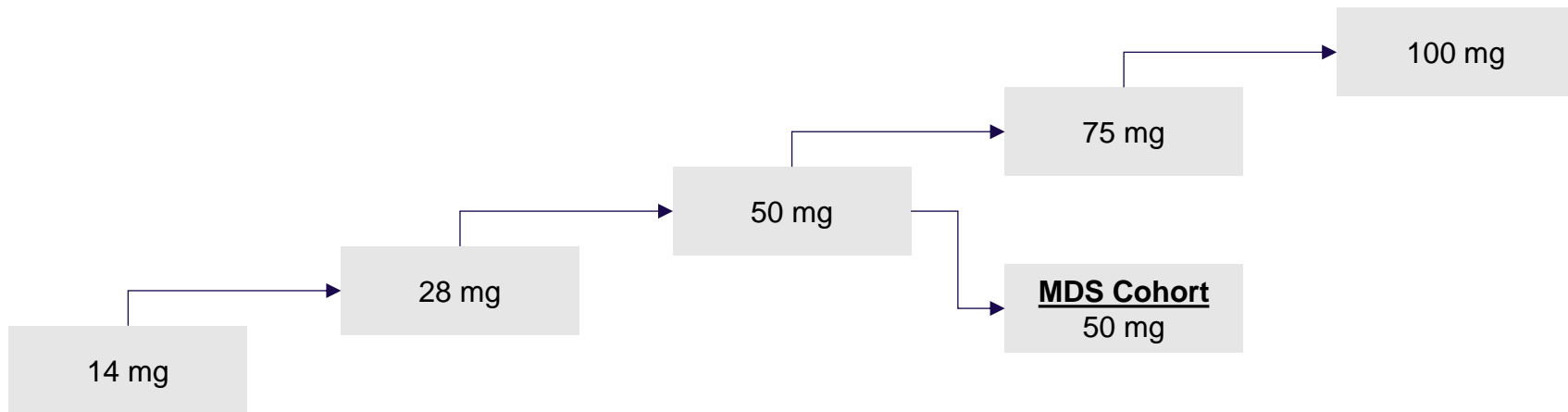
## Hepcidin Levels are Elevated in MF

~ 12× higher than control and associated with severity of anemia and transfusion burden



# DISC-0974 Phase 1b Anemia of MF Study Overview

Subcutaneous dosing once monthly for 6 months



**Key Endpoints/Measures:** Iron, hepcidin, and other hematologic parameters, safety/tolerability

**Data Availability:** Data presented in June 2024; initiation of Phase 2 study expected by the end of 2024

# Updated DISC-0974 MF Data: Baseline and Demographics

Data as of April 29, 2024

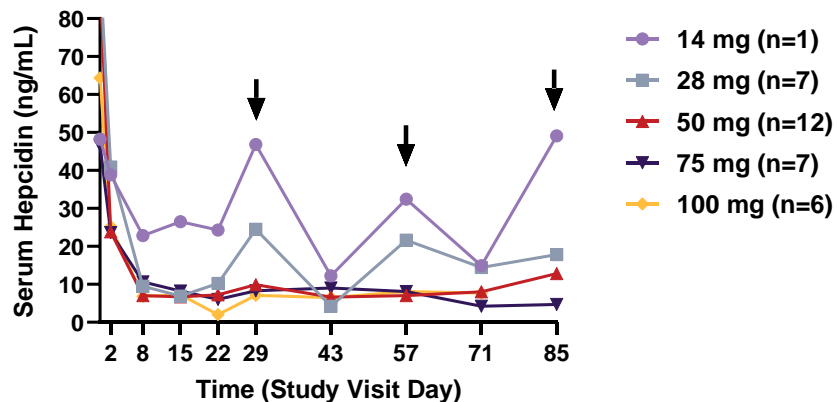
	DISC-0974 14 mg (N=1)	DISC-0974 28 mg (N=7)	DISC-0974 50 mg (N=12)	DISC-0974 75 mg (N=8)	DISC-0974 100 mg (N=6)
<b>Age, median (range), years</b>	70	71 (57, 89)	70.5 (31, 83)	74 (58, 84)	67.5 (53, 79)
<b>Time since MF diagnosis, median (range), years</b>	1	6 (0,18)	2.5 (0,14)	4 (0, 12)	1 (0,2)
<b>Concomitant medication, n (%)</b>					
JAK inhibitor	0	4 (57.1)	5 (41.7)	1 (12.5)	0
Hydroxyurea	1 (100)	0	0	1 (12.5)	0
<b>Transfusion dependent, n (%)*</b>	0	2 (28.6)	1 (8.3)	0	1 (16.7)
<b>Baseline hepcidin, median (range), ng/mL</b>	48.2	93.3 (21.4, 171.1)	90.2 (8.7, 155.7)	46.6 (23.7, 188.2)	64.4 (11.5, 374.7)
<b>Baseline hemoglobin, median (range), g/dL</b>	8.2	8.4 (6.8, 9.3)	8.6 (6.1, 10.3)	8.9 (6.7, 9.9)	8.2 (5.5, 9.4)

# Defined as an RBC transfusion frequency of  $\geq 6$  units PRBC over the 84 days immediately prior to Screening. There must not be any consecutive 42-day period without an RBC transfusion in the 84-day period, and the last transfusion must be within 28 days prior to Screening. One participant treated with 28 mg discontinued DISC-0974 early due to physician decision. JAK = Janus kinase. Baseline is defined as: (1) Participants transfused within 84 days of screening; (1.a) transfusion dependent then use lowest hemoglobin level recorded in the 84 days before screening initiation (one reading). (1.b) Non-transfusion dependent then {1.b.i} participants transfused within 30 days before screening use the lowest pre-transfusion hemoglobin level (one reading). {1.b.ii} participants transfused within 84 days but not within the month before screening use average of the pre-transfusion hemoglobin level, screening hemoglobin level, and Day -1 level (3 readings); (2) Participants not transfused within 84 days of Screening use Screening and Day -1 average

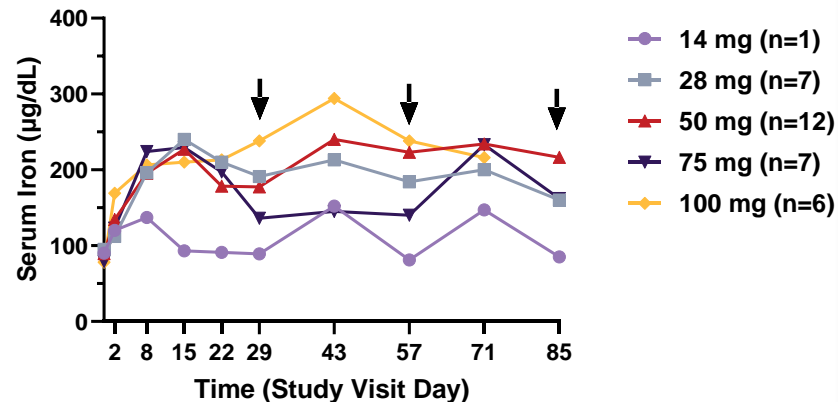
# Updated DISC-0974 Anemia of MF Data: Hepcidin and Iron

- DISC-0974 demonstrated decreases in hepcidin and increases in serum iron
- Impact was consistent across all treated participants

## Median Serum Hepcidin



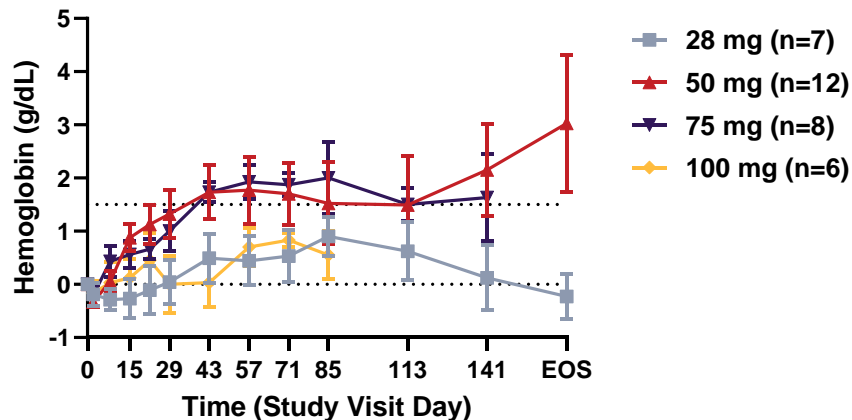
## Median Serum Iron



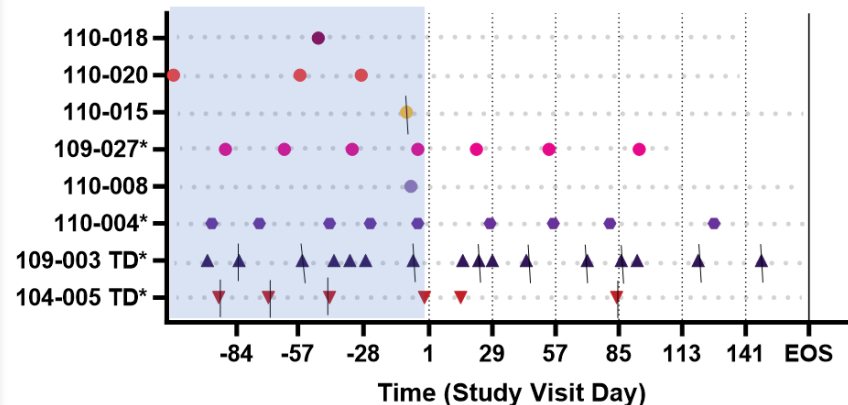
# Updated DISC-0974 Anemia of MF Data: Hematologic Response

- DISC-0974 demonstrated sustained increases in hemoglobin across dose groups
- All evaluable participants with baseline transfusion requirement had at least a 50% reduction in transfusions over a rolling 8-week window on study compared to baseline

## Hemoglobin Increase from Baseline in All Patients



## Transfusion Frequency Over Time<sup>1</sup>

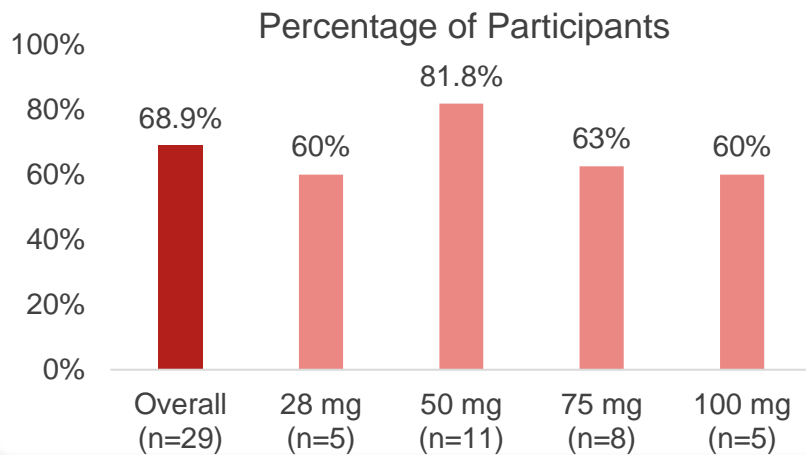




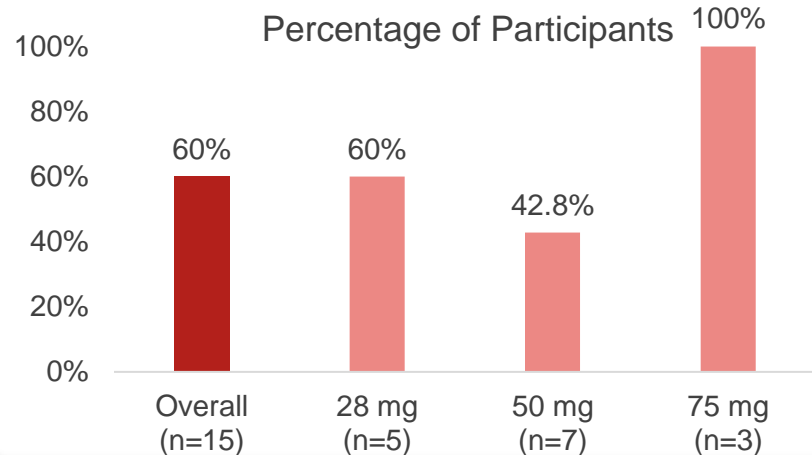
# Updated DISC-0974 Anemia of MF Data: Hemoglobin Response in NTD Participants

- ⊗ Hemoglobin responses of  $\geq 1.5$  g/dL increase were achieved in 68.9% of NTD participants
- ⊗ For participants who have completed at least 16 weeks of the study, 60% of NTD had a mean hemoglobin response of 1.5 g/dL above baseline sustained for at least 12-weeks

NTD Participants with Hgb  $\Delta \geq 1.5$  g/dL



NTD Participants with Hgb  $\Delta \geq 1.5$  g/dL for  $\geq 12$  Weeks<sup>1</sup>



# Updated DISC-0974 Anemia of MF Data: Safety

⊕ Generally well tolerated at all evaluated dose levels

Adverse events at least possibly related to DISC-0974	14 mg (N=1)	28 mg (N=7)	50 mg (N=12)	75 mg (N=8)	100 mg (N=6)
<b>Participants with event (n)</b>	<b>0</b>	<b>3</b>	<b>5</b>	<b>1</b>	<b>1</b>
Diarrhea	0	1	2	1	0
Injection site bruising	0	1*	0	0	0
Pyrexia	0	1*	0	0	0
Blood bilirubin increased	0	0	0	0	1
Platelet count decreased	0	0	1*	0	0
Anemia	0	0	1*	0	0
Urinary tract infection	0	1*	0	0	0
Headache	0	0	1	0	0
Hot flush	0	0	1	0	0

AE = adverse event; JAKi = Janus kinase inhibitor

Grade 3 AEs include headache reported in 1 participant treated at 28 mg (unlikely related to DISC-0974) and Grade 3 anemia reported in 2 participants treated at 28 mg and 4 participants treated at 50 mg (one at 50 mg was deemed related to DISC-0974; all others were deemed not related). Serious AE: Grade 2 arthralgia was reported in 1 participant treated at 28 mg (not related to DISC-0974). There were no ≥ Grade 4 AEs reported. Liver iron concentration was obtained at baseline and end of study; for available participants (n=10), median change from baseline was 0.3 mg/g dry weight, range (-0.5 to 16.2). \* indicates AE in a participant receiving concomitant JAKi therapy.

# Summary of Updated DISC-0974 MF Data

**Decreased  
hepcidin &  
increased  
iron**

**68.9%**  
of NTD pts had  
Hgb response  
 $\geq 1.5\text{g/dL}$

**60%**  
of NTD pts had  
Hgb response  
sustained for  
 $\geq 12$  weeks\*

**100%**  
of pts with  
baseline  
transfusions had  
 $\geq 50\%$   
reduction

**1 of 2**  
TD pts  
reached TI

**Generally  
well  
tolerated**

# Summary of DISC-0974 in MF Anemia

DISC-0974 demonstrated improved hemoglobin response and transfusion burden in MF



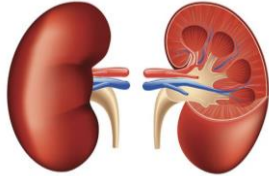
## ➤ Next Steps

- End of Phase 1b meeting with regulators in H2 2024
- Initiation of Phase 2 study by the end of 2024

# Hepcidin is a Key Driver of CKD Anemia

Pervasive issue that is currently highly under-treated

## Anemia of CKD



### > Est. # Patients

- 5 to 6 million anemic NDD-CKD patients in the US alone

### > Etiology of Anemia

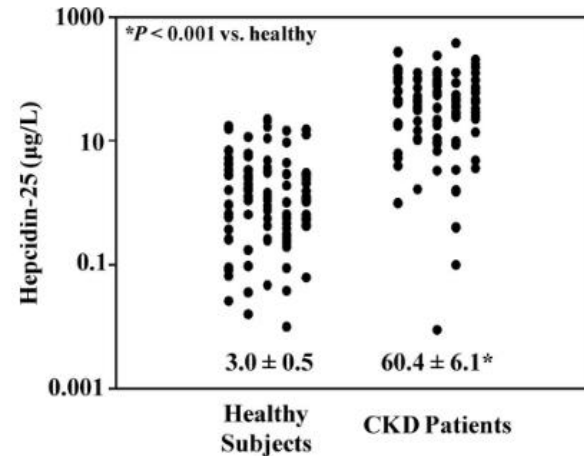
- High hepcidin from inflammation & poor renal clearance
- Compromised erythropoietin production

### > Unmet Medical Needs

- Majority patients untreated or under-treated
- ESAs restricted due to safety and black box
- Mean Hb 9.3 g/dL in patients initiating dialysis

## Hepcidin Levels Elevated in CKD Patients

~20x higher than healthy subjects and increases with disease severity

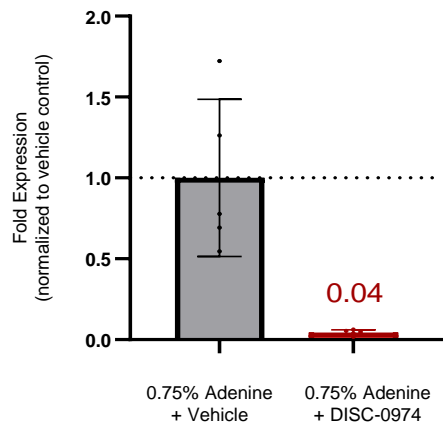


# DISC-0974 Improved Anemia in Model of CKD

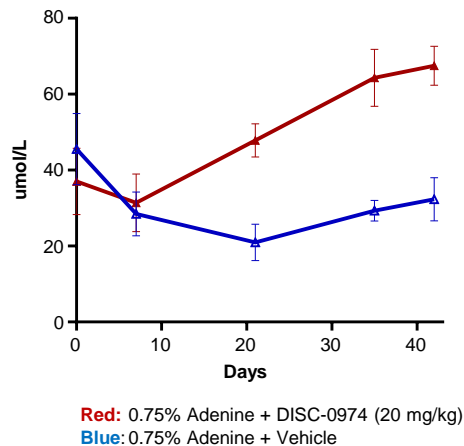
## Rat Model of Adenine Diet-Induced CKD



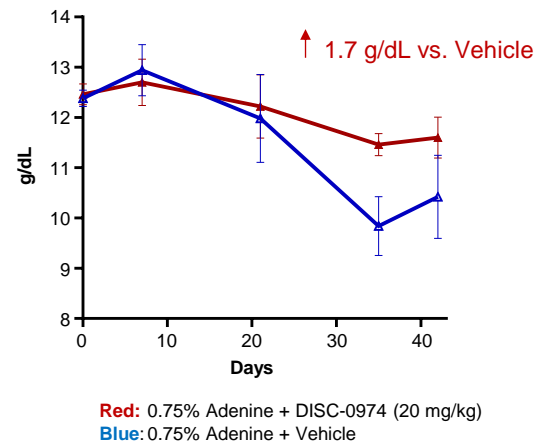
DISC-0974 Reduced  
Hepcidin Expression



DISC-0974 Increased  
Serum Iron



DISC-0974 Increased  
Hemoglobin Levels



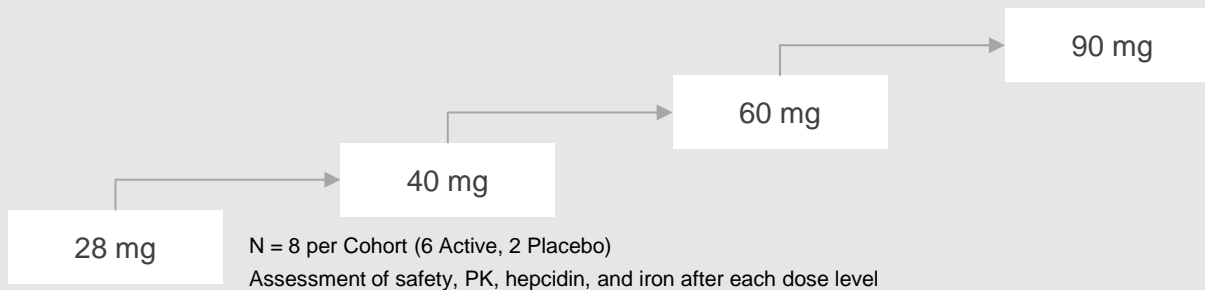
# DISC-0974 NDD-CKD Anemia Trial Overview

Data as of October 20, 2023

## Trial Population

- Stage II-V CKD; Adult
- Not receiving dialysis
- Hgb (g/dL) <10.5 (F), 11 (M)
- Exclude iron-deficient anemia by ferritin and TSAT

## Phase 1b | Single-Ascending Dose



**Key Endpoints/Measures:** Change in hemoglobin; iron, hepcidin, and other hematologic parameters, safety / tolerability

**Data availability:** Initial data presented at ASH 2023; updated Phase 1b data to be presented 2H 2024

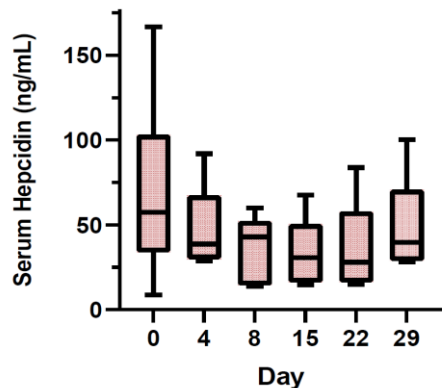
	DISC-0974 28 mg	Placebo
<b>Enrolled</b>	6	2
<b>Median Age (range), years</b>	69.5 (55, 78)	74.5 (73, 76)
<b>Median Baseline Hemoglobin (range), g/dL</b>	9.7 (7.9, 10.5)	9.5 (9, 10)

# ASH 2023 DISC-0974 Anemia of CKD Data: Heparidin and Iron

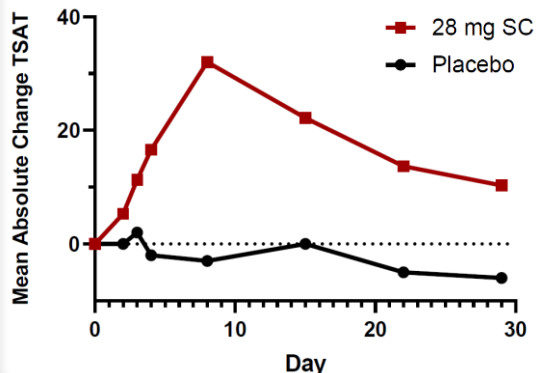
## First Cohort: 28 mg SC

- Meaningful reduction in serum heparidin with corresponding increase in serum iron
- Similar PK/PD relationship as seen in healthy volunteers

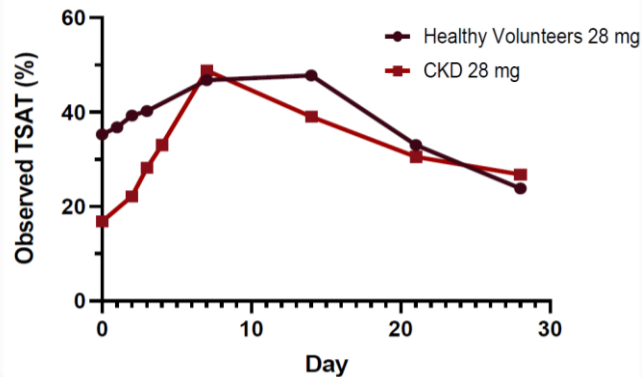
### Heparidin Changes Over Time



### Iron Changes Over Time



### Iron Changes Over Time vs. HV



**Safety:** DISC-0974 was generally well tolerated to date; 2 subjects treated with DISC-0974 28 mg had a TEAE (33%) vs. 2 on placebo (100%); 2 treated subjects had SAEs deemed not related to DISC-0974\*

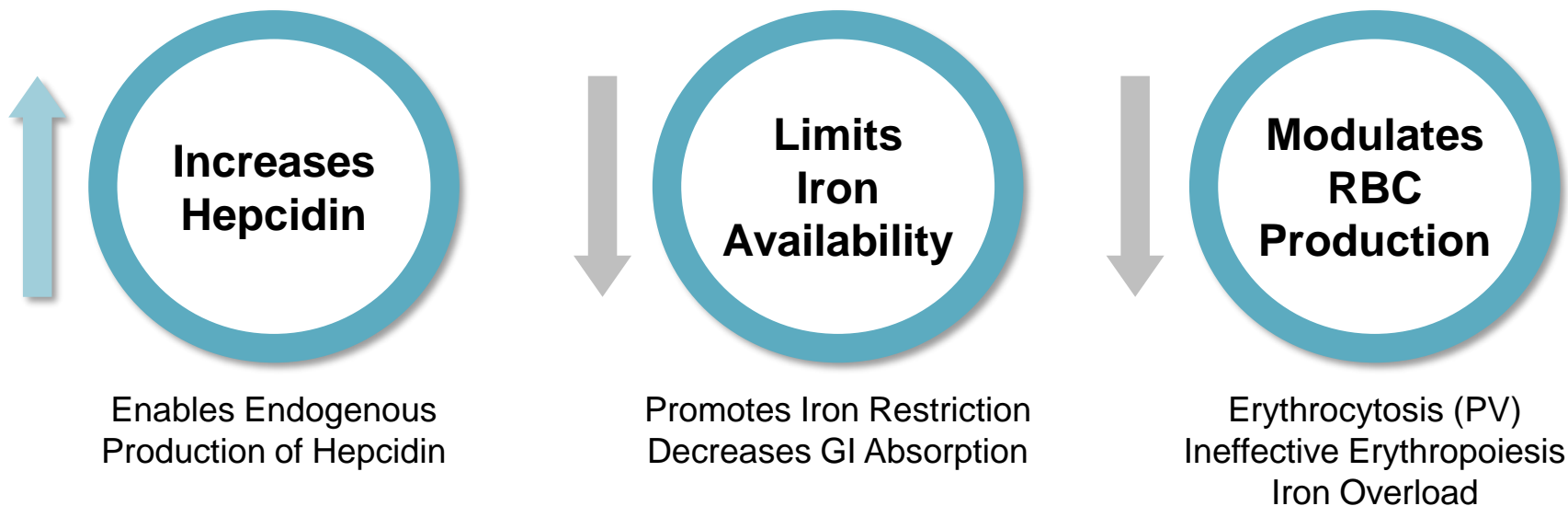




**DISC-3405**  
Anti-TMPRSS6 mAb  
Hepcidin Induction

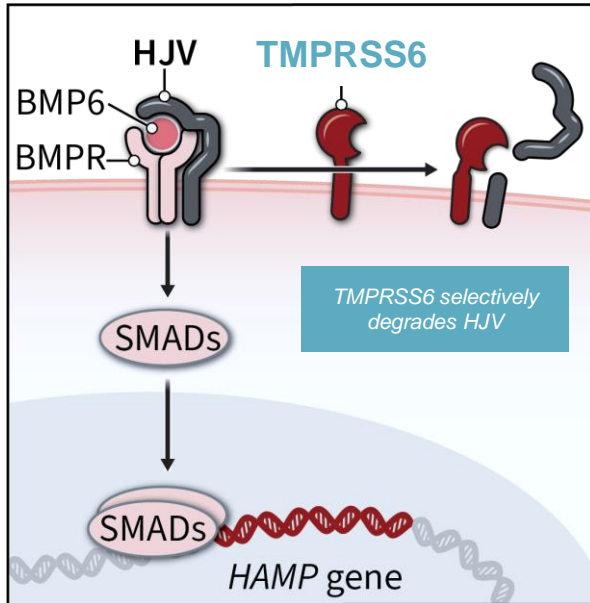
# Anti-TMPRSS6 mAb Induces Hepcidin

Designed to limit iron levels with potential to address a wide range of hematologic disorders



# Targeting TMPRSS6 to Increase Hepcidin

Potent, specific target controls endogenous hepcidin production



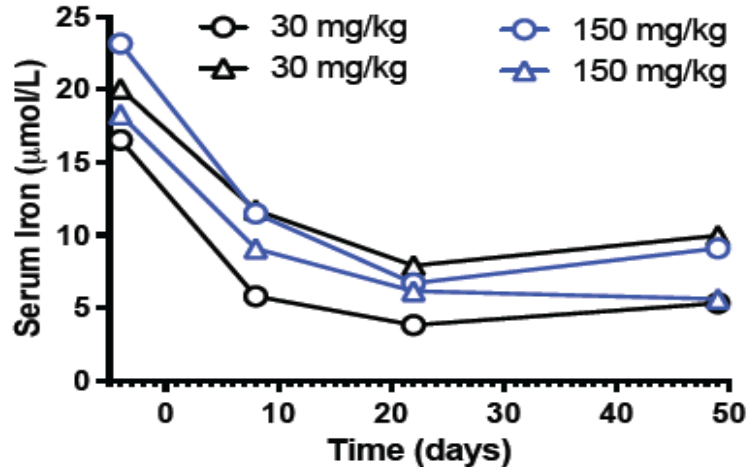
## Inhibiting TMPRSS6 with an Antibody Enables Hepcidin Production to Suppress Iron

- **Genetic validation** in patients with IRIDA (Iron-Refractory Iron Deficiency Anemia)
  - LOF TMPRSS6 mutation increases hepcidin and reduces iron availability
- **Functionally specific** to hepcidin / iron
- **Tissue specific** expression primarily in the liver

# DISC-3405 Effects in Non-Human Primates

Resulted in deep and sustained suppression of serum iron levels

Single dose of DISC-3405 resulted in ~ 70% suppression of serum iron lasting 3 weeks



- Potent PD effects observed across multiple preclinical studies consistent with TMPRSS6 inhibition
  - Heparin: 3-4 fold induction
  - Serum iron: ~60-70% suppression
- DISC-3405 demonstrated excellent safety profile in non-clinical GLP safety studies

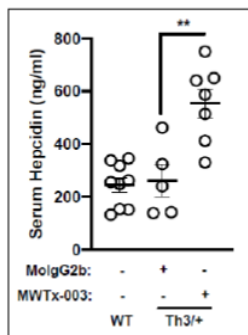
# DISC-3405 in Beta Thalassemia and Polycythemia Vera

## Significant effects on hallmarks of disease

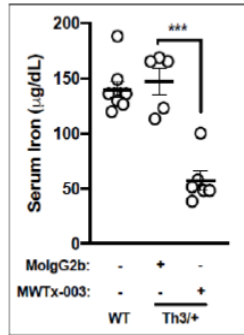
### Hbb<sup>Th3/+</sup> Model of Beta-Thalassemia

### Jak2<sup>V617F</sup> model of Polycythemia Vera

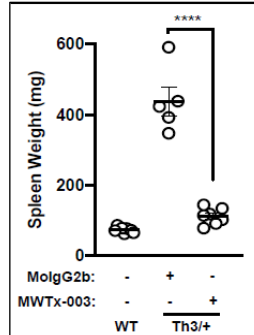
↑ Hepcidin Production



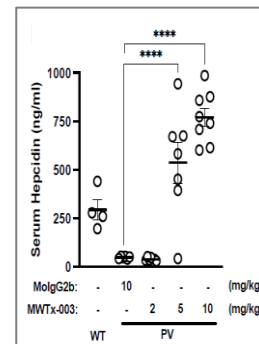
↓ Iron



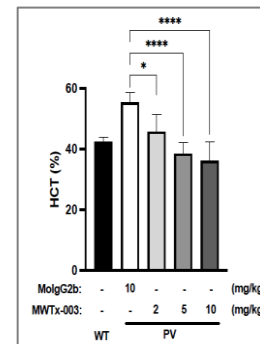
↓ Spleen Weight



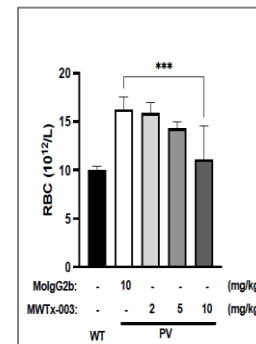
↑ Hepcidin Production



↓ Hematocrit



↓ RBC Production



# DISC-3405 Development Plans

Phase 1 in healthy volunteers ongoing; aim to advance program into POC studies with focus on polycythemia vera

**Phase 1 SAD/MAD in HV**  
Initiated October 2023

Demonstrate proof-of-mechanism  
(hepcidin, iron, hematologic parameters)

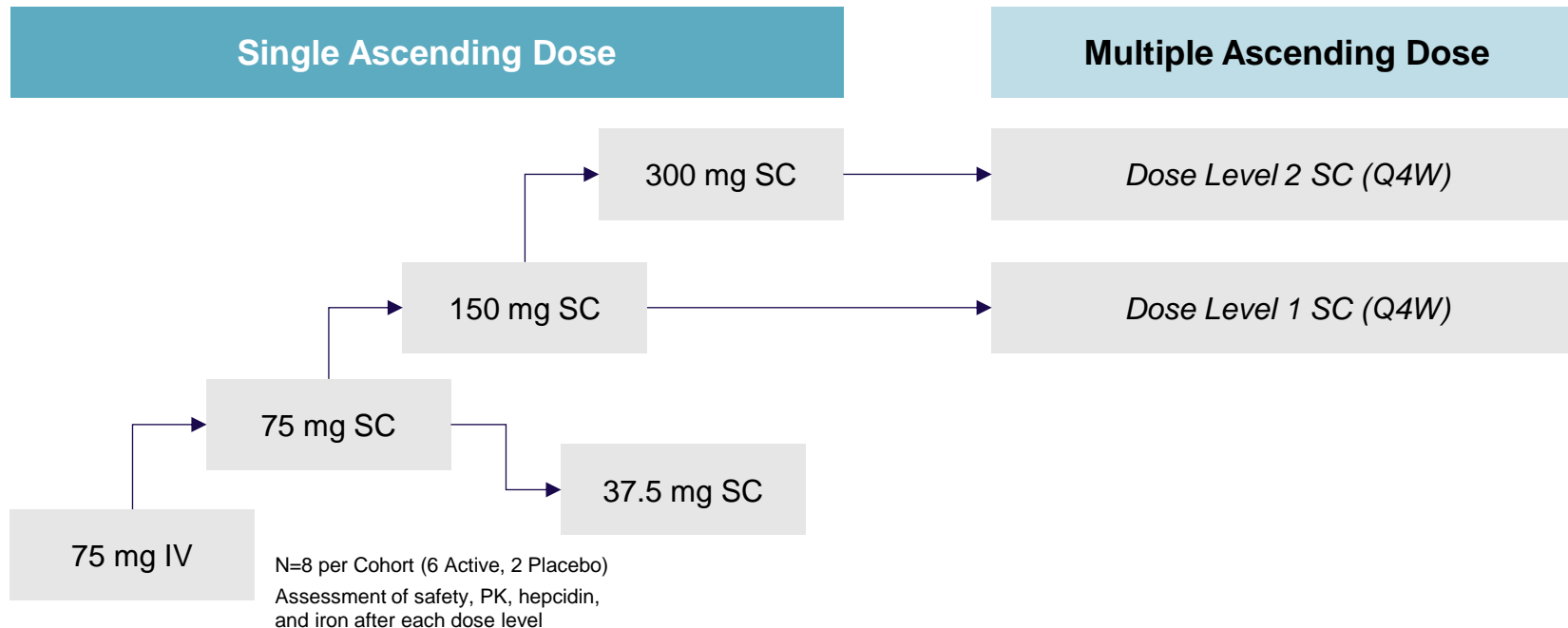
**Phase 2 Proof-of-Concept Study  
in Polycythemia Vera**

- Strong proof of therapeutic hypothesis; clarity on regulatory development path
- Assess safety, PK, hepcidin, iron, hematologic parameters; % Hct and requirement for phlebotomy

**Additional POC Studies in a Range of Indications**

- Hereditary Hemochromatosis
- Beta-Thalassemia
- Myelodysplastic Syndromes

# DISC-3405 Phase 1 Healthy Volunteers Study Overview



**Key Endpoints/Measures:** Iron, hepcidin, and other hematologic parameters, safety/tolerability

# DISC-3405 Phase 1 Healthy Volunteer SAD: Baseline and Demographics

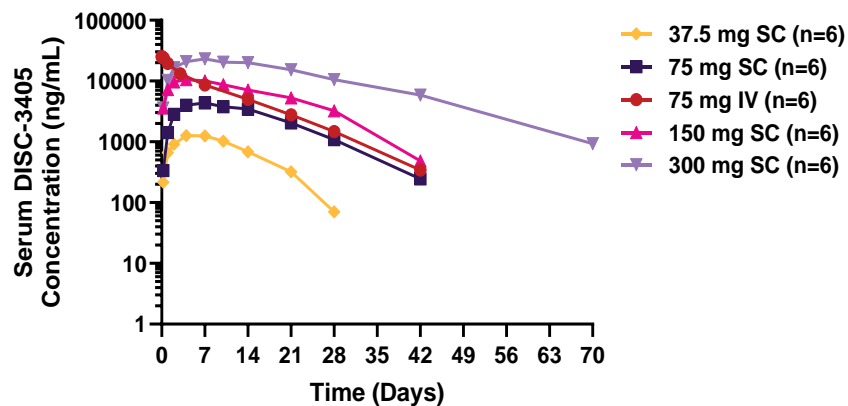
Characteristic	Placebo n = 10	37.5 mg SC n = 6	75 mg IV n = 6	75 mg SC n = 6	150 mg SC n = 6	300 mg SC n = 6
Age, years	48.6 (39-62)	52.7 (42-64)	36.8 (23, 49)	57.3 (49, 61)	44.0 (25, 57)	34.0 (22, 38)
Gender, Female, n (%)	2 (20)	5 (83.3)	3 (50.0)	4 (66.7)	2 (33.3)	0 (0)
Hepcidin, ng/mL	14.1 (5.2, 28.8)	41.7 (6.1, 177.2)	19.4 (2.0, 36.6)	32.6 (7.2, 69.8)	15.2 (8.7, 20.2)	18.7 (8.6, 45.0)
Serum Iron, ug/dL	97.2 (50, 180)	88.7 (43, 127)	99.2 (74, 127)	95.7 (67, 137)	85.7 (43, 138)	106.2 (54, 135)
Hemoglobin, g/dL	14.9 (13.1, 16.0)	13.2 (10.7, 17.7)	13.8 (12.1, 15.6)	13.8 (12.7, 16.0)	14.2 (13.0, 14.9)	15.4 (14.4, 16.7)
Hematocrit, %	43.6 (38.9, 47.1)	39.7 (34.3, 50.2)	41.5 (37.1, 45.5)	41.0 (38.7, 45.0)	42.3 (39.4, 46.2)	45.2 (42.3, 48.2)
RBC, 10 <sup>12</sup> /L	4.9 (4.2, 5.8)	4.5 (3.9, 5.7)	4.6 (3.8, 5.2)	4.5 (4.2, 5.0)	4.7 (3.9, 5.1)	5.1 (4.8, 5.8)



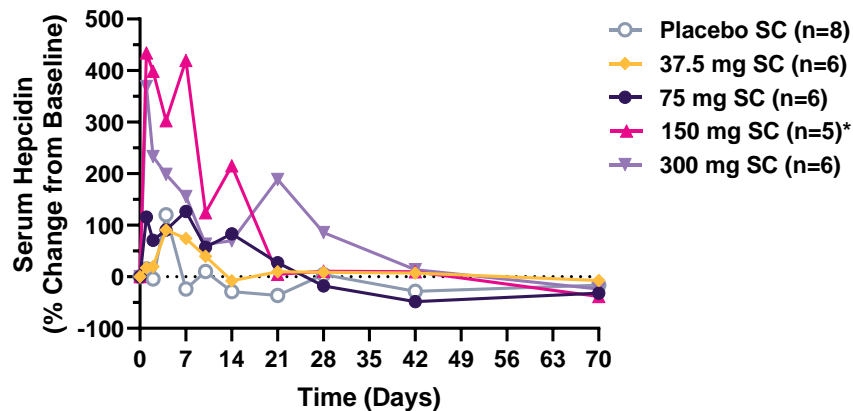
# Initial DISC-3405 HV Data: PK and Hepcidin

- ⊗ Dose-dependent PK profiles
- ⊗ DISC-3405 demonstrated dose-related hepcidin increases

## Pharmacokinetics



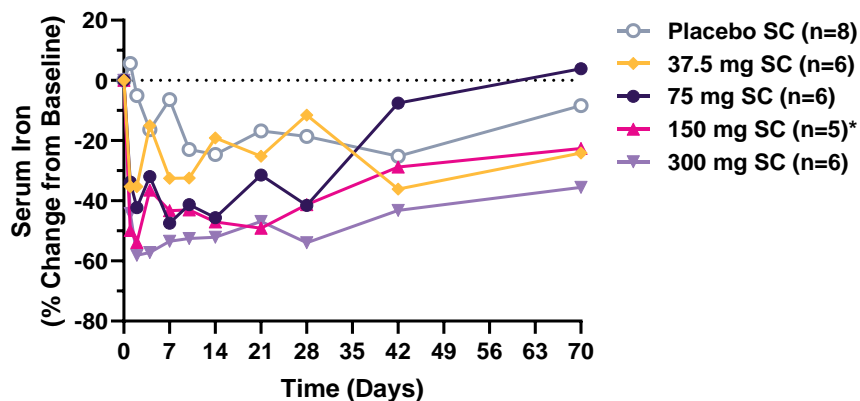
## Mean Change from Baseline in Serum Hepcidin



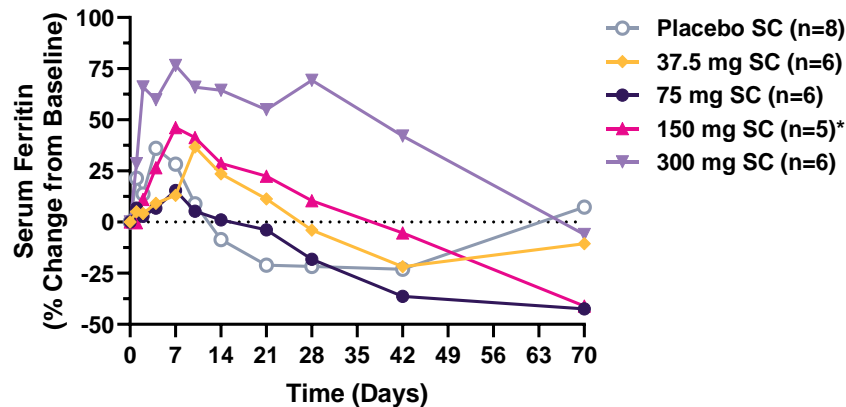
# Initial DISC-3405 HV Data: Iron Parameters

- Mean serum iron reduction of more than 50% from baseline was achieved for both 150- and 300-mg doses
- Serum iron reductions were sustained for at least 4 weeks, supportive of monthly SC dosing

## Mean Change from Baseline in Serum Iron

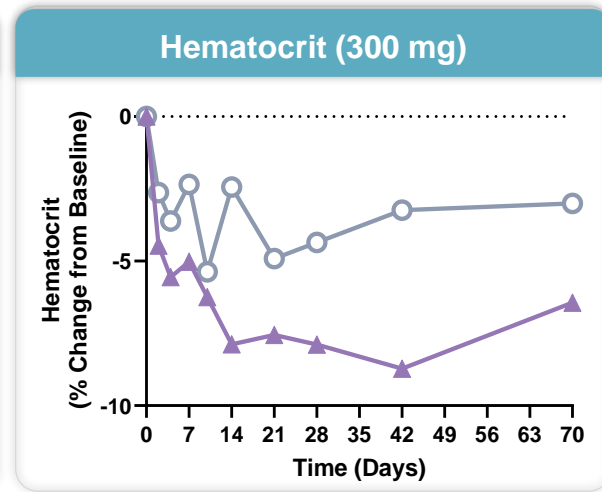
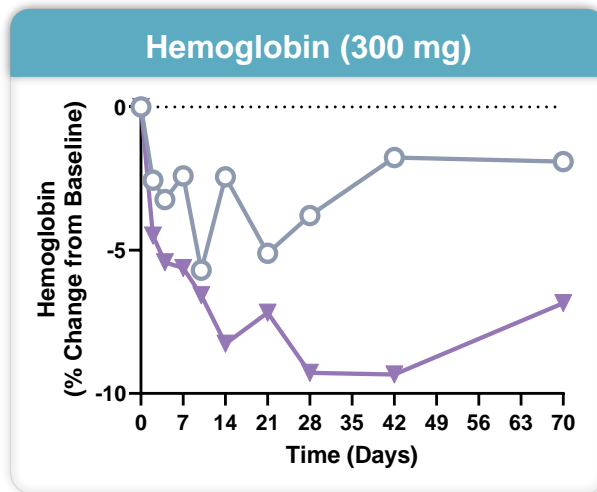
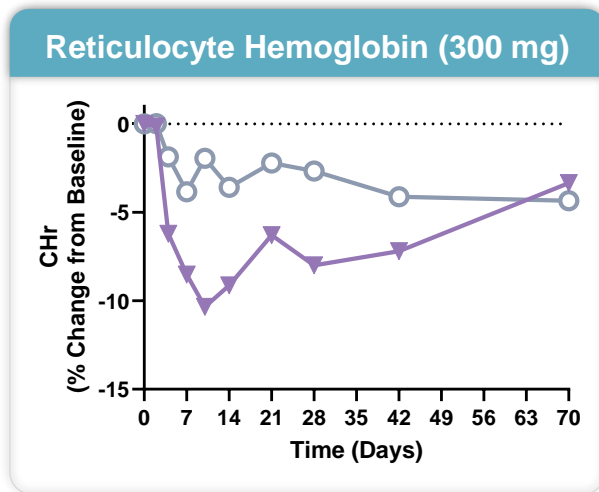


## Mean Change from Baseline in Serum Ferritin



# Initial DISC-3405 HV Data: Hematologic Response

- A single 300-mg dose of DISC-3405 demonstrated meaningful reductions in hematologic parameters (reticulocyte hemoglobin, hemoglobin, and hematocrit)



➤ 300 mg SC (n=6)      ○ Placebo SC (n=8)

# Initial DISC-3405 HV Data: Safety

- Generally well tolerated at all evaluated dose levels; no serious AEs, > Grade 2 AEs, or AEs leading to study withdrawal were reported

Adverse Event	Placebo n = 10	37.5 mg SC n = 6	75 mg IV n = 6	75 mg SC n = 6	150 mg SC n = 6	300 mg SC n = 6
Sore Throat	0	0	1	0	0	0
Nausea	0	1	0	1	0	0
Headache	1	1*	0	0	0	0
Cough	0	0	0	0	1	0
Rhinorrhea	0	0	0	0	1	0
Lightheadedness	0	0	0	1	0	0
Increased ALT	0	0	0	0	1*	0
Increased AST	0	0	0	0	1*	0

# Summary of Phase 1 Healthy Volunteer SAD Data

- Single-dose SC administration of DISC-3405 demonstrated dose-dependent increases in hepcidin and corresponding reductions in serum iron levels across all dose levels
- >50% reductions in mean serum iron were observed in patients that received 150 mg and 300 mg doses
- PK/PD profile is supportive of monthly subcutaneous dosing in polycythemia vera and iron overload conditions
- DISC-3405 was well tolerated
- **Next Steps:** Phase 1 multiple-ascending dose (MAD) data expected by EOY; initiation of a Phase 2 study in PV expected in 1H 2025

# Disc Continues Strong Growth Trajectory Towards Becoming a Leading Hematology Company

## Significant Accomplishments in 1H 2024

### Bitopertin

Positive data across two Phase 2 studies

### DISC-0974

Updated positive data in anemia of MF

### DISC-3405

Initial positive SAD healthy volunteer data

## Important Catalysts in 2H 2024-2025

- EPP Phase 3 Study pending regulatory feedback
- POC in DBA
- Additional POC data in MF and CKD anemia
- Preclinical efforts on additional indications
- MAD healthy volunteer data
- Polycythemia vera as first indication

Supported by a strong cash position with runway well into 2027

**Thank You**

