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

FORM 8-K

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

Date of Report (Date of earliest event reported): June 9, 2023

Disc Medicine, Inc.
(Exact name of Registrant as Specified in Its Charter)

Delaware	**001-39438**	**85-1612845**
(State or Other Jurisdiction of Incorporation)	**(Commission File Number)**	**(IRS Employer Identification No.)**

321 Arsenal Street, Suite 101 **Watertown, Massachusetts** **(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(s)	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 June 9, 2023, Disc Medicine, Inc. (the "Company") issued a press release announcing initial data from its ongoing Phase 2 open-label BEACON trial evaluating bitopertin, an orally administered investigational glycine transporter 1 ("GlyT1") inhibitor, in patients with erythropoietic protoporphyria ("EPP") and X-linked protoporphyria ("XLP") at the European Hematology Association 2023 Congress. The Company hosted a live webcast on June 9, 2023 at 7:30 a.m. ET. An archived webcast will be available for 30 days on the events & presentations section of the Company's website. The Company also updated its corporate presentation. A copy of the press release and the Company's updated corporate presentation are attached as Exhibits 99.1 and 99.2, respectively, to this Current Report on Form 8-K. The corporate presentation will also be available in the investor relations 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.

The information contained in Item 7.01 of this Current Report on Form 8-K (including Exhibits 99.1 and 99.2 attached hereto) 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 materials attached hereto as Exhibits 99.1 and 99.2.

Item 8.01 Other Events.

On June 9, 2023, the Company announced initial data from its ongoing Phase 2 open-label BEACON trial evaluating bitopertin, an orally administered investigational GlyT1 inhibitor, in patients with EPP and XLP.

BEACON Initial Data

The BEACON trial is a randomized, open-label, parallel-arm trial enrolling up to 22 patients with EPP or XLP at trial sites in Australia. 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 trial is ongoing and these data reflect initial data from 15 subjects enrolled as of the data cutoff of May 8, 2023, with a range of treatment durations from 18 days to 6 months. Due to batch processing of samples, the data cutoff for PPIX data was April 7, 2023.

Highlights of the initial data presented:

- PPIX levels: Significant, consistent, dose-dependent, and sustained reductions of whole-blood, metal-free PPIX; mean reduction of >40% when compared to baseline
- Measures of light tolerance (individual) from two participants with the longest follow-up demonstrated substantial increases in sunlight tolerance as measured by time in sunlight without experiencing a prodrome (initial symptoms that signal a pain attack), or "sunlight challenge":
    - A participant on 20 mg bitopertin reported a >80-fold increase in sunlight tolerance on day 88 of treatment, increasing from 4.5 minutes at baseline to over 6 hours; the participant did not report a prodrome during any sunlight challenge after Day 20
    - A participant on 60 mg bitopertin reported a >200-fold increase in sunlight tolerance on day 74 of treatment, increasing from 1.25 minutes at baseline to over 4 hours, and did not report a prodrome during any sunlight challenge after Day 120
- Measures of light tolerance (aggregated across participants from whom data was available in the trial):
    - Average weekly total time spent in sunlight: increased from 344 minutes (approximately 49 minutes per day) to 1,200 minutes at Week 24
    - Time to prodrome during sunlight challenge (averaged over a two-week period): increased >7-fold, from 25 minutes at baseline to 182 minutes at Week 24
    - Increased proportion of days without symptoms: 75% vs. 25% (baseline)
    - Increased proportion of sunlight challenges without prodromes: 50% vs. 0% (baseline)
    - Phototoxic reactions: 96% reduction in patient-reported phototoxic reactions while on treatment compared to baseline (n=15)
- Measures of patient quality of life
    - Patient Global Impression of Change (PGIC): All 10 patients that had completed a day 43 visit reported their disease was much better (n=8) or a little better (n=2) in the last 7 days

- Patient Global Impression of Severity (PGIS): Nine out of 10 patients that had completed a day 43 visit reported their EPP was mild (n=3) or not at all severe (n=6)
- EPP Impact Questionnaire (EPIQ): For patients whose most recent data was Day 43, 4/8 patients reported an improvement in the impact of EPP on quality of life and 4/8 reported no change in the impact of EPP on quality of life. For patients whose most recent data was after Day 43, 2/2 reported marked improvement in the impact of EPP on quality of life, reporting no impact of EPP on quality of life.

- Bitopertin was well-tolerated at both dose levels with no reported serious adverse events, no reported discontinuations or dose reductions, no reported adverse events greater than Grade 1, and no meaningful changes observed in mean hemoglobin levels.

Cautionary Note 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, including, but not limited to, express or implied statements regarding the Company's expectations with respect to its BEACON Phase 2 clinical trial of bitopertin and projected timelines for the initiation and completion of its clinical trials, the timing of additional data and other activities. The use of words such as, but not limited to, "aim," "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 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 March 31, 2023 and other documents filed by the Company from time to time with the Securities and Exchange Commission (the "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.

Item 9.01. Exhibits.

(d) Exhibits

Exhibit No.	Description
99.1	Press release issued by Disc Medicine, Inc. on June 9, 2023, furnished herewith.
99.2	Disc Medicine, Inc. Investor Presentation, furnished herewith.
104	Cover Page Interactive Data File (embedded within the Inline XBRL document)

SIGNATURES

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

DISC MEDICINE, INC.

Date: June 9, 2023

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

Disc Presents Positive Initial Data from Phase 2 BEACON Trial of Bitopertin in Patients with Erythropoietic Protoporphyria (EPP) at European Hematology Association (EHA) 2023 Congress

- *Consistent and dose-dependent reductions of protoporphyrin IX (PPIX), the disease-causing metabolite in EPP, were observed in patients treated with bitopertin*
- *Patients reported significant improvements in sunlight tolerance and measures of quality-of-life*
- *Bitopertin was well-tolerated, with no meaningful changes in hemoglobin observed*
- *Disc Medicine to host an investor conference call today at 7:30 AM ET*

WATERTOWN, Mass. (June 9, 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 preliminary findings from its ongoing, Phase 2 open-label BEACON trial evaluating bitopertin, an orally administered glycine transporter 1 (GlyT1) inhibitor, in patients with erythropoietic protoporphyria (EPP) and X-linked protoporphyria (XLP) at the European Hematology Association (EHA) 2023 Congress in Frankfurt, Germany. The initial trial data demonstrated consistent decreases in PPIX, significant increases in reported sunlight tolerance and improvements in measures of patient quality of life.

“We’re delighted to share these initial, positive data from BEACON, which provide the first clinical evidence supporting our therapeutic hypothesis of bitopertin in EPP. Over the next 12 months, we plan to build on this momentum with a series of additional clinical read-outs across our portfolio,” said John Quisel, J.D., Ph.D., Chief Executive Officer and President of Disc Medicine. “This is an important moment for Disc as a company, and I want to extend my gratitude to our team, collaborators, and most importantly, the patients and families participating in BEACON.”

“We are excited to share these initial data from the BEACON trial, where we observed consistent and sustained suppression of PPIX, the disease-causing metabolite in EPP, in patients treated with bitopertin,” said Will Savage, M.D., Ph.D., Chief Medical Officer at Disc Medicine. “Importantly, this reduction translated into significant improvements in the time that patients can spend in sunlight without reporting pain or symptoms related to their disease. We’re encouraged by the data and plan to present additional data at the end of the year.”

The BEACON trial is a randomized, open-label, parallel-arm trial enrolling up to 22 patients with EPP or XLP at trial sites in Australia. 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 trial is ongoing and these data reflect initial data from 15 subjects enrolled as of the data cutoff of May 8, 2023, with a range of treatment durations from 18 days to 6 months. Due to batch processing of samples, the data cutoff for PPIX data was April 7, 2023.

Highlights of the initial data presented:

- Protoporphyrin IX (PPIX) levels: Significant, consistent, dose-dependent, and sustained reductions of whole-blood, metal-free PPIX; mean reduction of >40% when compared to baseline
- Measures of light tolerance (individual) from two participants with the longest follow-up demonstrated substantial increases in sunlight tolerance as measured by time in sunlight without experiencing a prodrome (initial symptoms that signal a pain attack), or "sunlight challenge":
  - A participant on 20 mg bitopertin reported a >80-fold increase in sunlight tolerance on day 88 of treatment, increasing from 4.5 minutes at baseline to over 6 hours; the participant did not report a prodrome during any sunlight challenge after Day 20
  - A participant on 60 mg bitopertin reported a >200-fold increase in sunlight tolerance on day 74 of treatment, increasing from 1.25 minutes at baseline to over 4 hours, and did not report a prodrome during any sunlight challenge after Day 120
- Measures of light tolerance (aggregated across participants from whom data was available in the trial):
  - Average weekly total time spent in sunlight: increased from 344 minutes (approximately 49 minutes per day) to 1,200 minutes at Week 24
  - Time to prodrome during sunlight challenge (averaged over a two-week period): increased >7-fold, from 25 minutes at baseline to 182 minutes at Week 24
  - Increased proportion of days without symptoms: 75% vs. 25% (baseline)
  - Increased proportion of sunlight challenges without prodromes: 50% vs. 0% (baseline)
  - Phototoxic reactions: 96% reduction in patient-reported phototoxic reactions while on treatment compared to baseline (n=15)
- Measures of patient quality of life
  - Patient Global Impression of Change (PGIC): All 10 patients that had completed a day 43 visit reported their disease was much better (n=8) or a little better (n=2) in the last 7 days
  - Patient Global Impression of Severity (PGIS): Nine out of 10 patients that had completed a day 43 visit reported their EPP was mild (n=3) or not at all severe (n=6)
  - EPP Impact Questionnaire (EPIQ): For patients whose most recent data was Day 43, 4/8 patients reported an improvement in the impact of EPP on quality of life and 4/8 reported no change in the impact of EPP on quality of life. For patients whose most recent data was after Day 43, 2/2 reported marked improvement in the impact of EPP on quality of life, reporting no impact of EPP on quality of life.
- Bitopertin was well-tolerated at both dose levels with no reported serious adverse events, no reported discontinuations or dose reductions, no reported adverse events greater than Grade 1, and no meaningful changes observed in mean hemoglobin levels

These data were presented at the European Hematology Association 2023 Congress in Frankfurt, Germany and the poster is available on the EHA Congress platform at www.ehaweb.org.

Management will host a call to review the presented data on Friday, June 9th at 7:30 am ET. Please register for the event on the Events and Presentations page of Disc's website (https://ir.discmedicine.com/).

About Bitopertin

Bitopertin is an investigational, clinical-stage, orally-administered inhibitor of glycine transporter 1 (GlyT1) that is designed to modulate heme biosynthesis. GlyT1 is a membrane transporter expressed on developing red blood cells and is required to supply sufficient glycine for heme biosynthesis and support erythropoiesis. Disc is planning to develop bitopertin as a potential treatment for a range of hematologic diseases including erythropoietic porphyrias, where it has potential to be the first disease-modifying therapy. There are currently two ongoing Phase 2 clinical trials of bitopertin in patients with erythropoietic porphyria, including an open-label trial called BEACON and a randomized, double-blind placebo-controlled trial called AURORA.

Bitopertin is an investigational agent and is not approved for use as a therapy in any jurisdiction worldwide. Disc obtained global rights to bitopertin under a license agreement from Roche in May 2021.

About Erythropoietic Protoporphyria (EPP) and X-linked Protoporphyria (XLP)

Erythropoietic protoporphyria (EPP) and X-linked Protoporphyria (XLP) are rare, debilitating and potentially life-threatening diseases caused by mutations that affect heme biosynthesis, resulting in the accumulation of a toxic, photoactive intermediate called protoporphyrin IX (PPIX). This causes severe reactions when patients are exposed to sunlight, characterized by excruciating pain, edema, burning sensations and potential blistering and disfigurement. PPIX also accumulates in the hepatobiliary system and can result in complications including gallstones, cholestasis, and liver damage in 20-30% of patients and in extreme cases liver failure. Current standard of care involves extreme measures to avoid sunlight, including restricting outdoor activities to nighttime, use of protective clothing and opaque shields, and pain management. This has a significant impact on the psychosocial development, quality of life, and daily activities of patients, particularly in young children and families. There is currently no cure for EPP and only one FDA-approved therapy, a surgically implanted synthetic hormone designed to stimulate melanin production called Scenesse® (afamelanotide).

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.

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, including, but not limited to, express or implied statements regarding Disc’s expectations with respect to its BEACON Phase 2 clinical trial of bitopertin and projected timelines for the initiation and completion of its clinical trials, the timing of additional data and other activities. The use of words such as, but not limited to, “aim,” “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 data 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. Actual data 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 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 data of Disc's preclinical studies and clinical trials and the risk that the data of Disc's preclinical studies and clinical trials may not be predictive of future data 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 filed with the Securities and Exchange Commission (SEC) on May 15, 2023 and other documents filed by Disc from time to time with the SEC, as well as discussions of potential risks, uncertainties, and other important factors in Disc's subsequent filings with the SEC. 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.

Media Contact

Peg Rusconi
Verge Scientific Communications
prusconi@vergescientific.com

Investor Relations Contact

Christina Tartaglia
Stern Investor Relations
christina.tartaglia@sternir.com

Exhibit 99.2

Corporate Presentation

June 2023

disc medicine

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 the future. 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,” “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 the “Risk Factors” section of the Quarterly Report on Form 10-Q filed with the SEC on May 15, 2023, and other documents filed by Disc from time to time with the SEC, as well as discussions of potential risks, uncertainties, and other important factors in Disc's subsequent filings 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.

Disc is Building a Leading Company Dedicated to Treating Hematologic Diseases

Focus on Hematologic Disorders

- Immense medical need across a wide spectrum of disorders
- Predictive, objective endpoints

Fundamental & Validated Pathways

- Fundamental to red blood cell biology: iron and heme
- Clinical and genetic evidence of target mechanism in humans

Multiple Clinical Programs with Broad Potential

- Bitopertin in Phase 2
- DISC-0974 in Phase 1b/2
- MWTX-003 is Phase 1-Ready

Multiple Near-Term Catalysts

- Bitopertin Phase 2 data in EPP
- DISC-0974 Phase 1b data in MF and NDD-CKD
- Initiate Phase 1 MWTX-003

EPP (Erythropoietic Protoporphyria); XLP (X-linked Protoporphyria); MF (myelofibrosis); NDD (non-dialysis dependent) CKD (chronic kidney disease)

Our Executive Team

Deep experience building companies and bringing therapies to patients

John Quisel, JD, PhD | CEO & President

Former EVP & Chief Business Officer at Acceleron Pharma; 14 years through transformative Celgene partnerships, IPO and launch of Reblozyl®; led re-acquisition and positioning of sotatercept for PAH

Brian MacDonald, MB, ChB, PhD | Chief Innovation Officer

Founder and former Board Member of Disc Medicine; founder and CEO of Merganser Biotech; Previously at Zelos Therapeutics, 3-Dimensional Pharmaceuticals, GlaxoSmithKline

Jonathan Yu, MBA | Chief Business Officer

Qpex Biopharma (Co-founder), The Medicines Company, Acceleron Pharma, and Johnson & Johnson. Leadership roles in corporate strategy, finance and operations licensing, M&A, and commercial planning

Srikanth Venkatraman, PhD | SVP Chemistry

Merck and Schering-Plough, leadership roles in discovery, manufacturing and formulation, including for Victrelis® (boceprevir), first approved HCV protease inhibitor

Hua Yang, PhD | SVP Nonclinical R&D

Agios, Millennium / Takeda, BMS. Leadership positions in DMPK and Clinical Pharmacology, including for approved therapies IDHIFA® (enasidinib), TIBSOVO® (ivosidenib) and PYRUKIND® (mitapivat)

Joanne Bryce, CPA | Chief Financial Officer

Former CFO of Arkuda Therapeutics, Dyne Therapeutics, and Quartet Medicine; previously at WiTricity, Speedy Packets, Narrative Communications; Arthur Andersen

Will Savage, MD, PhD | Chief Medical Officer

Magenta Therapeutics and Shire / Takeda; Trained in Pediatric Hematology & Transfusion Medicine; Faculty at Harvard Medical School, Johns Hopkins University School of Medicine

Rahul Khara, PharmD, JD | General Counsel

Former VP Legal and Chief Compliance Officer at Acceleron Pharma, supported commercial launch of Reblozyl® and eventual acquisition by Merck; Arnold & Porter, LLP; Sidley Austin LLP

Min Wu, PhD | VP Biology

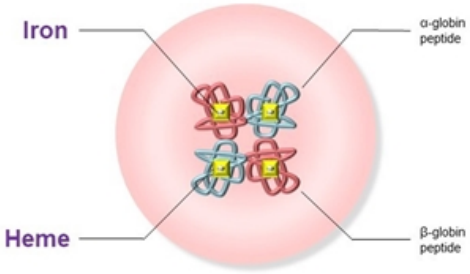
Proteostasis, FORMA, Agios, AVEO Oncology. Discovery and development across range of therapeutic areas including oncology and orphan disease including AATD, CF, lysosomal storage disease and others

Jeremy Brinkerhoff, CPA | VP Finance

Former Partner at CFGI, a portfolio company of The Carlyle Group and largest non-audit accounting advisory firm in US and focused on life science companies; Covidien; PwC

Targeting Fundamental Pathways that Impact the Biology of Red Blood Cells

Iron and heme formation play a central role in erythropoiesis



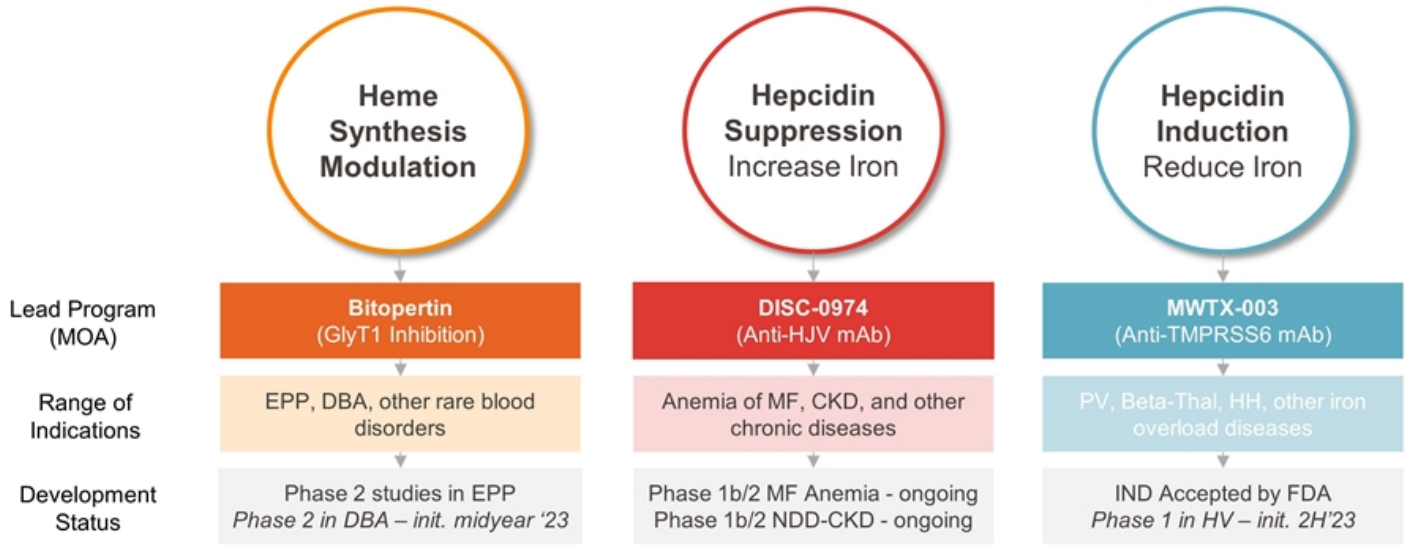
Critical points of intervention across multiple hematologic diseases

Wide Spectrum of Hematologic Diseases Addressable by Disc Portfolio (US and Europe)

Severe Rare (000s) → Moderate Prevalence (100K+)

Diamond-Blackfan Anemia	Erythropoietic Porphyrias	Beta-Thalassemia	Anemia of Myelofibrosis	Myelodysplastic Syndromes	Sickle Cell Disease	Polycythemia Vera	Hereditary Hemochromatosis	IBD Anemia	CKD Anemia
~ 5,000 (WW)	~7,500	20,000+	30,000	200,000	200,000	200,000+	1 Million (US)	1 Million+ (US)	6 Million+ (US)

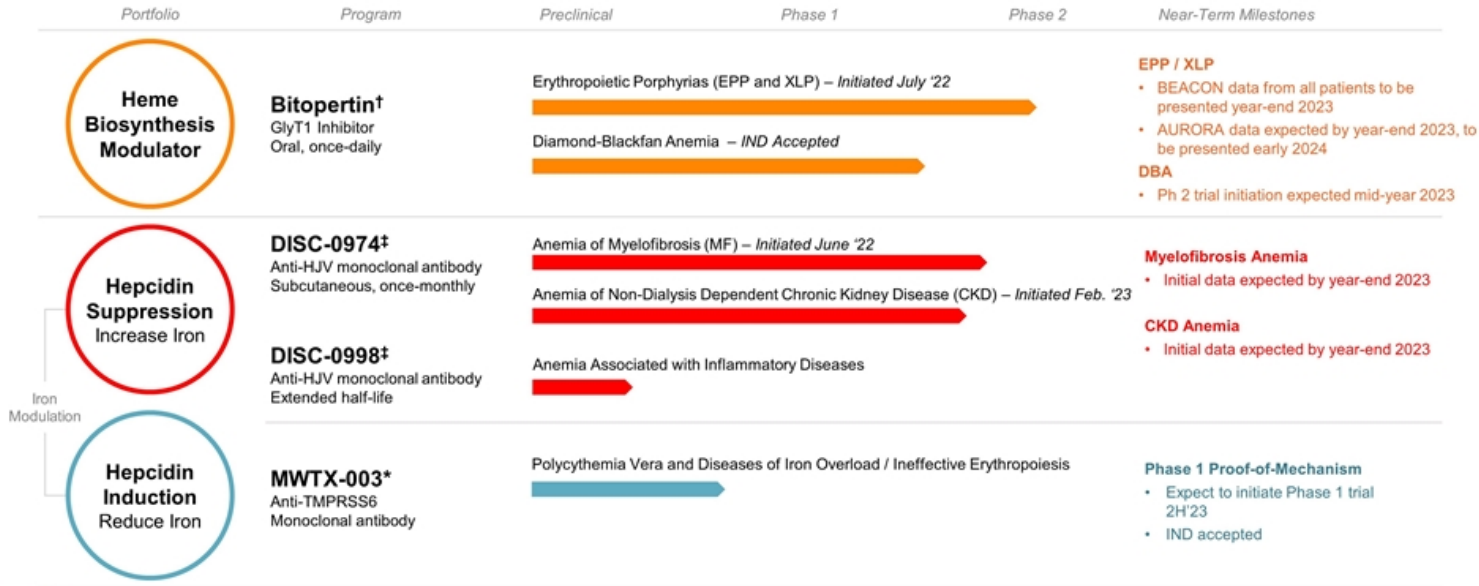
Disc's Portfolio Addresses Broad Spectrum of Hematologic Disorders



EPP (Erythropoietic Protoporphyria); XLP (X-linked Protoporphyria); MF (myelofibrosis); NDD (non-dialysis dependent) CKD (chronic kidney disease); DBA = diamond blackfan anemia; PV = polycythemia vera; HH = hereditary hemochromatosis; HV = healthy volunteers

Disc's Hematology-Focused Pipeline

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



† Bitopertin in-licensed from Roche; ‡ DISC-0974 and DISC-0998 in-licensed from Abbvie; *in-licensed from Mabwell

Projected Upcoming Milestones and Events

Multiple catalysts expected beginning mid-year and through 2024

Program	Indication	H1 2023	H2 2023	2024
Bitopertin Heme Synthesis Modulator	Erythropoietic Porphyrias (EPP and XLP)	• Initial Ph 2 BEACON presented at EHA	• Phase 2 BEACON data	• Phase 2 AURORA data (early 2024) • End of Ph 2 Meeting
	Diamond-Blackfan Anemia (DBA)	• Initiate Ph 2 DBA trial (mid-year)		• Initial Ph 2 DBA data
DISC-0974 Hepcidin Suppression	Anemia of Myelofibrosis (MF)		• Initial Ph 1b/2 MF data	• Ph 2 MF data
	Anemia of Chronic Kidney Disease (CKD)	• Initiate Ph 1b/2 CKD trial	• Initial Ph 1b/2 CKD data	• Ph 2 CKD data
MWTX-003 Hepcidin Induction	Polycythemia Vera and Diseases of Iron Overload / Ineffective Erythropoiesis		• Initiate Ph 1 SAD / MAD trial	• Phase 1 SAD / MAD data

SAD = single ascending dose; MAD = multiple ascending dose

Strong Projected Growth Trajectory Towards Building a Leading Hematology Company

Establish Company

2020
Series A and founding technology

Build Portfolio of Clinical Programs

2021-2022
Licensed bitopertin and MWTX-003; DISC-0974 and bitopertin enter the clinic; Series B financing and transition to public company

Demonstrate Phase 2 POC in Multiple Programs

2023
Initial Phase 2 patient data from bitopertin and DISC-0974; Additional trial initiations for bitopertin, DISC-0974, and MWTX-003

Initiate Phase 3 Studies and Expand Portfolio

2024 and Beyond
Positioned to enter potentially pivotal trials; expand range of indications and pipeline

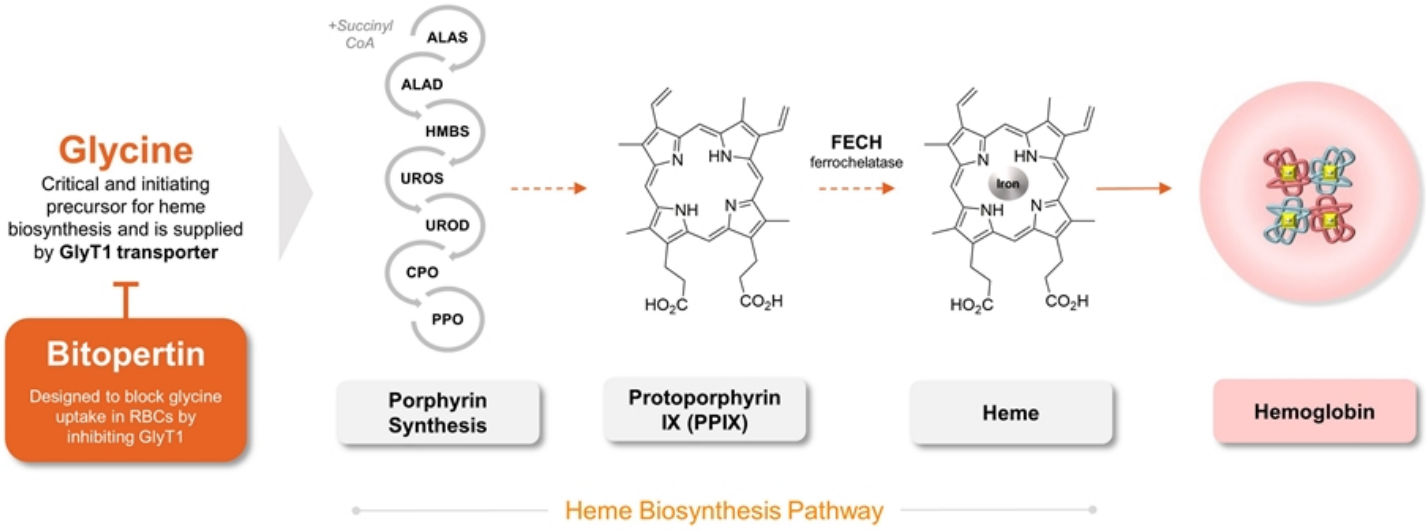
Bitopertin

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 Protoporphyria (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

EPP and XLP Prevalence:

Approximately 7-8k+ addressable patients in US and Europe; recent genetic studies suggest number may be higher

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

Sources: Deybach et al (2009) *Orphanet Journal of Rare Diseases; American Porphyria Foundation;* Dickey et al (2021) *Genet. Med.*

PPIX is a Driver of Disease in EPP / XLP Patients

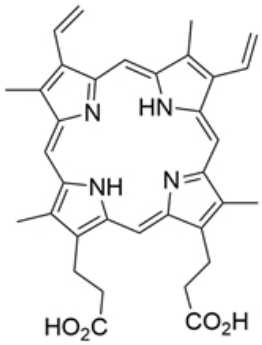
Toxic and photo-active metabolite accumulates in RBCs and is transported to skin and other organs, causing damage

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

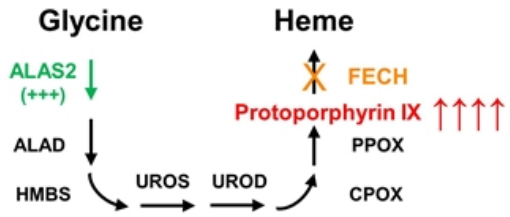
Other Complications

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

Bitopertin: Potential Disease-Modifying Treatment

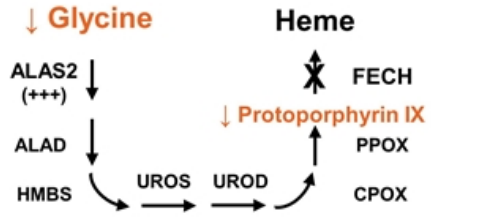
Designed to reduce disease-causing PPIX by limiting uptake of glycine into developing erythrocytes

EPP and XLP Patients
High PPIX Levels



Mutations result in reservoir of pathologically high levels of PPIX

Bitopertin Treatment
Designed to Reduce PPIX Levels



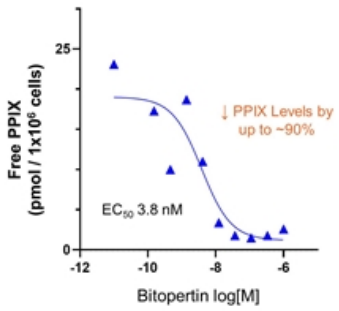
Potential first disease-modifying treatment for EPP and XLP

Figures adapted from Halloy et al. (2021) *Cell Chem Biol*

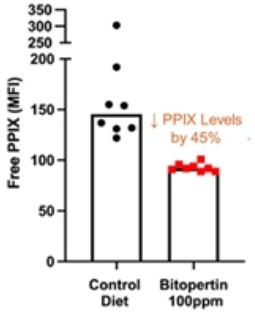
Bitopertin Reduced PPIX in Models of EPP / XLP

Effects on PPIX have the potential to be disease-modifying

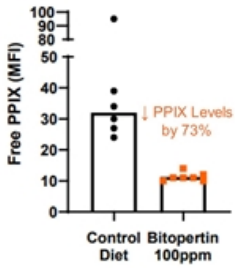
In vitro – EPP Model (K562 Cell)
FECH$^{IVS3\text{-}48C/KO}$ Mutation



In vivo - EPP Model (Mouse)
FECH^{m1pas} Missense Mutation



In vivo - XLP Model (Mouse)
ALAS2^{Q548X} Gain-of-Function 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 ≥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

Data presented at the 63rd ASH Annual Meeting (December 2021); Studies performed in collaboration with Boston Children's Hospital (PI: Paul Schmidt, Advisor: Mark Fleming)
Sources: [†] Heerfordt et al. (2016) *Br J. Dermatol.*; Wulf et al. (2019) *Photodiagn and Photodyn Ther;* Poh-Fitzpatrick (1997) *J Am Acad Derm*

Bitopertin Robust Data Package

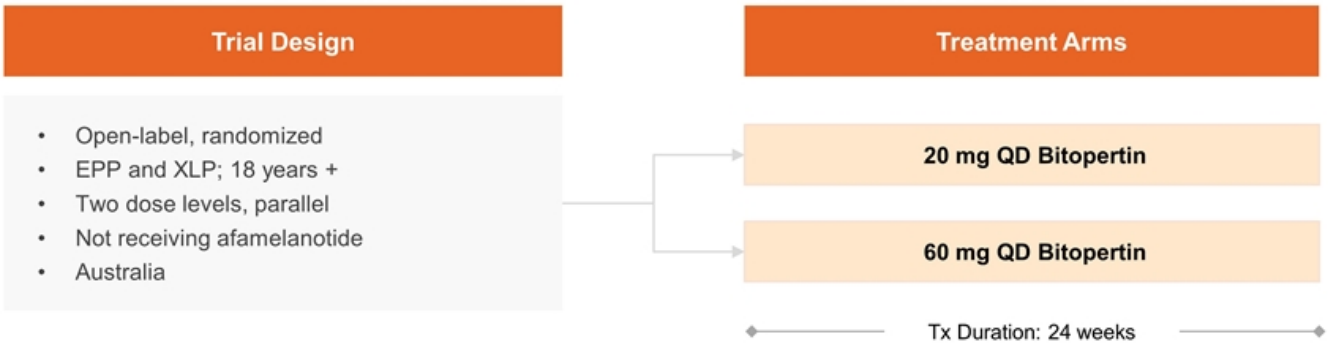
Extensive non-clinical, CMC and clinical development has already been completed

Non-Clinical	CMC	Clinical
✓ Genetic toxicity and Safety pharmacology	✓ Commercial-scale production	✓ Healthy volunteer studies
✓ Long-term GLP toxicology	✓ Optimized oral formulation (tablet and capsule)	✓ Drug-drug interaction studies
✓ Juvenile GLP toxicology studies supporting patients ≥2 y/o	✓ Highly stable molecule (at least 5 years)	✓ Hepatic impairment
✓ Carcinogenicity studies		✓ Renal impairment
✓ Full reproductive GLP toxicology		✓ TQT (heart rhythm) study
✓ Metabolites fully qualified		✓ Pharmacokinetics in patients of Asian descent
		✓ 30+ Other clinical trials

Note: Total clinical experience of bitopertin is extensive and includes 700+ HV and 4,000 patients in over 30 clinical trials; all trials referenced conducted by Roche

BEACON Trial: Open-Label Ph 2 Trial in EPP / XLP

Open-label, parallel-dose trial to establish POC and assess efficacy, safety in patients (N~22)



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

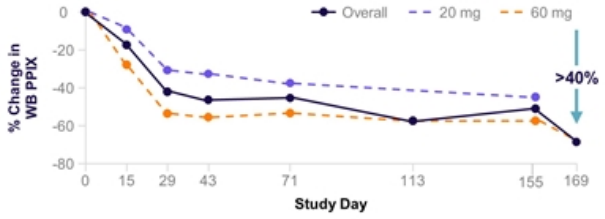
Data availability: Initial, open-label, data presented at EHA; data on all patients to be presented by year-end

Time to prodromal symptom = the time until a patient experiences an early warning signal of a phototoxic attack, measured through a weekly sunlight challenge; QD = daily, Tx = treatment; POC = proof of concept; QOL = quality of life

Initial BEACON Data: % Change in Whole-Blood PPIX

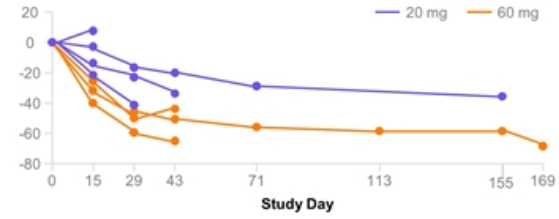
- Whole-blood (WB) metal-free PPIX reduction was observed in trial participants
- Dose-dependent reductions were observed across broad range of baseline WB PPIX levels (140-3,410 µg/dL)

PPIX Changes Over Time



Overall N	15	9	6	5	2	1	2	1
20mg	8	5	3	2	1	0	1	0
60mg	7	4	3	3	1	1	1	1

Individual PPIX Data



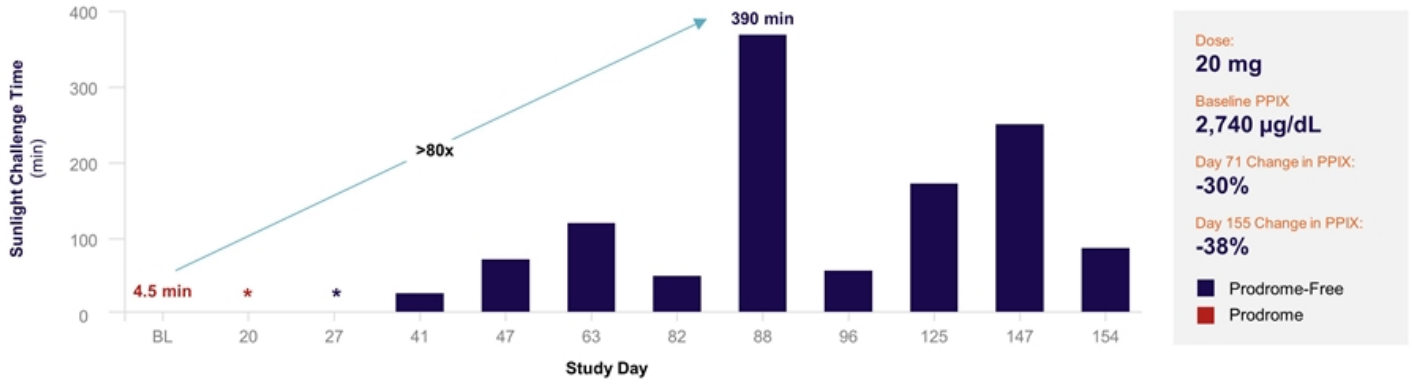
20 mg	8	5	3	2	1	0	1	0
60 mg	7	4	3	3	1	1	1	1

PPIX data as of 7 April 2023

Light Tolerance: Time to First Prodromal Symptom

Individual Patient Sunlight Challenges (20 mg QD)

>80x increase in sunlight challenge time
Patient did not report a prodrome with sunlight challenge after Day 20



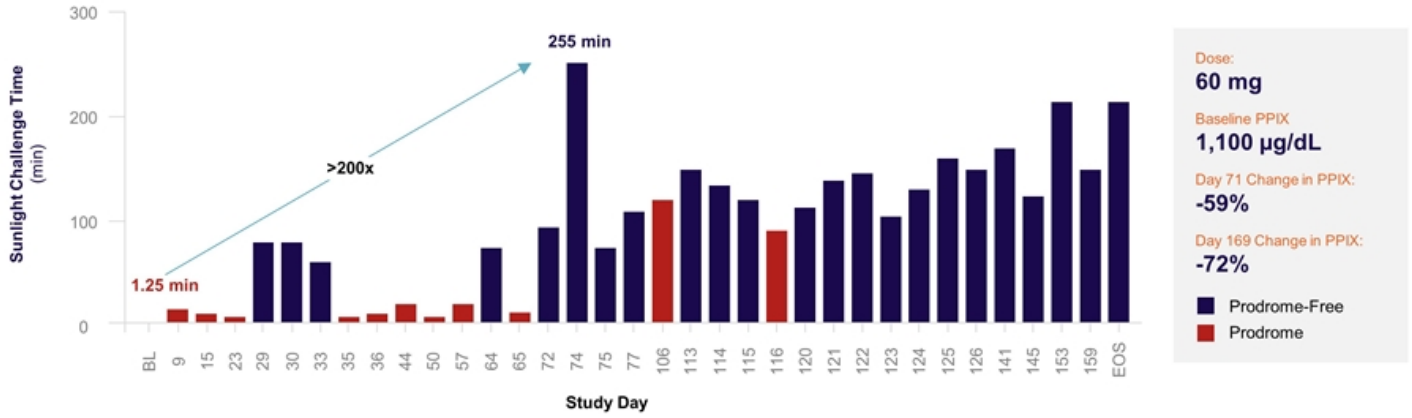
Additional data not visible due to y-axis scale include prodrome (*) after 2 minutes of sunlight and prodrome-free (*) challenge with 4 minutes of sunlight

Sunlight challenge time for individual participant while receiving 20 mg of bitopertin. Participants could complete more than 1 sunlight exposure challenge per week and if a patient was unable to elicit a prodrome during a sunlight challenge (blue bars), the patient would record the amount of time that the patient chose to remain in sunlight

Light Tolerance: Time to First Prodromal Symptom

Individual Patient Sunlight Challenges (60 mg QD)

>200x increase in sunlight challenge time
Patient did not report a prodrome with most sunlight challenges after Day 57

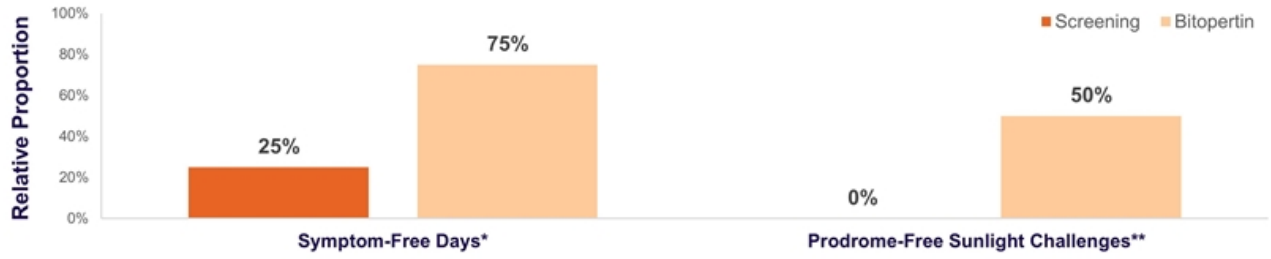


Sunlight challenge time for individual participant while receiving 60 mg of bitopertin. Participants could complete more than 1 sunlight exposure challenge per week and if a patient was unable to elicit a prodrome during a sunlight challenge (blue bars), the patient would record the amount of time that the patient chose to remain in sunlight

Initial BEACON Data: Light Tolerance

Days without Symptoms or Prodromes

- 96% reduction in patient-reported full phototoxic reactions*
- An increase in the proportion of total symptom-free days (no prodrome / early warning symptoms or full phototoxic reactions) with sun exposure was observed***



	Days w/ Sun Exposure	Sunlight Challenges
Screening	163	42
On-Treatment	679	135

*as assessed with a daily diary; **as assessed with a weekly sunlight challenge; ***summed across all patients

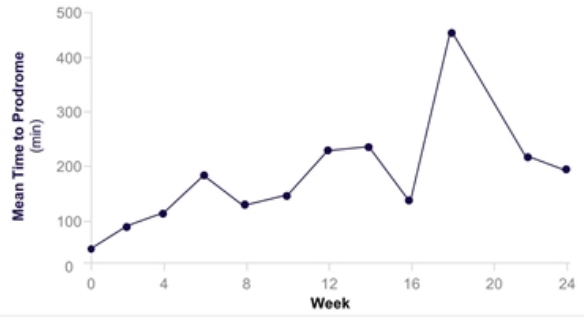
Percentages calculated relative to total number of days with sunlight exposure (left) or total number of weekly sunlight exposure challenges (right) from all study participants (n=15) during screening or while receiving bitopertin (20 mg and 60 mg dose groups combined).

Initial BEACON Data: Aggregated Light Tolerance Data

Time to Prodrome and Weekly Total Time in Sunlight

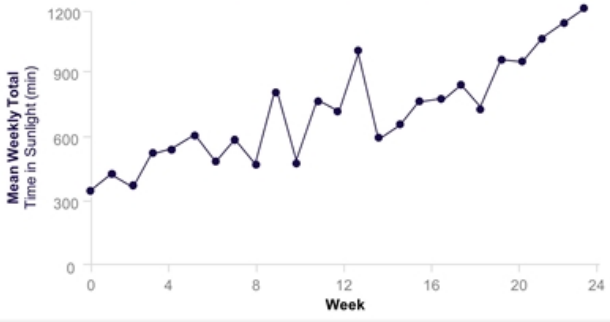
Patients reported an increase in average time to prodrome, and average total time patients were able to spend in the sun over a one-week period, for both 20 mg and 60 mg groups

Time to Prodrome



No. of Subjects	15	13	14	11	8	4	5	1	1	2	2	1
No. of Challenges	42	27	30	25	13	8	10	2	1	12	5	2

Weekly Total Time in Sunlight



No. of Subjects	15	14	13	11	8	5	4	3	2	2	2	2	1
No. of Diary Entries	163	55	64	39	28	20	21	13	12	13	11	11	7

Time to prodrome during weekly sun exposure challenges averaged over a two-week period, including cumulative time in sunlight challenges where the patient did not report a prodrome (left); if a patient was unable to elicit a prodrome during a sunlight challenge, the patient would record the amount of time that the patient chose to remain in light. Data are averaged for 20 mg and 60 mg bitopertin dose groups combined.

Average total time in sun recorded in daily sun exposure diaries over a one-week period for 20 mg and 60 mg bitopertin dose groups combined. Incomplete diary entries counted as zero minutes; The data for weeks 23 and 24 represents the available diary data for completed weeks at the time of the data cut-off and represents 1 subject

Initial BEACON Data: Measures of Quality of Life

Patient Global Impression of Change at Day 43

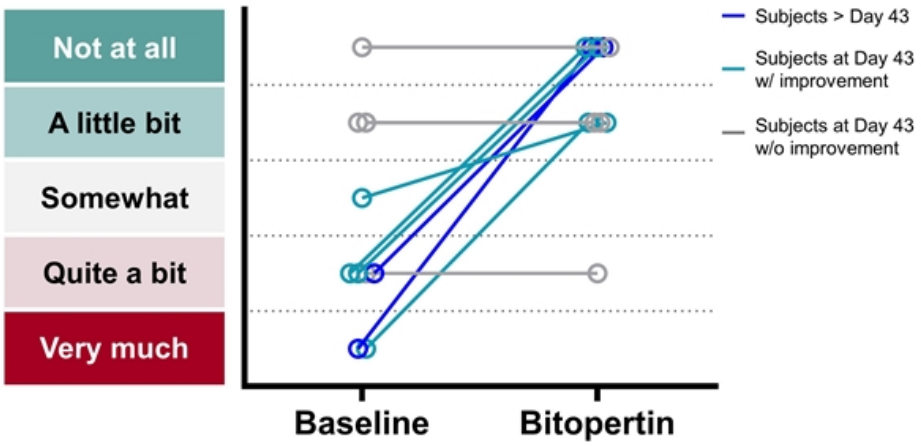
10/10 participants reported their EPP was **much better** (n=8) or a **little better** (n=2)

Patient Global Impression of Severity at Day 43

9/10 participants reported their EPP was **mild** (n=3) or **not at all severe** (n=6)

EPP Questionnaire

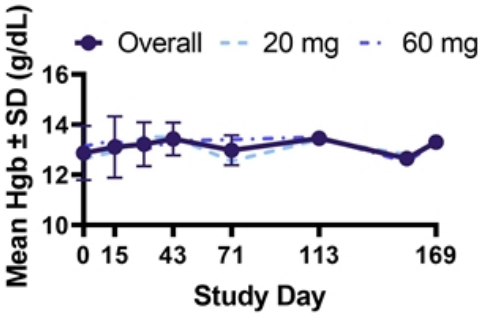
"In the past 7 days, how much did having EPP impact your overall quality of life?"



QOL data may be entered at Day 43 ± 3 days and includes data from 1 participant who had not completed Day 43 visit;
Responses at baseline or most recent visit while receiving bitopertin (combined 20/60 mg doses, n=10), subjects with data beyond Day 43 shown in blue; for subjects at Day 43, relative improvements noted in green and no change in grey; Responses based on replies to EPP Questionnaire

Initial BEACON Data: Safety and Tolerability

- No reported serious adverse events
- No observed meaningful changes in mean hgb levels
- No reported discontinuations or dose reductions
- All reported TEAEs were Grade 1 in severity and transient
  (median / mean time to resolution, 0.5 / 2 days)

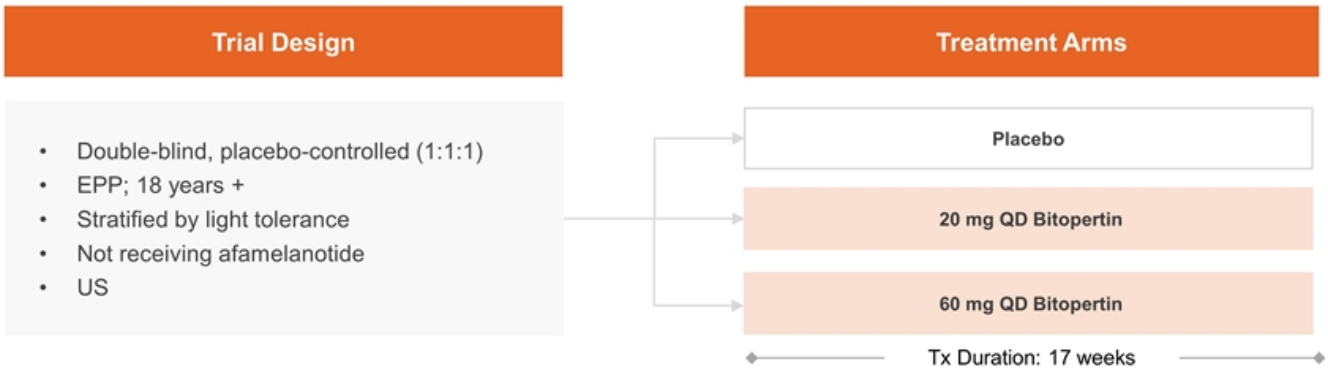


	Bitopertin 20 mg (n=8)	Bitopertin 60 mg (n=7)	Total (n=15)
Total Number of TEAEs (all Grade 1)	8	8	16
Subjects with any TEAE (all Grade 1)	6 (75%)	6 (86%)	12 (80%)
TEAEs reported in >1 subject			
Dizziness	4 (50%)	5 (71%)	9 (60%)
Headache	2 (25%)	1 (14%)	3 (20%)

Data as of 8 May 2023. Summaries include uncoded TEAEs categorized by verbatim terms; hgb = hemoglobin.

AURORA Trial: Ph 2 Trial in EPP

Randomized, Double-Blind, Placebo Controlled trial to assess efficacy, safety in patients (N~75)



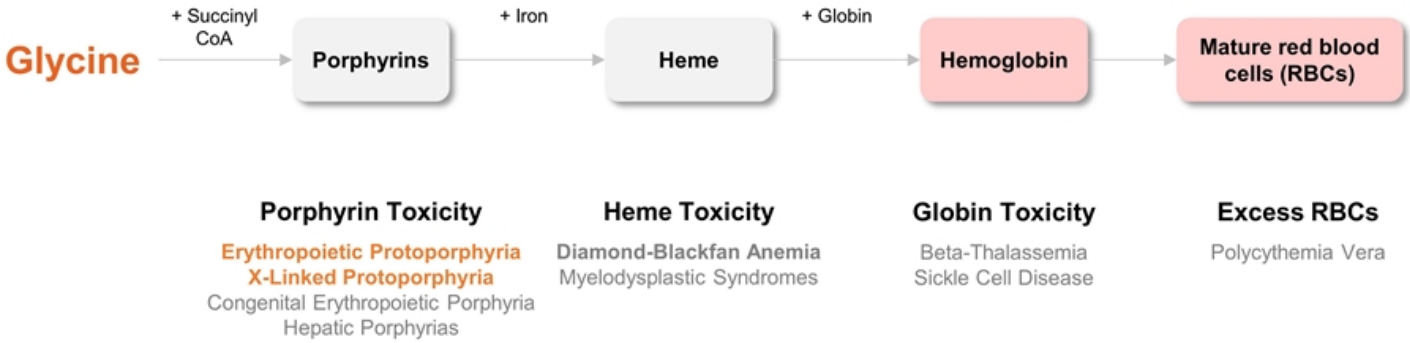
Trial endpoints: Changes in blood PPIX levels, time in daylight without pain, light tolerance, time to prodromal symptom (TTPS), QOL, safety / tolerability

Data availability: Data expected by year-end 2023, to be presented early 2024

Time to prodromal symptom = the time until a patient experiences an early warning signal of a phototoxic attack, measured through a weekly sunlight challenge; QD = daily, Tx = treatment; POC = proof of concept; QOL = quality of life

Multiple Additional Potential Applications of Bitopertin

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



Porphyrin Toxicity

Erythropoietic Protoporphyria
X-Linked Protoporphyria
Congenital Erythropoietic Porphyria
Hepatic Porphyrias

Heme Toxicity

Diamond-Blackfan Anemia
Myelodysplastic Syndromes

Globin Toxicity

Beta-Thalassemia
Sickle Cell Disease

Excess RBCs

Polycythemia Vera

bold (trial ongoing) / **bold (trial planned)**

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

GI Tract
Iron Intake

Induced by Inflammation

Hepcidin

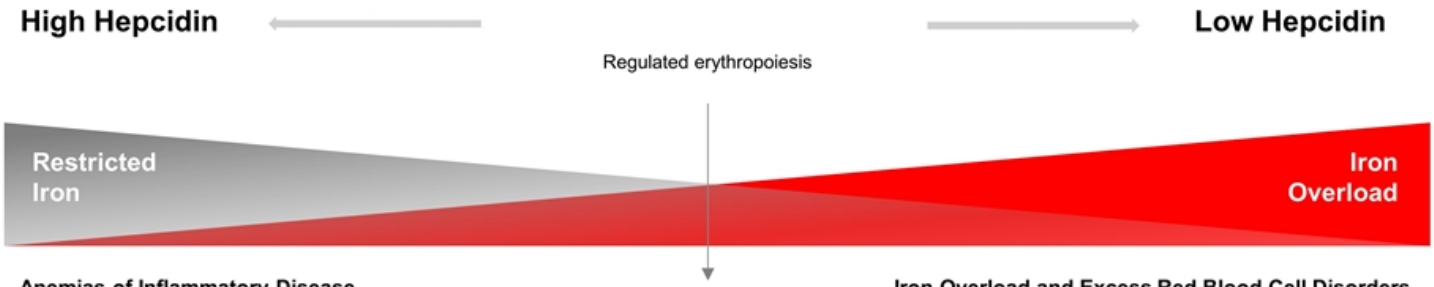
Gatekeeper Function: Blocks iron absorption and recycling

Spleen
Iron Storage

RBC Production in Bone Marrow

Hepcidin is a Therapeutic Target for Diseases

Dysregulated hepcidin drives a wide range of hematologic diseases



Anemias of Inflammatory Disease

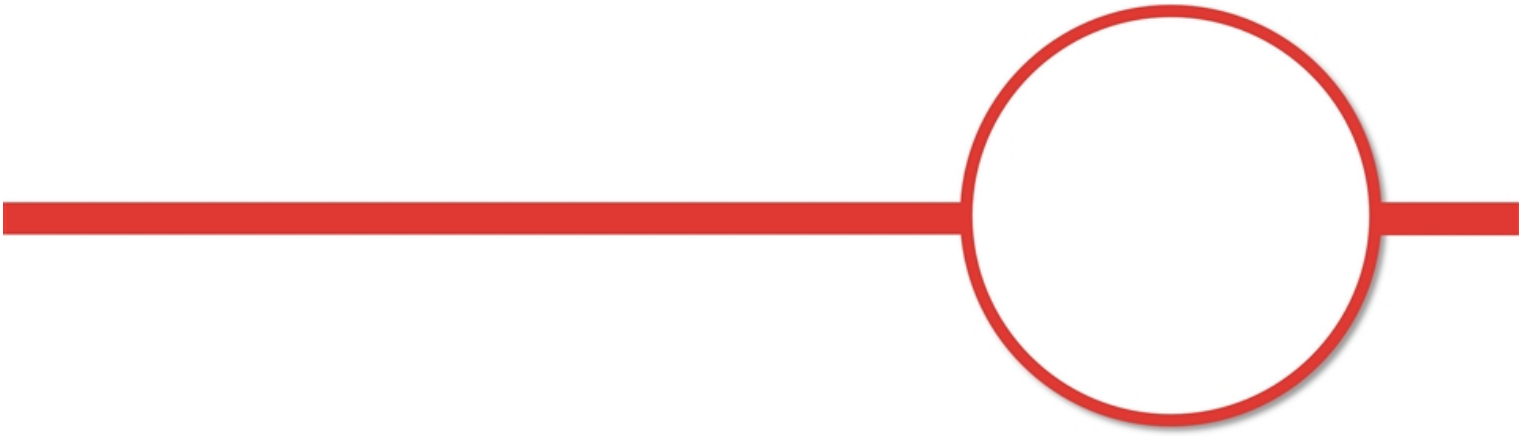
- Myelofibrosis
- Chronic Kidney Disease
- Autoimmune / Inflammatory Disorders

Iron Overload and Excess Red Blood Cell Disorders

- Polycythemia Vera
- Hereditary Hemochromatosis
- Myelodysplastic Syndromes

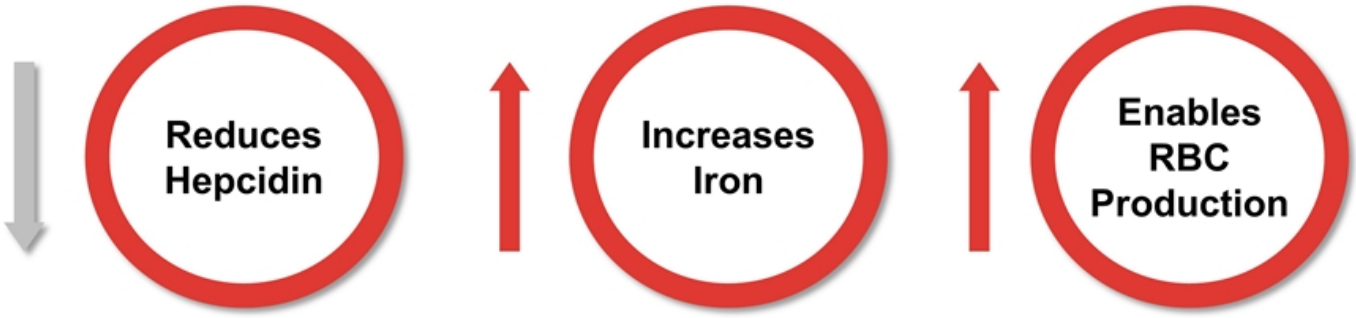
DISC-0974

MWTX-003



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

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



Inhibits endogenous production of hepcidin

Releases iron stores
Enables GI absorption

Potential to treat wide range of anemias

Anemia of Inflammation or Chronic Disease

Inflammation caused by a wide range of conditions results in anemia due to elevated hepcidin

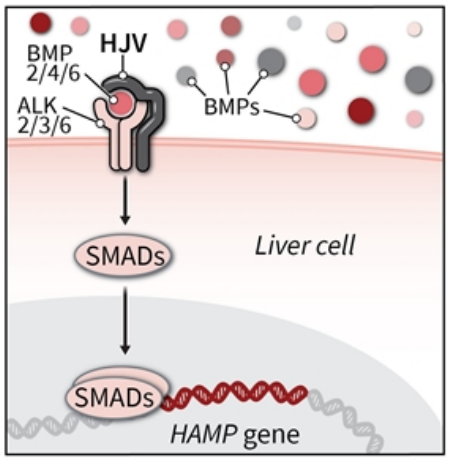
Anemia Types	US Prev.	Est. % Anemic
Myelofibrosis (MF)	16-18.5K	87%
Chronic Kidney Disease (CKD)	37 MM	17-50%
Inflammatory Bowel Disease	1.6 MM	25-35%
Anemia of Cancer	17 MM	35-80%
Systemic Lupus Erythematosus	210K	50%

- **Anemia of inflammation (also called Anemia of Chronic Disease or ACD)** is the 2nd 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

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

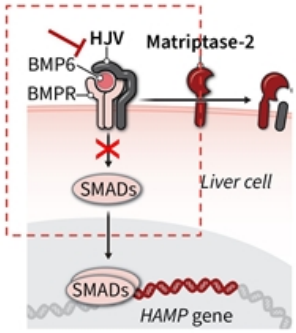
- **Genetic validation** in patients with Juvenile Hemochromatosis (lower hepcidin and elevated iron levels)
  - Loss-of-function mutations in HJV are phenotypically indistinguishable from mutations in *HAMP* (hepcidin) gene
- **Functionally specific** to hepcidin / iron
- **Tissue specific** expression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

Sources: Finberg et al, (2010) *Blood*; Zhang et al, (2010) *J Biol Chem*

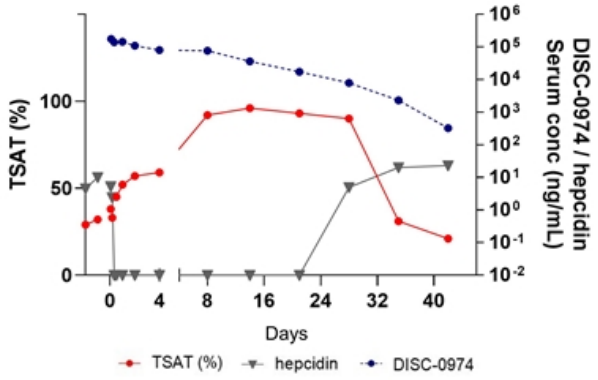
DISC-0974 Mechanism of Action

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)

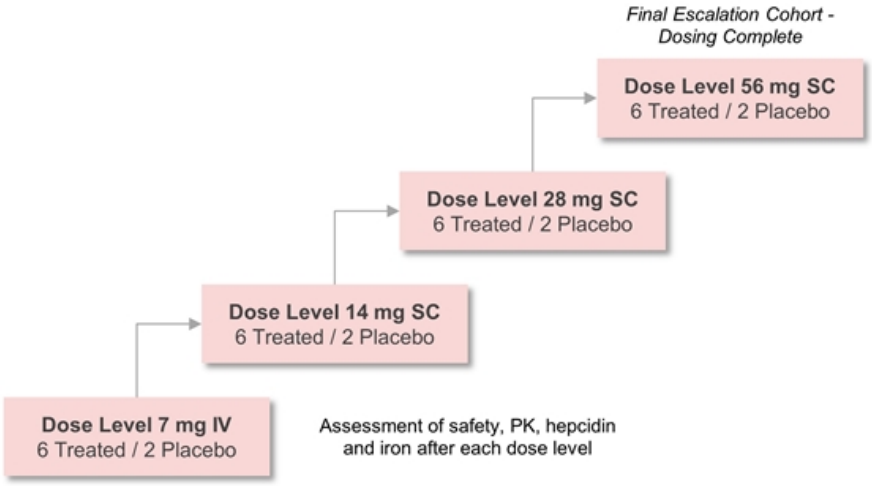


Phase 1 SAD Trial in Healthy Volunteers

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

Trial Design

- Single-ascending dose in ≥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)

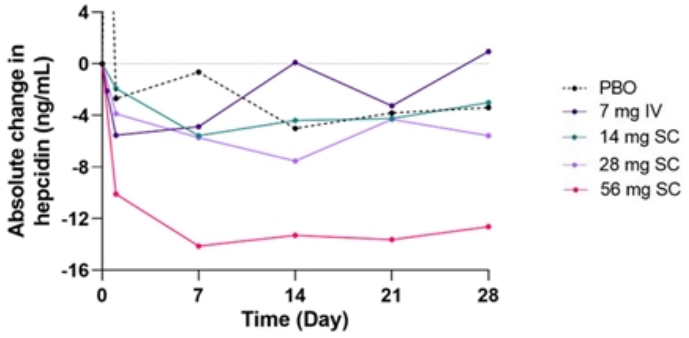


TSAT = transferrin saturation; IV = intravenous; SC = subcutaneous

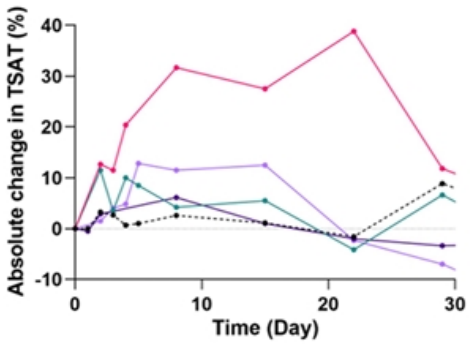
DISC-0974 Phase 1 SAD Data

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

DISC-0974 Reduced Hepcidin Production



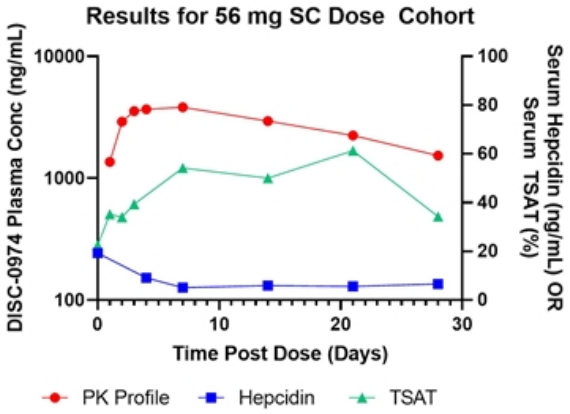
DISC-0974 Increased TSAT

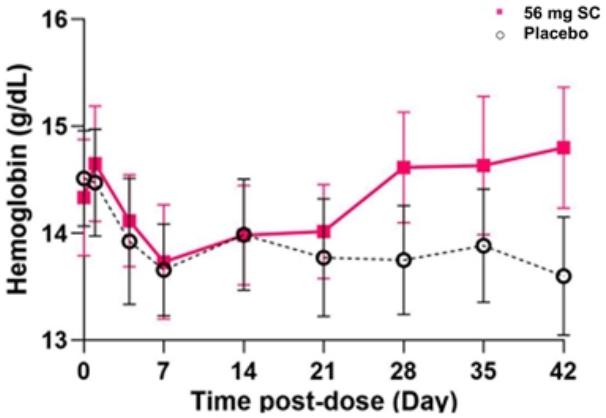


TSAT = transferrin saturation; SAD = single ascending dose

DISC-0974 Phase 1 SAD Data (cont.)

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





Hgb = hemoglobin; SAD = single ascending dose

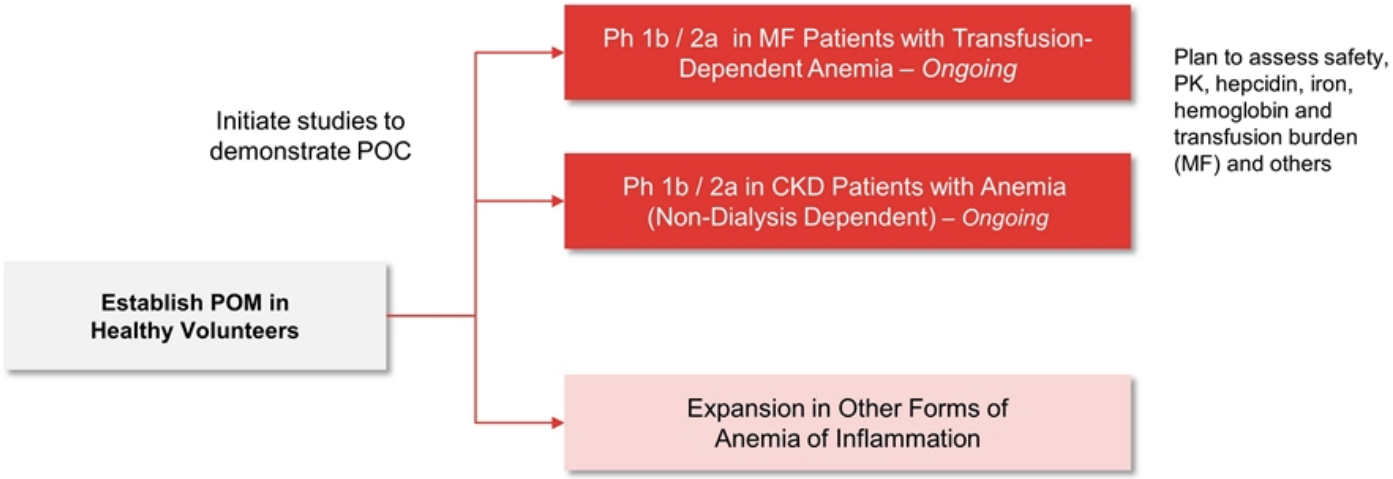
DISC-0974 Phase 1 SAD Safety

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

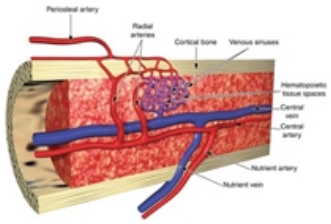
DISC-0974 Development Strategy

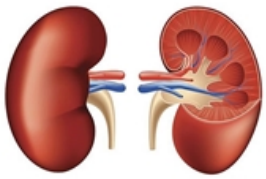
Aim to demonstrate POC in anemia of MF and CKD



DISC-0974: Anemia of Inflammation

Initiate development in parallel in anemias of MF and NDD-CKD





	Anemia of Myelofibrosis (MF)	Anemia of CKD (NDD and DD)
Est. # Patients	16,000 to 18,500 patients (US alone)	5 to 6 million patients (US alone)
Etiology of Anemia	High hepcidin from inflammation JAKi's worsen anemia; Loss of marrow function	High hepcidin from inflammation & poor renal clearance Compromised erythropoietin production
Unmet Medical Needs	Severe and difficult to treat; high transfusion burden No approved or effective anemia therapy Anemia limits optimal JAKi treatment	Majority patients untreated or under-treated ESAs restricted due to safety and black box Mean Hb 9.3 g/dL in patients initiating dialysis

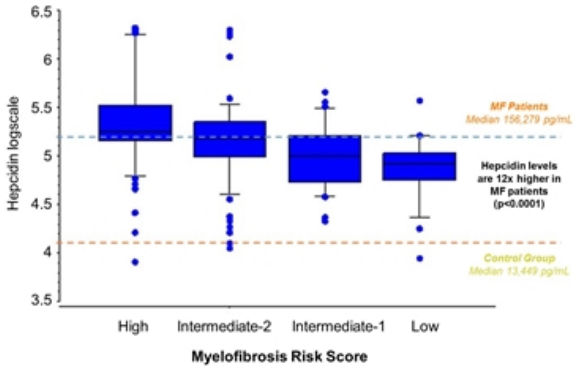
NDD: Non-Dialysis Dependent; DD: Dialysis Dependent

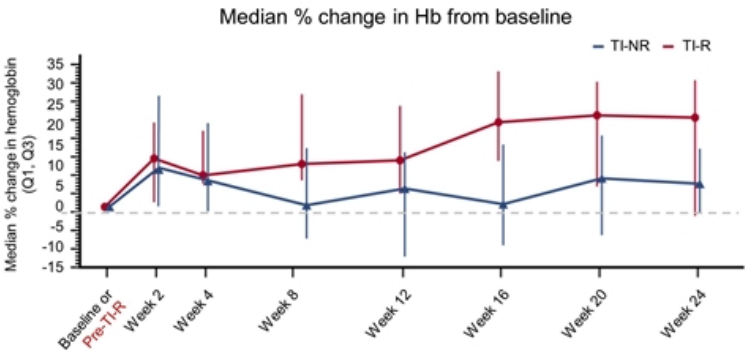
Hepcidin is a Key Driver of MF Anemia

Clinical POC* that inhibiting hepcidin axis can impact Hb Levels

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

Clinical Proof-of-Principle
Hepcidin suppression increased Hb and reduced transfusion burden (41% TI and 85% transfusion reduction)



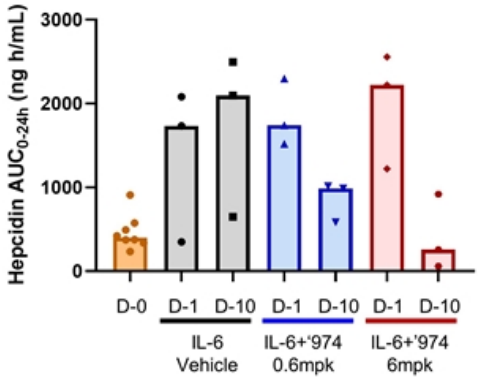


Source: Pardanani et al (2013) *Am. J. Hematol;* Oh et al., (2020) *Blood Adv:* TI-R: Transfusion-Independent for > 12 weeks by week 24; TI-NR: Transfusion Independent Non-Response; *from third party

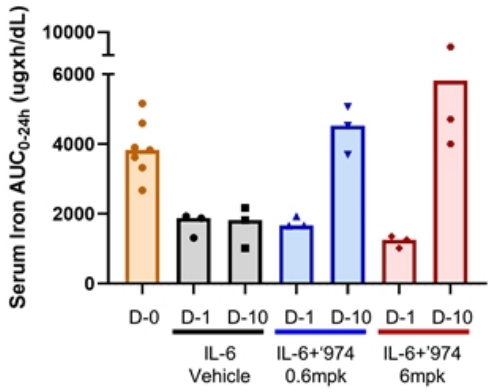
DISC-0974 Lowered Hepcidin in Inflammation Model

NHP: IL6-induced hepcidin and hypoferremia

DISC-0974 Reduced Hepcidin Production



DISC-0974 Increased Serum Iron Levels



Similar effects in animal models of infection-induced hypoferremia, IRIDA and anemia of inflammation

Phase 1b / 2 Trial in MF Anemia

Aim to evaluate efficacy and safety and position program for pivotal trial; Ph 1b data expected by year-end 2023

Phase 1b Dose Escalation in Pts

Design

- N =1-9 per cohort†, initial dose: 14 mg SC
- Open-label, adaptive design (BOIN), accelerated titration
- Receiving transfusions or Hb < 10 g/dL
- Key endpoints: Hemoglobin, Iron, Hepcidin

Treatment Duration: 6 cycles (q28d)

Phase 2 Trial Focused on Transfusion-Dependent (TD) Patients

Patient Population

- N ~ 26
- Severity: DIPSS INT-2/High
- Transfusion Dependent
- +/- JAK inhibitor permitted

Design

- Open-label
- Flexibility to add additional exploratory cohorts
- Key endpoints:
  - Transfusion-independence (TI)
  - Hb, Iron, Hepcidin, hematologic parameters

Study Arms

DISC-0974 in TD MF

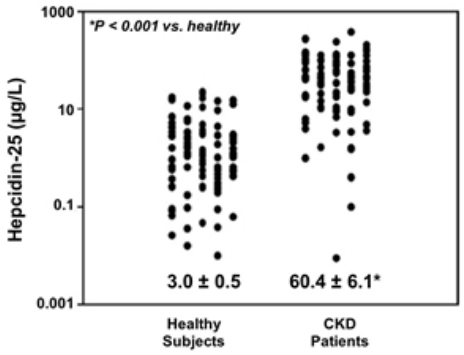
Treatment Duration: 6 months (q28d)

†Note: In Part 1, expect one patient per cohort until iron mechanism is engaged; TD MF = transfusion-dependent myelofibrosis

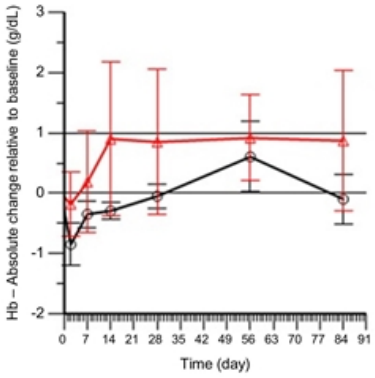
Hepcidin is a Key Driver of CKD Anemia

Clinical POC* that inhibiting hepcidin axis can impact Hb levels

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



Clinical Proof-of-Principle*
Hepcidin inhibition via single dose of mechanistically similar BMP-6 mAb increases Hb in dialysis patients

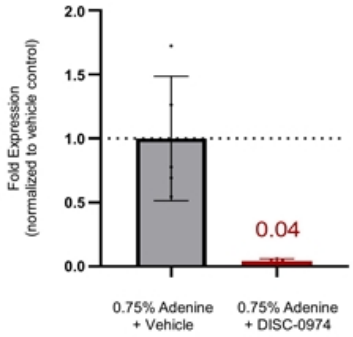


Sources: Troutt et al. (2013), *J Clin Lab Analy*; Sheetz et al. (2019) *Br J Clin Pharmacol.* (2019); *from third party

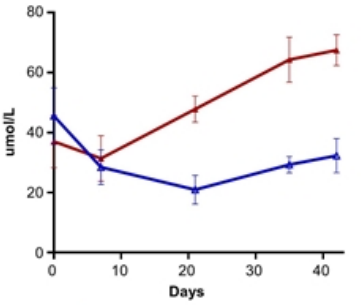
DISC-0974 Improved Anemia in Model of CKD

Rat Model of Adenine Diet-Induced CKD

DISC-0974 Reduced Hepcidin Expression

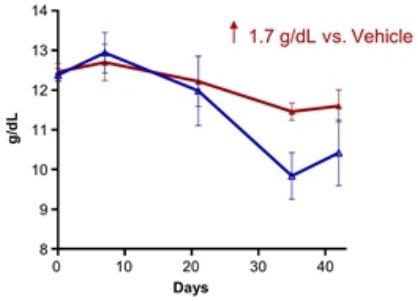


DISC-0974 Increased Serum Iron



Red: 0.75% Adenine + DISC-0974 (20 mg/kg)
Blue: 0.75% Adenine + Vehicle

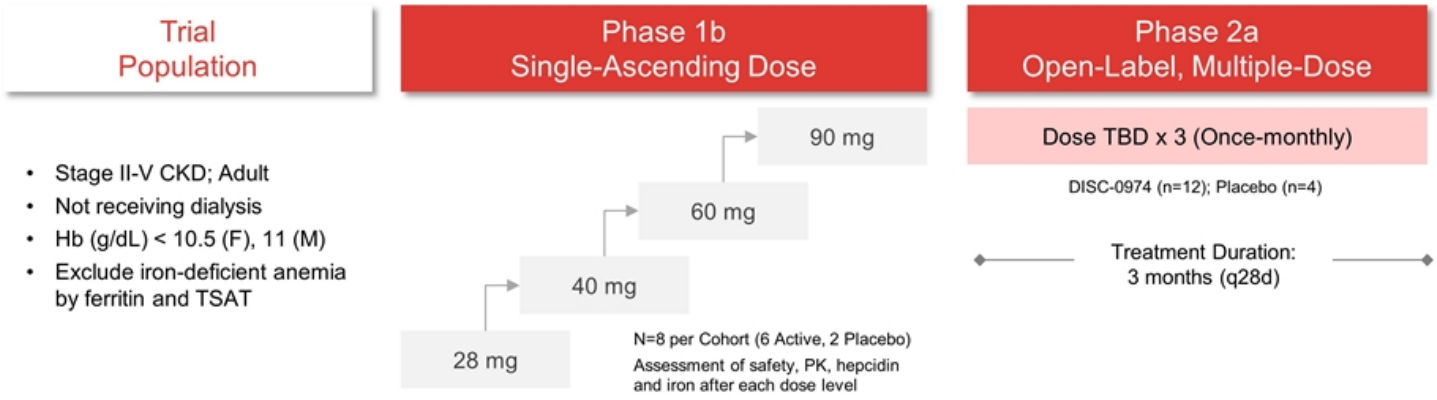
DISC-0974 Increased Hemoglobin Levels



Red: 0.75% Adenine + DISC-0974 (20 mg/kg)
Blue: 0.75% Adenine + Vehicle

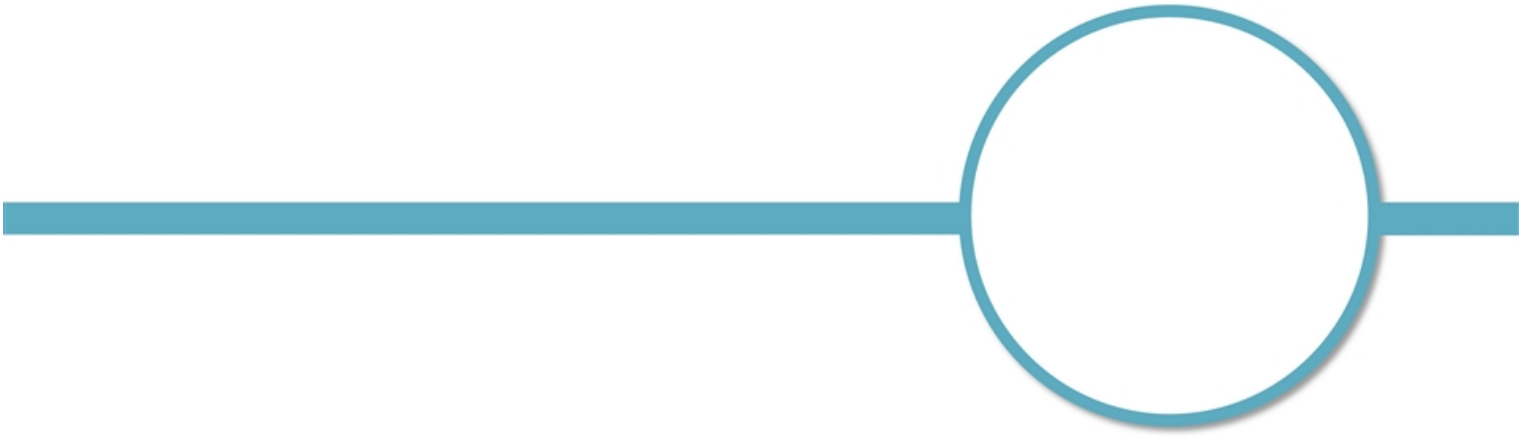
Phase 1b / 2a POC Trial in NDD-CKD Anemia

Aim to evaluate efficacy and safety in non-dialysis dependent patients



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

Data availability: Initial data expected by year-end 2023



Anti-TMPRSS6 mAb Induces Hepcidin

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

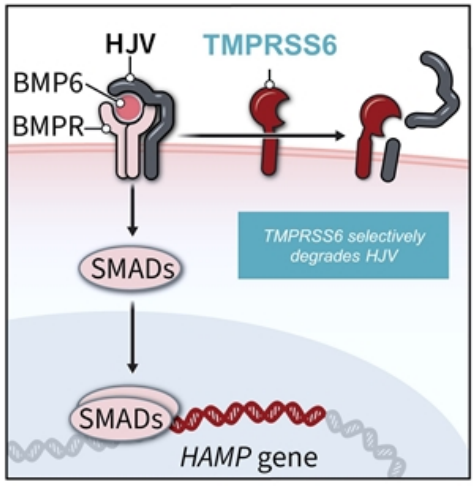
Enables Endogenous Production of Hepcidin

Promotes Iron Restriction
Decreases GI Absorption

Erythrocytosis (PV)
Ineffective Erythropoiesis
Iron Overload

Targeting TMPRSS6 to Increase Hepcidin

Potent, specific target controls endogenous hepcidin production



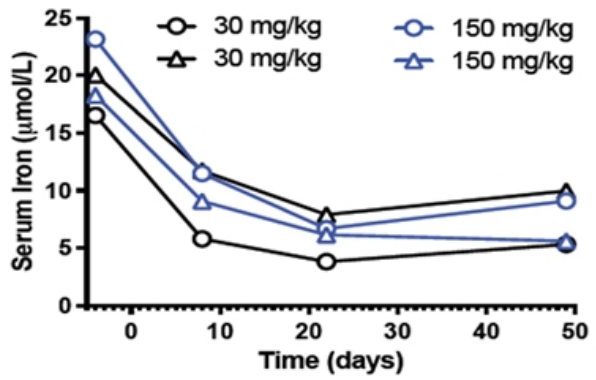
Inhibiting TMPRSS6 with an Antibody Enables Hepcidin Production to Suppress Iron

- **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

MWTX-003 Effects in Non-Human Primates

Resulted in deep and sustained suppression of serum iron levels

Single dose of MWTX-003 resulted in ~ 70% suppression of serum iron lasting 3 weeks



- Potent PD effects observed across multiple preclinical studies consistent with TMPRSS6 inhibition
  - Hepcidin: 3-4 fold induction
  - Serum iron: ~ 60-70% suppression
- MWTX-003 demonstrated excellent safety profile in non-clinical GLP safety studies

Chen B. et al Blood (2021) 138 (Supplement 1): 941, ASH 2021 Annual Meeting

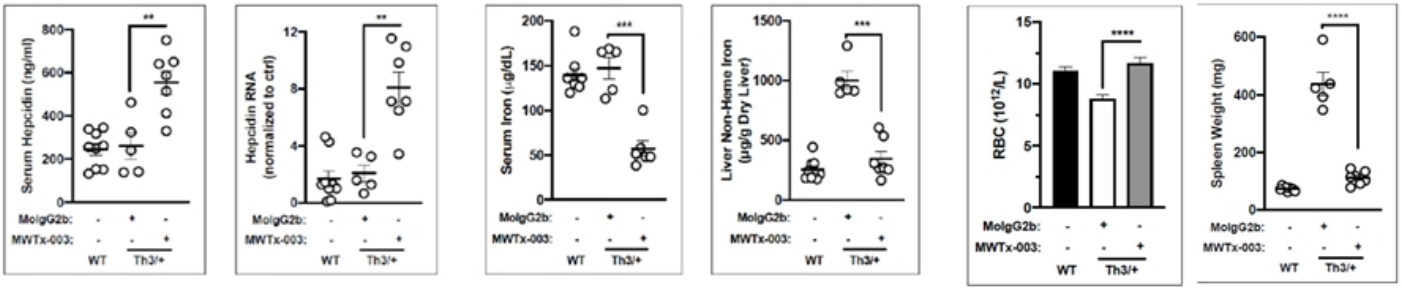
Effects in HbbTh3/+ Model of Beta-Thalassemia

Significant effects on hallmarks of disease including iron overload, ineffective erythropoiesis and splenomegaly were observed

↑ Hepcidin Production
Up to 4-fold (mRNA)

↓ Serum and Liver Iron
60-65% Reduction

↑ RBC Production
↓ Spleen Weight



HbbTh$^{3/+}$ mice were treated with the lead anti-TMPRSS6 antibody at 10 mg/kg IP for 4 weeks

MTWX-003 Development Plans

Aim to establish phase 1 proof-of-mechanism and advance program into POC studies with focus on Polycythemia Vera

Phase 1 SAD / MAD in HV
Plan to Initiate 2H'23

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

Phase 2 Proof-of-Concept Trial 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

Hct = hematocrit; HV = healthy volunteers

Disc is Building a Leading Company Dedicated to Treating Hematologic Diseases

- **Clinical-stage biopharmaceutical company developing therapies for hematologic diseases**
  - Focused on fundamental and well-validated pathways that affect heme biosynthesis and iron homeostasis
- **Portfolio of 3 distinct "pipeline-in-a-product" programs with broad applications and opportunity for growth**
  - Bitopertin (Phase 2): Potential 1st disease-modifying treatment for debilitating, orphan diseases EPP / XLP
  - DISC-0974 (Phase 1b/2): Targeting anemia of inflammation opportunity with non-ESA mechanism
  - MWTX-003 (IND accepted): Targeting polycythemia vera and disease of iron overload
- **Entering catalyst-rich period with multiple data read-outs anticipated across portfolio in next 6-12 months**
  - Initial data DISC-0974 Phase 1b/2 trials in anemias of NDD-CKD and MF; data from bitopertin Phase 2 trials in EPP / XLP
- **Strong foundation positions us to build Disc into a leading hematology company**
  - Leadership with deep experience developing and commercializing therapies; strong balance sheet with support from top-tier healthcare investors

Thank You