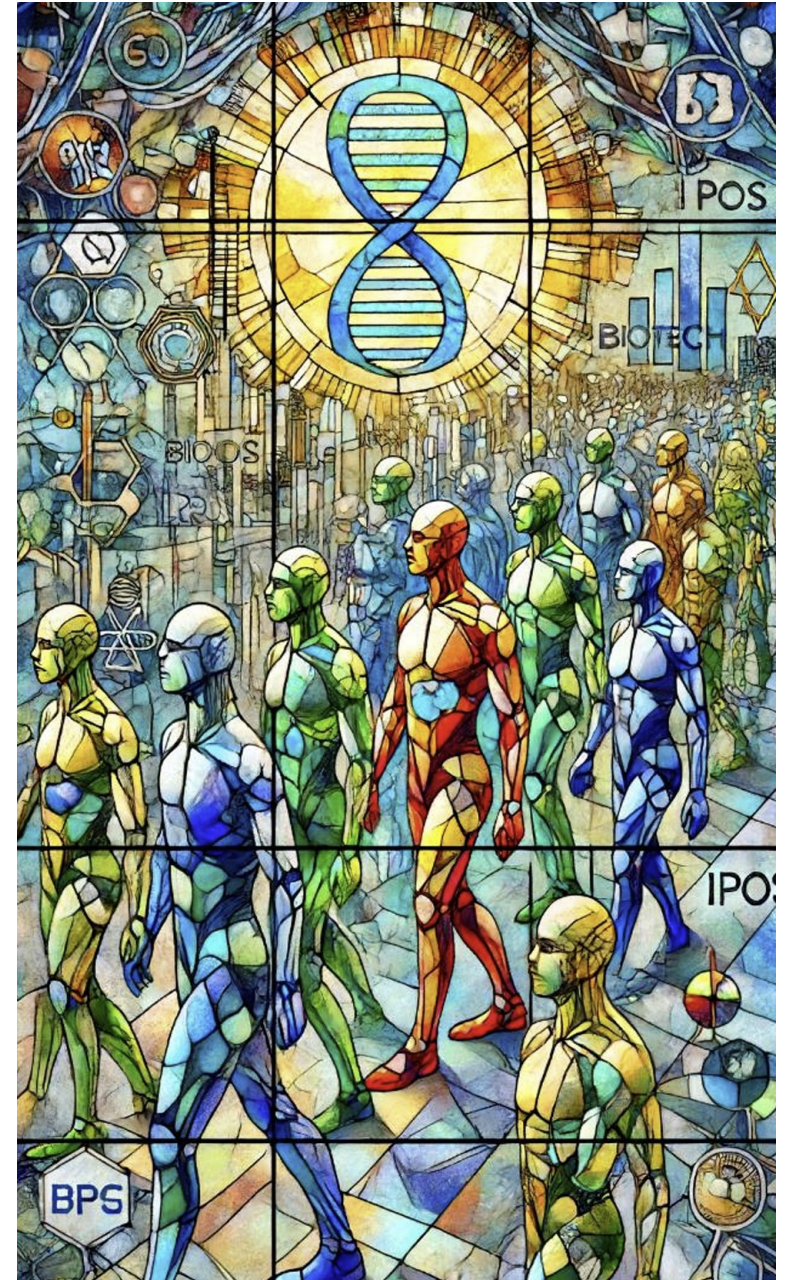


# BIOPHARMA INVESTING CONSIDERATIONS

VALUEX VAIL 2024

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# Biopharma Market Update





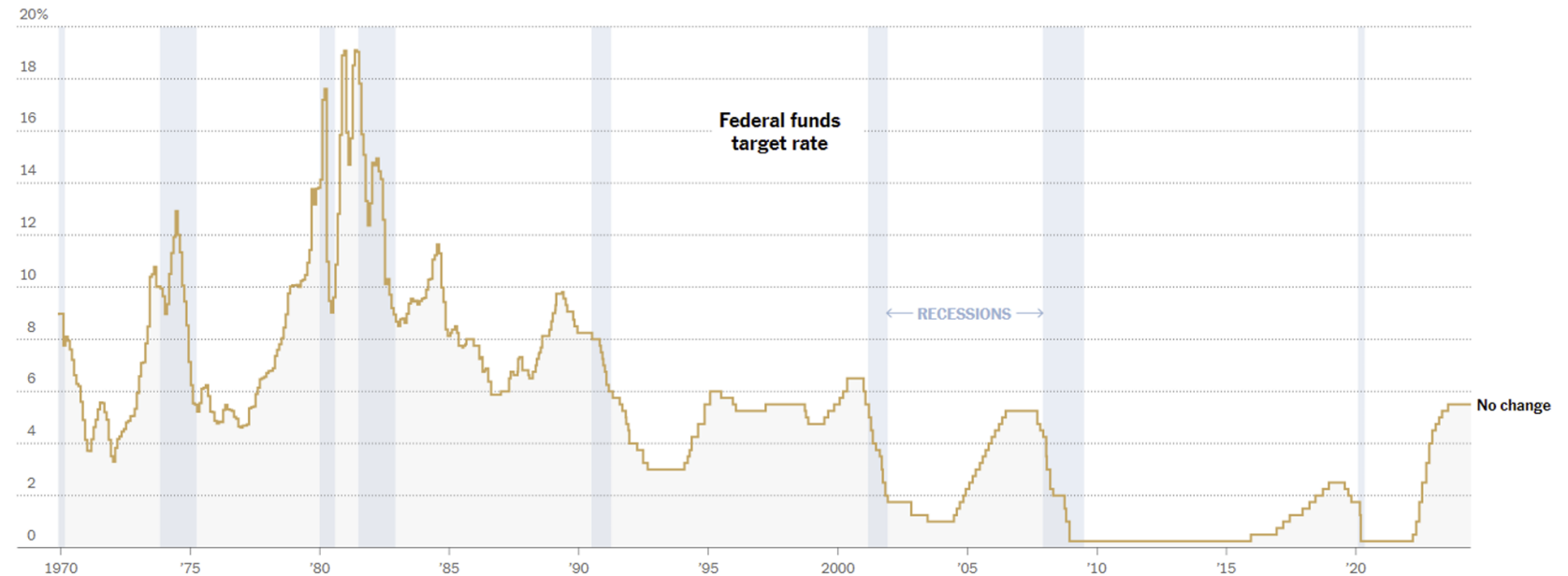
# The Fed Holds Rates Steady and Predicts Just One Reduction This Year

Jeanna Smialek, *New York Times*, June 12, 2024 (excerpt)

Federal Reserve officials left interest rates unchanged at their June meeting on Wednesday and predicted that they will cut borrowing costs just once before the end of 2024, taking a cautious approach as they try to avoid declaring a premature victory over inflation.

While the Fed had been expected to leave rates unchanged, its projections for how interest rates may evolve surprised many economists.

When Fed officials last released quarterly economic estimates in March, they anticipated cutting interest rates three times this year. Investors had expected them to revise that outlook somewhat this time, in light of stubborn inflation early in 2024, but the shift to a single cut was more drastic.



Note: The rate since December 2008 is the upper limit of the federal funds target range. • Source: Federal Reserve • By Karl Russell

*Excerpt from Stifel Healthcare (Advisory Bank)  
Biopharmaceutical Sector Update Report June 2024*

# XBI REMAINS LOW COMPARED WITH COVID-ERA HIGHS

## XBI: SPDR S&P Biotech ETF



# XBI CONTINUES TO DIVERGE FROM S&P 500

Over the last 3 years, the XBI is down 33% while the S&P 500 is up 27.7% (most this year). Nvidia has driven quite a bit of the S&P 500 with a 631% rise in the last three years. AI and tech stocks are driving the market in recent years while biotech has not captured the imagination of investors in the same way.

*Excerpt from Stifel Healthcare  
(Advisory Bank) Biopharmaceutical  
Sector Update Report June 2024*

Performance of S&P 500 vs. XBI, June 14, 2021 to June 14, 2024




# INDUSTRY MEMBERS BELIEVE INNOVATION WILL LEAD TO SIGNIFICANT GROWTH

The New York Times Magazine

## Suddenly, It Looks Like We're in a Golden Age for Medicine

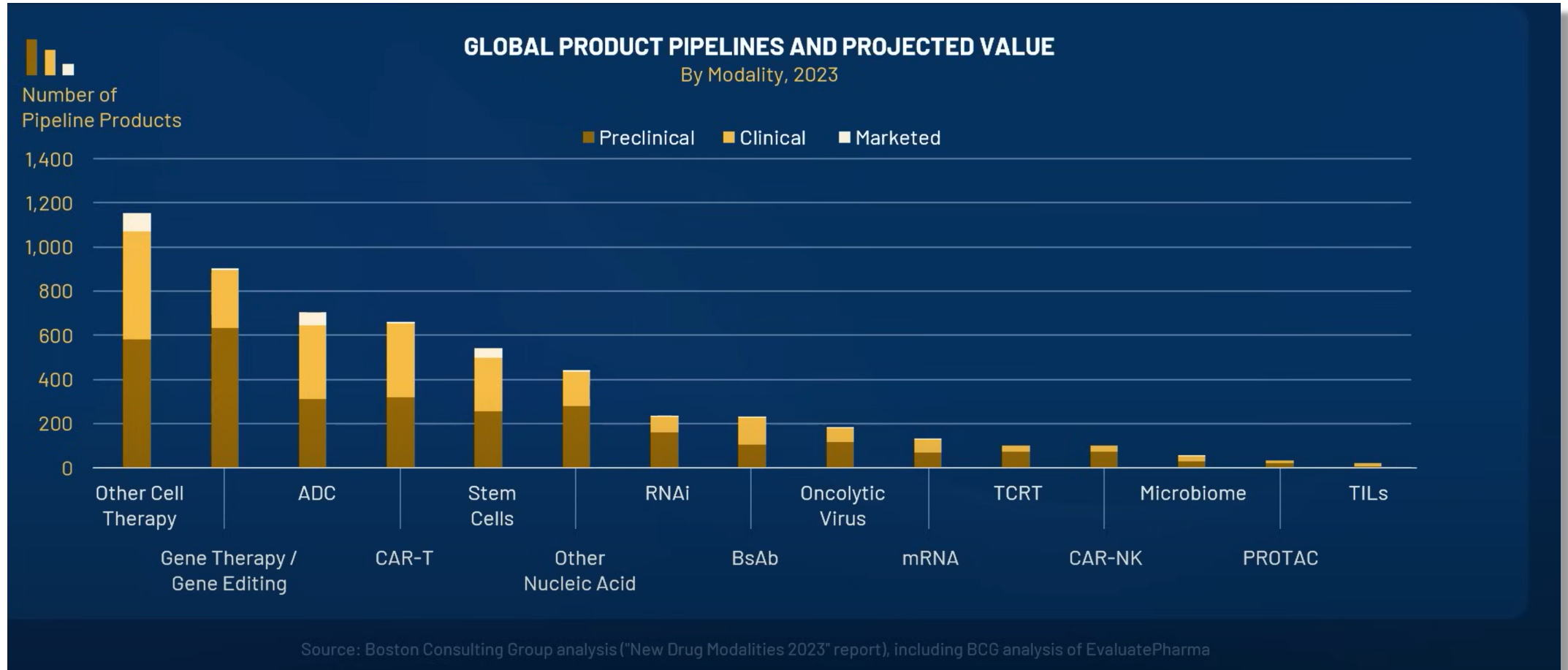
We may be on the cusp of an era of astonishing innovation — the limits of which aren't even clear yet.

Share full article



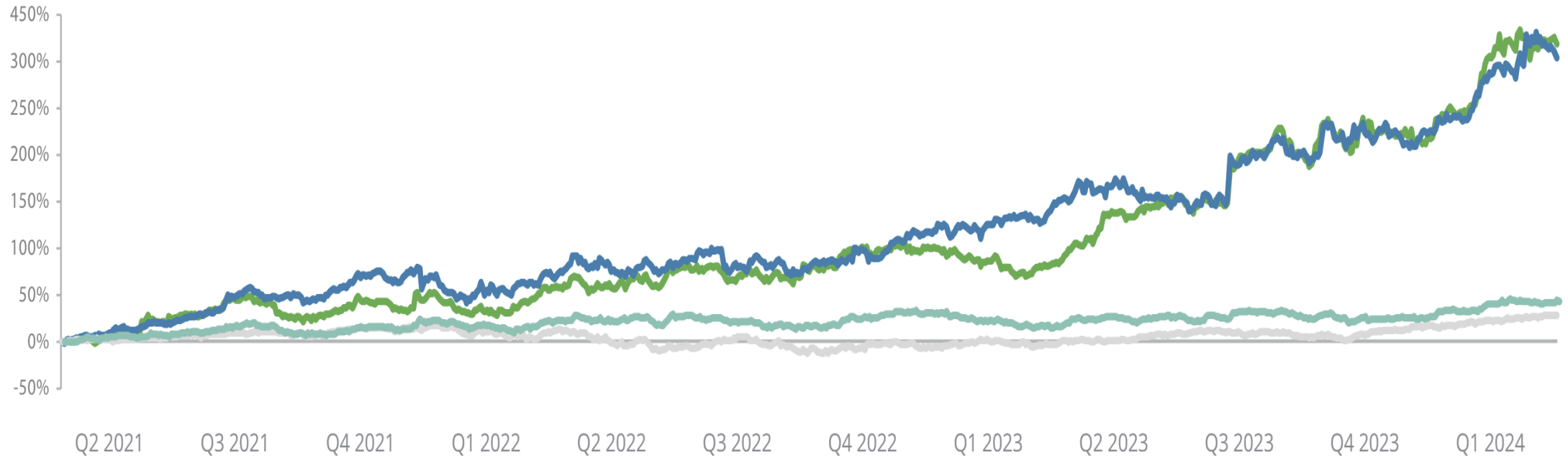
*Hype springs eternal in medicine, but lately the horizon of new possibility seems almost blindingly bright. “I’ve been running my research lab for almost 30 years,” says Jennifer Doudna, a biochemist at the University of California, Berkeley. “And I can say that throughout that period of time, I’ve just never experienced what we’re seeing over just the last five years.”*

# INCREDIBLE DIVERSITY OF NEW MODALITIES ACROSS INDUSTRY



# CATCHING LIGHTNING IN A BOTTLE LIKE GLP-1 DRUGS MAY BE CHALLENGING...

Stock performance of Eli Lilly and Novo Nordisk vs. S&P 500 (relative performance to start date - 6 April 2021)





# THREE BIOPHARMA INVESTMENT OPTIONS FOR CONSIDERATION



- Britain's biggest drugmaker, AstraZeneca, has set out a bold ambition to reach \$80bn (£63bn) in revenues by 2030 from treatments for cancer, rare diseases and other conditions, by launching 20 major new medicines before the end of the decade.
- Aspires to shift standard of care for many cancers from chemotherapy to antibody drug conjugates
- Value oriented

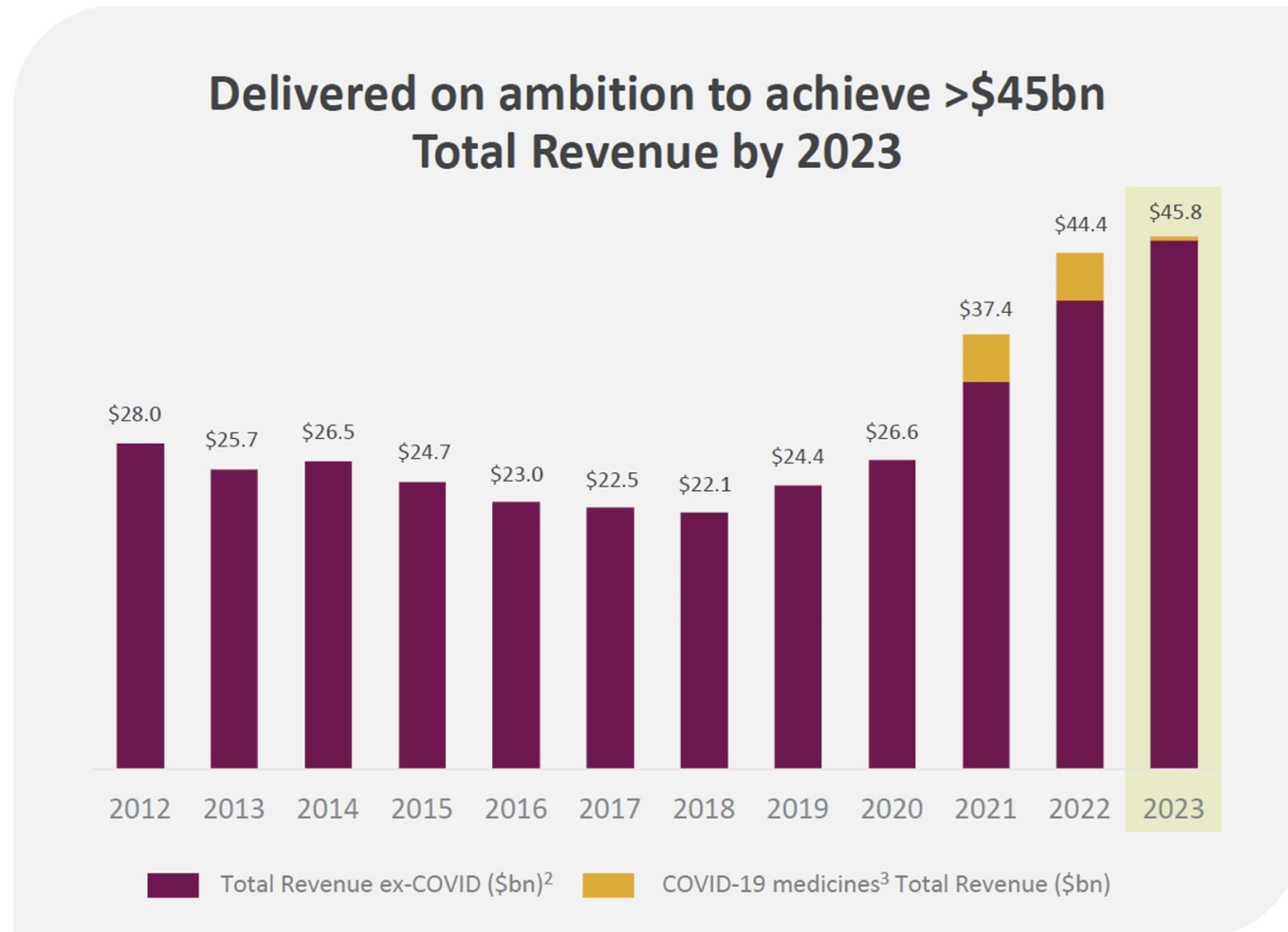


- ETF that allows exposure to smaller biopharma sector with a diverse collection of companies
- At a relatively low point compared to past highs
- Could perform well if and when interest rates begin to drop



- SPECULATIVE
- Cell therapy startup with strong management team and track record
- Is on the verge of releasing their first human data (first half 2024) for their type-1 diabetes program which could be curative
- Pipeline of autoimmune cell therapy programs

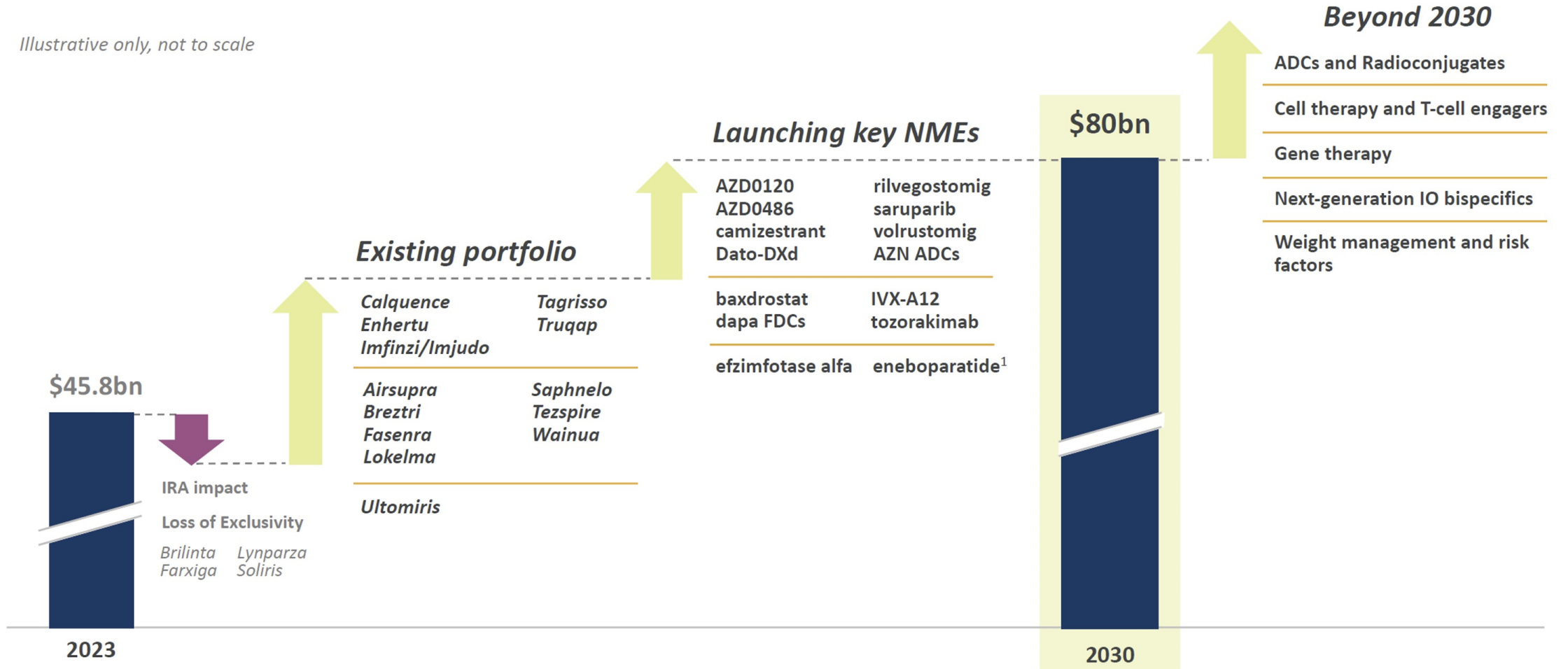
# ASTRAZENECA DELIVERED ON THEIR PRIOR AMBITION TO ACHIEVE \$45B REVENUE



# Ambition – \$80bn Total Revenue by 2030 and sustained 2030+ growth

## Working on “today, tomorrow and the day after”

Illustrative only, not to scale





# XBI TOP HOLDINGS AS OF JUNE 2024

No.	Symbol	Name	% Weight
1	<a href="#">NVAX</a>	Novavax, Inc.	2.86%
2	<a href="#">INSM</a>	Insmmed Incorporated	2.49%
3	<a href="#">MRNA</a>	Moderna, Inc.	1.47%
4	<a href="#">TWST</a>	Twist Bioscience Corporation	1.44%
5	<a href="#">GERN</a>	Geron Corporation	1.39%
6	<a href="#">DYN</a>	Dyne Therapeutics, Inc.	1.35%
7	<a href="#">NTRA</a>	Natera, Inc.	1.34%
8	<a href="#">RVMD</a>	Revolution Medicines, Inc.	1.30%
9	<a href="#">HALO</a>	Halozyme Therapeutics, Inc.	1.28%
10	<a href="#">UTHR</a>	United Therapeutics Corporation	1.28%
11	<a href="#">VRTX</a>	Vertex Pharmaceuticals Incorporated	1.26%
12	<a href="#">PTCT</a>	PTC Therapeutics, Inc.	1.24%
13	<a href="#">BPMC</a>	Blueprint Medicines Corporation	1.24%
14	<a href="#">AMGN</a>	Amgen Inc.	1.18%
15	<a href="#">MDGL</a>	Madrigal Pharmaceuticals, Inc.	1.18%
16	<a href="#">CRNX</a>	Crinetics Pharmaceuticals, Inc.	1.16%
17	<a href="#">ALNY</a>	Alnylam Pharmaceuticals, Inc.	1.16%
18	<a href="#">REGN</a>	Regeneron Pharmaceuticals, Inc.	1.16%
19	<a href="#">AGIO</a>	Agios Pharmaceuticals, Inc.	1.15%
20	<a href="#">BCRX</a>	BioCryst Pharmaceuticals, Inc.	1.14%
21	<a href="#">BIIB</a>	Biogen Inc.	1.12%
22	<a href="#">INCY</a>	Incyte Corporation	1.12%
23	<a href="#">KRYS</a>	Krystal Biotech, Inc.	1.12%
24	<a href="#">RYTM</a>	Rhythm Pharmaceuticals, Inc.	1.10%

# SANA BIOTECHNOLOGY

## Sana Biotechnology Inc.

188 East Blaine Street  
Suite 400  
Seattle, Washington 98102

PHONE  
1 206 701-7914

INDUSTRY  
**Biotechnology**

SECTOR  
**Health Care/Life Sciences**

FISCAL YEAR-END	REVENUE
<b>12/2023</b>	<b>N/A</b>

NET INCOME	2022 SALES GROWTH
<b>-\$269.48M</b>	<b>N/A</b>

EMPLOYEES  
**421**



### KEY DATA

OPEN	DAY RANGE
<b>\$5.99</b>	<b>5.64 - 5.99</b>

52 WEEK RANGE	MARKET CAP
<b>2.75 - 12.00</b>	<b>\$1.33B</b>

SHARES OUTSTANDING	PUBLIC FLOAT
<b>221.32M</b>	<b>120.52M</b>

BETA	REV. PER EMPLOYEE
<b>2.10</b>	<b>N/A</b>

P/E RATIO	EPS
<b>N/A</b>	<b>-\$1.53</b>

YIELD	DIVIDEND
<b>N/A</b>	<b>N/A</b>

### PERFORMANCE

5 Day ■ -17.56%

1 Month ■ -31.57%

3 Month ■ -34.34%

YTD ■ 39.22%

1 Year ■ -8.24%

### ANALYST RATINGS

AVG

SELL UNDER HOLD OVER BUY

NUMBER OF RATINGS 5 FULL RATINGS →

# SANA PIPELINE

## Sana pipeline positioned to deliver meaningful clinical data

PRODUCT CANDIDATE	MECHANISM	INDICATIONS	PRECLINICAL IND-ENABLING	PHASE 1	PHASE 2/3	SANA'S RIGHTS
<b>Oncology</b>						
SC291	CD19-directed allo CAR T	NHL	ARDENT			WW
SC291	CD19-directed allo CAR T	CLL	ARDENT			WW
SC262	CD22-directed allo CAR T	NHL (CD19 failures)	VIVID			WW
SC255	BCMA-directed allo CAR T	MM				WW
<b>B-cell Mediated Autoimmune Diseases</b>						
SC291	CD19-directed allo CAR T	LN	GLEAM			WW
SC291	CD19-directed allo CAR T	ERL	GLEAM			WW
SC291	CD19-directed allo CAR T	AAV	GLEAM			WW
SC291	CD19-directed allo CAR T	Other indications				WW
<b>Regenerative Medicine</b>						
UP421	HIP primary islet cells <sup>1</sup>	T1D				WW
SC451	Stem-cell derived pancreatic islet cells	T1D				WW
SC379	Glial progenitor cells	HD, PMD, SPMS				WW

<sup>1</sup>Investigator sponsored trial.

Abbreviations: AAV, ANCA-associated vasculitis; CLL, chronic lymphocytic leukemia; ERL, extrarenal systemic lupus erythematosus; HD, Huntington's disease; LN, lupus nephritis; MM, multiple myeloma; NHL, non-Hodgkin lymphoma; PMD, Pelizaeus-Merzbacher Disease; SPMS, secondary progressive multiple sclerosis; T1D, type 1 diabetes; WW, worldwide.



# CONSIDERATIONS FOR INDIVIDUAL COMPANIES

## Sampling of criteria

- Multiple products in pipeline (rather than single-asset companies)
- Pipeline is in disease areas of interest to larger biopharma
- Sufficient cash on hand to fund operations and clinical development through next inflection points (optimally 1.5 years or more)
- History of collaborations with larger pharma companies (this demonstrates some level of scientific validation by third parties)
- Strong scientific management



VALUE<sub>x</sub>VAIL

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