

absci.

We translate ideas into drugs

40th Annual
J.P. Morgan Healthcare Conference

January 2022



Disclaimers

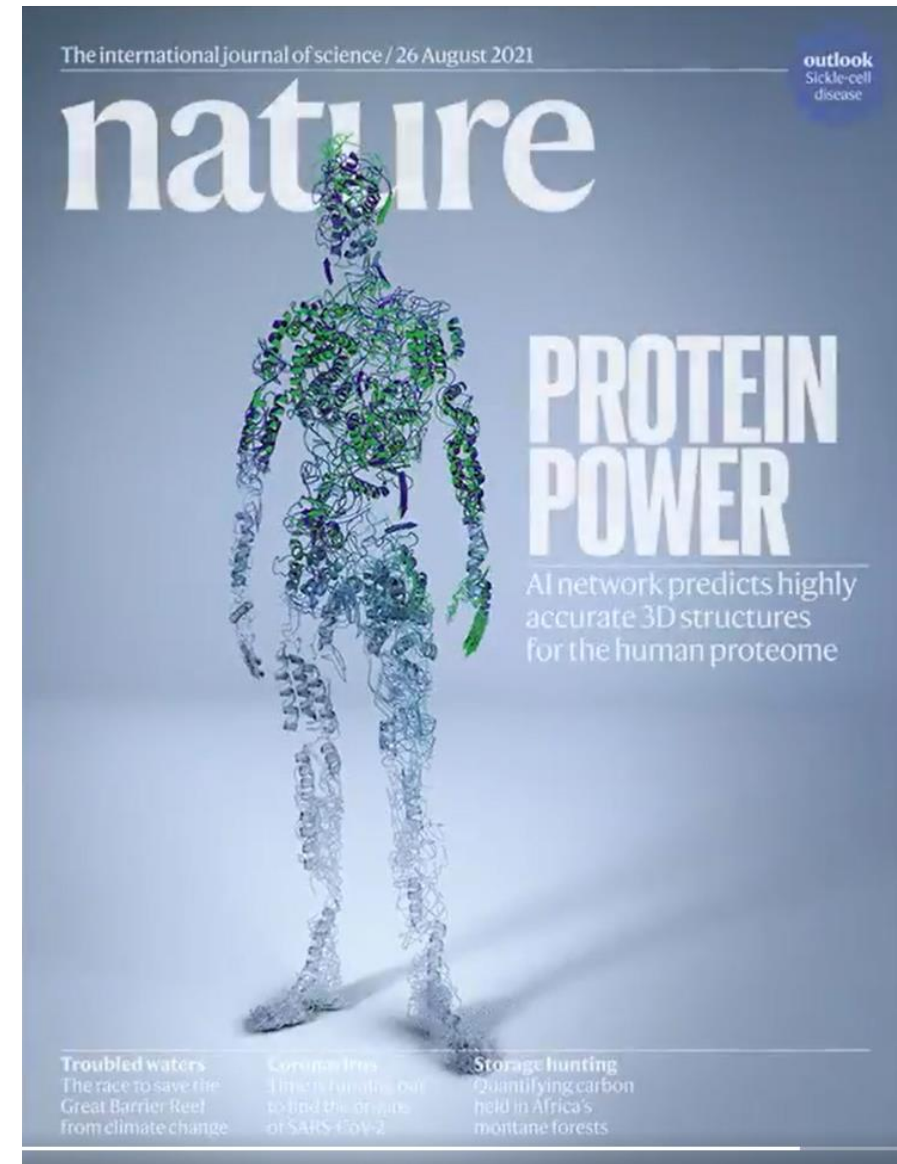
Forward-Looking Statements

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,” “aim,” and “intends,” or similar expressions. We intend these forward-looking statements, including statements regarding our strategy, future operations, future financial position and value of program portfolio, forms of revenue, including fees, milestones and royalties, research and technological development activities, growth plans, projected costs, 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 and our ability to secure milestone payments and royalties; 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.

Market and Statistical Information

This presentation also contains estimates and other statistical data made by independent parties and by us relating to market size and growth and other industry data. These data involve a number of assumptions and limitations, and you are cautioned not to give undue weight to such estimates. We have not independently verified the data generated by independent parties and cannot guarantee their accuracy or completeness.

One of the biggest breakthroughs in biotech came from big tech AI



Jumper, J., Evans, R., Pritzel, A. *et al.* Highly accurate protein structure prediction with AlphaFold. *Nature* **596**, 583–589 (2021).

Biologic drug discovery is a complex combinatorial challenge

Possible mAb CDR sequence diversity exceeds the total number of atoms in the universe

~**20⁶²** mAb sequences¹ vs. ~**10⁸⁰** atoms in the universe²

Visual representation
of all possible mAb
sequences →

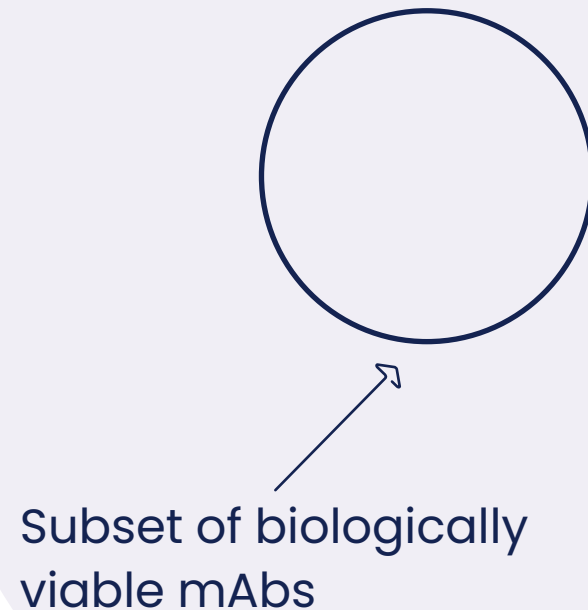
¹Assuming 62 positions (6 unique CDRs of approximately 7-13 residues in length) to vary with 20 possible amino acids per position

²<https://www.thoughtco.com/number-of-atoms-in-the-universe-603795>

The Problem

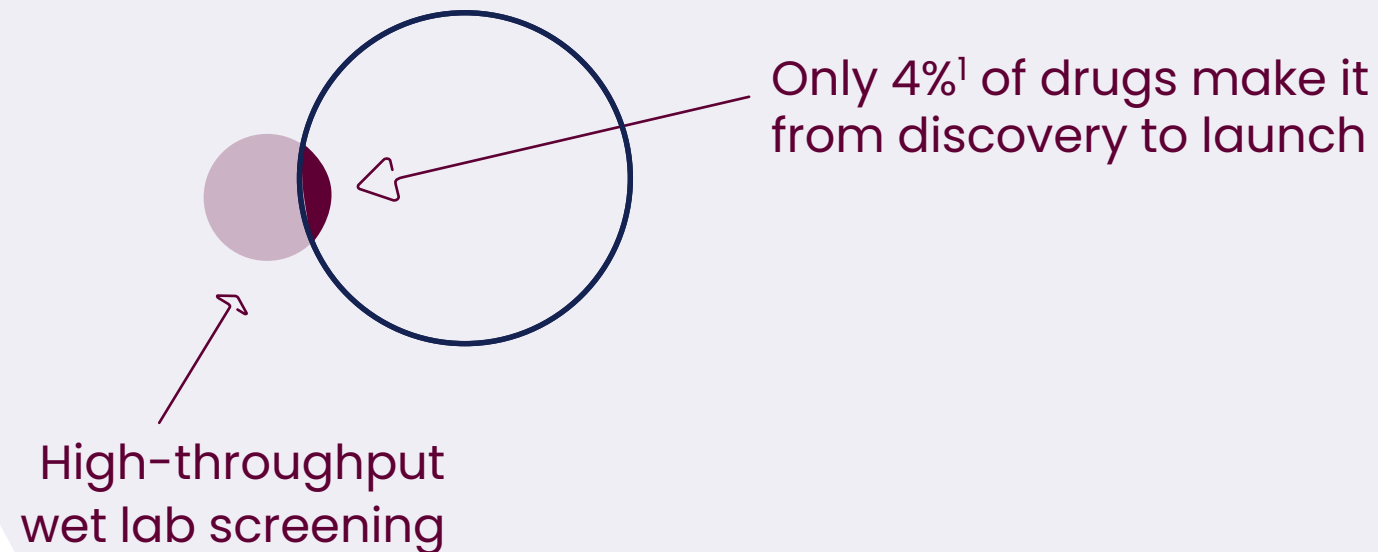
Biologic drug discovery fails too often

Only a subset of these sequences are biologically viable
(i.e., sequences that are developable, non-immunogenic, etc.)



Biologic drug discovery fails too often

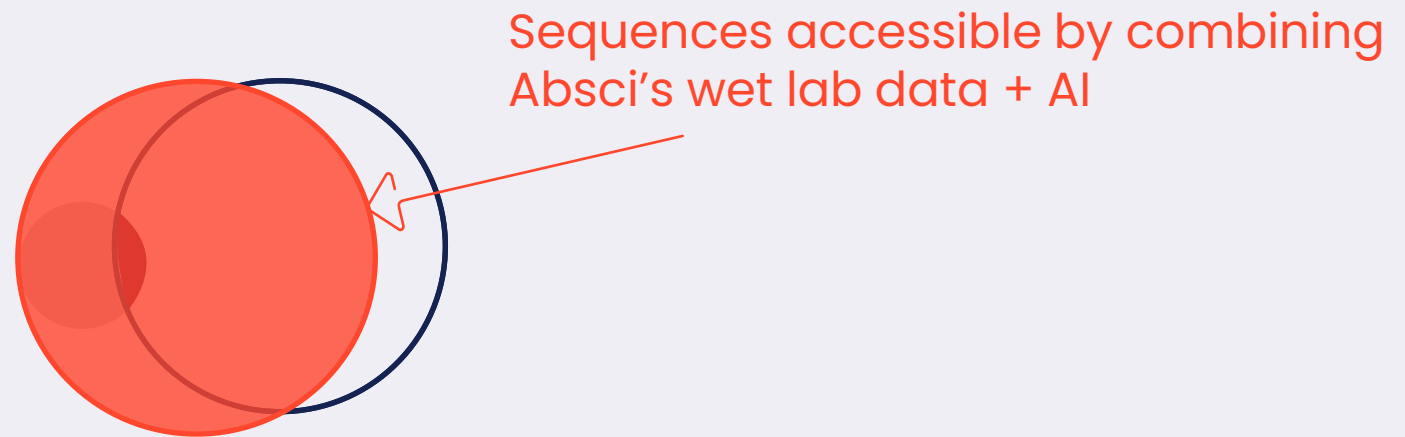
High throughput wet lab screening samples a very small fraction of possible sequences, many of which are not suitable drug candidates



¹Paul, S., Mytelka, D., Dunwiddie, C. et al. How to improve R&D productivity: the pharmaceutical industry's grand challenge. Nat Rev Drug Discov 9, 203–214 (2010).

Why Absci?

Proprietary wet lab data and AI enables Absci to explore **more** of the **right** sequences – ultimately bringing better drugs to patients



Why Absci?

Absci is merging AI & synthetic biology to accelerate biologic drug discovery

Absci
Proprietary
Data

Denovium
Engine™
(AI Platform)

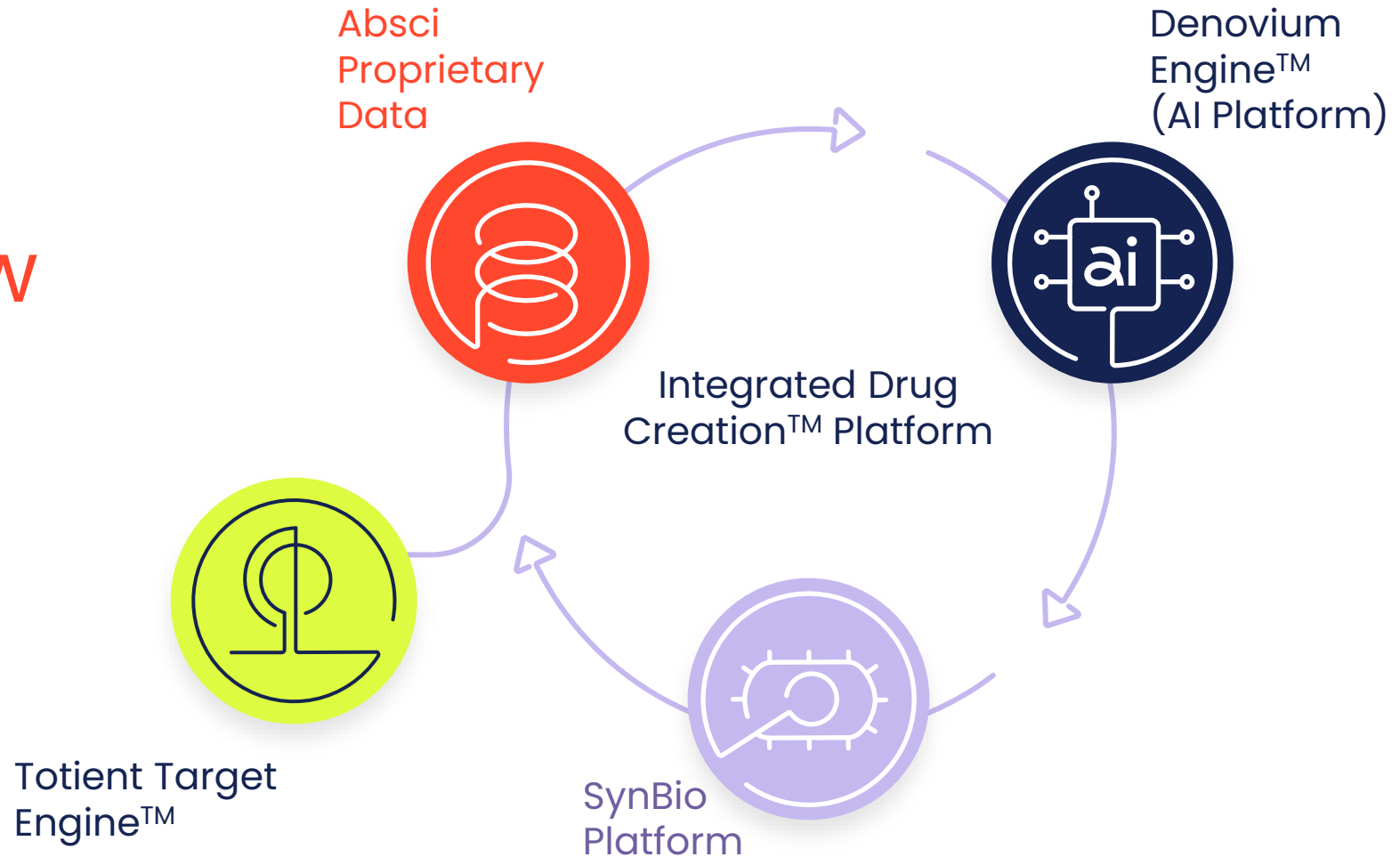


Integrated Drug
Creation™ Platform



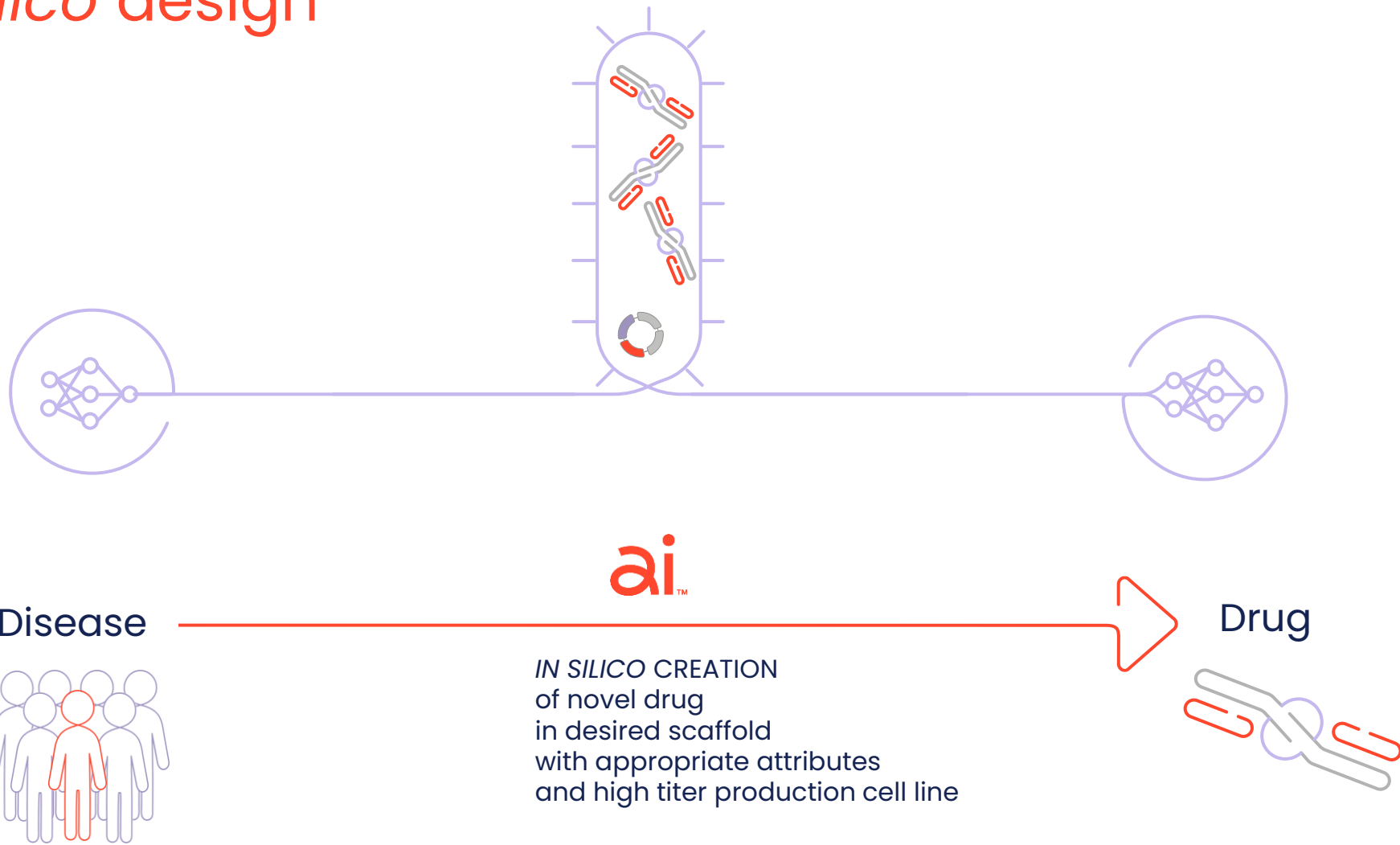
SynBio
Platform

Absci is applying AI to discover new drugs *and* novel drug targets



Vision

Fully *in silico* design



Absci has built an industry-leading data-centric platform for scalable, AI-enabled protein biologic discovery

Selected examples:

- **Deep contextual language models generate antibodies with specified target affinity**
Case study: *In silico* predicted affinities with high correlation to actual binding affinity
- **AI functional embeddings identify novel chaperones that increase titer & quality of protein biologics**
Case Study: Discovered chaperones increased Fab yield ~2-fold and improved product quality
- **Absci's nonstandard amino acid incorporation technology allows us to continue to out-evolve nature and design better drug candidates**
Case Study: Bionic SoluPro® strain and nsAA incorporation

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Case Study: Absci's AI-informed drug discovery

Toward *in silico* drug creation
Designing drug candidates with desired attributes



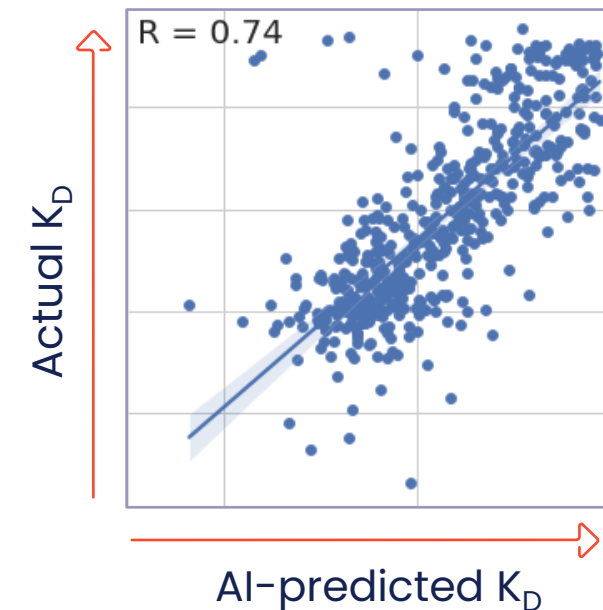
Absci's *in silico* predicted affinities have high correlation with values measured in wet lab

- Absci's AI trained on our proprietary data generated by in-house synthetic biology platform using trastuzumab variants with sequence diversity in CDRH3
- Binding affinities for Absci AI-predicted K_D and measured K_D have high correlation ($R = 0.74$)

Absci goes beyond current state of the art and can **design desired target affinity *in silico* with high confidence**

Trastuzumab binding kinetics:

Absci's AI-predicted vs experimentally measured K_D



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Case Study: Absci's AI-informed cell line development

Toward *in silico* drug creation
Designing drug candidates with desired attributes

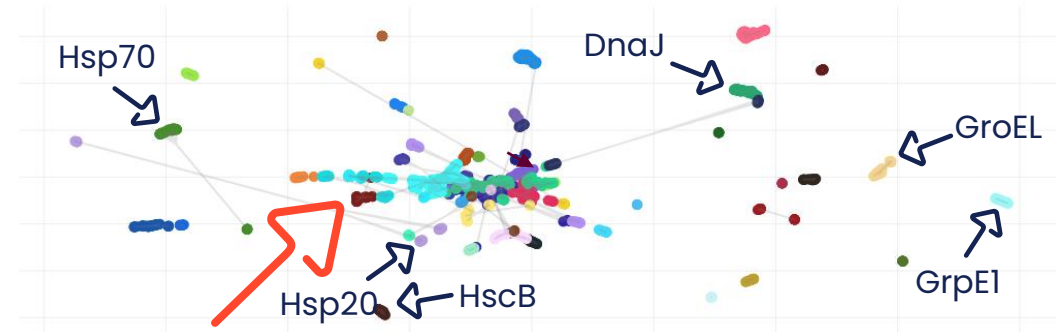


Absci's AI-discovered novel chaperone increased Fab yield 2-fold

- Absci's AI capable of understanding protein function & used to identify novel chaperones
- Protein XYZ was coexpressed with a difficult-to-express Fab and fermentation yield increased 2-fold

Absci's AI accelerates our understanding of biology to improve manufacturability

AI identified >1,000 proteins as potential chaperones, including known chaperones & proteins of unknown function



Coexpression of Protein "XYZ" from root bacterium resulted in **2-fold increase in Fab yield**

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Case Study: Bionic SoluPro[®] strain and nsAA incorporation

Toward *in silico* drug creation
Designing drug candidates with desired attributes



Out-evolving nature

Bionic Protein™ Technology: Non-Standard Amino Acid (nsAA) Incorporation

Absci is advancing our high-yielding SoluPro® platform by enabling site-specific nsAA incorporation into difficult-to-produce biologics

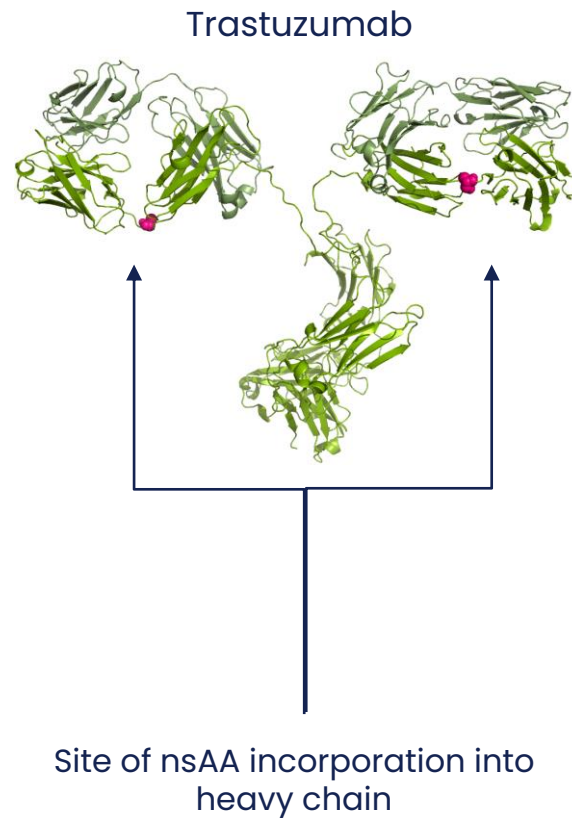
Wide-ranging applications:

- Improved drug properties
- Half-life extension
- Site-specific, homogeneous, designer glycosylation
- Development of antibody-drug conjugates (ADCs)
- Attachment of novel chemical moieties

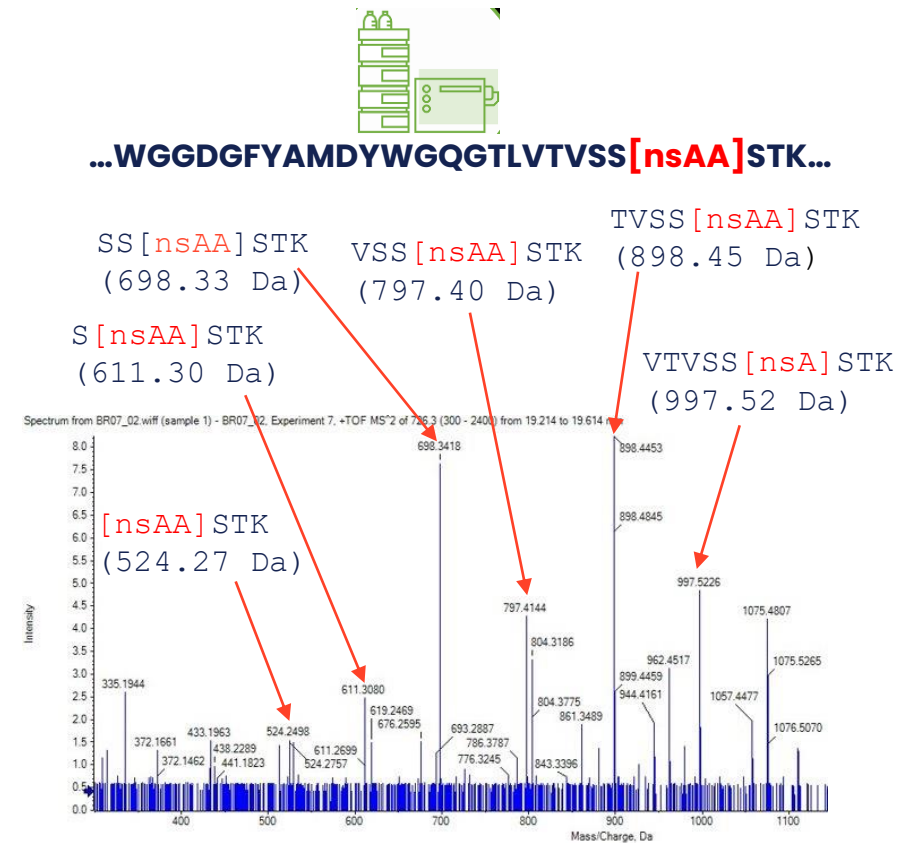
Out-evolving nature

Bionic trastuzumab produced at ~1 g/L and <1% misincorporation

Absci has engineered Bionic SoluPro[®] strains for incorporation of 4 unique nsAA



LC/MS/MS confirmation of nsAA incorporation



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Business Model

Toward *in silico* drug creation
Designing drug candidates with desired attributes



Program economics grow with successful development

Assembling a diverse portfolio of potential milestones & royalties



*Illustrative of Absci's general beliefs regarding the potential value of downstream clinical and commercial success of partnered programs; does not depict any underlying data

¹Paul, S., Mytelka, D., Dunwiddie, C. et al. How to improve R&D productivity: the pharmaceutical industry's grand challenge. Nat Rev Drug Discov 9, 203-214 (2010).

²Company analysis of aggregated publicly available data from EvaluatePharma® [April, 2021] Evaluate Ltd.

Sample NPV assumptions

Probability of success (cumulative)

- Discovery: 4%¹
- CLD: 8%¹

Timeline to approval

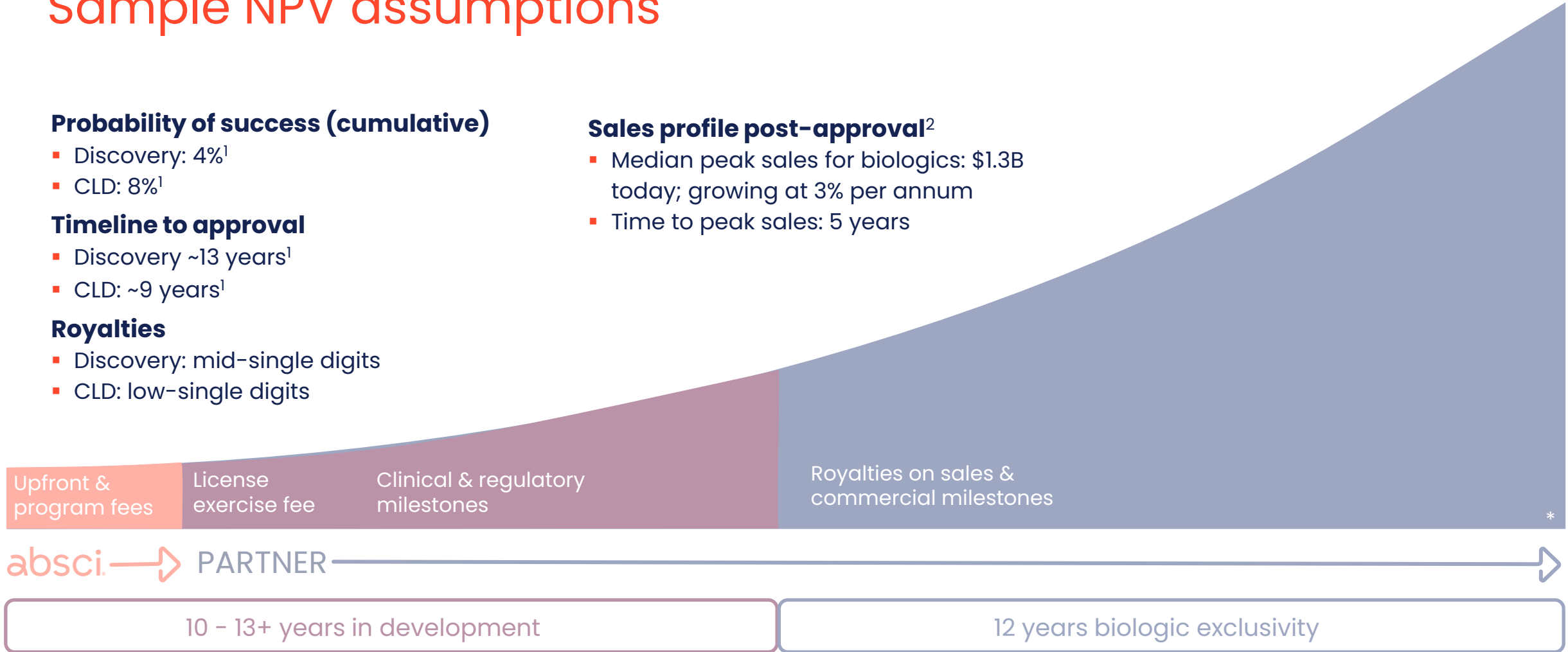
- Discovery ~13 years¹
- CLD: ~9 years¹

Royalties

- Discovery: mid-single digits
- CLD: low-single digits

Sales profile post-approval²

- Median peak sales for biologics: \$1.3B today; growing at 3% per annum
- Time to peak sales: 5 years

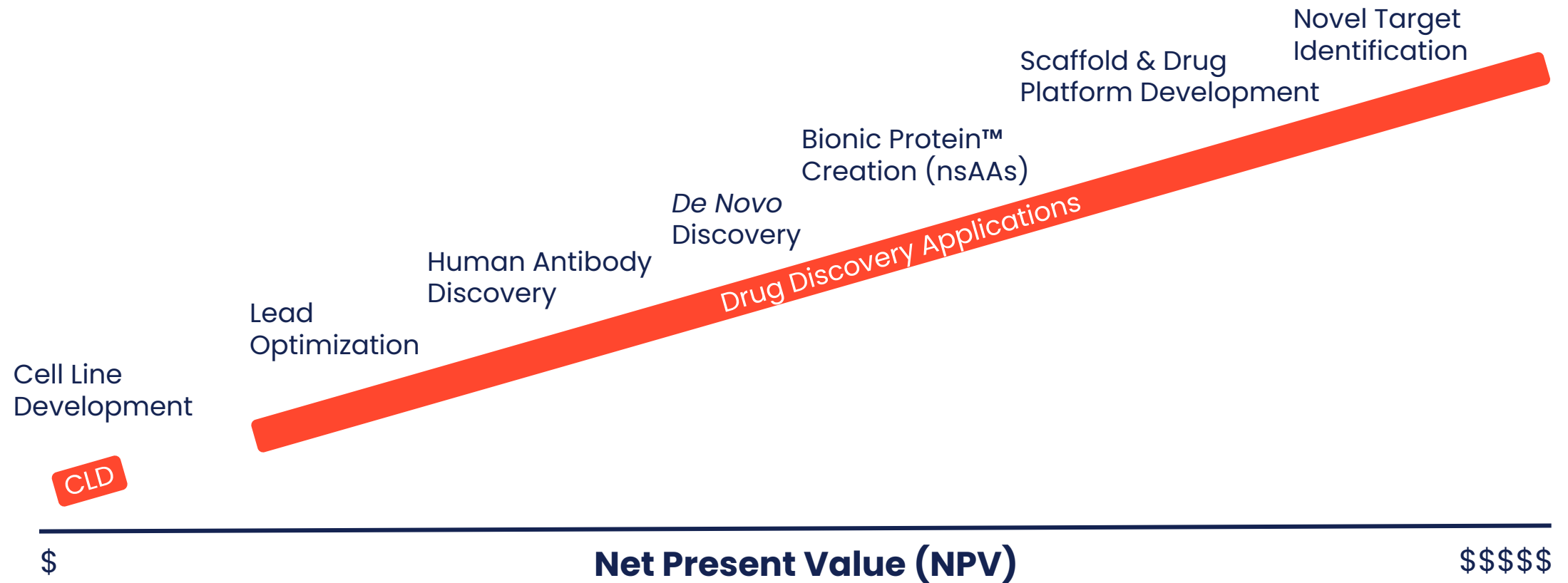


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Creating a portfolio of programs with increasing value for drug & target discovery



January 7, 2022

Absci announces research collaboration with Merck

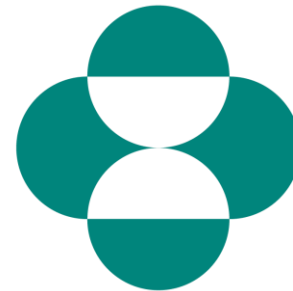
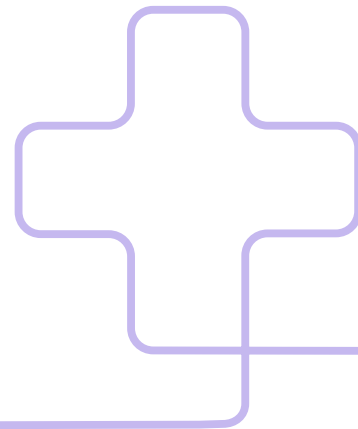
Drug Discovery

- Option to nominate up to 3 targets & enter into a drug discovery agreement
- \$610M potential upfront + milestones
- Tiered royalties on sales of approved drugs
- Research funding

Bionic Enzymes™

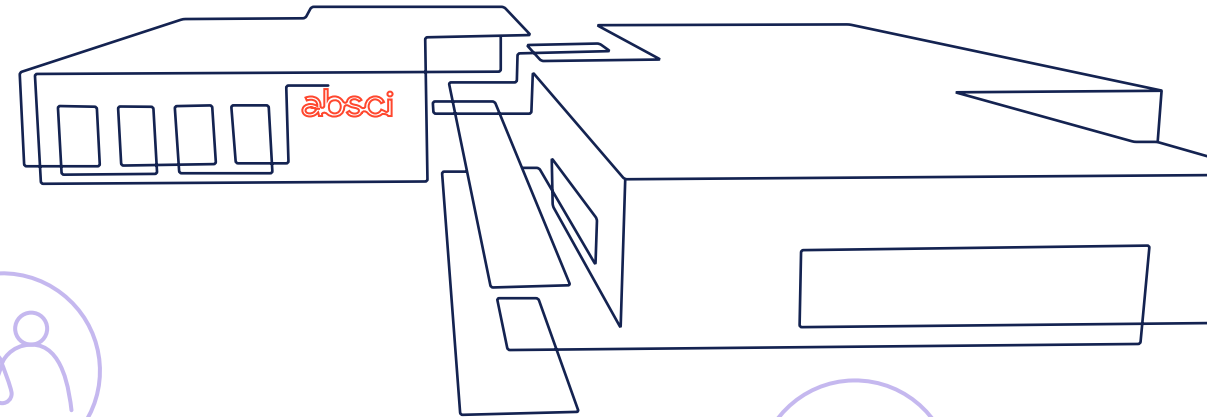
- Generation of nsAA-containing custom bioproduction enzymes
- Upfront and milestones

absci®

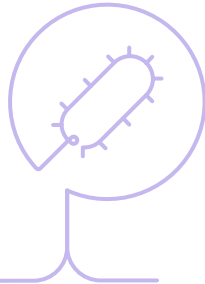


MERCK

A transformative year for Absci

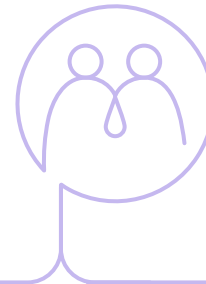


Technology



- ✓ **Platform expansion**
Launched Bionic Protein™ Technology
- ✓ **Demonstrated performance** of Absci's AI deep learning platform (Denovium Engine™) for drug discovery and cell line design
- ✓ **Bolstered Absci's AI capabilities** with addition of antibody and target discovery technology (Totient Target Engine™)

Company



- ✓ **Expanded world-class team** to 225+ unlimiters, including leaders in AI, immunology, synthetic biology, and protein expression
- ✓ Opened **77,000 ft²** campus
- ✓ Raised **\$435M+** of capital

Partnerships



- ✓ Signed flagship **partnerships** with Merck and EQRx, including multiple programs & full suite of drug discovery, AI, Bionic Protein™, and CLD capabilities
- ✓ **15 Active Programs***
- ✓ Increased the **economic value** of portfolio on an **NPV per program** basis

Team

The right leadership team to accomplish the impossible



Sean McClain
Founder & CEO
Director



Matthew Weinstock, PhD
Chief Technology Officer



Greg Schiffman, CPA
Chief Financial Officer



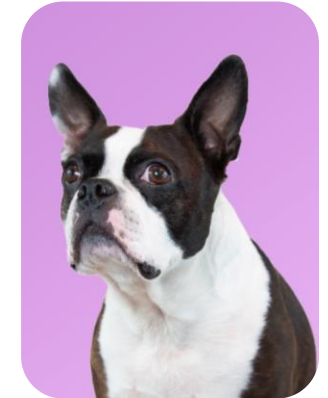
Nikhil Goel, MS, MBA
Chief Strategy Officer



Sarah Korman, PhD, JD
General Counsel



James Sietstra
SVP, Business Development



Penelope
Chief Morale Officer

Board of Directors



Ivana Magovcevic-Liebisch, PhD, JD
CEO & President, Vigil Neuroscience
Board Chair



Eli Casdin
CIO, Casdin Capital
Board Chair



Zach Jonasson, PhD
Managing Partner, PVP



Karen McGinnis, CPA
Former CAO, Illumina



Amrit Nagpal
Managing Director, Redmile Group



Joseph Sirosh, PhD
CTO, Compass, Inc

Just because something hasn't been done,
doesn't mean it can't be done



Translate ideas into impact™