

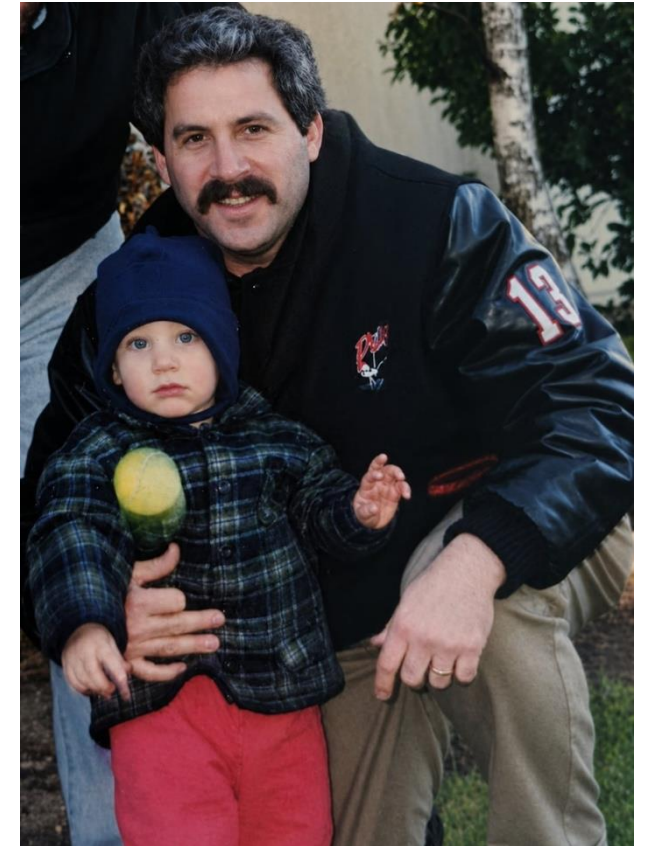
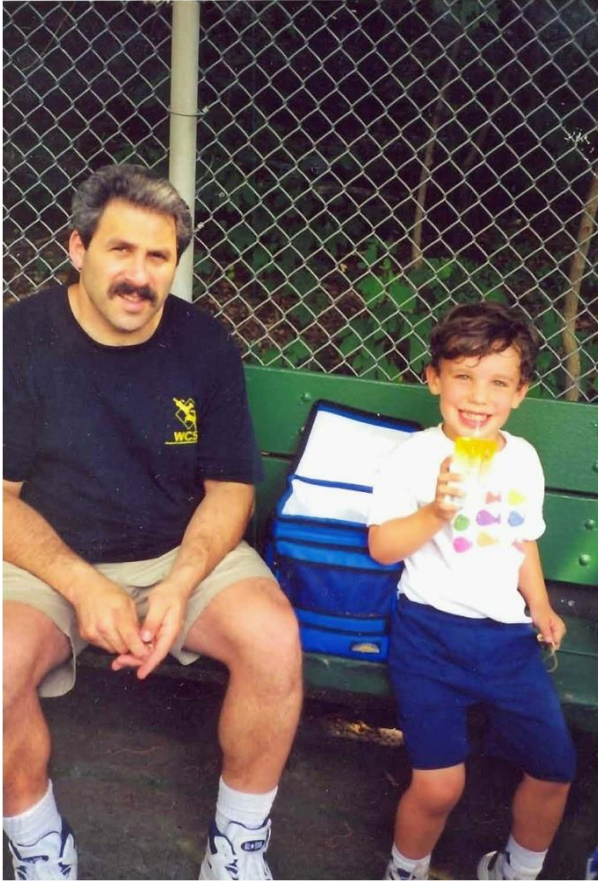
Wall Street is Your Friend
(A Primer to Longevity Biotech Finance)

NOVA Conference Presentation

April 2026

Section 1:
Why I Chose to Work on Aging

A Brief Introduction to Michael as a Human



A Brief Introduction to Healthcare Investment Banking (“What I Do”)

- Investment bankers broker transactions on behalf of corporations:
 1. Capital raising (getting new money from investors – IPOs, issuing bonds)
 2. Mergers and acquisitions (selling companies to others companies) **← our focus**

Biotech companies hire my firm to decide if, when, and at what price to be acquired by large pharma. Acquisitions often increase the odds of a drug getting to patients, because:

- Pharma companies (often) have larger R&D budgets for more trials
- Pharma companies can commercialize drugs more effectively than a biotech creating a new sales organization from scratch
- [Acquisitions also generate a return for biotech investors, which gets reinvested]

Statistically, the first aging drug will most likely be acquired by large pharma.

Positioning longevity biotechs to be transactable, and leveraging the existing healthcare finance ecosystem, increases our odds of success.



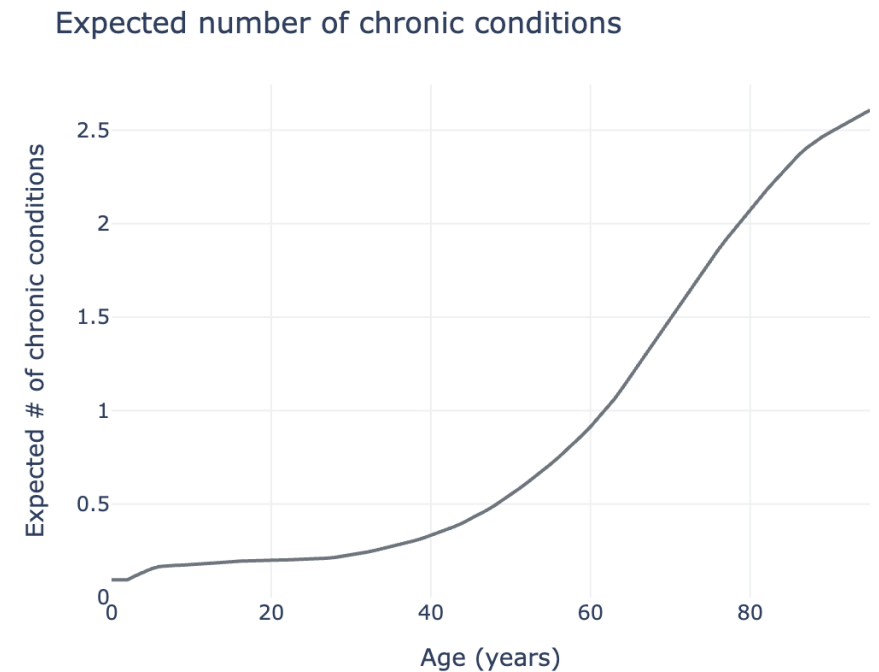
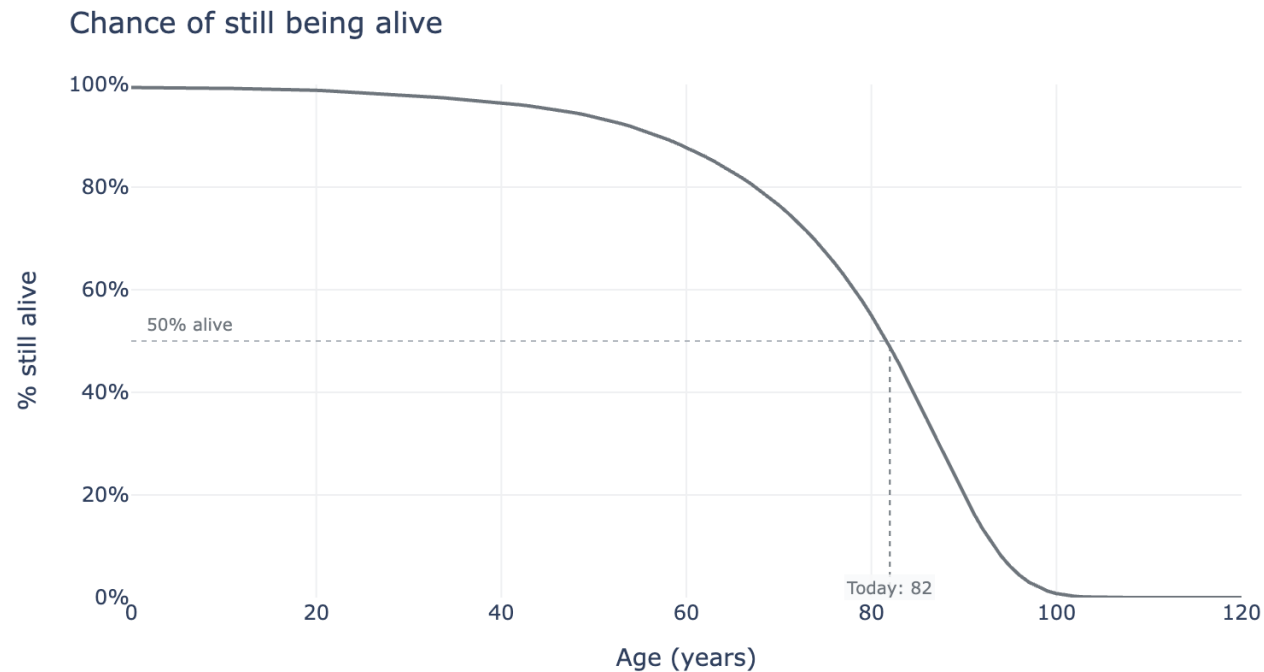
SECOND CENTURY
FOUNDATION

“Advancing biomedical research so humans can enjoy a second century of good health”

Section 1: Why I Chose to Work on Aging

Here is an (approximate) average American human survival curve

EXPECTED LIFESPAN	YEARS GAINED	CHANCE OF REACHING 80	CHANCE OF REACHING 100
Today 82.0 yrs	No changes yet	Today 55.0%	Today 0.8%



Section 1: Why I Chose to Work on Aging

How many years do you think we would get from:

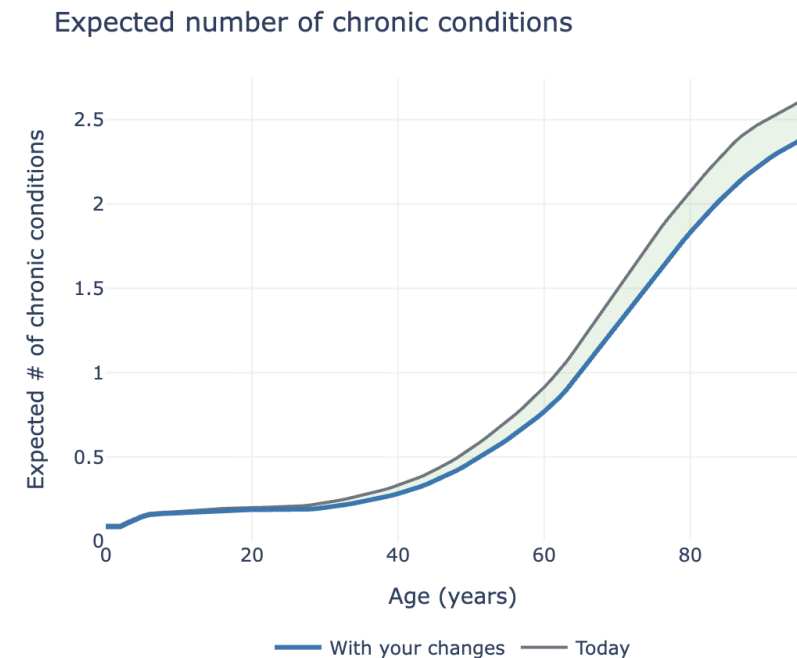
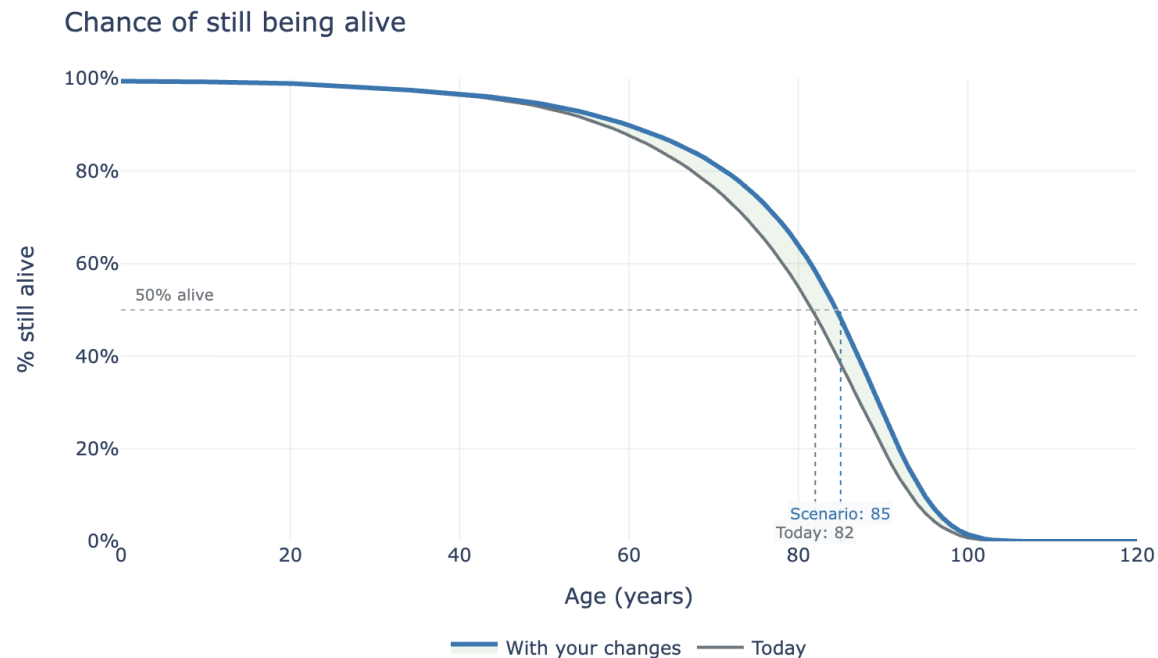
- **Curing cancer?**

Section 1: Why I Chose to Work on Aging

How many years do you think we would get from:

- **Curing cancer?**

EXPECTED LIFESPAN		YEARS GAINED		CHANCE OF REACHING 80		CHANCE OF REACHING 100	
Today	82.0 yrs	+3.0 yrs 4% longer than today	Today	55.0%	Today	0.8%	
With your changes	85.0 yrs		With your changes	64.0%	With your changes	1.5%	
+3.0 years vs. today			1.2× more likely		1.9× more likely		



Section 1: Why I Chose to Work on Aging

How many years do you think we would get from:

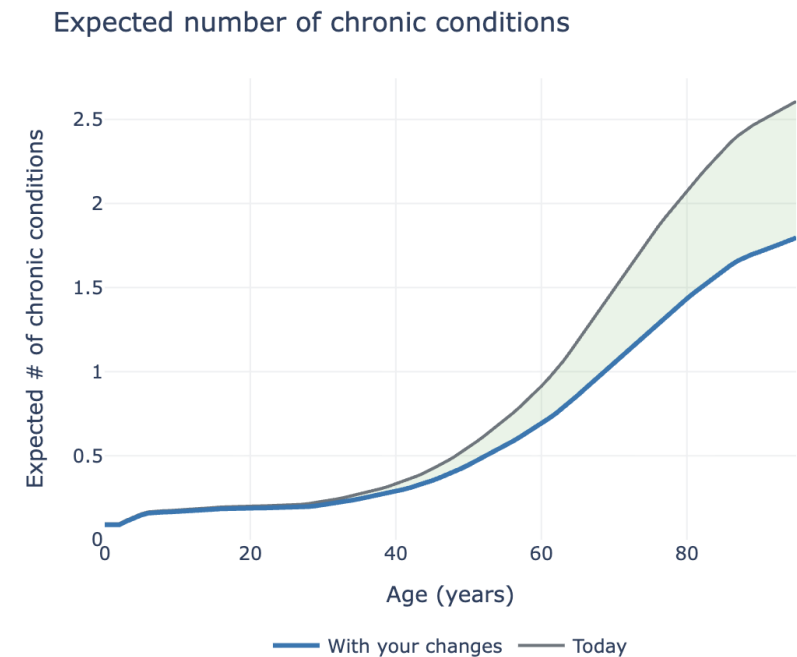
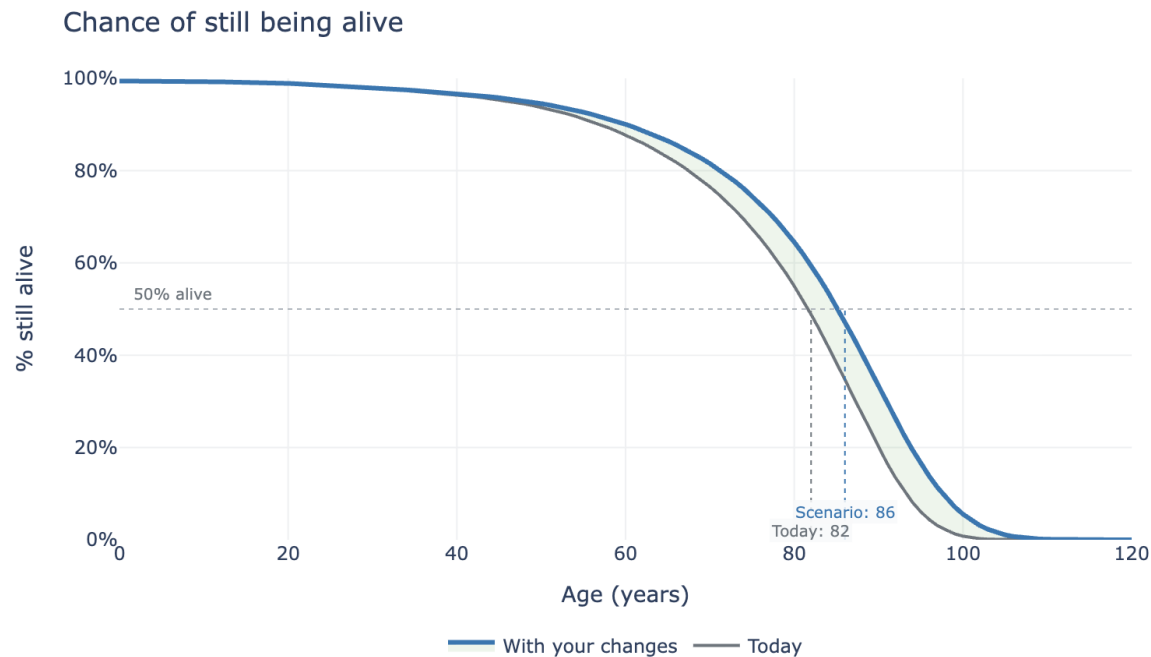
- **Curing heart disease?**

Section 1: Why I Chose to Work on Aging

How many years do you think we would get from:

- **Curing heart disease?**

EXPECTED LIFESPAN		YEARS GAINED		CHANCE OF REACHING 80		CHANCE OF REACHING 100	
Today	82.0 yrs	+4.0 yrs 5% longer than today	Today	55.0%	Today	0.8%	
With your changes	86.0 yrs		With your changes	64.5%	With your changes	5.5%	
+4.0 years vs. today			1.2× more likely		7.1× more likely		



Section 1: Why I Chose to Work on Aging

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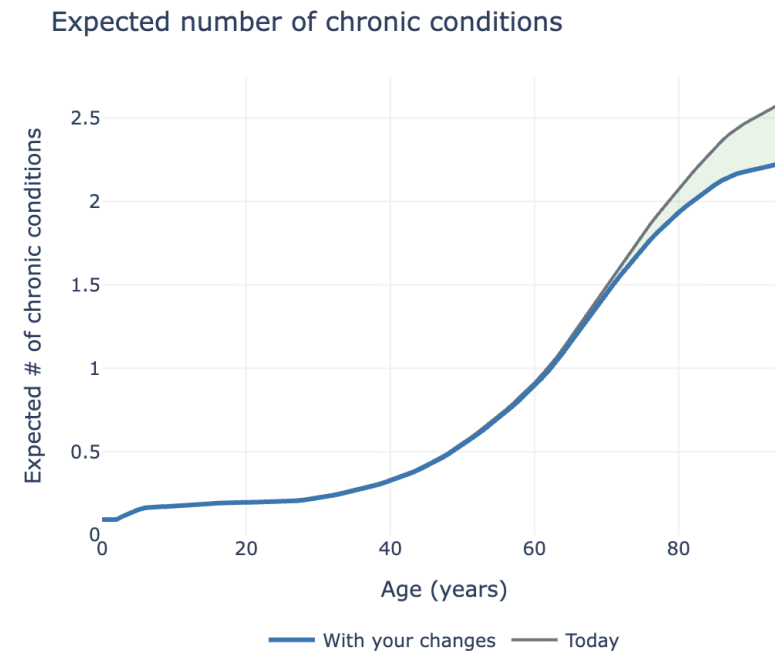
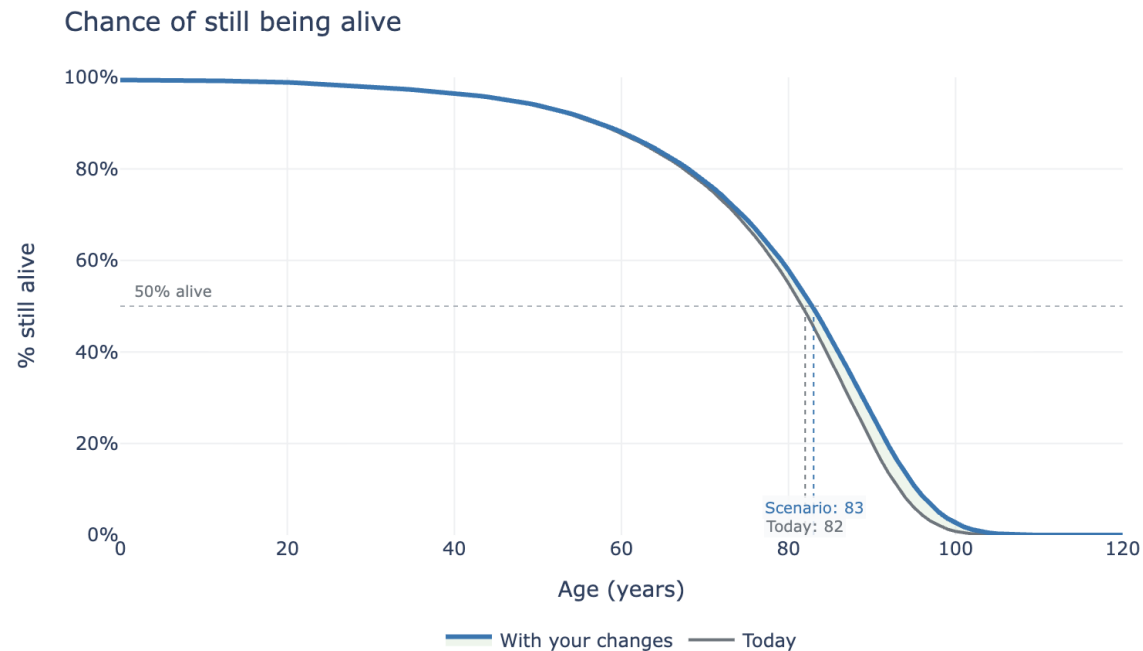
- **Curing neurodegenerative disease?**

Section 1: Why I Chose to Work on Aging

How many years do you think we would get from:

- **Curing neurodegenerative disease?**

EXPECTED LIFESPAN		YEARS GAINED		CHANCE OF REACHING 80		CHANCE OF REACHING 100	
Today	82.0 yrs	+1.0 yrs 1% longer than today		Today	55.0%	Today	0.8%
With your changes +1.0 years vs. today	83.0 yrs			With your changes 1.1× more likely	57.9%	With your changes 3.3× more likely	2.6%



Section 1: Why I Chose to Work on Aging

- That's not to say these diseases aren't important – they are the undisputed top killers of human beings, and certainly make a difference to those affected by them, and their families
- But playing “whack-a-mole” with late, point interventions, like we as an industry have been, won't move the needle on healthy human lifespan

....

- Is there a better way?

Section 1: Why I Chose to Work on Aging

How many years do you think we would get from:

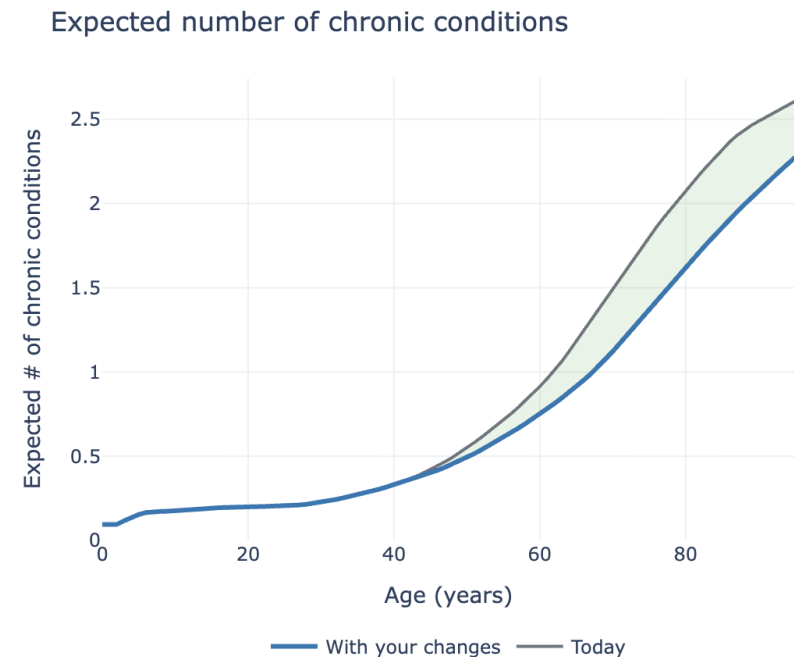
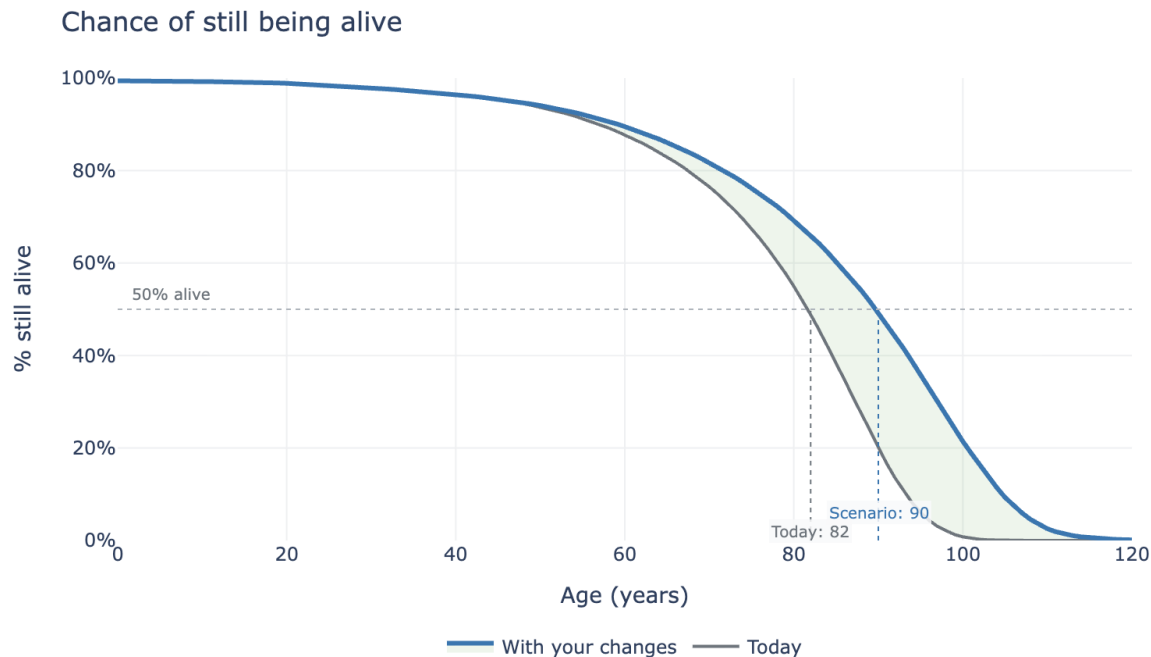
- **Slowing the rate of aging by 20%, with an intervention starting at age 40?**

Section 1: Why I Chose to Work on Aging

How many years do you think we would get from:

- **Slowing the rate of aging by 20%, with an intervention starting at age 40?**

EXPECTED LIFESPAN		YEARS GAINED		CHANCE OF REACHING 80		CHANCE OF REACHING 100	
Today	82.0 yrs	+8.0 yrs 10% longer than today	Today	55.0%	Today	0.8%	
With your changes	90.0 yrs		With your changes	69.2%	With your changes	21.4%	
+8.0 years vs. today			1.3× more likely		27.5× more likely		



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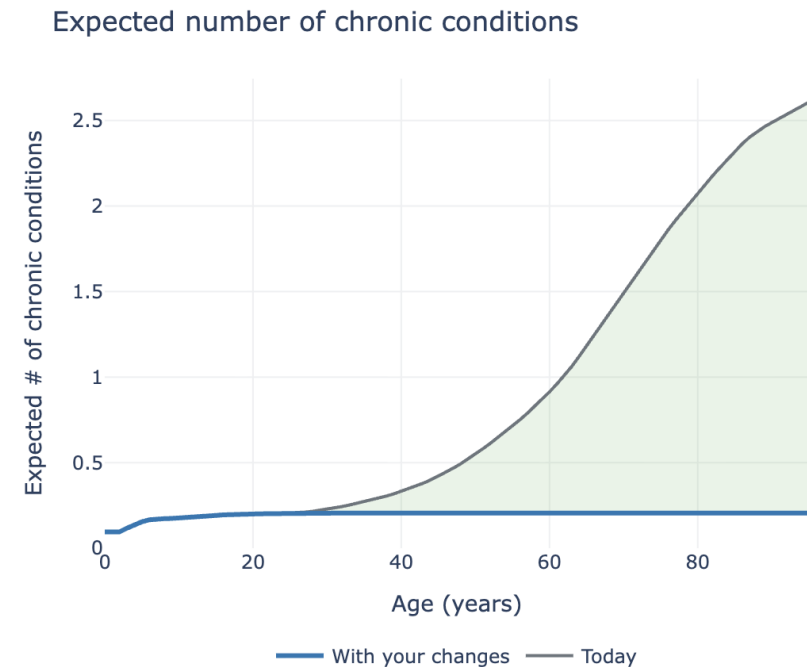
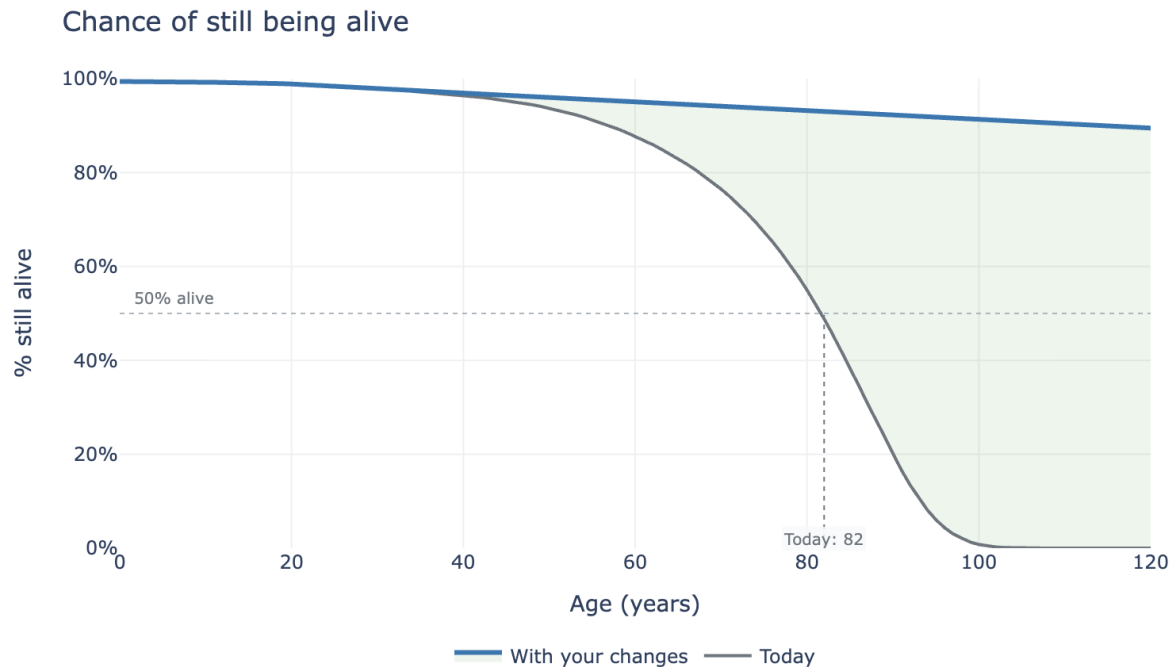
- **Halting aging at age 25, or similarly reversing its damage?**

Section 1: Why I Chose to Work on Aging

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- **Halting aging at age 25, or similarly reversing its damage?**

EXPECTED LIFESPAN		YEARS GAINED		CHANCE OF REACHING 80		CHANCE OF REACHING 100	
Today	82.0 yrs	+619.8 yrs 756% longer than today		Today	55.0%	Today	0.8%
With your changes	701.8 yrs			With your changes	93.1%	With your changes	91.3%
+619.8 years vs. today				1.7× more likely	117.0× more likely		



Section 2:
How To Raise Funds For A Longevity Biotech

Transition

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 - **Will I have to hide the aging-related aspect of my drug?**

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 - Will I have to hide the aging-related aspect of my drug?
 - **Will I be able to raise sufficient capital?**

Transition

- Let's say I've tentatively convinced you that targeting aging is worthwhile
- You might have some (fair) questions you might think to ask your interim investment banking advisor (me):
 - Will I have to hide the aging-related aspect of my drug?
 - Will I be able to raise sufficient capital?
 - **How will Wall Street view my company?**

Transition

- Let's say I've tentatively convinced you that targeting aging is worthwhile
- You might have some (fair) questions you might think to ask your interim investment banking advisor (me):
 - Will I have to hide the aging-related aspect of my drug?
 - Will I be able to raise sufficient capital?
 - How will Wall Street view my company?
 - **How punishing will the stock market be?**

Transition

- Let's say I've tentatively convinced you that targeting aging is worthwhile
- You might have some (fair) questions you might think to ask your interim investment banking advisor (me):
 - Will I have to hide the aging-related aspect of my drug? (***spoiler: no***)
 - Will I be able to raise sufficient capital? (***spoiler: maybe***)
 - How will Wall Street view my company? (***spoiler: favorably***)
 - How punishing will the stock market be? (***spoiler: reasonably***)

There Have Been ~7 Longevity Biotech IPOs to Date

(And I Believe They're Informative – Operationally, and for Investor Sentiment)

	Company	IPO Date	Pre-\$	Raise	Post-\$	Lead Asset (at time of IPO)				Current	Platform Technology	Current Status
			Valuation	Amt.	Valuation	Name	Target	Indication	Phase	Mkt Cap		
Active	 英科智能 Insilico Medicine (HKEX)	Dec-25	\$1,430	\$293	\$1,723	Rentosertib	TNIK inhibitor	Idiopathic pulmonary fibrosis	P2a	\$5,499	Pharma.AI end-to-end generative AI drug discovery platform	-IPO up +45% on first day of trading -Announced partnerships with Servier for oncology and Hygtia for CNS diseases
	BIOAGE (NASDAQ)	Nov-24	417	228	645	Azelaprag	APJ agonist	Obesity combos	P2	815	Longitudinal omics coupled with serial functional assessments to model age-related decline	-Azelaprag P2 trial terminated due to safety -BGE-102 (NLRP3 inhibitor) subsequently released positive interim P1 data in CVD; company valuation materially recovered
Acquired	 sirtris A GSK COMPANY (NASDAQ)	Apr-07	218	60	278	SRT501	Resveratrol / SIRT1 activator	T2D and other age-related indications	P1a	NA	Oral, small molecule SIRT1 activation platform	-Acquired by GSK on 4/22/08 for \$720mm with SRT501 in P2a trial -GSK terminated SRT501 due to safety concerns
Liquidated	 UNITY BIOTECHNOLOGY (NASDAQ)	May-18	627	85	712	UBX0101	Senolytic; MDM2/p53 inhibitor	Osteoarthritis of the knee initial focus	P1 Rdy	NA	Senolytic platform focused on locally administered therapies targeting cellular senescence	-UBX0101 P2 trial in OA failed to meet primary endpoint -Subsequent assets showed lackluster early clinical data; company dissolved
	restORbio (NASDAQ)	Jan-18	323	98	421	RTB101	Selective TORC1 inhibitor	Respiratory tract infections in elderly	P2b	NA	Immunotherapy platform targeting immunosenescence via selective TORC1 inhibition	-RTB101 P3 PROTECTOR 1 trial failed to meet primary endpoint after promising P2 data -Cash shell was reverse merged by Adicet Bio
Defunct	 LONGEVERON (NASDAQ)	Feb-21	160	27	187	Lomecel-B	MSC cell therapy	Alzheimer's disease, Aging Frailty, ARDS, HLHS	P2 Rdy	22	Off-the-shelf allogeneic MSC regenerative cell therapy platform	-Initial momentum from FDA Rare Pediatric Disease designation for Lomecel-B in HLHS not sustained by clinical trial readouts
	 biophytis (EPA)	Jul-15	25	11	37	Sarcob (BIO101) Maculia (BIO201)	Mas receptor agonist PPAR-α modulator	Sarcopenic obesity AMD	P2b Rdy	2	Longevity platform using AI-assisted target discovery and SM therapeutics	-BIO101 P2/3 COVA trial in COVID failed to meet statistical significance

Case Study #1: Sirtris Pharmaceuticals (2007) – IPO Prospectus

Prospectus

6,000,000 shares



Common stock

This is an initial public offering of shares of common stock by Sirtris Pharmaceuticals, Inc. Sirtris Pharmaceuticals, Inc. is selling 6,000,000 shares of common stock. Prior to this offering, there has been no public market for our common stock. The initial public offering price is \$10.00 per share.

Our common stock has been approved for listing on The NASDAQ Global Market under the symbol "SIRT."

[Link](#) [Download](#)

	Per share	Total
Initial public offering price	\$ 10.00	\$ 60,000,000
Underwriting discounts and commissions	\$ 0.70	\$ 4,200,000
Proceeds to Sirtris Pharmaceuticals, Inc., before expenses	\$ 9.30	\$ 55,800,000

Sirtris Pharmaceuticals, Inc. has granted the underwriters an option for a period of 30 days to purchase up to 900,000 additional shares of common stock.

Investing in our common stock involves a high degree of risk. See "Risk factors" beginning on page 10.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed on the adequacy or accuracy of this prospectus. Any representation to the contrary is a criminal offense.

The shares of common stock will be ready for delivery on or about May 29, 2007.

JPMorgan

CIBC World Markets

Piper Jaffray

JMP Securities

Rodman & Renshaw

May 22, 2007

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**\$60mm of
new capital**

**5 investment
banks involved,
led by JPMorgan**

Case Study #1: Sirtris Pharmaceuticals (2007) – IPO Prospectus

Sirtris Pharmaceuticals

We are a biopharmaceutical company focused on discovering and developing proprietary, orally available, small molecule drugs with the potential to treat diseases associated with aging, including metabolic diseases such as Type 2 Diabetes. Our drug candidates are designed to mimic certain beneficial health effects of calorie restriction, without requiring a change in eating habits, by activating an enzyme called SIRT1, a member of a recently discovered class of enzymes called sirtuins. Over the past 70 years, scientists have shown that calorie restriction, or the reduction of normal calorie intake by at least 30-40%, extends lifespan in multiple species, including mice and rats. In addition, calorie restricted animals showed improvement in a number of factors associated with Type 2 Diabetes, including glucose levels, insulin levels and weight gain. Recently published animal studies, including articles in *Cell* and *Nature* in 2006, suggest that certain beneficial effects of calorie restriction are triggered by activation of SIRT1.

Scientific literature suggests that resveratrol, a natural substance found in red wine and other plant products, activates SIRT1 and confers certain beneficial effects of calorie restriction without requiring a reduction in normal calorie intake. Our most advanced programs are focused on developing activators of SIRT1 and include SRT501, our proprietary formulation of resveratrol, that is in Phase 1b clinical trials for Type 2 Diabetes. We have also discovered several novel small molecules, structurally distinct from resveratrol, that activate SIRT1 in animal studies. We believe these novel small molecules may be attractive drug candidates although we have not yet tested them in humans.

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Sirtris describes themselves:

1

“Treat disease associated with **aging**”

2

Define the upstream target: **caloric restriction**

3

Choose a specific indication: **Type 2 diabetes**

(They're also not afraid to talk about lifespan)

Case Study #1: Sirtris Pharmaceuticals (2007) – IPO Prospectus

(page 2, “focus programs”):

- **The discovery and development of proprietary new chemical entities, or NCEs, the next generation activators of SIRT1.** We have discovered several novel orally-available, small molecules that are structurally distinct from resveratrol and that activate SIRT1 in animal studies. One of these small molecules, at one-tenth the dose, is as effective at reducing fasted glucose levels and fed insulin levels as SRT501 in an established animal model of Type 2 Diabetes, although these results have not yet been shown, and may not be achieved, in humans. We have successfully completed preclinical studies with NCEs that measure solubility and pharmacokinetics, or PK. If we successfully complete IND-enabling and other preclinical studies, we plan to advance at least one of these NCEs into a Phase 1a human clinical trial by the first half of 2008 and a Phase 1b study in the second half of 2008.
- **The discovery and development of novel small molecule modulators of other sirtuins and related pathways.** In addition to SIRT1, there are six other enzymes in the sirtuin family of enzymes. Although substantially all of our efforts are currently focused on modulation of SIRT1, we believe these other enzymes and their related pathways may be attractive targets for future drug development in therapeutic areas including metabolic, neurological and cardiovascular diseases, and cancer. We are currently pursuing the discovery of small molecule modulators of additional sirtuins and their related pathways.

4

Discuss label expansion
into **many other
diseases**

Case Study #1: Sirtris Pharmaceuticals (2007) – Wall Street Takes



Michael G. King, Jr.
212.430.1750
mking@rodmanandrenshaw.com

Sirtris Pharmaceuticals (SIRT)

Market Outperform/Speculative Risk

Initiating Coverage

BIOTECHNOLOGY

July 1, 2007

Sirtris Pharmaceuticals: Bacchus Vin-dicated

MARKET DATA

6/29/2007

SIRT	\$9.87
Target Price	\$18.00
Market	NASD
52 Wk Hi - Low	9.81 - 13.63
Market Cap. (MM)	274.28M
Shares Out (MM)	27.79
Public Mkt Float (MM)	5.28
Avg. Daily Vol (000)	197,276.00

We are initiating coverage of Sirtris Pharmaceuticals with a Market Outperform rating and a 12-month price target of \$18. Sirtris is the leading company in the area of sirtuin research, a vast new area of biology with important medical implications across many disease states. In our opinion, the shares of Sirtris represent a rare opportunity to invest in a small company dominant in such an attractive space with this kind of grasp on both the fundamental biology and the chemistry that pairs with it.

Case Study #1: Sirtris Pharmaceuticals (2007) – Wall Street Takes

INVESTMENT OVERVIEW

The concept of living forever (or at least for a very long time) has been a topic that has fascinated mankind from time immemorial. From Methuselah to Gandalf the White and Yoda, the concept of survival of hundreds of years has been the fodder of many a tale. Recently, science has turned its attention to the biology of longevity based on fundamental observations made in multiple experiments conducted in a variety of different species of animals indicating that calorie restriction can prolong life. Indeed, several groups of individuals around the world have made themselves human guinea pigs by restricting their calorie intake in an attempt to live longer.

While it will not be within the scope of this report to even begin to discuss the moral and scientific questions posed by this quest, the fundamental understanding of the science behind aging can produce tremendous medical and commercial rewards. For example, it has long been known that diabetic subjects age at a rate greater than that of individuals of normal health. Sirtris intends to exploit the understanding of the sirtuin pathway in order to lead the company and its shareholders to success in the marketplace. Figure 3 below is a chart of the pipeline and stage of clinical development of Sirtris's drug candidates.

Figure 3: Developmental Candidates and Stage of Development

Product	Indication	Stages of Development			
		Pre-Clinical	Phase Ia	Phase Ib	Phase II
SRT 501	Type 2 Diabetes				

Case Study #1: Sirtris Pharmaceuticals (2007) – Wall Street Takes

PiperJaffray®

Company Note
July 2, 2007

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Piper Jaffray & Co.

Reason for Report:
Initiating Coverage

Changes	Previous	Current
Rating	--	Outperform
Price Tgt	--	\$12.00
FY07E Rev (mil)	--	\$0.0
FY08E Rev (mil)	--	\$0.0
FY07E EPS	--	\$(1.16)
FY08E EPS	--	\$(1.14)
Price:		\$9.87
52 Week High:		\$13.63
52 Week Low:		\$9.81
12-Month Price Target:		\$12.00

Sirtris Pharmaceuticals Outperform

(SIRT - \$9.87)
Volatility: High

Initiating Coverage with an Outperform Rating

KEY POINTS:

- Focused on exciting and novel sirtuin biology
- Phase Ib data on SRT-501 in naive diabetics in 2H:07
- Expect SIRT1 drug partnership to drive value next year
- **The Fountain of Youth Drug?** Breakthrough research has shown that SIRT1 activation by *resveratrol* increases longevity in yeast, worms, fruit flies and mice. Sirtris was founded in 2004 to develop drugs based on this discovery to treat diseases of aging such as diabetes, obesity and cancer.
- **Phase I Trials of SRT-501 Underway.** SRT-501 is a proprietary, enhanced formulation of *resveratrol*. Phase I trials in healthy volunteers showed the drug to be safe and well-tolerated. Sirtris has commenced Phase Ib trials of SRT-501 in naive diabetics in India with data anticipated later this year. Sirtirs will initiate Phase II trials in combination with metformin this year with data due in 2H:08.

Case Study #1: Sirtris Pharmaceuticals (2007) – Wall Street Takes

North America Equity Research

02 July 2007

Sirtris Pharmaceuticals

Initiating Coverage at Overweight

Sirtris is an early-stage, platform biotech focused on an exciting class of druggable targets known as sirtuins. Sirtris has what we consider all the right ingredients of a successful biotech: a strong management team, scientific leadership and IP protection around a class of targets and a phase 1 pipeline focused on blockbuster markets such as diabetes. We are initiating coverage with an Overweight rating, recommending SIRT shares for longer-term investors. 25

JPMorgan 

Initiation
Overweight

\$9.87

29 June 2007

US Biotechnology

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Case Study #1: Sirtris Pharmaceuticals (2007) – A Brief Interlude on Trial Design

You may be asking – why didn't Sirtris just run an aging trial? David Sinclair doesn't really care about diabetes, he wants to extend human lifespan

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The FDA, to David: “OK, sounds good. If you prove it, we're happy to approve it. You would just need to run a randomized, blinded, placebo-controlled Phase 3 trial for the next 20 years in 10,000 patients. Let us know how it goes.”

Investors, to David: “You are fired.”

Case Study #1: Sirtris Pharmaceuticals (2007) – A Brief Interlude on Trial Design

So, what should companies do instead?

Well, if aging is characterized by the decline of ~all organ systems and the onset of ~all chronic disease...

Case Study #1: Sirtris Pharmaceuticals (2007) – A Brief Interlude on Trial Design

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Then a longevity drug should be able to just treat a “normal” disease, and run trials to get approved like any other drug...

Case Study #1: Sirtris Pharmaceuticals (2007) – A Brief Interlude on Trial Design

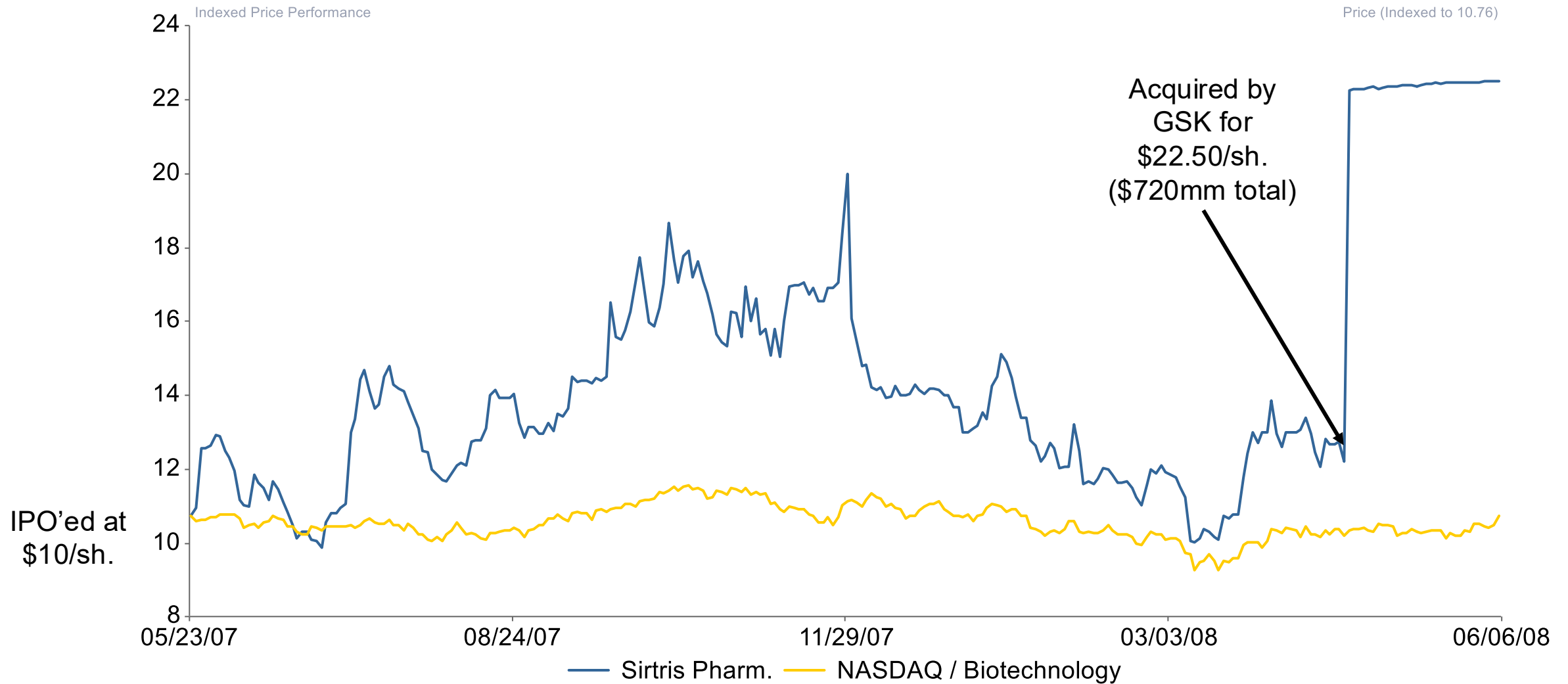
So, what should companies do instead?

Well, if aging is characterized by the decline of ~all organ systems and the onset of ~all chronic disease...

Then a longevity drug should be able to just treat a “normal” disease, and run trials to get approved like any other drug...

BUT, with the added benefit of having positive side effects across many organ systems and diseases, and actually extending healthy human life

Case Study #1: Sirtris Pharmaceuticals (2007 to 2008) – Stock Performance



Source: FactSet Prices

Case Study #1: Sirtris Pharmaceuticals (2007 to 2008) – Epilogue

(The drug didn't work)

Case Study #1: Sirtris Pharmaceuticals (2007 to 2008) – Epilogue

(The drug didn't work)

(IPO investors made a >2x return though)

Case Study #1: Sirtris Pharmaceuticals (2007 to 2008) – Epilogue

(The drug didn't work)

(IPO investors made a >2x return though)

(And science would live to try again!!)

Case Study #2: Unity Biotechnology (2018) – IPO Prospectus

Prospectus

5,000,000 Shares

UNITY
BIOTECHNOLOGY

Common Stock

This is the initial public offering of shares of common stock by Unity Biotechnology, Inc.

Prior to this offering, there has been no public market for our common stock. The initial public offering price of our common stock is \$17.00 per share.

Our common stock will trade on The Nasdaq Global Select Market under the symbol "UBX."

We are an "emerging growth company" as defined under the federal securities laws and, as such, have elected to comply with certain reduced reporting requirements for this prospectus and may elect to do so in future filings.

Investing in our common stock involves risks. See the section titled "[Risk Factors](#)" beginning on page 12 to read about factors you should consider before buying shares of our common stock.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities, or passed upon the accuracy or adequacy of this prospectus. Any representation to the contrary is a criminal offense.

	Per Share	Total
Initial public offering price	\$ 17.00	\$85,000,000
Underwriting discounts(1)	\$ 1.19	\$ 5,950,000
Proceeds to Unity Biotechnology, Inc., before expenses	\$ 15.81	\$79,050,000

(1) See the section titled "Underwriting" for additional information regarding compensation payable to the underwriters.

To the extent that the underwriters sell more than 5,000,000 shares of common stock, the underwriters have the option to purchase up to an additional 750,000 shares from us at the initial public offering price less the underwriting discount.

The underwriters expect to deliver the shares against payment in New York, New York on May 7, 2018.

Goldman Sachs & Co. LLC

Morgan Stanley
Mizuho Securities

Citigroup

Prospectus dated May 2, 2018.

Filed pursuant to Rule 424(b)(4)
Registration No. 333-224163

**\$85mm of
new capital**

4 investment banks
involved, led by
Goldman Sachs

Case Study #2: Unity Biotechnology (2018) – IPO Prospectus

Unity describes themselves:

1

Target “diseases of aging”

Overview

Our mission is to extend human healthspan. We define healthspan, or healthy longevity, as the period of one’s life unburdened by the diseases of aging. Enabled by foundational scientific insights, we have devoted over six years to identifying multiple mechanisms that we believe to be root causes of age-associated disease. We are utilizing these insights to develop a broad portfolio of drug candidates to treat these diseases of aging, and we plan to initiate our first clinical study of our lead drug candidate in the second quarter of 2018. We believe our team of scientific, clinical, and business leaders and our strong culture of collaboration with external scientists make us uniquely qualified to accomplish our ambitious mission.

Age-associated diseases such as arthritis, vision loss, and cognitive decline cause considerable economic, personal, and societal burden. As individuals age, the prevalence of chronic disease increases, with 80% of older Americans having at least one chronic disease and 50% having two or more. Age-associated diseases negatively impact quality of life, are typically chronic, and progress from the time of onset until death. It is estimated that providing healthcare for people over the age of 65 costs four to five times more than for younger individuals. According to the Centers for Disease Control and Prevention, this elderly population of Americans is expected to nearly double by 2050, increasing the economic burden of aging dramatically. Any success increasing longevity without treating underlying diseases of aging would only serve to increase this burden.

Case Study #2: Unity Biotechnology (2018) – IPO Prospectus

2

Define the upstream target: **senescent cells**

Over the last three decades, knowledge of the fundamental mechanisms of aging has advanced considerably. As a result of these advances, aging is no longer characterized as a single, over-arching process but rather as multiple biological and cellular processes working concurrently. We now have evidence that one of these mechanisms, the accumulation of senescent cells, is a fundamental mechanism of aging and a major driver of many common age-associated diseases. Further, we believe that we have developed the tools required to target this mechanism. We have demonstrated in preclinical studies published in *Nature* (“Naturally occurring P16lnk4a-positive cells shorten healthy lifespan,” *Nature* (2016) and “Clearance of p16lnk4a-positive senescent cells delays ageing associated disorders,” *Nature* (2011)) and *Science* (“Senescent intimal foam cells are deleterious at all stages of atherosclerosis,” *Science* (2016)) that the selective elimination of accumulated senescent cells extends both the healthspan and lifespan of animals and slows, halts, or reverses particular diseases of aging.

With these tools in hand we have developed a portfolio of programs targeting specific biological mechanisms implicated in diseases of aging and a pipeline of drug candidates to attack specific age-associated diseases, beginning with musculoskeletal, ophthalmologic, and pulmonary indications.

Case Study #2: Unity Biotechnology (2018) – IPO Prospectus

3

Choose a specific indication: **osteoarthritis and AMD**

Within our cellular senescence programs, our lead senolytic molecules, UBX0101 and UBX1967, designed for local treatment for the removal of accumulated senescent cells, are described below:

- UBX0101 is our lead drug candidate for musculoskeletal disease with an initial focus on osteoarthritis. This drug candidate is a potent senolytic small molecule inhibitor of the MDM2/p53 protein interaction. Disruption of this protein interaction can trigger the elimination of senescent cells. Our investigational new drug, or IND, application for UBX0101 was cleared by the U.S. Food and Drug Administration, or FDA, in April 2018, and we plan to initiate a Phase 1 clinical study in osteoarthritis in the second quarter of 2018. We expect to receive data from this clinical study in the first quarter of 2019.
- UBX1967 is our lead drug candidate for ophthalmologic diseases. This drug candidate is a potent senolytic small molecule inhibitor of specific members of the Bcl-2 family of apoptosis regulatory proteins. Senescent cells utilize pro-survival mechanisms to remain viable and rely on specific Bcl-2 protein family members to persist and accumulate in tissues. We plan to submit our IND application and commence a Phase 1 clinical study in an ophthalmologic indication in the second half of 2019.

- **Demonstrate in our clinical studies that local treatment with senolytic medicines can alter the course of an age-associated disease.** If we prove that local treatment with senolytic medicines can slow, halt, or reverse aspects of aging, we will be well-positioned to expand upon that success with numerous additional applications.

4

Discuss label expansion into **many other diseases**

Case Study #2: Unity Biotechnology (2018) – Wall Street Takes

Morgan Stanley

RESEARCH

FOUNDATION

May 29, 2018 04:01 AM GMT

Unity Biotechnology Inc.

A New Way To Treat Chronic Disease; Initiate at OW

Stock Rating
Overweight

Industry View
In-Line

Price Target
\$25.00

Clearing the build-up of cells from aging offers a unique approach to attack chronic disease. While initial focus of knee arthritis is narrow, we believe proof-of-concept could lead to platform validation. Preclinical data, with a 35% increase in mice age, is supportive. Initiate at OW with \$25 PT.

Clearing of senescent cells could have a long-term impact on disease: Unity is focused on modulating the build-up of SASP factors (proteins which cause inflammation and other disease processes) by clearing senescent (non-dividing) cells. Management is initially focused on the local clearing of senescent cells to modulate chronic diseases such as osteoarthritis and diseases of the eye. We see supportive preclinical data, a lead versus the competition and a compelling market opportunity as the basis for our OW thesis.

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Morgan Stanley appreciates your support in the Institutional Investor 2018 All-America Research Team Survey.

[Request your ballot](#)

Unity Biotechnology Inc. (UBX.O, UBX.US)

Biotechnology / United States of America

Stock Rating	Overweight
Industry View	In-Line
Price target	\$25.00
Shr price, close (May 25, 2018)	\$13.00
Mkt cap, curr (mm)	\$185
52-Week Range	\$20.48-12.75

Fiscal Year Ending	12/17	12/18e	12/19e	12/20e
ModelWare EPS (\$)	(0.50)	(1.28)	(1.68)	(1.73)
Prior ModelWare EPS (\$)	-	-	-	-
P/E	NM	NM	NM	NM
Consensus EPS (\$)	-	-	-	-
Div yld (%)	-	-	-	-

Unless otherwise noted, all metrics are based on Morgan Stanley ModelWare

Case Study #2: Unity Biotechnology (2018) – Wall Street Takes

Key Investment Points

A leader in the novel biology of aging: Unity is targeting novel biology which management believes could have an impact on many diseases associated with aging. As cells age they stop dividing and become senescent (SnC). During this process, the senescent cells accumulate many proteins (>100) which are referred to as the Senescence Associated Secretory Phenotype, or SASP. Unity is developing senolytic medicines which eliminate the senescent cells. By eliminating these cells, SASPs are reduced and the inflammatory state reversed. Thus, Unity may be able to provide durable responses to chronic diseases associated with aging. We estimate that these chronic disease categories represent >\$50-100B in current drug spending, offering a significant opportunity if management can address even a small portion of the key diseases. Importantly, management is also well ahead of key competitor Calico (private, not covered) and has a broad program to address this unique disease biology.

Case Study #2: Unity Biotechnology (2018) – Wall Street Takes

Debate 1: Is the underlying biology enough to impact aging?

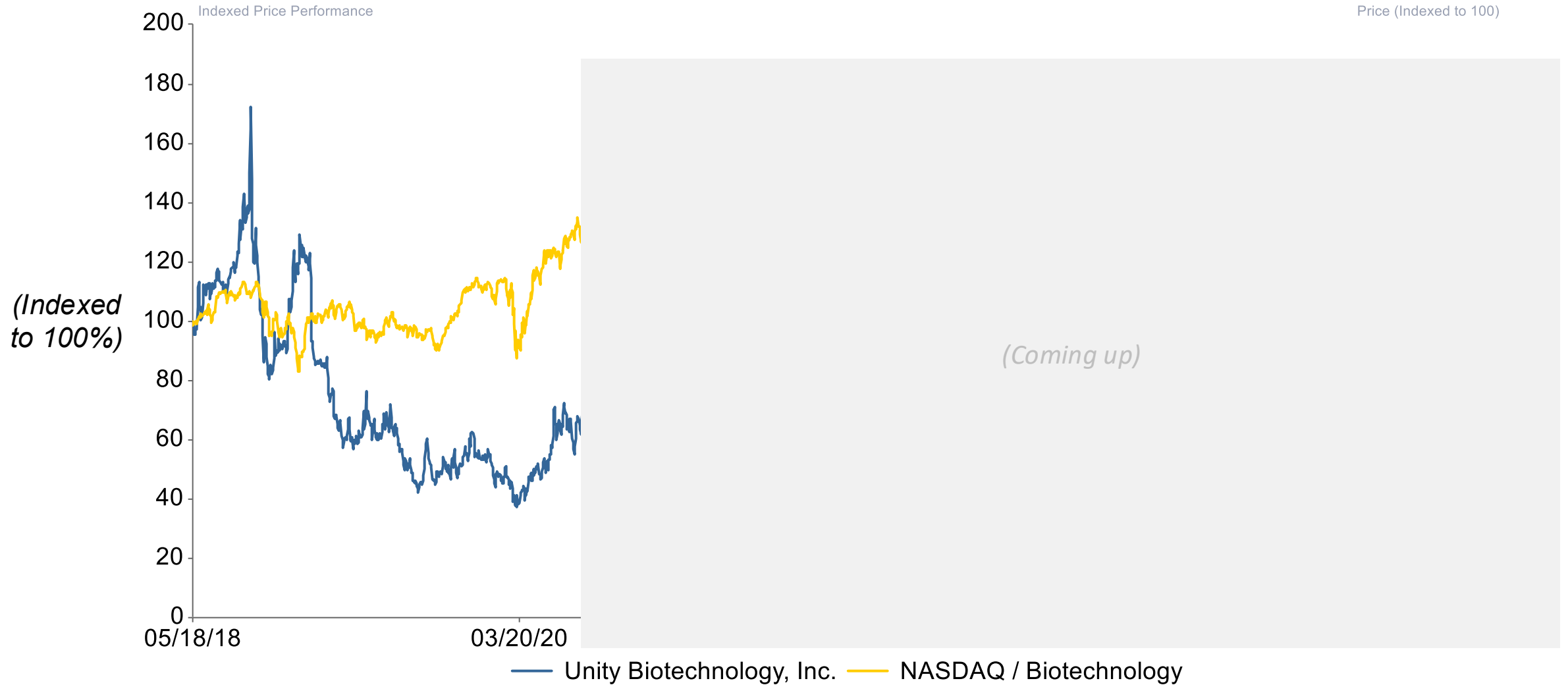
Overview: Unity is targeting a novel biology. Management believes that by removing aging cells that have stopped dividing (senescent cells or SnCs) it can reverse the build up of toxic protein complexes (SASPs) which could lead to significant improvements in chronic disease states. Management has developed a compelling set of preclinical data including mice which live longer than un-treated mice and suffer from much less disease. However, with no data in humans and a novel biology, investors debate the relevance of the preclinical data and the potential for this new therapeutic approach.

Street's take: Investors are clearly split. Some investors see the technology as little more than a new cover on old technology with management just recapitulating disease factors that are already known and calling them something else. Others see this as a novel discovery that could lead to significant implications for chronic diseases. Most remain skeptical of preclinical data, but at least find the context of the data helpful.

Our take: We see this as a novel technology that makes significant intuitive sense. In particular, while we highlight the risks with preclinical data, we believe management has a robust package of data that support its thesis. Further, we believe the literature is supportive of the therapeutic approach. The biggest risk we see is that management may not know the kinetics of a clinical response in humans and therefore initial data may not be as clear as investors want.

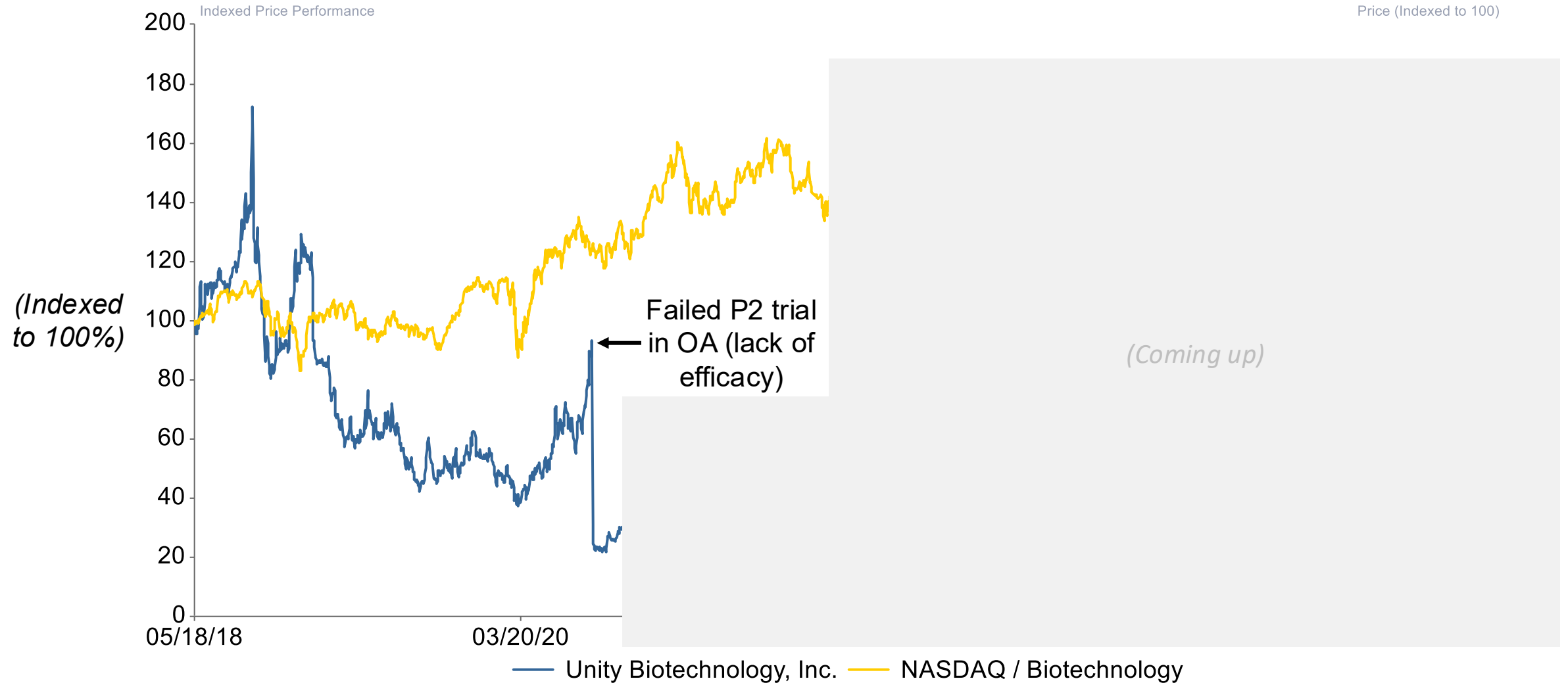
(...They go on to debate this for 6 pages... and have two additional debates on OA and other applications)

Case Study #2: Unity Biotechnology (2018 to 2020) – Stock Performance



Source: FactSet Prices

Case Study #2: Unity Biotechnology (2018 to 2020) – Stock Performance



Case Study #2: Unity Biotechnology (now 2020) – Wall Street Takes



EQUITY RESEARCH

August 17, 2020

Intraday Price: \$4.86 (11:32AM ET)

Price Target: \$12.00 (From \$20.00)

Rating: **Overweight**

Key Statistics:

Symbol	NASDAQ: UBX
52-Week Range	\$4.62 - \$15.44
Market Cap (M)	646.9
ADV (3 mo)	560,019
Shares Out (M)	52.0

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EPS

FYE (Dec)	2019A	2020E	2021E
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UNITY Biotechnology, Inc. (UBX)

Company Update

If it Was Easy, Everyone Would Be Doing It; PT to \$12

Investment Summary: Post unsuccessful Phase 2 UBX0101 osteoarthritis data we reiterate our OW rating and revise our 12-month PT to \$12, from \$20. We believe UBX has the potential to successfully execute its strategy to target the root causes of diseases that are prevalent in aging populations, which is underappreciated by the Street, in our view.

We believe the rest of the pipeline, which will focus on ophthalmology and neurologic diseases, remains very underappreciated at current levels. **UBX shares are down 60% intraday, versus NBI +2%.**

- **This morning UBX reported that UBX0101 did not meet its primary endpoint** in the Phase 2 trial of a single dose of 0.5mg, 2mg and 4mg of UBX0101 against placebo. The placebo response seen in the primary endpoint showed a -1.017 reduction in WOMAC-A score from baseline for patients dosed with placebo. Although we would expect a meaningful placebo response in a subjective pain trial, our expectation was for a placebo response closer to -0.5. In the UBX0101 dosing cohorts, we didn't see a clear dose response regarding the reduction in WOMAC-A scores, as the 2mg dosing cohort performed best showing a -1.052 change from baseline WOMAC-A, while the 4mg dosing cohort showed a -1.019 change. The company noted it will not be moving UBX0101 forward into pivotal trials. We will still get the data readouts on the 24 week Phase 2 data, as well as the high dose/multi dose Phase 1b study later this year. Once we see the full dataset presented, we can make the determination whether we believe a future partner or acquirer of UBX may revive the program at some stage in the future, given that development of OA products have faced mixed trial results in the past and still gained approval. However for now we are removing UBX0101 from our model, and we believe it is the correct decision by UBX to focus its development efforts on ophthalmology and neurological diseases given the data we have in hand.
- **We believe the company has generated more thorough and compelling preclinical evidence for targeting Bcl-xL inhibition within ophthalmology than it had for OA.**

Case Study #2: Unity Biotechnology (now 2021) – Wall Street Takes



Company Report

December 15, 2021

Rating:

OUTPERFORM

Price:

\$1.72

12-Month Price Target:

\$4.00

Analysts

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Company Information

Market Cap (M)	\$94
Enterprise Value (M)	\$45
Shares Outst (M)	57.7
52-Week Range	\$1.70 - \$9.78
Cash/sh	\$1.36
Tangible Book Value/sh	\$1.56
Net Debt (M)	\$(72.10)

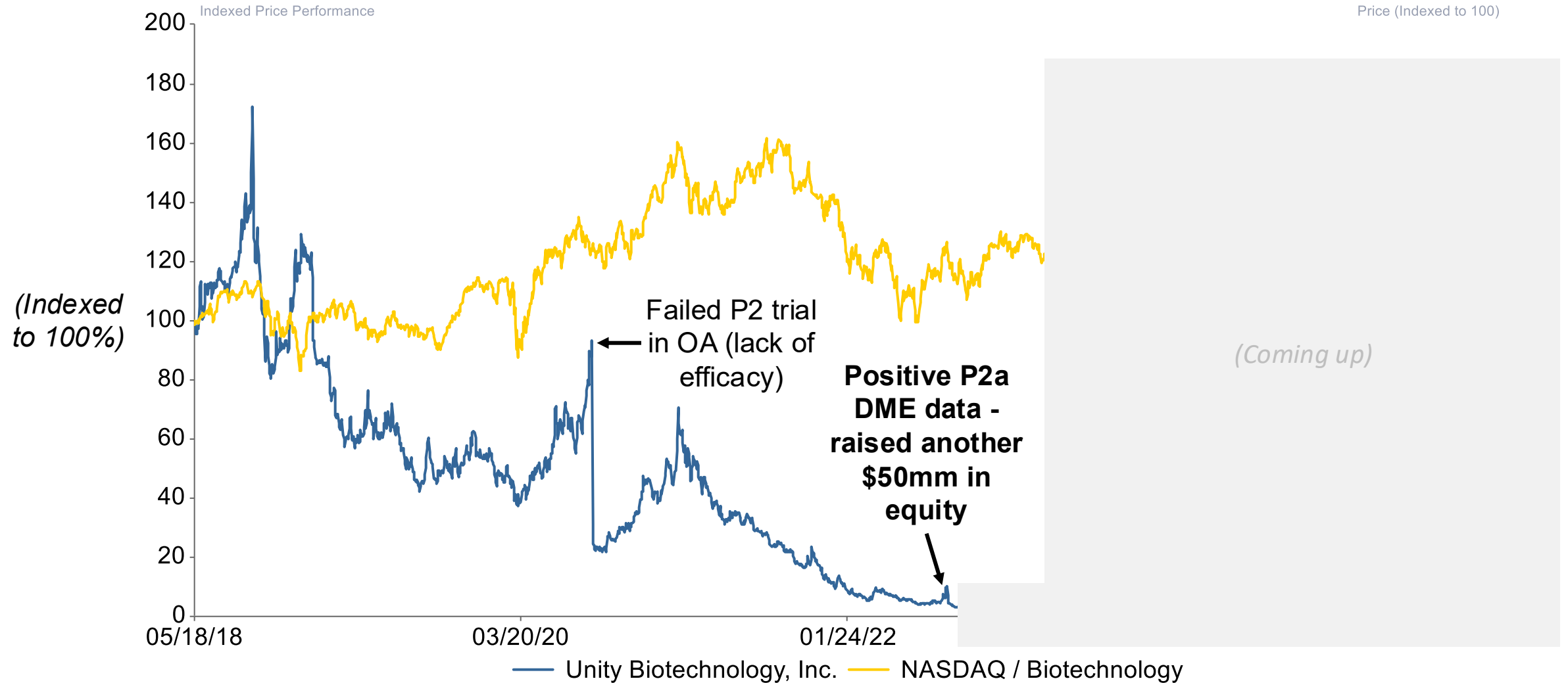
Unity Biotechnology (UBX)

Getting at the Essence with Senescence; Initiating OP & \$4 PT

The Wedbush View

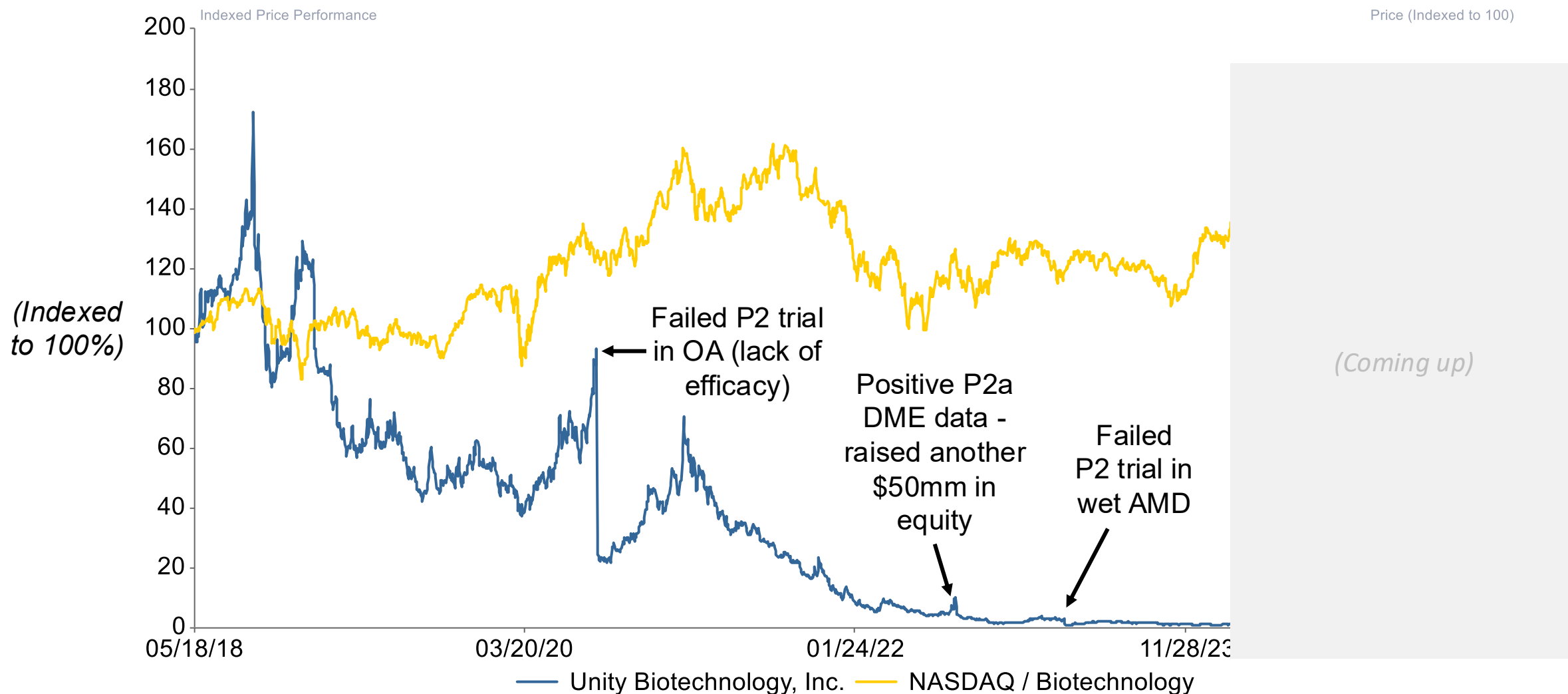
Unity Biotechnology is developing drug candidates targeting cellular senescence to treat vitreoretinal diseases and neurological disorders. The lead is UBX1325, a Bcl-xL inhibitor designed for intravitreal injection for the treatment of diabetic macular edema (DME), diabetic retinopathy (DR) and wet age-related macular degeneration (wAMD). While anti-VEGF treatments have become the standard of care for most wAMD and DME patients, there are many who continue to experience persistent symptoms due to poor compliance and/or progression of disease as evidenced by the CATT study which showed that 51.5% of ranibizumab-treated patients and 67.4% of bevacizumab-treated patients had persistent fluid present after 2 years of monthly treatment (*Drug Des Devel Ther.* 2016; 10:1857-1867). Similarly, the Protocol I study demonstrated that ~40% of DME patients had the sub-optimal response of ≤ 5 letters gain in BCVA after 12-weeks of treatment with ranibizumab $\pm$ laser therapy (*Am J Ophthalmol.* 2016; 172:72-79). In our view, UBX1325 has the potential to address this unmet need for non-responders since it acts upstream of anti-VEGF therapies with the larger possibility of treating patients early in disease progression given the potential for disease modification (Figure 1).

Case Study #2: Unity Biotechnology (2018 to 2022) – Stock Performance



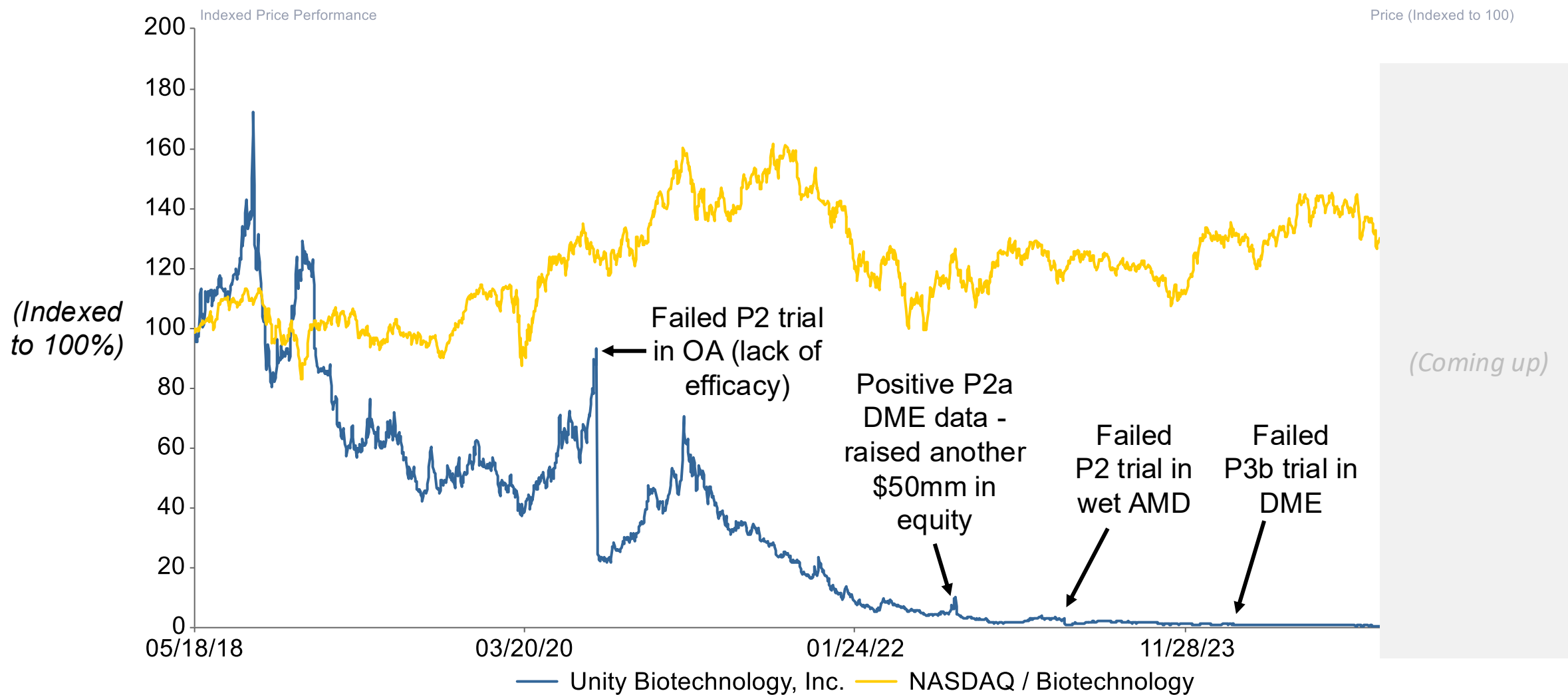
Source: FactSet Prices

Case Study #2: Unity Biotechnology (2018 to 2023) – Stock Price Performance



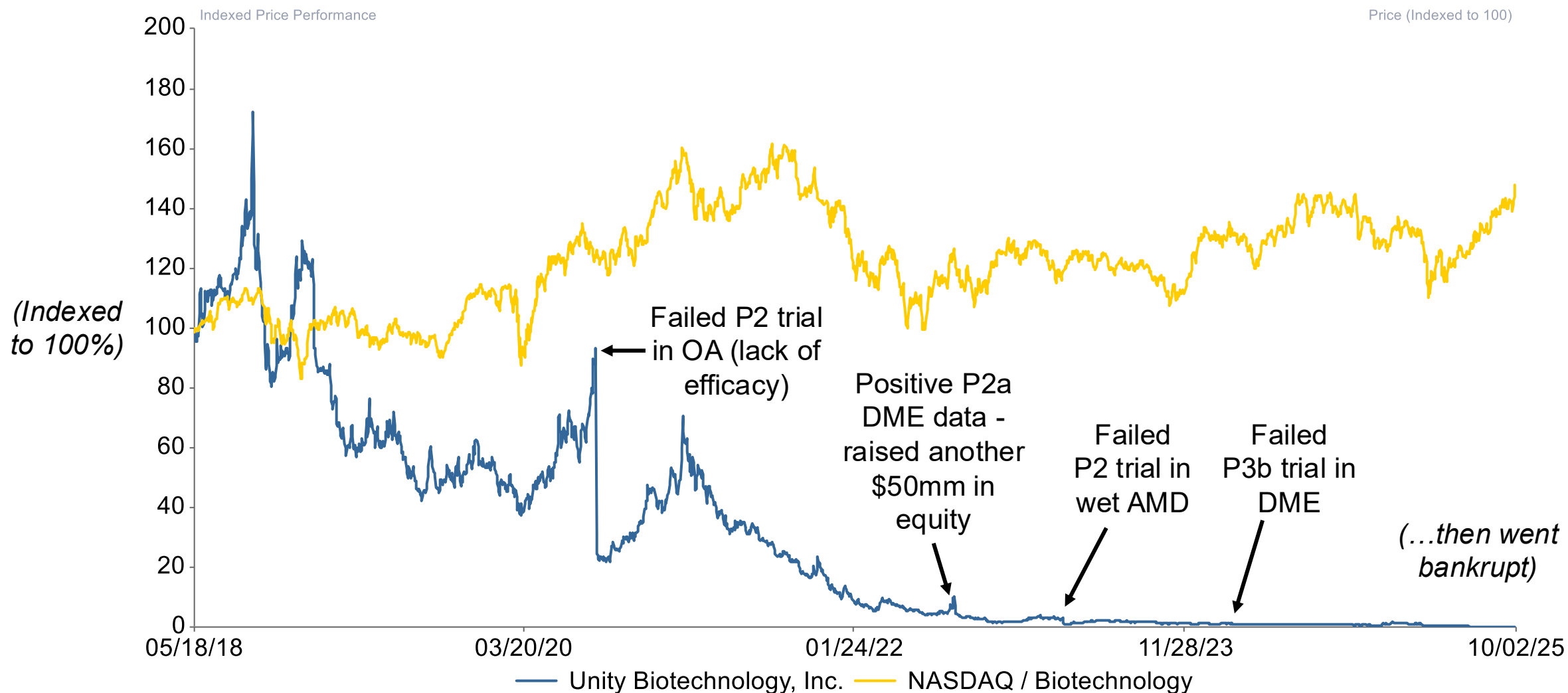
Source: FactSet Prices

Case Study #2: Unity Biotechnology (2018 to 2024) – Stock Price Performance



Source: FactSet Prices

Case Study #2: Unity Biotechnology (2018 to 2025) – Stock Price Performance



Source: FactSet Prices

Case Study #2: Unity Biotechnology – Epilogue

(Their drug also didn't work)

Case Study #2: Unity Biotechnology – Epilogue

(Their drug also didn't work)

(Investors lost some money)

Case Study #2: Unity Biotechnology – Epilogue

(Their drug also didn't work)

(Investors lost some money)

(They got a few good tries though)

Case Study #2: Unity Biotechnology – Epilogue

(Their drug also didn't work)

(Investors lost some money)

(They got a few good tries though)

(And science would live to try again!!)

Case Study #3: BioAge Labs (2024) – IPO Prospectus

Filed pursuant to Rule 424(b)(4)
Registration Nos. 281901 and 282334

PROSPECTUS

11,000,000 Shares

BIOAGE

Common Stock

This is the initial public offering of shares of common stock of BioAge Labs, Inc.

We are offering 11,000,000 shares of our common stock. Prior to this offering, there has been no public market for our common stock. The initial public offering price is \$18.00 per share. We have been approved to list our common stock on the Nasdaq Global Select Market under the symbol "BIOA."

We are an "emerging growth company" and a "smaller reporting company" as defined under the federal securities laws and, as such, have elected to comply with certain reduced reporting requirements in this prospectus and may elect to do so in future filings.

Investing in our common stock involves a high degree of risk. See the section titled "[Risk Factors](#)" beginning on page 17.

[Link](#) [Download](#)

	Per Share	Total
Initial public offering price	\$ 18.00	\$ 198,000,000
Underwriting discounts and commissions ⁽¹⁾	\$ 1.26	\$ 13,860,000
Proceeds, before expenses, to us	\$ 16.74	\$ 184,140,000

⁽¹⁾ See the section titled "Underwriting" for additional disclosure regarding the estimated underwriting discounts and commissions and estimated offering expenses.

We have granted the underwriters an option for a period of 30 days to purchase up to 1,650,000 additional shares of common stock at the initial public offering price, less the underwriting discounts and commissions.

Sofinnova Venture Partners, XI, L.P., an existing stockholder, has agreed to purchase approximately \$10.6 million in shares of our common stock in a concurrent private placement exempt from the registration requirements of the Securities Act of 1933, as amended, at a per share price equal to the initial public offering price of \$18.00 per share (588,888 shares). The private placement will close concurrently with, and is contingent and conditioned upon consummation of, this offering, as well as certain other customary closing conditions. However, this offering is not contingent on the closing of the concurrent private placement. The underwriters have agreed to act as placement agents in connection with the concurrent private placement and will receive a placement agent fee equal to 7.0% of the total purchase price of the private placement shares. In addition, affiliates of Sofinnova Venture Partners, XI, L.P. are expected to invest up to \$1.4 million directly in the public offering.

The underwriters expect to deliver the shares against payment in New York, New York on September 27, 2024.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the accuracy or adequacy of this prospectus. Any representation to the contrary is a criminal offense.

Goldman Sachs & Co. LLC

Morgan Stanley

Jefferies

Citigroup

September 25, 2024

4 investment banks
involved, led by
Goldman Sachs

**\$198mm of
new capital**

Case Study #3: BioAge Labs (2024) – IPO Prospectus

BioAge describes themselves:

1

“Targeting the biology of human aging”

Overview

We are a clinical-stage biopharmaceutical company developing therapeutic product candidates for metabolic diseases, such as obesity, by targeting the biology of human aging. Our technology platform and differentiated human datasets enable us to identify promising targets based on insights into molecular changes that drive aging. Our primary focus is metabolic disease, one of the greatest global healthcare challenges.

Our lead product candidate, azelaprag: an orally available, small molecule APJ agonist that has the potential to recapitulate the effects of exercise

Leveraging our platform, we found that apelin levels decrease with age and that higher levels of apelin are predictive of both improved physical function and increased longevity. Apelin is a type of signaling molecule released in response to exercise known as an exercine, which, as shown in preclinical studies and clinical trials, has the potential to recapitulate many of the downstream benefits of exercise. Azelaprag is an orally available, small molecule agonist of APJ that we are developing for the treatment of obesity.

2

Define the upstream target: exercise mimetic

Case Study #3: BioAge Labs (2024) – IPO Prospectus

3

Choose a specific indication: **obesity**

Our lead product candidate, azelaprag: an orally available, small molecule APJ agonist that has the potential to recapitulate the effects of exercise

Leveraging our platform, we found that apelin levels decrease with age and that higher levels of apelin are predictive of both improved physical function and increased longevity. Apelin is a type of signaling molecule released in response to exercise known as an exerkin, which, as shown in preclinical studies and clinical trials, has the potential to recapitulate many of the downstream benefits of exercise. Azelaprag is an orally available, small molecule agonist of APJ that we are developing for the treatment of obesity.

Our approach starts with human data. We examine the impact of the molecular changes that happen naturally as people age and study how these changes drive both functional decline (e.g., loss of muscle strength) and disease risk (e.g., obesity, insulin resistance, dyslipidemia, hypertension). To develop new insights into the biological drivers of aging, we have generated proprietary longitudinal human datasets based on exclusive access to a unique resource: serial biobanked human samples coupled with health records and functional measurements collected for up to 50 years, capturing individual aging trajectories measured over several decades. We analyze these samples using state-of-the-art molecular profiling technologies, measuring thousands of biologically relevant molecules, and then apply computational tools to the resulting data to extract potential drivers of a long and healthy lifespan.

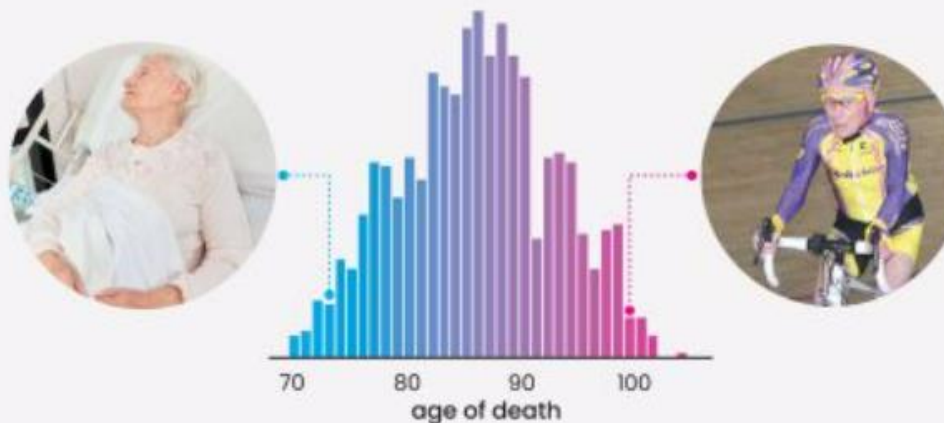
4

Discuss label expansion into **many other diseases**

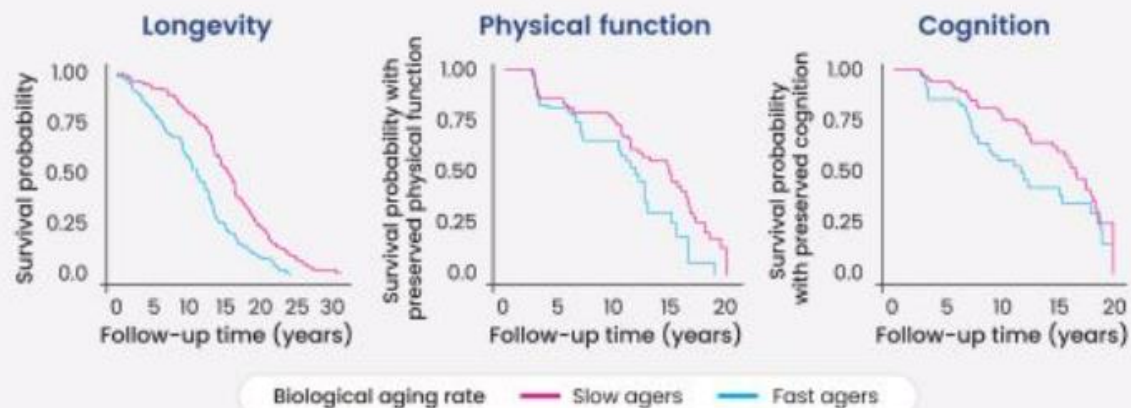
Case Study #3: BioAge Labs (2024) – IPO Prospectus

We know there are many pathways that impact human lifespan and healthspan;
It is our mission to find them and develop therapies to target them

Our human aging cohorts capture a range of aging outcomes



Using deep molecular profiling, we can predict aging outcomes based on biology alone



We capture a range of aging outcomes in our human aging cohorts, including functional and cognitive decline, disease incidence and mortality. In this example, deep, serial profiling of circulating proteins in these participants was used to understand the biology that drives these outcomes.

Case Study #3: BioAge Labs (2024) – Wall Street Takes

Morgan Stanley

RESEARCH

October 21, 2024 05:23 AM GMT

BioAge Labs Inc | North America

Targeting Aging Biology to Treat Chronic Metabolic Diseases; Initiate at Overweight

We initiate at Overweight with a \$40 PT. Initial data for azelaprag have been promising, suggesting it has the potential to increase weight loss in combination with GLP-1s, while improving body composition and weight loss quality.

Azelaprag mimics the effects of exercise to enhance weight loss in combination with GLP-1s. BioAge is a clinical stage company focused on developing therapies for metabolic diseases. The company's lead candidate, azelaprag, is an oral apelin receptor APJ agonist that increases weight loss and improves body composition when combined with GLP-1s. It is currently running the Phase 2 STRIDES study in combination with tirzepatide, with another Phase 2 study beginning in 1H25 in combination with semaglutide. In addition to the promising early data on weight loss and body composition, we think arguably the most compelling reason to be bullish on BioAge is its partnership with Eli Lilly, which not only validates the company's

FOUNDATION

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BioAge Labs Inc (BIOA.O, BIOA US)

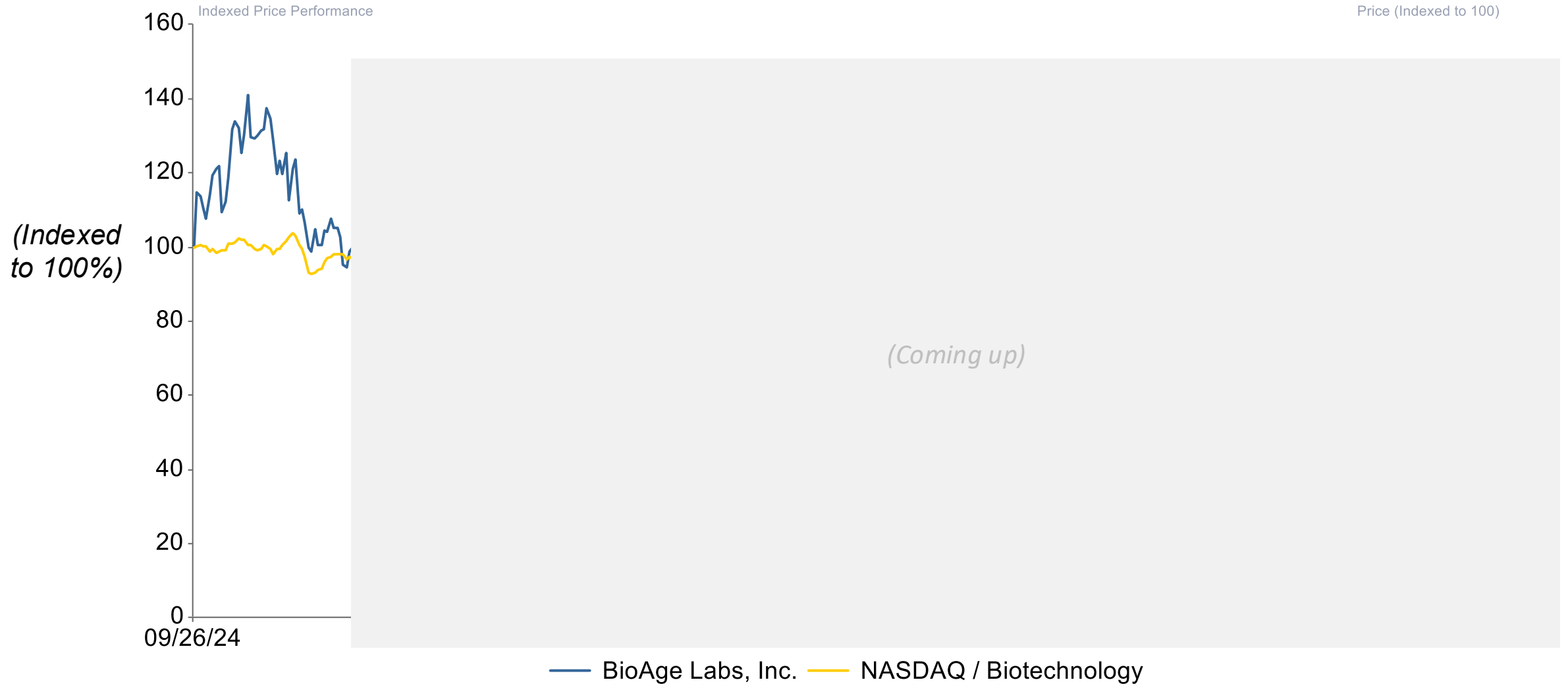
Biotechnology | United States of America

Stock Rating	Overweight
Industry View	Attractive
Price target	\$40.00
Shr price, close (Oct 18, 2024)	\$23.86
Mkt cap, curr (mm)	\$855
52-Week Range	\$25.50-18.30

Fiscal Year Ending	12/23	12/24e	12/25e	12/26e
EPS (\$)**	(8.55)	(2.93)	(2.90)	(3.18)
Prior EPS (\$)**	-	-	-	-
P/E	NM	NM	NM	NM
EPS (\$)§	-	-	-	-
Div yld (%)	-	-	-	-

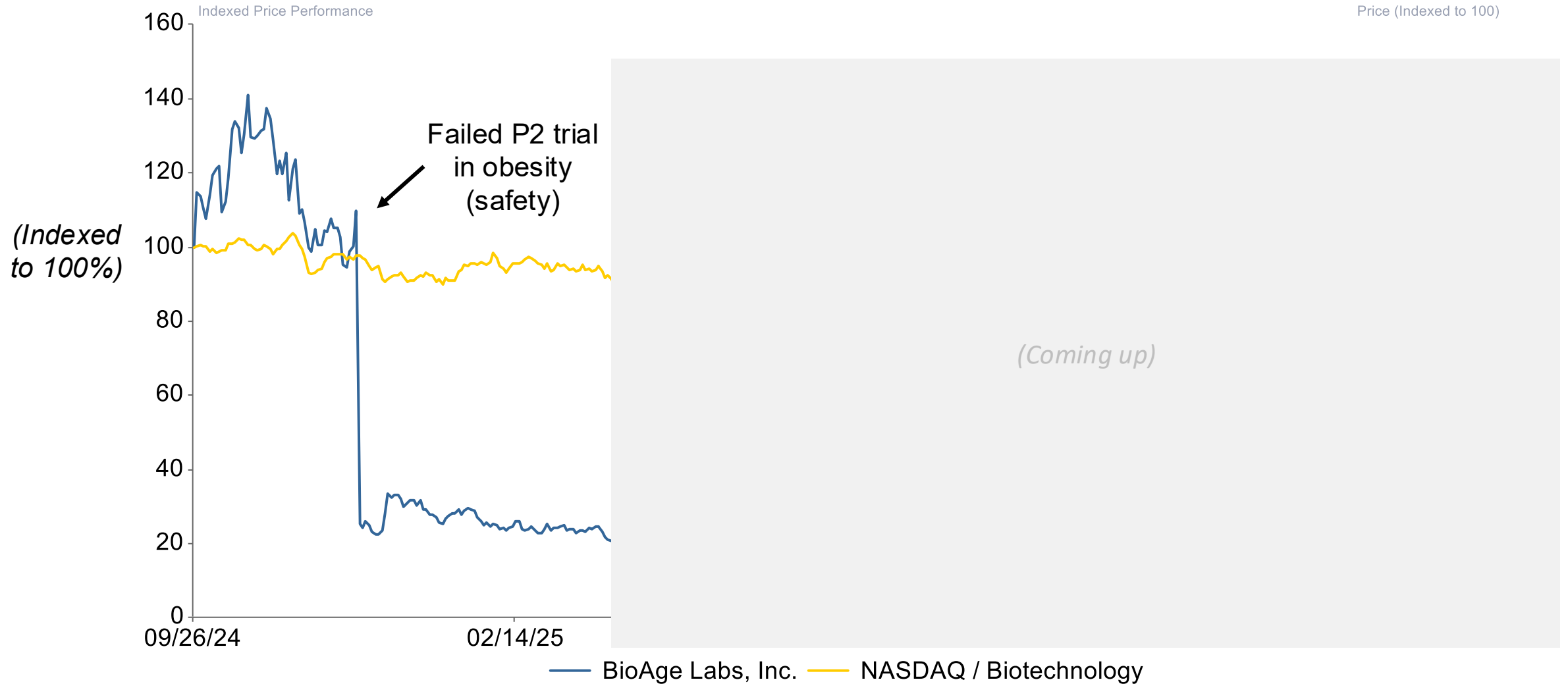
Unless otherwise noted, all metrics are based on Morgan Stanley ModelWare framework
** = Based on consensus methodology
§ = Consensus data is provided by Refinitiv Estimates

Case Study #3: BioAge Labs (2024 – 2025) – Stock Performance



Source: FactSet Prices

Case Study #3: BioAge Labs (2024 – 2025) – Stock Performance



Source: FactSet Prices

Case Study #3: BioAge Labs (still 2024) – Wall Street Takes

Jefferies

USA | Biotechnology

BioAge

Equity Research

December 9, 2024

Azelaprag Ph2 Discontinued Due to Liver Tox; Focus on NLRP3 Now; D/G with PT \$7

We caught up with mgmt. Co discontinued Ph2 obesity study of azelaprag (apelin) with tirze due to transaminase elevation only in Aze arms. Co was surprised as liver signal was never a concern across 8 Ph1 studies done by Co and AMGN and preclincial tox studies. Co will analyze data to inform next steps and give update in 1Q25. Co will now be focused on NLRP3 program with IND in 2H25/ Ph1 in 2H26 but potentially accelerate. We remove Aze rev, lowering PT to \$7.

Bottom line. We expect to see sig stock drop (post market down ~70%), as Co announced discontinuation of STRIDES Ph2 study of Aze/ tirze in obesity due to 11 subjects in Aze groups had transaminase elevations despite no clinically sig symptoms or Hy's law. The liver signal was only from Aze groups (no such cases in tirze arm), without disclosing dose levels, but likely combo/ mono (given both stopped). This was a big surprise as safety, particularly liver tox never came up across 8 Ph1 studies done by Co/ AMGN and various preclinical tox studies (e.g., 6/ 9 mo in rat/ dog) by AMGN and benign safety in genetic studies. However, this is the first time pts are being exposed to Aze at these Ph2 obesity doses (300mg QD or BID) for a long period (timing of liver signal not disclosed but randomization started in Jul '24), as in previous trials at highest 300mg BID was tested longest for 2W. This could be a property with Aze at high dose and long exposure but does not rule out other reasons including interaction with tirze, pt baseline, etc.

RATING | TARGET CHANGE

RATING **↓ HOLD (BUY)**

PRICE **\$20.09^A**

PRICE TARGET | % TO PT **↓ \$7.00 (\$42.00) | -65%**

52W HIGH-LOW **\$26.62 - \$16.30**

FLOAT (%) | ADV MM (USD) **57.1% | 5.09**

MARKET CAP **\$719.2M**

TICKER **BIOA**

^APrior trading day's closing price unless otherwise noted.

FY (Dec) CHANGE TO JEFc JEF vs CONS

2024 2025 2024 2025

REV NA NA NA NA

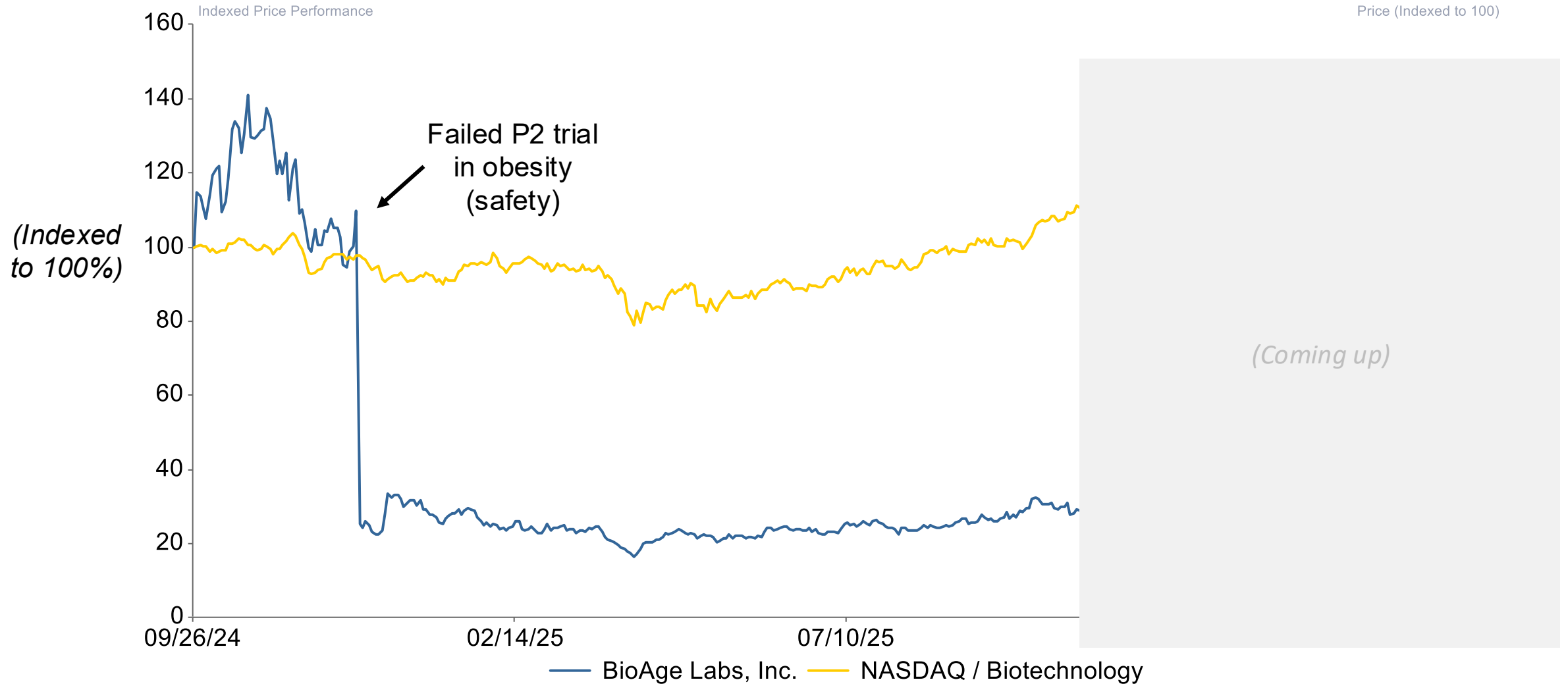
EPS NA NA NA NA

2024 (\$) Q1A Q2A Q3 Q4 FY

EPS (5.80) (0.60) (6.70) (0.97) (5.30)

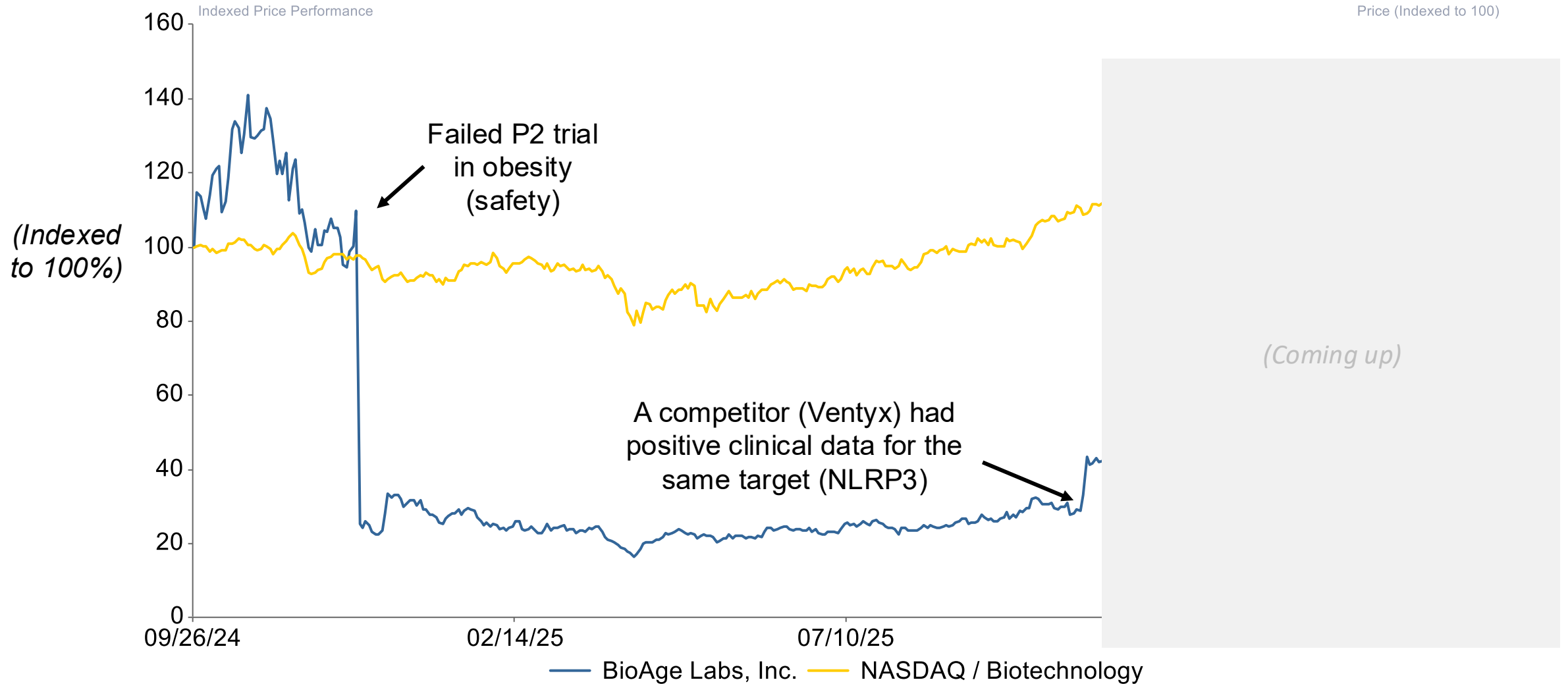
PREV

Case Study #3: BioAge Labs (2024 – 2025) – Stock Performance



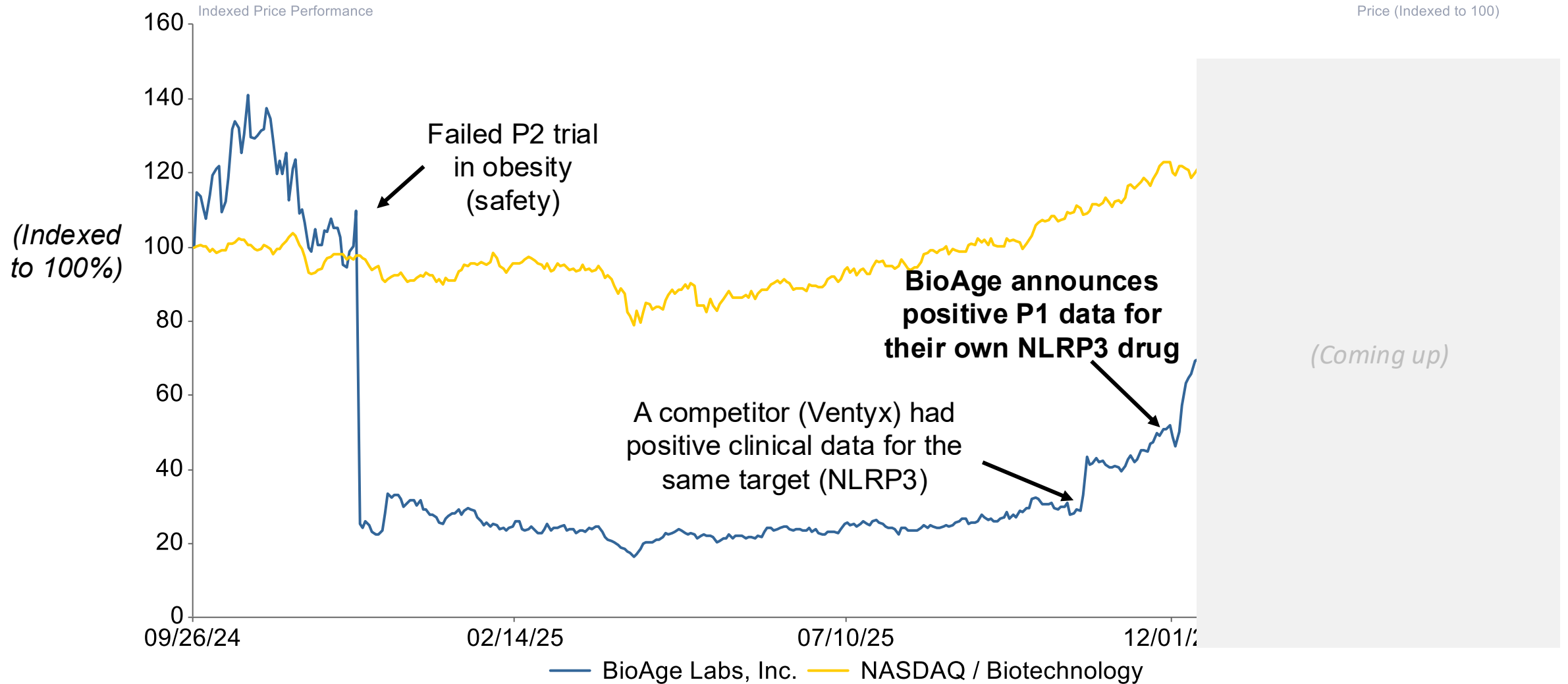
Source: FactSet Prices

Case Study #3: BioAge Labs (2024 – 2025) – Stock Performance



Source: FactSet Prices

Case Study #3: BioAge Labs (2024 – 2025) – Stock Price Performance



Source: FactSet Prices

Case Study #3: BioAge Labs (now 2025) – Wall Street Takes

Morgan Stanley | RESEARCH

December 5, 2025 06:20 PM GMT

BioAge Labs Inc | North America

Interim Ph1 BGE-102 Data Suggest Potential; Upgrade to Equal-weight

WHAT'S CHANGED

BioAge Labs Inc (BIOA.O)	From	To
Rating	Underweight	Equal-weight
Price Target	\$5.00	\$12.00

Initial clinical data for BGE-102 highlights robust biomarker reductions, suggesting potential to reduce cardiovascular risk. We look to additional data in 2026 for further confirmation, although we find early data encouraging and we upgrade to EW and raise price target to \$12.

Key Takeaways

- BGE-102 demonstrates robust reductions in IL-1 (90-98%) and hsCRP (79% in subgroup), key biomarkers suggestive of CV risk reduction.
- Additional MAD data in obese patients with elevated hsCRP expected in 1H26, followed by a Ph2a study with data guided for 2H26.
- We are encouraged by initial BGE-102 data suggesting potential. Hence, we upgrade to Equal-weight and raise our price target to \$12.

IDEA

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BioAge Labs Inc (BIOA.O, BIOA US)

Biotechnology | United States of America

Stock Rating	Equal-weight
Industry View	Attractive
Price target	\$12.00
Shr price, close (Dec 4, 2025)	\$10.50
Mkt cap, curr (mm)	\$376
52-Week Range	\$20.37-2.88

Fiscal Year Ending	12/24	12/25e	12/26e	12/27e
EPS (\$) **	(2.84)	(2.80)	(2.97)	(2.83)
Prior EPS (\$) **	-	-	-	-
P/E	NM	NM	NM	NM
EPS (\$) §	(8.07)	(2.30)	(2.91)	(3.04)
Div yld (%)	-	-	-	-

Unless otherwise noted, all metrics are based on Morgan Stanley ModelWare framework

** = Based on consensus methodology

§ = Consensus data is provided by Refinitiv Estimates

e = Morgan Stanley Research estimates

QUARTERLY EPS (\$)

Quarter	2024	2025e Prior	2025e Current	2026e Prior	2026e Current
Q1	(1.74)	-	(0.36)a	-	-
Q2	(0.60)	-	(0.60)a	-	-
Q3	(0.68)	-	(0.56)a	-	-
Q4	(0.59)	-	(1.27)	-	-

e = Morgan Stanley Research estimates, a = Actual Company reported data

Case Study #3: BioAge Labs (now 2026) – Wall Street Takes

PIPER | SANDLER

COMPANY NOTE
January 26, 2026

BioAge Labs, Inc. (BIOA)

Overweight

NLRP3 Inhibition Can Kill Many Birds With One Stone; Initiate OW

CONCLUSION

We are initiating coverage on BioAge Labs, Inc. (BIOA) with an OW rating and \$73 PT where BGE-102 is an oral QD CNS-penetrant NLRP3 inhibitor small-molecule with strong Ph1 SAD/MAD data in HVs and obese patients (elevated hsCRP). Notably, NLRP3 inhibition is validated across multiple indications with PoC data as both a monotherapy and in-combination. Additionally, there have been ~10 key NLRP3-related transactions over the last ~decade with the recently announced ~\$1.2B acquisition of Ventyx Biosciences by LLY (not covered; expected to close 1H26) and ~\$1.4B acquisition of Tourmaline Bio by NVS (not covered; **pgs. 10-15**). We view BIOA as a key name to own given BGE-102's full Ph1 SAD/MAD data 1H26, 12-week Ph2a obese/CV-risk initiation 1H26 (data 2H26), and indication expansion into Diabetic Macular Edema (DME; Ph1b/2a initiation mid-2026). Thus, we believe BIOA is positioned for continued growth into Ph2a data with clear rationale across broad inflammatory indications.

- **BGE-102 is a potent oral CNS-penetrant NLRP3 inhibitor with a unique binding site and strong Ph1 SAD/MAD data.** Importantly, BGE-102 is an oral QD NLRP3 inhibitor with a unique binding site, potential best-in-class potency (1.8 nM IC90 human whole blood, 2.1 nM IC90 human microglia), and strong CNS-penetrance which allows it to target peripheral/central inflammation. Further, BGE-102 has robust IP coverage inclusive of composition of matter to 2045 (**pgs. 16-18**). Moreover, BGE-102's Ph1 SAD/MAD in HVs validated QD dosing with ≥90% IL-1β suppression for 24-hours and CSF drug levels >IC90. Additionally, interim Ph1 MAD obese cohort (120 mg; BMI 32-42, hsCRP >3 mg/L) data showed an -86% hsCRP reduction, 93% of patients achieved normalized hsCRP (<2 mg/L), reductions in IL-6 and fibrinogen, and 93% IL-1β

PRICE: US\$18.27

TARGET: US\$73.00

Based on risk-adjusted net present value (rNPV) of BGE-102 sales: 1) \$44/sh from obese CV risk in US; 2) \$20/sh from obese CV risk in EU5; and 3) \$9/sh from cash proforma

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Liam Hiester

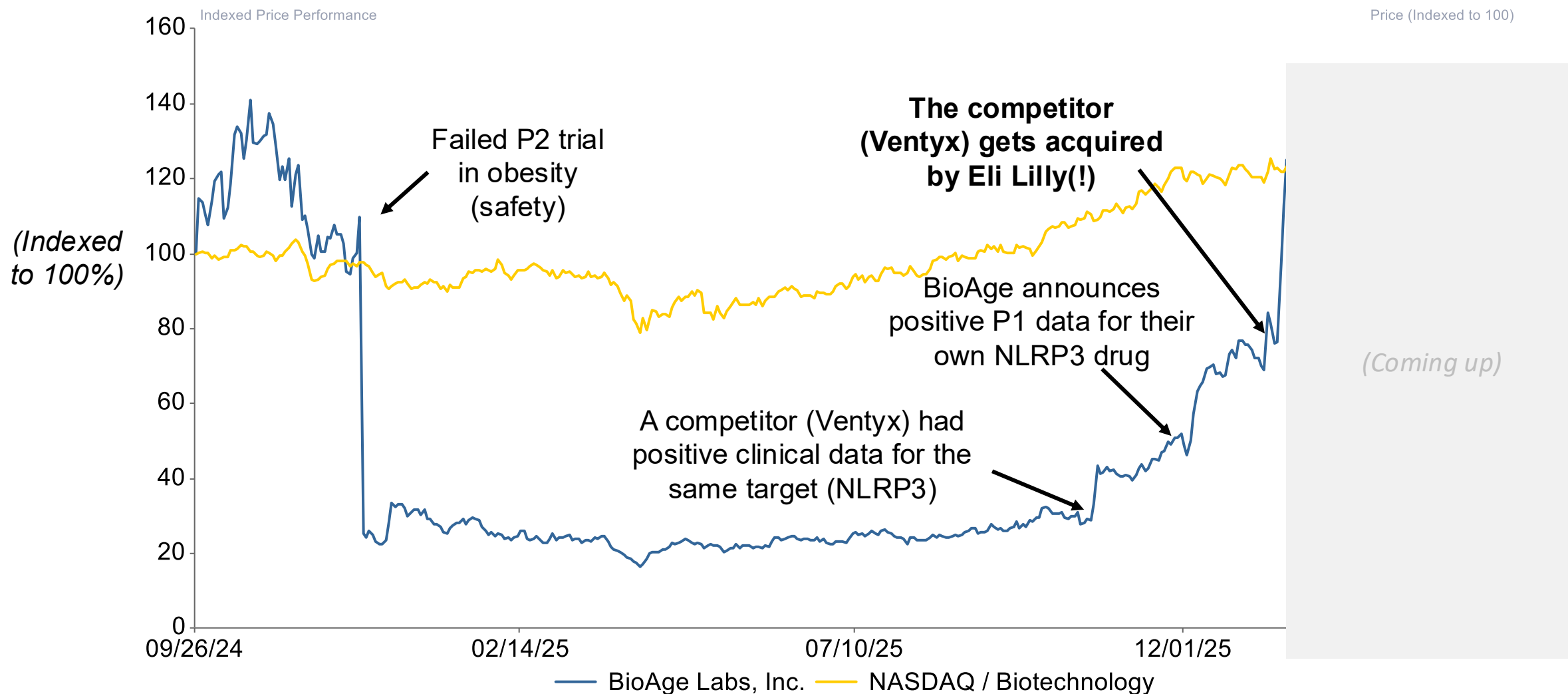
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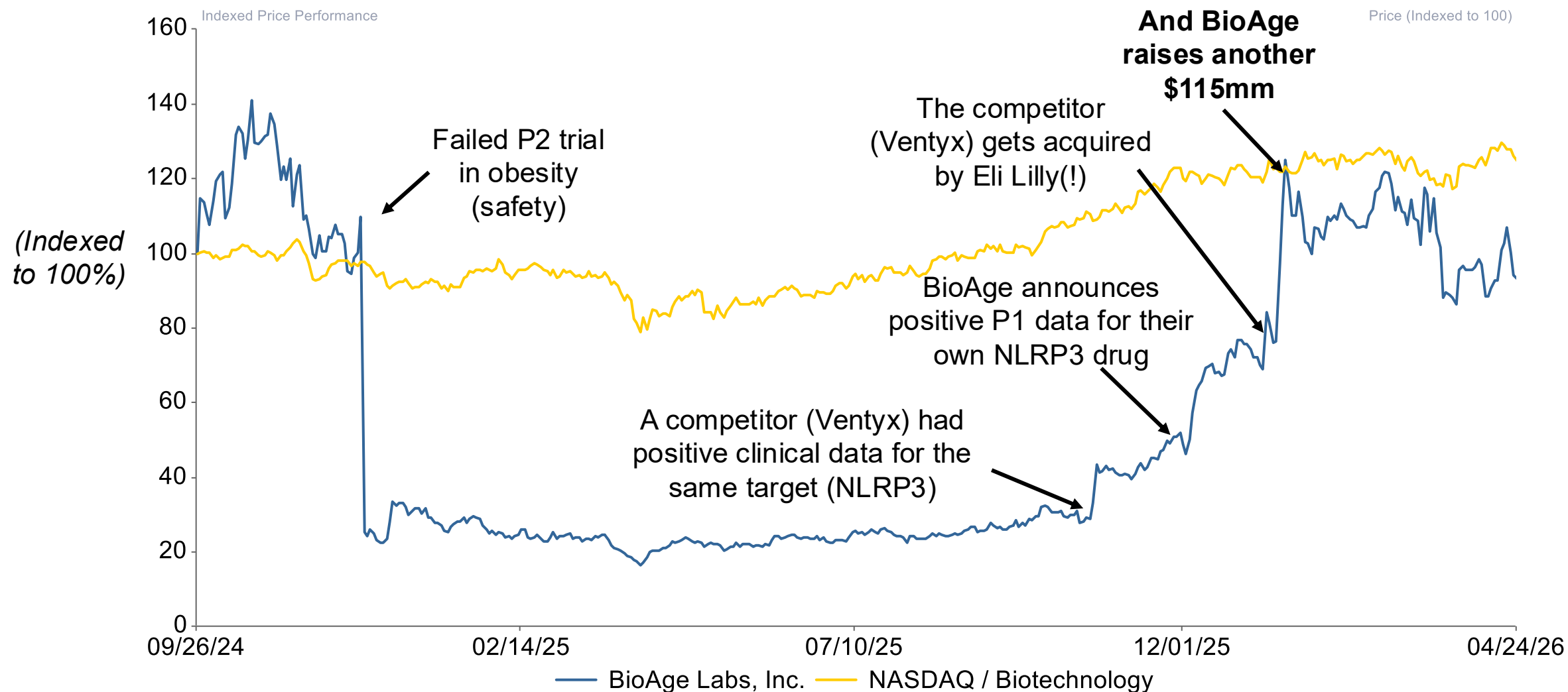
Changes	Previous	Current
Rating		Overweight
Price Tgt		US\$73.00
FY26E Rev (mil)	—	US\$0.0
FY27E Rev (mil)	—	US\$0.0
FY26E EPS	—	US\$(2.90)
FY27E EPS	—	US\$(2.89)

Case Study #3: BioAge Labs (2024 – 2026) – Stock Performance



Source: FactSet Prices

Case Study #3: BioAge Labs (2024 – 2026) – Stock Performance



Case Study #3: BioAge Labs (now 2026) – Wall Street Takes



March 27, 2026
INITIATING COVERAGE

Biotechnology

BioAge Labs (BIOA)

RATING
BUY

PRICE TARGET
\$50.00

PRICE
\$16.41

52-WEEK RANGE
\$2.88 - \$24.00

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Getting at the Heart of Obesity: Initiating Coverage on BIOA w/ a Buy & \$50 PT

We are initiating coverage on BioAge Labs (BIOA) with a Buy rating and \$50 PT. We are bullish on BIOA and lead asset BGE-102, an oral, CNS-penetrant NLRP3 inhibitor in Ph1 development for cardiovascular risk (CV) in obese patients. We believe BGE-102's safety, PK/PD profile, and early biomarker data demonstrate best-in-class potential in a very large indication (we est. >25M pts), with expansion opportunities planned in ophthalmology, specifically diabetic macular edema (DME). We see favorable risk/reward ahead of several catalysts in the next 12-15 months including: 1) full Ph1 biomarker data (1H26); 2) Ph2a PoC data in obese pts with CV risk (2H26); and 3) Ph1/2 PoC data in DME (mid-2027).

- **Lead asset BGE-102 is a highly differentiated oral NLRP3 inhibitor.** Internally-discovered BGE-102 shows a best-in-class profile vs oral NLRP3 inhibitors from Ventyx, NodThera, and others. We note that recent clinical developments have led to a positive sentiment in the space, providing high-value opportunities on positive results such as LLY's \$1.2B acquisition of Ventyx soon after the latter's Ph2a topline data.

KEY DATA

Market Cap (MM)	\$728.3
Price (03/25/2026)	\$16.41
52-Week Range	\$2.88 - \$24.00
Shares Outstanding	44.38
Avg. Daily Volume	611,331.4

ESTIMATES

FY (Dec)	2025A	2026E	2027E
EPS			
Q1	[0.36]A	[0.61]E	-
Q2	[0.60]A	[0.66]E	-
Q3	[0.56]A	[0.69]E	-
Q4	[0.72]A	[0.57]E	-
Year	[2.24]A	[2.54]E	[2.09]E
Growth		13.4%	NM

Case Study #3: BioAge – Epilogue?

(The company marches on)

Case Study #3: BioAge – Epilogue?

(The company marches on)

(I don't know whether their drugs will work)

Case Study #3: BioAge – Epilogue?

(The company marches on)

(I don't know whether their drugs will work)

(But they have \$285mm to keep trying)

Lessons: The Longevity IPO “Playbook”

1. Target an aging-related indication that is tractable with your drug. Historical examples include:

- Type 2 diabetes
- Osteoarthritis
- Immune decay
- Muscle loss / frailty
- Idiopathic pulmonary fibrosis

Lessons: The Longevity IPO “Playbook”

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 - Idiopathic pulmonary fibrosis
2. Pursue a piecemeal, label-expansion strategy, using the broader upstream health benefit of your drug, informed by clinical data

Wall Street will understand the enormous market opportunity, and if your drug seems promising, the “longevity” or “aging” labels will not stop you

Section 3: How You Can Work On Aging

The Longevity Biotech Landscape – Top Funded Companies Today

Company (Founded)	 (2013)	 英科智能 Insilico Medicine (2014)	BIOAGE (2015)	 (2017)	Cambrian (2019)	 NewLimit (2021)	 (2021)	 (2022)
Approach	Deep, basic research on systems biology of lifespan & aging	Generative AI drug discovery for healthy longevity	Human longitudinal multiomics biobank-driven pipeline	AI-driven mapping of secreted proteins for regeneration	"Hub-and-Spoke"; lead approach an AMPK and mitochondrial activator	Novel transcription factors for partial reprogramming (via LNP mRNA)	Several: reprogramming (via AAV), autophagy, proteome mod.	Cellular rejuv.: reprogramming (via SM), undisc. approaches
Lead Indication (Phase)	ADPKD (P2)	IPF (P2a China Data)	CVD Risk Factors (P2-Ready)	DM1 / Sarcopenia (P1/2)	Obesity / CVRM (P1b/2a)	Alcoholic Liver Dis. (PC)	Alzheimer's (P1)	Undisc. (PC)
Key Add'l Aging Indications	Vanishing White Matter, IPF, Oncology	Neurodegen., Inflammation, Oncology	DME, Obesity	Fibrosis, Osteoarthritis, Inflammation	Respiratory Tract Infections	Immunology, Metabolic Syndrome, Endothelial / Vascular	CNS, Osteoarthritis, Hearing Loss	Undisc.
Key Leadership / Founders	Arthur D. Levinson, David Botstein (formerly)	Alex Zhavoronkov, Feng Ren	Kristen Fortney	Hanadie Yousef, Jeremy O'Connell	James Peyer, Christian Angermayer	Jacob Kimmel, Brian Armstrong, Blake Byers	Joe Betts-LaCroix	Rick Klausner, Hans Bishop, Hal Barron
# of Employees	~250	~300	~90	~50	~30	~40	~70	~500
Key Investors / Partnerships	Alphabet, AbbVie (formerly), Mabwell	Lilly, Servier, Sanofi, Fosun, Exelixis, Menarini	Lilly, Novartis, A16Z, Sofinnova	Lilly, Mubadala (Abu Dhabi)	Novartis, AbbVie	Lilly, Founders Fund, Kleiner Perkins, Garry Tan	OpenAI, Sam Altman, Multiply Labs, MCRI	Yuri Milner, Jeff Bezos, ARCH, Mubadala
Funding to Date	\$3.5bn	\$850mm	\$630mm	\$130mm	\$205mm	\$250mm	\$180mm+ ⁽²⁾	\$5.6bn
Last Raise (Date)	\$1.0bn ⁽¹⁾ (Jul. 2021)	\$293mm (Dec. 2025)	\$115mm (Jan. 2026)	\$80mm (Jan. 2026)	\$25mm (Dec. 2025)	\$45mm (Oct. 2025)	"Up to \$1.0bn" (Apr. 2022)	\$1.5bn (Feb. 2024)
Valuation	— (Subsidiary)	\$5.2bn (Public, HKEX)	\$0.8bn (Public, NASDAQ)	Undisc. (Private)	Undisc. (Private)	Est. \$1.6bn (Private)	Undisc. (Private)	Est. \$8.8bn (Private)

Source: Public filings, PitchBook, and FactSet as of April 2026. Note: Reflects companies with >\$100mm in funding to date. Dollar values rounded to nearest \$5mm. (1) 2021 extension to the 2014 AbbVie/Calico partnership (prev. extended in 2018); AbbVie opted out of extension in 2025. (2) Excludes ongoing announced \$1.0bn raise.

How You Can Work On Aging

Longevity companies are **fundable**, but we need **talented people** to start them

If you're a scientist or a pre-PhD, the longevity biotech IPO Playbook works

- Don't hide it in your LinkedIn
- Frame it around a tractable indication

If you're a finance or operations person, we need more talent too

- Work at one of these companies
- Or join a traditional company, but use your skills and services

If you're an undergrad, start a longevity club

- We'll fund it for you

Bonus:
Second Century Foundation



SECOND CENTURY FOUNDATION



Michael Reisman
President



Alex Epstein, Ph.D.
Head of Research

Longevity is still a small piece of the research pie, but it's a big pie



Government/nonprofits

Yearly longevity
commitment



\$400M



\$400M



\$60M

Industry

Funding raised to date



\$3.5B



\$5.6B



\$850M



\$630M



\$250M



\$180M

Key foundational work can't be funded due to misaligned incentives



Government/nonprofits

Yearly longevity
commitment



\$400M



\$400M



\$60M

“Is it publishable?”



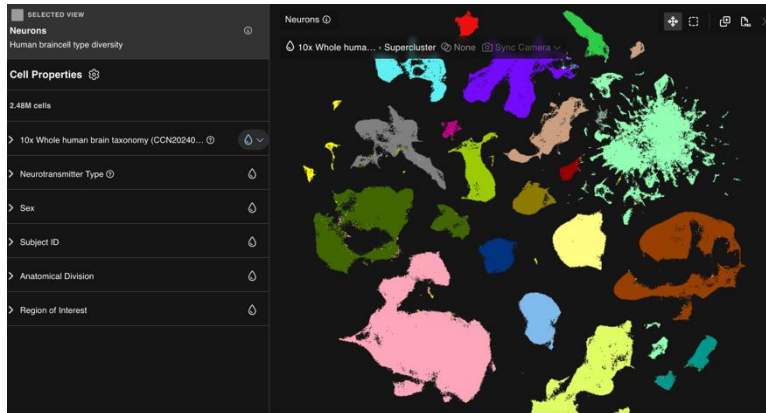
“Can we make >5x
return in 10 years?”

Industry	
Funding raised to date	
	\$3.5B
	\$5.6B
 Insilico Medicine	\$850M
	\$630M
 NewLimit	\$250M
	\$180M

Key foundational work can't be funded due to misaligned incentives

Open data and tools

Expectation



Reality

```
Fatal error: Exit code 1 ()
Error in `row.names<-.data.frame`(`*tmp*`,
  duplicate 'row.names' are not allowed
Warning message: non-unique value when sett
```

Longevity organizations



- Total US universities: **~4000**
- Cost to start an undergraduate club: **<\$10,000**
- Active undergrad longevity orgs: **<10**

High school science fairs



- Nobel prizewinners: **15**
- Alumni founded/invented: **Regeneron, Human Genome Project, CRISPR**
- Special award cost: **<\$10,000**
- Longevity-focused awards to date: **zero**

Sample of our work so far



PhD fellowship



Kayla Leung

Inaugural Second Century Fellow
PhD Candidate, Columbia University
Developing advanced gene and cell
therapy delivery tech

Open science tool: longevity simulator

Longevity Simulator

See how curing diseases or slowing aging could change expected lifespan.

About you

All fields optional.

Michael

Age 30

Man

Cure these diseases

Heart disease & stroke Cancer

Alzheimer's & nervous system

Chronic lung disease

Diabetes & kidney disease

Digestive disease Infections & early-life

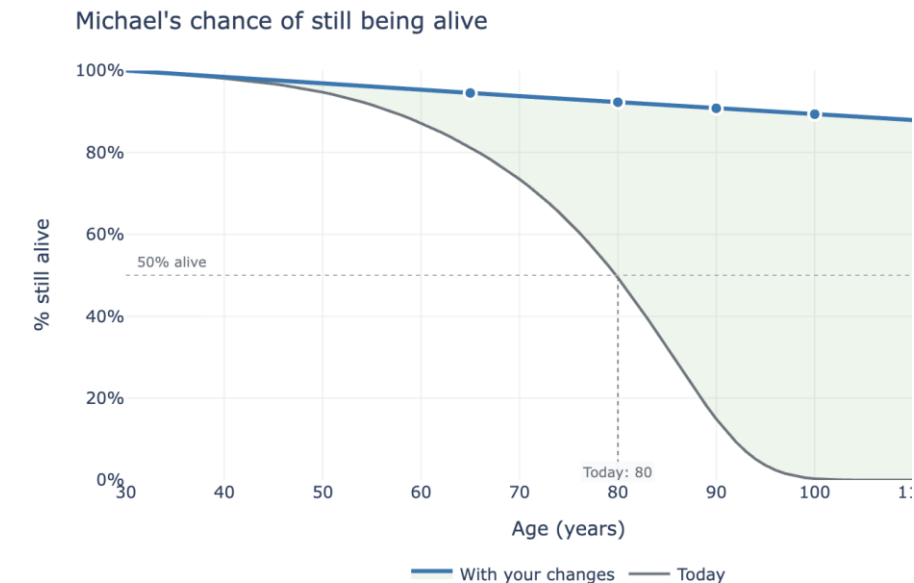
Accidents & injuries Other causes

Slow down your aging

Frozen aging (0%) starting at 30

0% 50% 100% 150% 0

MICHAEL'S EXPECTED LIFESPAN		MICHAEL'S YEARS GAINED	
Today	80.0 yrs	+380.2 yrs	475% longer than today
With your changes	460.2 yrs		
+380.2 years vs. today			



How to read this

The left chart shows the percentage still alive at each age. The dashed line is today; the blue line is the sq 101

See more at secondcentury.org

