CATALYST BIOSCIENCES

Corporate Overview

7 January 2019

CATALYST BIOSCIENCES

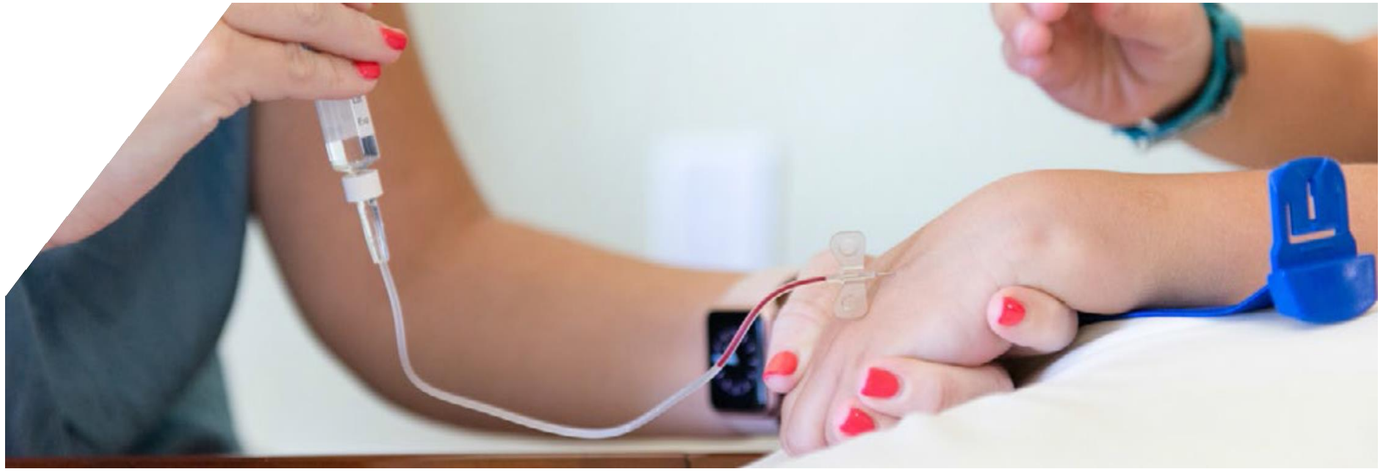
Forward looking statements

This presentation includes forward-looking statements that involve substantial risks and uncertainties. All statements, other than statement of historical facts, included in this presentation are forward-looking statements. Examples of such statements include, but are not limited to, the potential benefits of subcutaneous administration of dalcinonacog alfa (formerly CB 2679d/ISU304) and marzeptacog alfa (activated), the potential for long-term dosing of dalcinonacog alfa to maintain FIX activity in the high-mild hemophilia range, statements relating to Catalyst's clinical trial timelines, including plans for a Phase 2b clinical trial of dalcinonacog alfa, including initiation in the first quarter of 2019 and presentation of data at ISTH, plans for a Phase 3 trial of dalcinonacog alfa, plans for the completion of the ongoing clinical trial of marzeptacog alfa (activated) and presentation of data at EAHAD and ISTH and for a Phase 3 trial of marzeptacog alfa (activated), and the potential market opportunities for these products. Actual results or events could differ materially from the plans and expectations and projections disclosed in these forward-looking statements.

Various important factors could cause actual results or events to differ materially from the forward-looking statements that Catalyst makes, including, but not limited to, the risk that trial initiation or enrollment may be delayed and that ongoing or future trials may not achieve their endpoints, that subsequent clinical trials will not replicate the results from earlier clinical studies on small numbers of patients, that potential adverse effects may arise from the testing or use of Catalyst's products, including the generation of antibodies or inhibitors, the risk that costs required to develop or manufacture Catalyst's products will be higher than anticipated, the risk of competition from other hemophilia treatments, including those in development, Catalyst's ability not to infringe third party intellectual property rights, and other factors described in the "Risk Factors" section of Catalyst's Quarterly Report on Form 10-Q for the quarter ended September 31, 2018, which was filed with the Securities and Exchange Commission on November 1, 2018. Forward looking statements in this presentation speak only as of the date hereof. Catalyst does not assume any obligation to update any forward-looking statements, except as required by law.

Catalyst Biosciences: CBIO

Nasdaq: CBIO



We are working to establish a new standard of care in hemophilia prophylaxis by developing highly potent subcutaneous treatments that improve the quality of life for patients with hemophilia with inhibitors, acquired hemophilia & hemophilia B

Investment highlights

Nasdaq: CBIO

Novel subcutaneous compounds with orphan drug designation

$3.4B market

2018

FVIIa & FIX SQ efficacy clinically demonstrated

Experienced team

~134 worldwide patents – CBIO retains full ownership of all compounds

Well funded
$129 M cash (Q3 2018)

Life with hemophilia

Rare bleeding disorders – orphan diseases

Hemophilia A

- Congenital lack of functional FVIII, treated with recombinant IV FVIII or SQ Emicizumab

Hemophilia B

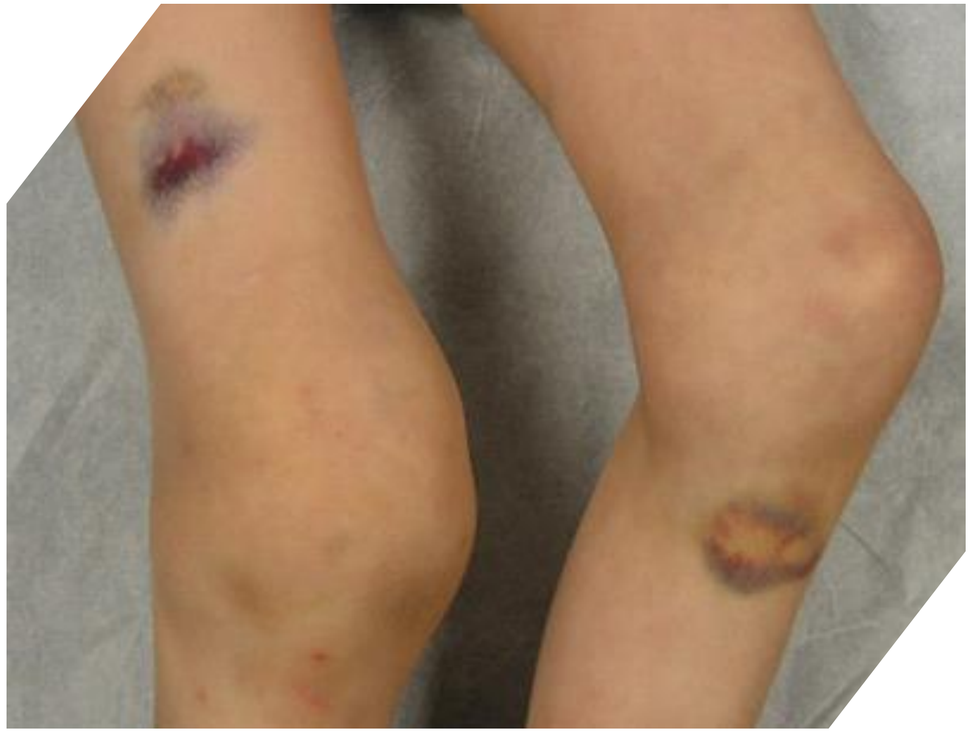
- Congenital lack of functional FIX, treated with IV recombinant FIX products

Hemophilia A or B with inhibitors

- Results from neutralization of the replacement clotting factor, 30% of Hem A patients & 5% of Hem B patients develop inhibitors
- Patients are at high risk for hemorrhagic stroke & premature mortality
- Treated with IV bypass agents (FVIIa, FEIBA®) or SQ Emicizumab in Hem A inhibitors only

Acquired Hemophilia

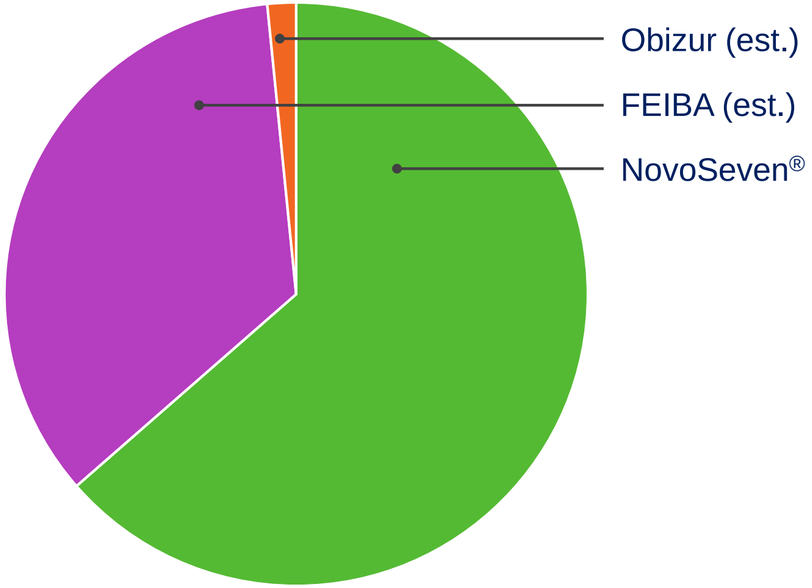
- Rare disorder, occurs spontaneously, caused by anti-FVIII nAbs
- Currently treated with immunosuppressants + IV bypass agents (FVIIa, FEIBA® or Obizur®)
- High unmet need to adequately treat & prevent re-bleeds



Market

FVIIa & Bypassing Agents: $2.2B market

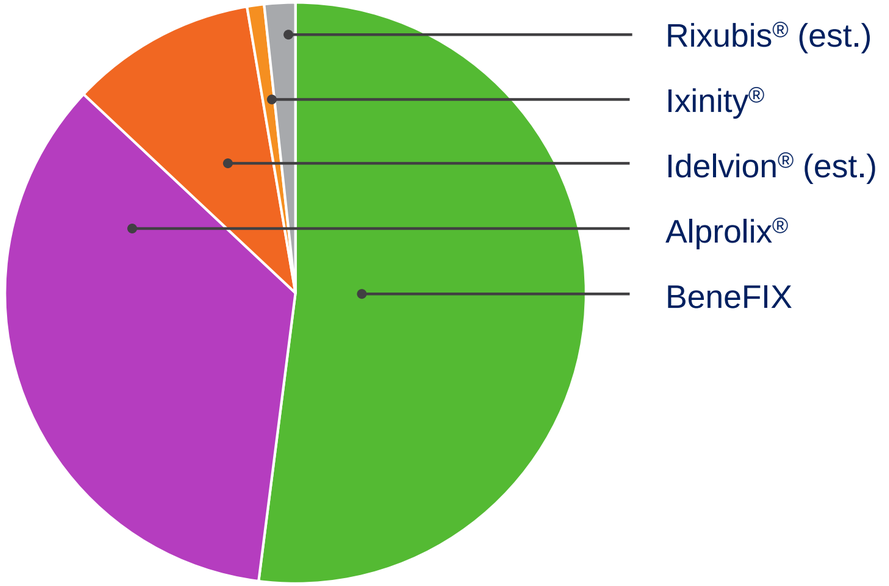
2017 Sales



In 2017 over 2,400 US and EU5 patients were treated with FVIIa and bypassing agents for hemophilia with inhibitors, acquired hemophilia and factor VII deficiency

Hemophilia B, FIX: $1.2B market

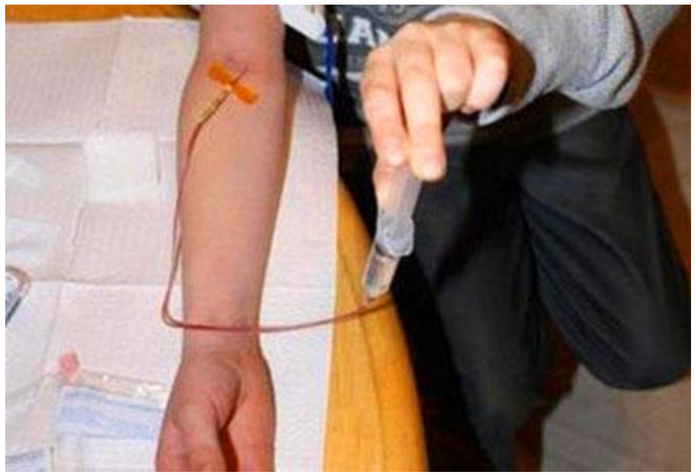
2017 Sales

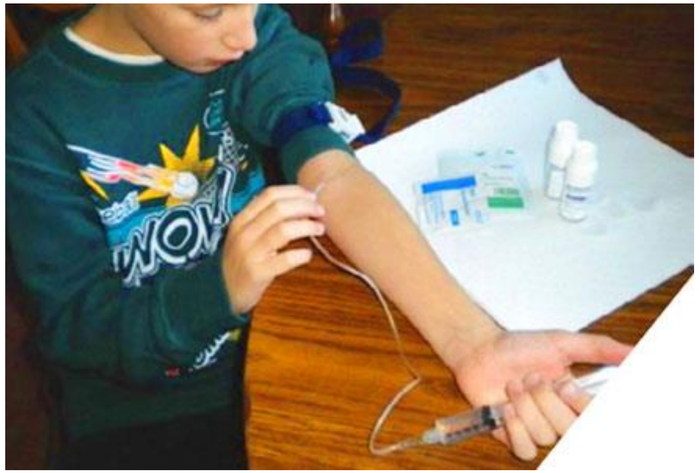


In 2017 over 6,000 US and EU5 hemophilia B patients were treated with recombinant FIX

Sources: WFH Annual Global Survey, GlobalData, Roche, Novo Nordisk, Aptevo, SOBI, Bioverativ. *Hemlibra® had global sales of $58M in 1H 2018

Available treatments





- Regular intravenous (IV) infusions are necessary to maintain higher clotting levels
- IV treatments are very unpleasant and time-consuming
- Inconvenience affects compliance, outcomes and quality of life
- Especially difficult for pediatric patients & their families

The Catalyst Biosciences solution

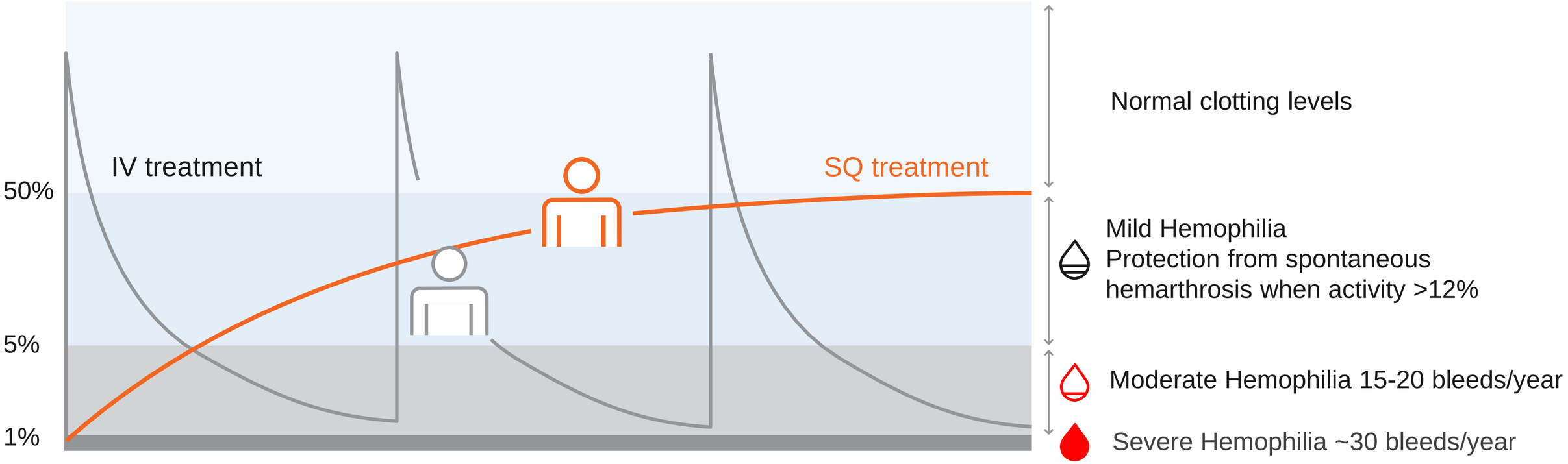
Our highly potent solution:

+ Quick & simple subcutaneous injection – allows for self-administration including in pediatric patients
+ Much higher & stable factor levels – keeps patients at safe levels for much longer

The new standard in hemophilia prophylaxis

Nasdaq: CBIO

Patients in high mild range are protected from spontaneous bleeds



- The concept of prophylactic treatment is to keep severe & moderate hemophilia patients in the high mild range
- Our subcutaneous treatment has the ability to build up over time, offering long-term stability in clotting levels

Pipeline

Nasdaq: CBIO

Marzeptacog alfa (activated) – MarzAA

Marzeptacog alfa (activated), a novel clinical stage SQ FVIIa product candidate differentiated from IV market leaders:

+ SQ enhances pharmacokinetics
+ Simpler, less painful, small dose
+ Potential to maintain continuous protective levels
+ Disruptive to current intravenous bypass products
+ Especially well suited for children

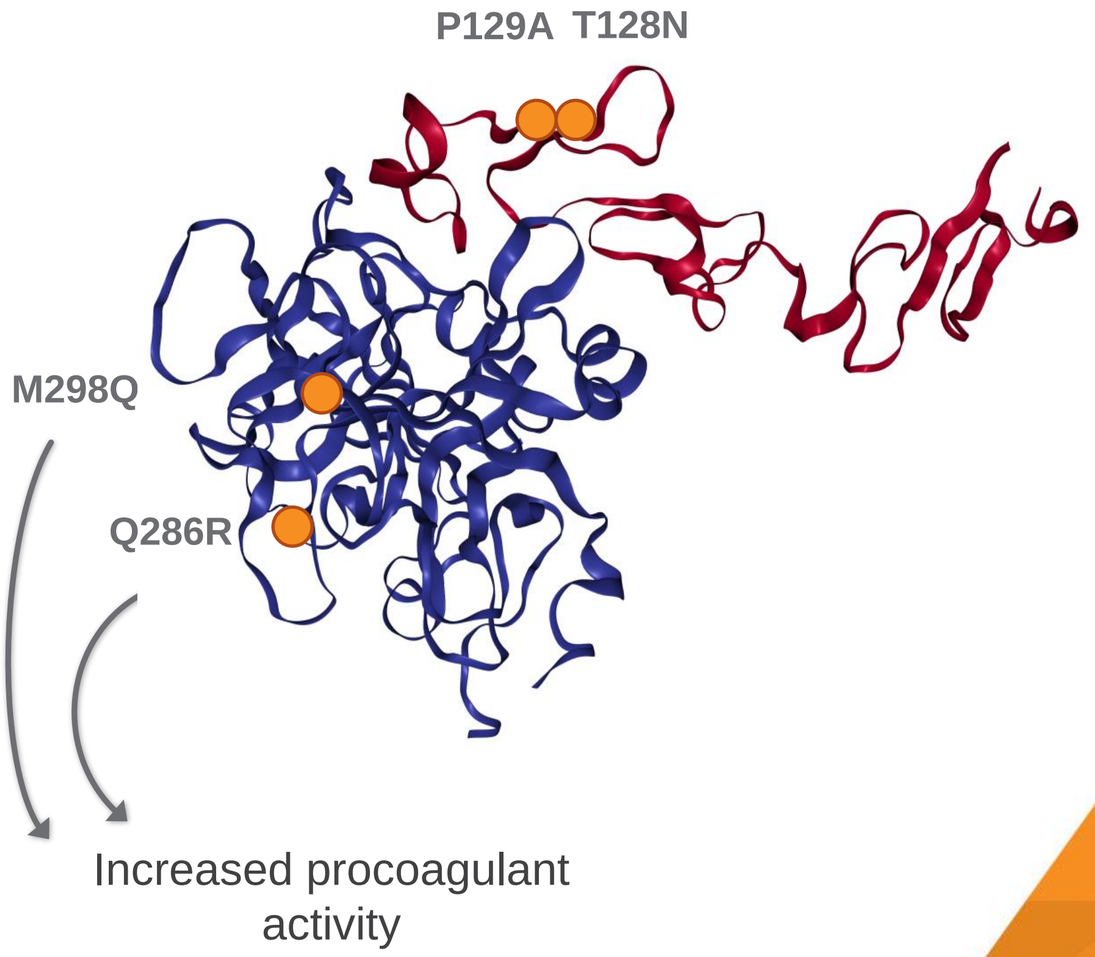
Four engineered substitutions

+ Catalytic activity & half-life increased

Best-in-class high-potency rFVIIa product

+ 9-fold more potent than NovoSeven RT

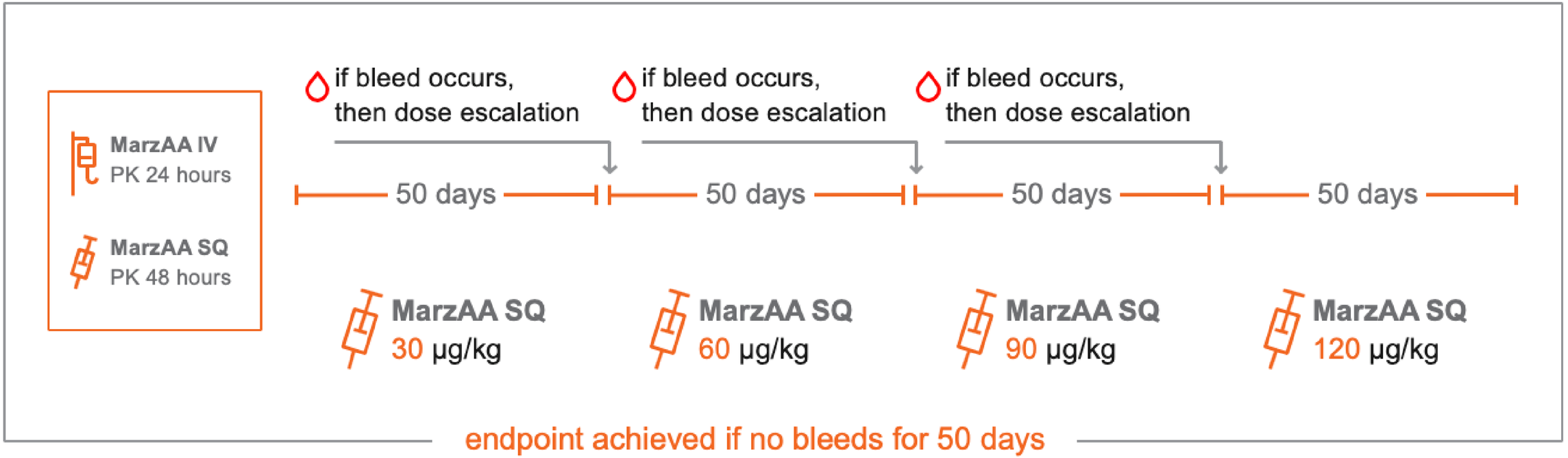
Orphan Drug Designation in US



MarzAA phase 2 SQ clinical trial design

Nasdaq: CBIO

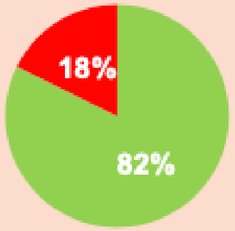
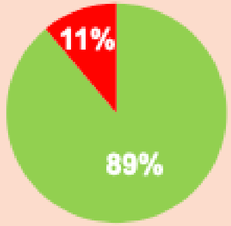
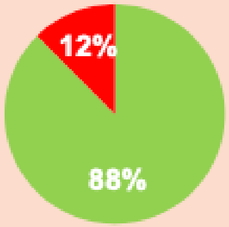
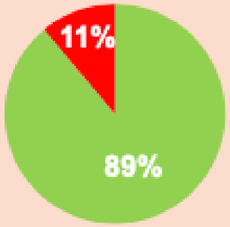
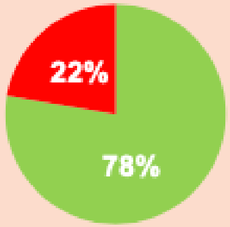
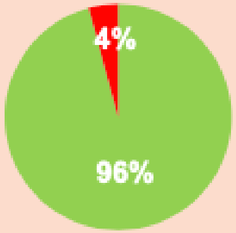
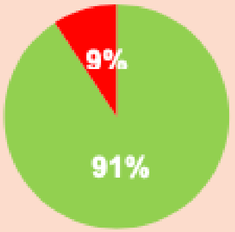
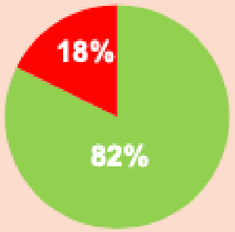
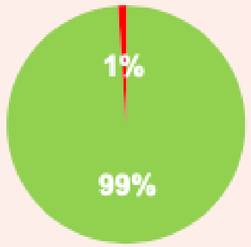
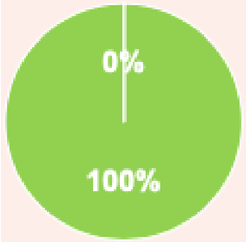
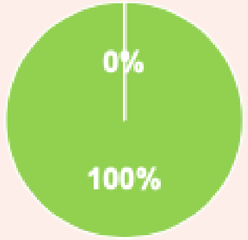
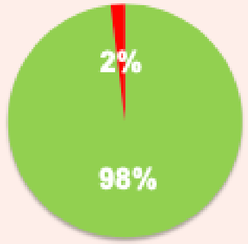
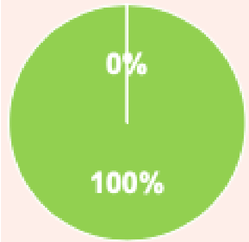
Hemophilia A or B with inhibitors



- Open label SQ study with individual dose escalation if needed
- Hemophilia A or B with inhibitors
- Up to 12 adult patients with documented annual bleeding rate (ABR) >12
- Primary endpoint: reduction in annual bleed rate
- Secondary endpoints: safety and tolerability, no inhibitor formation

Pre- and on-treatment proportion of bleeding days

Nasdaq: CBIO

Subject	2680301	2680302	6430201	6430202	0510101	6430203	6430204	0510104
Pre-treatment								
On-treatment		Unrelated SAE						

Red denotes the proportion of days with bleeding during observation period

- The average percentage of days of bleeding in the **pre-treatment** period was **13.2%** (SD = 6.3%) [median = 11.9%]
- In the **treatment** period, these percentages were reduced to **1.9%** (SD = 3.2%) [median 0.5%]
- The analysis of these pairwise differences by a randomization paired t-test yields p=0.03 (and p=0.036 by Wilcoxon signed-rank test)

Marzeptacog alfa (activated) program

Moving forward in clinical development after clinical proof of concept

Clinical efficacy and tolerability demonstrated

Additional clinical data at EAHAD 2019 and ISTH 2019

Trial guidance obtained from EMA & MHRA, will confirm at FDA end-of-phase 2 in late 2019

Dalcinonacog alfa

Dalcinonacog alfa, a novel clinical stage SQ FIX product candidate differentiated from IV market leaders

- Simpler, less painful, small dose
- SQ enhances pharmacokinetics
- Potential to maintain continuous protective levels
- Disruptive to all current intravenous products
- Especially well suited for children

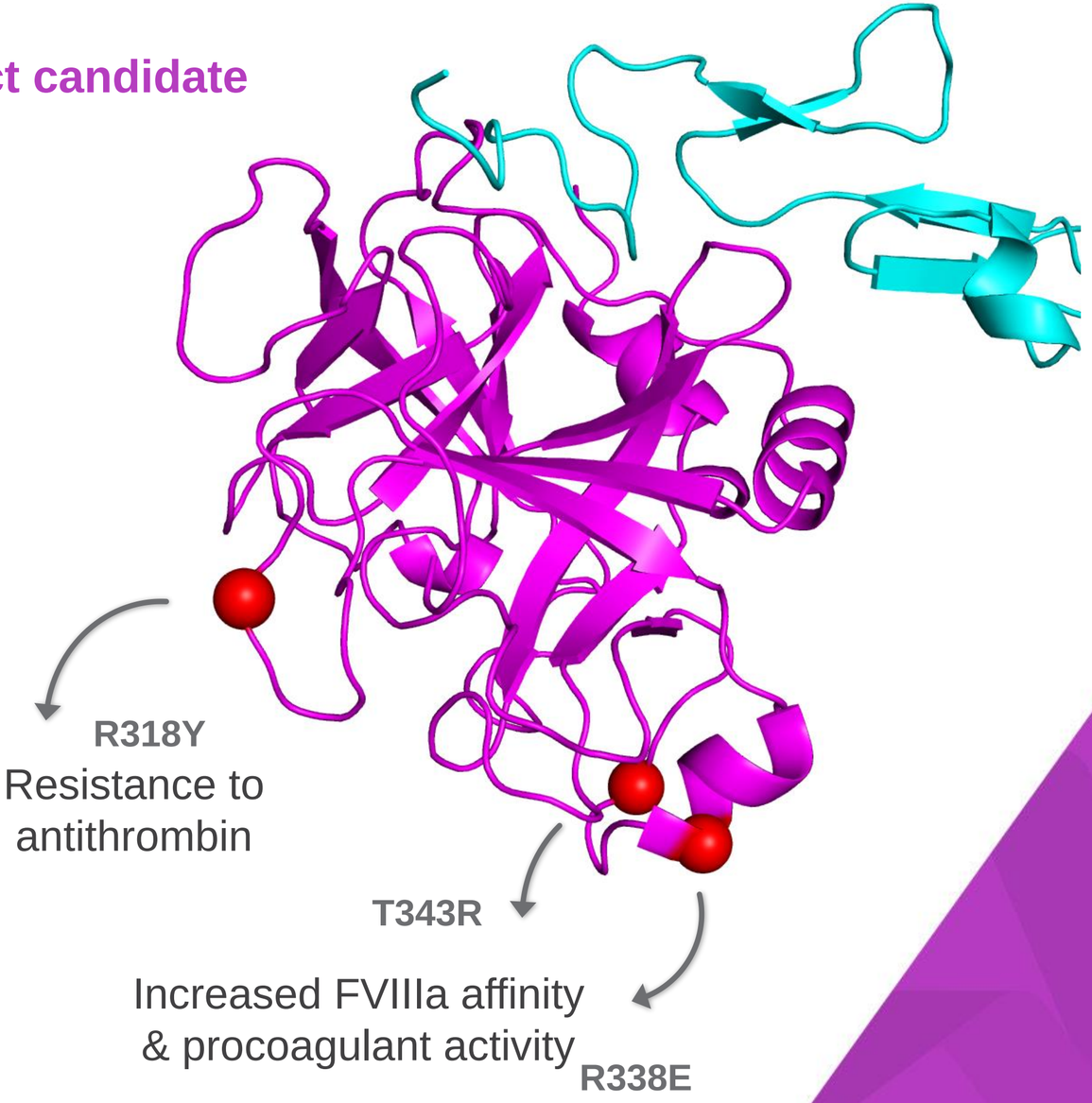
Three engineered substitutions

- Catalytic activity increased
- Affinity for activated factor VIII increased
- Resistance to inhibition by antithrombin improved

Best-in-class high-potency recombinant FIX product

- 22-fold more potent than BeneFIX in man

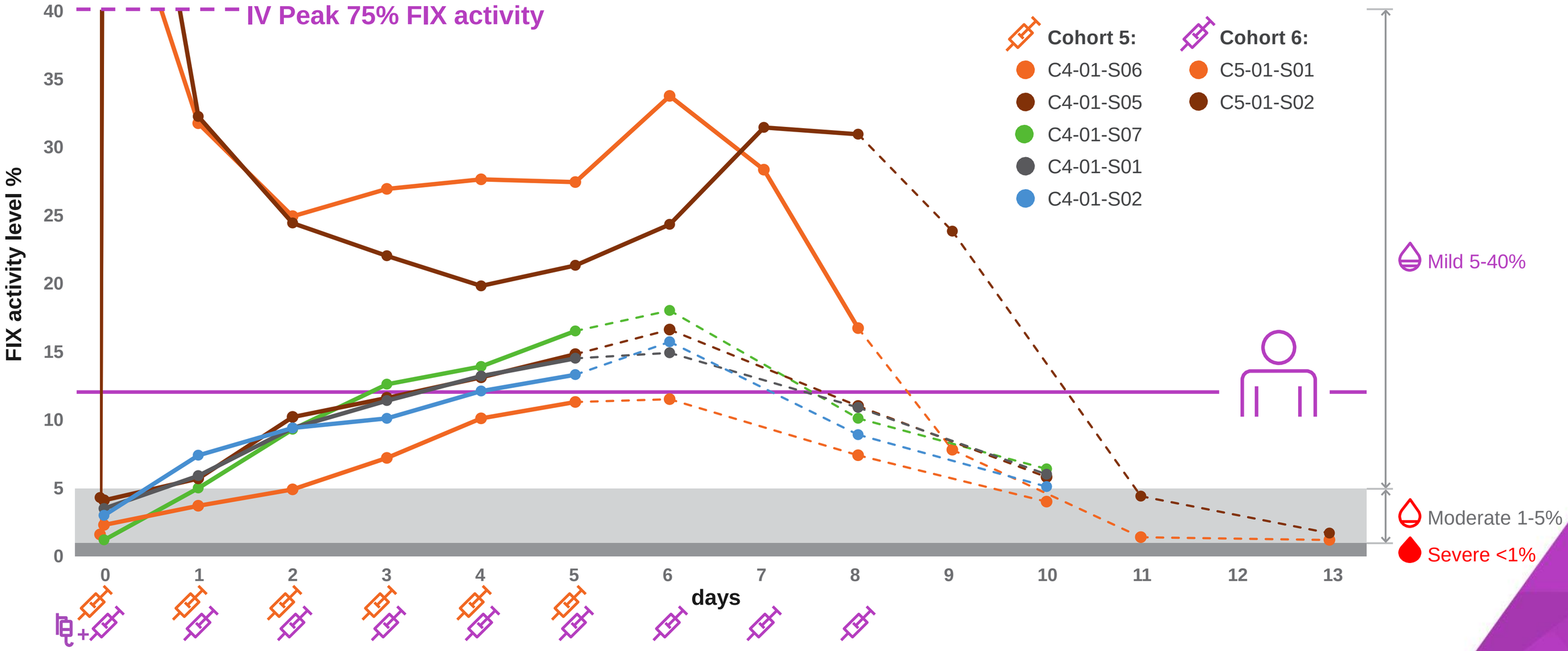
Orphan Drug Designation in US & EU



DalcA P1/2: Cohort 5 & 6 FIX activity results

Nasdaq: CBIO

Trough levels >12%, sufficient to protect against spontaneous joint bleeds



Dalcinonacog alfa

Moving forward to P2b clinical development after an extensive immunogenicity risk assessment

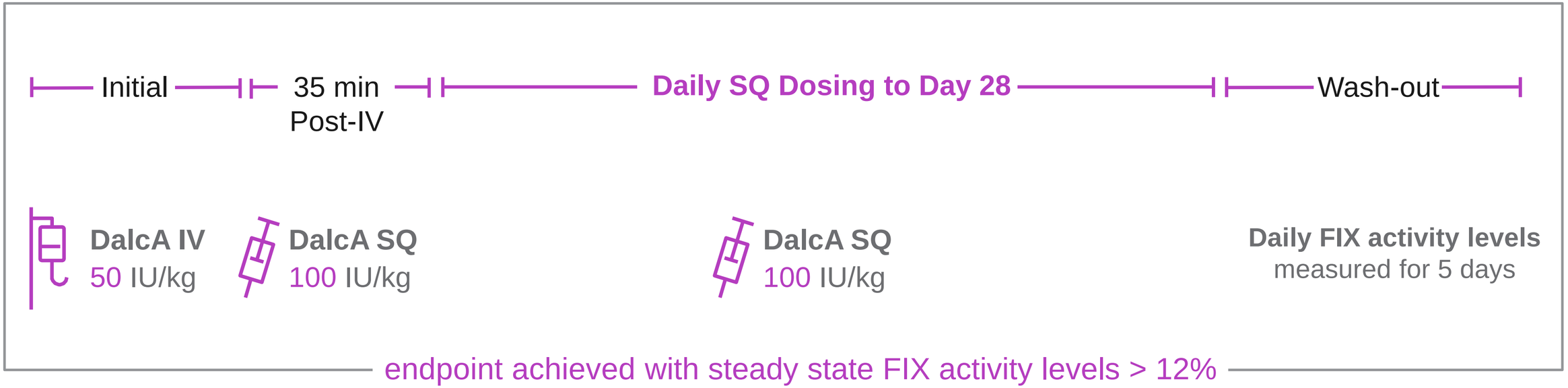
Preclinical immunogenicity assessment shows that dalcinonacog alfa is equivalent to that of competitors such as BeneFIX

A comprehensive evaluation of the drug product shows comparable quality to marketed rFIX products

KOLs & subject experts agree with the immunogenicity risk assessment and proceeding to a P2b study to evaluate the safety & efficacy of dalcinonacog alfa

Dalcinonacog alfa

Phase 2b SQ clinical trial design: DLZ-201



- Enrollment: 6 patients
- Single IV dose followed by 28 day SQ dosing
- Primary endpoint: Steady state FIX activity level above 12% with daily dosing
- Secondary endpoints: no inhibitor formation, pharmacokinetics, pharmacodynamics

Financial information

Nasdaq: CBIO

Selected data

Operating Results	Q3 2018	Q3 YTD
Operating Expense	$8.3 M	$22.1 M
Net Loss	($7.7 M)	($19.2 M)
Net Loss per share	($0.64)	($1.75)

2018 Forecast	2019 Est.
OpEx >$30 M	OpEx ~$56 M
Cash ~$120 M	Cash Burn ~ $50 M

Share Data

Common Stock Outstanding	11,942,729
Fully Diluted Shares	14,623,688
Average Volume	166,084
Market Capitalization as of 4 January 2019	$112 M

Financial Strength

Cash & Cash Equivalents Q3/2018	$129.2 M

Milestones

2019

	Q1	Q2	Q3	Q4
MarzAA (FVIIa)	**EAHAD** Oral presentation P2 data	**Initiate P1 PK/PD**	**ISTH** P2 Data	**EoP2** A/B Inhibitors **ASH** Final P2 data
DalcA (FIX)	**Initiate P2b** **EAHAD** Preclinical data		**P2b data** **ISTH** nAb Analysis	**ASH** Final P2b data
Anti-C3 (dAMD)	**PK/PD**	**ARVO** PK/PD		

Summary

Disruptive approach to a $3.5 billion market

Subcutaneous prophylactic dosing designed to be less painful and much more convenient, especially for children

+ Clinical proof of efficacy demonstrated for both Marzeptacog alfa (activated) & Dalcinonacog alfa

FVIIa: Marzeptacog alfa (activated)

~$2.2 Billion market

Phase 2 of a Phase 2/3 program enrolling

90% reduction in ABR on treatment

No ADAs or nAbs observed to date

+ Phase 2 data at EAHAD & ISTH 2019
+ EoP2 in 2019

FIX: Dalcinonacog alfa
~$1.2 billion market

>30% activity levels achieved with daily SQ dosing

Potential to maintain long-term FIX activity in the mild hemophilia range to be explored in P2b

+ Phase 2b efficacy data in Q3 2019

Anti-C3 for Dry AMD:

multi-billion market opportunity

C3 is a clinically validated target, potential to generate a best-in-class molecule

+ Pre-clinical proof-of-concept in 1H 2019

Strong financial position, ~2.5 years cash

THANK YOU

Nasdaq: CBIO

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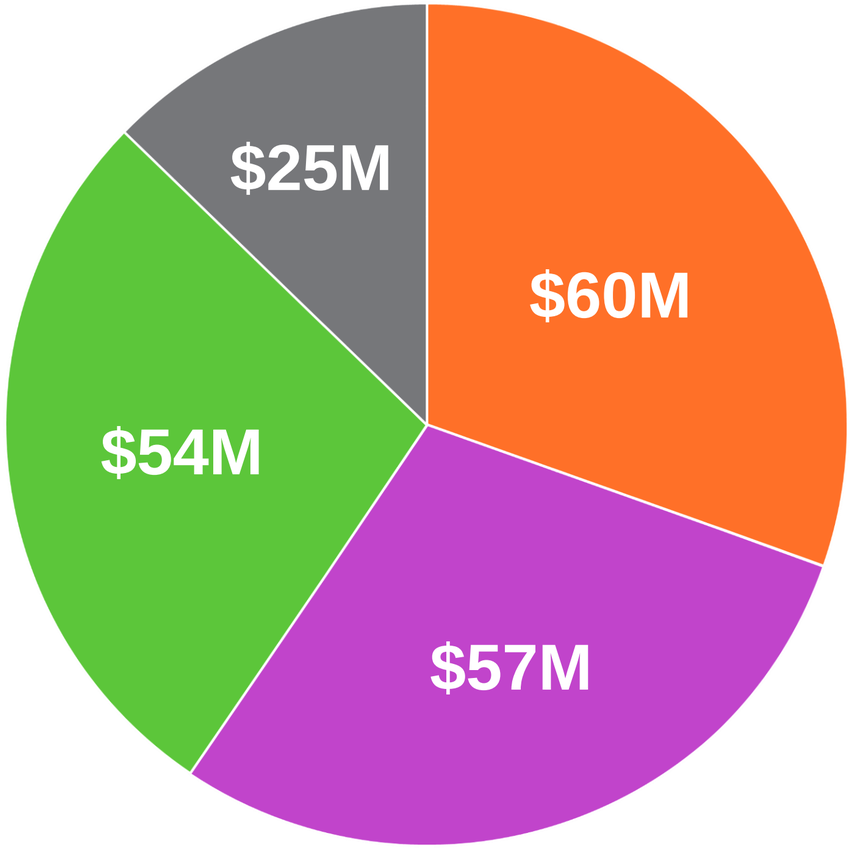
MarzAA US Revenue Forecast $196M (~$400M Worldwide)

Target Product Profile Strongly Resonates Across Multiple Indications

Factor VII Deficiency
>50% “very willing” to use MarzAA

Acquired Hemophilia A
>75% “very willing” to use MarzAA



Hemophilia B Inhibitors
>70% “very willing” to use MarzAA

Hemophilia A Inhibitors
~50% “willing” or “very willing” to use MarzAA

ADIVO ASSOCIATES

Team

President & CEO

Nassim Usman, Ph.D.

Massachusetts Institute of Technology · RPI · Sirna Therapeutics

26 years in biotech

SVP, Technical Operations

Andrew Hetherington, M.B.A.

gsk · Bayer · Novartis

20 years in biotech

Chief Medical Officer

Howard Levy, M.B.B.Ch., Ph.D., M.M.M.

Sangart · novo nordisk · CSL · Lilly · Inspiration Biopharmaceuticals

18 years in hematology

VP, Translational Research

Grant Blouse, Ph.D.

novo nordisk · Catalyst Biosciences · Wayne State University School of Medicine · Aarhus University Department of Molecular Biology and Genetics · Henry Ford Health System

12 years in biotech

Chief Financial Officer

Fletcher Payne

RiNAT · Cell Genesys · Dynavax Innovating Immunology · IBM · CytomX Therapeutics · Plexxikon · Abgenix

26 years in biotech

VP, Business Development

Jeffrey Landau, M.B.A.

Jazz Pharmaceuticals · Onyx Pharmaceuticals · Lilly · Threshold Pharmaceuticals

16 years in biotech