SHIELD THERAPEUTICS

Improving Lives Together

Investor Presentation

Mello London

27 November 2018

Disclaimer

These slides have been prepared by Shield Therapeutics plc (the "Company") solely for your information and for use at a presentation for the purpose of providing background information on the Company, its business and the industry in which it operates. For the purposes of this notice, "presentation" means these slides, any oral presentation, any question and answer session and any written or oral material discussed or distributed during the presentation meeting.

This presentation has not been approved by the United Kingdom Listing Authority under the Prospectus Rules (made under Part VI of the Financial Services and Markets Act 2000, as amended) or otherwise, or by the London Stock Exchange plc. This presentation has not been independently verified and no representation or warranty, express or implied, is made or given by or on behalf of the Company or any of its subsidiaries or subsidiary undertakings, or any of such person's respective directors, officers, partners, employees, agents, affiliates or advisers, as to, and no reliance may be placed for any purpose whatsoever on the information or opinions contained in this presentation or on the completeness, accuracy or fairness thereof.

This presentation does not constitute or form part of, and should not be construed as, any offer, invitation or recommendation to purchase, sell or subscribe for any securities of the Company in any jurisdiction and neither the issue of this presentation nor anything contained herein shall form the basis of or be relied upon in connection with, or act as an inducement to enter into, any investment activity. This presentation does not purport to contain all of the information that may be required to evaluate any investment in the Company or any of its securities and should not be relied upon to form the basis of, or be relied on in connection with, any contract or commitment or investment decision whatsoever. This presentation is intended to present background information on the Company, its business and the industry in which it operates and is not intended to provide complete disclosure upon which an investment decision could be made. The merit and suitability of an investment in the Company should be independently evaluated and any person considering such an investment in the Company is advised to obtain independent advice as to the legal, tax, accounting, financial, credit and other related advice prior to making an investment.

No undertaking, representation, warranty or other assurance, express or implied, is or will be made or given by or on behalf of the Company or any of its subsidiary or subsidiary undertakings, or any of such person's respective directors, officers, partners, employees, agents, affiliates or advisers or any other person as to the accuracy or completeness of the information or opinions contained in this presentation and no responsibility or liability is accepted by any such person for any such information or opinions or for any errors, omissions or misstatements, negligent or otherwise, nor for any other communication written or otherwise. All information in this presentation is subject to verification, correction, completion and change without notice. None of the Company or any of its subsidiary or subsidiary undertakings, or any of such person's respective directors, officers, partners, employees, agents, affiliates or advisers, undertakes any obligation to amend, correct or update this presentation or to provide the recipient with access to any additional information that may arise in connection with it.

The statements contained in this presentation may include "forward-looking statements" that express expectations as to future events or results. Forward-looking statements can be identified by the use of forward-looking terminology, including the terms "believes", "estimates", "anticipates", "projects", "expects", "intends", "may", "will", "seeks" or "should" or, in each case, their negative or other variations or comparable terminology, or by discussions of strategy, plans, objectives, goals, future events or intentions. These statements are based on current expectations and involve risk and uncertainty because they relate to events and depend upon circumstances that may or may not occur in the future. There are a number of factors which could cause actual results or developments to differ materially from those expressed or implied by such forward-looking statements. Any of the assumptions underlying forward-looking statements could prove inaccurate or incorrect and therefore any results contemplated in forward-looking statements may not actually be achieved. Nothing contained in this presentation should be construed as a profit forecast or profit estimate. Investors and any other recipients of such communications are cautioned not to place reliance on any forward-looking statements. The Company undertakes no obligation to update or revise (publicly or otherwise) any forward-looking statement, whether as a result of new information, future events or other circumstances.

To the extent available, the data contained in this presentation has come from official or third party sources. Third party industry publications, studies and surveys generally state that the data contained therein have been obtained from sources believed to be reliable, but that there is no guarantee of the accuracy or completeness of such data. While the Company believes that each of these publications, studies and surveys has been prepared by a reputable source, the Company has not independently verified the data contained therein. In addition, certain of the data contained in this presentation come from the Company's own internal research and estimates based on the knowledge and experience of the Company's management in the market in which the Company operates. While the Company believes that such research and estimates are reasonable and reliable, they, and their underlying methodology and assumptions, have not been verified by any independent source for accuracy or completeness and are subject to change without notice. Accordingly, undue reliance should not be placed on any of the data contained in this presentation.

This presentation should not be copied or distributed by recipients and, in particular, should not be distributed by any means, including electronic transmission, to persons with addresses in the United States of America, Canada, Australia, South Africa or Japan, their possessions or territories or to any citizens thereof, or to any corporation, partnership or such entity created or organised under the laws thereof, or any other jurisdiction, where such distribution is unlawful. Any such distribution contrary to the above could result in a violation of the laws of such jurisdictions.

This presentation is confidential and is being supplied to you solely for your information and may not be reproduced, re-distributed or passed on, directly or indirectly, to any other person or published in whole or in part for any purpose. By attending the meeting where this presentation is made or by accepting a copy of this presentation, you agree to be bound by the limitations and restrictions set out above.

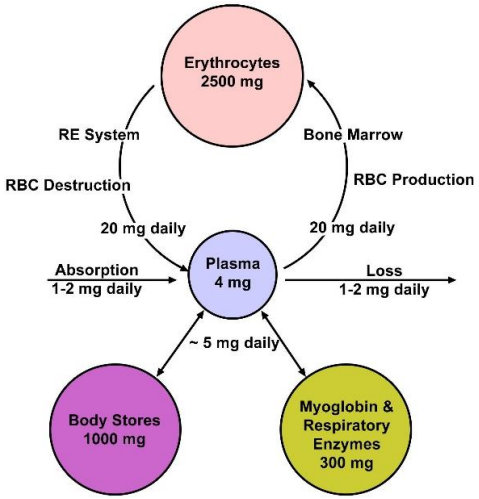
Introduction to Shield Therapeutics

- AIM-listed biotech company (L.STX)
  - Market capitalisation £39m
- Focused on developing and commercialising Feraccru®
  - a novel treatment for iron deficiency
  - Out-licensed to Norgine in Europe, Australia, New Zealand
  - US NDA submitted September 2018
- Semi-virtual company – clinical trials, manufacture and commercialisation are out-sourced
  - Experienced management team
  - 15 employees
  - Small offices in London and Newcastle
- Recent £11m up-front receipt means company is funded for at least 12 months

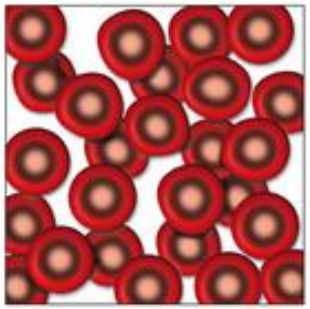
Iron deficiency and Feraccru®

Iron deficiency is caused by depletion of iron stores in the liver resulting in insufficient iron to fuel RBC production

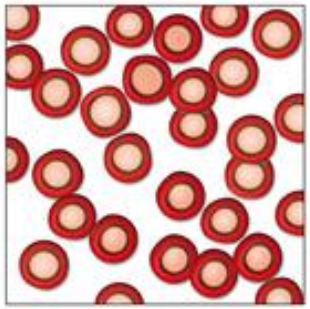
Iron recycling in the body



Iron deficiency



Normal erythrocytes



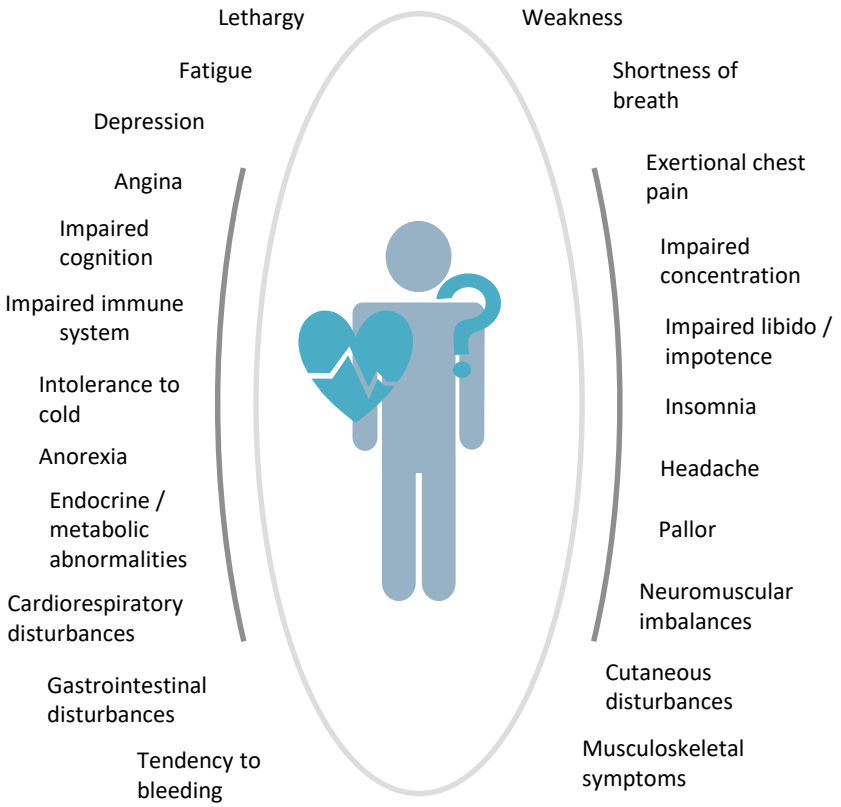
Hypochromic erythrocytes containing less haemoglobin

- The body requires iron for the production of haem groups, used in oxygen carrying proteins such as haemoglobin (Hb) and myoglobin, as well as other enzymes involved in metabolism
- Iron is typically absorbed from food, either as haem-iron from meat (more easily absorbed) or non-haem iron from plant material (less easily absorbed)
- After absorption in the GI tract, iron is released to the blood stream where it binds an iron transporter (transferrin), which delivers the iron to the body's stores in the liver and bone marrow
  - iron is released as required to fuel production of red blood cells (RBCs) in the bone marrow
  - iron is also recycled from dead RBCs by the spleen
- Iron deficiency occurs where iron requirements exceed iron intake leading to depletion of iron stores, which can ultimately impact the body's ability to synthesise RBCs
- Can be caused by bleeding, malnutrition and a number of disease areas including **Irritable Bowel Disease** (IBD) and **Chronic Kidney Disease** (CKD)

Source: American Academy of Family Physicians; Merck Manuals; Gut, Kidney International; Mayo Clinic; Iron Disorders Institute; MedScape; Shield Therapeutics Investor Materials, 2017; L.E.K. research

Iron Deficiency Anaemia (IDA) - broad range of symptoms, but many of these also occur in other conditions leading to potential misdiagnosis or underdiagnosis

Symptoms of anaemia



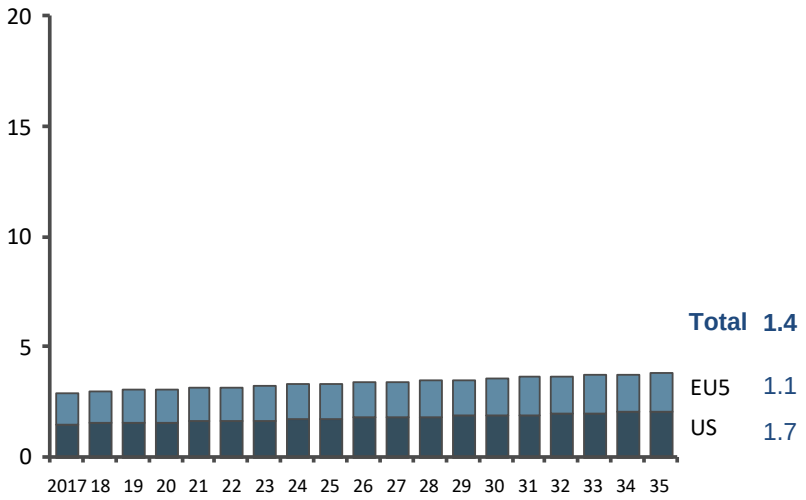
- Early symptoms of anaemia are vague and may go unnoticed
  - patients that develop symptoms slowly may not recognise them or may attribute them to other causes
  - often patients only appreciate the impact of their symptoms once the anaemia has been treated and resolved and function returns to normal
- As the symptoms of anaemia are not specific to its underlying cause they do not help differentiate between types of anaemia, which include:
  - anaemia of chronic disease
  - iron deficiency anaemia
  - vitamin deficiencies

Source: American Academy of Family Physicians; Merck Manual; Gut; New England Journal of Medicine; Kidney International; Mayo Clinic; World Health Organization; Center for Disease Control and Prevention; UptoDate

c.15 million patients are estimated to have diagnosed IBD or CKD in 2017. This is expected to grow to c.19 million by 2035

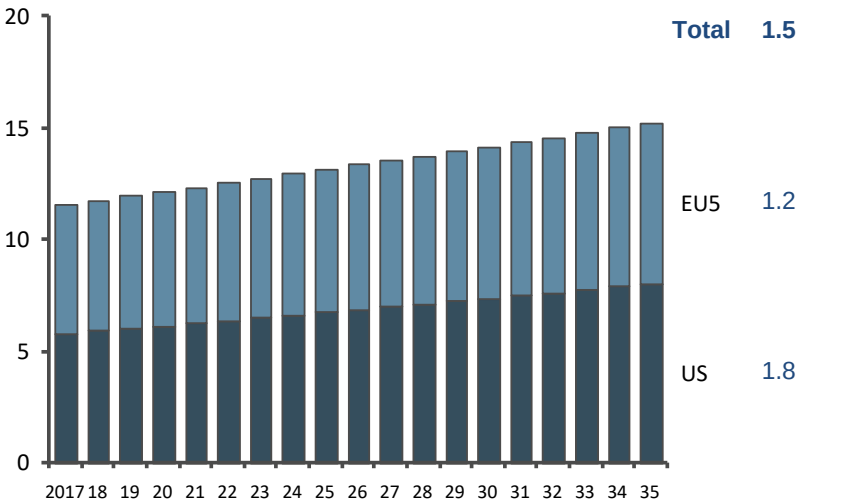
IBD diagnosed prevalence in US, EU5 (2017-35F)

Millions of patients



CKD diagnosed prevalence in US, EU5 (2017-35F)

Millions of patients



Key assumptions

- IBD diagnosed prevalence was identified from systematic reviews and country specific surveys with country specific assumptions being used where available – *see appendix for further detail*
- Growth in IBD prevalence driven by population growth and in underlying proportion of people developing IBD
  - IBD rate estimated to be growing at c.1% p.a. in developed nations driven by improved awareness amongst other factors
  - population growth estimated at c.0.7% and c.0.1% p.a. in the US and EU5

Key assumptions

- CKD prevalence identified from NHANES studies to be c.15% in 2016
- Growth in CKD prevalence is driven by population growth in population over 50 years old as kidney function declines with age
  - CKD rate estimated to be growing at c.1.1% p.a. in developed nations based on subsequent NHANES studies
- The diagnosis rate of CKD is not expected by physicians to change over the forecast period and has been stable since 2000

SHIELD THERAPEUTICS
Improving Lives Together

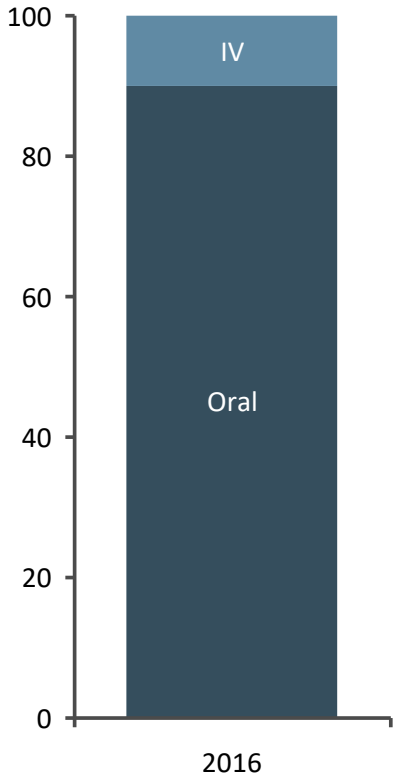
Source: L.E.K. interviews and analysis; NHANES 2000-2014; Hein et al. (2014), Domenicantonio 2014, Kappelman et al. (2013), Gismera et al. (2013), Cosnes et al. (2011), Burisch et al, (2013), Rubin et al. (2000), Loftus (2016); US Census Bureau

Iron deficiency (ID) is treated with iron replacement therapy which can be delivered orally or intravenously

INDICATIVE

Iron market by volume

Percent



IV iron

Key characteristics

- Rapid increase in iron
- Risk of iron overload / anaphylaxis
- Inconvenient route of administration – infusion at hospital / clinic
- Expensive
- Use more restricted to severe / urgent / refractory patients

Examples

- Venofer (Vifor)
- Injectafer / Ferinject (Vifor)
- Feraheme (AMAG)
- Ferrlecit / Ferrlexit (Sanofi)
- Monofer (Pharmacosmos)

Oral iron / Oral Ferrous Products (OFPs)

Key characteristics

- Chronic treatment
- Poor tolerability
- Slower restoration of iron levels
- Convenient / self-dosed
- Cheap / genericised
- Typically 1st line usage

Examples

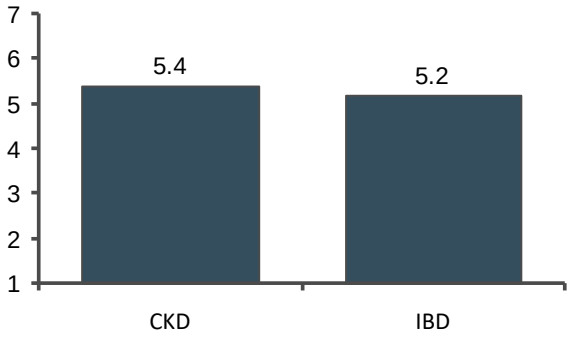
- Ferrous sulphate
- Ferrous gluconate
- Ferrous fumarate

- Physicians try to treat the underlying condition causing ID, but will often need to also treat the ID
- Iron replacement therapy is used to deliver additional iron to deficient patients to refuel their bodily stores
- Iron products can either be delivered orally (e.g., tablets / capsules) or intravenously (IV)
  - route of administration is the major differentiator between different iron products

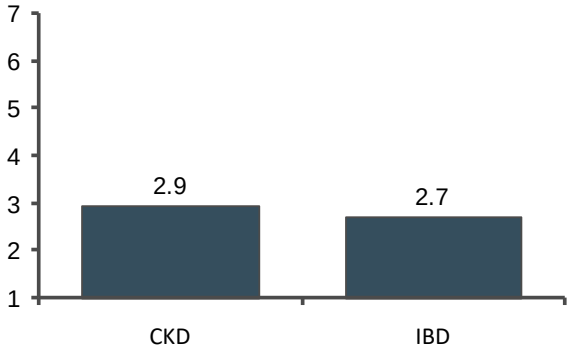
Source: AMAG annual report; ResearchMoz; L.E.K. research and interviews

The tolerability of oral therapies is a major unmet need

Degree of unmet need in oral iron therapy
(Physician interviews, N=9 (CKD), N=10 (IBD))
Score 1-7*



Degree of unmet need in IV iron therapy
(Physician interviews, N=9 (CKD), N=10 (IBD))
Score 1-7*



Oral iron therapy

- Oral iron is considered to be relatively efficacious, however physicians perceive the slow improvement in iron levels to lead to slow improvements in haemoglobin levels
- The key unmet need in oral therapy is tolerability, with 60-70% of patients unable to tolerate a course of treatment at full dosage
- Nephrologists indicated that oral iron is preferred because hospital visits are not required (they can be costly and time consuming for patients)
- Gastroenterologists highlighted absorption of iron as being more of an issue in IBD than CKD due to the higher level of GI inflammation

IV iron therapy

- Efficacy of IV iron treatments is typically good and it is considered to be faster acting than oral irons
- While there have been concerns around the safety of IV irons in the past, physicians believe that newer formulations have addressed this problem
- Physicians view the route of administration of IV iron as its most significant issue, raising concerns over vascular preservation, and the costly and time consuming nature of hospital visits

Note: *1 – No unmet need, 7 – Very high level of unmet need
Source: L.E.K. interviews, research and analysis

Feraccru overview: A novel oral ferric iron therapy

Patient diagnosed with iron deficiency

- ID arises in multiple primary diseases
- Failure to treat leads to lethargy as well as much more serious consequences (e.g. immune & heart complications)

Oral Iron

Up to 70% with gastro side effects

Oral Iron Intolerant

Oral Iron Tolerant

Fe^{2+} Fe^{2+} → Insoluble complexes + Radicals → Gut damage side effects

Intravenous (IV) Iron

- Iron directly into the blood
- But:
  - Potential allergic reactions
  - Iron overload
  - Hospital only
  - Resuscitation team required
  - High overall cost
- **No patients in long term studies of Feraccru required interventional IV Iron therapy**

FERACCRU

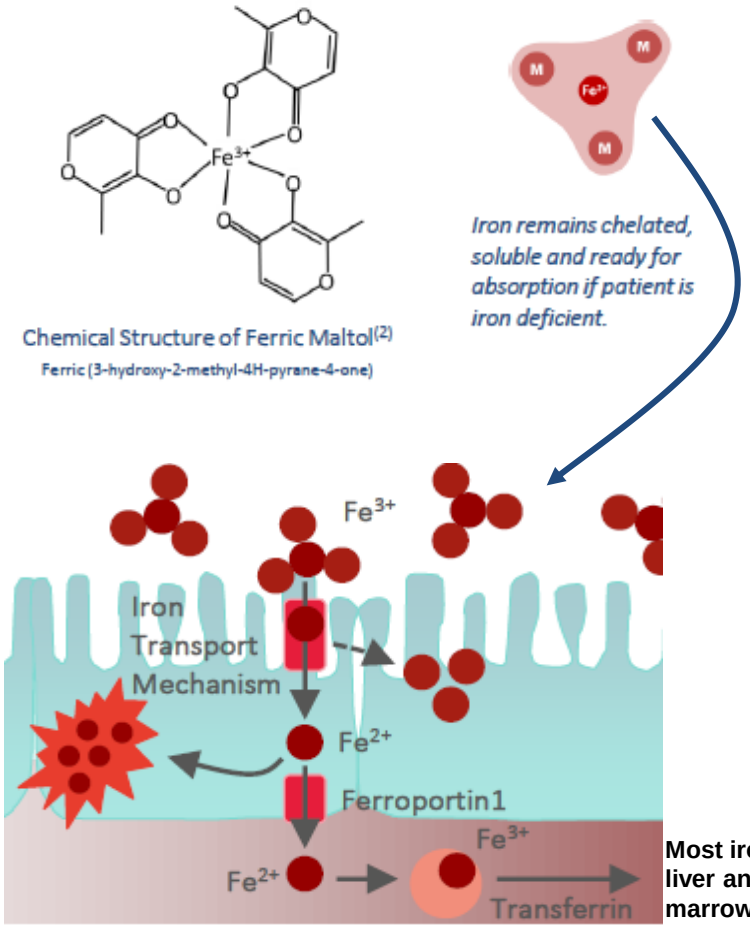
- ✓ **Oral twice-daily administration**
- ✓ **High iron availability**
- ✓ **Raises Hb effectively**
- ✓ **Well tolerated**
- ✓ **Taken without food**

Patent-protected until 2035

Approved and marketed in Europe for the treatment of iron deficiency in adults

Feraccru delivers iron to the blood stream with minimal formation of insoluble complexes in the gut

Feraccru mechanism of action



Most iron enters liver and bone marrow

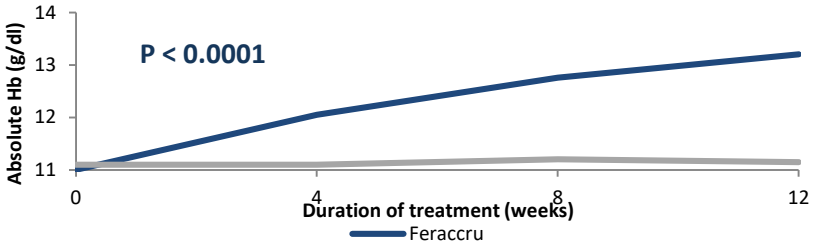
- Feraccru is an oral formulation of a complex of Fe^{3+} (ferric maltol), which is stable in the gastrointestinal tract
  - existing oral ferrous products (OFPs) deliver iron as Fe^{2+}, which can form insoluble products in the GI tract, causing intolerance in patients
- The Fe^{3+} in Feraccru remains in complex with maltol until absorbed by the enterocyte, which then delivers the iron as Fe^{2+} to the bloodstream where it binds transferrin
  - maltol is absorbed separately and is glucuronidated and excreted in urine
  - unabsorbed Feraccru passes through the digestive system in complex and is excreted in faeces
- Feraccru is a well tolerated oral iron replacement therapy
  - potential for use as a first line treatment for patients with iron deficiency or as an alternative to IV iron in patients failing existing OFPs

Source: Shield Therapeutics Investor Materials, 2017; MedScape; EMA; Stallmach *et al.* 2015; Abbaspour *et al.* 2014; L.E.K. research

Feraccru® clinical studies

Feraccru's efficacy and safety are key differentiators: AEGIS-IBD*

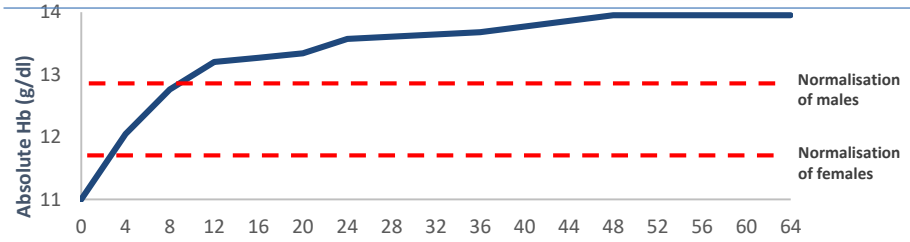
Feraccru provides rapid and effective results...



Source: Marketing Authorisation Application (MAA)

- A clinically relevant haemoglobin (Hb) increase is considered to be 1g/dL
- Feraccru delivered highly relevant and rapid 2.3g/dL rise inside 12 weeks with 1g/dL in only 4 weeks

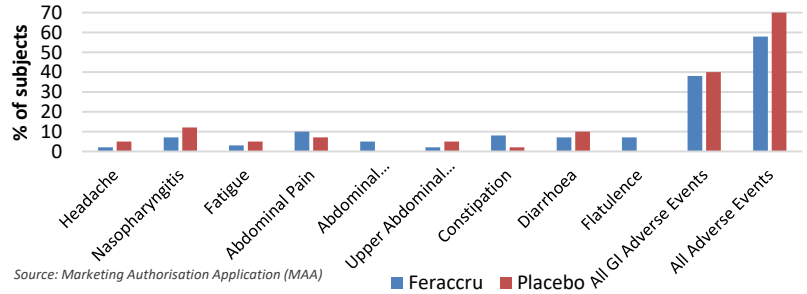
...works over the long term



Source: Marketing Authorisation Application (MAA)

- By week 12 mean Hb of the treated group had normalised
- Long term compliance levels of 97%
- With chronic therapy patients' anaemia did not recur and iron indices continued to improve
- Ongoing Feraccru therapy may prevent need for IV iron

...and is well-tolerated



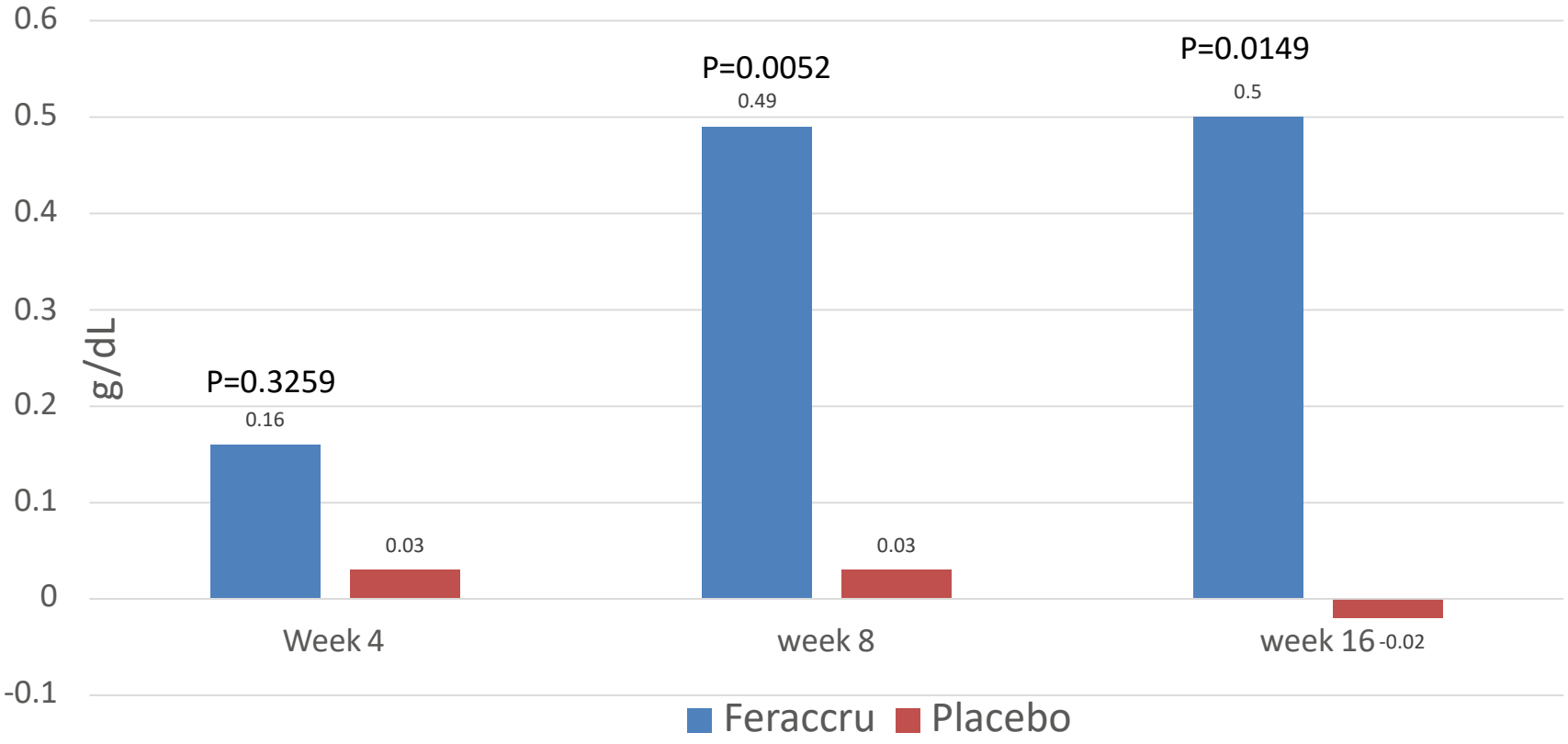
Source: Marketing Authorisation Application (MAA)

- Majority of adverse events were related to IBD status
- Low incidence of adverse events
- Neither short or long-term Feraccru therapy lead to iron overload

* 128 patients

AEGIS-CKD Study Analysis (1) (2)

- Study met primary endpoint (change in Hb from baseline at 16 wks)
- Statistically significant change in Hb is observed across all analyses (ITT, mITT and PP) and in all sensitivity analysis at both wk 8 and 16
- Change in ferritin, TSAT and serum iron from baseline statistically significant at weeks 4, 8 and 16 demonstrating early effect



ITT: intention-to-treat; MI: multiple imputations

(1) SAP v1.1
(2) 169 patients

Other Feraccru® studies

AEGIS-PAED PK Phase I Pharmacokinetics study

- Top-line data reported June 2018
- 36 subjects aged 12-17 years
- Feraccru® achieved all pre-defined goals including positive effects on serum parameters and good tolerance at all dosing levels

AEGIS-H2H (Head-to-Head) study (242 patients)

- Phase IIIb non-inferiority study
- Comparing efficacy and safety of Feraccru® to IV iron
- Data will support pricing and reimbursement negotiations
- Recruitment completed September 2018
- Preliminary results anticipated Q1 2019

Planned Phase III paediatric study

- Expected to start recruitment H2 2019

Europe commercialisation
Norgine licence headlines

Norgine licence headlines

- Exclusive licence to commercialise Feraccru® in Europe*, Australia and New Zealand
- £11 million upfront licence payment
- Up to €54.5million in development and sales milestones
- Royalties ranging from 25% to 40% as sales increase
- Norgine is a well-resourced, European-focused specialty pharma business with a proven commercial track record for whom Feraccru will be a central product in its future growth
- Shield globally responsible for
  - Manufacture and supply of Feraccru®
  - All aspects of current and future development
  - All aspects of intellectual property
- Shield also retains full commercial rights to Feraccru® in all unlicensed countries including the USA

* Excluding countries covered by AOP (Scandinavia) and EWO (Switzerland)

USA

USA

- NDA submitted September 2018, filed November 2018
- Potential US approval H2 2019
- Board currently assessing commercial options
  - Out-license
  - JV
  - Self-commercialise

Financial headlines
&
Management Team

Financial position

- Cash balance at 30 June 2018 - £3.5m
- £11m upfront received September 2018 from Norgine transaction
- Cash runway – “funded for at least 12 months” (September RNS announcing Norgine transaction)

Management team

Name	Role	Biography
Carl Sterritt	CEO/co-founder	Co-founded the Group in 2008. Previously Carl held senior management roles at United Therapeutics and Encysive Pharmaceuticals, working on innovative therapies for the treatment of pulmonary arterial hypertension. Carl founded the Group after Encysive was acquired by Pfizer Inc.
Mark Sampson	Chief Medical Officer	Appointed as VP, Medical Affairs at Shield in 2015, transitioned into the role of CMO in 2017. Mark has more than 25 years of medical practice, pharmaceutical development and commercialisation experience at companies such as SmithKline Beecham, Amgen and Gilead.
Jackie Mitchell	VP, Regulatory Affairs and Quality	Jackie has run the group's regulatory activities since 2012 and has over 20 years' experience in regulatory affairs working for several pharmaceutical companies, including Boehringer Ingelheim, Abbott and Archimedes. She has led several major regulatory projects, including successful MAA and NDA submissions, including MAAs for the NCEs Kaletra and Humira.
David Childs	Director of Product Supply & Commercial Alliances	David joined in 2011 as Director of Manufacturing. During his tenure at GSK, David gained over 18 years' of experience in chemical and pharmaceutical development and worked closely with several outsourcing partners.
Lucy Bailey	General Counsel & Company Secretary	Lucy has been with the Group since August 2015 and was a key member of the team working on the admission of Shield Therapeutics to the AIM market in 2016. Lucy is admitted as a Solicitor of the Senior Courts of England and Wales and has worked previously at a boutique corporate law firm and an international US law firm in Singapore.
Tim Watts	Chief Financial Officer	Tim joined the company as Interim Chief Financial Officer in August 2018 and has over 25 years' experience in the pharmaceutical and biotech sectors. A chartered accountant, he was Group Financial Controller of AstraZeneca plc from 2002-2006. From 2007-2011 Tim was CFO of Archimedes Pharma and then CFO of Oxford Biomedica plc from 2012-2017.

Newsflow and investment highlights

Anticipated newsflow

Indicative timing	Event
Nov~~/Dec~~ 2018	FDA acceptance of NDA submission
Q1 2019	AEGIS –H2H study results
Q3 2019	~~Potential~~ PDUFA date for US approval
H2 2019	Start of Paediatric Phase III study
Ongoing/ad hoc	Further out-licensing agreements in other territories

Key messages and investment highlights

- Iron deficiency is a major market with significant unmet needs
- Ferracru
  - novel oral ferric iron with broad approval in Europe
  - Norgine commercialisation agreement for Europe
  - US NDA submission completed for Feraccru with potential approval in the world's largest and most attractive pharma market during H2-19
  - Further licensing opportunities being actively pursued for Feraccru in geographies inc. USA, China etc…
- Cash runway extending at least 12 months
- Valuation upside
  - Current market capitalisation - £39m (34p)
  - Consensus analyst valuation* - £80m - £90m (70p-80p)
  - USA approval

*Peel Hunt & Liberum; based on European commercialisation only, conservative sales forecasts

SHIELD
THERAPEUTICS PLC
Improving Lives Together

Contact us:

Carl Sterritt, CEO
Tim Watts, CFO

Tel: +44 (0)207 186 8500
info@shieldtx.com
www.shieldtherapeutics.com