Nasdaq: CBIO

CATALYST BIOSCIENCES

Corporate Presentation

October 2022

CatalystBiosciences.com

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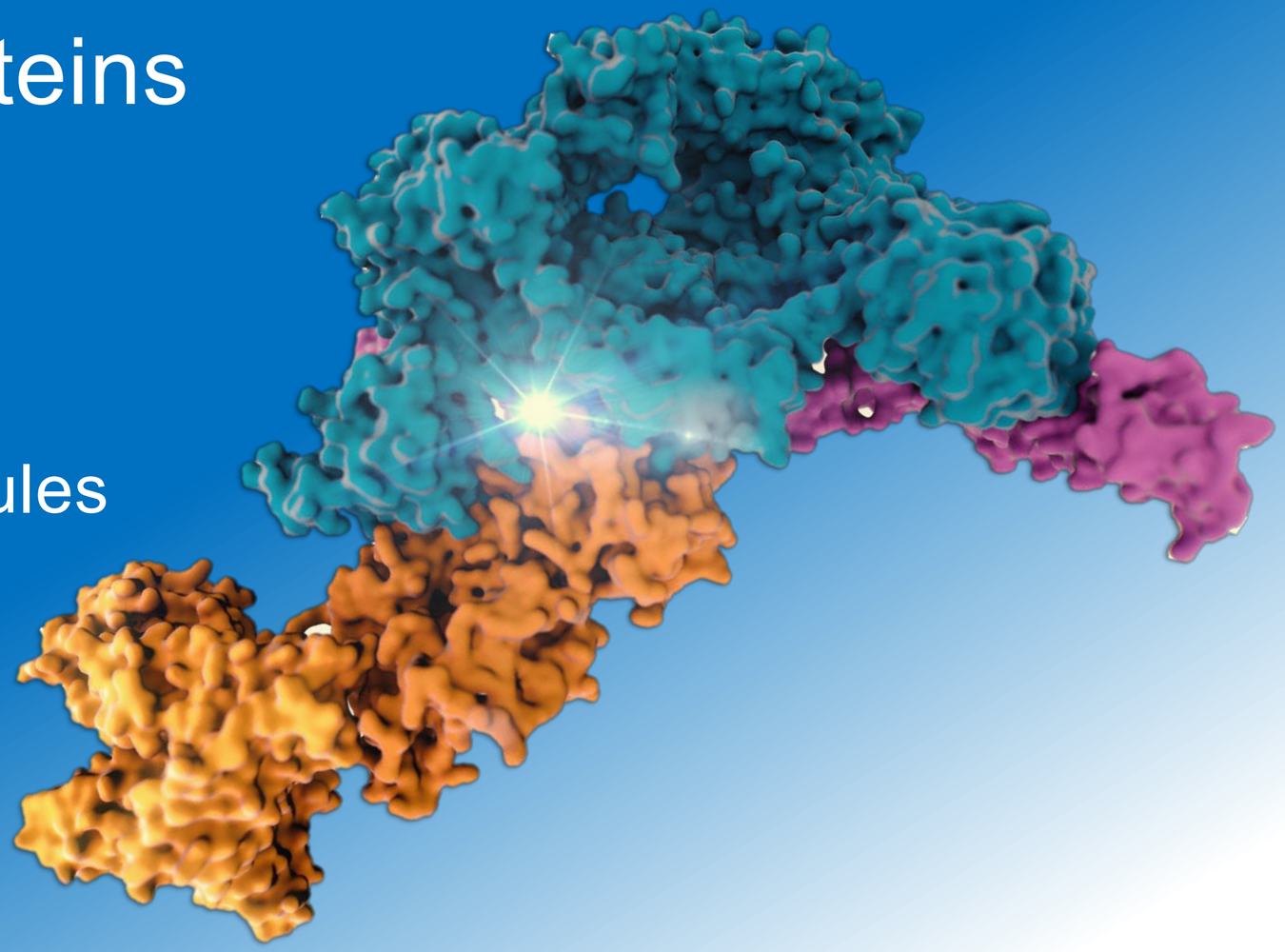
Forward-looking statements

This presentation contains forward-looking statements that involve substantial risks and uncertainties. Forward-looking statements include, without limitation, those regarding the amount and timing of planned cash distributions, potential uses of and markets for MarzAA, DalcA and CB 2679d-GT, and Catalyst's plans to continue to explore strategic alternatives. Actual results or events could differ materially from the plans, intentions, expectations, and projections disclosed in the forward-looking statements. Various important factors could cause actual results or events to differ materially, including, but not limited to, the risks that Catalyst's obligations and liabilities will be greater than anticipated, that Catalyst will not be able to identify strategic partners interested in MarzAA, DalcA, CB 2679d-GT or any other transaction with the Company, and other risks described in the "Risk Factors" section of the Company's Annual Report on Form 10-K filed with the Securities and Exchange Commission (the "SEC") on March 31, 2022, the Quarterly Report on Form 10-Q filed with the SEC on August 15, 2022, and in other filings filed from time to time with the SEC. The Company does not assume any obligation to update any forward-looking statements, except as required by law.

Modulating Biological Systems with Nature's Regulatory Proteins



- Proteases are nature's key regulatory proteins
- Innovative engineered molecules to degrade or activate therapeutic targets
- Applicable across multiple disease areas

Bleeding disorder programs available for partnering

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Corporate Strategy

Monetize our assets & distribute cash to our shareholders

Catalyst Biosciences:

+ Engages Perella Weinberg Partners to Assist the Company in Exploring Strategic Alternatives (February)
+ Sells Complement Portfolio for $60 Million (May)
+ Announces Plan to Distribute up to $65 Million Cash to Stockholders (June)
+ Announces Initial Special Dividend of $45M to Stockholders (August)
+ Pays Special Dividend of $45M (September)

Partnering Opportunities – Last stage completed

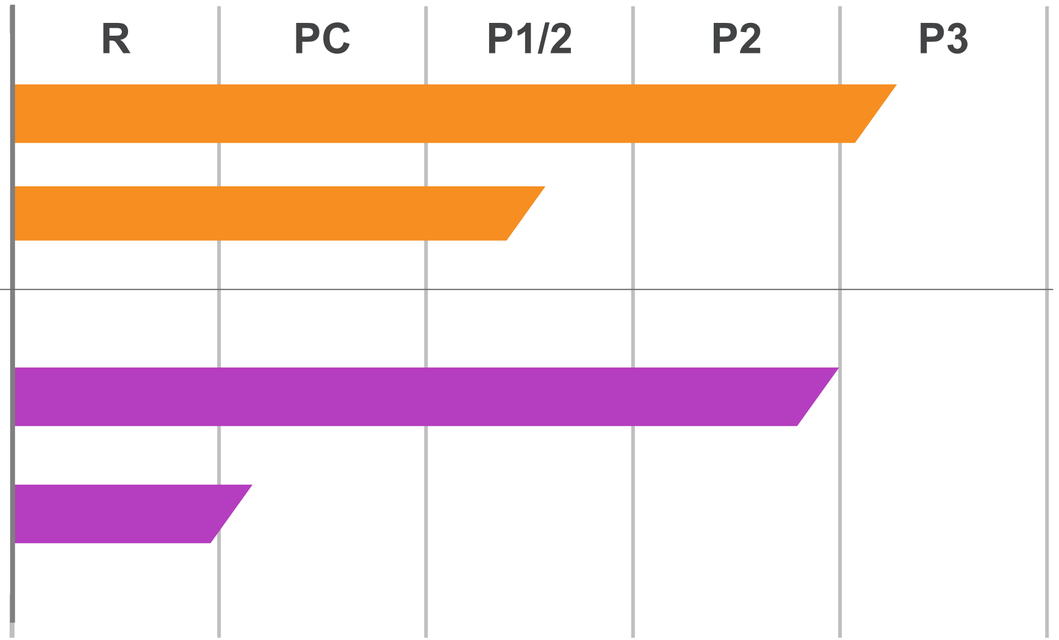
Hemostasis

SQ Marzeptacog alfa (FVIIa) "MarzAA"
Hemophilia A or B with inhibitors – ToB

FVIID/Glanzmann/Hemlibra – ToB

SQ Dalcinonacog alfa (FIX) "DalcA"
Hemophilia B

CB 2679d-GT
Hemophilia B FIX Gene Therapy

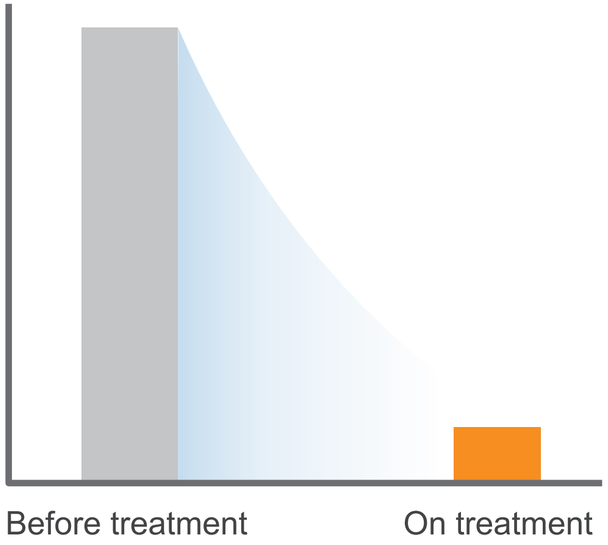


Catalyst protease platform

Validated across three programs

Marzeptacog alfa (activated)

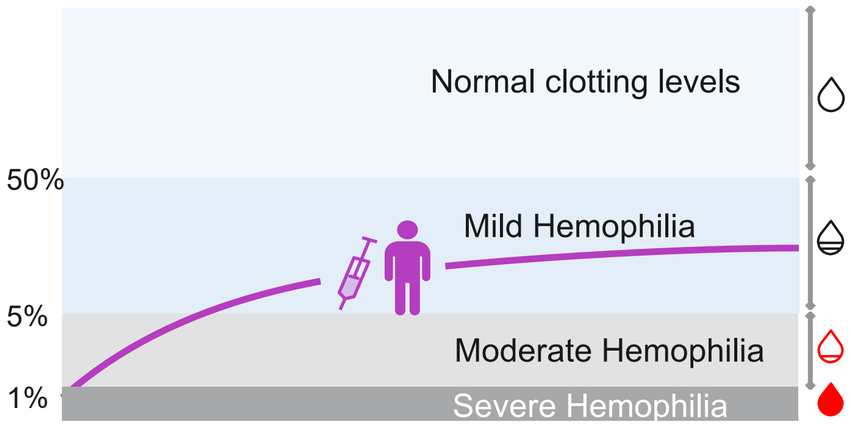
90% reduction in annualized bleed rate



Engineered rFVIIa protease

Dalcinonacog alfa

Achieved sustained & high target levels of FIX

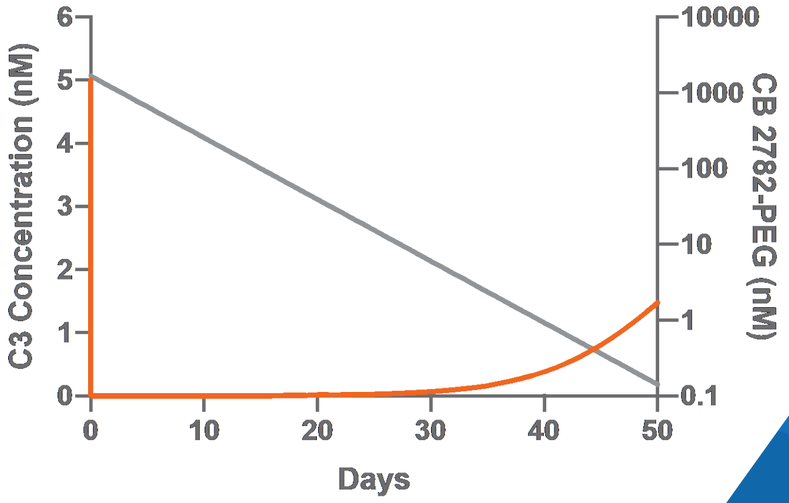


Engineered rFIX protease

CB 2782-PEG

Complement portfolio sold to Vertex

Best-in-class profile for dry AMD
Extended pharmacodynamics



Novel C3 degrader

Marzeptacog alfa (activated) - MarzAA

SQ Next-Generation FVIIa

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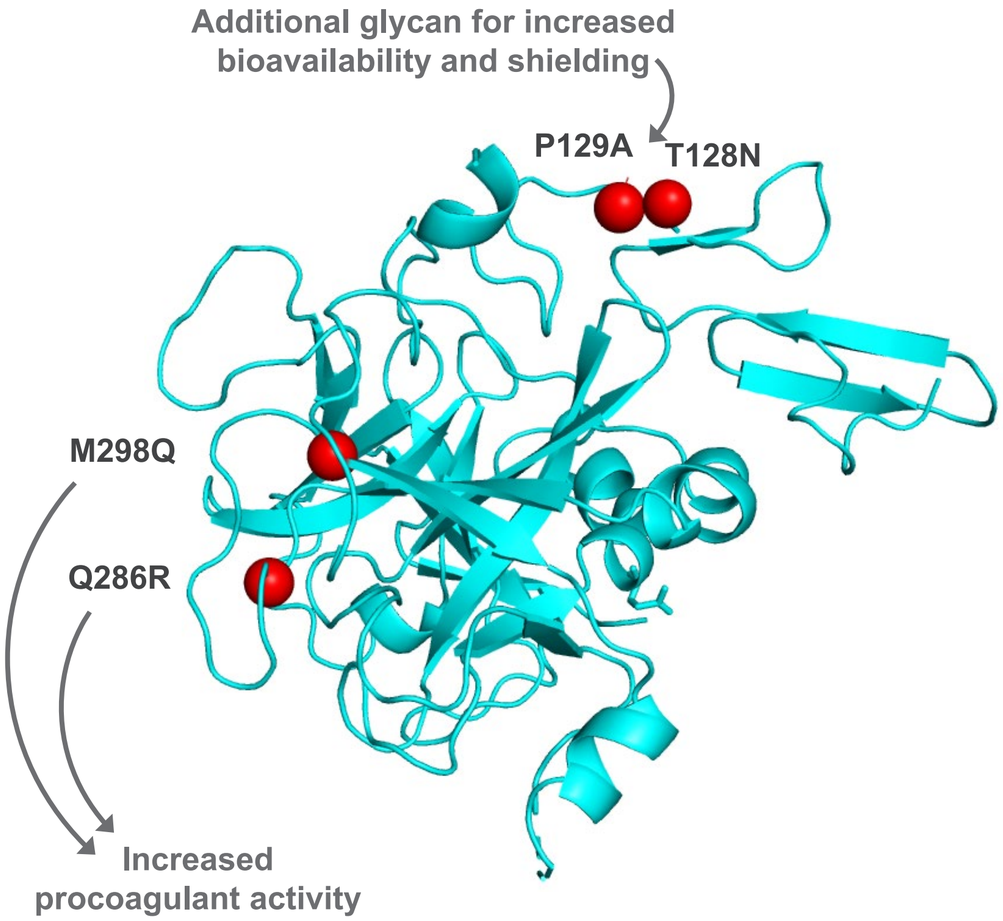
Marzeptacog alfa (activated) – MarzAA: SQ rFVIIa

Addresses a clear unmet need in hemophilia & other bleeding disorders



9-fold higher activity *vs* NovoSeven RT

+ Potency allows for SQ dosing that prolongs half-life
+ NovoSeven RT is administered IV

Preclinical efficacy of SQ in episodic bleeding

+ HA mouse; HA dog; HA rat – all dosed after bleeding had started; dog and rats after spontaneous ‘clinical’ bleeds

PoC & safety in HA or HB with inhibitors

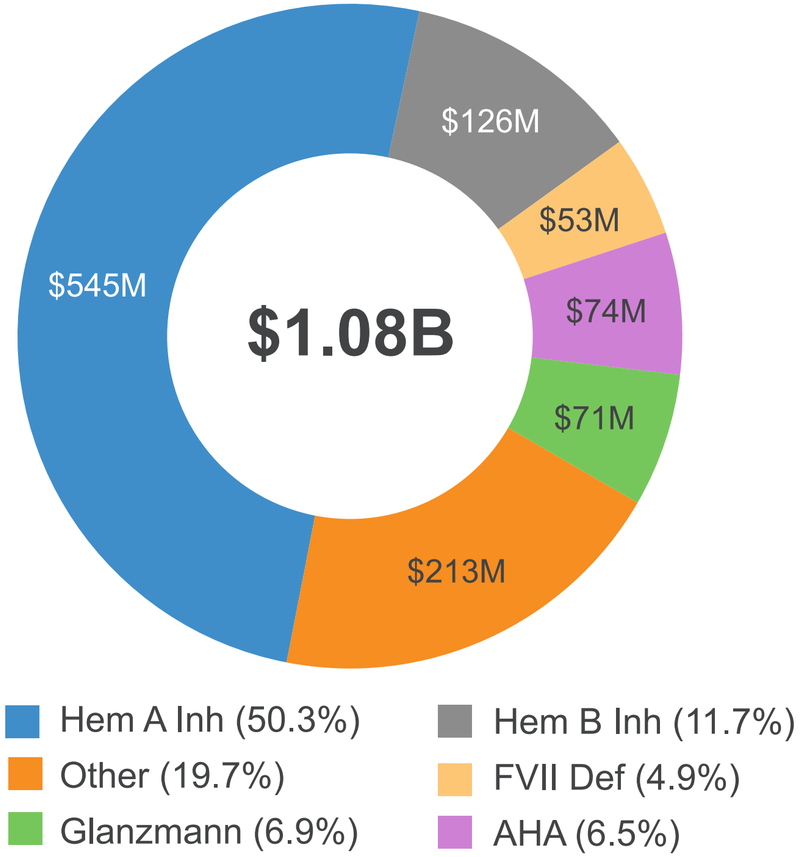
+ Total of 61 patients treated in P1/P2/P3 with single dose IV, up to 3 SQ doses/day, and daily SQ prophylaxis for up to 97 days

Multiple regulatory designations to date

+ FTD & ODD for on-demand use in HA/HB with inhibitors
+ FTD for on-demand use in FVII deficiency & ODD for FVII deficiency (on-demand & prophylaxis)
+ ODD prophylaxis for hemophilia with inhibitors

SQ MarzAA has a large commercial opportunity

Global NovoSeven sales breakdown by indication (2020)



Source: Adivo Associates market research; Catalyst Biosciences market research - Data on file

SQ MarzAA profile

- SQ is patient-preferred & eliminates IV barrier to fast & effective treatment
- Ideal for pediatrics & patients with venous access issues
- Long half-life and sustained hemostasis without high C_{max} for optimal control of bleeds
- *In vitro* data support combination with Hemlibra® without increased thrombogenicity
- Prophylaxis opportunity demonstrated in P2

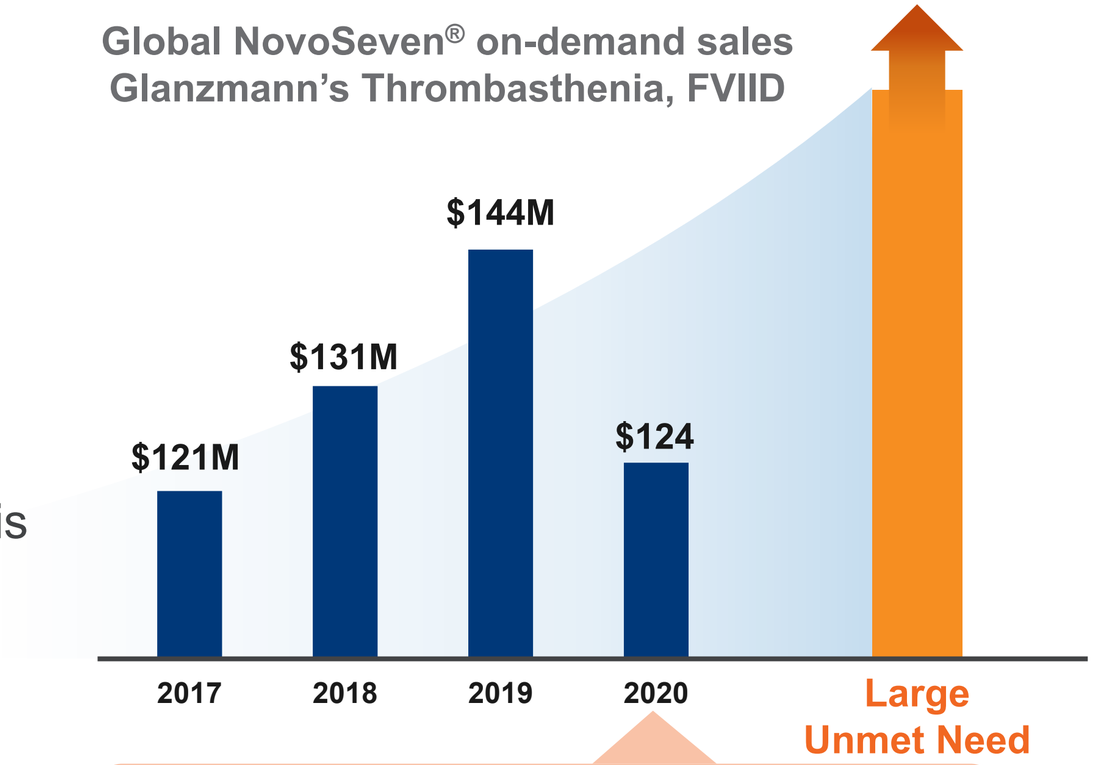
SQ MarzAA likely to enable substantial growth in GT and FVIID

Initial focus on on-demand use with prophylaxis as further upside

+ **NovoSeven® – rFVIIa approved for GT & FVIID**
  - Approved for IV on-demand treatment of bleeding
  - SQ MarzAA could allow faster on-demand treatment

+ **Significant unmet needs are addressable by SQ MarzAA for prophylaxis in Glanzmann's and FVIID**
  - Payers willing to pay ~$2M/patient/year for prophylaxis
  - Severe Glanzmann's patients require costly and burdensome platelet transfusions as a last resort

Global NovoSeven® on-demand sales Glanzmann's Thrombasthenia, FVIID



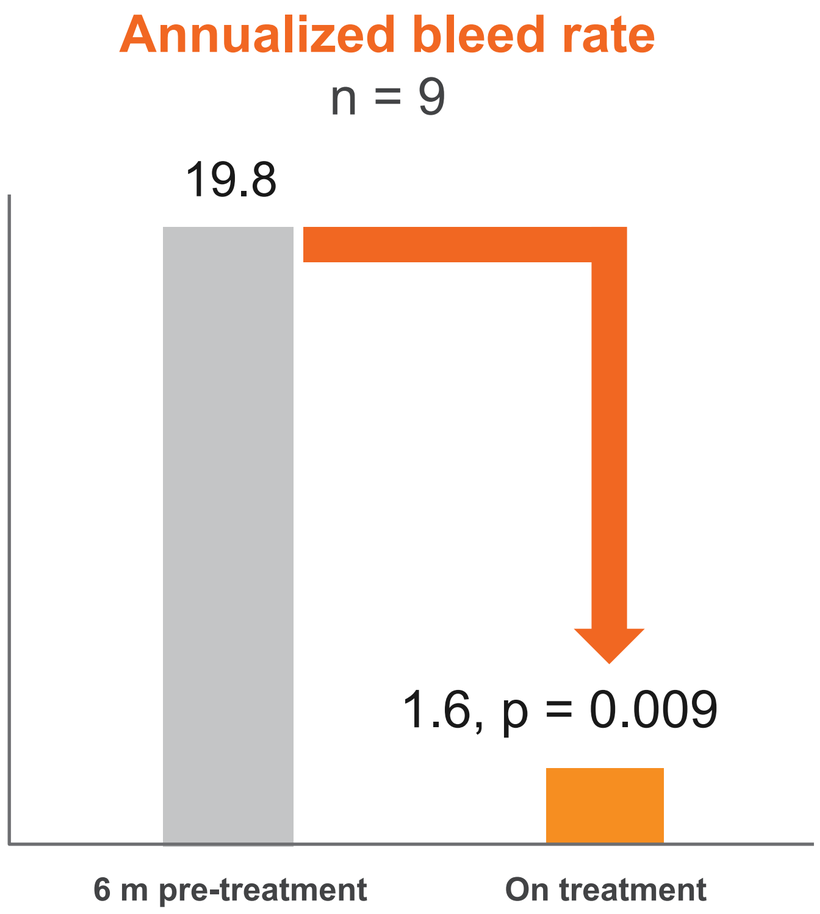
2020 sales decline was attributed to lower patient activity during COVID-19 lockdowns

IV NovoSeven® cannot capture the Prophylaxis segment in Glanzmann's the same way SQ MarzAA could

Source: Catalyst Biosciences, Adivo Associates Market Research; CBIO-CHES Market research. 2020. Average numbers presented.

MarzAA is efficacious with daily prophylaxis

MAA-201: Daily SQ dosing for 50 days (range 44 – 97 days)



90%

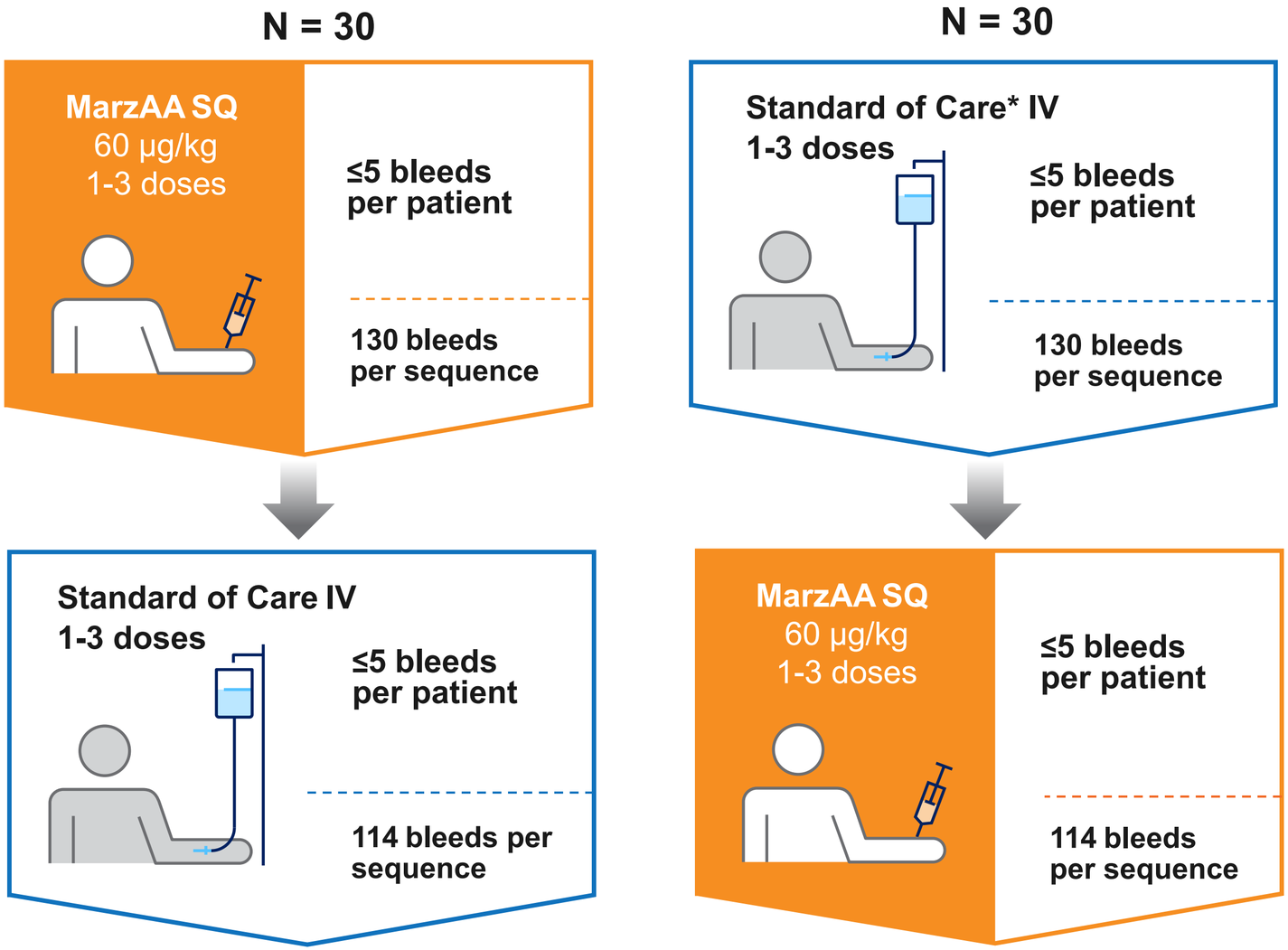
Reduction in bleeding rate

+ Median ABR = 0
+ Safe & well tolerated in 517 SQ doses
  - 6 mild/moderate injection site rxns in 2 subjects – all spontaneously resolved
+ One subject had fatal SAEs unrelated to MarzAA
  - Intracerebral hemorrhage
  - Hypertension – subject diagnosed but noncompliant with treatment

Mahlangu *et al*. Res Pract Thromb Haemost. 2021 Aug 17;5(6):e12576

MAA-304 (Crimson 1) Phase 3 study (terminated @ 18 subjects)

Treatment of episodic bleeding in Hemophilia A or B with inhibitors, ABR ≥ 8



- **Primary endpoint**
  Non-inferior hemostatic efficacy: standard 4-point scale at 24 h
- **Secondary endpoints**
  Time to bleed resolution; number of doses; rescue meds
- **Safety**
  Adverse events, anti-drug antibodies (ADA); thrombosis

Statistics

+ **SOC estimate 85%**
  Excellent/good treatment of bleeds
+ Non-inferiority margin of **12%**
+ **2.5%** significance, one-sided
+ **90%** power

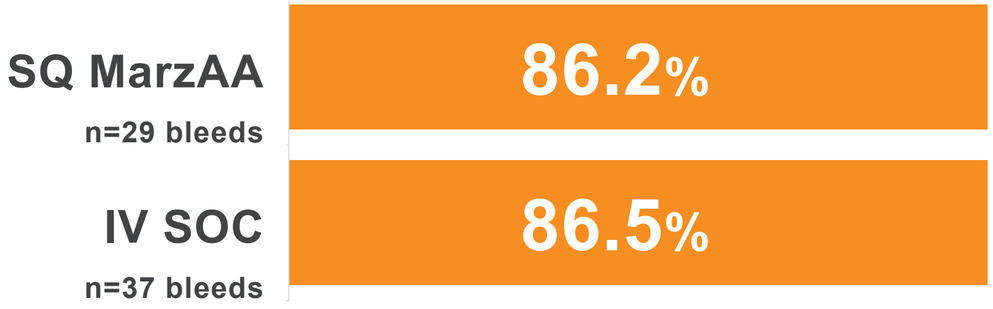
* SOC: IV FEIBA or IV N7 1-3 doses

Crimson 1: Efficacy and safety

74 Bleeds Reported Before Trial Termination, 66 Bleeds Evaluable for Efficacy

Treatment Success at 24 Hours

(Rated 'Excellent' or 'Good')



Time to Cessation of Bleeding (minutes)

	SQ MarzAA (N=8 subjects)	IV SOC (N=10 subjects)
Evaluable Bleeds	29	37
Mean (SD)	770.1 (645.5)	854.8 (954.2)
Median (IQR)	537.0 (180.0-1390.0)	360.0 (161.0-1380.0)

ISTH, July 2022

Essentially equivalent efficacy of SQ MarzAA *vs* IV SOC at 24 hours

+ Slight differences in mean versus median time to bleeding cessation

Safe & well-tolerated

+ No injection site reactions (ISRs), drug-related adverse events, or thrombotic events
+ One serious adverse event unrelated to MarzAA or SOC (left vesico-ureteric junction calculus)
+ One subject with transient ADA

ISRs = injection site reactions, SAE = serious adverse event, ADA = anti-drug antibody

MAA-202 Phase 1/2 study (terminated @ 6 subjects)

FVII deficiency, Glanzmann Thrombasthenia, and HA on Hemlibra

Phase 1 PK

MarzAA IV each cohort

Single dose
18 µg/kg

MarzAA SQ

Single dose escalation
10 to 60 µg/kg

Multiple dose Q3H
Up to 3 x 60 µg/kg

Phase 2 ToB

MarzAA SQ 1-3 doses

FVIID ≥30 bleeds

GT ≥30 bleeds

HA ≥15 bleeds

- **Phase 1**

  Primary endpoint:
  Pharmacokinetics

  Secondary endpoint:
  Pharmacodynamics

- **Phase 2 ToB (Treatment of Bleeds)**

  Primary endpoint:
  Hemostatic efficacy at 24 hours

  Secondary endpoints:
  Effective hemostasis at successive timepoints; doses needed; rescue meds

  Safety:
  Adverse events and ADA

Marzeptacog alfa (activated) – a SQ next generation FVIIa

Potential to provide effective SQ prophylaxis or episodic treatment of a bleeds

- Clinical efficacy demonstrated in prophylaxis with no bleeds for 50 days
- Clinical efficacy demonstrated for on-demand treatment of bleeds
- Multiple regulatory designations and positive interactions with agencies
- No SAEs, systemic hypersensitivity or neutralizing antibodies
- Phase 3 interim data for Crimson 1 was presented at ISTH in July 2022

Dalcinonacog alfa - DalcA

SQ Next-Generation FIX

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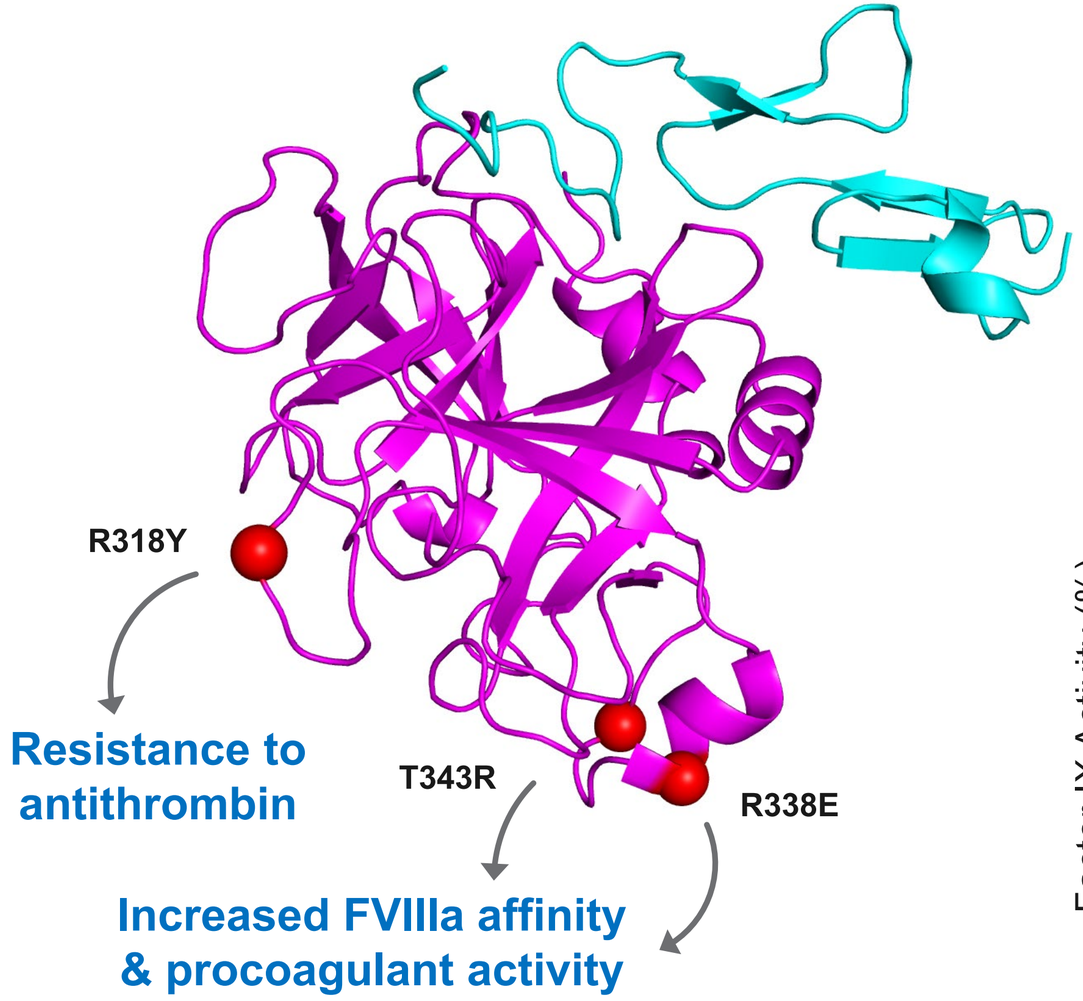
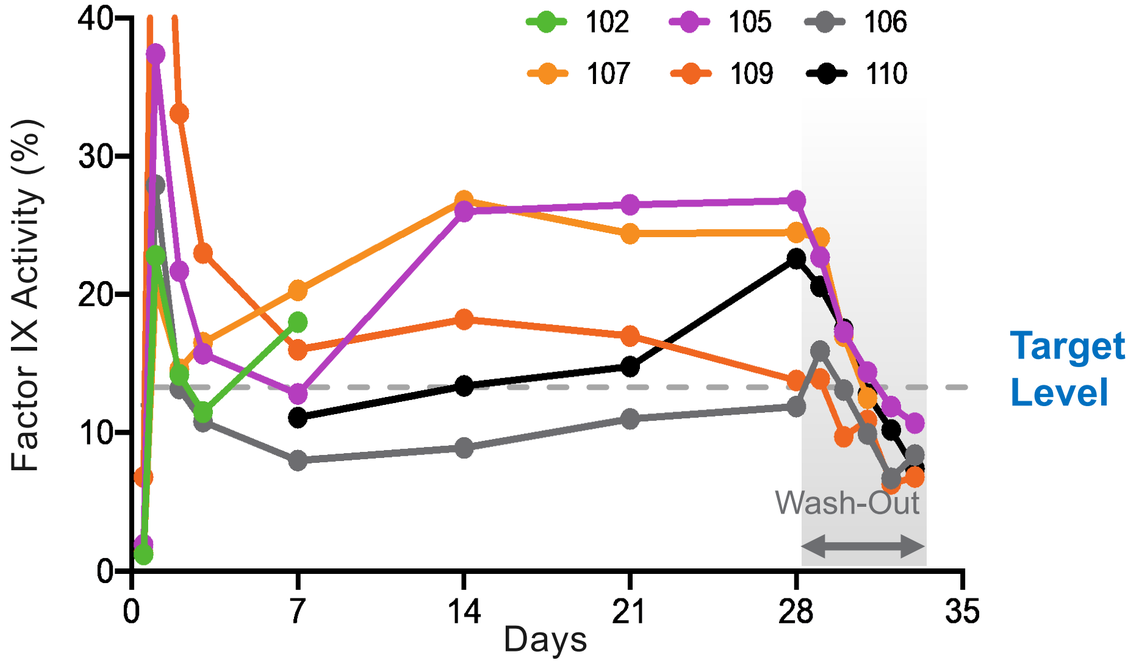
DalcA P2b demonstrated efficacy & safety



Differentiated from marketed IV FIXs

+ Small volume SQ administration
+ Enhanced pharmacokinetics with prolonged half-life
+ Excellent extravascular distribution
+ **Target levels >12% achieved with daily SQ 100 IU/kg dosing for 28 days**



Mahlangu *et al*. Haemophilia. 2021 Jul;27(4):574-580

Dalcinonacog alfa – a SQ next generation FIX

Potential to provide effective SQ prophylaxis for individuals with Hemophilia B

- Phase 2b trial complete
- Protective therapeutic FIX activity levels achieved
- No bleeding events during treatment indicates effective prophylaxis
- No SAEs, systemic hypersensitivity or neutralizing antibodies
- Long half-life – potential for lower dose/reduced dosing frequency

Catalyst's CB 2679d gene therapy for hemophilia B

FIX Transgene	AAV Capsid	Study Dose (vg/kg)	FIX Activity (U/mL)
CB 2679d-GT	**Novel Chimeric**	**8.0×10^{10}**	**20**
Padua	TAK-748*	7.4×10^{11}	20
Padua	TAK-748*	7.4×10^{10}	1

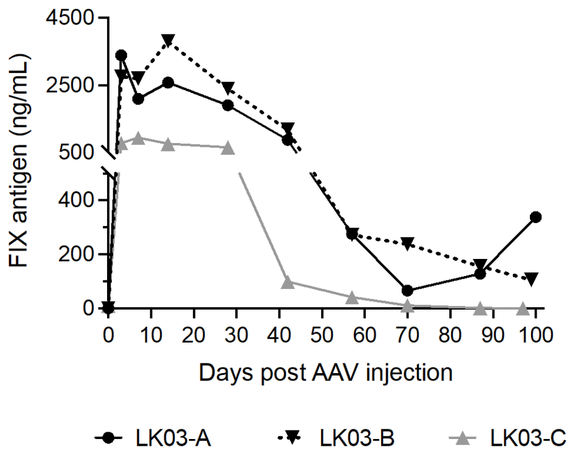
*Weiller *et al.* (2019) *Blood* Vol. 134, Supplement S1 P4633

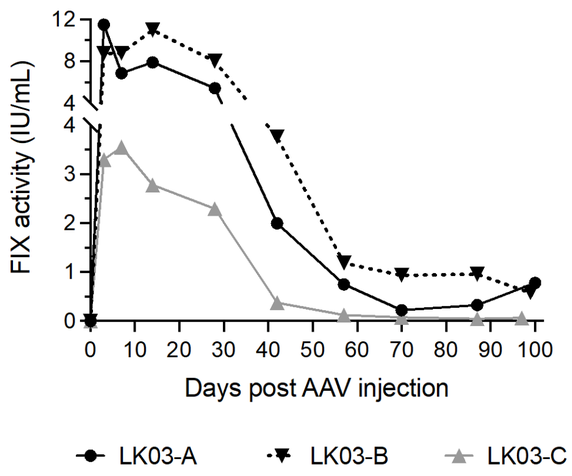
CB 2679d-GT has a superior profile *vs* Padua in preclinical HB mice studies

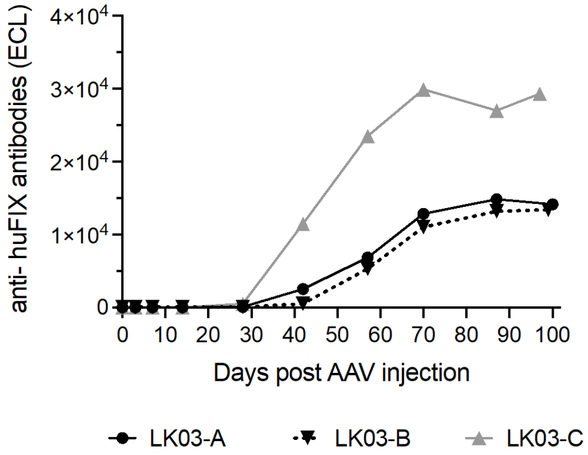
- Stable high activity levels with 1/10th vector dose in mouse model
- 4 to 5-fold reduction in bleeding time when compared to the Padua
- Potential for improved efficacy & safety at 1-2 log reduced dose

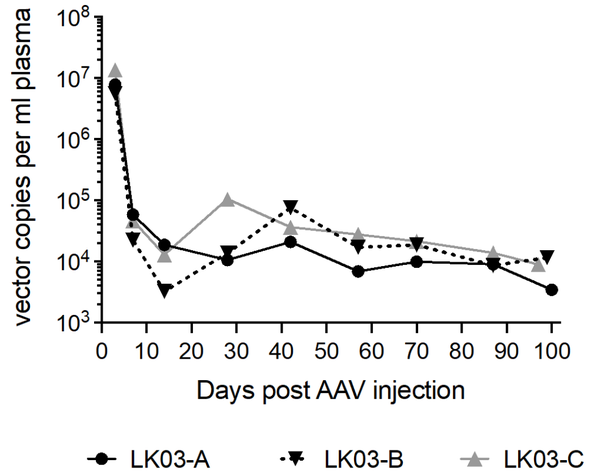
Wholly-owned & issued patents covering gene therapy

Catalyst's CB 2679d gene therapy for hemophilia B









CB 2679d-GT achieved high sustained FIX levels in rhesus monkey studies

- Presented at the 2022 annual meeting of the American Society of Gene + Cell Therapy
- Optimized vector dosed at 3.5×10^{12} vg/kg

CB 2679d-GT was safe and well tolerated

- No sustained effect on liver enzymes
- No thrombogenic signals

Sponsored research collaboration with Dr Mark Kay at Stanford University

- LK03 and KP1 chimeric capsids packaged with a codon-optimized and CpG depleted CB 2679d-GT transgene

Thank you

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