

**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, D.C. 20549**

**FORM 8-K**

**CURRENT REPORT  
Pursuant to Section 13 or 15(d)  
of the Securities Exchange Act of 1934**

**Date of Report (Date of earliest event reported): December 11, 2023**

**DISC MEDICINE, INC.**

(Exact name of registrant as specified in its charter)

**Delaware**  
(State or other jurisdiction  
of incorporation)

**001-39438**  
(Commission  
File Number)

**85-1612845**  
(IRS Employer  
Identification No.)

**321 Arsenal Street, Suite 101  
Watertown, MA 02472**  
(Address of principal executive offices)

**02472**  
(Zip Code)

**Registrant's telephone number, including area code: (617) 674-9274**

**N/A**  
(Former Name or Former Address, if Changed Since Last Report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions (see General Instruction A.2. below):

- Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
- Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
- Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
- Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol	Name of each exchange on which registered
Common Stock, par value \$0.0001 per share	IRON	The Nasdaq Global Market

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (§230.405 of this chapter) or Rule 12b-2 of the Securities Exchange Act of 1934 (§240.12b-2 of this chapter).

Emerging growth company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

**Item 7.01 Regulation FD Disclosure.**

On December 11, 2023, Disc Medicine, Inc. (the “Company”) issued a press release announcing the Company’s data presented at the 65th American Society of Hematology (“ASH”) Annual Meeting and Exposition. The Company will host a conference call on December 11 at 9:30 p.m. ET to review such data and the Company’s operational plans. An archived webcast will be available following the call for 30 days on the Events & Presentations section of the Company’s website at <https://ir.discmedicine.com>. Information contained on the Company’s website is not incorporated by reference into this Current Report on Form 8-K, and you should not consider any information on, or that can be accessed from, the Company’s website as part of this Current Report on Form 8-K. A copy of the press release is attached as Exhibit 99.1 to this Current Report on Form 8-K.

The information contained in Item 7.01 of this Current Report on Form 8-K, including Exhibit 99.1, is intended to be furnished and shall not be deemed “filed” for purposes of Section 18 of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), or otherwise subject to the liabilities of that section, nor shall it be deemed incorporated by reference in any filing under the Securities Act of 1933, as amended, or the Exchange Act, except as expressly provided by specific reference in such filing. The Company undertakes no obligation to update, supplement or amend the material attached hereto as Exhibit 99.1.

**Item 8.01 Other Events.****Phase 2 BEACON Study Data Release**

On December 11, 2023, the Company presented updated results from its ongoing Phase 2 BEACON study evaluating bitopertin in patients with erythropoietic protoporphyria (“EPP”).

The BEACON study (ACTRN12622000799752) is a randomized, open-label, parallel-arm study that enrolled 22 adult subjects with EPP or X-linked protoporphyria in Australia, and has been expanded to include adolescents. This trial was designed to assess changes in levels of Protoporphyrin IX (“PPIX”), as well as measures of photosensitivity, quality of life, and safety and tolerability. Subjects are randomized to receive either 20 mg or 60 mg of bitopertin once-daily for 24 weeks, after which patients have the option of continuing in an open-label extension of the trial for up to an additional 24 weeks. The updated data presented reflects results from all 22 adults, with a data cutoff of September 18, 2023 for PPIX data and October 20, 2023 for all other endpoints. The data are consistent with the initial positive results presented in June 2023.

- PPIX levels: Significant, dose-dependent, and sustained reductions in whole blood PPIX levels; mean reduction > 40% (p<0.001 versus baseline)
- Demonstrated substantial and consistent improvements in sunlight tolerance across all study measures
- Highlights of the data:
  - Average time to prodrome: Greater than 3x improvement vs. baseline (p<0.001)
  - Increased proportion of days without symptoms: 78% vs. 33% (baseline)
  - Increased proportion of sunlight challenges without prodromes: 54% vs. 7% (baseline)
  - Phototoxic reactions: 92% reduction in patient-reported reactions while on treatment compared to baseline
  - Nearly all participants reported improvements in multiple quality-of-life measures at the end of study
- Mean cumulative total time in light on days without pain observed over the 6-month treatment period (precedented pivotal endpoint): 222.6 ± 129.3 hours
  - Bitopertin-treated participants had a >3x increase relative to historical control
- Bitopertin was generally well tolerated at both dose levels with no serious adverse events, stable mean hemoglobin levels, and no anemia adverse events (“AEs”) reported.
  - The most common AEs were dizziness, lightheadedness, headache, and nausea.

## Updated Corporate Presentation

On December 11, 2023, the Company updated its corporate presentation for use on the Company's conference call on December 11 at 9:30 p.m. ET. A copy of the corporate presentation is filed as Exhibit 99.2 for purposes of Section 18 of the Exchange Act and is incorporated herein by reference.

### *Cautionary Statement Regarding Forward-Looking Statements*

This Current Report on Form 8-K contains "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995, as amended, including, but not limited to, express or implied statements regarding the Company's expectations, hopes, beliefs, intentions or strategies with respect to its AURORA Phase 2 and BEACON Phase 2 clinical studies of bitopertin and the results thereof, its Phase 1b/2 clinical studies of DISC-0974 in patients with myelofibrosis and non-dialysis dependent chronic kidney disease patients with anemia, its Phase 1 clinical study 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, the Company's business plans and objectives, the Company's analysis of market potential for patients with EPP, and the Company's beliefs about operating expenses and that it will have capital to fund the Company well into 2026. The use of words such as, but not limited to, "anticipate," "believe," "contemplate," "continue," "could," "estimate," "expect," "future," "intends," "may," "might," "plan," "possible," "potential," "predict," "project," "should," "seek," "suggest," "will," or "would" 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 the Company's current beliefs, expectations and assumptions regarding the future of the Company'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.

The Company may not actually achieve the plans, intentions or expectations disclosed in these forward-looking statements, and investors should not place undue reliance on these forward-looking statements. Actual results or events could differ materially from the plans, intentions and expectations disclosed in the forward-looking statements as a result of a number of material risks and uncertainties including but not limited to: the adequacy of the Company's capital to support its future operations and its ability to successfully initiate and complete clinical trials; the nature, strategy and focus of the Company; the difficulty in predicting the time and cost of development of the Company's product candidates; the Company's plans to research, develop and commercialize its current and future product candidates; the timing of initiation of the Company's planned preclinical studies and clinical trials; the timing of the availability of data from the Company's clinical trials; the Company's ability to identify additional product candidates with significant commercial potential and to expand its pipeline in hematological diseases; the timing and anticipated results of the Company's preclinical studies and clinical trials and the risk that the results of the Company's preclinical studies and clinical trials may not be predictive of future results in connection with future studies or clinical trials and may not support further development and marketing approval; the other risks and uncertainties described in the "Risk Factors" section of our Quarterly Report on Form 10-Q for the quarter ended September 30, 2023, and other documents filed by the Company from time to time with the Securities and Exchange Commission ("SEC"), as well as discussions of potential risks, uncertainties, and other important factors in the Company's subsequent filings with the SEC. Any forward-looking statement speaks only as of the date on which it was made. None of the Company, nor its affiliates, advisors or representatives, undertake any obligation to publicly update or revise any forward-looking statement, whether as result of new information, future events or otherwise, except as required by law.

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**Item 9.01 Financial Statements and Exhibits.**

(d) Exhibits

<u>Exhibit No.</u>	<u>Description</u>
99.1	<a href="#">Press Release issued by Disc Medicine, Inc. on December 11, 2023.</a>
99.2	<a href="#">Disc Medicine, Inc. Investor Presentation.</a>
104	Cover Page Interactive Data File (embedded within the Inline XBRL document).



**SIGNATURE**

Pursuant to the requirements of the Securities Exchange Act of 1934, as amended, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

DISC MEDICINE, INC.

Date: December 11, 2023

By: /s/ John Quisel  
Name: John Quisel, J.D. Ph.D.  
Title: Chief Executive Officer



**Disc Presents Positive Updated Results from Phase 2 BEACON Study of Bitopertin and Other Programs at the 65<sup>th</sup> American Society of Hematology (ASH) Annual Meeting**

- *Updated data from BEACON continued to demonstrate significant, consistent reductions in protoporphyrin IX (PPIX) > 40% and improvements in sunlight tolerance*
- *Robust and consistent improvements across all measures of sunlight tolerance, including >3x improvement over historical control of precedented pivotal endpoint*
- *Bitopertin was generally well-tolerated with stable hemoglobin at both dose levels*
- *Earlier today, Disc also announced initial positive data from the phase 1b study of DISC-0974 in myelofibrosis patients with anemia, demonstrating improvements in hemoglobin and reductions in transfusion burden*

WATERTOWN, Mass. (December 11, 2023) – Disc Medicine, Inc. (NASDAQ:IRON), a clinical-stage biopharmaceutical company focused on the discovery, development, and commercialization of novel treatments for patients suffering from serious hematologic diseases, today presented updated results from the phase 2 open-label BEACON study of bitopertin, an orally administered glycine transporter 1 (GlyT1) inhibitor, in patients with erythropoietic protoporphyria (EPP) as an oral presentation at the 65<sup>th</sup> ASH Annual Meeting. The updated data are consistent with and confirm the initial positive results presented in June, demonstrating significant decreases in PPIX, robust and consistent improvements in sunlight tolerance across all study measures, including the precedented pivotal endpoint, and improvements in patient quality of life.

“This has been a tremendous ASH meeting for Disc, as we presented data across our two most advanced programs. We are especially proud and excited to present the updated results from BEACON, which reflect a more robust open label data set and clearly indicate that reducing PPIX with bitopertin has the potential to result in dramatic benefits for patients with EPP. Importantly, this improvement was observed across every efficacy measure of the study, including our analysis of the precedented pivotal endpoint, cumulative time in light over 6 months, which we debuted at this meeting,” said John Quisel, J.D., Ph.D., President and Chief Executive Officer. “With these results and the positive initial efficacy data from the DISC-0974 myelofibrosis study that we presented earlier today, Disc is preparing to enter its next stage of growth. We look forward to next year as we advance our full portfolio and obtain the readouts from AURORA and other studies.”

The BEACON study (ACTRN12622000799752) is a randomized, open-label, parallel-arm study that enrolled 22 adult subjects with EPP or X-linked protoporphyria (XLP) in Australia, and has been expanded to include adolescents. This trial was designed to assess changes in levels of PPIX, as well as measures of photosensitivity, quality of life, and safety and tolerability. Subjects are randomized to receive either 20 mg or 60 mg of bitopertin once-daily for 24 weeks, after which patients have the option of continuing in an open-label extension of the trial for up to an additional 24 weeks. The updated data presented reflects results from all 22 adults, with a data cutoff of September 18, 2023 for PPIX data and October 20, 2023 for all other endpoints. The data are consistent with and confirm the initial positive results presented in June 2023.

- Protoporphyrin IX (PPIX) levels: Significant, dose-dependent, and sustained reductions in whole blood PPIX levels; mean reduction > 40% (p<0.001 versus baseline)
- Demonstrated substantial and consistent improvements in sunlight tolerance across all study measures
- Highlights of the data presented:
  - Average time to prodrome: Greater than 3x improvement vs. baseline (p<0.001)
  - Increased proportion of days without symptoms: 78% vs. 33% (baseline)
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  - Nearly all participants reported improvements in multiple quality-of-life measures at the end of study
- Mean cumulative total time in light on days without pain observed over the 6-month treatment period (precedented pivotal endpoint): 222.6 ± 129.3 hours
  - Bitopertin-treated participants had a >3x increase relative to historical control
- Bitopertin was generally well tolerated at both dose levels with no serious adverse events, stable mean hemoglobin levels, and no anemia adverse events (AEs) reported.
  - The most common AEs were dizziness, lightheadedness, headache, and nausea.

Earlier today, Disc also presented initial positive data from the ongoing phase 1b study of DISC-0974 in myelofibrosis (MF) patients with anemia. The data were presented as a poster during the ASH meeting and demonstrated suppression of hepcidin, increased iron levels and improvements in hematologic parameters, including increased hemoglobin and reduction in transfusion burden. The presentation was announced in a separate press release issued earlier today and will be reviewed again during the management call, as well as initial data from the first dose-escalation cohort of the ongoing phase 1b/2 study in non-dialysis dependent chronic kidney disease (NDD-CKD) patients with anemia.

Bitopertin and DISC-0974 are investigational agents and are not approved for use as a therapy in any jurisdiction worldwide.

#### **Webcast Conference Call Information**

Management will host a call on Monday, December 11th at 9:30 pm ET / 6:30 pm PT to review data and operational plans. Please register for management's webcast on the Events and Presentations page of Disc's website (<https://ir.discmedicine.com/>).

## About Disc Medicine

Disc Medicine is a clinical-stage biopharmaceutical company committed to discovering, developing, and commercializing novel treatments for patients who suffer from serious hematologic diseases. We are building a portfolio of innovative, potentially first-in-class therapeutic candidates that aim to address a wide spectrum of hematologic diseases by targeting fundamental biological pathways of red blood cell biology, specifically heme biosynthesis and iron homeostasis. For more information, please visit [www.discmedicine.com](http://www.discmedicine.com).

## Disc Medicine Cautionary Statement Regarding Forward-Looking Statements

This press release contains “forward-looking statements” within the meaning of the Private Securities Litigation Reform Act of 1995, as amended, including, but not limited to, express or implied statements regarding Disc’s expectations, hopes, beliefs, intentions or strategies with respect to its AURORA Phase 2 and BEACON Phase 2 clinical studies of bitopertin and the results thereof, its Phase 1b/2 clinical studies of DISC-0974 in patients with MF and NDD-CKD patients with anemia, its Phase 1 clinical study 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, Disc’s business plans and objectives, Disc’s analysis of market potential for patients with EPP, and Disc’s beliefs about operating expenses and that it will have capital to fund Disc well into 2026. The use of words such as, but not limited to, “anticipate,” “believe,” “contemplate,” “continue,” “could,” “estimate,” “expect,” “future,” “intends,” “may,” “might,” “plan,” “possible,” “potential,” “predict,” “project,” “should,” “seek,” “suggest,” “will,” or “would” 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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# 2023 ASH Management Call

Clinical Data Updates:  
Bitopertin and DISC-0974

December 11, 2023



## Disclaimer and FLS

This presentation includes "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995, as amended. These forward-looking statements include express or implied statements relating to Disc's management team's expectations, hopes, beliefs, intentions or strategies regarding Disc's expectations with respect to its AURORA Phase 2 and BEACON Phase 2 clinical studies of bitopertin and the results thereof, its Phase 1b/2 clinical studies of DISC-0974 in patients with MF and NDD-CKD patients with anemia, its Phase 1 clinical study 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; Disc's business plans and objectives; Disc's analysis of market potential for patients with EPP; and Disc's beliefs about operating expenses and that it will have capital to fund Disc well into 2026. In addition, any statements that refer to projections, forecasts or other characterizations of future events or circumstances, including any underlying assumptions, are forward-looking statements. The words "anticipate," "believe," "contemplate," "continue," "could," "estimate," "expect," "intends," "may," "might," "plan," "possible," "potential," "predict," "project," "should," "suggest," "will," "would" and similar expressions may identify forward-looking statements, but the absence of these words does not mean that a statement is not forward-looking. 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. Disc may not actually achieve the plans, intentions or expectations disclosed in these forward-looking statements, and investors should not place undue reliance on these forward-looking statements. These forward-looking statements involve a number of risks, uncertainties (some of which are beyond Disc's control) or other assumptions that may cause actual results or performance to be materially different from those expressed or implied by these forward-looking statements. These risks and uncertainties include, but are not limited to: the adequacy of Disc's capital to support its future operations and its ability to successfully initiate and complete clinical trials; the nature, strategy and focus of Disc; the difficulty in predicting the time and cost of development of Disc's product candidates; Disc's plans to research, develop and commercialize its current and future product candidates; the timing of initiation of Disc's planned preclinical studies and clinical trials; the timing of the availability of data from Disc's clinical trials; Disc's ability to identify additional product candidates with significant commercial potential and to expand its pipeline in hematological diseases; the timing and anticipated results of Disc's preclinical studies and clinical trials and the risk that the results of Disc's preclinical studies and clinical trials may not be predictive of future results in connection with future studies or clinical trials and may not support further development and marketing approval; the other risks and uncertainties described in our Annual Report on Form 10-K for the year ended December 31, 2022, Quarterly Reports on Form 10-Q for the quarters ended March 31, 2023, June 30, 2023 and September 30, 2023, and other documents filed by Disc from time to time with the Securities and Exchange Commission. Any forward-looking statement speaks only as of the date on which it was made. None of Disc, nor its affiliates, advisors or representatives, undertake any obligation to publicly update or revise any forward-looking statement, whether as result of new information, future events or otherwise, except as required by law.





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





# Agenda

01

## Introduction and Data Summary

John Quisel, JD, PhD, Chief Executive Officer

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02

## Bitopertin in EPP

- **Updated BEACON Data**  
Bruce Wang, MD, Professor of Gastroenterology, University of California San Francisco  
Will Savage, MD, PhD, Chief Medical Officer
  - **EPP Commercial Opportunity**  
Jonathan Yu, Chief Business Officer
- 

03

## DISC-0974

- **Initial Data in Anemia of Myelofibrosis**  
Will Savage, MD, PhD, Chief Medical Officer
  - **Initial Data in NDD-CKD and Anemia**  
Will Savage, MD, PhD, Chief Medical Officer
- 

04

## Closing Remarks

John Quisel, JD, PhD, Chief Executive Officer

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05

## Q&A Session

# Bitopertin: Summary of Phase 2 BEACON Data Update

Data presented at ASH established proof of concept and demonstrated functional benefit for EPP patients. Key findings:



Significant, dose-dependent reductions in **PPIX levels**



Significant increases in **sunlight tolerance**



Improved patients' reported **quality of life**



**Generally well tolerated** with stable mean hemoglobin levels

## DISC-0974: Summary of Initial Data from Phase 1b Studies in MF and CKD

Initial data from both Phase 1b studies in MF and CKD demonstrated proof of concept and improvement in anemia. Key findings:



Substantial  
reductions in  
hepcidin levels



Corresponding  
increases in iron  
levels



Positive impact on  
**hematologic  
parameters** across  
a broad range of  
MF patients



**Generally well  
tolerated** at all  
evaluated dose  
levels



# Agenda

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## Q&A Session



# Bruce Wang, MD

**Professor at UCSF**

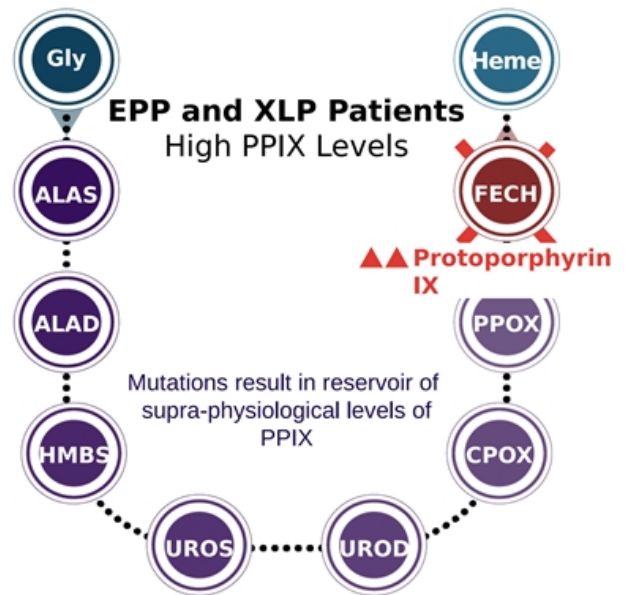
**Principal Investigator in US Porphyrrias Consortium**

## **Disclosures**

- Alnylam (consultant, investigator in clinical trial, grant funding)
- Disc Medicine (consultant, investigator in clinical trial)
- Mitsubishi-Tanabe (consultant, investigator in clinical trial, grant funding)
- Recordati Rare Diseases (consultant)

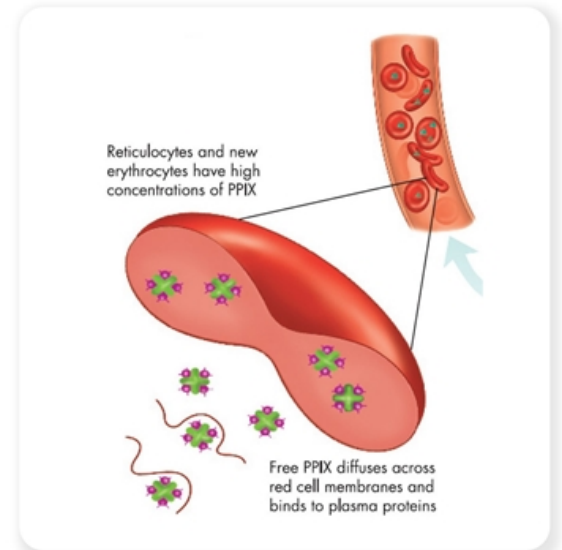
# In EPP, a genetic mutation leads to the buildup of protoporphyrin IX (PPIX)

- In most patients, EPP is caused by deficient ferrochelatase activity due to mutations of the FECH gene
- The deficiency causes a failure to convert protoporphyrin IX (PPIX) into heme in the terminal step of heme synthesis
- PPIX substantially accumulates in erythrocytes, plasma, skin, and liver



# PPIX is a highly toxic and photoreactive metabolite

- PPIX molecule absorbs light radiation
- Absorption increases energy content and enables excess energy to be transferred to oxygen, resulting in reactive oxygen species (ROS)
- These oxygen species can injure tissue by membrane lipid peroxidation, complement activation, and mast cell degranulation
- PPIX is also highly toxic independent of the photosensitizing reactions, particularly impacting the liver



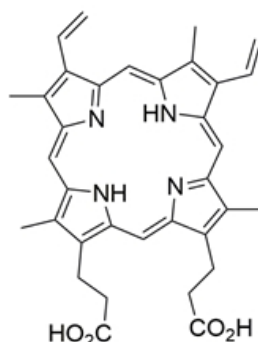
# Accumulation of this toxic metabolite can cause a variety of symptoms

## 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



# Of these symptoms, the primary manifestation is photosensitivity that can result in debilitating pain

- ⌚ Upon exposure to the sun, EPP patients experience **debilitating pain attacks** that can last for days
- ⌚ These attacks cause burning sensations, swelling, itching, and erythema, and can lead to **chronic skin lesions and scarring**



## As a result, EPP patients take extreme measures to avoid sunlight

- ⌚ EPP patients **spend most of their time indoors**, avoiding the light, causing them to miss many daily activities
- ⌚ When patients do have to go outside, they may **completely cover their skin** to avoid sun exposure, wearing long sleeves, hats, and gloves even in summer

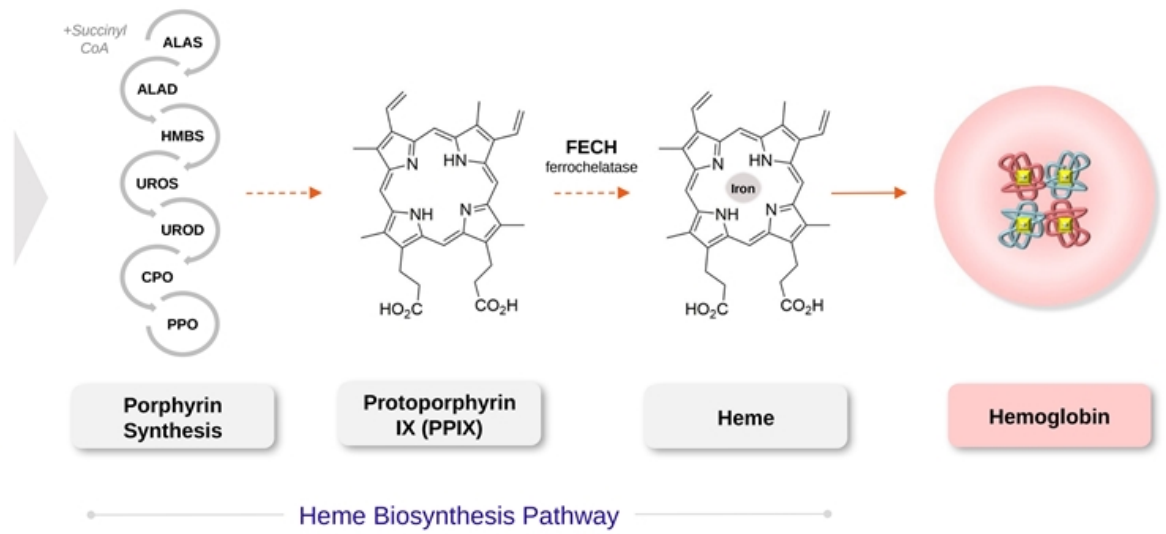
# Bitopertin: Investigational Oral, Selective GlyT1 Inhibitor

Bitopertin modulates heme biosynthesis by blocking uptake of glycine in erythrocytes

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

## Bitopertin

Designed to block glycine uptake in RBCs by inhibiting GlyT1



# EPP Phase 2 Development Program

Ongoing BEACON and AURORA Trials—Enrollment Complete

## Today's Focus



- EPP and XLP; N = >22 (fully enrolled for adults, now enrolling adolescents)
- Australia (study opened July '22)
- Open-Label, randomized, 24-week study

## Data Early 2024



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

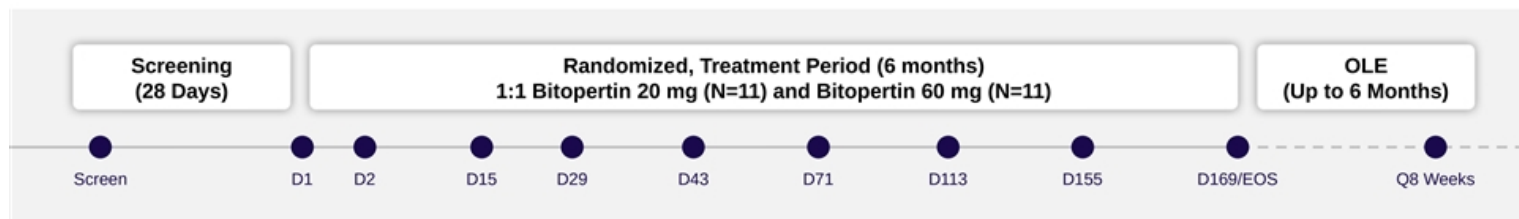
## Trial Endpoints:

Changes in blood PPIX levels, light tolerance, time to prodromal symptom (TTPS), safety, tolerability, and PK



# BEACON Trial Overview

## Enrollment data as of 20 Oct 2023



	Bitopertin 20 mg (n=11)	Bitopertin 60 mg (n=11)	Total (n=22)
Enrolled	11	11	22
Completed Day 43	11	11	22
Completed Day 113	9	8	17
Completed Treatment Period (Day 169)	7	7	14

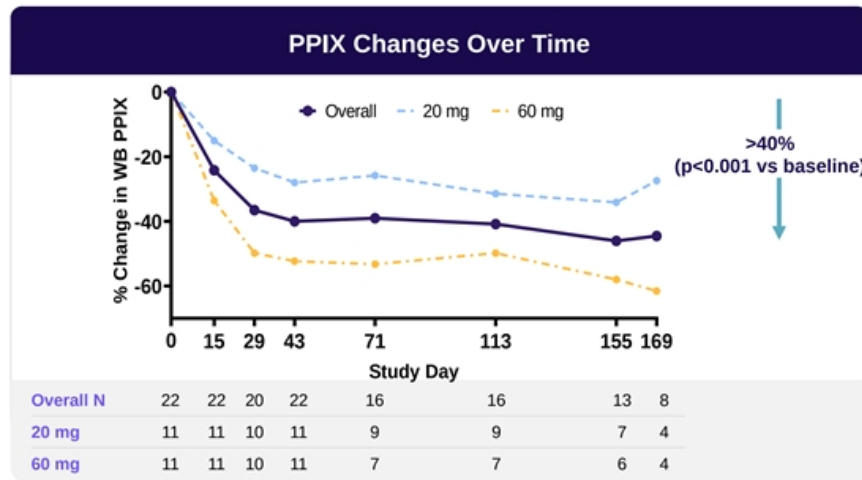
Study population is ~64% female with an average age of 44 years (range 20-73)



D = day, EOS = end of study, OLE = open-label extension

# Updated BEACON Data: % Change in Whole-Blood PPIX

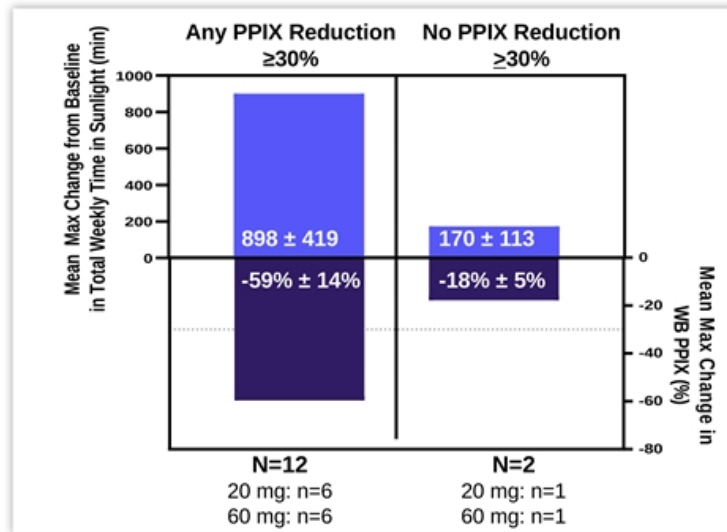
- ⊗ Bitopertin significantly reduced whole-blood (WB) metal-free PPIX levels by >40%
- ⊗ Dose-dependent reductions were observed across broad range of baseline whole-blood PPIX levels (144-3,410 µg/dL)



PPIX data as of 18 September 2023. Least-squares means for percent changes in PPIX were analyzed using a mixed model for repeated measures; each dose group had a statistically significant reduction from baseline (20 mg p=0.0016, 60 mg p<0.0001).

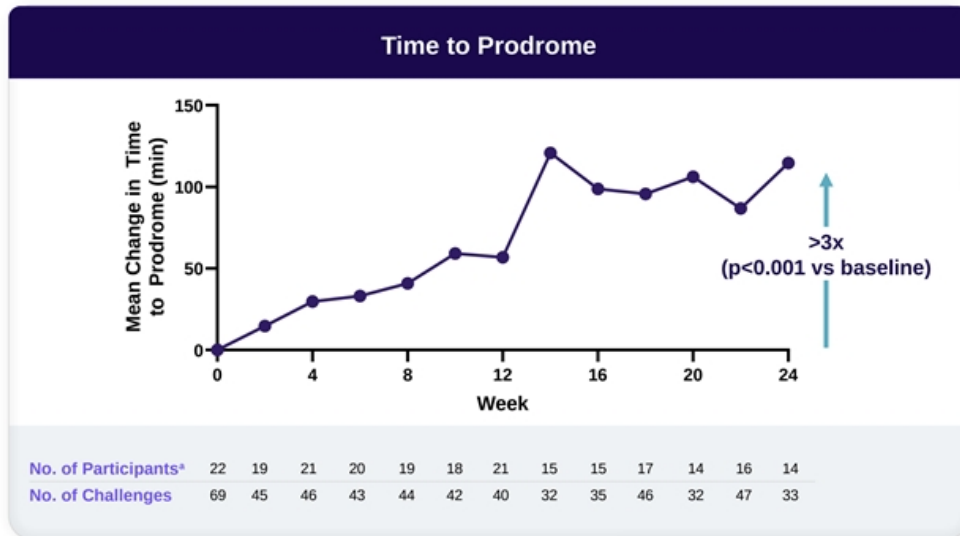
# Updated BEACON Data: PPIX and Light Tolerance

- ⦿ Improvements in light tolerance were observed in every patients
- ⦿ Greatest improvements in light tolerance seen in participants with any PPIX reduction  $\geq 30\%$



# Updated BEACON Data: Time to Prodrome

- Improvements in light tolerance during sunlight-exposure challenges were significant (>3x) and increased with time

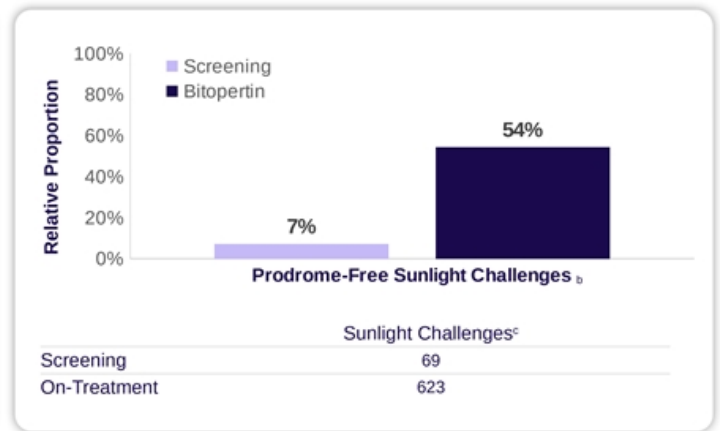
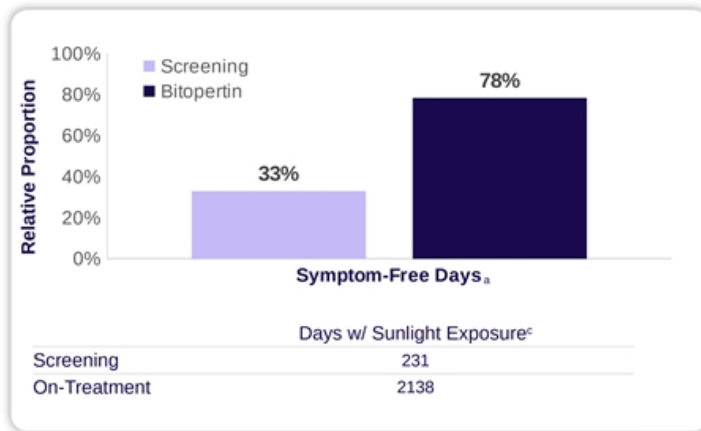


\*The number of subjects with at least 1 sunlight-exposure challenge during a 2-week period. Time to prodrome data from weekly sunlight-exposure challenges were averaged over a 2-week period, including cumulative time in sunlight challenges where the participant did not report a prodrome, and were analyzed using MMRM for both 20 mg and 60 mg bitopertin dose groups combined.

# Updated BEACON Data: Light Tolerance

## Days without Symptoms or Prodromes

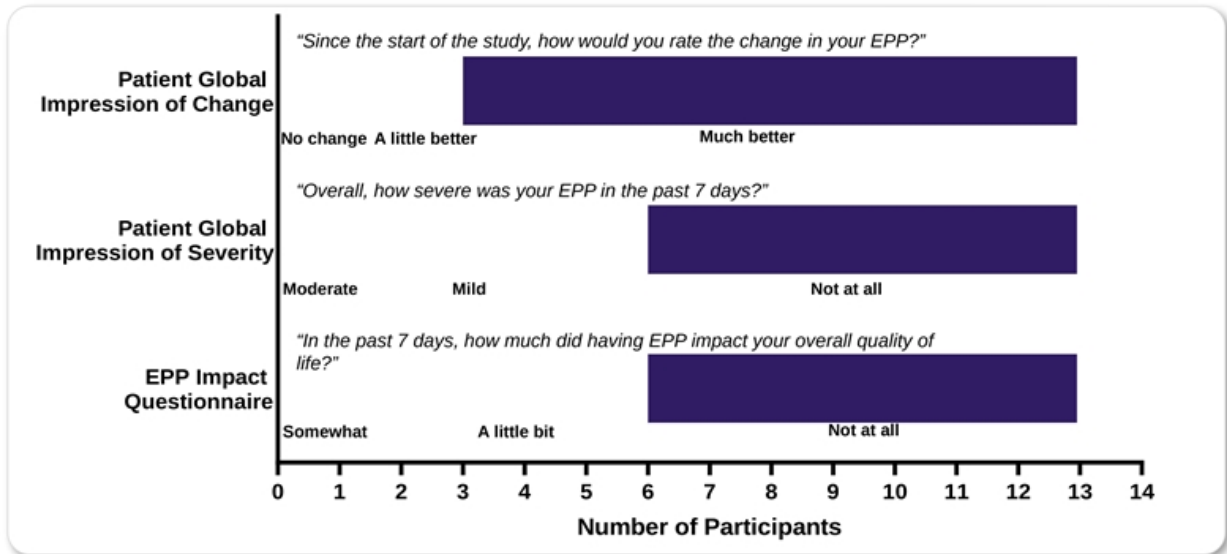
- 92% reduction in patient-reported full phototoxic reactions<sup>a</sup>
- An increase in the proportion of total symptom-free days (no prodrome / early warning symptoms or full phototoxic reactions) with sunlight exposure was observed





# Updated BEACON Data: Measures of Quality of Life

⦿ Nearly all participants reported improvements in multiple quality-of-life measures at end of study

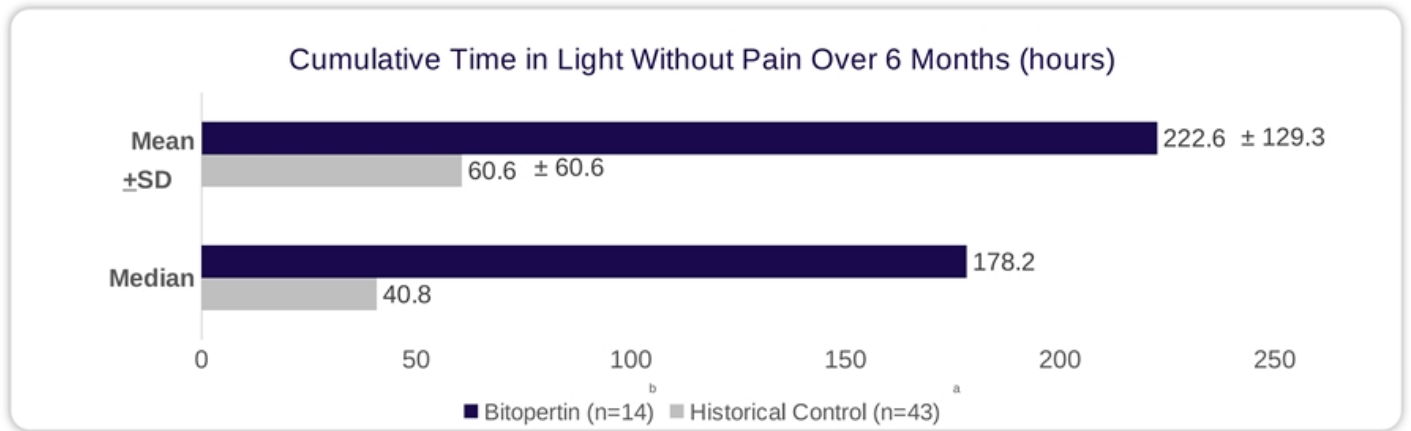


Only 13 participants who completed through Day 169/EOS with QOL responses.

# Updated BEACON Data: Precedented Pivotal Endpoint

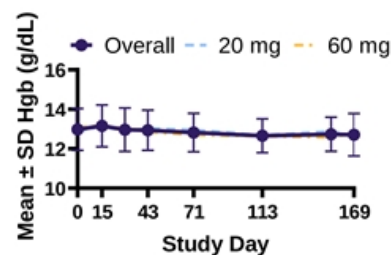
## Cumulative Time in Light on Days without Pain

- ⊙ Cumulative total time in light observed over 6-month treatment period with bitopertin represents >3x increase relative to historical control
- ⊙ Improvements in average daily light tolerance with bitopertin increased with time



# Updated BEACON Data: Safety and Tolerability

- No serious adverse events
- Stable mean Hgb levels; no anemia AEs reported
- Favorable safety profile consistent with prior studies enrolling >4,000 participants
- Safety profile supports enrollment of adolescents



	Bitopertin 20 mg (n=11)	Bitopertin 60 mg (n=11)	Total (n=22)
<b>Subjects with any TEAE</b>	9 (82%)	9 (82%)	18 (82%)
<b>TEAEs leading to discontinuation</b>	1 (9%) <sup>a</sup>	0	1 (5%)
<b>TEAEs reported in &gt;1 subject</b>			
Dizziness	3 (27%)	4 (36%)	7 (32%)
Lightheadedness	3 (27%)	2 (18%)	5 (23%)
Headache	3 (27%)	1 (9%)	4 (18%)
Nausea	1 (9%)	2 (18%)	3 (14%)



Includes all coded AE data as of 20 October 2023. \*Grade 3 TEAE reported as "localized headache."  
AE = adverse event; Hgb = hemoglobin; TEAE = treatment-emergent adverse event; SD = standard deviation

# Key Takeaways from Updated BEACON Data



## Proof of Concept

Significant reduction in PPIX at low and high doses



## Functional Outcomes

Significant improvement in sunlight tolerance, including on precedented pivotal endpoint



## Quality of Life Impact

Patients reported an improved quality of life



## Safety

Generally well tolerated and no meaningful change in hemoglobin observed with bitopertin



# Agenda

01

## Introduction and Data Summary

John Quisel, JD, PhD, Chief Executive Officer

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02

## Bitopertin in EPP

- **Updated BEACON Data**  
Bruce Wang, MD, Professor of Gastroenterology, University of California San Francisco  
Will Savage, MD, PhD, Chief Medical Officer
  - **EPP Commercial Opportunity**  
Jonathan Yu, Chief Business Officer
- 

03

## DISC-0974

- **Initial Data in Anemia of Myelofibrosis**  
Will Savage, MD, PhD, Chief Medical Officer
  - **Initial Data in NDD-CKD and Anemia**  
Will Savage, MD, PhD, Chief Medical Officer
- 

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## Closing Remarks

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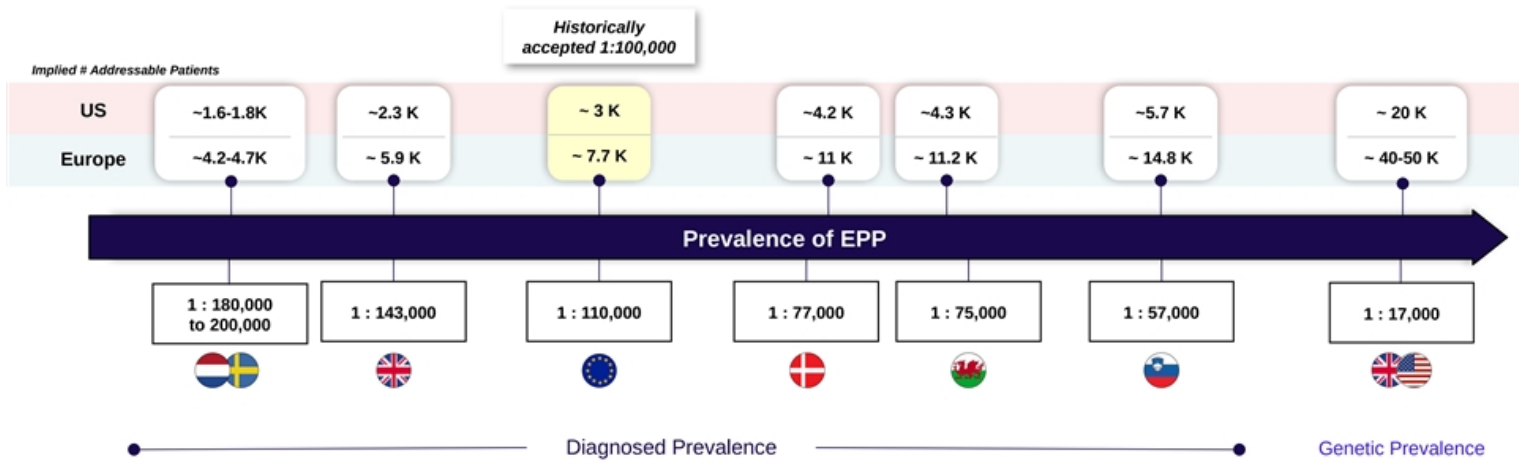
05

## Q&A Session



# Historical EPP estimates likely underrepresent prevalence

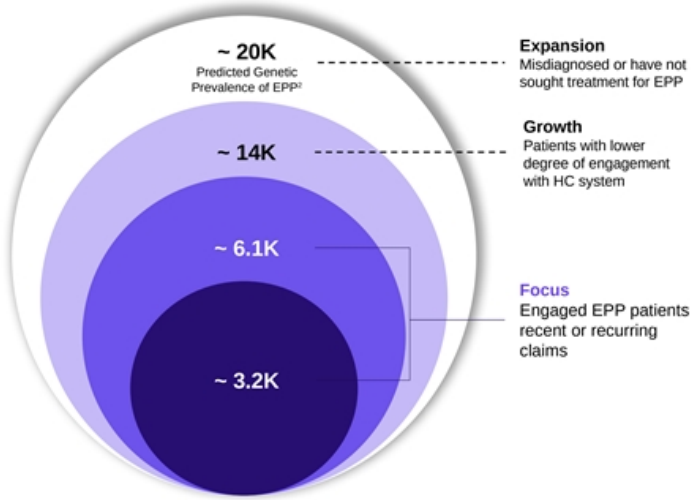
Based on methodology reported in literature and patient journey



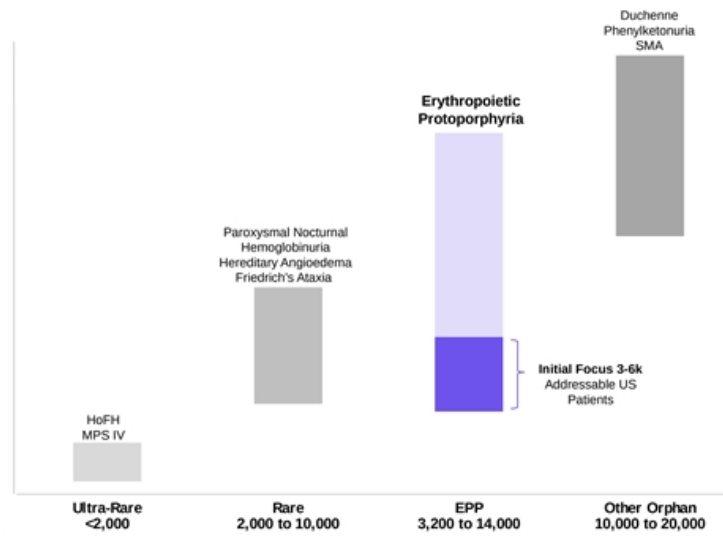
# EPP Prevalence: Est. 3-6K addressable patients in the US

Based on analysis of ICD-10 codes in claims data

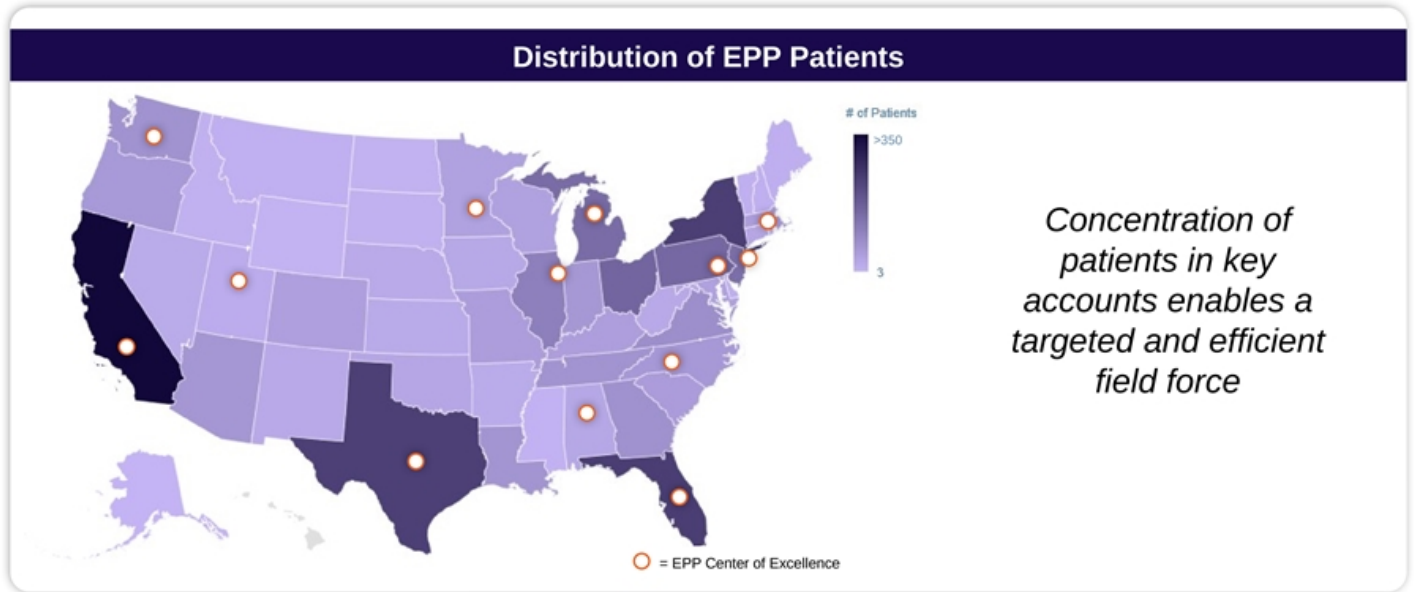
## Prevalence of EPP Patients in the U.S.



## US EPP Prevalence Comparable to Major Rare Diseases

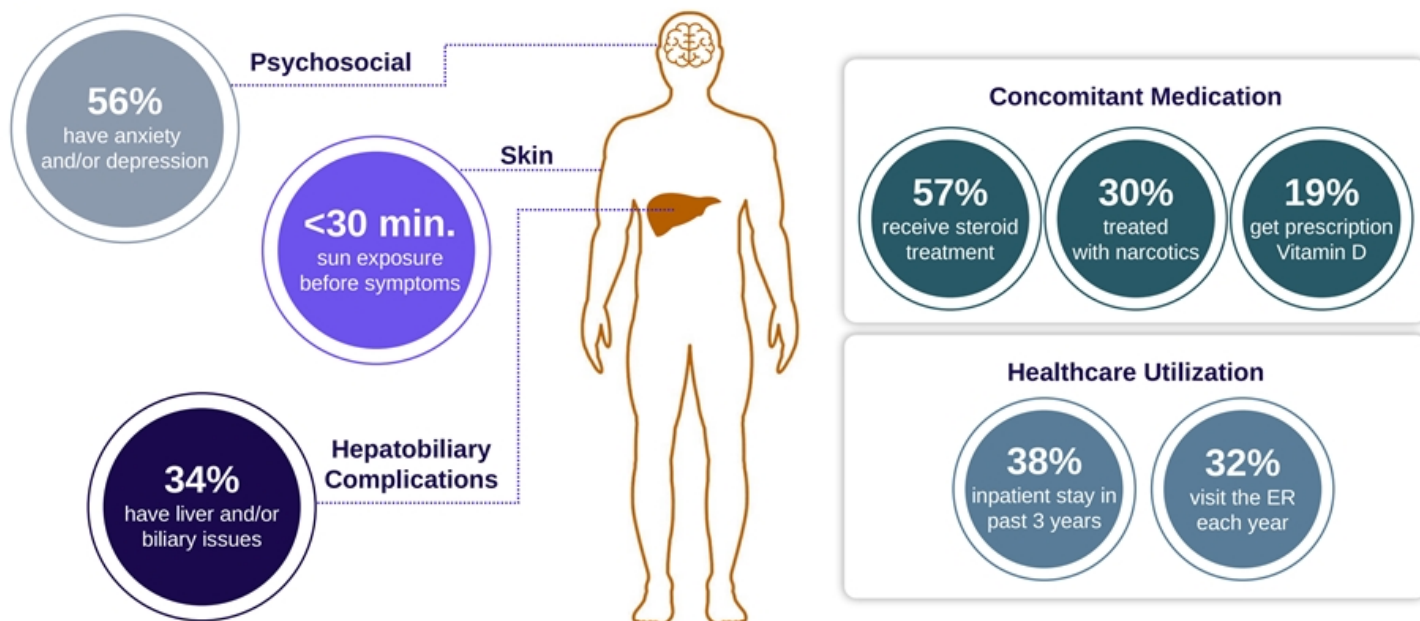


# EPP patients are identifiable and can be addressed through a highly efficient operating model





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





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## Q&A Session

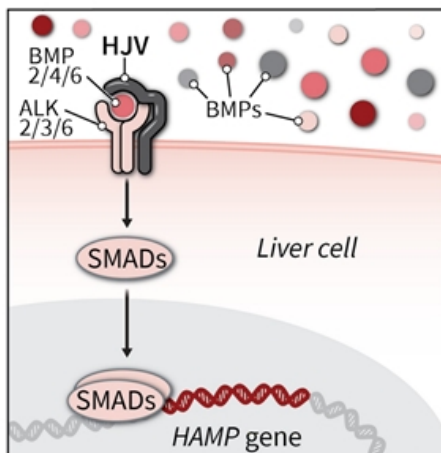
# DISC-0974: Novel Anti-HJV mAb to Suppress Hepcidin

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



# Targeting HJV to Suppress Hepcidin

Critical and specific target for hepcidin expression



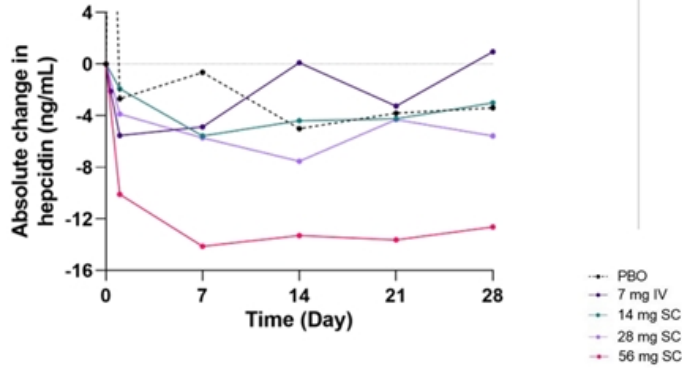
## Inhibiting Hemojuvelin (HJV) Prevents Hepcidin Expression and Increases Iron

- **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

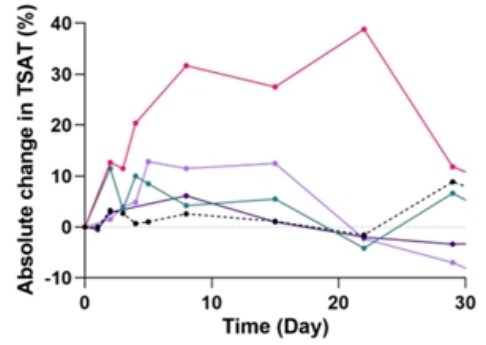
# DISC-0974 Phase 1 SAD Healthy Volunteer Data

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

DISC-0974 Reduced Hepcidin Production

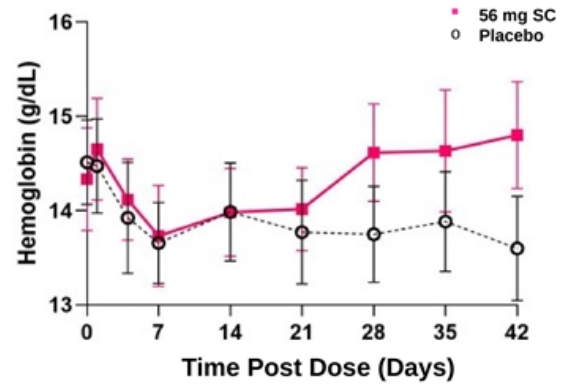
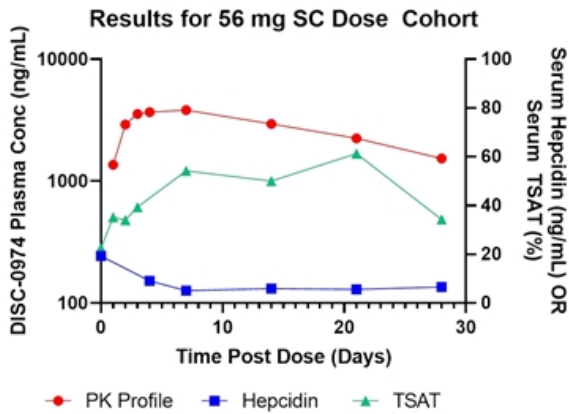


DISC-0974 Increased TSAT



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

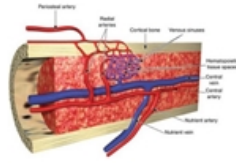
Top dose (56 mg) pharmacodynamic activity improved key clinical parameters (> 1 g/dL Hgb)



# 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

- 16,000 to 18,500 patients (US)
- ~87% are anemic; severe and requires transfusion

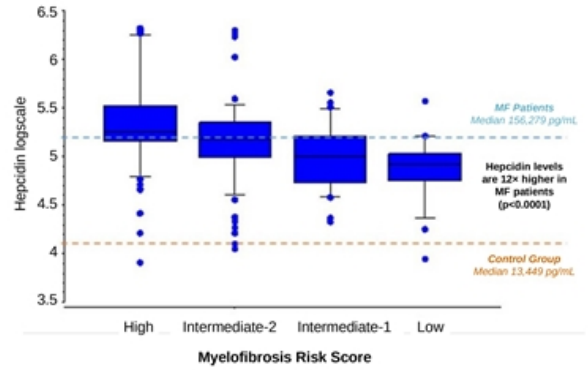
### Etiology of Anemia

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

### Unmet Medical Needs

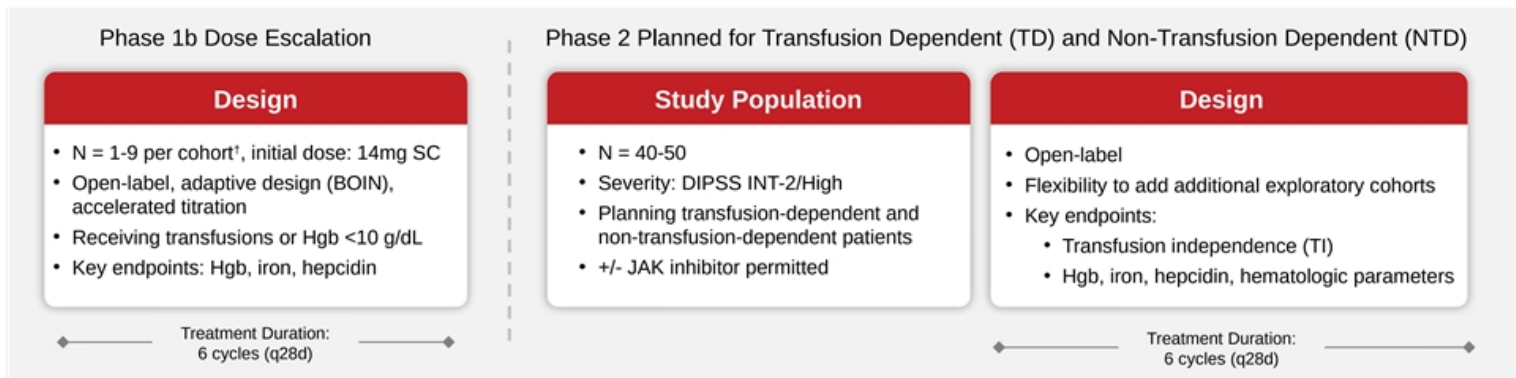
- Severe and difficult to treat; high transfusion burden
- No approved or effective anemia therapy
- Anemia limits optimal JAK inhibitor treatment

**Hepcidin Levels are Elevated in MF**  
 ~ 12× higher than control and associated with severity of anemia and transfusion burden



# DISC-0974 MF Anemia Trial Overview

Data as of October 20, 2023



	DISC-0974 14 mg	DISC-0974 28 mg	DISC-0974 50 mg	Total
<b>Enrolled</b>	1	7	3	11
<b>Concomitant JAK use</b>	0	4 (57.1%)	0	4
<b>Transfusion Dependent*</b>	0	2 (28.6%)	0	2
<b>Median Time Since Diagnosis (yrs)</b>	1	6 (0-18)	2 (0-14)	-



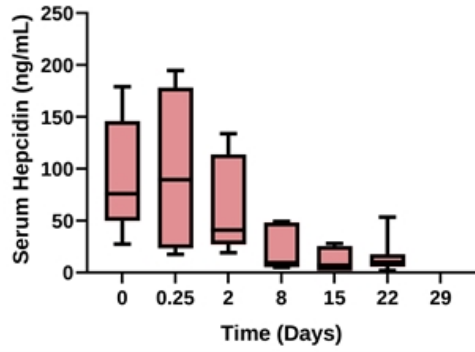
\*Defined as an RBC transfusion frequency of ≥6 units packed RBCs (PRBC) over the 84 days immediately prior to Screening. There must not be any consecutive 42-day period without an RBC transfusion in the 84-day period, and the last transfusion must be within 28 days prior to Screening; †Note: In Part 1, expect one patient per cohort until iron mechanism is engaged; BOIN = Bayesian Optimal Interval; DIPSS = Dynamic International Prognostic Scoring System; Hgb = hemoglobin; INT = intermediate; JAK = Janus kinase; q28d = every 28 days; SC = subcutaneous; DIPSS = Dynamic International Prognostic Scoring System



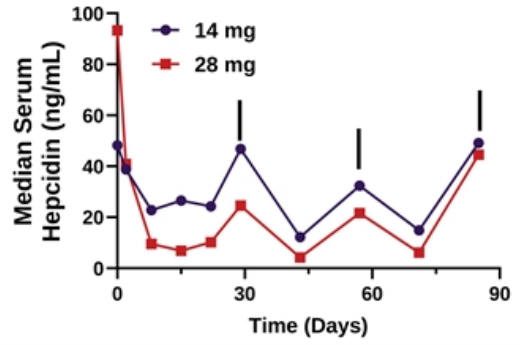
# Initial DISC-0974 Anemia of MF Data: Hepcidin

- DISC-0974 decreased hepcidin in a dose-dependent manner
- Hepcidin decreases were consistent across all treated patients

Median and Range of Serum Hepcidin after 28 mg Dose

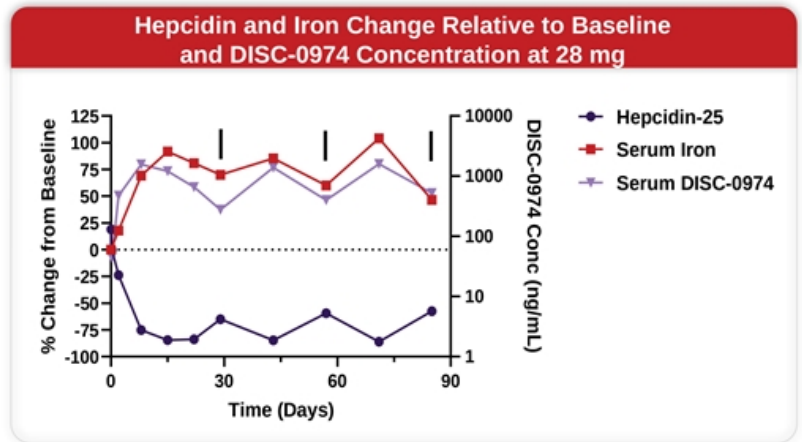
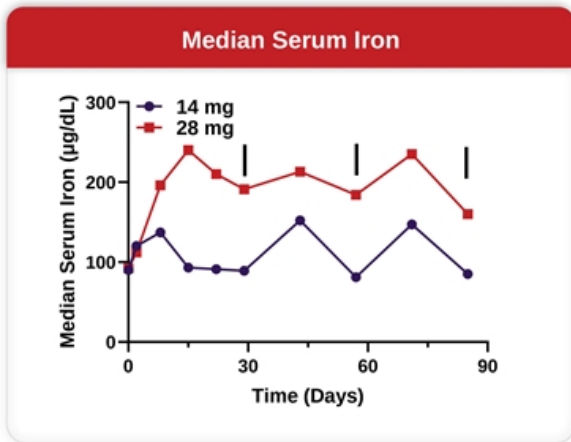


Median Serum Hepcidin



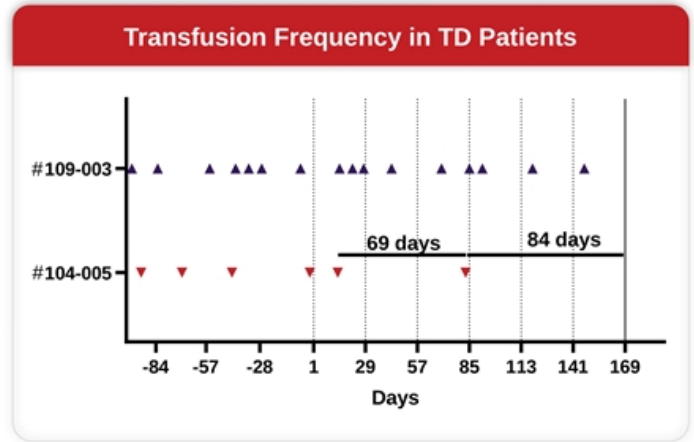
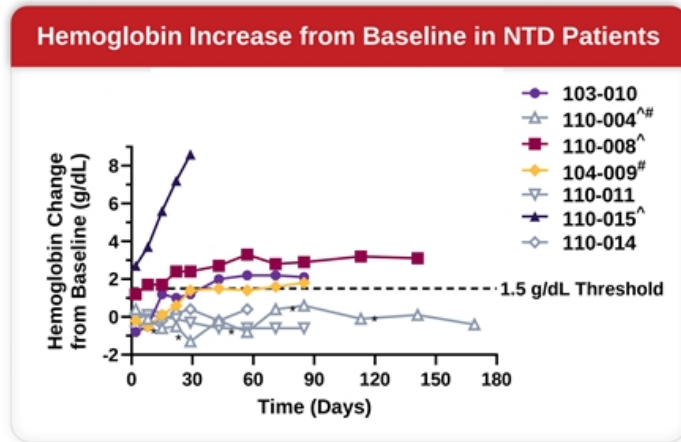
# Initial DISC-0974 Anemia of MF Data: Serum Iron

- ⊗ Serum iron increased in a dose-dependent manner
- ⊗ Dosing at 28 mg led to a >75% decrease in serum hepcidin and a >75% increase in serum iron



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

- Four of seven evaluable NTD subjects (57%) had  $\geq 1.5$  g/dL hemoglobin increase from baseline; effect was seen regardless of concomitant JAK inhibitor use
- One of the two transfusion-dependent subjects receiving 28 mg achieved transfusion independence<sup>1</sup>



<sup>1</sup>Gale criteria (*Leukemia Research* 35 (2011)); Five NTD subjects received 28 mg (103-010, 110-004, 110-008, 104-009, 110-011) and two subjects received 50 mg (110-014, 110-015) of DISC-0974 for more than 28 days as of the data cut. \*Indicates transfusion. ^ Indicates transfusion during screening. # Indicates concomitant JAK inhibitor use. NTD = non-transfusion dependent; TD = transfusion dependent.

# Initial DISC-0974 Anemia of MF Data: Safety

- ⊗ Generally well tolerated at all evaluated dose levels
- ⊗ Majority of AEs deemed not related to DISC-0974

AEs Occurring in ≥2 Subjects	14 mg DISC-0974 (N=1)		28 mg DISC-0974 (N=7)		50 mg DISC-0974 (N=3)	
	Any Grade	Grade 3	Any Grade	Grade 3	Any Grade	Grade 3
<b>Subjects with event (n)</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>3</b>	<b>2</b>	<b>1</b>
Fatigue	0	0	3	0	0	0
Anemia	0	0	4	2	1	1
Diarrhea	0	0	2	0	1	0
Nausea	0	0	2	0	0	0

**disc** medicine Related AEs: 1 subject with Grade 2 diarrhea treated at 50 mg. Grade 3 AE: headache was reported in 1 subject treated at 28 mg, unlikely related to DISC-0974. Serious AE: Grade 2 hip pain was reported in 1 subject treated at 28 mg, not related to DISC-0974. There were no ≥ Grade 4 AEs reported. AE = adverse event



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## Q&A Session

# Hepcidin is a Key Driver of CKD Anemia

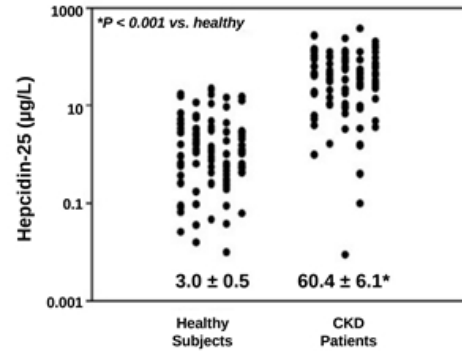
Anemia is a significant issue in CKD, with most patients currently untreated

## Anemia of CKD (NDD and DD)



- ① **5-6M CKD Patients with Anemia (US Only)**
  - ~17 to 50% of CKD patients are anemic; increases w/ stage
  - Nearly all anemic patients are non-dialysis dependent (NDD)
- ① **Hepcidin is a Driver of CKD Anemia**
  - High hepcidin from inflammation
  - Poor renal clearance leads to accumulation of hepcidin
- ① **Unmet Medical Needs**
  - Majority patients untreated or under-treated
  - ESAs restricted due to safety and black box
  - Mean Hgb 9.3 g/dL in patients initiating dialysis

**Hepcidin Levels Elevated in CKD Patients**  
~20× higher than healthy subjects and increases with disease severity



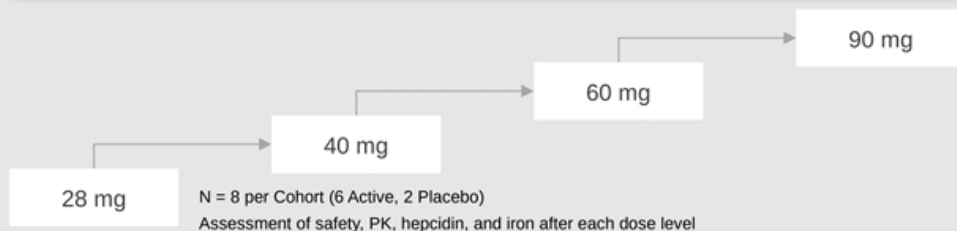
# DISC-0974 NDD-CKD Anemia Trial Overview

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



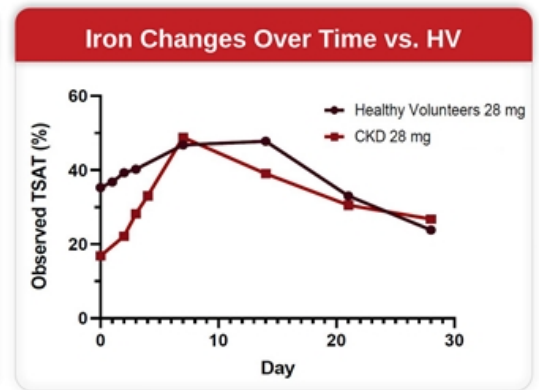
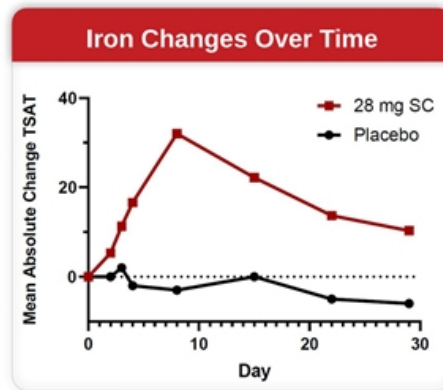
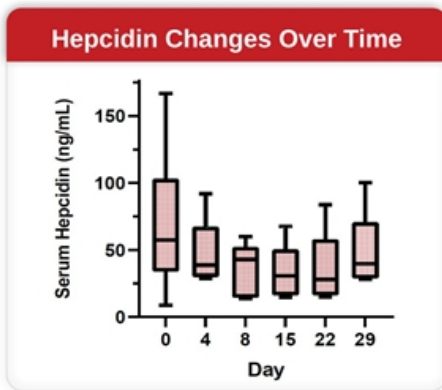
**Key Endpoints/Measures:** Change in hemoglobin; iron, hepcidin, and other hematologic parameters, safety / tolerability

	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)

# Initial DISC-0974 Anemia of CKD Data: Hepcidin and Iron

## First Cohort: 28 mg SC

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



**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** medicine 1 patient received IV iron during study week 4. For this patient, the iron and hepcidin data through week 3 only was included in this analysis; \*1 "atrial fibrillation" and 1 "worsening of end stage renal disease; CKD = chronic kidney disease; HV = healthy volunteer; IV = intravenous; PK/PD = pharmacokinetic/pharmacodynamic; SAE = serious adverse event; SC = subcutaneous; TEAE = treatment-emergent adverse event



## Key Takeaways from Initial DISC-0974 Data

### Initial Proof of Concept

Dose-dependent, meaningful reductions in hepcidin and increases in iron

### Signal of Hematologic Response

Improvements in hemoglobin and transfusion burden across broad range of MF patients

### Safety

Generally well tolerated at all evaluated dose levels



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## Q&A Session

# Summary of Data

## Bitopertin

### Heme Synthesis Modulator

- Consistent, significant reductions in PPIX; >40% on average
- Significant improvement in sunlight tolerance across multiple measures:
  - >3x increase in time to prodrome
  - >3x increase in cumulative time in light vs. historical controls
  - Increase in symptom-free days
- Improvements in quality of life
- Generally well tolerated

## DISC-0974

### Hepcidin Suppression

#### Phase 1b/2 in Myelofibrosis and Anemia

- Initial data demonstrated:
  - Consistent decrease in serum hepcidin (>75%) and increase in iron
  - Hematologic responses in a broad range of pts

#### Phase 1b/2 in NDD-CKD and Anemia

- Initial data from the 28 mg cohort demonstrated:
  - Meaningful reductions in hepcidin and increase in iron, similar PK/PD as HVOL
- Generally well tolerated



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

## Significant Accomplishments in 2023

**Bitopertin**

Positive initial Phase 2 data

**DISC-0974**

Initial POC in anemia of MF and CKD

**DISC-3405**

Initiation of Phase 1 study

## Strong Series of Catalysts in 2024

- AURORA readout early 2024
- Regulatory interactions & Phase 3 prep
- POC in DBA
- Additional POC data in MF and CKD anemia
- Preclinical efforts on additional indications
- Initial healthy volunteer data in 2024
- Polycythemia vera as first indication

Supported by a strong cash position with runway well into 2026



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**Q&A**