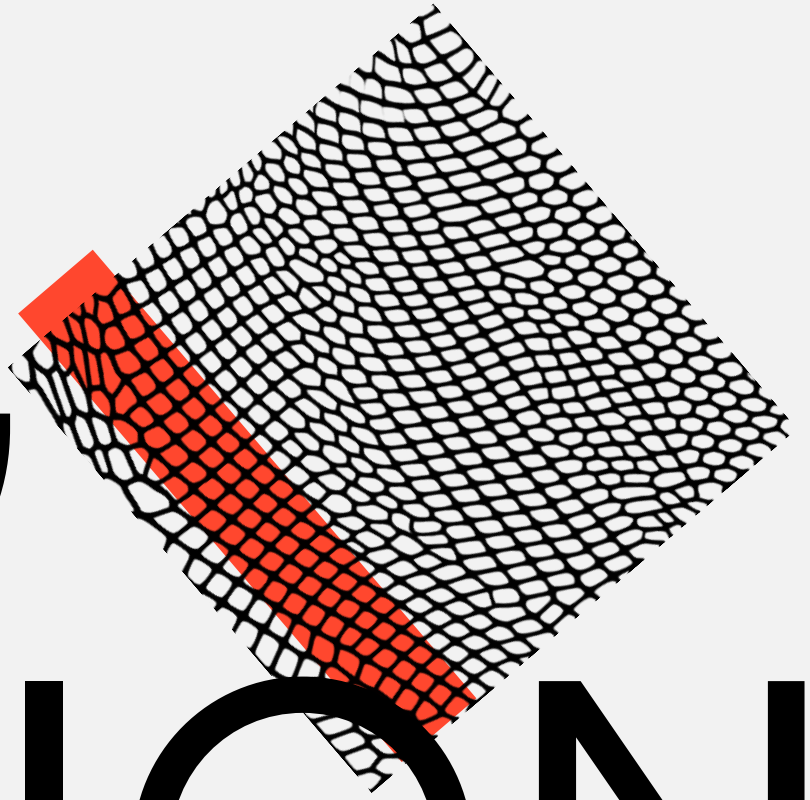
absci®

```
from absci import de_novo_model
model = de_novo_model.load_latest()
antigen = model.load_pdb("7olz.pdb",
chain="A")
antibodies = model.predict(antigen, N=300000)
```

```
from absci_library import codon_optimizer
library
= codon_optimizer.reverse_translate(library)
library.to_csv("covid-antibody-designs.csv")
library.to_wet_lab(assay="ACE")
```

```
from absci import lead_opt_model
lead_optimizer = lead_opt_model.load_latest()
library.naturalness =
lead_optimizer.naturalness(library)
lead_optimizer.optimize(library).to_wet_lab(as
say="SPR")
```

GENERATIVE AI DRUG CREATION



ABSCI R&D DAY 2024

```
from absci import genetic_algorithm; parameters=["maximize|binding_affinity:pH=7.5", "minimize|binding_affinity:pH=6.0",
"maximize|human_naturalness"]; library = genetic_algorithm.multiparametric_optimization(library, parameters, evolutions=100);
library.to_wet_lab(assays=["ACE", "SPR", "Bioassays"])
```

```
from absci_library import codon_optimizer
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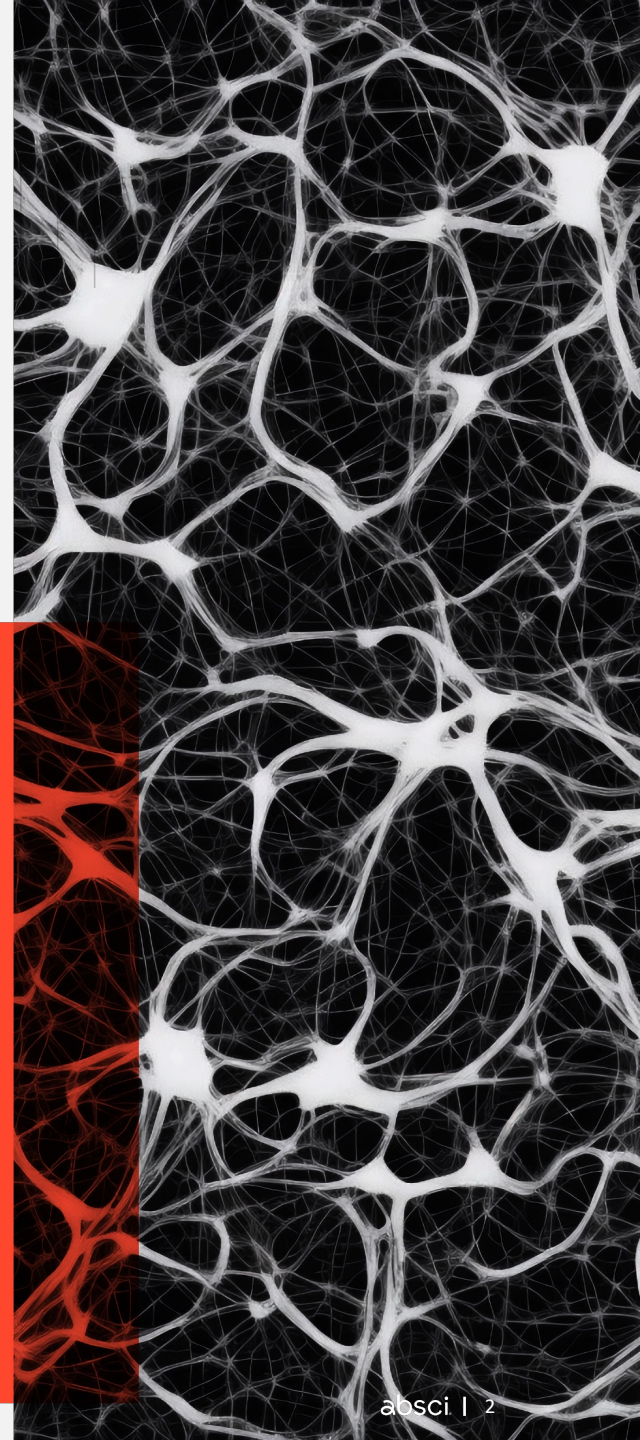

ALEX KHAN

VP, FINANCE & INVESTOR RELATIONS

```
library = []
for antibody in antibodies:
    naturalness = model.naturalness(antibody.sequence)
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```

Disclaimers

Forward-Looking Statements
Certain statements in this presentation that are not historical facts are considered forward-looking within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended, including statements containing the words "will," "may," "anticipates," "plans," "believes," "forecast," "estimates," "expects," "predicts," "advancing," "aim," and "intends," or similar expressions. We intend these forward-looking statements, including statements regarding our strategy, our expectations regarding the clinical, therapeutic and market potential of product candidates discovered and developed through our platform; the potential advantages of our technology and the assets in our internal pipeline; our ability to achieve catalysts in our preclinical and clinical development programs, such as the initiation of IND-enabling studies and Phase 1 clinical development and the receipt of clinical data; the anticipated timing of such events; the expected evolution of our portfolio over time; guidance regarding cash, cash equivalents and our projected cash runway, our future operations, internal research and technological development activities, estimated speed and cost advantages of leveraging our AI drug creation platform; our expectations regarding the status and progress of our existing partnerships and our plans for potential new partnerships; our expected operational efficiencies, research and technology development collaboration efforts, growth plans, prospects, plans and objectives of management, to be covered by the safe harbor provisions for forward-looking statements contained in Section 27A of the Securities Act and Section 21E of the Securities Exchange Act, and we make this statement for purposes of complying with those safe harbor provisions. These forward-looking statements reflect our current views about our plans, intentions, expectations, strategies, and prospects, which are based on the information currently available to us and on assumptions we have made. We can give no assurance that the plans, intentions, expectations, or strategies will be attained or achieved, and, furthermore, actual results may differ materially from those described in the forward-looking statements and will be affected by a variety of risks and factors that are beyond our control, including, without limitation, risks and uncertainties relating to the development of our technology as well as the assets in our internal pipeline, our ability to secure milestone payments and royalties, and our ability to effectively conduct research, drug discovery and development activities with respect to our internal programs and to collaborate with our partners or potential partners with respect to their research, drug discovery and development activities; along with those risks set forth in our most recent periodic report filed with the U.S. Securities and Exchange Commission, as well as discussions of potential risks, uncertainties, and other important factors in our subsequent filings with the U.S. Securities and Exchange Commission. Except as required by law, we assume no obligation to update publicly any forward-looking statements, whether as a result of new information, future events, or otherwise.

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Agenda

8:00 - 9:00
Breakfast

Opening remarks
Prof Sir Mene Pangalos | Board Director and Co-Chair of Scientific Advisory Board, Absci

Corporate overview
Sean McClain | Founder & CEO, Absci

Innovation overview
Andreas Busch, PhD | Chief Innovation Officer, Absci

AI platform updates
Amaro Taylor-Weiner, PhD | Chief AI Officer, Absci

Break

Pipeline updates
Christian Stegmann, PhD | SVP Drug Creation, Absci

Guest Presenters:

Anthony Rossi, MD| MSKCC; Weill Cornell Medical College; Advisor, Absci

Mike Jafar| Advisor, BCG and Advisor, Absci

Luis Diaz, MD| MSKCC; Advisor, Absci

Dennis Slamon, MD, PhD| Chief of Division of Hematology and Oncology, UCLA Medicine

Partnership and Business updates
Zach Jonasson, PhD | CFO & CBO, Absci

Guest Presenters:

Karl Ziegelbauer, PhD| Chief Scientific Officer, Almirall

Closing remarks
Sean McClain | Founder & CEO, Absci

Q&A

12:15 - 1:00
Reception

```
from absci_library import codon_optimizer
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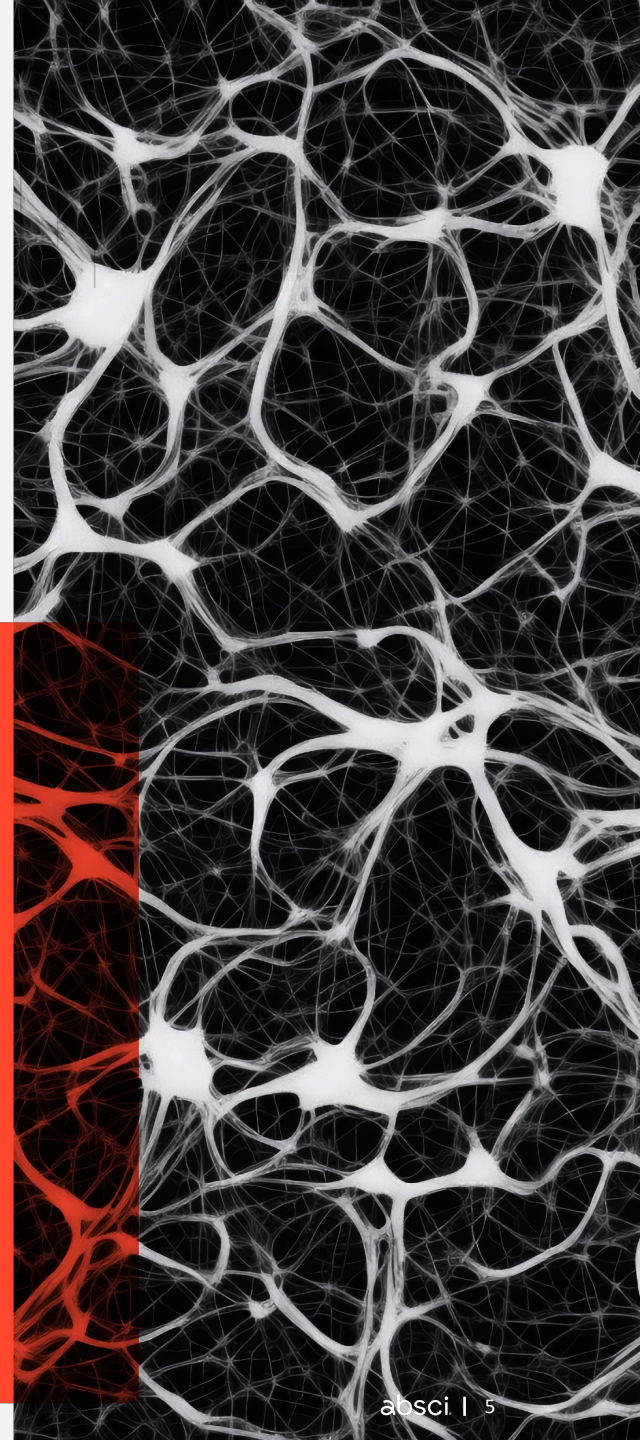

SIR MENE PANGALOS, PHD

BOARD DIRECTOR, ABSCI
CO-CHAIR, ABSCI SCIENTIFIC ADVISORY BOARD

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```


absci

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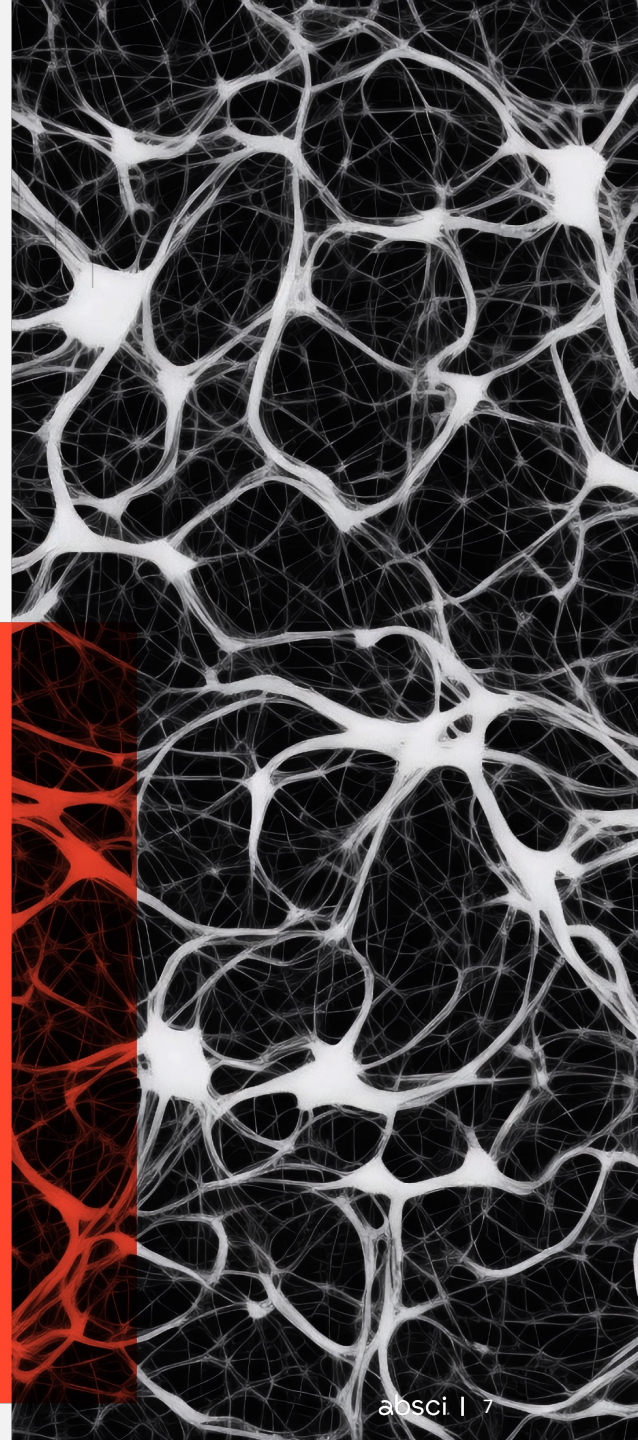

SEAN MCCLAIN

FOUNDER & CEO

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library = []
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```

absci®

Absci is a data-first generative AI Drug Creation™ company

absci®

Absci is a data-first generative AI Drug Creation™ company

PLATFORM

Leading *de novo* antibody design models to unlock novel biology and create differentiated therapeutics

PARTNERSHIPS

Successful execution on Large Pharma partnerships such as AstraZeneca & Almirall

New Partnerships announced with Memorial Sloan Kettering Cancer Center and Twist Bioscience

PIPELINE

Rapidly advancing and expanding pipeline of differentiated assets designed using Absci's generative AI platform

- ABS-101: "Best-in-class" potential TL1A antibody entering clinic 1H 2025
- ABS-201: Novel hair re-growth prolactin receptor antibody addressing significant clinical and commercial need
- ABS-301 & ABS-501: showcasing novel and differentiated programs designed using AI

Absci has been developing AI antibody design tools to:

ADDRESS COMPLEX AND PREVIOUSLY "HARD TO DRUG" TARGETS

- Bind specific extracellular domains
- Target specific conformations

INTRODUCE PRECISE CONTROL OVER ANTIBODY DESIGN:

- "Smart" biologics
- Engineer selectivity, minimizing off target toxicity
- Agonism vs antagonism
- Multidimensionally co-optimized

Ingredients for Success

LEADING AI MODELS

Leading de novo AI model for antibody design with proof-points in internal and partnered programs

COMPUTE AT SCALE

Compute at scale enabled by partnerships with NVIDIA & Oracle

DATA ADVANTAGE

Proprietary ultra-high throughput data generation in 77,000+ ft^2 lab

Amassing high quality data at scale since 2020

DRUG DISCOVERY EXPERTISE

World-Class Discovery Team

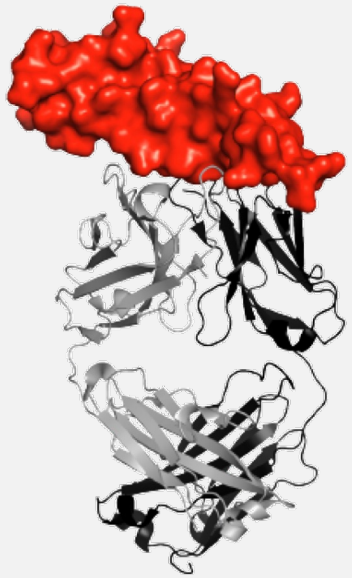
>10 Drugs Approved under current leadership

Our AI platforms are enabled by our 6-week ‘lab-in-the loop’ active learning cycles

AI PLATFORMS

DE NOVO ANTIBODY DESIGN

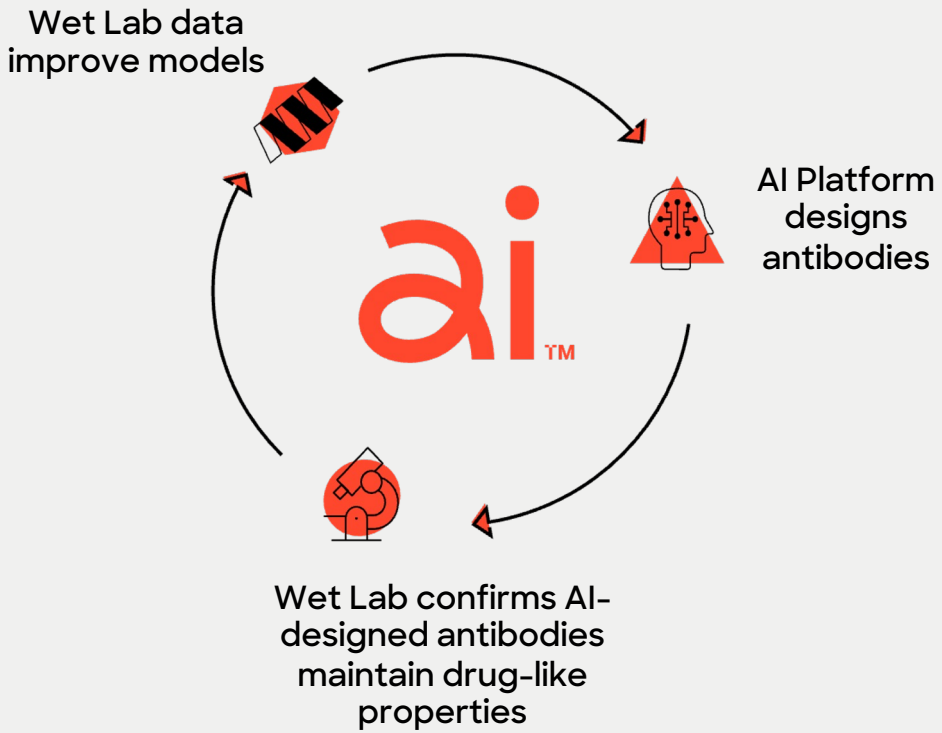
***de novo* design of epitope-specific antibodies** against targets without requiring a known binder



LEAD OPTIMIZATION

AI guided lead optimization enables tunable pharmacology

LAB-IN-THE-LOOP

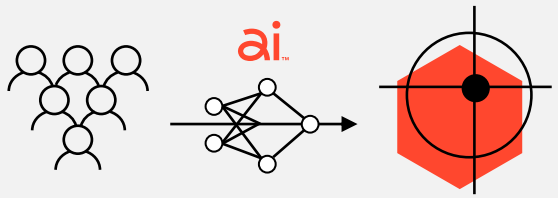


INTEGRATED DRUG CREATION PLATFORM™

Leveraging AI throughout the end-to-end drug discovery process

TARGET SELECTION

AI reverse immunology target discovery

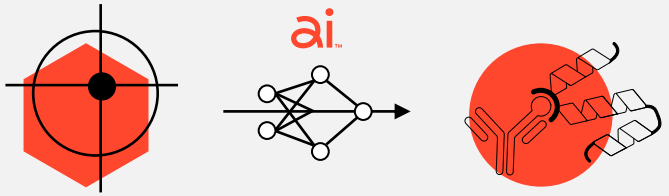


OR

Partner identified target

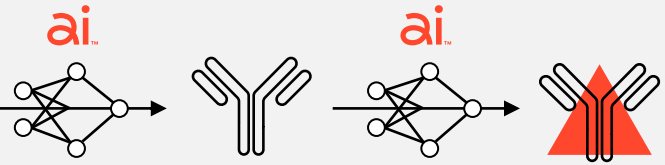
AI-GUIDED DRUG CREATION

De novo antibody design



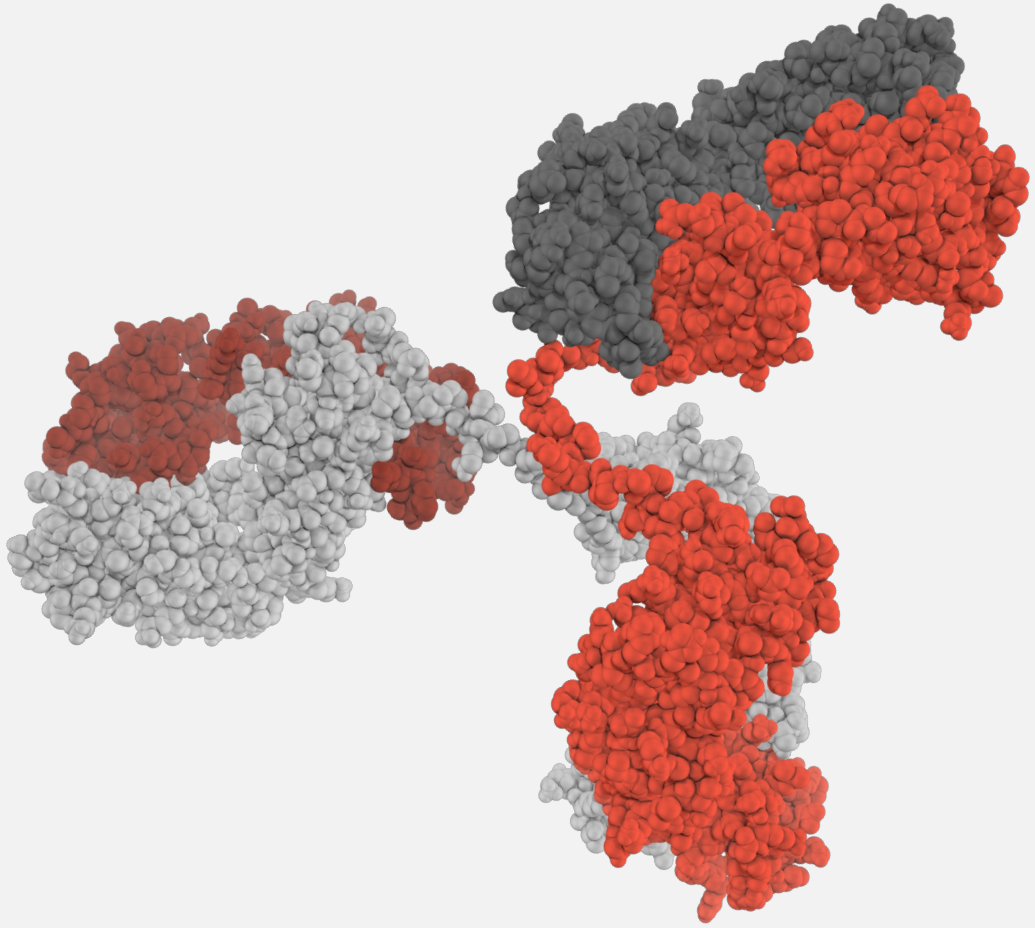
AI-GUIDED LEAD OPTIMIZATION

Affinity & developability



Pharmacology engineering

We use AI to create novel & differentiated therapeutics



- EPITOPE-SPECIFIC DESIGN + EPITOPE INTERFACE OPTIMIZATION
- ENHANCED POTENCY AND MOA
- ABILITY TO ADDRESS DIFFICULT TARGET CLASSES, E.G. GPCRS
- ENABLING FEATURES: MULTI-VALENCY, pH-DEPENDENT BINDING
- BROAD IP: 100S TO 10,000S OF FUNCTIONALLY VALIDATED SEQUENCES ENABLED BY PROPRIETARY WET-LAB VALIDATION

Absci partnership ecosystem

AI Drug Creation™ Partnerships

AstraZeneca
almirall
MERCK
BILL & MELINDA GATES foundation
TWIST BIOSCIENCE
precisionlife
Memorial Sloan Kettering Cancer Center
UCLA
Caltech

- 23 PARTNERED PROGRAMS
- 4 NAMED INTERNAL PROGRAMS
- ADDITIONAL PROGRAMS IN EARLY DEVELOPMENT

Data & compute collaborations

ORACLE
Aster Insights™
NVIDIA
Saint John's Health Center
Providence
UNIVERSITY OF OXFORD

- SCALING COMPUTE
- IMPROVING MODELS
- INCREASING PROGRAMS

OUR PEOPLE

”Multilingual” team with expertise in AI and drug creation

LEADERSHIP TEAM

Sean McClain
Founder, CEO & Director

Andreas Busch, PHD
Chief Innovation Officer

Zach Jonasson, PHD
Chief Financial Officer & Chief Business Officer

Amaro Taylor-Weiner, PHD
SVP, Chief AI Officer

Shelby Walker, JD
Chief Legal Officer

Karin Wierinck
Chief People Officer

Christian Stegmann, PHD
SVP, Drug Creation

Christine Lemke, DVM
SVP, Portfolio & Growth Strategy

Penelope
Chief Morale Officer

BOARD OF DIRECTORS

Frans Van Houten
Chairman of the Board
Former CEO, Royal Phillips

Sean McClain
Founder, CEO & Board Director

Sir Mene Pangalos, PHD
Former EVP R&D AstraZeneca

Karen Mcginnis, CPA
Former Chief Accounting Officer, Illumina

Amrit Nagpal
Managing Director, Redmile Group

Dan Rabinovitsj
VP Hardware Engineering, Meta

Joseph Sirosh, PHD
Former CTO, Compass
VP, Amazon & Microsoft

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Sir Mene Pangalos, PHD
Co-Chair SAB
Former EVP R&D AstraZeneca

Andreas Busch, PHD
Co-Chair SAB
Chief Innovation Officer

Ian McInnes, PHD
Vice Principal and Head of College University of Glasgow

Luis Diaz, MD
Head, Division of Solid Tumor Oncology Memorial Sloan Kettering Cancer Center

John Wherry, PHD
Director, Institute for Immunology & Immune Health, University of Pennsylvania

Victor Greiff, PHD
Associate Professor University of Oslo

Hubert Truebel, MD, PHD, MBA
Chief Medical Officer AiCuris

EXPERTISE & BACKGROUND FROM

OpenAI · Google · NVIDIA
HARVARD UNIVERSITY · Stanford University · MIT
TESLA · Takeda · X
AstraZeneca · BROAD INSTITUTE · BAYER
Pfizer · Bristol Myers Squibb · novo nordisk
PHILIPS · Shire · amazon
Meta · Microsoft · PathAI

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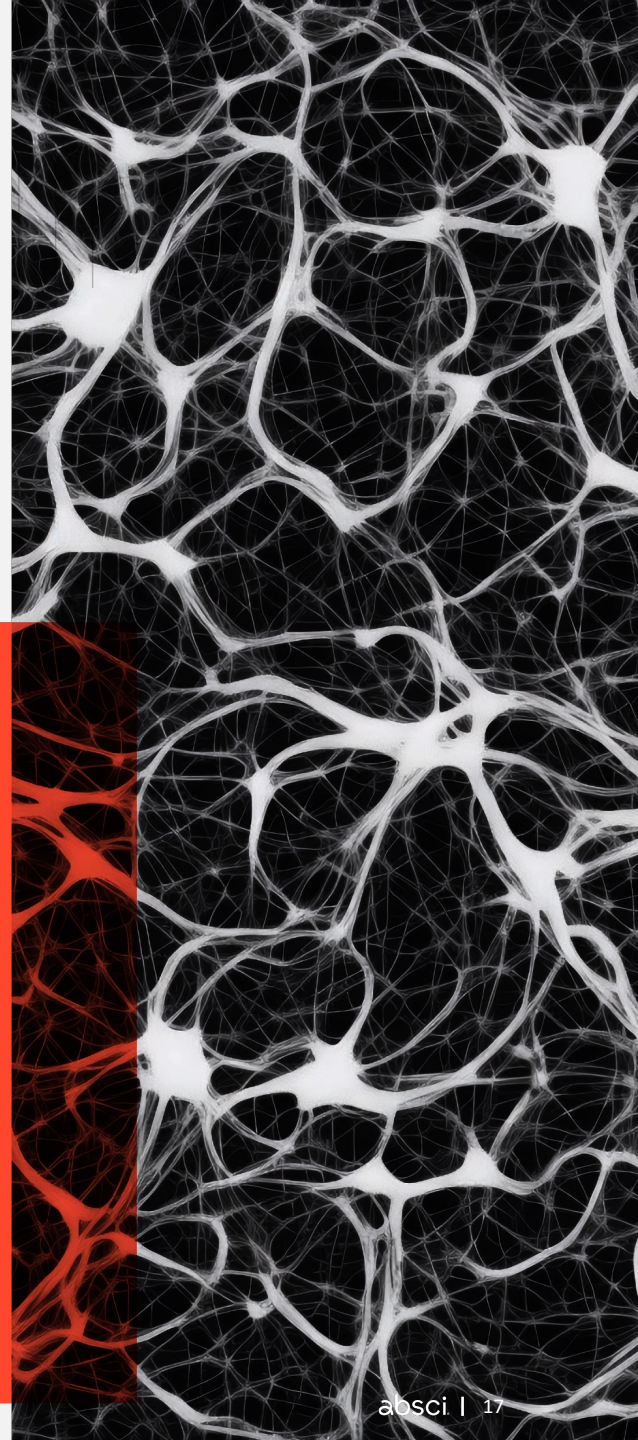

ANDREAS BUSCH, PHD

CHIEF INNOVATION OFFICER

```
library = []
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    library.append((antibody, naturalness))
```

Demonstration of Absci's progress in Drug Creation, AI platforms and internal portfolio

DRUG CREATION

- On track to deliver **ABS-101** (TL1A) IND and FiH in 1H 2025
- Delivered Development candidate **ABS-201** (PRLR, best-in-class) with blockbuster potential in androgenic alopecia (and upside in endometriosis)
- Progress of first-in-class **ABS-301** with target validation. Expect full data package including efficacy read outs and potential candidate nomination in 1H 2025
- **Expansion of internal portfolio:**
  - 1 best-in-class lead in 2024
  - 3 first-in-class or best-in-class targets identified in 2024

PLATFORM

- *De novo* AI generated antibodies for **disease-relevant target epitopes and difficult targets**
  - Antibodies designed for AstraZeneca target with no-known binder using *de novo* AI model
  - First Hits identified for challenging Almirall target
  - *de novo* AI design of antibodies to difficult target with no-known binder in partnership with BMGF and Caltech
- Successful expansion of **multi-dimensional AI-guided lead optimization**

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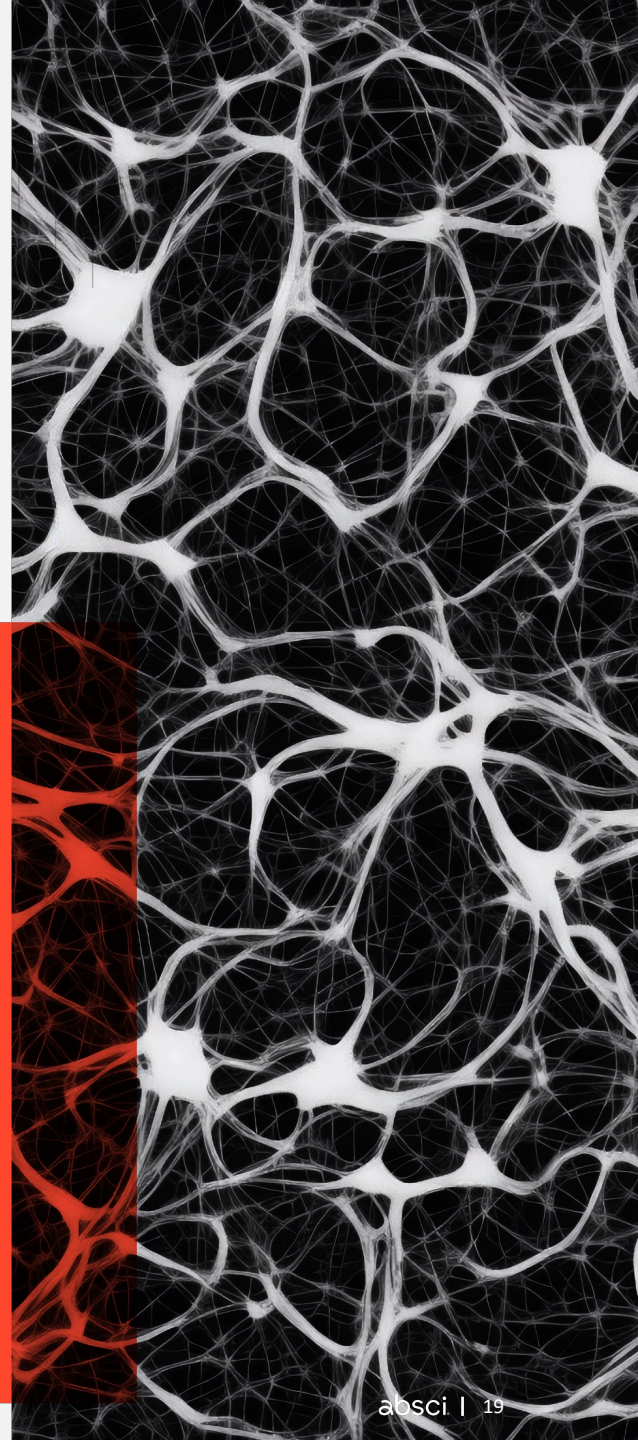

AMARO TAYLOR-WEINER, PHD

CHIEF AI OFFICER

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Absci has been developing AI antibody design tools to:

ADDRESS COMPLEX AND PREVIOUSLY "HARD TO DRUG" TARGETS

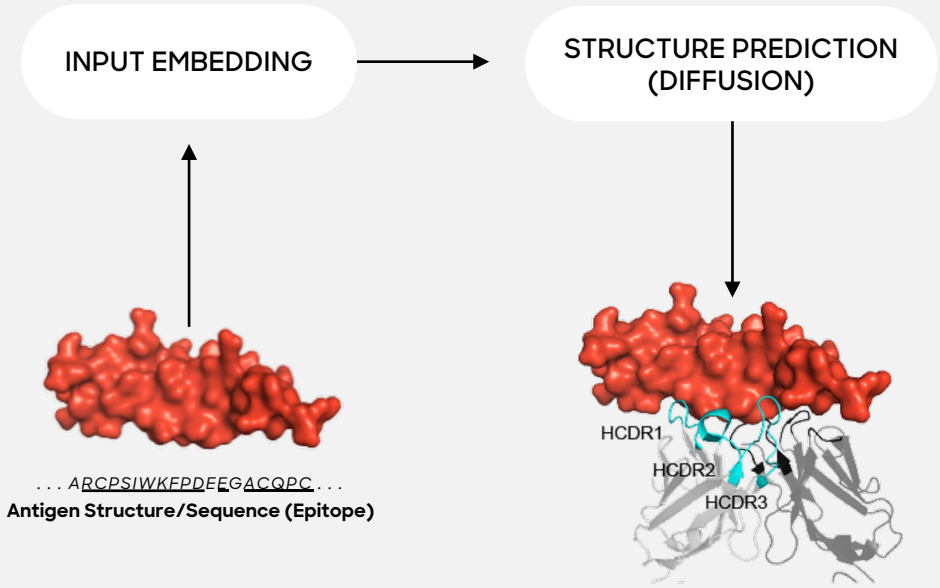
- Bind specific extracellular domains
- Target specific conformations

INTRODUCE PRECISE CONTROL OVER ANTIBODY DESIGN:

- "Smart" biologics
- Engineer selectivity, minimizing off target toxicity
- Agonism vs antagonism
- Multidimensionally co-optimized

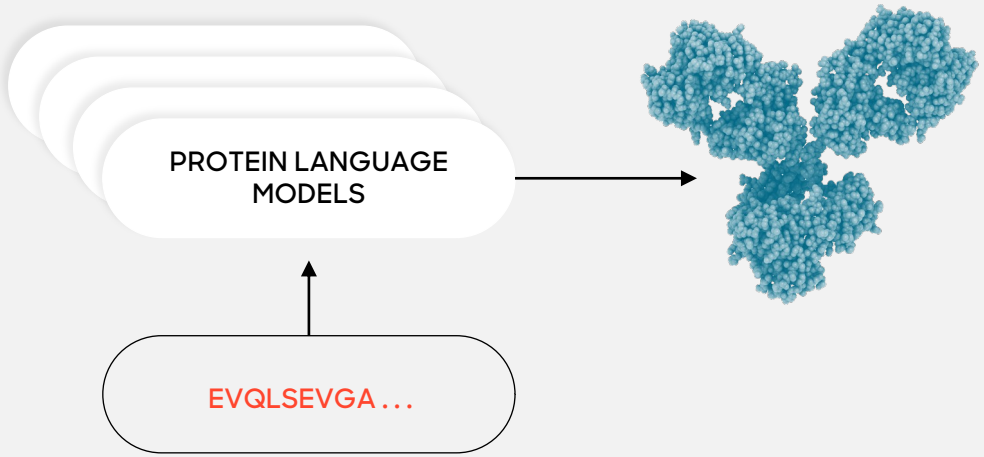
Leadership in AI *de novo* design of antibody-based therapeutics

DE NOVO ANTIBODY DESIGN



- *de novo* antibody design model creates epitope-specific binders given a target structure
- Designed in framework of choice or multiple frameworks

AI LEAD OPTIMIZATION



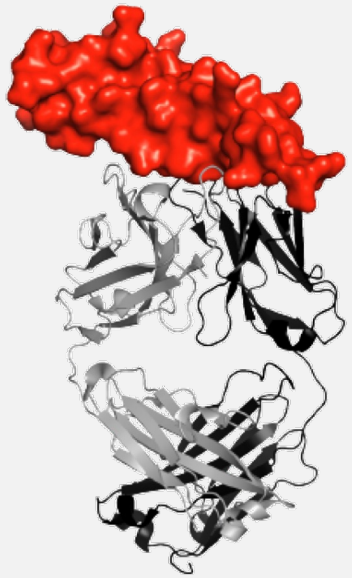
- Co-optimization enables improvement of antibody attributes while maintaining developability
- Precise engineering of molecule pharmacology

Our AI platforms are enabled by our 6-week ‘lab-in-the loop’ active learning cycles

AI PLATFORMS

DE NOVO ANTIBODY DESIGN

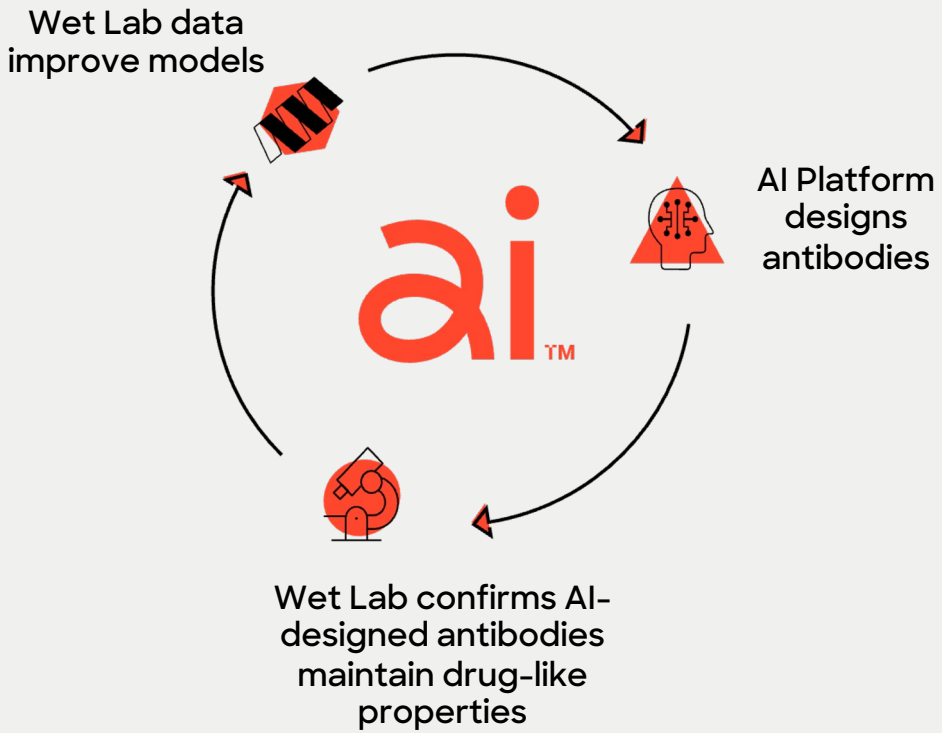
***de novo* design of epitope-specific antibodies** against targets without requiring a known binder



LEAD OPTIMIZATION

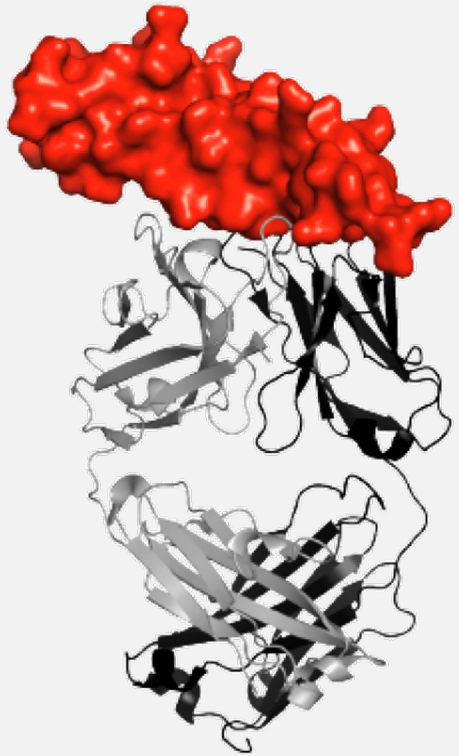
AI guided lead optimization enables tunable pharmacology

LAB-IN-THE-LOOP



AbsciDesign comprises two categories of AI models for *de novo* antibody design

AbsciGen:
antibody<>antigen complex structure and sequence design



Design 1
HCDR1: GFNIKDTY
HCDR2: IYPTNGYT
HCDR3: SRWGGDGFYAMDY

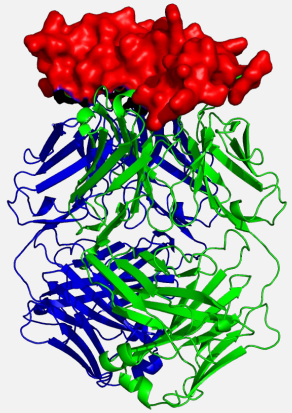
LCDR1: QDVNTA
LCDR2: SAS
LCDR3: QQHYTTPPT

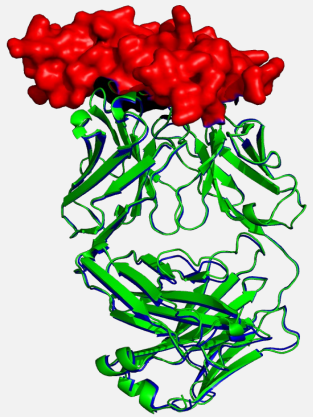
▪
▪
▪

Design N
HCDR1: GFNIKDTW
HCDR2: IYPSNGYT
HCDR3: ARWGGDGFYAMDY

LCDR1: QDVNTA
LCDR2: SAS
LCDR3: QQHYTTPPT

AbsciBind:
antibody design scoring and filtering





Antigen
AbsciGen
AbsciBind

AbsciBind
Low Rank

RMSD = 5.3 Å
Confidence = 0.64

AbsciBind
High Rank

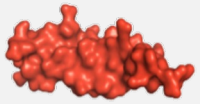
RMSD = 2.3 Å
Confidence = 0.95

The AbsciDesign AI platform delivers *de novo* antibodies via an end-to-end design-validation workflow

STEP 1.
Define
design parameters

STEP 2.
Fine-tune and deploy AbsciGen and AbsciBind to generate hundreds of thousands of variants and filter to a subset that are likely binders

STEP 3.
Wet lab screening and model performance validation



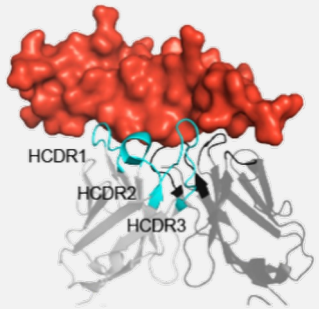
...ARCPSIWKFPDEEGACQPC...

Antigen Structure/Sequence (Epitope)

HFWR1: EVQLE.....GSLSCAAS
HFWR2: IHWVR.....LEWVAR
HFWR3: RYRF.....SLEDTAVYYC
HFWR4: WGQGTLVTVSS

LFWR1: DIQMT...RVTITCRAS
LFWR2: VAWYQ...KLLIY
LFWR3: FLLQPE....DFATYYC
LFWR4: FGQGTKVEIK

Heavy/Light Framework Sequences



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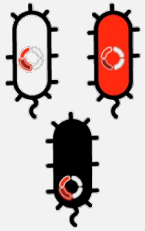
LCDR1: QDVNTA
LCDR2: SAS
LCDR3: QQHYTTPPT

⋮

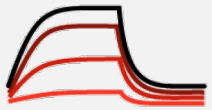
Design N
HCDR1: GFNIKDTW
HCDR2: IYPSNGYT
HCDR3: ARWGGDGFYAMDY
LCDR1: QDVNTA
LCDR2: SAS
LCDR3: QQHYTTPPT

Heavy/Light CDR Sequences

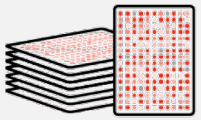
Cloning



Surface Plasmon Resonance



Expression



Sequencing

```
from absci_library import codon_optimizer
library
= codon_optimizer.reverse_translate(library)
library.to_csv("covid-antibody-designs.csv")
library.to_wet_lab(assay="ACE")
```

CASE STUDY

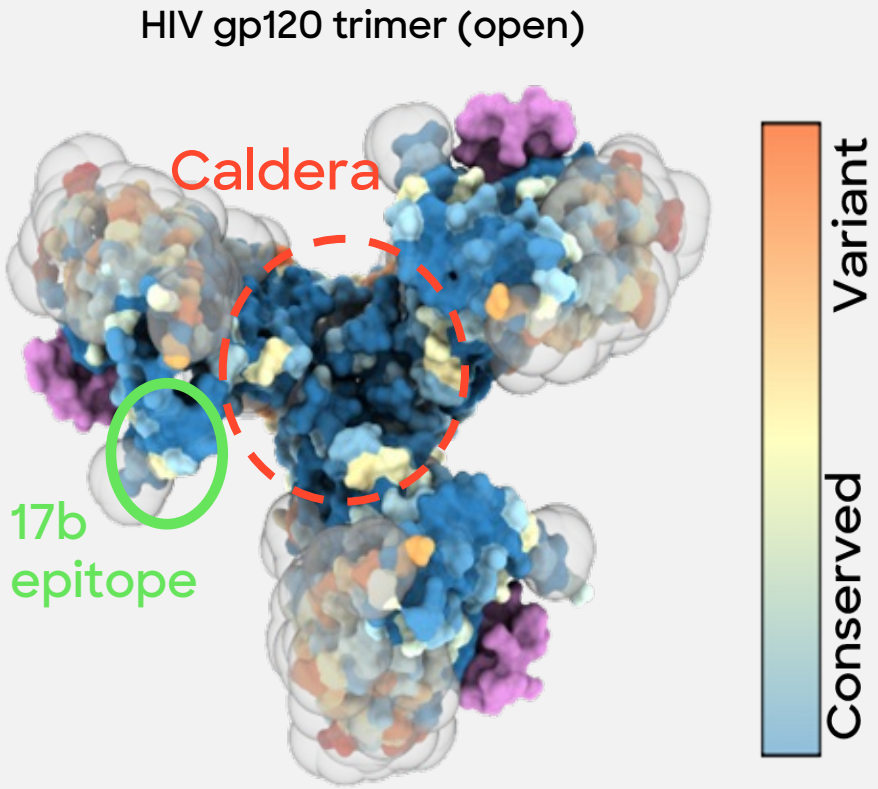
Collaboration with Professors Steve Mayo and Pamela Bjorkman at Caltech funded by the Bill and Melinda Gates Foundation

Caltech absci BILL & MELINDA GATES foundation

```
from absci import lead_opt_model
lead_optimizer = lead_opt_model.load_late
library.naturalness =
lead_optimizer.naturalness(library)
lead_optimizer.optimize(library).to_wet_l
say="SPR")
```

de novo design antibody that binds to the highly conserved caldera region of HIV gp120

- No natural or synthetic antibody for HIV exists today because immune system cannot derive an antibody that is universally neutralizing against HIV
- Design challenge: create universally neutralizing HIV antibody by binding unique and conserved epitope within “caldera” of open conformation of gp120 to prevent HIV from entering host cells
- Numerous attempts to target this epitope have failed-previous efforts have identified antibodies, but none bind the “caldera” and none are universally neutralizing.



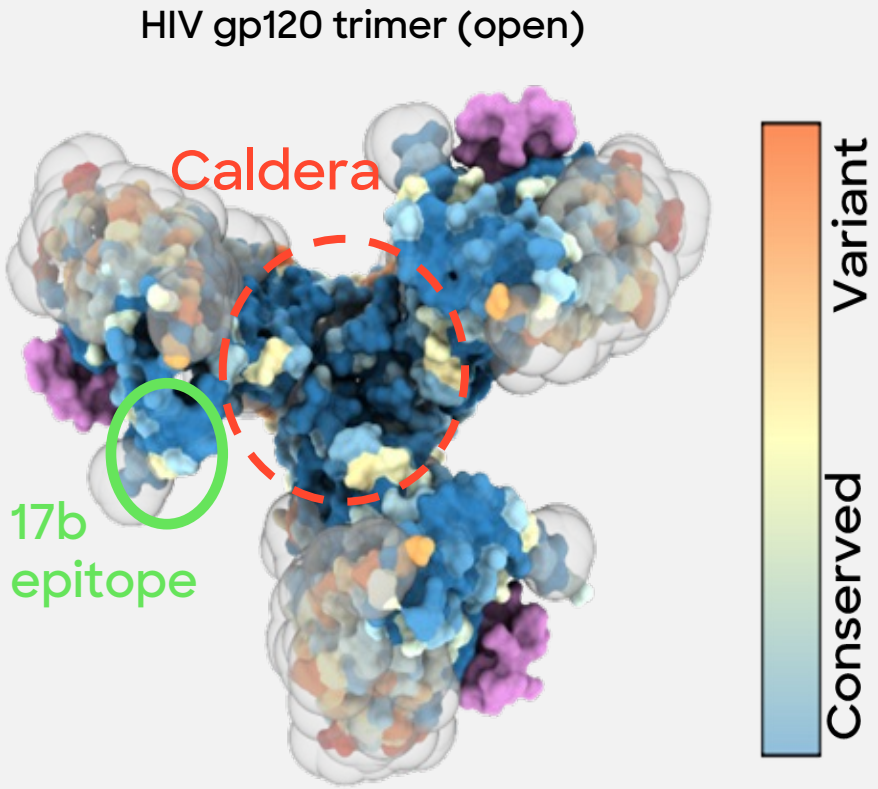
Inputs and AI *de novo* design for HIV-Caldera

Model inputs:

1. Antigen structure
2. Framework of 17b
3. Epitope selected conserved across HIV strains (Clades A, B, and C)

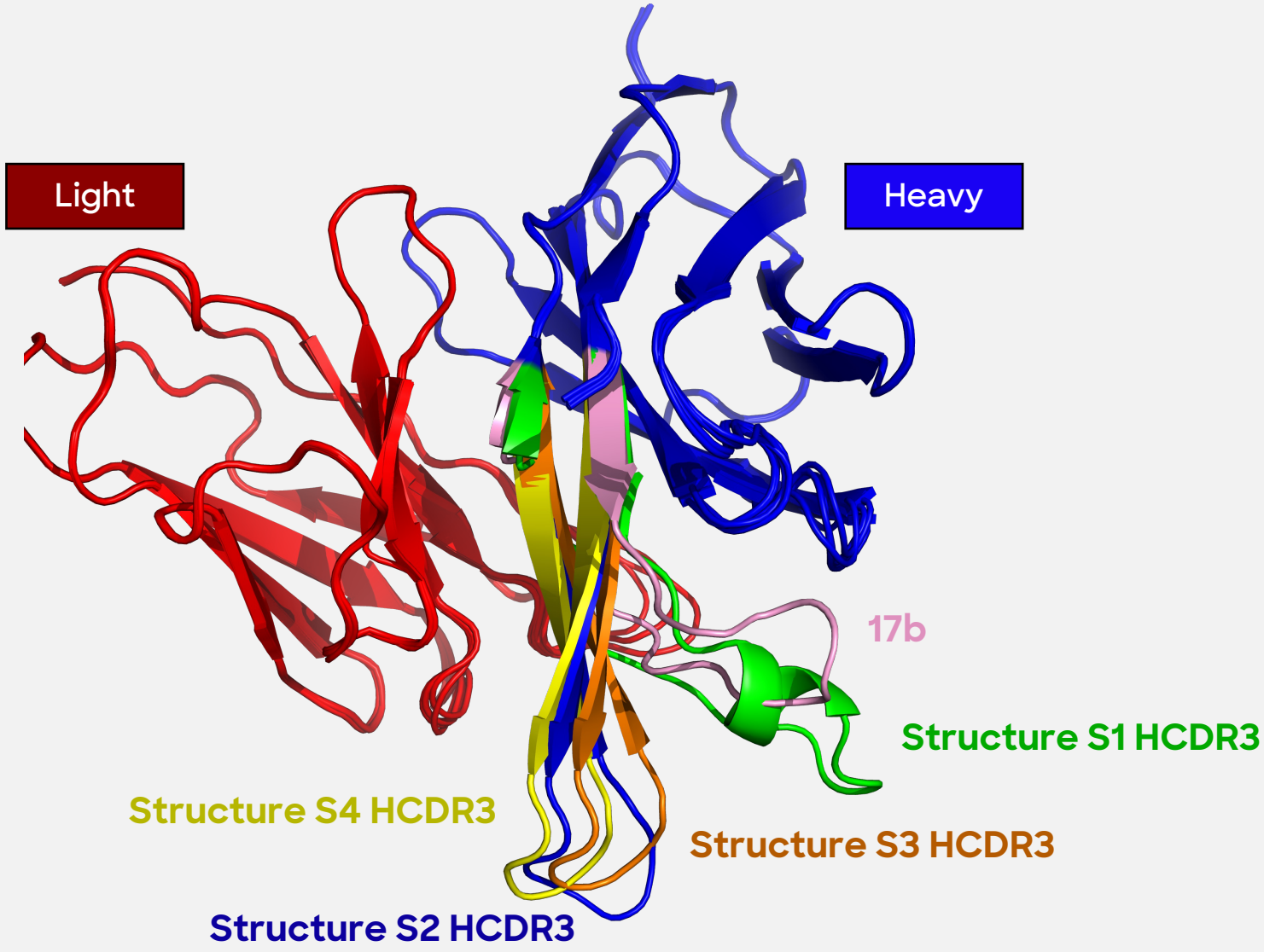
Design of CDRs:

- Condition the model to design long HCDR3 to reach into open caldera region (>20 residues)
- Designed HCDR2 and LCDR3 to bind to HIV surface



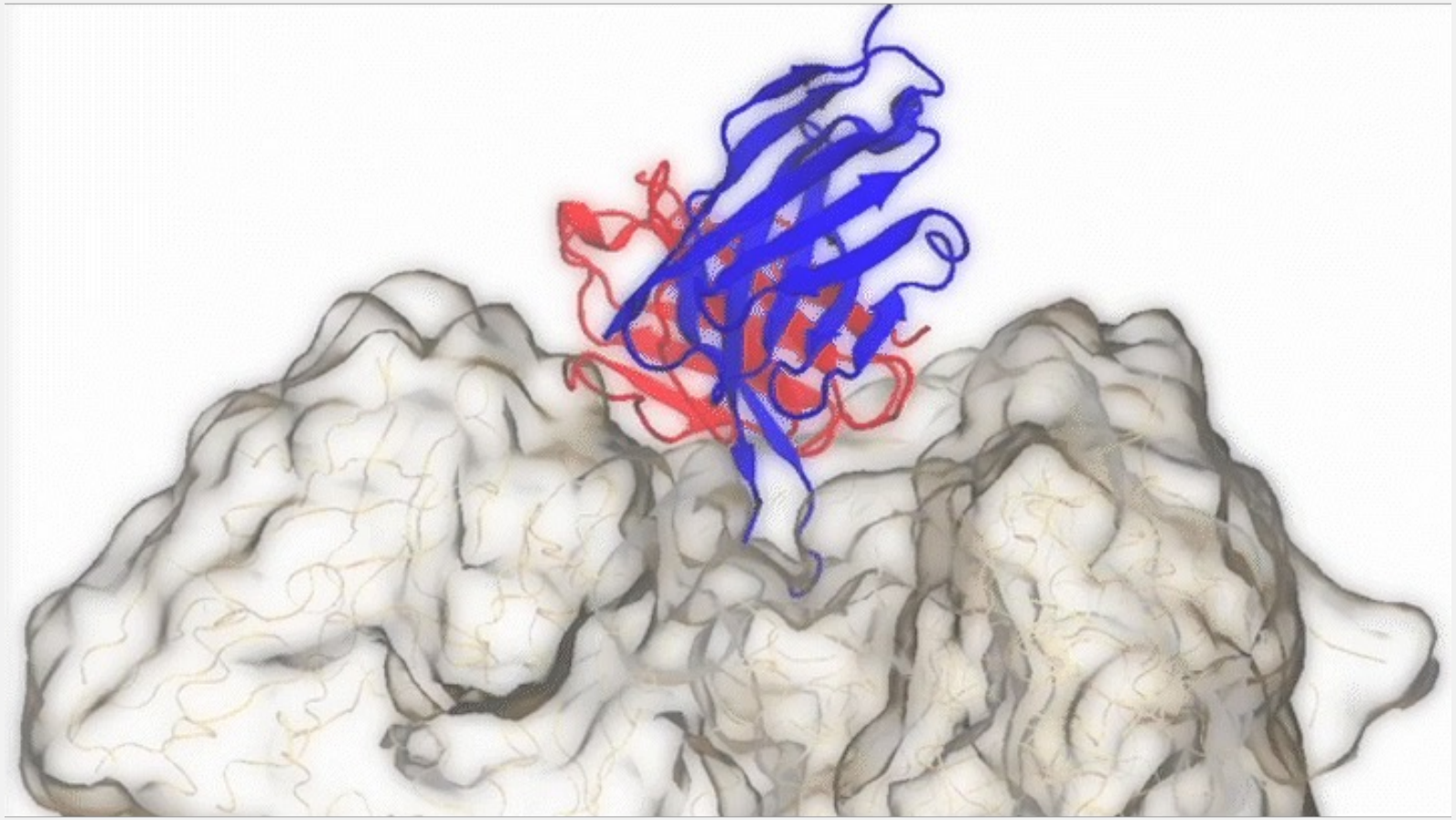
CASE STUDY – HIV DE NOVO DESIGN

4 best structures selected from 10,000+ structures generated by *de novo* model



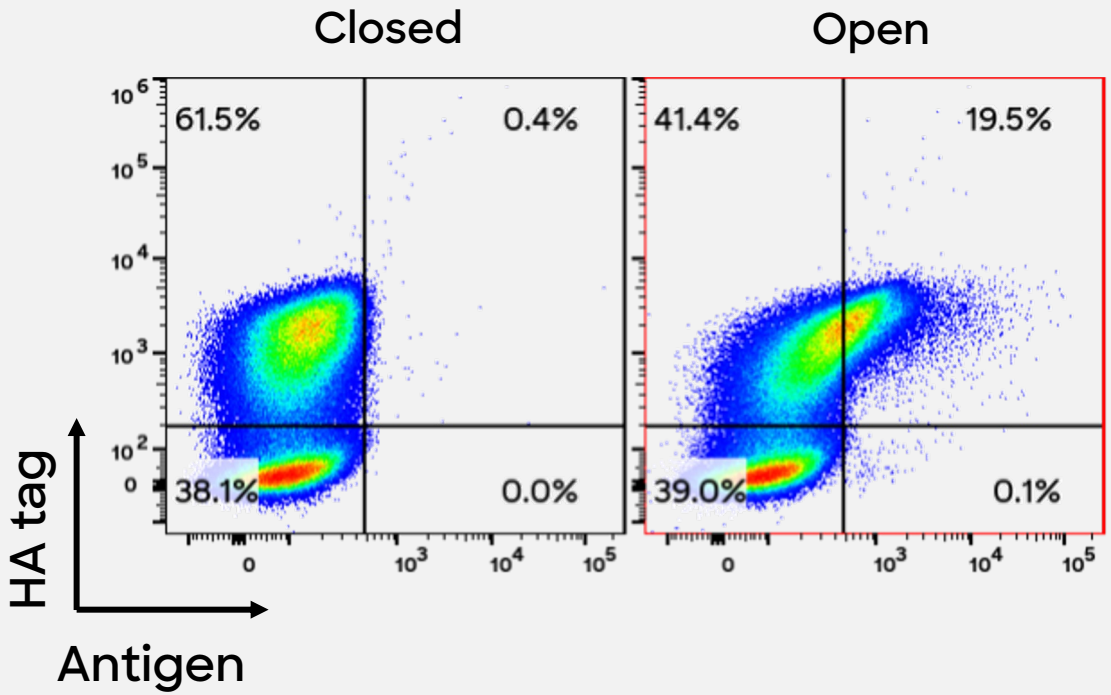
CASE STUDY – HIV DE NOVO DESIGN

Applied molecular dynamics simulation to evaluate *de novo* designed antibodies

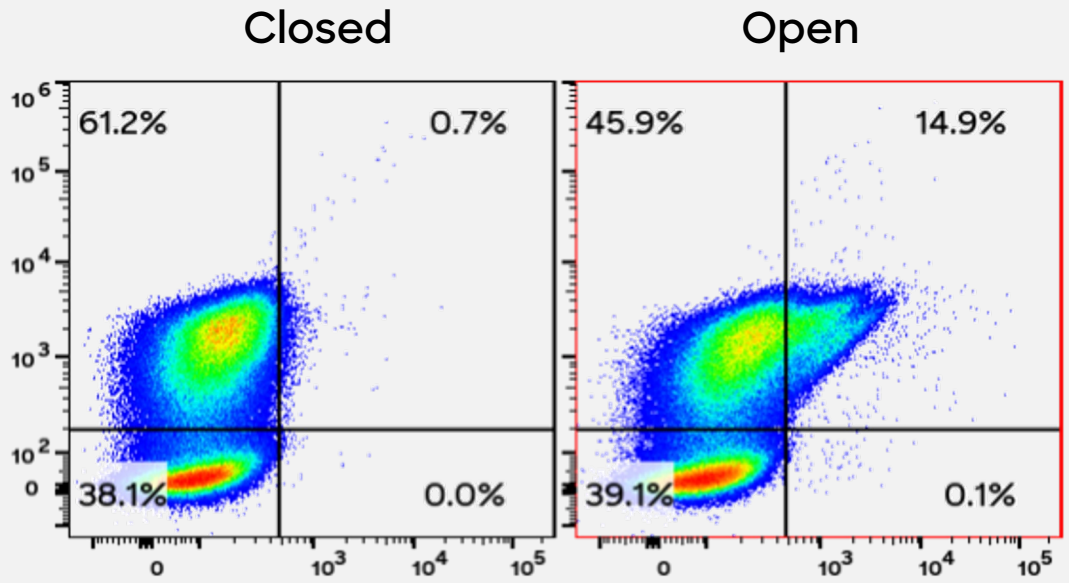


Enriched *de novo* library binds open, not closed, gp120 trimer conformation in YSD

Clade A gp120 trimer

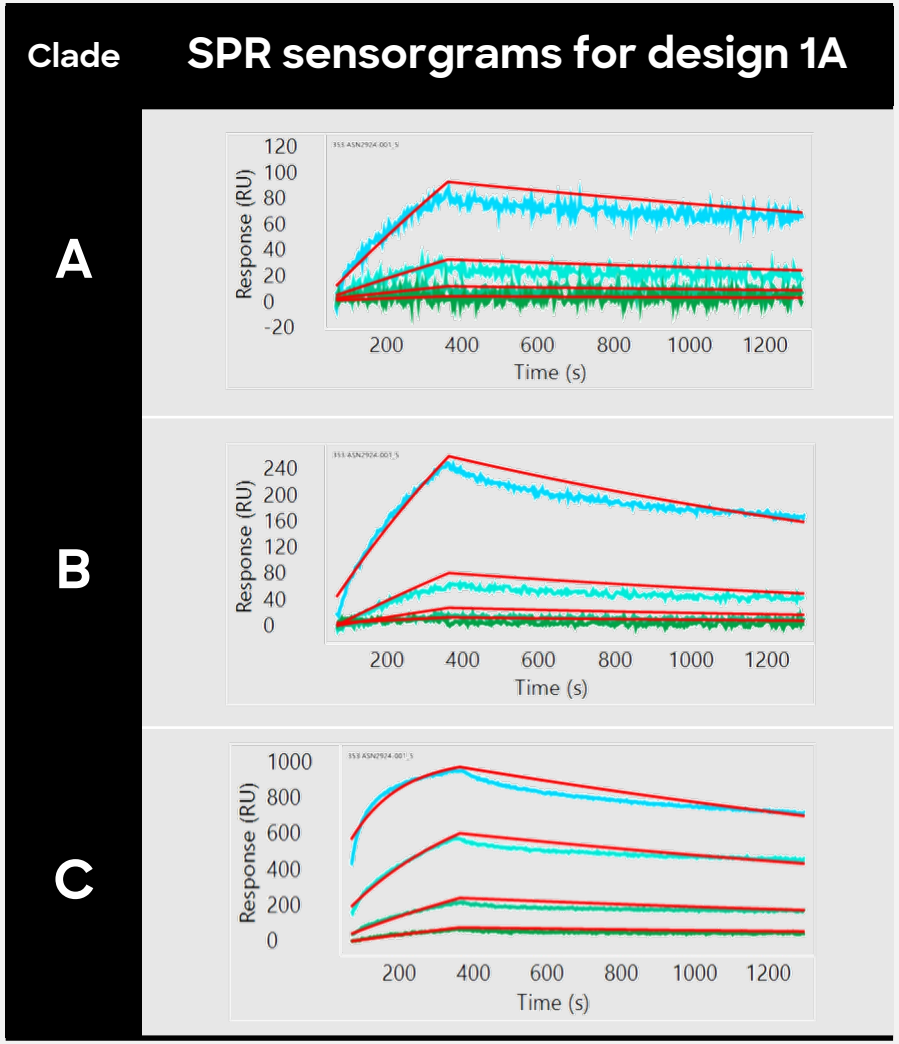


Clade B gp120 trimer



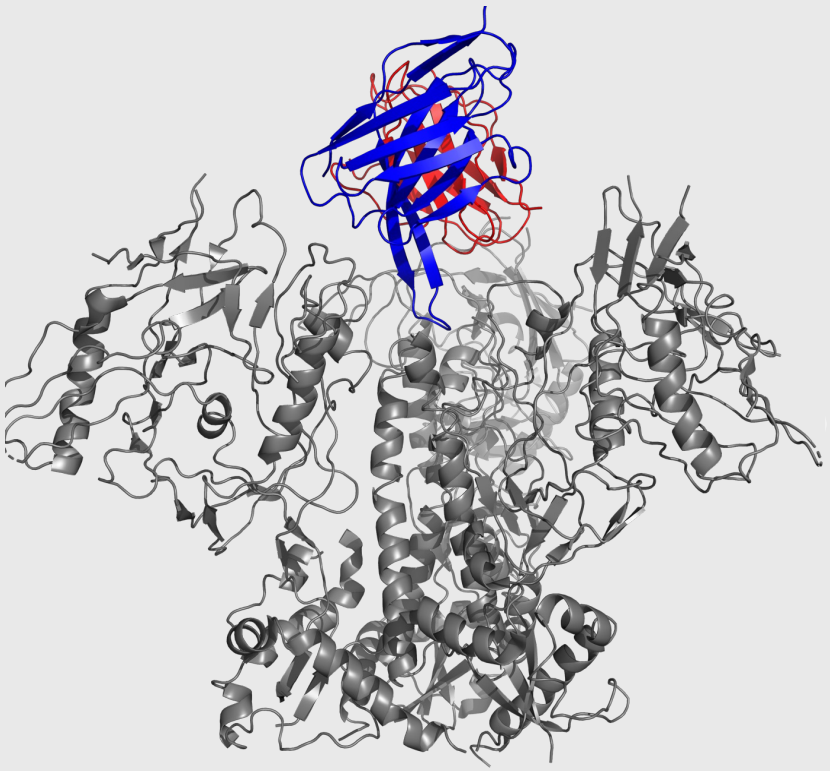
HIV-Caldera: Preliminary SPR data demonstrate binding of *de novo* designs to open conformations of all 3 clades

- Of enriched designs, five (5) unique HCDR3s were frequently represented
  - Four (4) unique HCDR3s came from Structure S2
  - One (1) unique HCDR3 came from Structure S3
- In SPR, these designs bound across clades A, B, and C to the open conformation suggesting caldera binding



CASE STUDY – HIV DE NOVO DESIGN TAKEAWAYS

HIV-Caldera: demonstrating AI *de novo* design for challenging target



SUMMARY

- *de novo* design model created a novel and diverse antibody which binds multiple clades of HIV indicating successful targeting of the caldera epitope
- Screening cascade enabled selection of differentially binding variants

NEXT STEPS

- Binders from this study will be selected for affinity maturation
- Structure of *de novo* binder and epitope specificity will be experimentally solved to confirm fidelity with designed structure and targeted epitope

```
from absci_library import codon_optimizer
library
= codon_optimizer.reverse_translate(library)
library.to_csv("covid-antibody-designs.csv")
library.to_wet_lab(assay="ACE")
```

CASE STUDY

AI Optimization for pH sensitivity

```
from absci import lead_opt_model
lead_optimizer = lead_opt_model.load_late
library.naturalness =
lead_optimizer.naturalness(library)
lead_optimizer.optimize(library).to_wet_l
say="SPR")
```

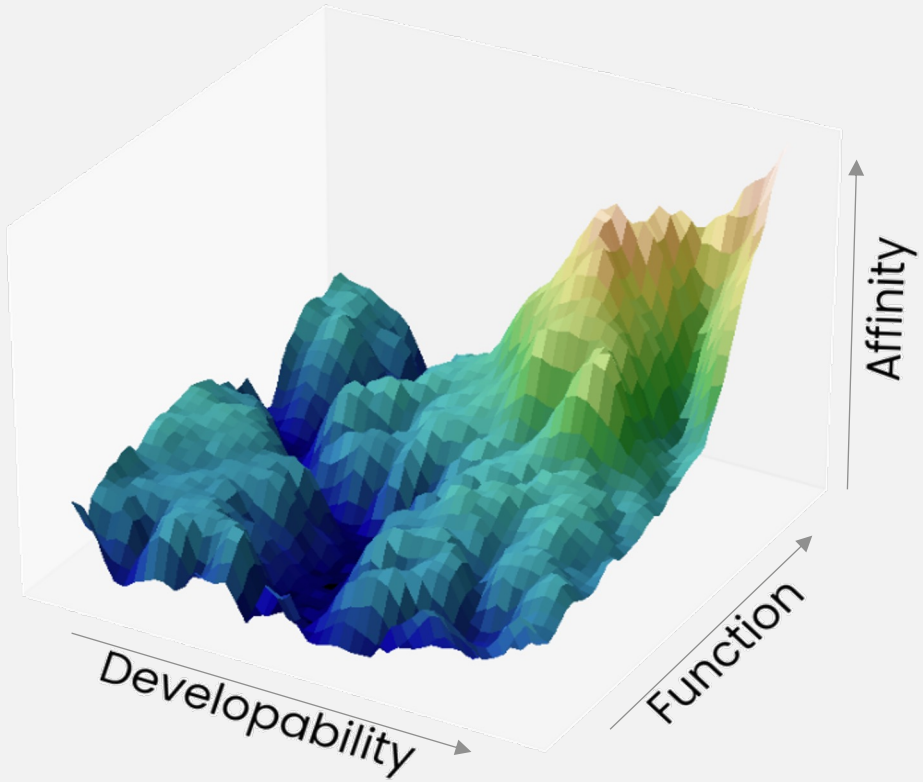
AI lead optimization platform for ‘smart biologics’

THE CHALLENGE:

The diversity of antibodies is vast, making it impossible for traditional methods to explore effectively.

ABSCI SOLUTION:

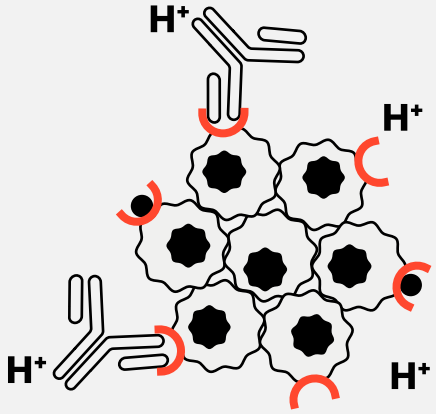
Our AI can search a space of ~10^{19}, a million times larger than traditional methods, identifying functional, developable antibodies in one step.



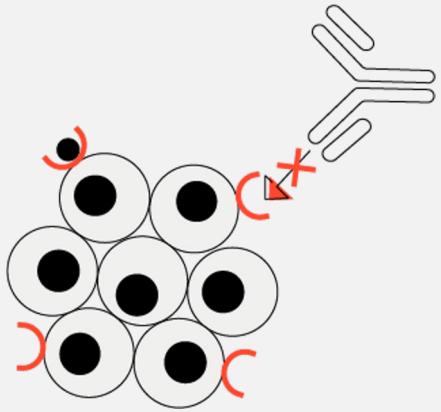
pH sensitivity may reduce toxicity and/or improve efficacy of therapeutic mAbs

TUMOR SPECIFICITY IMPROVES EFFICACY AND REDUCES "ON-TARGET OFF-TUMOR" TOXICITIES

Binding occurs in the acidic pH of the tumor microenvironment

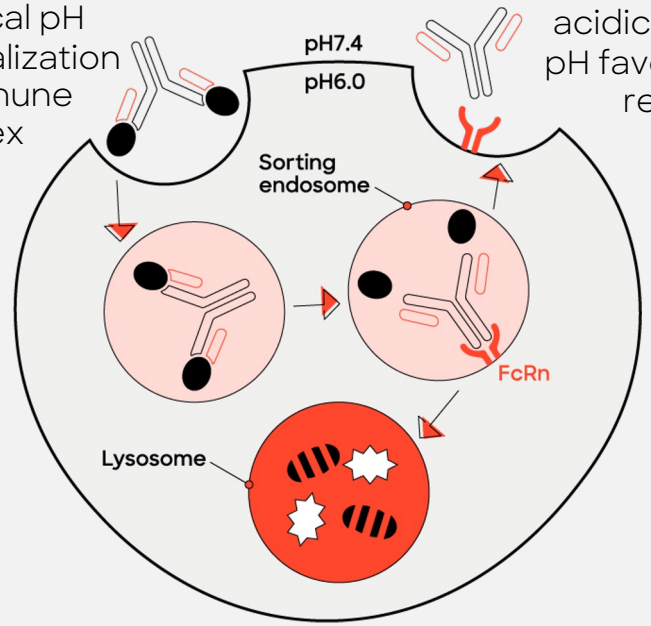


No binding occurs in the neutral pH surrounding healthy cells



DISSOCIATION IN THE ENDOSOME DRIVES ANTIBODY RECYCLING AND EFFICIENT CLEARANCE OF SOLUBLE TARGETS

Binding at physiological pH drives internalization of the immune complex

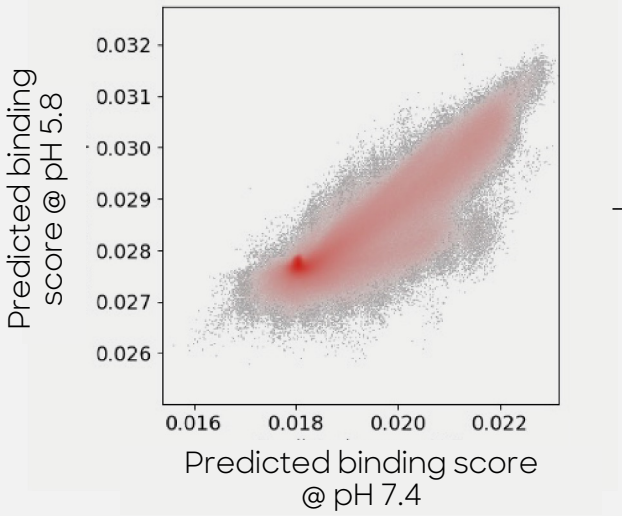


Dissociation at acidic endosomal pH favors antibody recycling

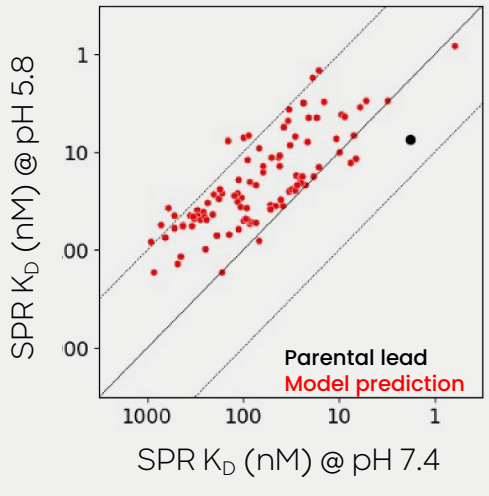
Models identify pH sensitive Fab variants from the same lead for either indication

1. Library for model training sampled 60 positions on heavy chain framework and CDRs with up to 7 substitutions biased for ionizable residues (H, K, R, D, E)
2. Library screened for antigen binding at pH 7.4 and pH 5.8
3. Model trained and used to generate antibodies with tuned pH dependency

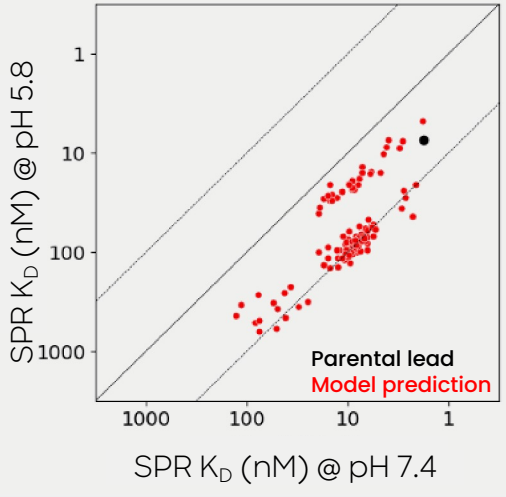
AI affinity scoring of variants within a large combinatorial space



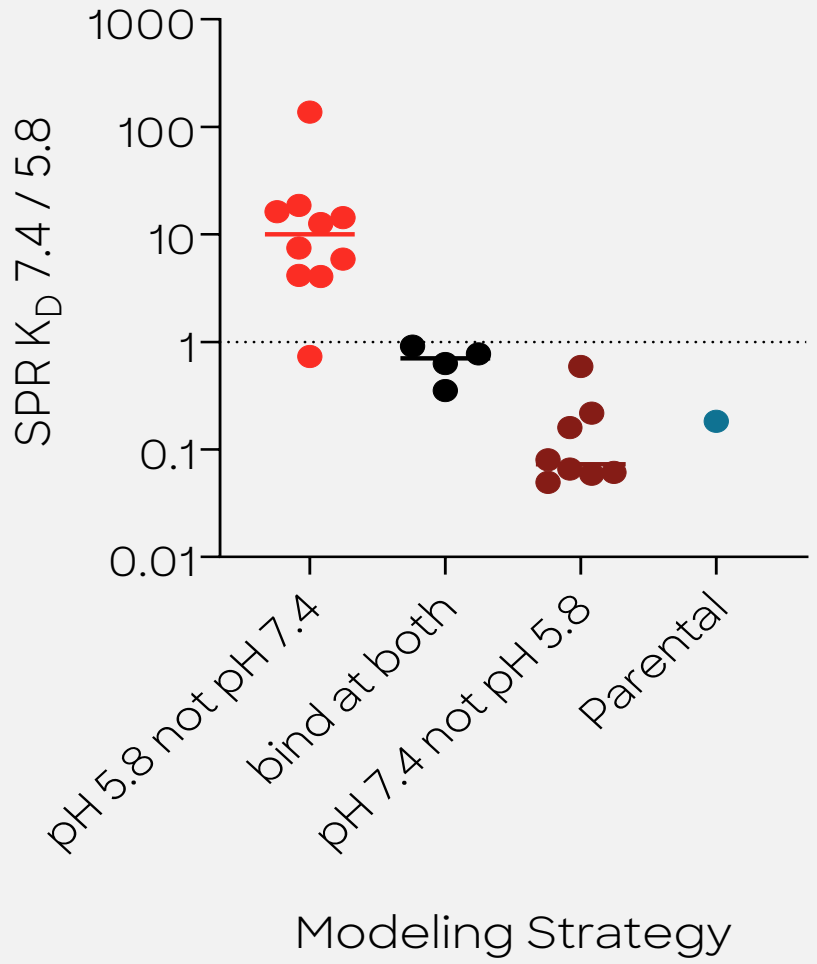
Lab measured affinities of Fab variants predicted to have tighter **binding at low pH**



Lab measured affinities of Fab variants predicted to have tighter **binding at neutral pH**



Hits reformatted as mAbs show desired binding profiles



- AI optimized leads achieves variants with pH sensitive binding up to 100x differential
- pH-sensitive leads had no liabilities for stability, aggregation and polyreactivity[1]
- Model proposed mutations use all 6 ionizing residues in heavy chain CDRs and framework region
- Sequences were proposed from a >10^{13} combinatorial space

[1] Data provided in appendix

Summarized platform case studies

DE NOVO DESIGN

- *de novo* design model created molecule binds multiple clades of HIV suggesting successful targeting of the caldera epitope
- Represents second disclosed target success for our *de novo* platform in the 2nd half of this year

Absci's *de novo design* platform can successfully address difficult to drug target epitopes

AI OPTIMIZATION

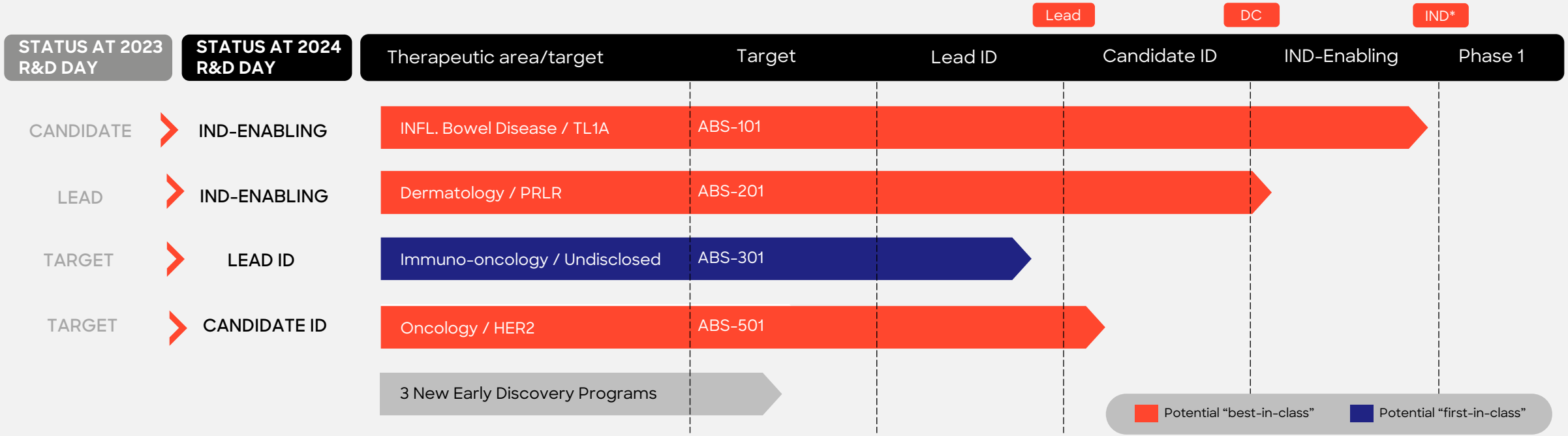
- Models identify unseen variants with 10x-20x pH sensitivity in both directions, and up to 100x differential compared to parental molecule after only one round
- Designed leads had no liabilities indicating the ability to successfully search a fitness landscape

Absci's lead optimization platform enables molecules with differentiated pharmacology

BREAK

AI PIPELINE

Advancing and expanding our pipeline of novel & differentiated assets designed using AI



*or equivalent ex-US filing

Partnered Programs

AstraZeneca · MERCK · almirall · Memorial Sloan Kettering Cancer Center · UCLA · precisionlife · TWIST BIOSCIENCE

INTERNAL PIPELINE

Absci's progress in Drug Creation

Continued advancement of lead assets

ABS-101

Continued progress of TL1A asset with FiH in 1H 2025

- New preclinical data support potentially superior immunogenicity profile
- Phase 1 Interim data readout in 2H 2025

ABS-201

Development Candidate for PRLR (prolactin receptor) nominated early December 2024

IND-enabling activities initiated

Discovery of next assets

ABS-301

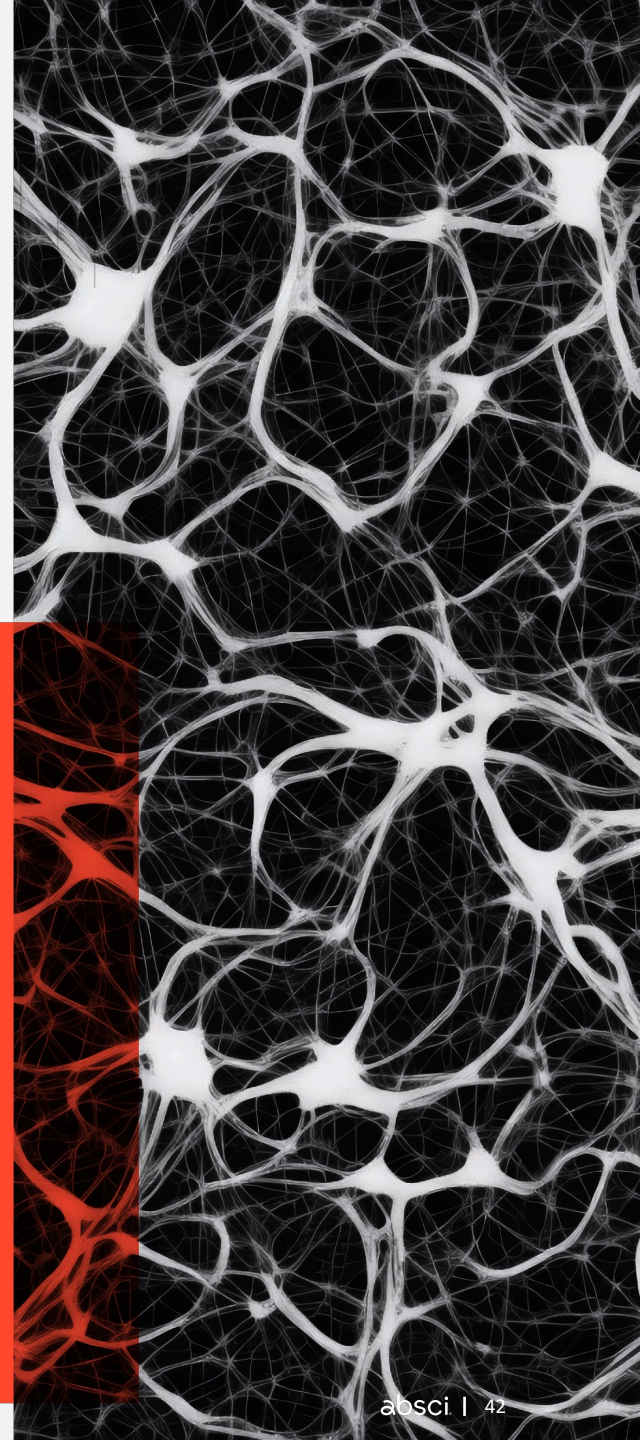
Progress of first-in-class asset with target validation and initial preclinical efficacy readouts in 1H 2025

NEW: ABS-501

Nomination of a potential best-in-class HER2 asset

```
from absci_library import codon_optimizer
library = codon_optimizer.reverse_translate(library)
library.to_csv("covid-antibody-designs.csv")
library.to_wet_lab(assay="ACE")
```

```
from absci import de_novo_model
model = de_novo_model.load_latest()
antigen = model.load_pdb("7olz.pdb", chain="A")
antibodies = model.predict(antigen, N=300000)
```



CHRISTIAN STEGMANN, PHD

SVP, DRUG CREATION

```
library = []
for antibody in antibodies:
    naturalness = model.naturalness(antibody.sequence)
    library.append((antibody, naturalness))
```

ABS-101 TL1A

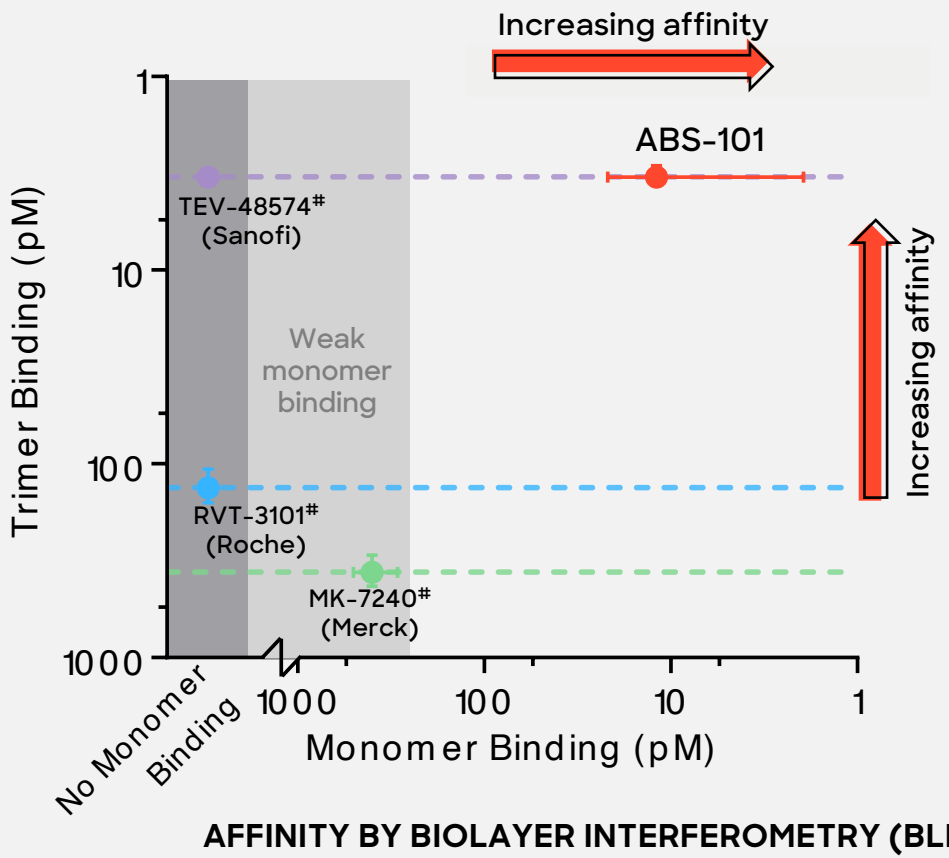
Potential best-in-class TL1A mAb designed using generative AI

- Higher affinity and potency
- Bind monomer and trimer TL1A
- High bioavailability
- Expected low immunogenicity
- Favorable developability
- High convenience based on half-life extension and sub-Q dosing

ABS-101, TL1A

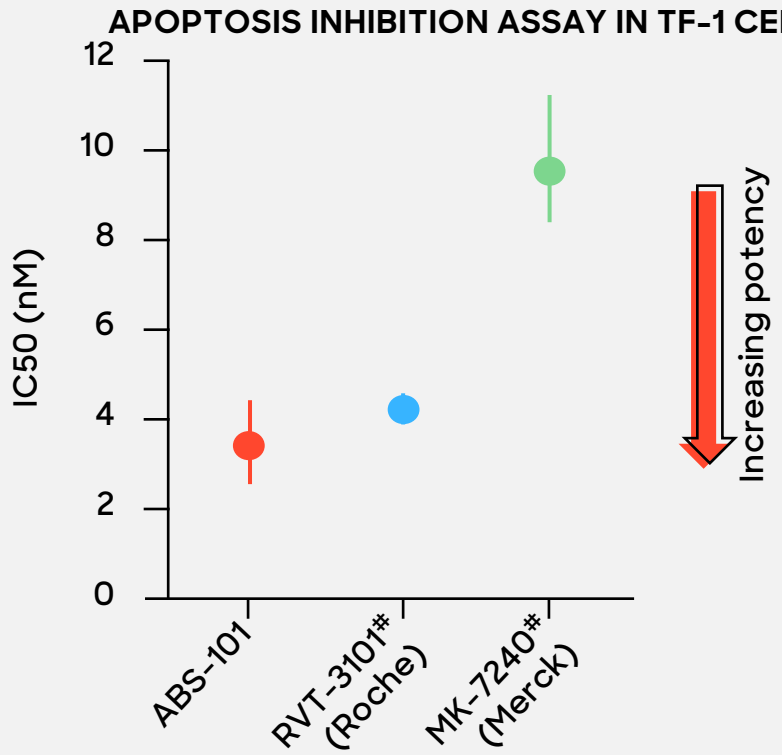
AI platform designed advanced leads with high affinity and superior potency

HIGH AFFINITY MABS WITH BINDING TO BOTH THE TL1A MONOMER AND TRIMER



AFFINITY BY BIOLAYER INTERFEROMETRY (BLI)

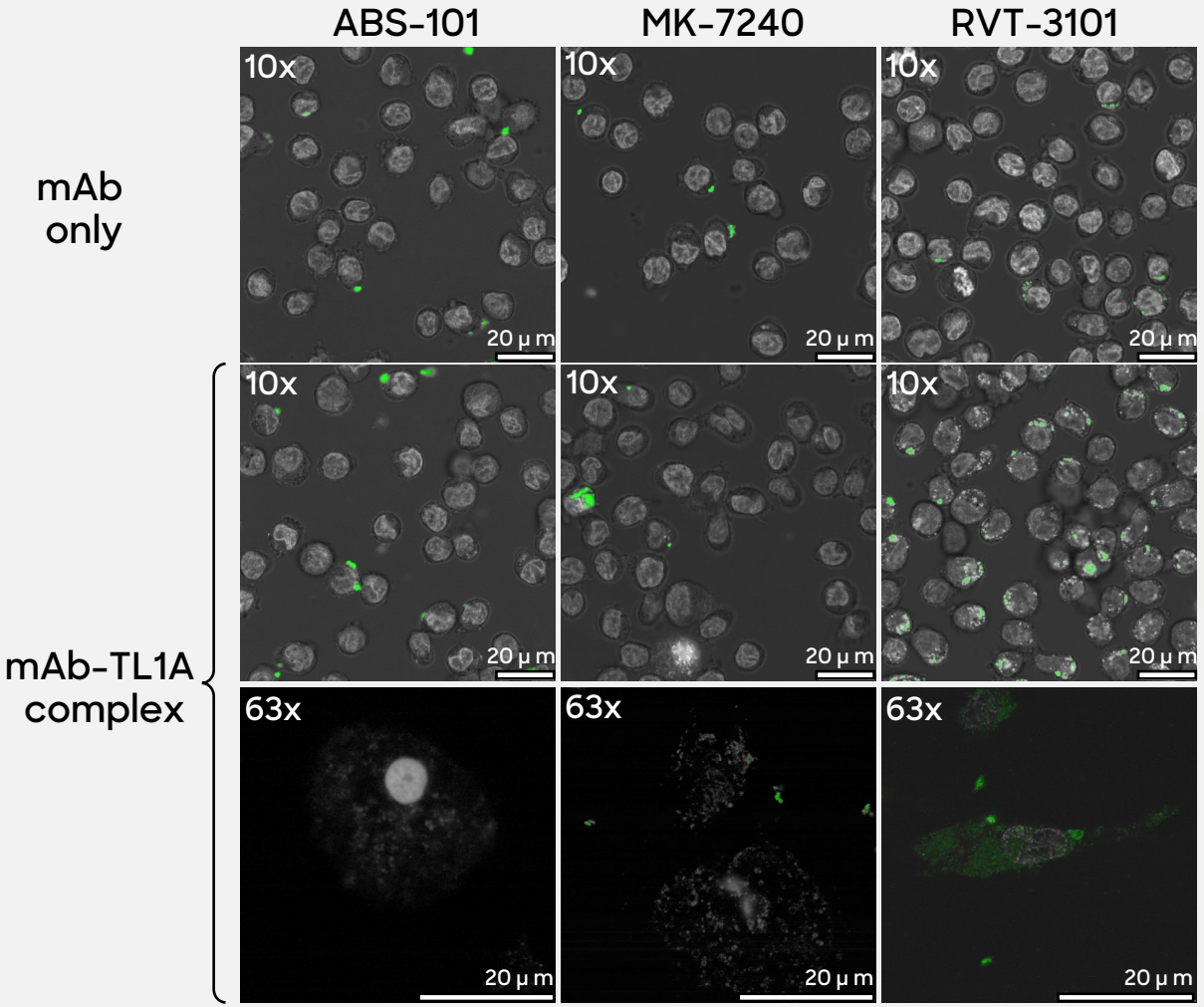
AI-OPTIMIZED LOW pM AFFINITY TRANSLATES TO SUPERIOR OR EQUIVALENT POTENCY



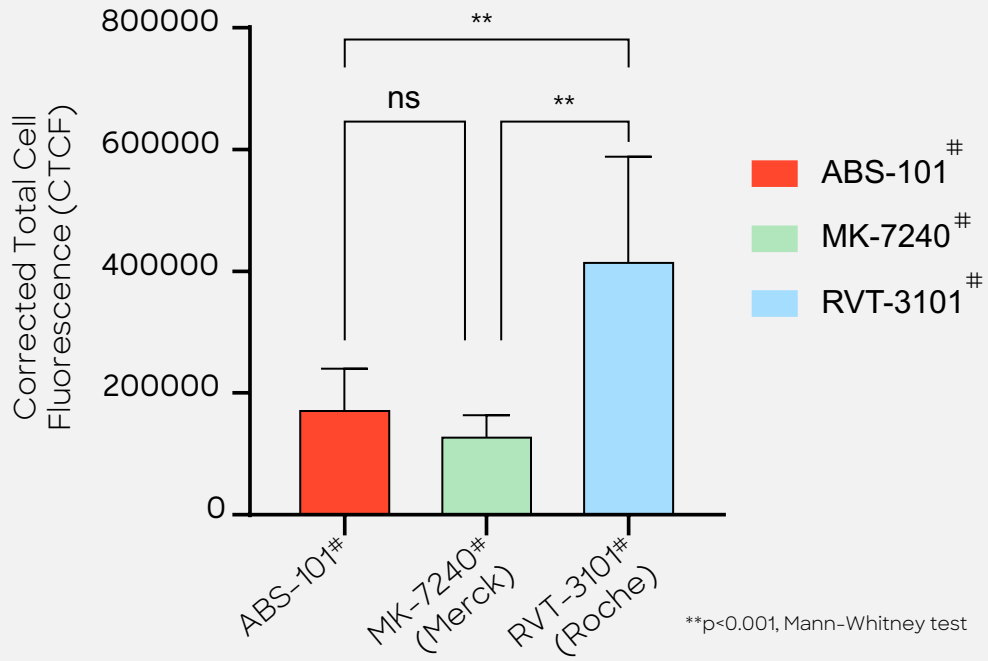
Estimated performance of a putative clinical competitor molecule

ABS-101, TL1A

ABS-101 and MK-7240 show reduced TL1A complex internalization than RVT-3101



MAB:TL1 COMPLEX INTERNALIZATION IN THP-1 CELLS



Internalization of mAb:TL1A complexes potentially contributes to immune activation and formation of ADA

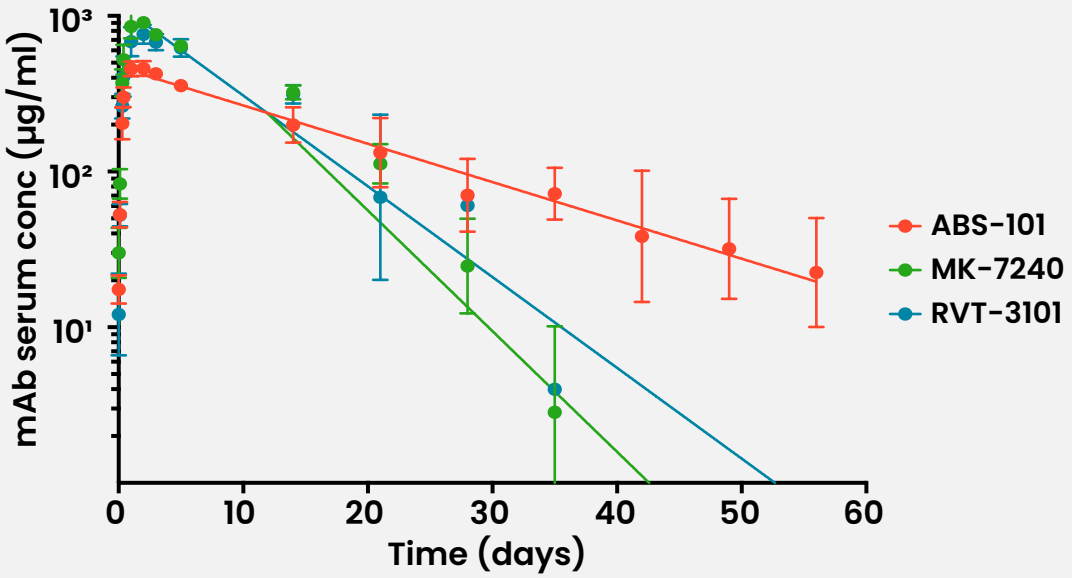
Reference, doi: 10.1053/j.gastro.2019.08.009

#Estimated performance of a putative clinical competitor molecule

ABS-101, TL1A

Latest Non-Human Primates & CMC data confirm compelling ABS-101 competitive profile

2-3X LONGER HALF-LIFE IN NHPs COMPARED TO CLINICAL COMPETITORS



NHP-PK & PRELIMINARY 13-WEEK NHP GLP-TOX

- 2-3x extended half-life in NHPs over clinical competitors to support Q8W-Q12W dosing interval
- ABS-101 shows enhanced biodistribution in NHPs, compared to antibodies in clinical development based on in silico modelling
- High subcutaneous bioavailability in NHPs at ~80%
- Preliminary 13-week GLP-tox shows no treatment-related adverse findings during in-life phase and necropsy; histopathology pending

CMC - HIGH CONCENTRATION FORMULATION

- Optimal developability profile allowed successful development of high-concentration formulation at 200mg/mL suitable for subcutaneous injection

ABS-101, TL1A

AI-designed for potentially optimal therapeutic profile

ATTRIBUTE	ABS-101	MK-7240 (MERCK, PROMETHEUS)	RVT-3101 (ROCHE, ROIVANT)	TEV-48574 (SANOFI, TEVA)
High affinity/potency	++	-	+	+
Trimer TL1A binding	++	+	+	++
Monomer TL1A binding	++	+	-	-
Low Immunogenicity potential	+	+	-	NA
Bioavailability/ Biodistribution	++	+	-	NA
Sub-Q injection	+	+	+	-
Q8W to once quarterly dosing	++	-	-	--

ABS-101 TL1A

Continued progress with FiH expected in 2025

1Q 2024

AI-designed Development Candidate

- ✓ High affinity
- ✓ High potency
- ✓ Long half-life
- ✓ Favorable manufacturability

INITIATED FEB 2024

IND-enabling studies to evaluate:

- ✓ GMP manufacture of sub-Q formulation at high concentration
- ✓ Favorable PK and long half-life
- ✓ High Bioavailability in NHPs
  - Low ADA
- ✓ 13-week GLP tox: No treatment-related adverse findings during in-life phase and necropsy observed. Histopathology pending

1H 2025

Phase 1 double-blind, placebo-controlled trial initiation

2H 2025

Phase 1 interim data readout

INTERNAL PIPELINE

Absci's progress in Drug Creation

Continued advancement of lead assets

ABS-101

Continued progress of TL1A asset with FiH in 1H 2025

- New preclinical data supporting superior immunogenicity profile
- Phase 1 Interim data readout in 2H 2025

ABS-201

Development Candidate for PRLR (prolactin receptor) nominated 12/2024

IND-enabling activities initiated

Discovery of next assets

ABS-301

Progress of first-in-class asset with target validation and initial preclinical efficacy readouts in 1H 2025

NEW: ABS-501

Nomination of a potential best-in-class HER2 asset

WHY ARE WE EXCITED ABOUT ABS-201?

Rationale for developing a PRLR (prolactin receptor) antibody in androgenic alopecia

Clinical and commercial unmet need

- Significant unmet clinical need for androgenic alopecia
- Large market: 80M patients in US, which is a highly motivated patient population

Scientific rationale

- Highly validated target (efficacy & safety) for treatment of androgenic alopecia
- Supportive pharmacological profile of ABS-201

Development path

- Straightforward clinical development path with option for early PoC
- Low competition, potentially first to US market

Anthony Rossi, MD

Mike Jafar

Christian Stegmann, PhD

```
from absci_library import codon_optimizer
library
= codon_optimizer.reverse_translate(library)
library.to_csv("covid-antibody-designs.csv")
library.to_wet_lab(assay="ACE")
```

UNMET CLINICAL NEED FOR ALOPECIA

ANTHONY ROSSI MD, FAAD, FACMS
ATTENDING DERMATOLOGIST – MEMORIAL SLOAN KETTERING CANCER CENTER
PROFESSOR OF DERMATOLOGY – WEILL CORNELL MEDICAL COLLEGE

```
from absci import lead_opt_model
lead_optimizer = lead_opt_model.load_late
library.naturalness =
lead_optimizer.naturalness(library)
lead_optimizer.optimize(library).to_wet_l
say="SPR")
```

ANTHONY ROSSI, MD, FAAD, FACMS

ATTENDING DERMATOLOGIST – MEMORIAL SLOAN KETTERING CANCER CENTER

PROFESSOR OF DERMATOLOGY – WEILL CORNELL MEDICAL COLLEGE

Professional Expertise: Double board-certified dermatologist and micrographic surgeon specializing in cutaneous oncology, aesthetic dermatology, and hair loss.

Research Contributions: Conducted 15+ clinical trials, including collaborations on novel drug therapies with major pharmaceutical companies. Pioneered restorative oncodermatology to address skin effects of cancer treatments; led advancements in treating aging and hair loss related to cancer therapy.

Editorial & Leadership Roles:

- Assistant Editor: *Journal of the American Academy of Dermatology*, *Dermatologic Surgery*, *Lasers in Surgery and Medicine*.
- Leadership: Executive Board, American Society for Dermatologic Surgery (ASDS); Nominating Committee, American Academy of Dermatology (AAD).
- Member: ASLMS, ACMS.

Education & Training:

- BS, New York University.
- MD, Weill Cornell Medical College.
- Residency: Dermatology, St. Luke's Roosevelt Hospital.
- Fellowship: MSKCC and Weill Cornell Medical College.

Experience and feedback from alopecia patients

GROWING # OF PATIENTS ARE ACTIVELY SEEKING SOLUTIONS FOR HAIR LOSS

Patients cut across demographics and includes young women and men

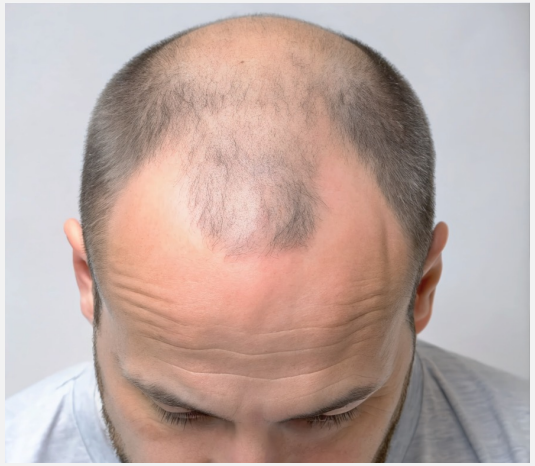
Patients often self-diagnose and have tried various treatment options with limited success

Patients want FDA approved therapeutics that are safe and efficacious

Female patients in particular lack FDA approved treatment

Hair loss has significant psychosocial impact on quality of life

Male and female androgenetic alopecia comprises the vast majority of alopecia patients



MALE ANDROGENETIC ALOPECIA

Male androgenetic alopecia, also known as male pattern hair loss is a common type of hair loss that affects men and characterized by frontotemporal and vertex thinning.

FEMALE ANDROGENETIC ALOPECIA

Female androgenetic alopecia, also known as female pattern hair loss is a common form of hair loss that affects adult women. It's characterized by a gradual thinning of hair at the top of the head and widening of the part, while the hairline usually remains intact

80 – 90 MILLION AMERICANS LIVE WITH ANDROGENETIC ALOPECIA

AFFECTS OVER 50% OF MEN BY AGE 50

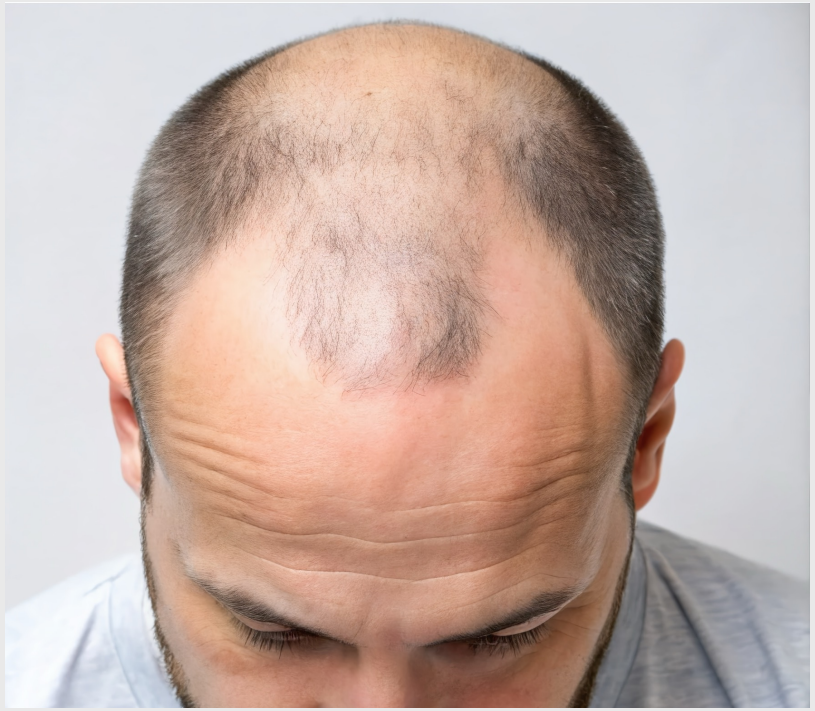
AFFECTS OVER 40% OF WOMEN BY AGE 50

Alopecia incidence is anticipated to rise with increasing uptake of GLP-1s. Jastreboff A, et al. (2022) report approximately 5% of patients taking Tirzepatide experienced alopecia as an adverse event

See Jastreboff A, et al. Tirzepatide Once Weekly for the Treatment of Obesity. N Engl J Med 2022;387:205-216.

SIGNIFICANT CLINICAL UNMET NEED

Limited treatment options exist for male androgenetic alopecia



AFFECTS ~50M MEN IN THE UNITED STATES

LIMITED TREATMENT OPTIONS DUE TO LACK OF EFFICACY AND SIDE EFFECTS

- **Minoxidil – FDA Approved (Topical)**
  - Requires continuous use - compliance is an issue
  - Efficacy varies, and is driven by SULT1A1 activity in an individual, with higher activity is associated with a better response to minoxidil
  - Side effects: temporary hair shedding, scalp irritation, and changes in hair texture and sometime palpitations or hypotension

  Finasteride – FDA Approved (Oral)
  - Requires lifetime use and daily compliance is an issue
  - Serious sexual side effects have been reported – even described as permanent - Finasteride Syndrome
  - Linked to depression
  - Cannot be handled by pregnant patients and not to be used while conceiving – may decrease sperm count
  - Some reports show efficacy of slowing down hair loss

- **Other options**
  - Low-Level Laser Therapy: mixed evidence on efficacy and overall lower effective vs. pharmaceuticals
  - Hair Transplants: invasive; limited by donor hair availability; does not address ongoing alopecia in untreated areas – and requires concomitant hair loss suppression

SIGNIFICANT CLINICAL UNMET NEED

Even more limited treatment options exist for female androgenetic alopecia

AFFECTS ~30M WOMEN IN THE UNITED STATES

LIMITED TREATMENT OPTIONS DUE TO LACK OF EFFICACY AND SIDE EFFECTS

- **Minoxidil – FDA Approved (Topical)**
  - Requires continuous use - compliance is an issue
  - Efficacy varies, and is driven by SULT1A1 activity in an individual, with higher activity is associated with a better response to minoxidil
  - Side effects: temporary hair shedding, scalp irritation, and changes in hair texture and sometime palpitations or hypotension
- **Finasteride**
  - Not approved by FDA for female androgenetic alopecia in childbearing women due to safety concerns including potential birth defects
- **Other options**
  - Low-Level Laser Therapy: mixed evidence on efficacy and overall lower effective vs. pharmaceuticals

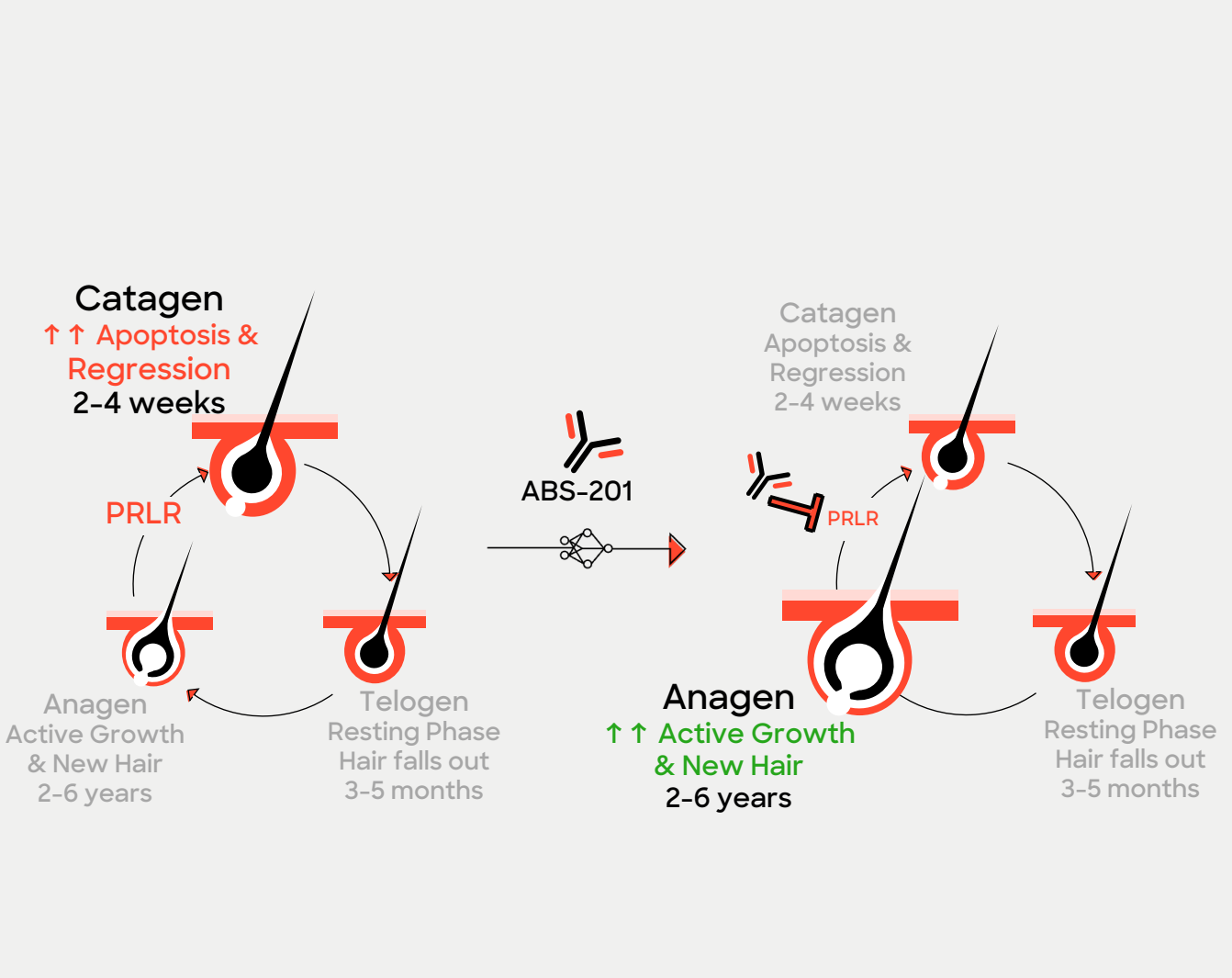
LACK OF INNOVATION IN THE ANDROGENETIC ALOPECIA THERAPEUTIC LANDSCAPE OVER THE PAST 25+ YEARS

LAST FDA APPROVED THERAPY IN 1997

Patients and clinicians need better treatment options for “hair re-growth”

- Hair re-growth, not just slowing of hair loss
- Safe
- Minimal side effects
- Durable effect
- Convenient administration frequency
- FDA approved

ABS-201 targets a novel mechanism that promotes hair into the anagen phase



ABS-201 TARGET PRODUCT PROFILE:

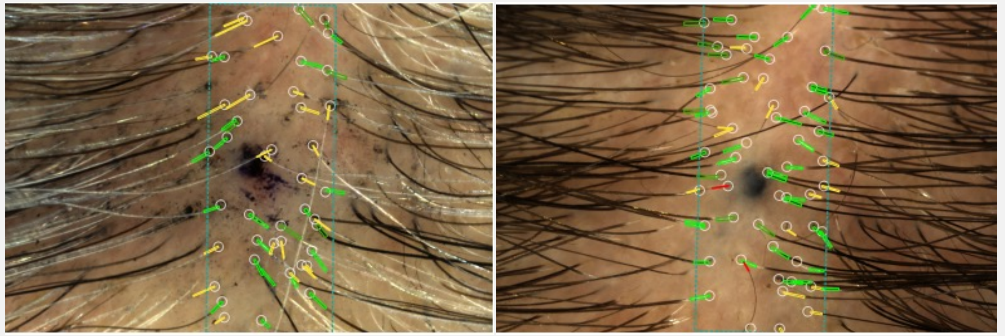
- ☑ **Significant hair re-growth (vs minoxidil)**
- ☑ **Safe with minimal side effects**
- ☑ **Durable effect**
- ☑ **Convenient infrequent dosing**

BENCH TO BEDSIDE

Straightforward path for ABS-201 clinical development

CLINICAL TRIALS FOR HAIR TREATMENTS ARE STRAIGHTFORWARD

- Ease of patient recruitment
- High level of KOL Interest
- Ability to conduct multi-center trials
- Non-invasive trial conduct



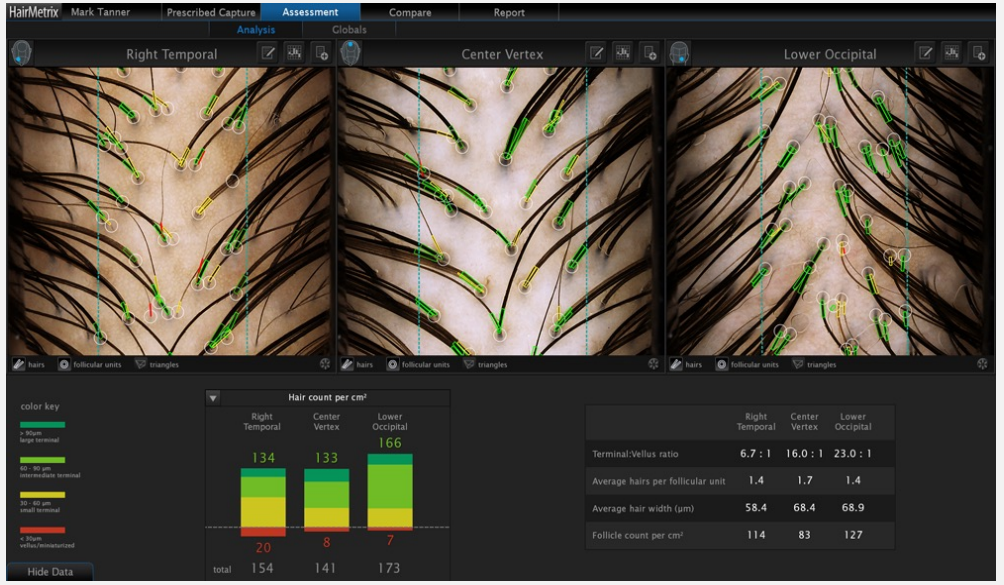
WELL DEFINED ENDPOINTS WITH VALIDATED MEASURES

Primary Endpoints: Quantitative measurements with follicular dermatoscope (trichoscopy)

- Terminal Hair Growth
- Total Hair Count
- Total hair density (per cm2)

Secondary Endpoints:

- Patient Reported Outcomes as measured by validated scales accepted by the FDA (HairDex; Hair Specific Skindex-29 (FPHL); The Men's Hair Growth Questionnaire (MHGQ)); Women's Hair Growth Questionnaire (WHGQ)
- Hair color - regimentation



Leading KOL network with extensive clinical and commercial reach

Over 500,000 alopecia patients treated each year by these KOL practice networks

DR. ANTHONY ROSSI
Memorial Sloan Kettering Cancer Center

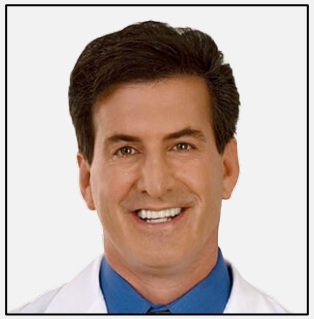
DR. KEN WASHENIK
Bosley Medical Group

DR. MARIA K. HORDINSKY
Univ. of Minnesota

DR. NEIL S. SADICK
Sadick Dermatology

DR. MEENA SINGH
Skin and Hair Center

DR. DORIS DAY
Day Dermatology & Aesthetics



DR. MATT L. LEAVITT
Advanced Dermatology and Cosmetic Surgery

DR. SUZANNE KILMER
Laser & Skin Surgery Center of Northern California

DR. GLYNIS ABLON
Ablon Skin Institute

DR. CHRISTINA RING
ZENA Medical

DR. CHESAHNA KINDRED
Kindred Hair & Skin Center

```
from absci_library import codon_optimizer
library
= codon_optimizer.reverse_translate(library)
library.to_csv("covid-antibody-designs.csv")
library.to_wet_lab(assay="ACE")
```

MARKET OPPORTUNITY

MIKE JAFAR
MEDICAL AESTHETICS STRATEGIC ADVISOR | BCG
ADVISOR | ABSCI

```
from absci import lead_opt_model
lead_optimizer = lead_opt_model.load_late
library.naturalness =
lead_optimizer.naturalness(library)
lead_optimizer.optimize(library).to_wet_l
say="SPR")
```

MIKE JAFAR

MEDICAL AESTHETICS STRATEGIC ADVISOR, BCG

ADVISOR, ABSCI

Professional Expertise:
Over 20 years in healthcare and medical aesthetics, played a pivotal role in launching or scaling iconic products:

Juvéderm VOLUMA™ XC

BOTOX® onabotulinumtoxinA injection

coolsculpting®

Jeuveau® prabotulinumtoxinA-xvfs injection

SkinMedica™

Latisse® (bimatoprost ophthalmic solution) 0.03%

Led initiatives at Allergan, Evolus, and Desktop Health, driving innovation in aesthetics and healthcare technology. Founder of JOYA Health and Xtresse

Over $8B worth of M&A in the medical aesthetics category

Medical Aesthetics Strategic Advisor to the Boston Consulting Group (BCG)

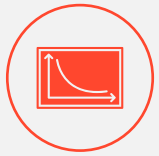
ABS-201 represents a new category offering hair re-growth

Unlocks New Category Meeting Massive Consumer Need

- Lack of effective treatments and lack of innovation in the hair space opens opportunity for new science-based therapy
- An effective therapy that regrows hair has long been considered the last frontier of aesthetics

Constant Consumer Demand Driven by Lifelong Focus on Skin & Hair

- The skin is a lifelong priority for consumers, fueling consistent demand for anti-aging, hydration, and appearance-enhancing treatments across all income and age groups



Strong Willingness to Self-Pay Across Demographics

- Consumers across income levels invest in aesthetic treatments, with flexible pricing making procedures accessible and driving steady demand

Appearance-Driven Culture Drive On-going Investment in Aesthetic Products

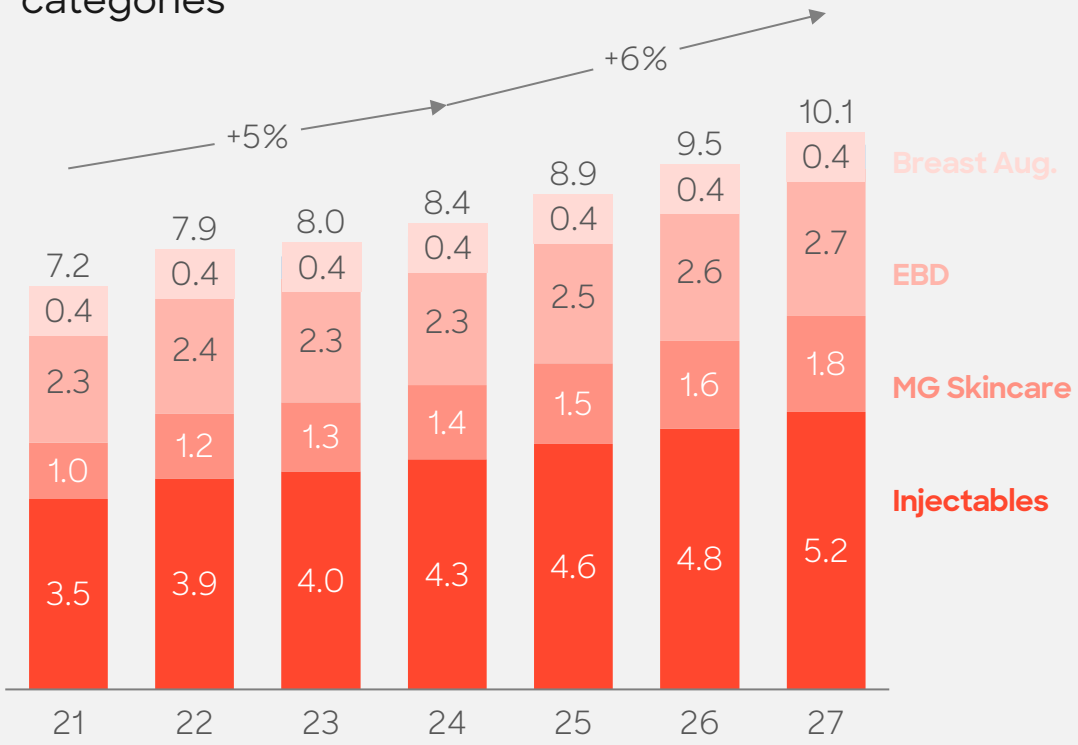
- The skin as a highly visible indicator of health and beauty in social media and professional settings, which drives consistent investment in aesthetic treatments

Source: BCG

ABS-201 represents a new category of injectable therapy for large consumer-driven market with a wide-range of providers

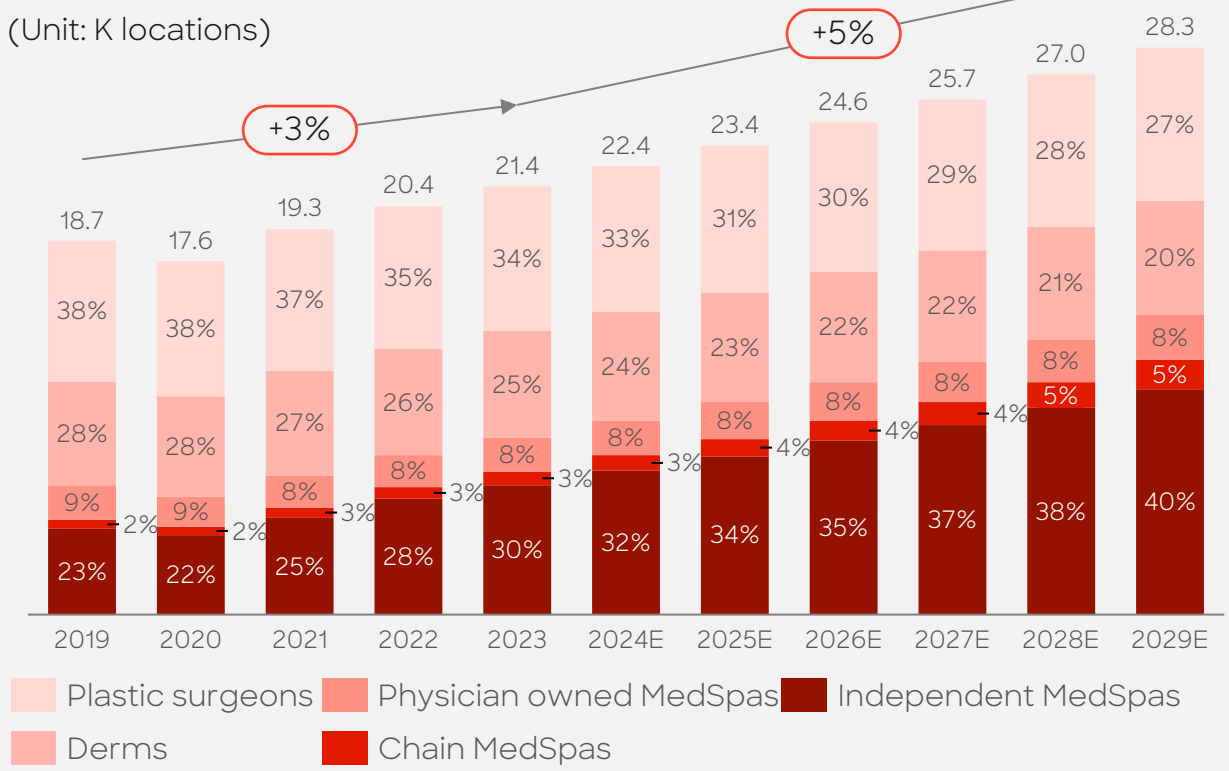
Injectables is the largest category of Aesthetics

Injectables growing at ~6% CAGR based in legacy categories



US Market outlook ($Bn)

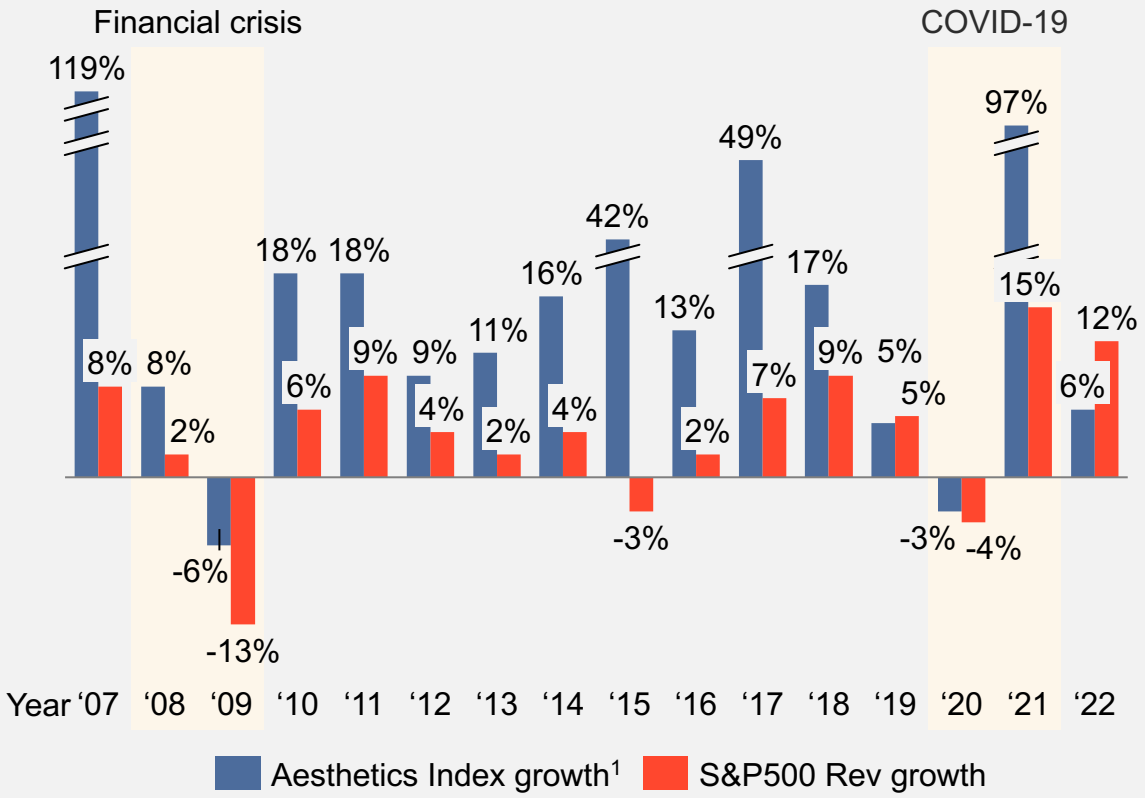
Number of Core Medical Aesthetics Locations



Source: IBIS; AmSpa

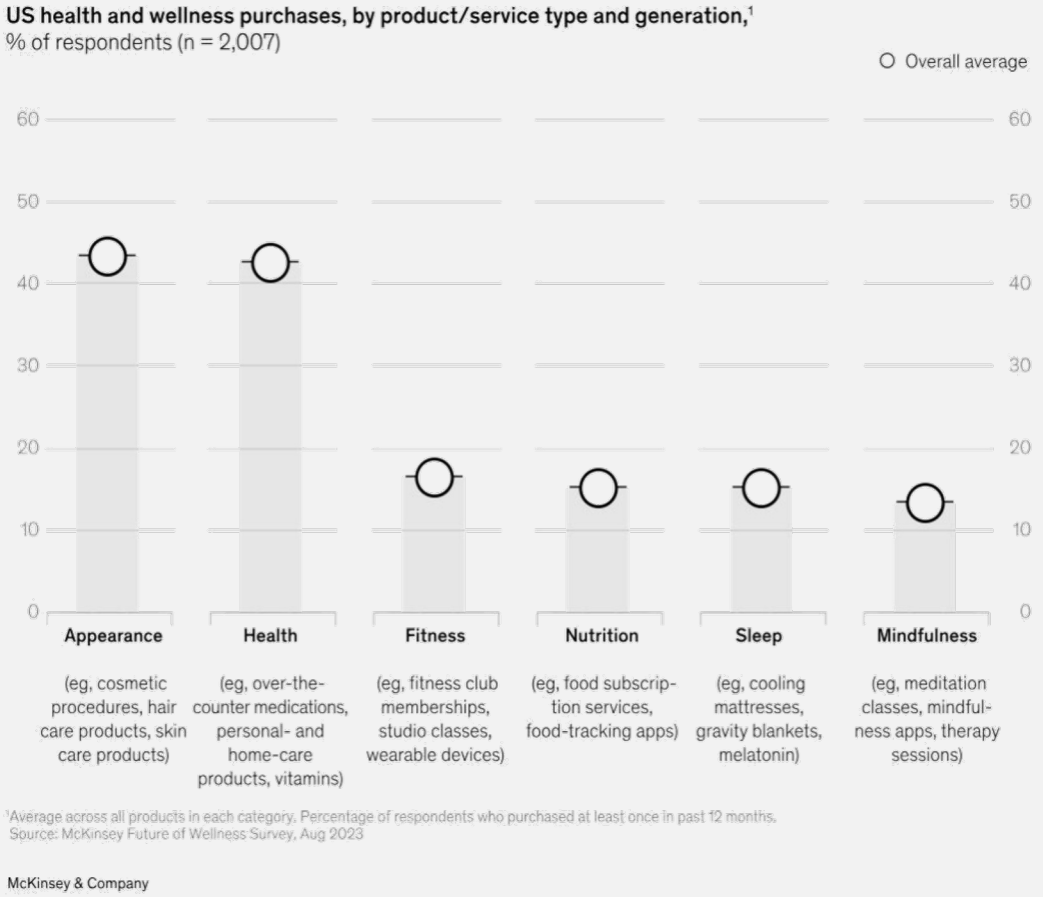
ABS-201 as a new category fits into the rapidly growing and resilient consumer demand for appearance and wellness products

IN PAST DOWNTURNS, THE AESTHETICS SECTOR HAS PROVEN MORE RESILIENT THAN THE BROADER MARKET[1]



1. Aesthetics Index is built using the weighted average revenue growth of Allergan Ax, Evolus, InMode, Cutera, Establishment labs.
2. Source: BCG Consumer Survey 2023, Expert interviews.

SIGNIFICANT CONSUMER SPEND ON APPEARANCE & HEALTH



ABS-201's profile addresses massive market demand

U.S. AESTHETICS INJECTABLES MARKET: $4.3B
(e.g. Fillers and Botox)

60M CONSUMERS CONCERNED ABOUT LINES/WRINKLES

↓ 11.7% elect injectable therapy

7M PATIENTS TREATED /yr

↓

$4.3B per year (OEM)
growing at 6% CAGR

PROJECTED ABS-201 U.S ANDROGENIC ALOPECIA MARKET: $7-14B

Model uses aesthetic injectables conversion metrics as a proxy to predict annual ABS-201 treatments

80M AMERICANS WITH ANDROGENIC ALOPECIA

↓ 11.7% elect injectable therapy

9M PATIENTS TREATED /yr

↓

$7-14B per year*

* Projections depend on pricing (relative to efficacy) assumptions. Additional upside potential from GLP1 side effects, possible hair color restoration

```
from absci_library import codon_optimizer
library
= codon_optimizer.reverse_translate(library)
library.to_csv("covid-antibody-designs.csv")
library.to_wet_lab(assay="ACE")
```

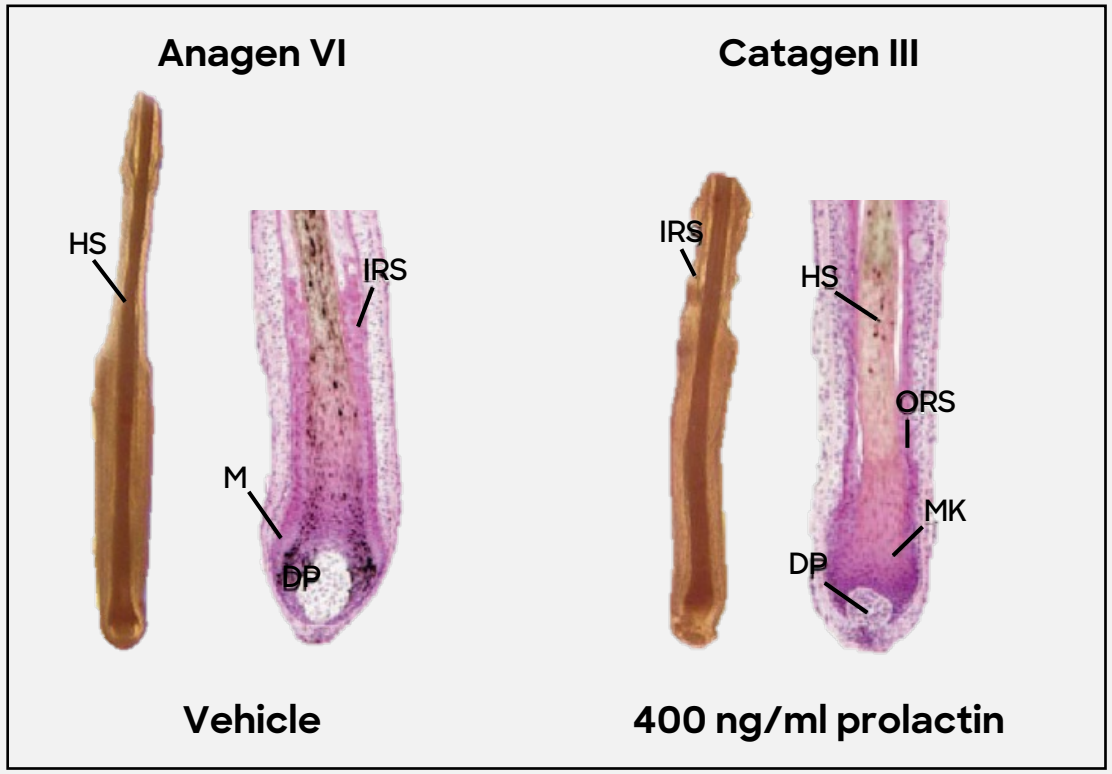
ABS-201 DRUG CREATION AND DEVELOPMENT

CHRISTIAN STEGMANN, PHD
SVP, DRUG CREATION

```
from absci import lead_opt_model
lead_optimizer = lead_opt_model.load_late
library.naturalness =
lead_optimizer.naturalness(library)
lead_optimizer.optimize(library).to_wet_l
say="SPR")
```

Prolactin impacts on organ-cultured human hair follicles

Prolactin-drives hair follicle regression in human *ex vivo* culture



Prolactin prematurely induces a catagen-like stage in organ-cultured human hair follicles[1] characterized by:

- Condensed shape of the dermal papilla
- Diminishment of the hair matrix volume
- Apparent cessation of pigmentation
- Inhibition of hair shaft elongation

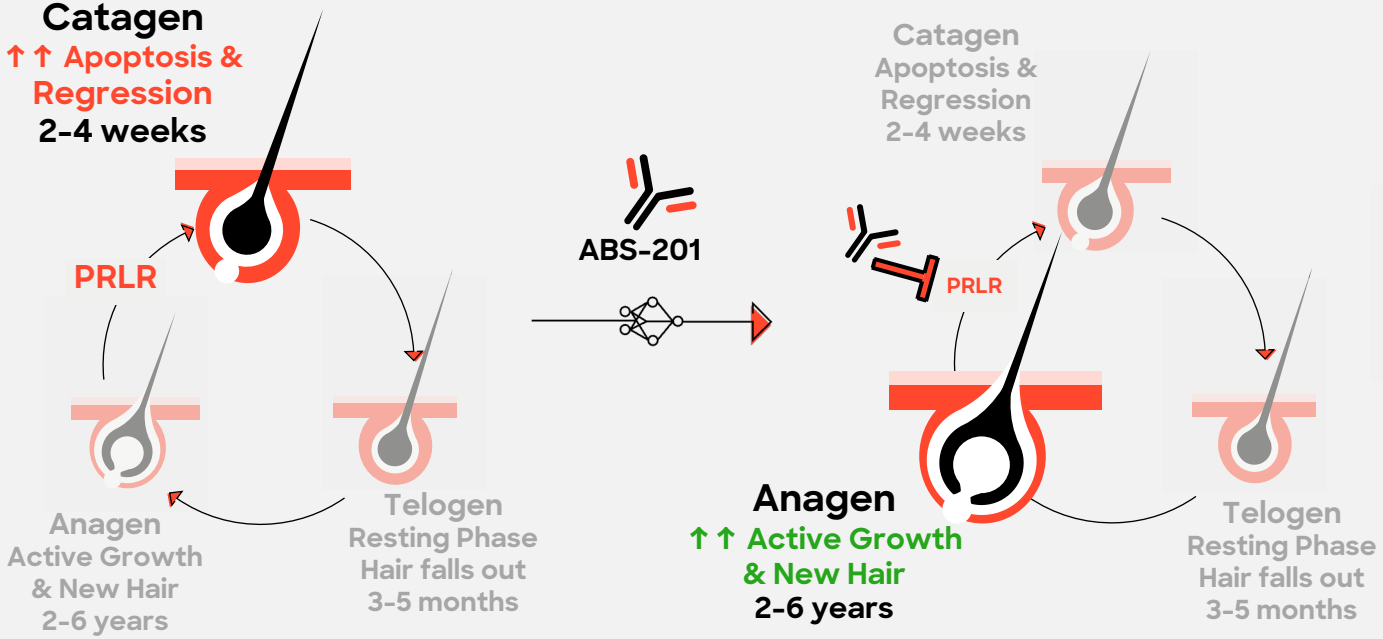
Human genetic evidence suggests no safety liabilities targeting PRLR[2]

[1] doi: 10.2353/ajpath.2006.050468
[2] doi: 10.1056/NEJMoa1805171

ABS-201, PRLR

PRLR inhibition as a safe innovative alternative to current treatment options

Proposed impact of ABS-201 on Hair Cycle Stages



ABS-201 has the potential to:

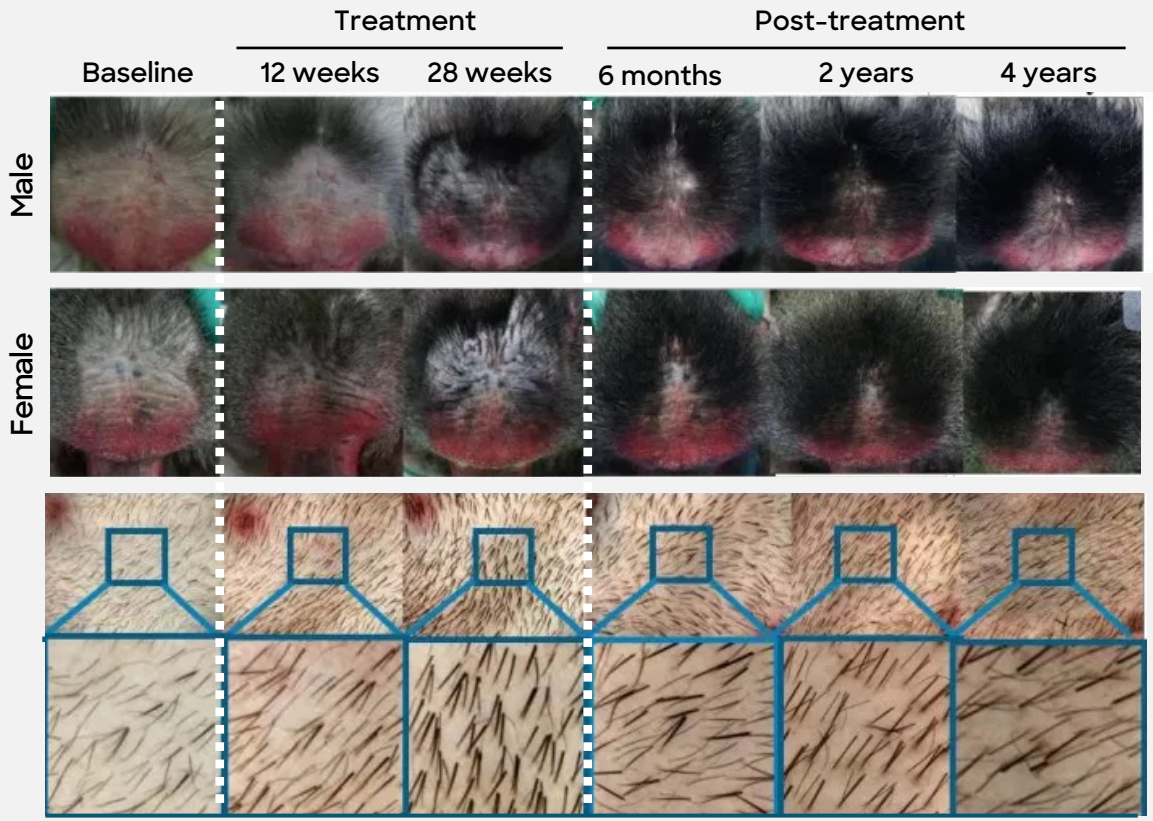
- Shift the balance in hair cycle stage towards anagen phase[1,2] with:
  - active and new hair growth
  - prevention of telogen effluvium
- Promote a long-lasting effect after treatment cessation
- Prevent prolactin mediated telogen effluvium[1,2]
- Restore hair pigmentation[2]

[1] doi: 10.1016/S0002-9440(10)64295-2
[2] doi: 10.2353/ajpath.2006.050468

PRECLINICAL VALIDATION

Treatment with an anti-PRLR mAb promotes and sustains long-term hair growth in NHP

Top head view stumptailed macaque phenotypic change over time



40mg/kg s.c. Q2W for 28 weeks

Disclosure from competitor

- Hair density & thickness improved with short treatment duration in primate model of androgenic alopecia
- Hair growth remains several years post cessation
- Hair regrowth observed for both male and female animals

ABS-201, PRLR

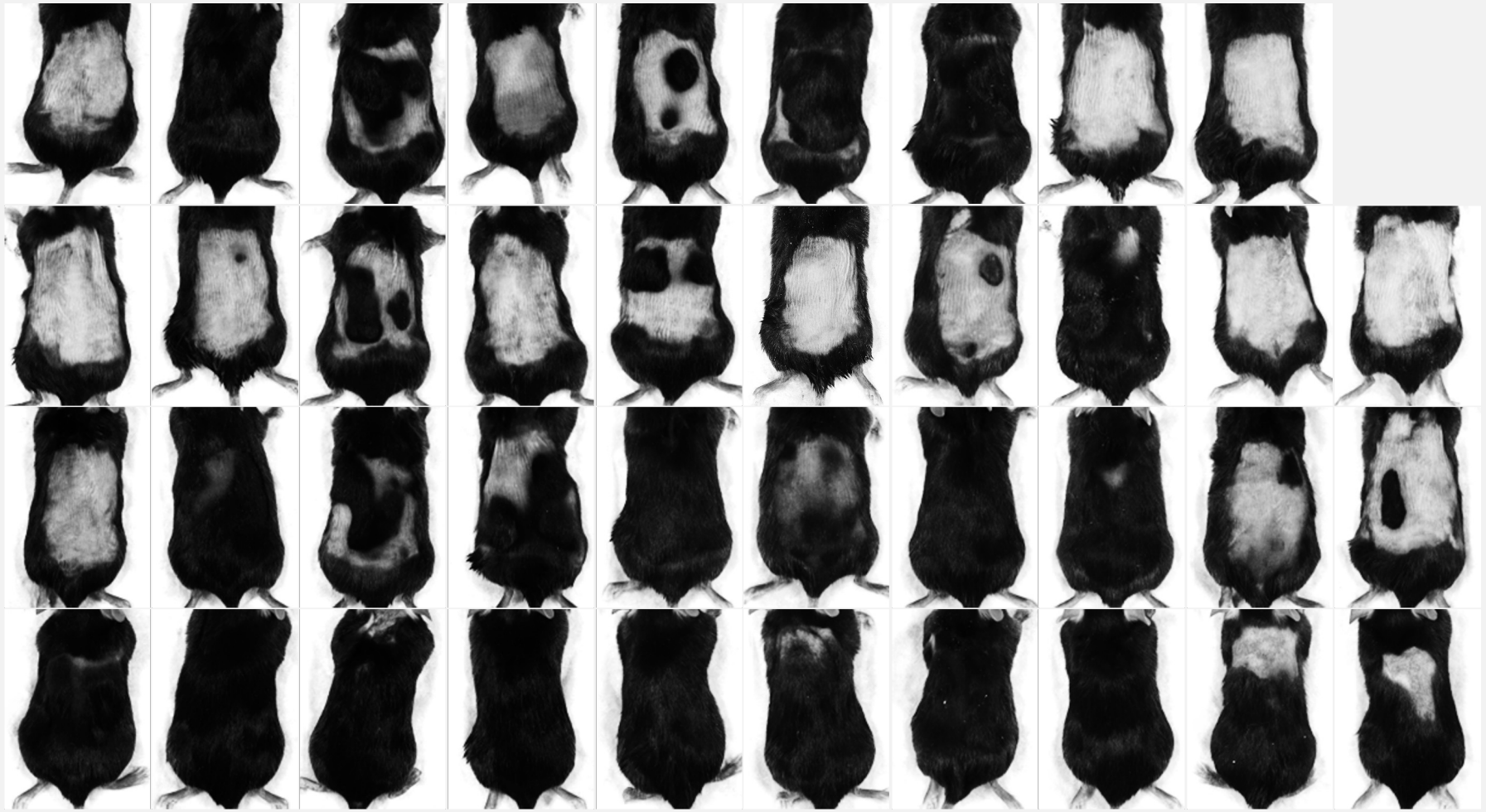
ABS-201 shows superior efficacy vs. 5% topical minoxidil in 25d hair regrowth model

Untreated
(n=9)

Isotype
30mg/kg i.p. 1QW
(n=10)

Minoxidil 5%
Topical once daily (n=10)

ABS-201-A
30mg/kg i.p. 1QW
(n=10)



ABS-201, PRLR

Excellent developability profile of ABS-201 development candidates

Desired attribute	Developability assessment	HMI-115#	ABS-201-A	ABS-201-B
High solubility	Solubility screening at various buffers[1]	Low	Great	Good
	Diffusion interaction parameter (high-concentration predictor)[2]	Low	Great	Great
Prolonged stability	Acidic stress forced degradation*,[3]	Affected	Not affected	Not affected
	Freeze-and-thaw susceptibility&,[4]	Affected	Not affected	Not affected

Estimated performance of a putative clinical competitor
* Samples at 50 mg/mL incubated at pH ≈ 2.5, 25°C for up to 3 days.
& Samples at 50 mg/mL and subjected up to 5 cycles of freeze-and-thaw.

1. Low, good and great as <20%, 20% and >20% PEG solubility, respectively
2. Low, good and great as <15.0, 15.0-20.0, and >20.0 k_D, respectively
3. Affected as loss of purity by NR-CGE > 4.0%
4. Affected as observed purity loss and high-molecular species formation by SEC

ABS-201, PRLR

Potential best-in-class PRLR antibody designed using generative AI

- High affinity and potency
- Delivery of promising candidates in just over 1 year
- Excellent developability profile enables high-concentration formulation and great stability
- Anticipated low immunogenicity
- Extended half-life and expected longer dosing intervals

ABS-201, PRLR

Continued progress with FiH expected in 2026

4Q 2024

AI-designed development candidates

- ✓ High affinity
- ✓ High potency
- ✓ Favorable manufacturability
- • Long half-life

INITIATED DEC 2024

IND-enabling studies

1H 2026

FiH clinical development

INTERNAL PIPELINE

Absci's progress in Drug Creation

Continued advancement of lead assets

ABS-101

Continued progress of TL1A asset with FiH in 1H 2025

- New preclinical data supporting superior immunogenicity profile
- Phase 1 Interim data readout in 2H 2025

ABS-201

Development Candidate for PRLR (prolactin receptor) nominated early December 2024

IND-enabling activities initiated

Discovery of next assets

ABS-301

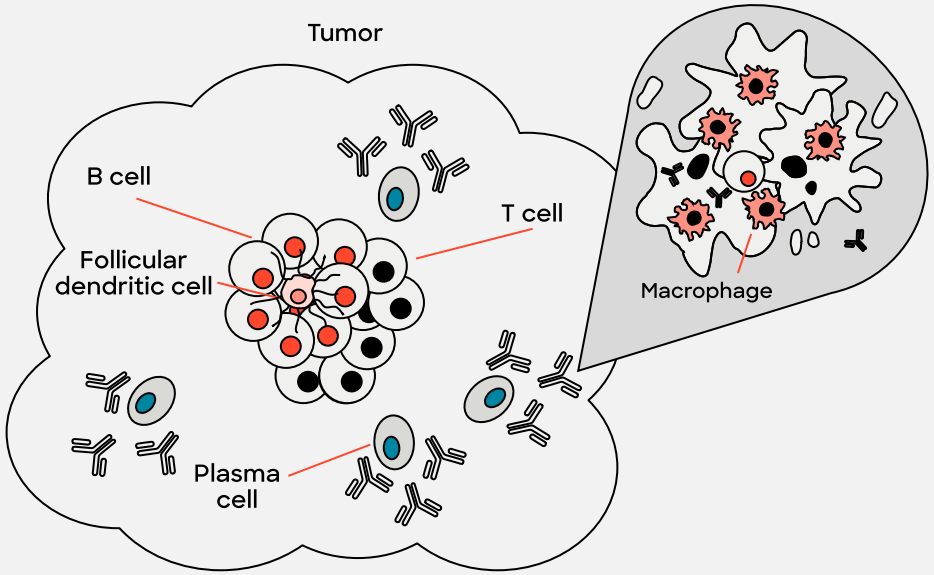
Progress of first-in-class asset with target validation and initial preclinical efficacy readouts in 1H 2025

NEW: ABS-501

Nomination of a potential best-in-class HER2 asset

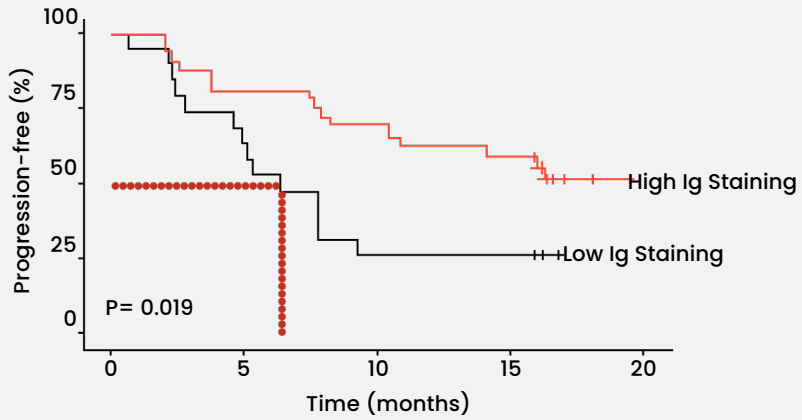
TARGET DISCOVERY

Tertiary Lymphoid Structures (TLS): The focus of Absci's Reverse Immunology approach



Tertiary lymphoid structures (TLS) are centers of immune activity, such as B-cell proliferation and antibody production, that develop in chronically inflamed tissues[1].

Antibodies from TLS are specialized for local antigens and play a significant role in the progression of chronic diseases and cancer, setting them apart from the general population of antibodies in the peripheral blood[2].

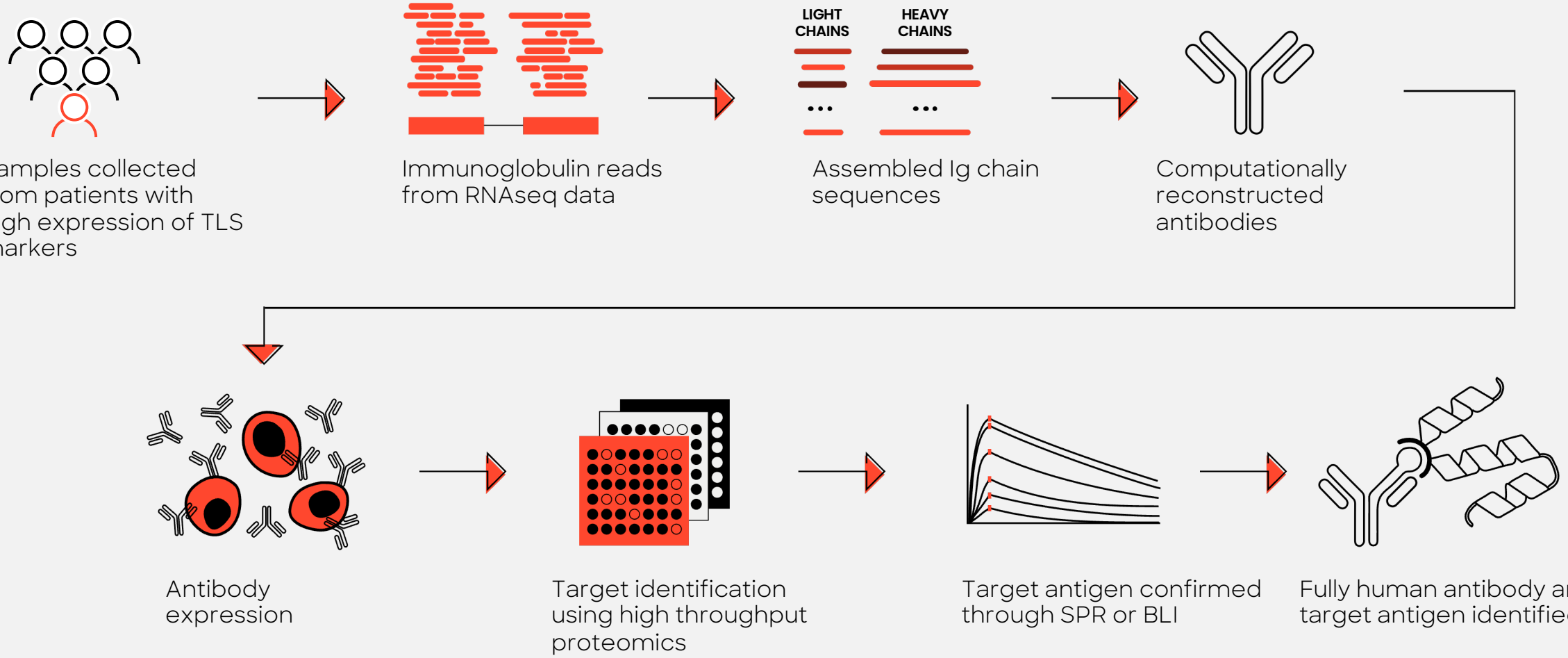


The presence of TLS is associated with longer progression-free survival and better response to immune checkpoint inhibitors[2,3].

- Rapidly growing evidence illustrates correlation between TLS-derived antibodies in the tumor microenvironment and positive clinical outcomes[2].
- TLS-derived antibodies have been shown to be associated with apoptosis of cancer cells in patients[2].

[1] doi: 10.3389/fimmu.2018.01952 [2] doi: 10.1016/j.immuni.2022.02.001 [3] doi: 10.1038/s41586-019-1922-8

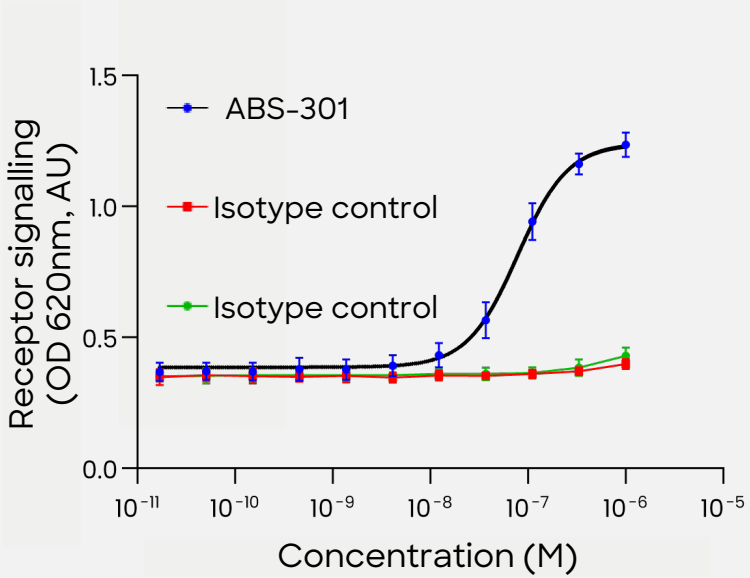
ABS-301 | Reverse Immunology platform identifies the antigens targeted by endogenous antibodies produced in tumor lymphoid structures, TLS



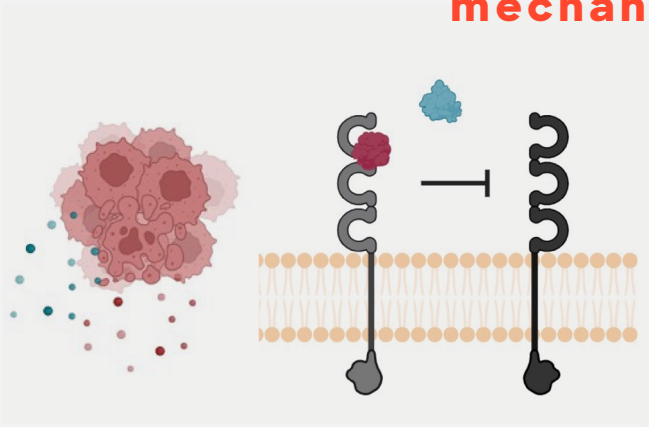
Reference, doi: 10.1101/2021.02.06.430058

ABS-301 | A patient-derived antibody discovered by reverse immunology blocks an immunosuppressive cytokine

ABS-301 rescues pro-inflammatory signaling through inhibition of immunosuppressive cytokine

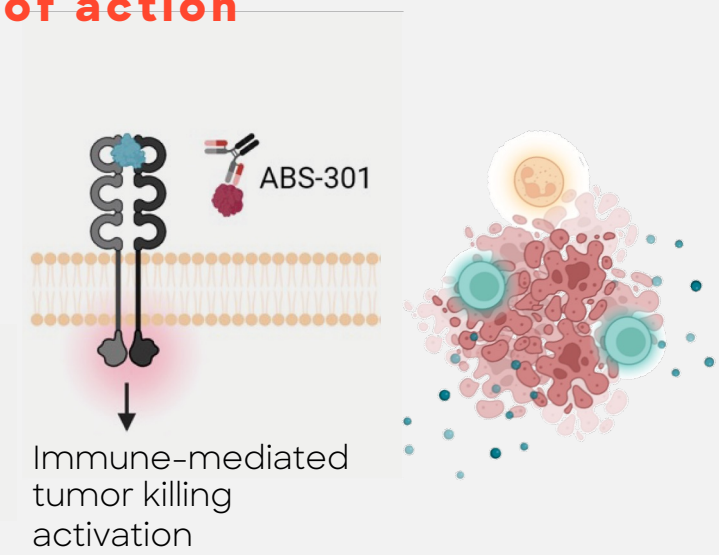


Target biology and proposed ABS-301 mechanism of action



Cytokine: Immunosuppressive / Activator

Target cytokine is suggested to maintain an immunosuppressive environment through signaling inhibition



Restoring signaling by blocking immunosuppressive cytokine which may promote immune-mediated tumor cell killing

LUIS DIAZ JR., MD

HEAD OF THE DIVISION OF SOLID TUMOR ONCOLOGY | MSKCC

BOARD DIRECTOR | QUEST DIAGNOSTICS

SCIENTIFIC ADVISORY BOARD MEMBER | ABSCI

Professional Expertise: Grayer Family Chair and Head of the Division of Solid Tumor Oncology in Memorial Sloan Kettering Cancer Center's Department of Medicine.

Research Contributions: Lab focused on developing novel tools and approaches for the diagnosis and treatment of cancer using genomics as a guide. Developed liquid biopsies for cancer detection, early diagnostic tools for ovarian and endometrial cancer, and led pembrolizumab study, securing the first FDA approval based on a biomarker rather than tumor location.

Select Awards & Honors:

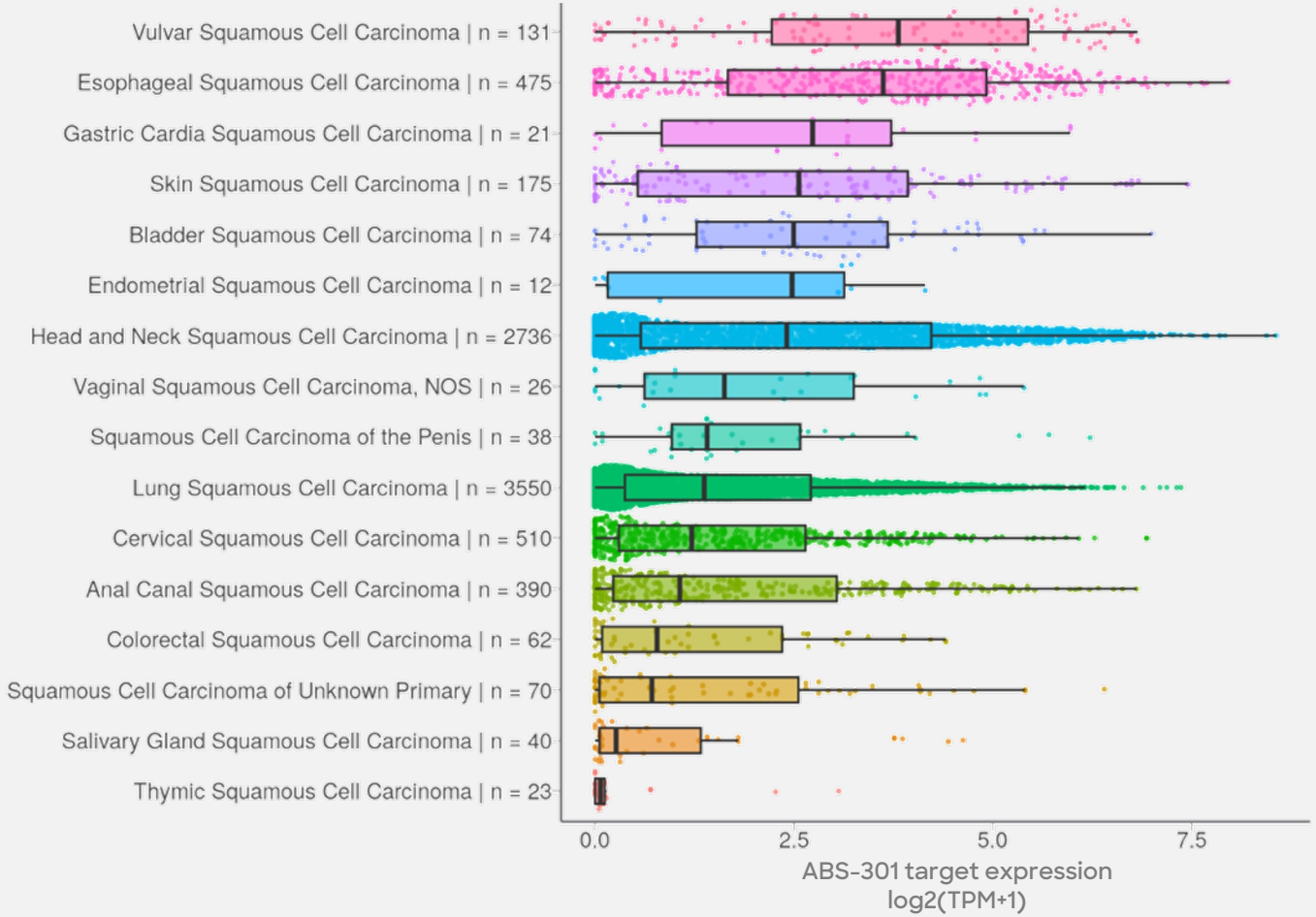
- Elected Member, National Academy of Medicine (2023)
- National Cancer Advisory Board (appointed by President Biden, 2021)

Education & Training:

- MD, University of Michigan.
- Residency: The Johns Hopkins School of Medicine.
- Fellowship: The Johns Hopkins School of Medicine

ABS-301

Expression of ABS-301's target suggests broad potential in squamous cell carcinomas

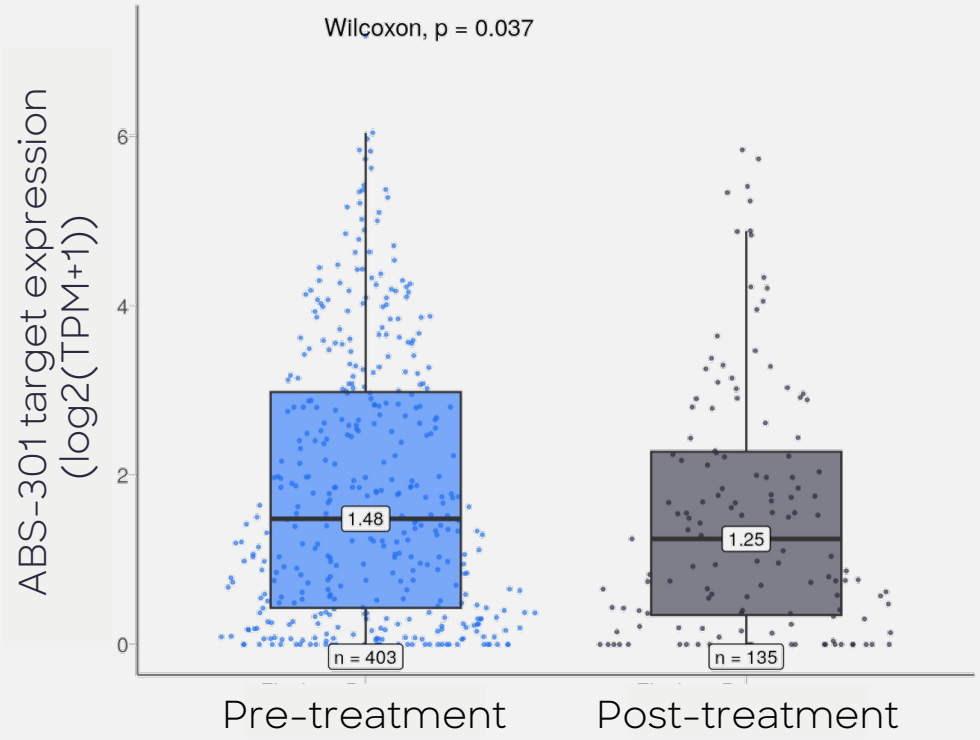


Distribution of ABS-301 target expression across squamous cell carcinoma cohorts.

Values shown are log2(TPM+1) normalized. Multiple biopsies from a patient are included in the analysis.
Source: Tempus

ABS-301 | Expression in Lung Squamous Cell Carcinoma (LUSC): no change with treatment and strong negative correlation with CD8+ T cell infiltration

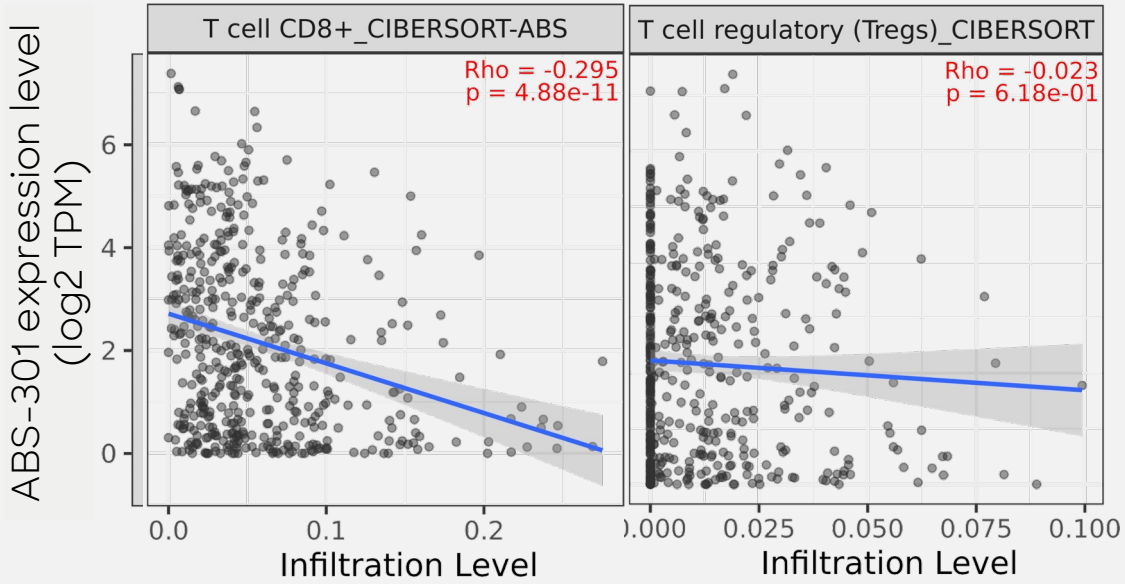
Sustained target expression in LUSC



Source: Tempus

In LUSC, univariate analysis of ABS-301 expression indicate only a minor change in expression between pre- and post-treatment suggesting opportunity for combination therapy.

CD8+ Infiltration negatively correlated with target expression in LUSC



Source: TCGA

ABS-301 target expression shows a strong negative correlation with CD8+ T cell infiltration with a minimal effect on Treg infiltration supporting immunosuppressive activity of target *in vivo*.

ABS-301 | Broad potential in immuno-oncology

Based on literature and potential competitive molecules, the following indications could be of interest:

Indication	US Prevalence	Estimated 5-year survival rate*	US Sales in 2030
NSCLC	Calculated: ~202K in 2023	28%	$27B
SCC	30% of NSCLC cases Calculated: ~61K	24%	Calculated Sales: $8.1B
Head and Neck SCC	~54K in 2022	68.5%	Calculated Sales: $2.3B
Esophageal Cancer	~21K in 2022	20%	$1.5B
SCC	~20% of cases Calculated: ~4.2K		Calculated Sales: $0.3B
Cervical Cancer	~14K in 2023		$0.6B
SCC	90% of cases Calculated: ~13K	67%	Calculated Sales: $0.6B
Skin Cancer, non-melanoma	Incidence = ~3,300K	95-100%	$1.0B
SSC	Incidence = ~700K	95%	Calculated Sales: $0.2B

*dependent on stage of diagnosis
References provided in appendix

INTERNAL PIPELINE

Absci's progress in Drug Creation

Continued advancement of lead assets

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Continued progress of TL1A asset with FiH in 1H 2025

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ABS-301

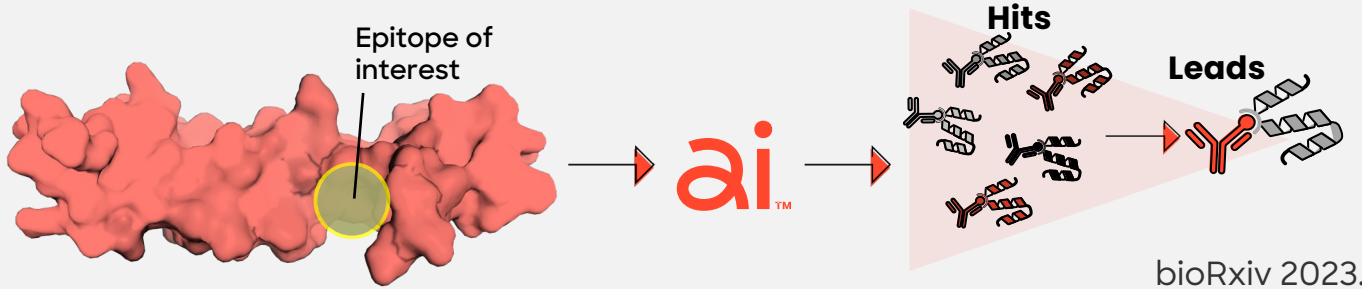
Progress of first-in-class asset with target validation and initial preclinical efficacy readouts in 1H 2025

NEW: ABS-501

Nomination of a potential best-in-class HER2 asset

ABS-501, HER2 | Deploying *de novo* AI model on HER2 led to discovery of antibodies displaying molecular interactions distinct from trastuzumab

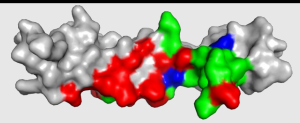
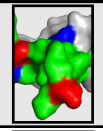
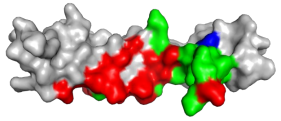
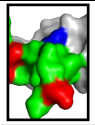
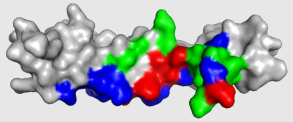
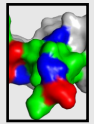
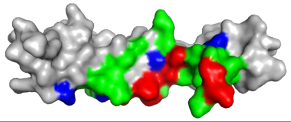
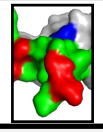
Zero shot *de novo* AI discovery on HER2



- Hits with edit distance of up to 12 amino acids in HCDR3 region (13 aa, search space of 20^{13}) were screened
- Selected 50 hits with <10 nM affinity were expressed as mAbs for binding affinity determination
- Top 11 antibodies were characterized *in vitro* and 3 leads evaluated *in vivo*

bioRxiv 2023.01.08.523187; doi: https://doi.org/10.1101/2023.01.08.523187

AI-designed antibodies: same epitope, different HER2 contact preferences

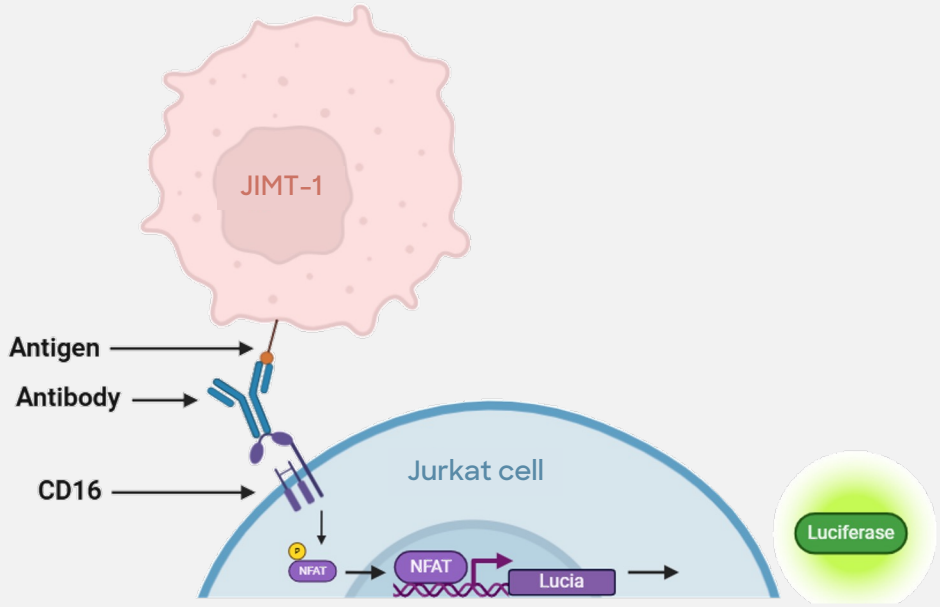
Variant #	Edit distance	K_D (nM)	Epitope mapping view	Loop 581-590
Trastuzumab	0	1.07		
1	7	4.16		
3	7	9.75		
4	2	6.66		

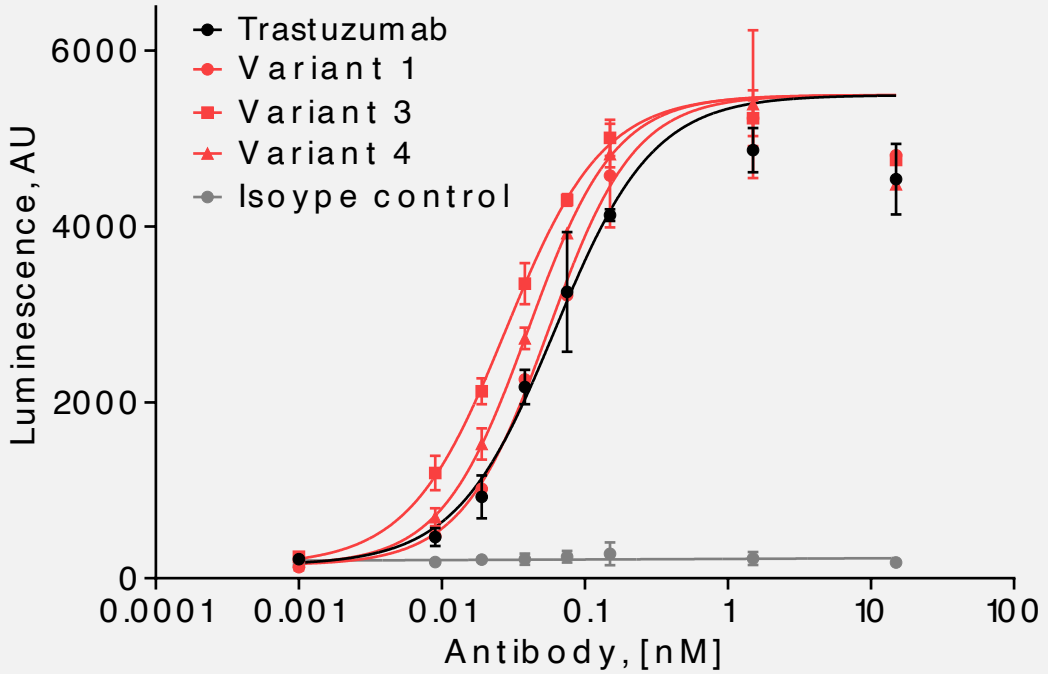
Not critical
Partial
Critical

ABS-501, HER2 | AI-designed antibodies demonstrate measurable enhancement of ADCC activity compared to trastuzumab

ADCC assay principle

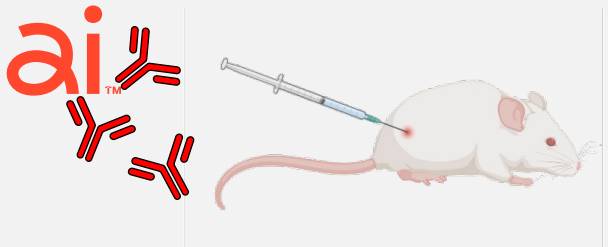
Luciferase signal driven by NFAT transcription factor positively correlates to ADCC activation against JIMT-1

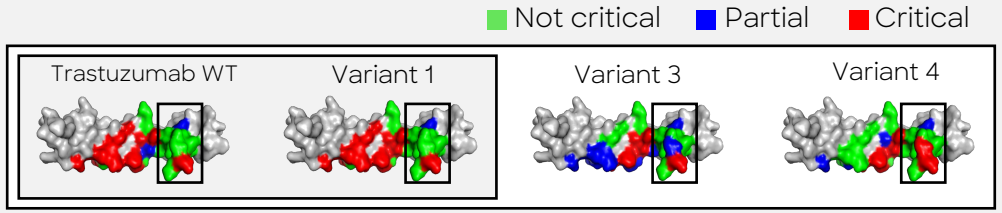




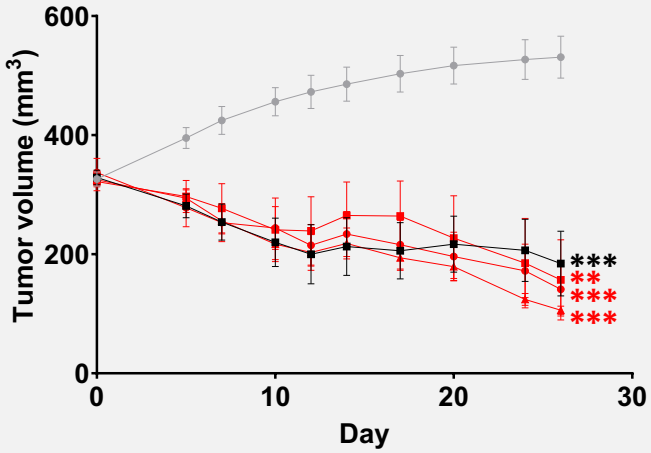
	Trastuzumab	Variant 1	Variant 3	Variant 4
EC50 (nM)	0.062	0.056	0.028	0.040
R squared	0.93	0.97	0.97	0.95
P value	N/A	Not significant	<0.0001	0.0015

ABS-501, HER2 | AI-designed antibodies suppress growth of trastuzumab-sensitive & resistant HER2+ breast tumors

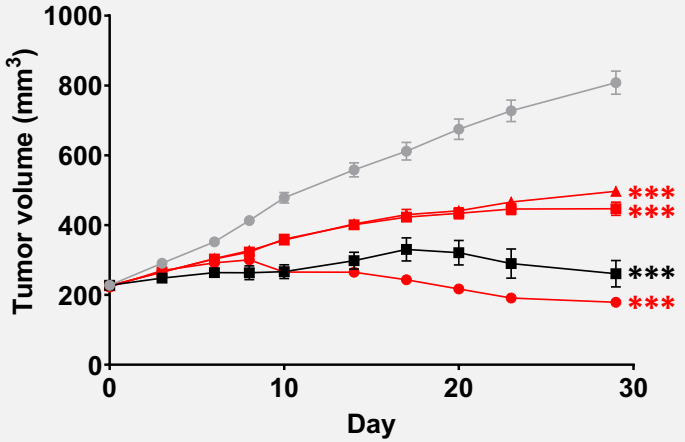




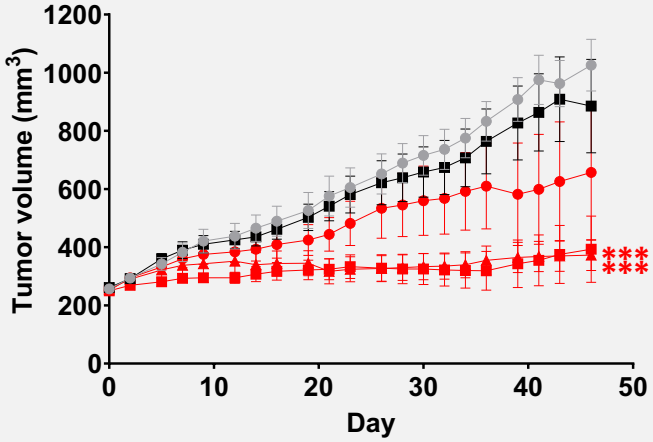
Mouse xenograft model using **EFM192A** (HER2+ BC; **Tz sensitive**)



Mouse xenograft model using **MDA-MB-361** (HER2+ BC; **Tz sensitive**)



Mouse xenograft model using **JIMT-1** (HER2-amp BC; **Tz resistant**)



Isotype control ● Trastuzumab ● Variant 1 ■ Variant 3 ▲ Variant 4

Trastuzumab-sensitive EFM192A and MDA-MB-361 tumors respond to both trastuzumab (Tz) & AI-designed antibodies

JIMT-1 tumors are trastuzumab resistant but sensitive to variants 3 and 4

Xenograft studies conducted by Dr. Dennis Slamon's team at UCLA

2-way ANOVA ** P<0.001 and ***P<0.0001 vs isotype control

ABS-501, HER2 | AI-designed variants create opportunities to address unmet medical need

Currently exploring breast cancer as opportunity: alternative to or post Enhertu®

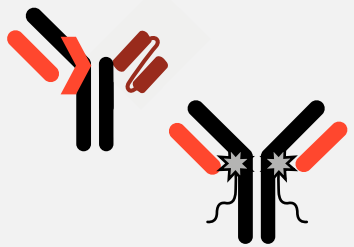
- Despite Enhertu's good efficacy, leading oncologists are only moderately satisfied due to toxicity (e.g. interstitial lung disease); less toxic therapy and effective treatment post-Enhertu are key unmet needs.

"Post-Enhertu is really where the action is right now in the field. I think the first company that comes up with something that has significant benefit in Enhertu progressive disease is going to win." – KOL

Multiple paths possible for therapeutic development:

- Modality switch or combination opportunities under consideration to address unmet medical needs

Later-line treatment regimens for HER2-positive cancer:
- Monotherapy
- Combination therapy with targeted small molecules



Enhancing efficacy and expanding indications (e.g. Enhertu resistance):
- Antibody-drug conjugates (ADCs)
- Multi-specific antibodies

DENNIS SLAMON MD, PHD

PROFESSOR OF MEDICINE AND CHIEF OF THE DIVISION OF HEMATOLOGY/ONCOLOGY | UCLA

EXECUTIVE VICE CHAIR FOR RESEARCH | UCLA DEPARTMENT OF MEDICINE

DIRECTOR OF CLINICAL/TRANSLATIONAL RESEARCH AND DIRECTOR OF THE REVLON/UCLA WOMEN'S CANCER RESEARCH PROGRAM

Research Contributions: Pioneering research that identified the HER2/neu oncogene that is amplified in 25-33% of breast cancer patients which led to the development of the breast cancer drug trastuzumab

Select Awards & Honors:

- 2024 Szent-Györgyi Prize
- 2002 Jacob Heskel Gabbay Award in Biotechnology and Medicine
- 2007 Gairdner Foundation International Award
- 2017 Komen Brinker Award for Scientific Distinction
- 2019 Lasker-DeBakey Clinical Medical Research Award
- 2019 Sjöberg Prize

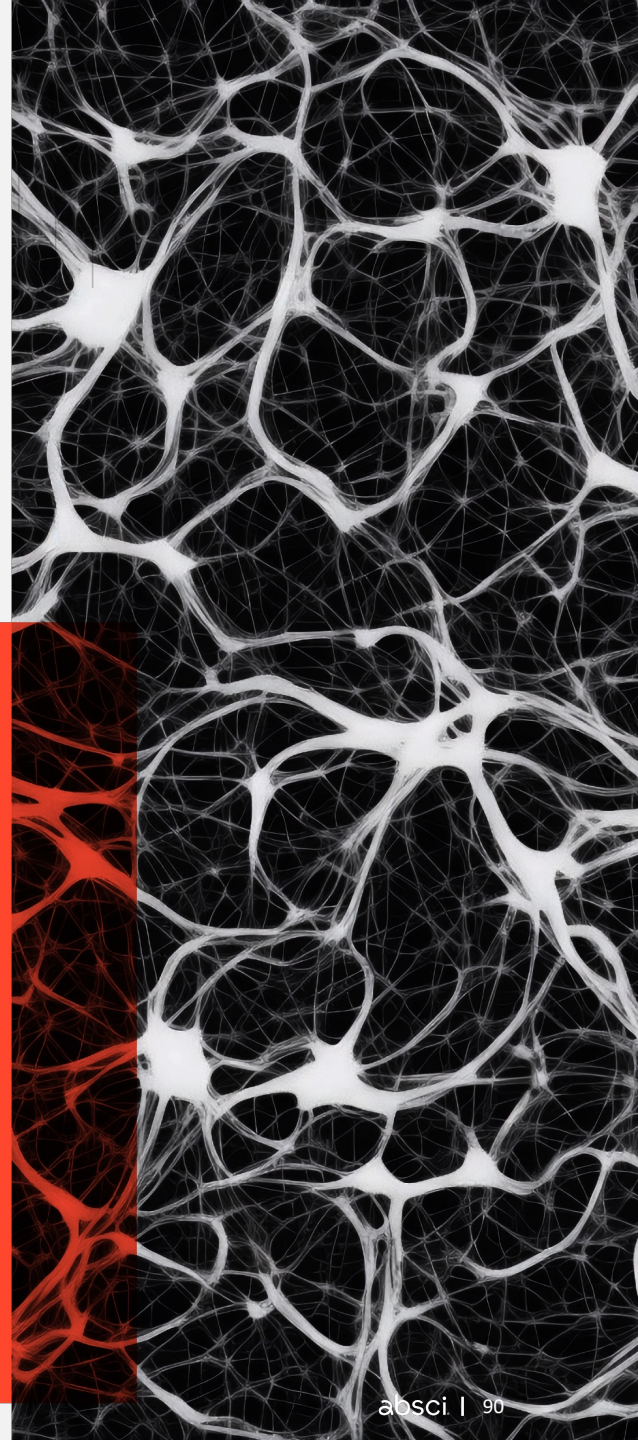
Education & Training:

- MD, University of Chicago
- Residency: Internal Medicine, University of Chicago Hospitals
- Fellowship: UCLA School of Medicine


Slamon, Dennis J.

```
from absci_library import codon_optimizer
library = codon_optimizer.reverse_translate(library)
library.to_csv("covid-antibody-designs.csv")
library.to_wet_lab(assay="ACE")
```

```
from absci import de_novo_model
model = de_novo_model.load_latest()
antigen = model.load_pdb("7olz.pdb", chain="A")
antibodies = model.predict(antigen, N=300000)
```

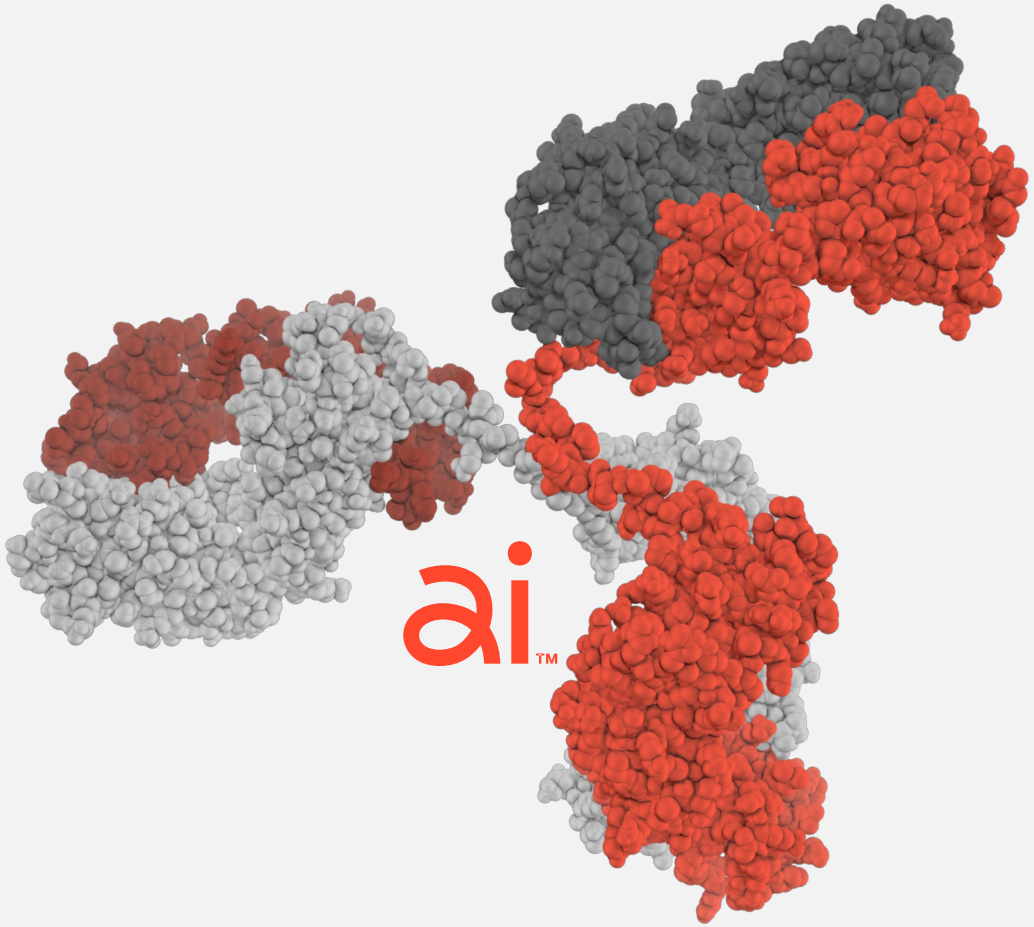


ZACH JONASSON, PHD

CHIEF FINANCIAL OFFICER & CHIEF BUSINESS OFFICER

```
library = []
for antibody in antibodies:
    naturalness = model.naturalness(antibody.sequence)
    library.append((antibody, naturalness))
```

We are advancing our AI platform capabilities and applying them to design novel and differentiated assets

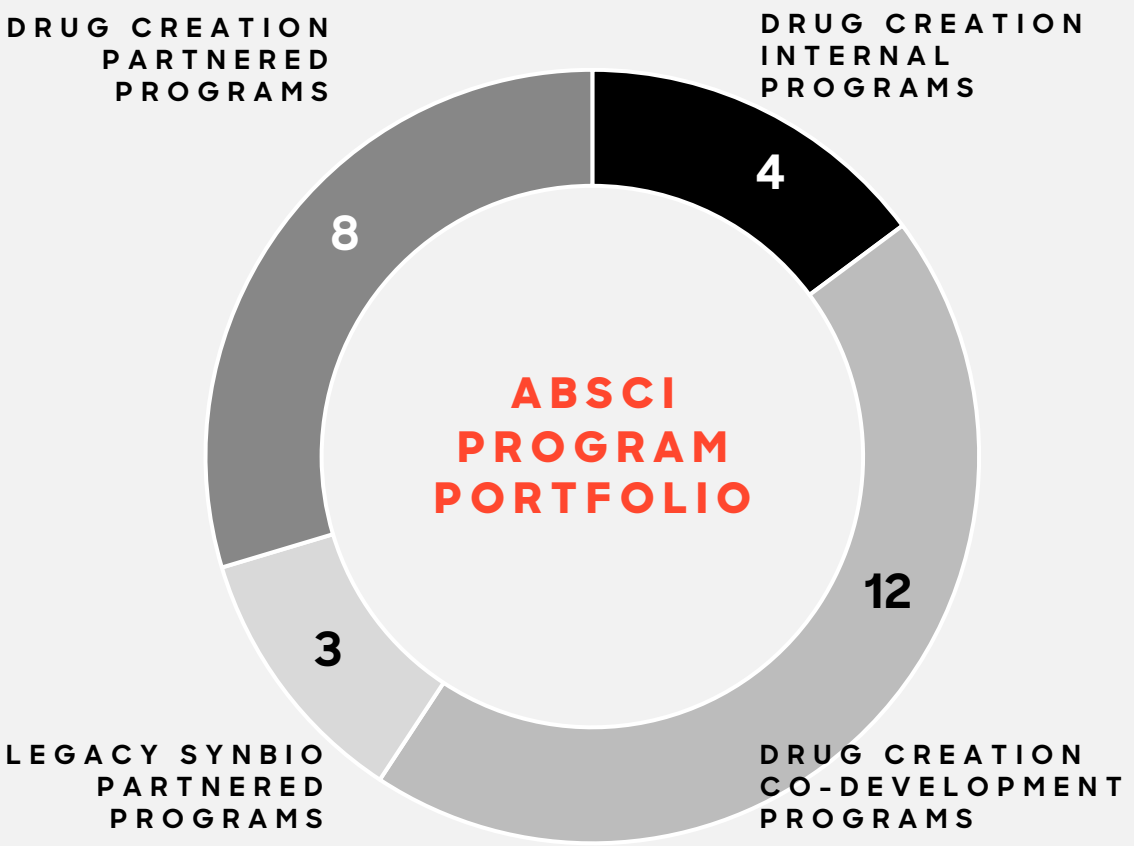


- EPITOPE-SPECIFIC + EPITOPE INTERFACE OPTIMIZATION
- ENHANCED POTENCY AND MOA
- ADDRESS DIFFICULT TARGET CLASSES
- DIFFERENTIATED PHARMACOLOGY FEATURES

Balanced portfolio of novel and differentiated programs

PORTFOLIO INCLUDES:

- Wholly-owned internal Drug Creation Programs targeting multi-billion dollar opportunities
- Partnered Drug Creation Co-Development Programs targeting multi-billion dollar opportunities
- Partnered Drug Creation Programs with over $1.5 B in potential deal value not including royalites
- Partnered Legacy SynBio Programs



PARTNERSHIP MODELS	DEAL STRUCTURE	EXAMPLE PARTNERS
Drug Creation Partnerships	• Upfront payments • R&D payments • Election fees • Clinical + commercial milestone payments • Royalties	MERCK, AstraZeneca, almirall
Co-Development Partnerships	• Joint contribution of IP, know-how, technology • 50/50 development cost • 50/50 out-license transaction economics • Opt-out ability	Memorial Sloan Kettering Cancer Center, TWIST BIOSCIENCE, precisionlife
Internally Developed Assets	Asset Sale or Out-license with • Upfront payment • Clinical and commercial milestone payments • Royalties	Partnering Discussions Currently Ongoing for Specific Programs

KARL ZIEGELBAUER, PHD

CHIEF SCIENTIFIC OFFICER, ALMIRALL

Professional Expertise:

Chief Scientific Officer at Almirall since 2021. Leading strategic partnerships and developing and expanding Almirall's R&D pipeline in Medical Dermatology.

and previously Senior Vice President and Head of Open Innovation & Digital Technologies at Bayer Pharmaceuticals.

Three decades of experience in drug discovery in international markets such as Germany, Japan, and the United States.

Research Contributions:
Co-authored more than 50 scientific publications covering basic research as well as drug discovery topics.

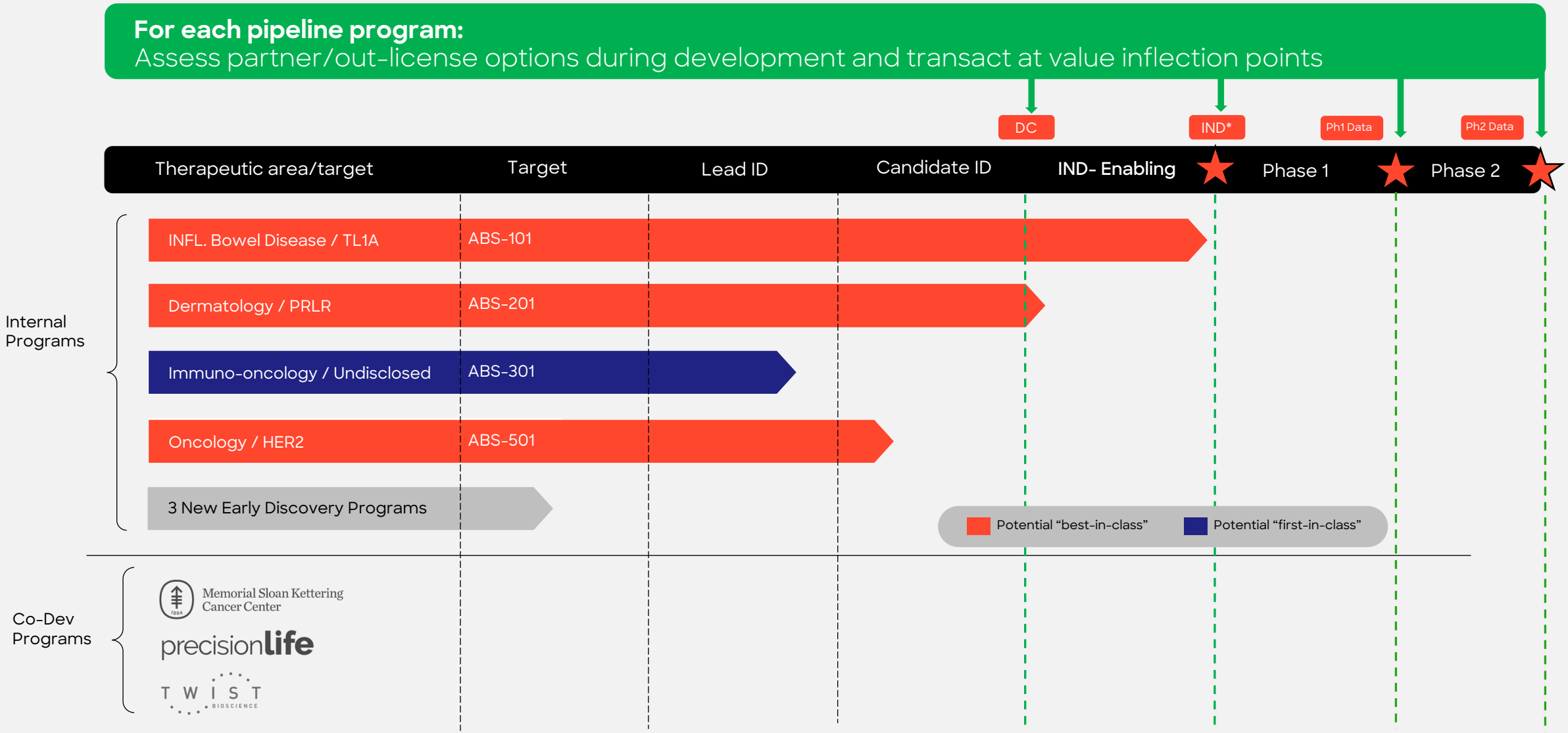
Education & Training
PhD in Biochemistry from the University of Tübingen (Germany).

almirall


Karl

PIPELINE

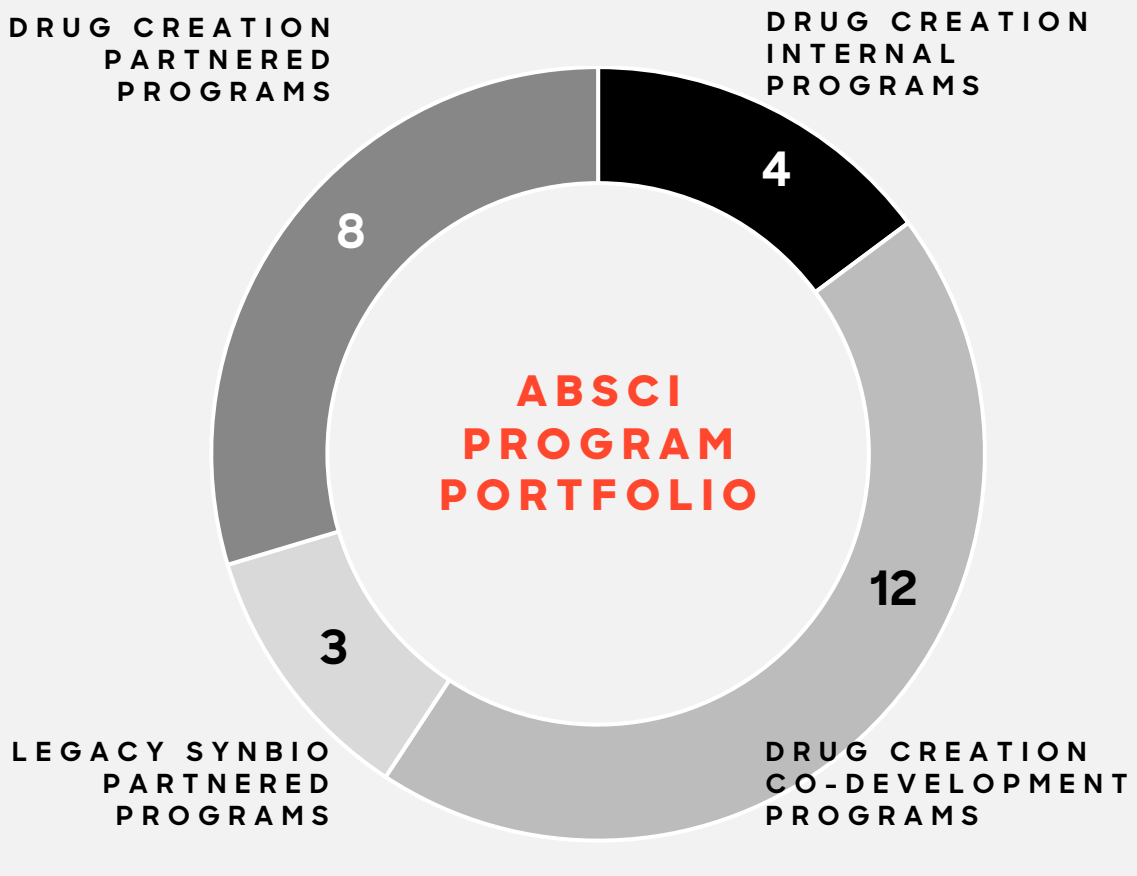
Internal pipeline and co-development pipeline monetization strategy



*or equivalent ex-US filing

VALUE INFLECTION POINTS

Portfolio provides near-term value inflection points and monetization options



- ABS-101 (anti-TL1A antibody) Interim Phase 1 Readout (2H 2025)
- ABS-301 (novel immuno-oncology program) Development Candidate Package (1H 2025)
- Progress on Milestones from our Existing Drug Creation Partnerships; Addition of New Partnerships with Large Pharma, Biotech, and Others
- Co-development partnership program advancements

Business and Financial Metrics

4 **NAMED INTERNAL, WHOLLY OWNED PROGRAMS**

23 **PARTNERED AND CO-DEVELOPMENT PROGRAMS**

Strong pipeline of interest in our AI Drug Creation Platform

$127.1M

Cash, cash equivalents, and short-term investments as of September 30, 2024, which based on our current plans is expected to fund our operations into the first half of 2027

```
from absci_library import codon_optimizer
library = codon_optimizer.reverse_translate(library)
library.to_csv("covid-antibody-designs.csv")
library.to_wet_lab(assay="ACE")
```

```
from absci import de_novo_model
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antibodies = model.predict(antigen, N=300000)
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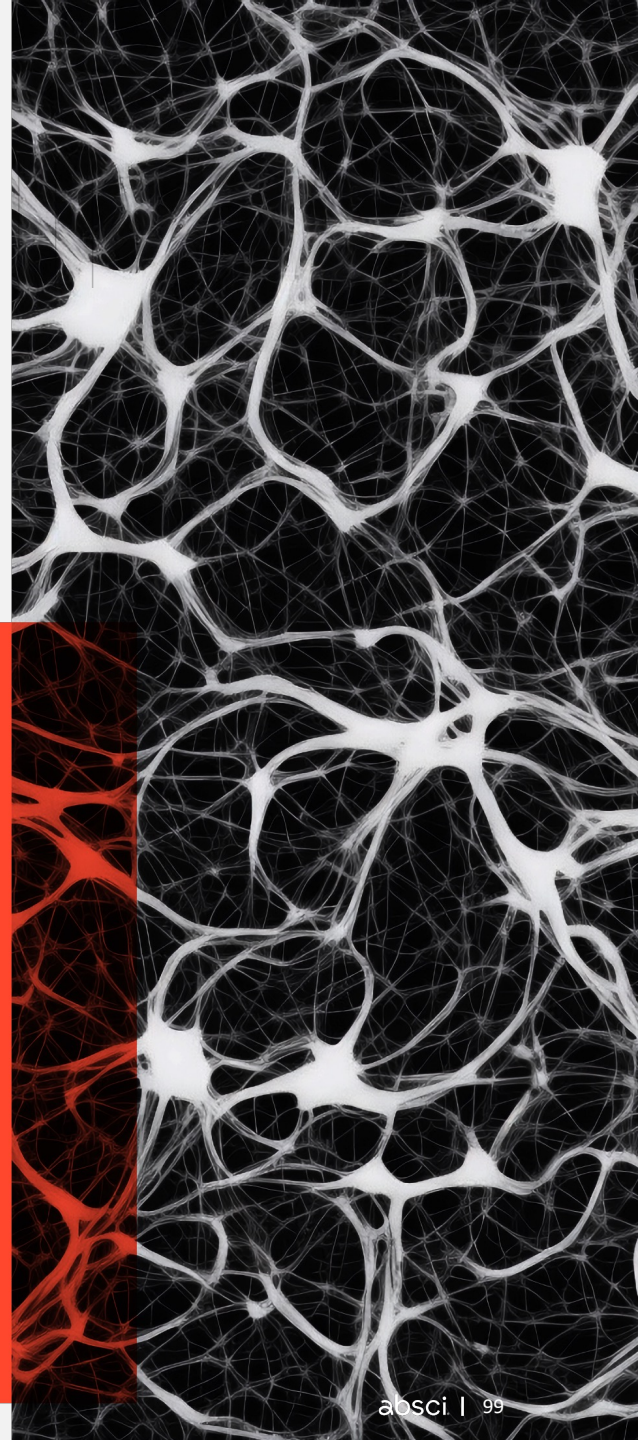


SEAN MCCLAIN

FOUNDER & CEO

```
library = []
for antibody in antibodies:
    naturalness = model.naturalness(antibody.sequence)
    library.append((antibody, naturalness))
```

CATALYSTS

Leading AI platform driving numerous near-term value inflection points

TODAY

ABS-201
IND-enabling activities initiated

1H 2025

ABS-101
Ph 1 double-blind, placebo-controlled Trial initiation

1H 2025

ABS-301
Immuno-oncology Development Candidate

2H 2025

ABS-101
Phase 1 Interim Data Readout

2025

Partnerships:
- New partnerships including Large Pharma partnership
- Milestones on current partnerships
- Potential internal asset partnership

1H 2026

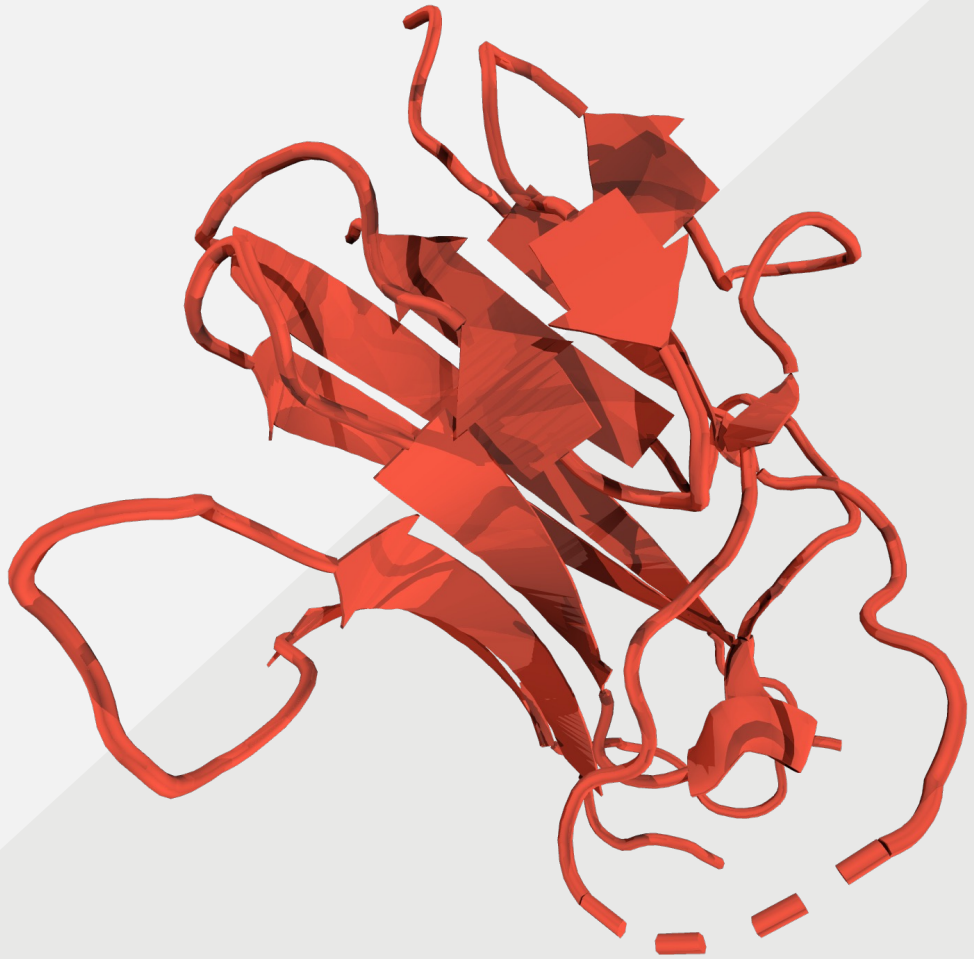
ABS-101
Ph1b/2a Clinical Trial Initiation

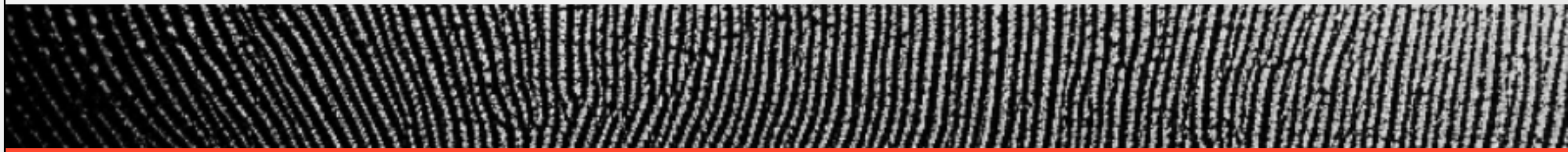
ABS-201
Ph1 Trial Initiation with opportunity for rapid PoC

Q&A

Mission:

CREATE BETTER BIOLOGICS FOR PATIENTS, FASTER.





APPENDICES

CASE STUDY - pH SENSITIVITY

Models optimize pH sensitivity without introducing developability liabilities

mAb	K_D at pH 5.8 (nM)	K_D at pH 7.4 (nM)	Affinity fold (pH 7.4 over pH 5.8, Δ)	Stability T_{m1} (ˆC)	Aggregation by AC-SINS (shift nm)	Polyreactivity score, DNA ELISA (AU)	Polyreactivity score, insulin ELISA (AU)	*Sequence
Parental	24.1	4.4	**5.5**	67.0	-0.3	1.184	1.291	XXXXXXXXXXXXX...XXXXXXXXXXXXXXXX...XXXXXXXXXXX...XXXXXXXXXXXXXXXXXXX
Variant 1	54.7	7500	**-138**	64.5	-0.3	1.515	1.747	KXXXXEXHXXXXX...XXXXXEXXXXXXXXXX...XXXXXXXXXXXX...XXXXXXXXXXXXXXXXKXXX
Variant 2	9.6	180	**-18**	67.0	-0.7	1.328	1.369	XXXXXEXHXXXXX...XXXXXEXXXXXXXXXX...XXXXXXXXXXXX...XXXXXXXHXXXXXXXXXXX
Variant 3	7.4	121	**-16**	65.8	-0.3	0.929	0.96	XXXXXEXHXXXXX...XXXXXEXXXXXXXXXX...XXXXXXXXXXXX...XXXXXXXHXXXXXXXXXXX
Variant 4	8.9	127	**-14**	66.5	-0.3	1.692	1.89	KXXXXXXHXXXXX...XXXXXEXXXXXXXXXX...XXXXXXXXXXXX...XXXXXXXXXXXXXXXXXXX
Variant 5	902	44.7	**+20**	68.5	-0.7	1.403	1.364	XXXEXXXXXXXXX...XXXXXXXXXDHXXXHX...XXXXXXXXRXXX...XXXXXXXXXXXXXXXXXXX
Variant 6	609	36.0	**+17**	68.0	-1.3	1.382	1.605	XXXXXXXXXXXXX...XXXXXXXXXDHXXXHX...XXXXXXXDRXXX...XXXXXXXXXXXXXXXXXXX
Variant 7	272	16.7	**+16**	68.0	-0.7	1.6	1.719	XXXEXXHXXXXXX...XXXXXXXXXXHXXXXX...XXXXXXXXXXXX...XXXXXXXXXXXXXXXXXXX
Variant 8	262	17.2	**+15**	67.5	1.0	1.018	1.031	XXXXXXRXXXXXX...XXXXXXXXXDHXXXHE...XXXXXXXDRXXX...XXXXXXXXXXXXXXXXXXX
Low Tm control	NA	NA	NA	55.8	-0.3	1.987	2.198	NA
Polyreactive control	NA	NA	NA	68.0	14.7	2.798	8.392	NA

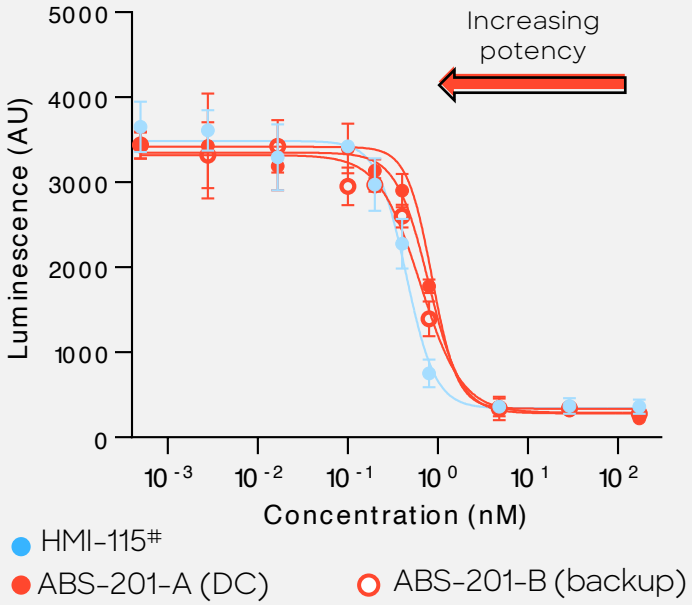
*X indicates positions of sampled amino acids from four regions on the heavy chain that included framework and CDRs. Substitutions of model-identified hits are shown in red.

Distinct from classical histidine scanning, Absci's lab-in-the-loop workflow allows the model to search the entire relevant ionizable combinatorial space and identifies 10x-100x pH sensitive variants in both directions **without introducing developability liabilities.**

ABS-201, PRLR

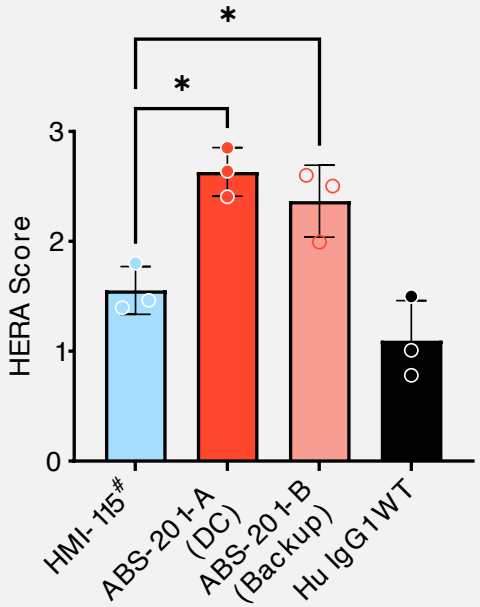
Drug candidates are potent binders with extended half-life and favorable immunogenicity

HIGH *IN VITRO* POTENCY



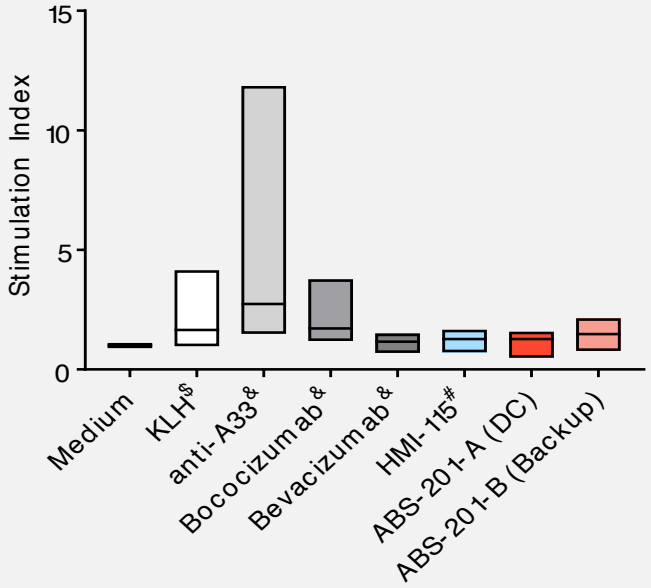
PathHunter assay

EXTENDED HALF-LIFE



FcRn recycling *in vitro*

FAVORABLE IMMUNOGENICITY

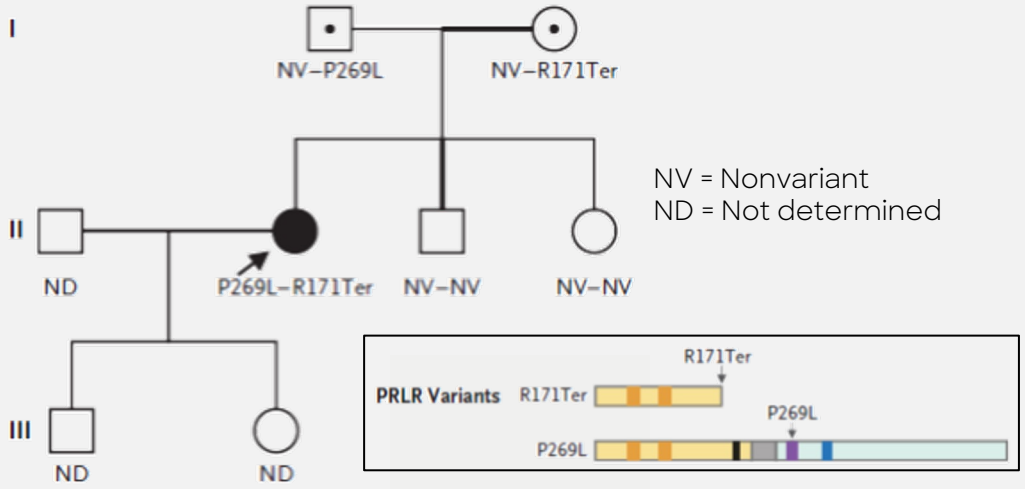


PBMC *ex vivo* immunogenicity assay

#Estimated performance of a putative clinical competitor
$Positive control; &High, mid and low standards as anti-A33, bococizumab and bevacizumab, respectively.

Prolactin receptor (PRLR) inhibition anticipated to be safe and well tolerated

Female compound heterozygous PRLR loss-of-function carrier lacks complete PRLR signaling



A 35-year-old woman with postpartum agalactia and hyperprolactinemia, otherwise in **good health**, with no apparent impact on fertility and completely normal serum electrolytes and hormone levels (except prolactin, PRL).

Serum electrolyte & hormone levels are within the normal range, except prolactin

Description	Analyte	Values	Range
Serum electrolytes	Na^+ - [mEq/l]	140	135-145
	K^+ - [mEq/l]	5.1	3.6-5.0
	Cl^- - [mEq/l]	104	98-108
	Ca^{2+} - [mEq/l]	9.6	8.6-10.1
	IP - [mEq/l]	4.6	2.5-4.5
	DHEAS* [µg/dL]	215	23-266
	IGF-1 [ng/ml]	119	111-279
Serum hormones (Early prolif. Phase)	LH [IU/l]	4.5	1.68-15
	FSH [IU/l]	8.8	1-9
	TSH [mIU/l]	1.07	0.5-5.0
	Estradiol [pg/ml]	57	20-350
	Prolactin [ng/ml]	200	<25
Serum hormones (Mid luteal phase)	LH [IU/l]	3.7	0.61-16.3
	FSH [IU/l]	3.4	1-9
	Estradiol [pg/ml]	82	30-450
	Progesterone [ng/ml]	14.5	2-25
	Testosterone [ng/ml]	0.24	0.15-0.46
	Prolactin [ng/ml]	188	<25

doi: 10.1056/NEJMoa1805171

ABS-301 | Broad potential in immuno-oncology

Based on literature and potential competitive molecules, the following indications could be of interest:

Indication	US Prevalence	Estimated 5-year survival rate*	US Sales in 2030[12]
NSCLC	Calculated: ~202K in 2023[1]	28%[2]	$27B
SCC	30% of NSCLC cases Calculated: ~61K	24%[3]	Calculated Sales: $8.1B
Head and Neck SCC	~54K in 2022[4]	68.5%[4]	Calculated Sales: $2.3B
Esophageal Cancer	~21K in 2022[5-7]	20%[7]	$1.5B
SCC	~20% of cases Calculated: ~4.2K		Calculated Sales: $0.3B
Cervical Cancer	~14K in 2023[8]		$0.6B
SCC	90% of cases Calculated: ~13K	67%[9]	Calculated Sales: $0.6B
Skin Cancer, non-melanoma	Incidence = ~3,300K[10]	95-100%[11]	$1.0B
SSC	Incidence = ~700K[10]	95%[11]	Calculated Sales: $0.2B

*dependent on stage of diagnosis

1. Sabbula BR, Gasalberti DP, Mukkamalla SKR, et al. Squamous Cell Lung Cancer. [Updated 2024 Feb 14]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2024 Jan-
2. https://www.cancer.org/content/dam/cancer-org/research/cancer-facts-and-statistics/annual-cancer-facts-and-figures/2023/2023-cff-special-section-lung-cancer.pdf; downloaded 12/11/2024
3. https://www.lungcancergroup.com/lung-cancer/non-small-cell-lung-cancer/squamous-cell-carcinoma/; accessed 12/10/2024
4. doi: 10.3390/medsci11020042
5. https://www.cancer.gov/pediatric-adult-rare-tumor/rare-tumors/rare-digestive-system-tumors/esophageal; accessed 12/10/2024
6. doi: 10.21037/jgo-22-729
7. doi:10.1001/jamanetworkopen.2023.29497
8. https://www.cancer.org/cancer/types/cervical-cancer/about/key-statistics.html; accessed 12/10/2024
9. https://www.cancer.org/cancer/types/cervical-cancer/detection-diagnosis-staging/survival.html; accessed 12/10/2024
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