

The background features a central bright blue and yellow light source that creates a tunnel-like effect with radiating lines and a bokeh of particles. A white play button icon is overlaid on the word 'drugs' in the text.

Creating
drugs▶ at the
speed of AI.

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(assay="SPR")
```

DRUG CREATION



41ST ANNUAL J.P. MORGAN
HEALTHCARE CONFERENCE

2005: 20 approved, 11.2% of drugs entering clinical trials approved 2006: 22 approved, 11.2% 2007: 18 approved, 10.7% 2008: 24 approved, 9.2% 2009: 26 approved, 7.8% 2010: 21 approved, 6.8% 2011: 35 approved, 6.1% 2012: 39 approved, 5.3% 2013: 27 approved, 5.2% 2014: 41 approved, 6.7% 2015: 45 approved, 13.8%
Oxford Academic

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, financial performance and results of operations, including our expectations and guidance regarding cash, cash equivalents and restricted cash, our projected cash usage, needs and runway, future operations, future financial position, future revenue, internal research and technological development activities, advancements toward in silico drug design, research and technology development collaboration efforts, 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, our ability to secure milestone payments and royalties, and our ability to effectively collaborate on research, drug discovery and development activities with our partners or potential partners; 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.

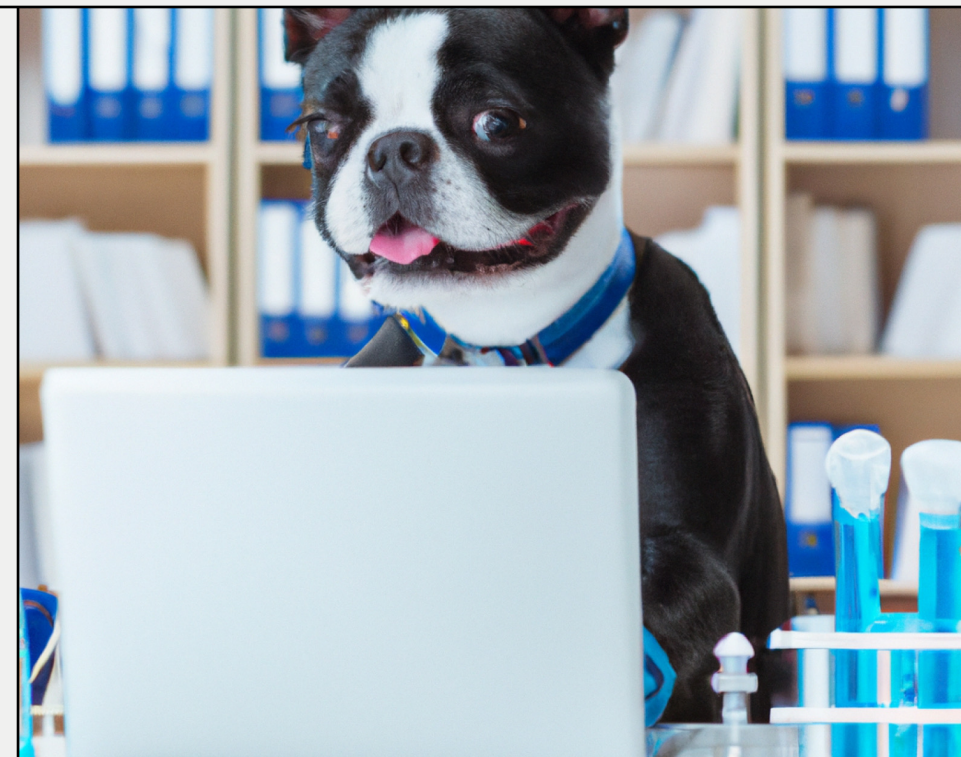
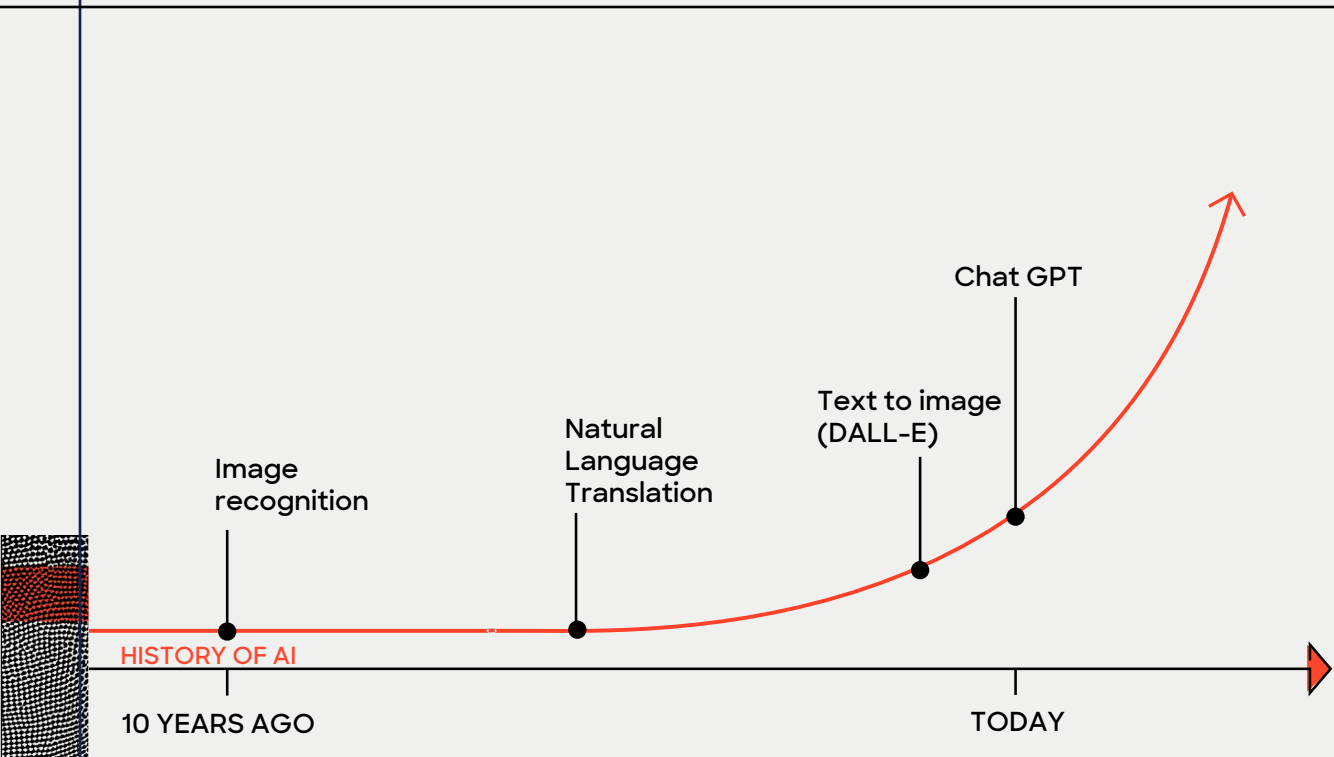
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What if the next transformative drug was not discovered but **created** with a **click of a button**?



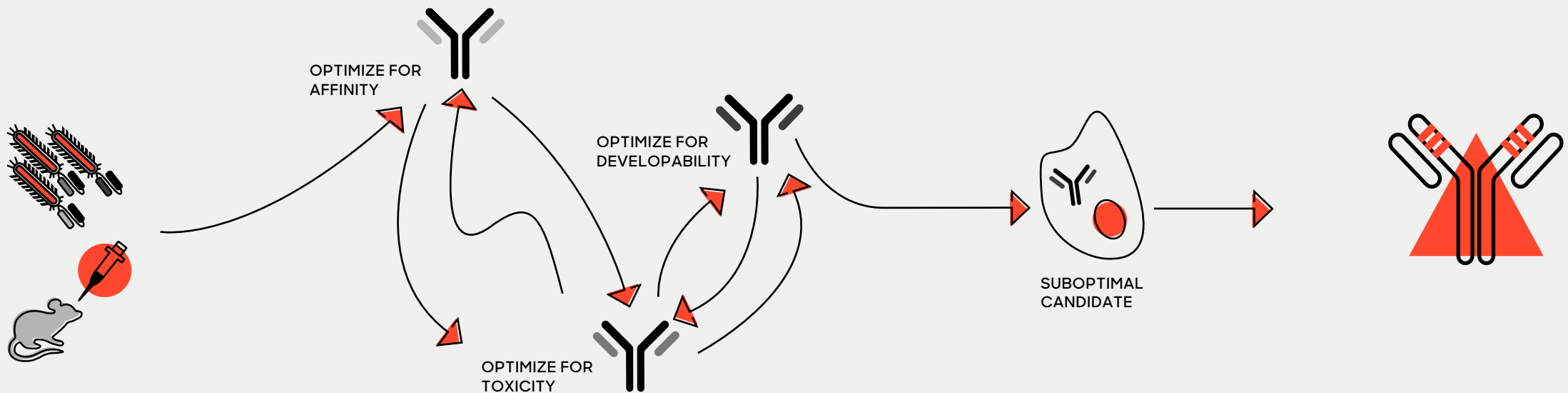
DALL-E generated image of Penelope (Absci's Chief Morale Officer) discovering biologics on a computer.

The Problem—The Need For Generative AI

The old drug discovery paradigm is ripe for disruption

5.5 YEARS FROM DISCOVERY TO IND

<5% SUCCESS RATE FROM DISCOVERY TO LAUNCH

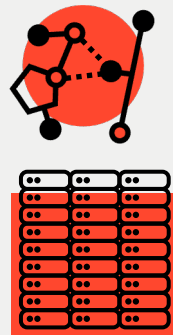


Long iterative process creating drug candidates with suboptimal attributes

Why Hasn't Generative AI Transformed Biologic Drug Discovery?

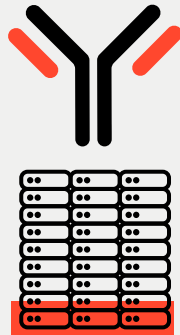
Unlocking the potential of generative AI in biology require **scalable biological data**

Small molecule



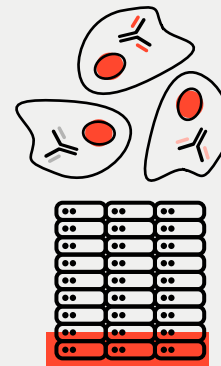
Extensive Libraries

v. Biologic



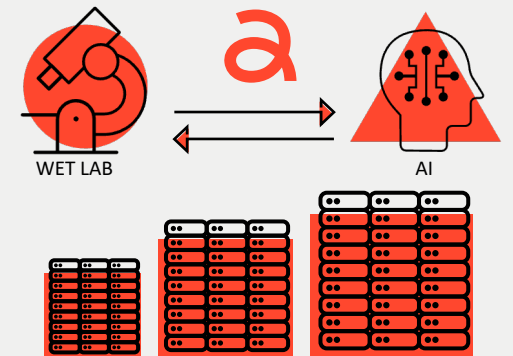
Limited Data

Biologics requires living organisms to make every drug variant for testing



Consistency and accurate data is limited

Unlocking the potential of generative AI in biology...



...requires generating scalable biological data

Absci is **solving** the problem of scalable biological data enabling **true generative AI** for biologics drug discovery

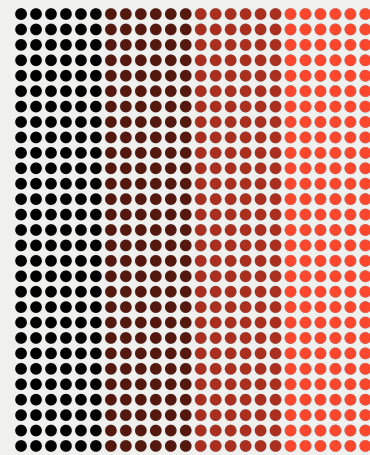
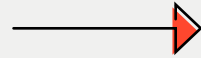
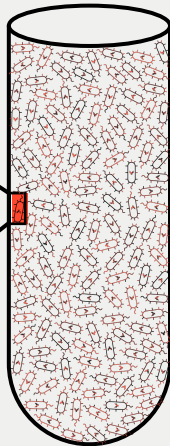
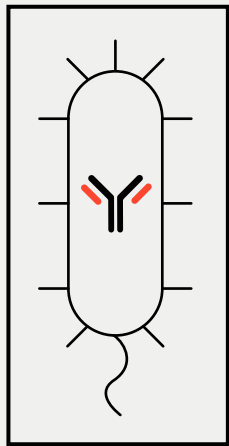


Absci's *E.coli* SoluPro™ cell line

Billions of cells, expressing proteins-of-interest

Absci's ACE Assay screens billions of unique drug variant candidates

High-quality data flows into Absci's generative AI engine



● NON-BINDING
● TIGHT BINDING



The Solution

At Absci, the future is **now** with our Integrated Drug Creation™ platform

DATA TO TRAIN

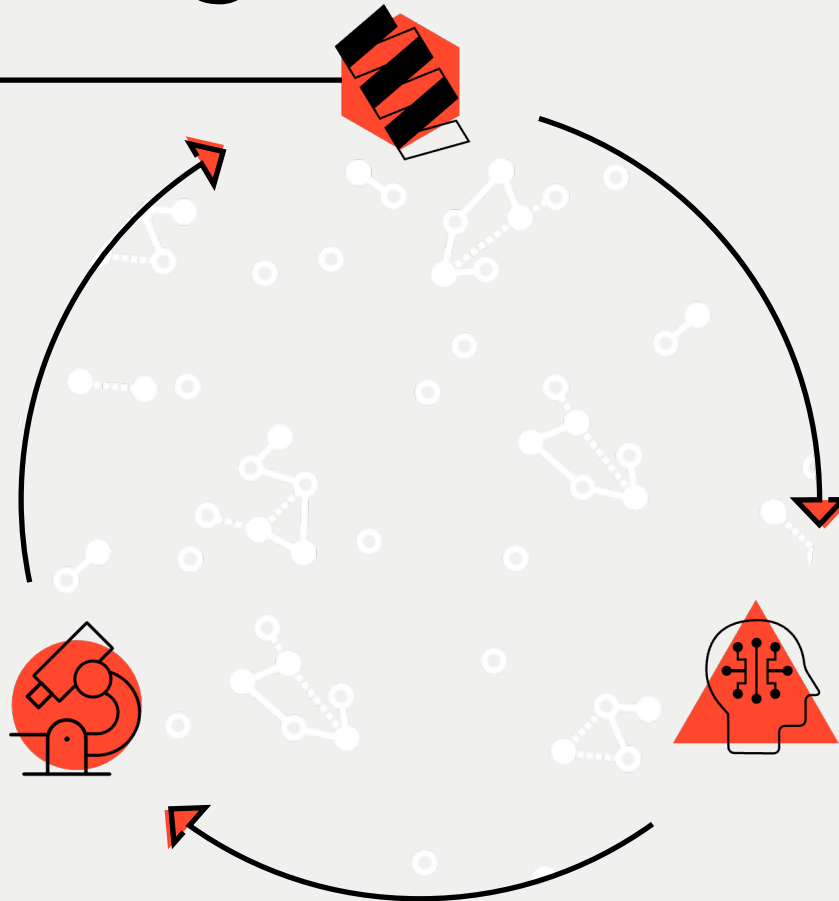
Proprietary wet-lab assays capable of generating **billions** of protein-protein interactions a week for ML training

WET LAB TO VALIDATE

Scalable wet-lab infrastructure capable of validating **2.8 million unique** AI-generated designs a week

AI TO CREATE

Generative AI engine to create new antibodies and next-gen biologics



Absci is the Leader in Generative AI Drug Creation for Biologics

Cycles completed within **weeks**

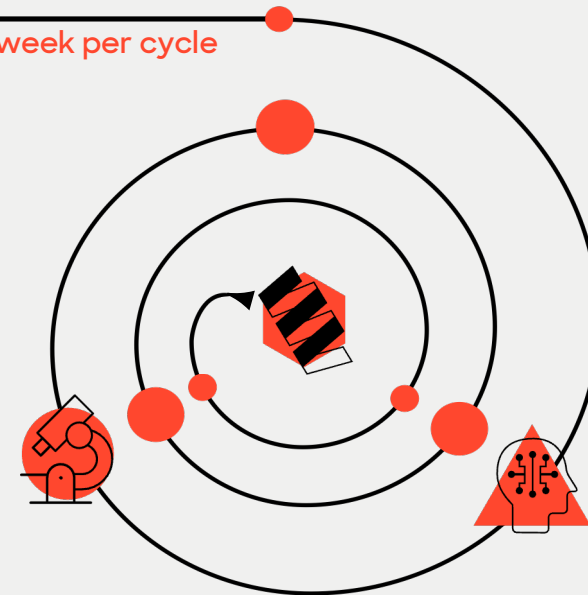


Absci's rapid cycle times aims to:

DATA TO TRAIN

Typical 6-week per cycle

WET LAB TO VALIDATE



AI TO CREATE

01

Rapidly iterate and improve AI models

02

Reduce preclinical development timelines and increase clinical PoS

03

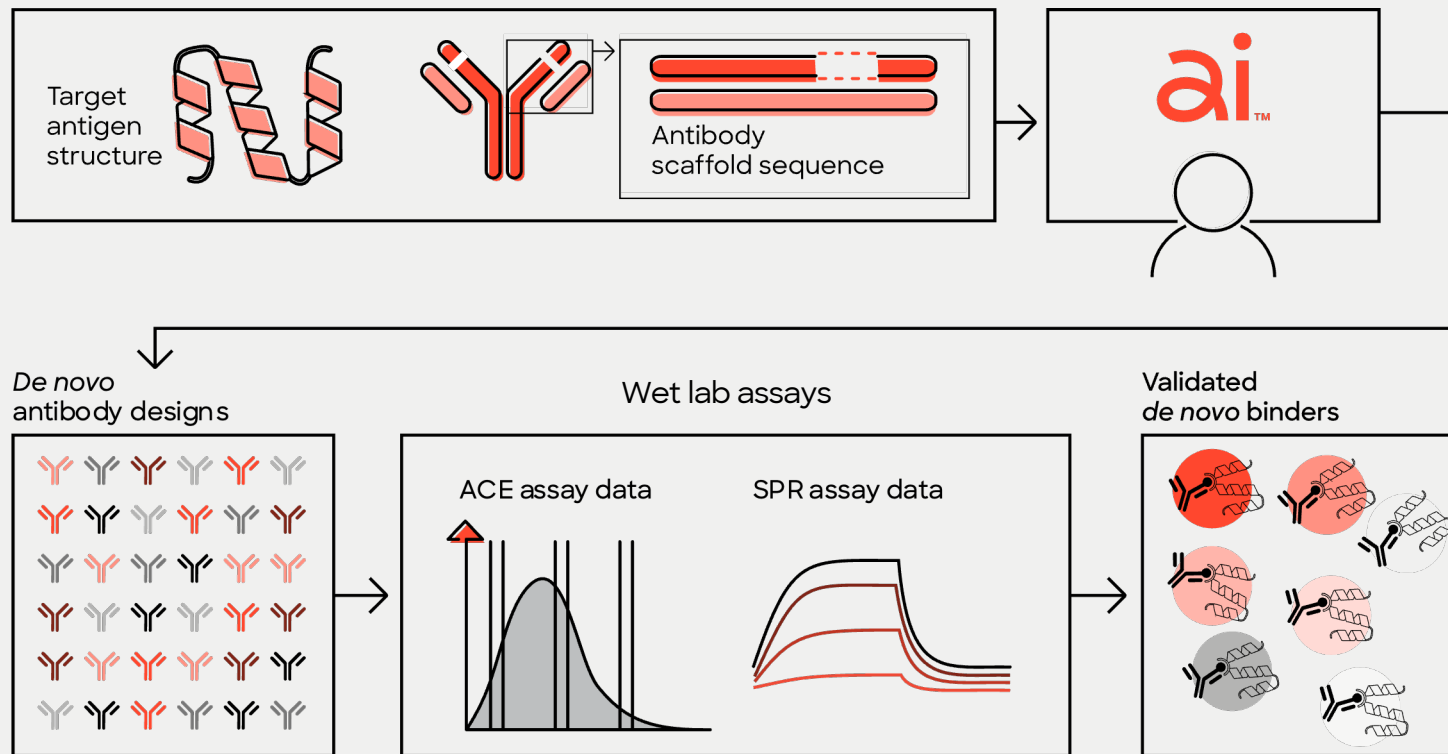
Accelerate Industry progress and attract top AI talent



Absci is the **first** to
design and validate
new antibodies with
zero-shot 
generative AI

Breakthrough in *de novo* Drug Creation

De novo drug creation with ‘zero-shot’ generative AI



- Zero-Shot: Model has never seen an antibody that binds to the target or homologs
- Binders were identified **straight out of the model** - no lead optimization was performed
- **Demonstrated** across **four therapeutic** targets: HER2, VEGF-A, COVID omicron, undisclosed target

Case Study: *de novo* Discovery in silico

Unlocking *de novo* antibody design with generative AI

Unlocking *de novo* antibody design with generative artificial intelligence

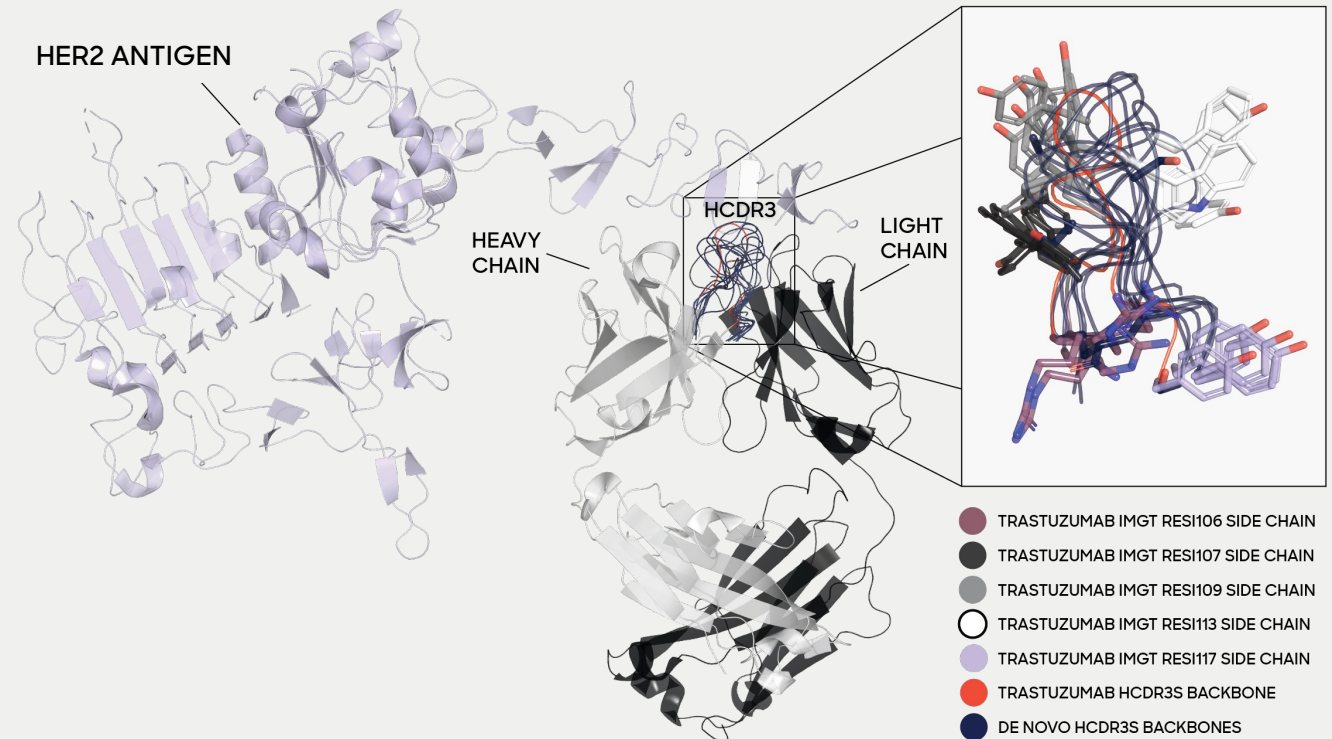
Amir Shanehsazzadeh*, Shurrol Bachas*, George Kasun, John M. Sutton, Andrea K. Steiger, Richard Shuai, Christa Kohnert, Alex Morehead, Amber Brown, Chelsea Chung, Brenna Luton, Nicolas Diaz, Matt McParillon, Bailey Knight, Macey Radach, Katherine Bateman, David A. Spencer, Jovan Cejovic, Gaelin Kopec-Belliveau, Robel Hailu, Edriss Yassine, Cailen McCloskey, Monica Natividad, Dalton Chapman, Luka Stojanovic, Roxane Cagniat, Shaheed Abdulhaqq, Zheyuan Guo, Katherine Moran, Lillian R. Klug, Miles Gander, Joshua Meier[§]

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Abstract

Generative artificial intelligence (AI) has the potential to greatly increase the speed, quality and controllability of antibody design. Traditional *de novo* antibody discovery requires time and resource intensive screening of large immune or synthetic libraries. These methods also offer little control over the output sequences, which can result in lead candidates with sub-optimal binding and poor developability attributes. Several groups have introduced models for generative antibody design with promising *in silico* evidence [1–10], however, no such method has demonstrated *de novo* antibody design with experimental validation. Here we use generative deep learning models to *de novo* design antibodies against three distinct targets in a *zero-shot* fashion where all designs are the result of a single round of model generations with no follow-up optimization. In particular, we screen over 400,000 antibody variants designed for binding to human epidermal growth factor receptor 2 (HER2) [11] using our high-throughput wet lab capabilities. From these screens, we further characterize 421 binders biophysically using surface plasmon resonance (SPR), finding three that bind tighter than the therapeutic antibody trastuzumab [12]. The binders are highly diverse and have low sequence identity to known antibodies. Additionally, these binders score highly on our previously introduced *Naturalness* metric [13], indicating that they are likely to possess desirable developability profiles and low immunogenicity. We open source the binders to HER2 and report the measured binding affinities. These results unlock a path to accelerated drug creation for novel therapeutic targets using generative AI combined with high throughput experimentation.



Case Study: *de novo* Discovery in silico

AI Model generated **highly diverse** and **effective** binders from **massive** search space

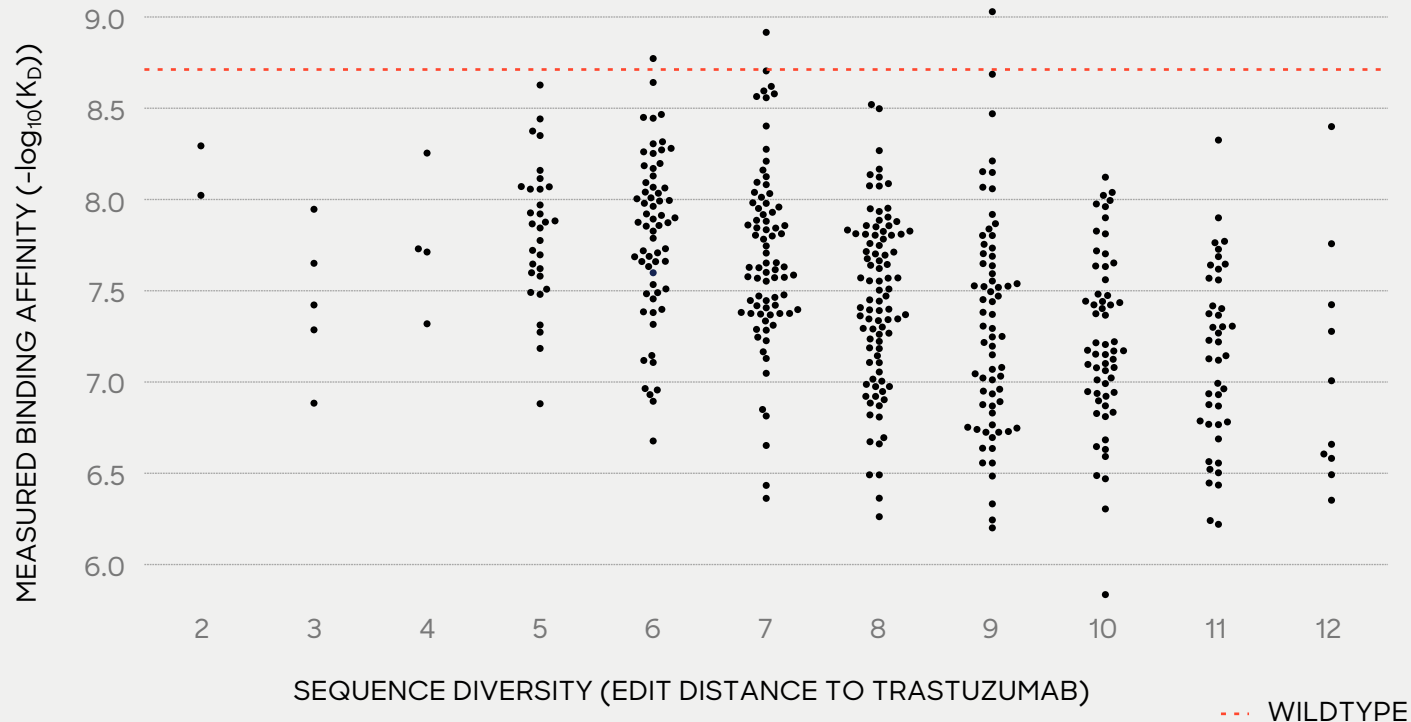
SIZE OF SEARCH SPACE:

MILLIONS

BILLIONS

TRILLIONS

QUADRILLIONS



AI-Designed & **Wet Lab Validated** HER2 Binders

- Hundreds of binders created
- Ability to generate binders near to and far from trastuzumab
- Binding affinity maintained even when mutating >90% of the CDR3 region
- All binders to HER2 and HER2 homologs removed from the training dataset

Case Study: *de novo* Discovery *in silico*

AI model is broadly applicable enabling higher potential therapeutics

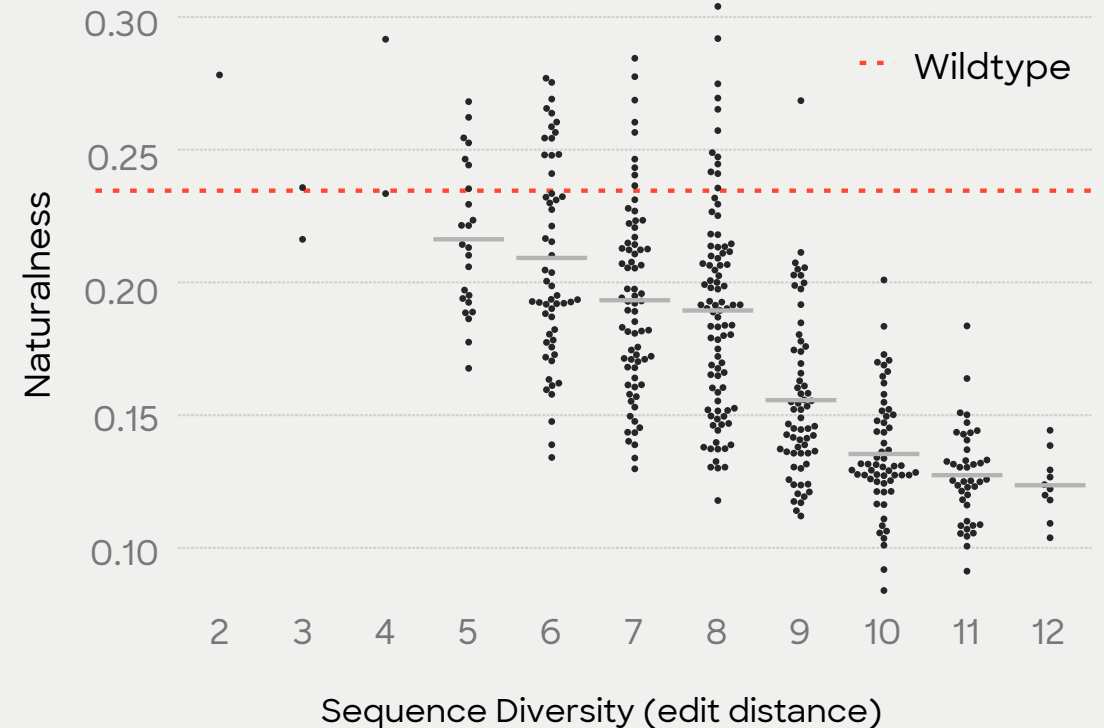
Better therapeutics, faster

- Successfully designed antibody variants with higher Naturalness score
- The Naturalness score is associated with developability metrics such as immunogenicity

Model is validated and broadly applicable

- Successfully demonstrated across four therapeutic targets: HER2, VEGF-A, COVID omicron, undisclosed target

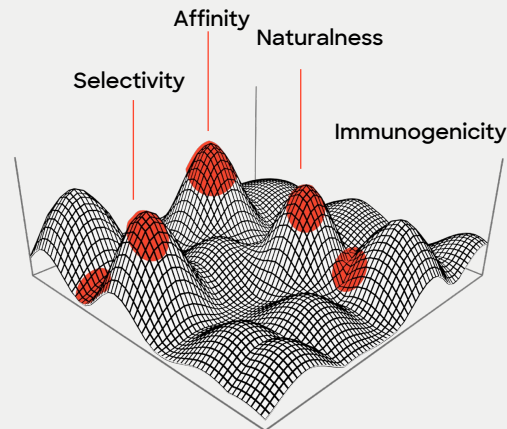
Rapid progress towards fully *in silico* drug creation



Unlocking **new** and **differentiated** value drivers

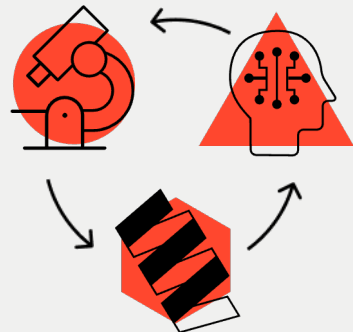
Higher **Potential** Biologics with Increased PoS

Multidimensional optimization in parallel creates higher quality biologics with an increased Probability of Success



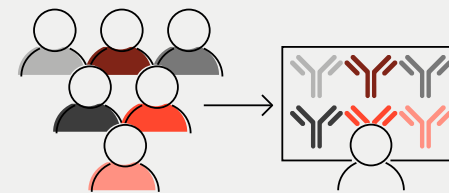
Reducing **Time** & Increasing **Competitiveness**

Drug creation process is significantly shortened, reducing research costs and increasing competitiveness



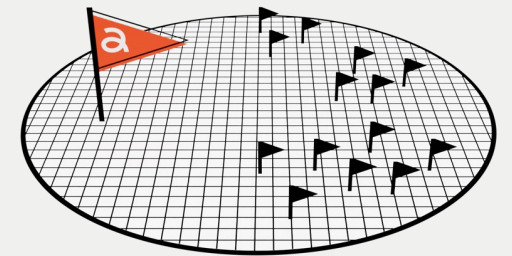
Increasing Options for **Personalized** Medicine

Specific Epitope targeting increases options for personalized medicine



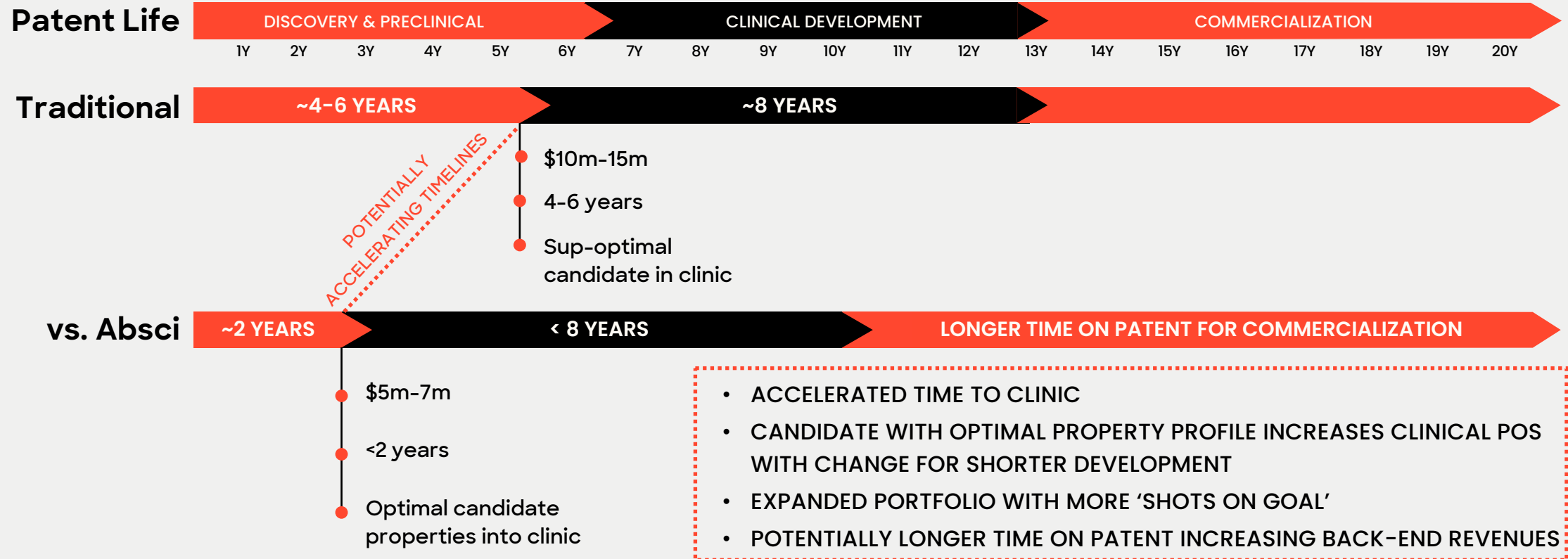
Broadening **Intellectual** Property Space

AI-driven drug creation generates valuable Intellectual Property



Better Biologics Faster

Accelerating time to clinic while increasing PoS



Partnerships

Technology **validated** through industry-leading partnerships



BioSpace

“Merck leans into AI with \$610M in biobucks for Absci drug discovery pact”

*“At Merck we are continually evaluating new ways to build, expand, and refine our biologics capabilities. Absci’s platform offers a compelling opportunity to design new biologic candidates and explore the expression of complex proteins.”**

Dr. Fiona Marshall

Former SVP, Head of Discovery,
Preclinical and Translational Medicine



“EQRx and Absci Announce Partnership to Discover and Develop Next-Generation Protein-Based Drugs”

“Absci’s technology platform enables rapid discovery and production of well-differentiated protein-based drugs that are elusive to other discovery approaches. We are excited to work with Absci...”

Dr. Carlos Garcia-Echeverria

Chief of Rx Creation

Well positioned to revolutionize AI drug creation



>200	Unlimiters with deep experience in AI, immunology, synthetic biology, and protein expression
77,000 Square Feet	State-of-the-art drug creation and wet lab space in Vancouver WA, with Absci AI Research (AAIR) lab in NYC, and Innovation Centre in Zug Switzerland
17	Active Programs* with leading partners
>\$160M	Strong cash position with >\$160M at end of '22**
>200	Patents filed worldwide with dozens more expected in 2023

Billions High quality high-throughput protein-protein interaction data can be generated a week

* Active Programs: programs in which we have negotiated, or expect to negotiate, license agreements for downstream milestones and royalties. Count as of 9/30/22 10Q filing.

**Unaudited Cash and cash equivalents and short-term investments

Trailblazing Management Team

The right leadership team to accomplish the Impossible

Executive Leadership



SEAN MCCLAIN
Founder & CEO Director

ANDREAS BUSCH, PHD
Chief Innovation Officer

GREG SCHIFFMAN, CPA
Chief Financial Officer

SARAH KORMAN, PHD, JD
Chief Legal Officer

DENISE DETTORE
Chief People Officer

JACK GOLD
Chief Marketing Officer

PENELOPE
Chief Morale Officer

Board of Directors



IVANA MAGOVCEVIC-LIEBISCH, PhD, JD
CEO & President, Vigil Neuroscience

ZACH JONASSON, PhD
Managing Partner, PVP

KAREN MCGINNIS, CPA
Former CAO, Illumina

AMRIT NAGPAL
Managing Director, Redmile Group

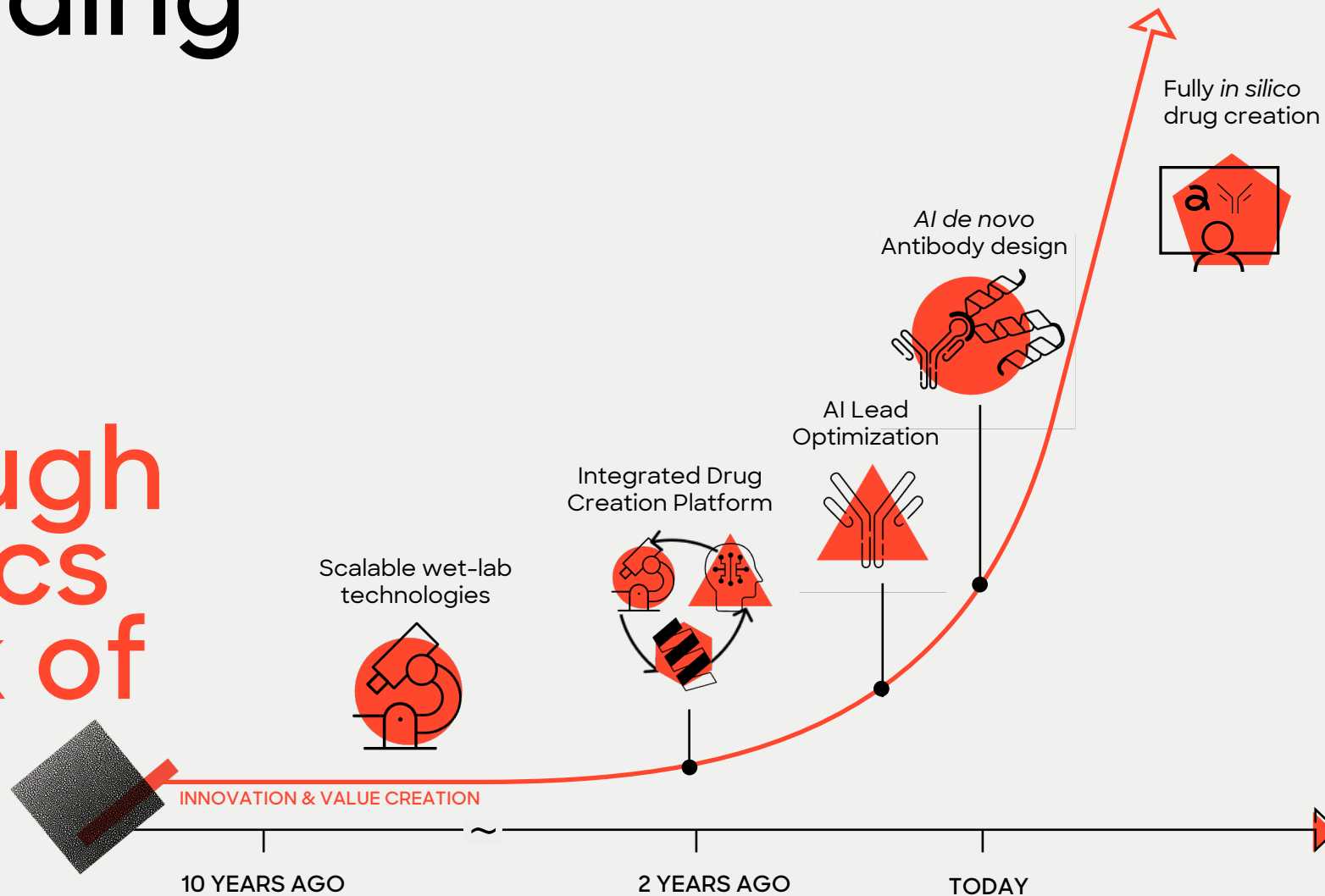
JOSEPH SIROSH, PhD
Vice President, Alexa Shopping, Amazon

DAN RABINOVITSJ
VP Connectivity, Meta

Leadership experience from:



Absci is leading the way in AI drug creation towards breakthrough therapeutics at the click of a button



absci[®]



This **revolution** is
only just beginning.