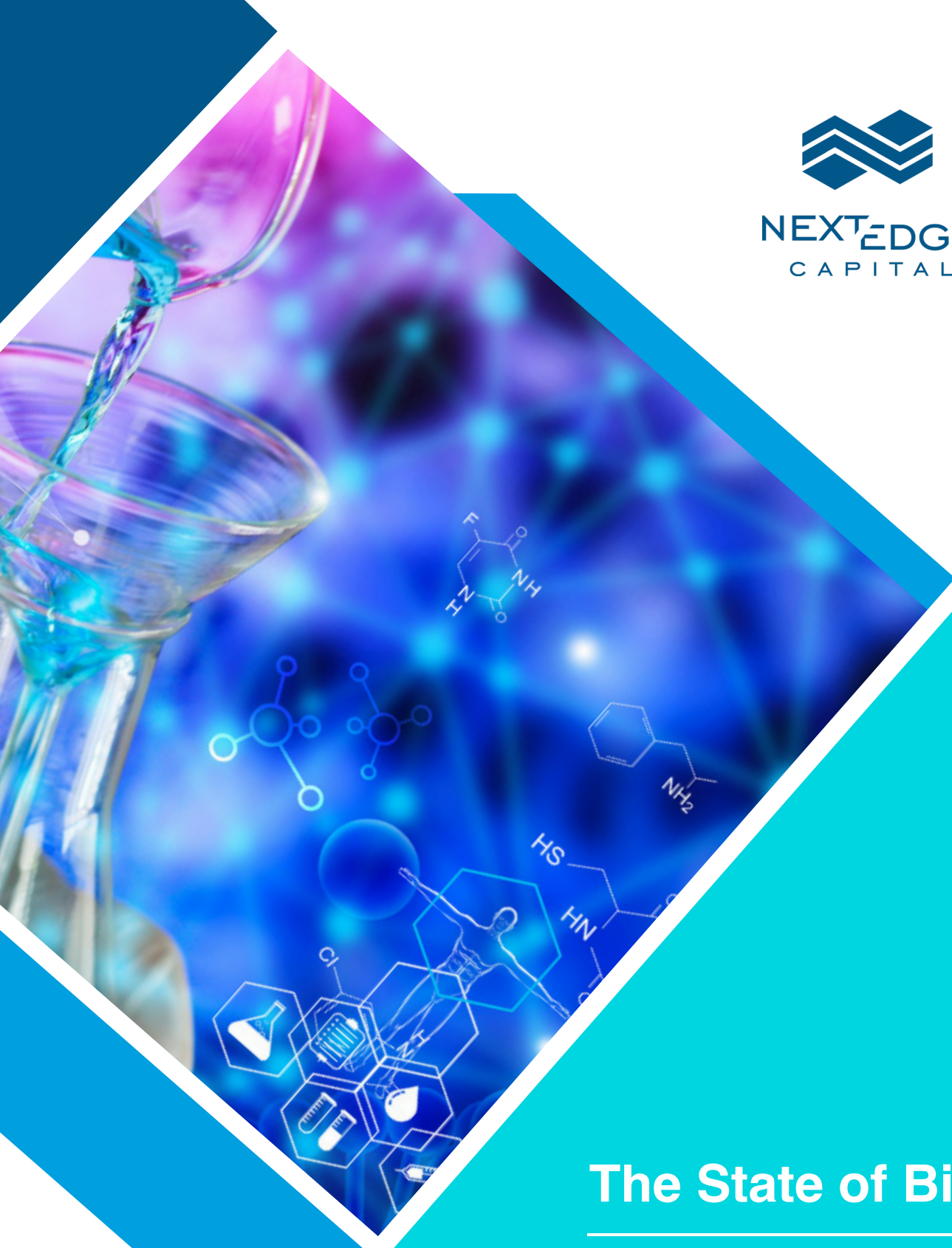




NEXTEDGE  
CAPITAL



# The State of Biotech

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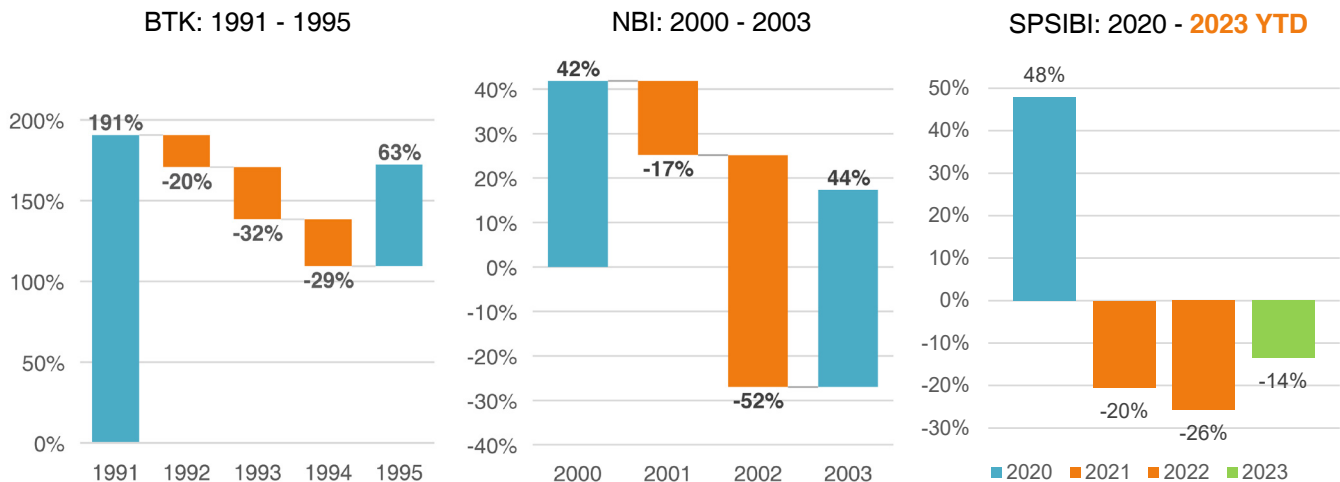
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## WHERE IS BIOTECH AND WHY HAS IT GOTTEN HERE?

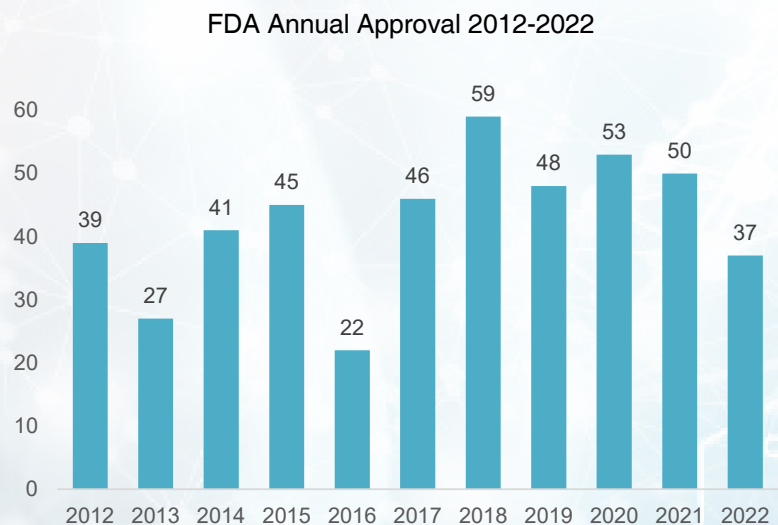
Biotech has declined for a third consecutive year, with the S&P Biotech Index (^SPSIBI / XBI) down **-14% YTD** (as of September 30, 2023), compounding losses of **-26%** in 2021 and **-20%** in 2020. This is **only the second time** in public Biotech's young 42-year history that it has **declined three consecutive years**. The only prior period was 1992-1994 when the Amex Biotech Index (^BTK) fell -75% versus the -65% February 2021 to June 2022 peak-to-trough decline. However, in 1992, unlike now, that bear was correcting a prior +800% 1988-1992 bull market. In the present instance, this bear is correcting a modest cyclical, mostly COVID-stock-driven bull market from a March 2020 low to a February 2021 peak.



Source: Bloomberg Data, Concept: Next Edge Capital Corp.

If there is a silver lining, the bull market that followed that devastating 1992 to 1994 bear market, was the greatest biotech bull ever at +1,000% from 1994 to 2000.

For the four years 2018 to 2021, including COVID years, FDA annual approvals averaged 53 per year. In 2022, it plunged -30% to only 37. There seemed to be many more negatively impacting Complete Reponse Letters (CRLs) and approval delays during 2022 than in prior years. That contributed to the negative sentiment.



Source: New Drug Therapies Report, 2022.

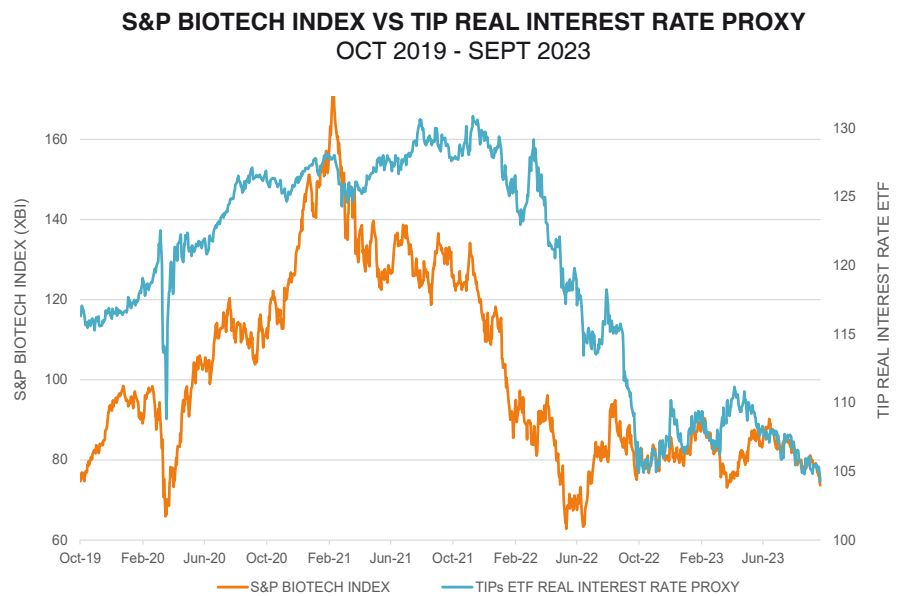
But again, there is a silver lining. As of September 15, 2023, **approvals so far in 2023 have matched 2022's at 37**. That means new potential blockbuster and game-changing therapies are launched over the coming year.

The market has been unforgiving in its reaction to disappointing clinical, regulatory, and financing news. That is understood. **Most disheartening is when companies achieve what they set out to, for the reasons one is invested, reporting positive clinical data, achieving regulatory or commercial successes, yet the market either ignores it or punishes them just the same.** There has been sporadic reward for de-risking events that improve chances of regulatory and commercial success. Nevertheless, with patience, these positives will add up to significant wins when the cycle turns and a tailwind returns, as it has historically under similar extremes.

### INTEREST RATE CYCLE FROM 0.10% TO 5.10% IN 60 SECONDS

The elephant in the room for the sector, as it was for many other long-duration asset classes, is the historic rise in interest rates and tightening of excess liquidity. From the sector's peak to now, US 2-year yields have risen from 0.10% to 5.10%. Biotech is the ultimate long-duration asset with heavy current R&D capital demands for the uncertain promise of distant future-cash flows. That makes it hypersensitive to the hurdle of changing real rates, both up and down. 'Uncertain promise' because the path to the elusive future cash-flows must navigate a labyrinth of funding, clinical and regulatory hurdles. **Improving investor chances of success involves minimizing those hurdles and is the focus of our investment strategy.**

Again, the light at the end of the tunnel is, *what if we are in the 8th or 9th inning of this interest rate cycle? What if the sector has endured the worst of this cycle?* Biotech is not an economically sensitive sector, and benefits from stable or falling rates. The Fed is now on pause while elevated rates exert their impact on cyclical areas of the economy that biotech has proven resilient to in previous market cycles.

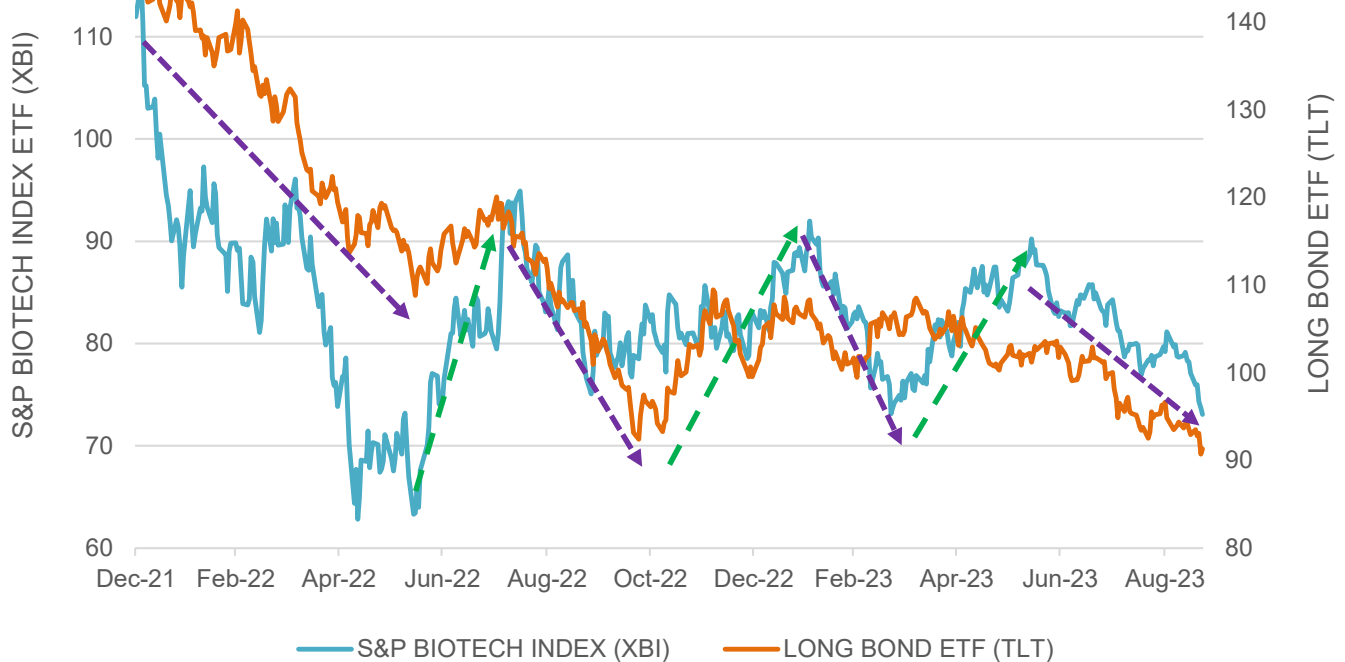


Source: Bloomberg Data, Concept: Next Edge Capital Corp.

As with biotech, US Long bonds has also endured a historic bear market, and biotech sensitivity to changing rates show how it has stair-stepped with the undulation of long bond prices.

### LONG-DURATION BIOTECH HAS TRACKED BOND PRICES DOWN

DEC 2021 -> SEPT 2023



Source: Bloomberg Data, Concept: Next Edge Capital Corp.

Over past three months, with rates rising sharply to new highs, biotech has again swooned into its third -20% retracement of the past year. Nothing has come easy in this sector since its mid-2015 peak.



Source: StockCharts, June 13, 2023 to September 25, 2023.

Again, the spectacle of identical ebb-and-flow with long bonds over the past three months. As bad as it feels, it is characteristic end-game phase when the holdout bulls lose credibility and surrender to the path of least resistance, which is now conceded to be down. Long bonds are down a suffocating **-14%** over the past three months, which is significantly impactful on the economy AND long duration assets.



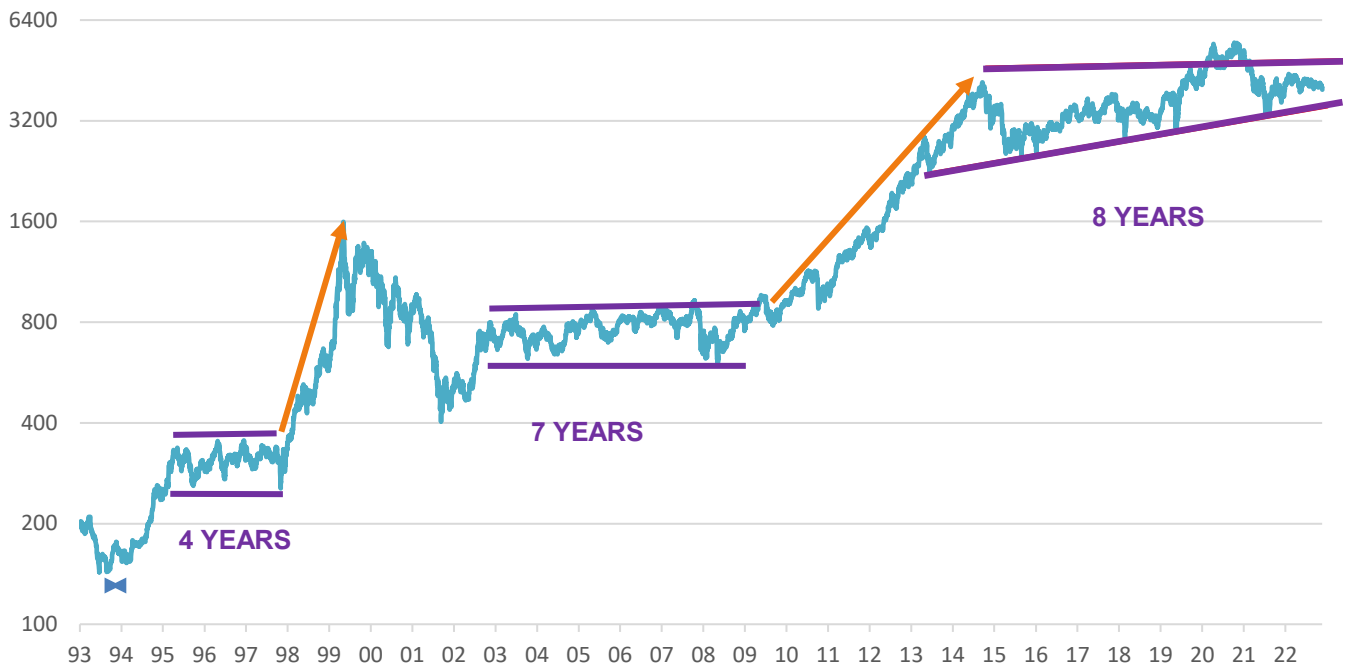


Source: StockCharts, June 26, 2023 to September 27, 2023.

## BENJAMIN GRAHAM-ESQUE VALUATIONS ABOUND IN BIOTECH

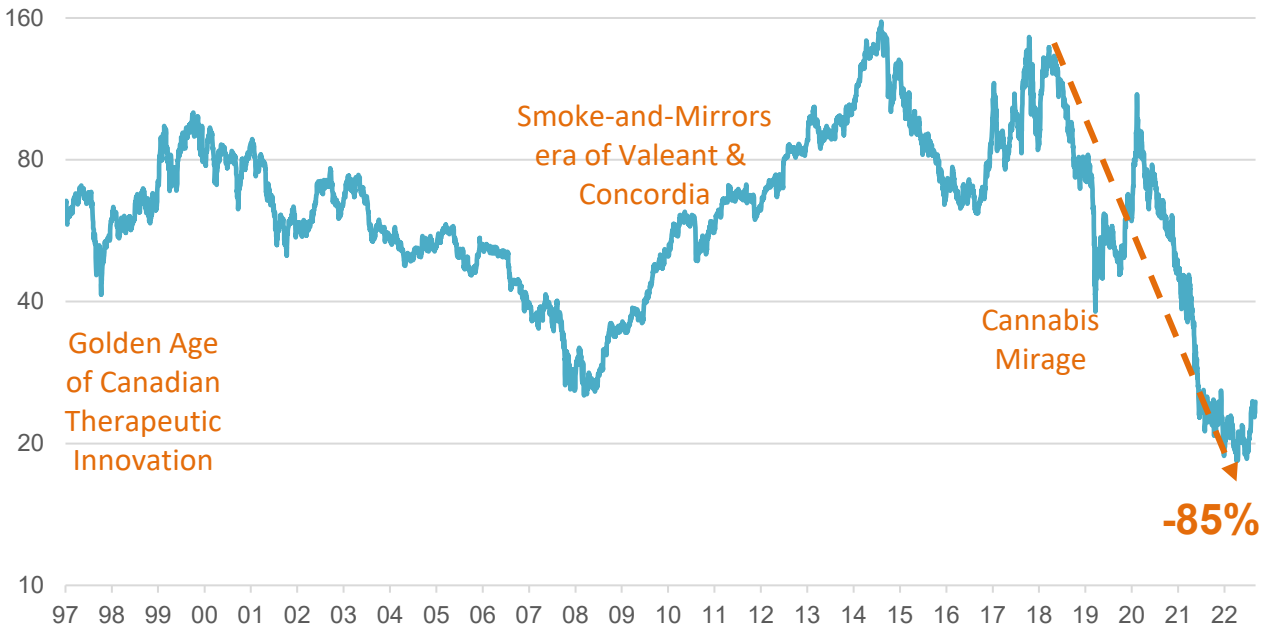
Since the last biotech secular bull cycle peaked in mid-2015, it has been mired in an eight year range, enduring four bear markets of **-55%**, **-35%**, **-36%** and **-65%**. If past is prologue, then significant undervaluation, under-exposure by investors, interest rate peak and M&A catalyst could reverse sector sentiment. While we are foremost stock pickers where very few of the +700 biotech companies meet our investment criteria, it certainly helps not to fight against the headwinds of perpetual bear market conditions in order for investments fair value to be recognized by the market, without relying on investments having to be acquired by big BioPharma.

NASDAQ BIOTECH INDEX (NBI): 1993 -> 2023



Source: Bloomberg Data, Concept: Next Edge Capital Corp.

**TSX HEALTHCARE INDEX (\$SPTHC)**  
1997 - 2023



Source: Bloomberg Data, Concept: Next Edge Capital Corp.

Screening US Biotech companies at various sector inflection points over the past five years illuminates the current extreme in oversold and undervaluation that pervades biotech. Never in my career have I been able to find so many quality mid-to-late-stage biotech companies trading below net cash value. A few quality biotech companies are even available at less than 30% of net cash. At the **-35%** bear market lows of 2018 & 2020, about 25% of biotech companies traded below cash.

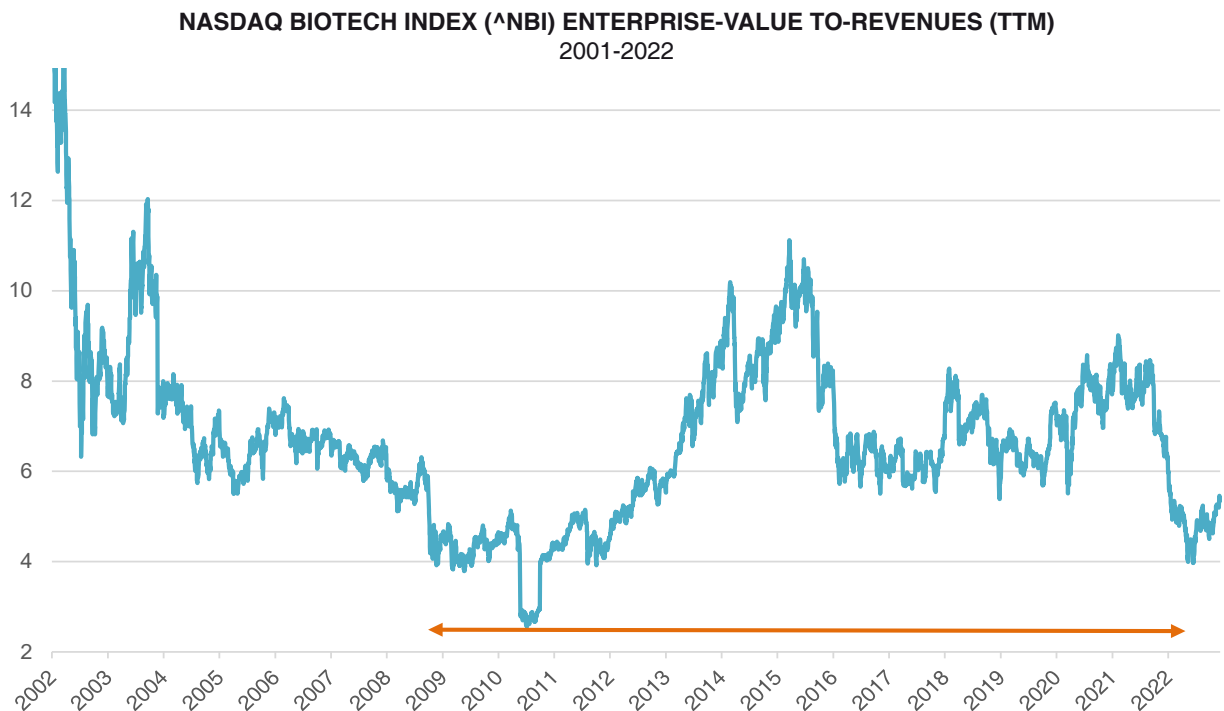
Currently, **37%** trade below cash. That reflects the pessimism that such companies will burn through their cash before significant value creating events and will have to further dilute shareholders into dust. Furthermore, it also reflects a lack of discipline by management in spending on too many early-stage pipeline projects instead being laser focussed on their single most advanced therapeutic in development and cutting the burn rate to extend several years without needing to access capital in the market.

**But what if under these apocalyptic conditions the market is not distinguishing between those few companies trading well below cash but with significant value creating, clinically meaningful trials ongoing that could lead to 10X, 20X, 30X upside potential?** Such investment gems carry limited risk, given their already draconian discounts-to-cash, priced as if they are better off dead than alive. Such are the exceptional possibilities for selective buyers, unlike anything I have seen in my career.

MARKET INFLECTION	SIGNIFICANCE	# BIOTECHS	#<CASH	% BELOW CASH
December 24, 2018	BEAR MARKET LOW	394	99	25%
March 24, 2020	COVID CRASH LOW	423	111	26%
February 8, 2021	MAJOR PEAK	510	27	5%
December 31, 2021	1st YEAR OF BEAR	595	56	9%
December 31, 2022	INTERMEDIATE LOW	559	167	30%
September 21, 2023	CURRENT LOW	541	200	37%

Source: Bloomberg Data, Concept: Next Edge Capital Corp.

There are numerous validating metrics of the extremes that beset the biotech sector that have hit multi-decade extremes such as the trailing 12-month (TTM) Enterprise Value (EV)-to- Revenues, which declined from 12X to 4X over the past eight years, similar to the 2004 to 2010 decline, prior to the advent of the +500%, five year bull market into 2015.

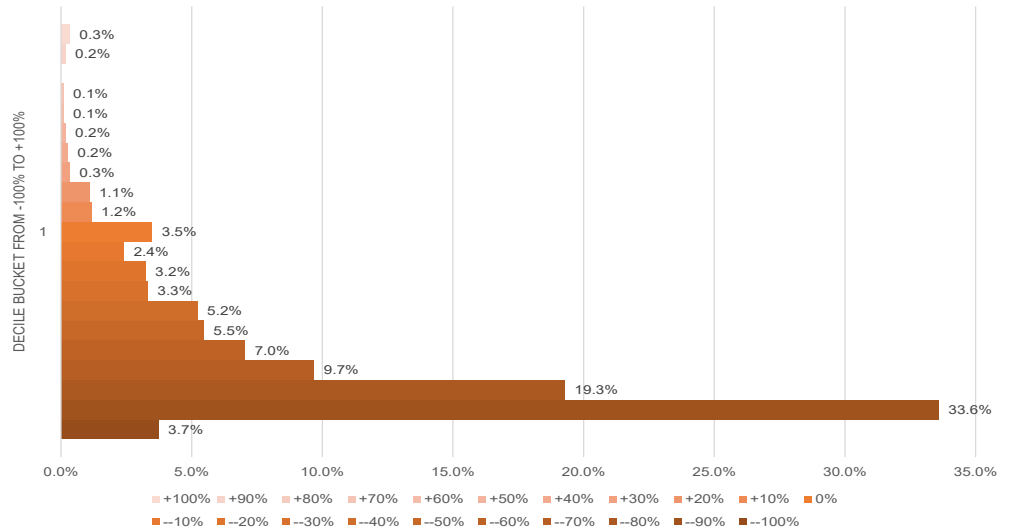


Source: Bloomberg Data, Concept: Next Edge Capital Corp.

At the end of December last year, two years into the bear market, we ran the following screen of 1,300 North American healthcare companies to see the extent to which each company had declined from their 2021 peak, and how they measured against the group in its entirety. The carnage was eye-opening. Almost 4% failed, +37% declined by greater than **-90%**, another 19% declined between **-80% & -90%**. And for certain, **those metrics would be even more extreme if we were to run them again now.**

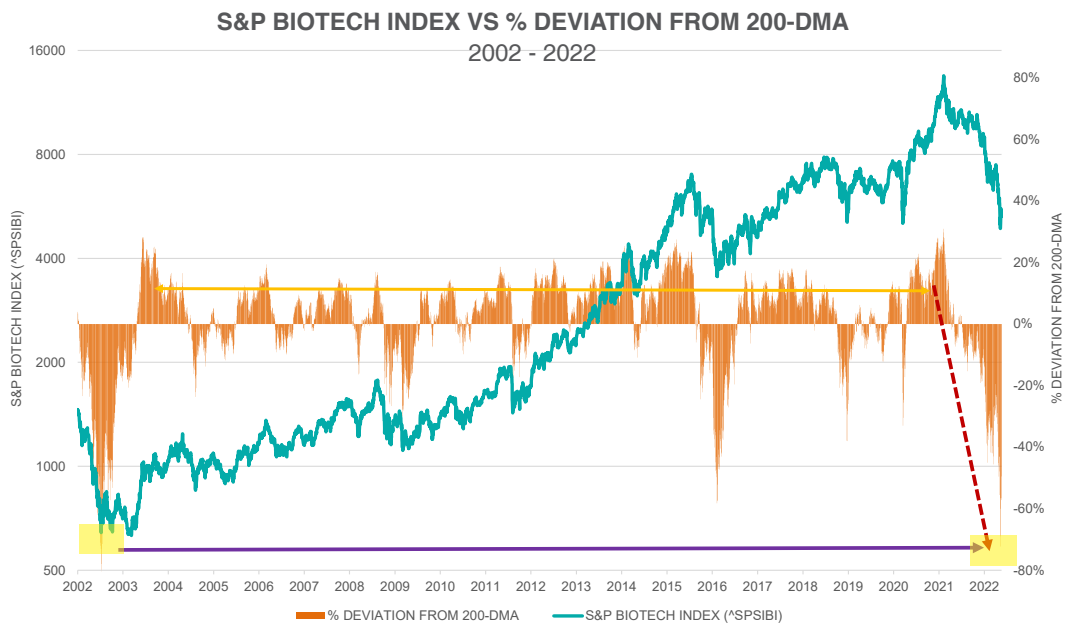
**% OF HEALTHCARE COS PERFORMANCE BY DECILE FROM 2021 HIGH**

DECILE	% HC COS	# COS
-100%	3.7%	45
-90%	33.6%	406
-80%	19.3%	233
-70%	9.7%	117
-60%	7.0%	85
-50%	5.5%	66
-40%	5.2%	63
-30%	3.3%	40
-20%	3.2%	39
-10%	2.4%	29
0%	3.5%	42
+10%	1.2%	14
+20%	1.1%	13
+30%	0.3%	4
+40%	0.2%	3
+50%	0.2%	2
+60%	0.1%	1
+70%	0.1%	1
+80%	0.0%	0
+90%	0.2%	2
+100%	0.3%	4
	100.0%	1209



Source: Bloomberg Data, Concept: Next Edge Capital Corp.

## TECHNICAL METRICS OF HISTORICALLY OVERSOLD CONDITIONS



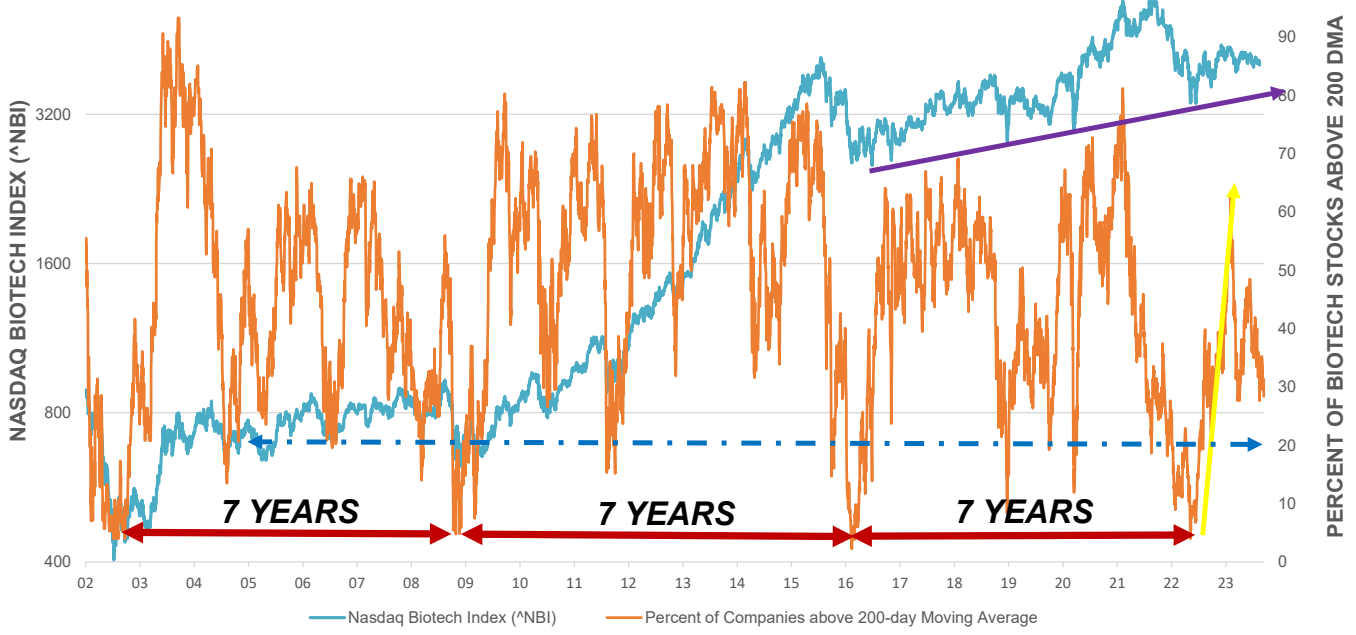
Data: Bloomberg. Concept: Next Edge Capital Corp



**PRESENT OF TOP 250 US COMPANIES  
ABOVE THEIR 50 DAY MOVING AVERAGE**



**NASDAQ BIOTECH INDEX CYCLES 2002 - 2023**  
PERCENT OF BIOTECH STOCKS ABOVE THEIR 200 DAY MOVING AVERAGE



Source: Bloomberg Data, Concept: Next Edge Capital Corp. as of September 26, 2023.

## FOREST FOR THE TREES: WHERE DO WE GO FROM HERE?

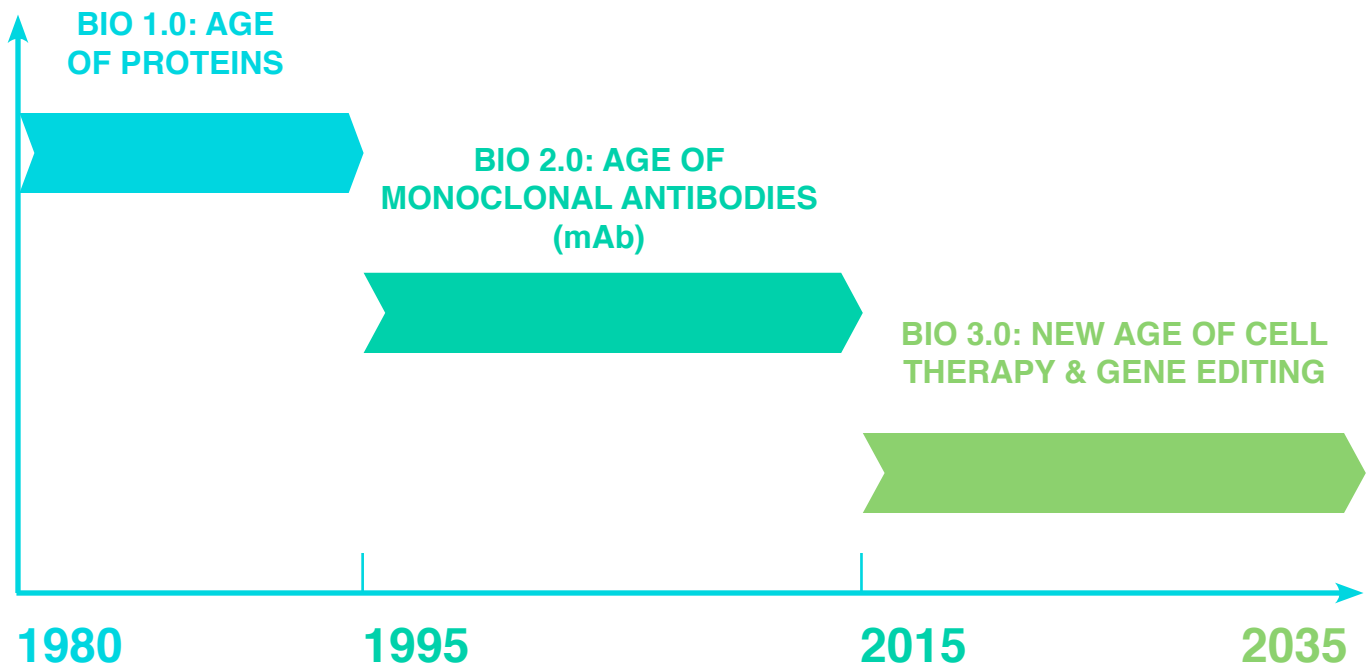
Amidst the noise, frustration, and pain of a difficult environment, innovation, and breakthroughs have continued unabated. While many projects have been rightfully cancelled due to capital constraints, the later-stage trials are being prioritized. The fear of the bear market obfuscates the technological leap forward both in terms of technology enabling biotech advances (Tech-Bio), and the actual therapeutic advances that are revolutionizing the treatment world.

There is a massive disconnect between the current valuation of such companies and what their potential platform earnings power could be over the next decade. We find those companies every cycle. The giant household name biotech companies of today were those same emerging companies over a decade ago. A bull market speeds up the recognition of their possibilities. A bear market obscures that possibility for a period of time, but not forever.

I went to university during **Biotech 1.0, The Age of Proteins**. My career kicked off being an early investor in the revolutionary emerging companies in the **Biotech 2.0, The Age of Monoclonal Antibodies**. Companies such as Biogen, Centocor (Remicade), Immunex (Enbrel), and others.

Now, the Next Edge Biotech and Life Sciences Opportunities Fund (the “Fund”) is buckled in for the emerging leaders in **Biotech 3.0, The New Age of Cell Therapy and Gene Editing** to pave the way for breakthroughs in **CURING** mono-genetic diseases and treating currently untreatable epidemic of neurological diseases.

THREE AGES BIOTECH INNOVATION: 1980 - 2035



Source: Next Edge Capital Corp., as of July 2023

Furthermore, during 2023 we have witnessed the M&A cycle turn in our favour for two specific reasons. First, an unprecedented +\$100 billion in BioPharma revenue will succumb to **Loss-of-Exclusivity** (LoE) as key major drug patents expire between now and 2030. About 20 large global BioPharma companies are seeking to replace lost revenues via acquisitions, to avoid being in the dreaded value-trap category that Pfizer and Bristol Myers now finds themselves in, with deceptively high yields as a measure of a higher cost of capital and low growth expectations.

Companies face the choice of either investing in R&D to develop a drug in-house; spend over a decade at \$1 to \$2 billion cost doing so, only to have that drug fail; or have a competitor develop a superior drug by the time it gets on the market in the mid-to-late 2030s. Or they can spend \$2 to \$10 billion now for a likely +\$1 billion or more drug before 2030, while sidestepping most clinical and regulatory risks that otherwise exists. The decision is clear.

The second contributing factor to the M&A urgency is the price-control impact on major drugs imposed by the Inflation Reduction Act (IRA). Many pharma companies have sued the Federal government over this since it sidesteps the protection afforded by patents. Nevertheless, it hastens the need to find revenue sources of new therapies not subject to IRA.

Already, **four** of the Fund's holdings have been acquired in 2023. All are commercial stage or either post successful Phase 3 data and so likely to ultimately obtain FDA approval. Given our primary focus on investing in companies that have surpassed major clinic hurdles, such as Phase 2 data, it is not a coincidence that over my career, over 30 biotech companies which have been fund portfolio holdings have been acquired, with 12 of those having taken place since 2016.

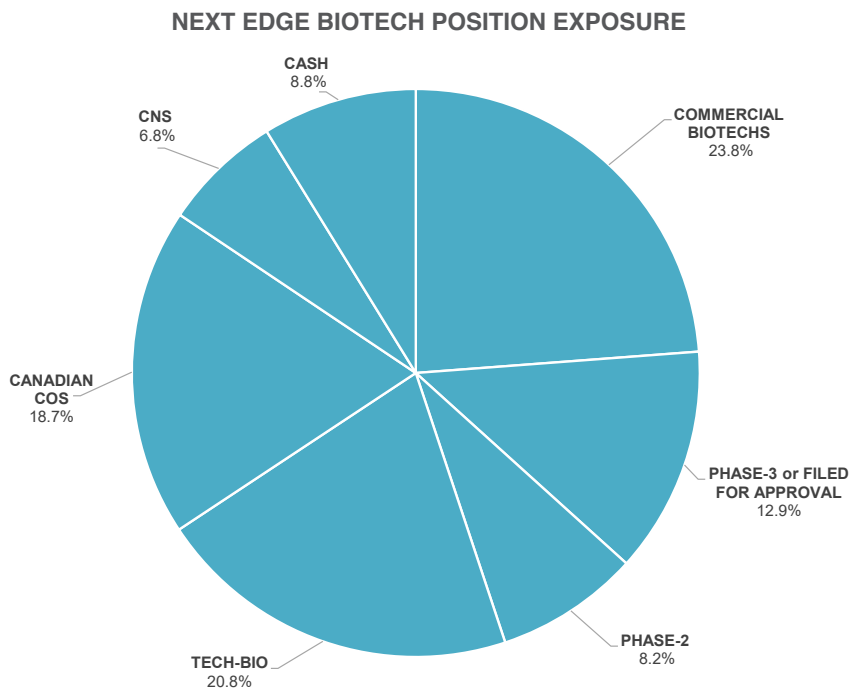
### THE COMING STORM: A 30-YEAR VIEW OF US PATENT EXPIRIES



Data: Pharma Market Drivers Part Two: Ch-ch-changes, June 2022.

The Fund is positioned in economically insulated growth, with almost 40% of the Fund positioned in either Phase 3 or early commercial stage companies at the cusp of growth acceleration. Among those companies, a few have the potential to become giants over the cycle.

Over the past year, the Fund has positioned significantly in technology-based biotech companies that enable productivity improvements either in the discovery of new therapies, development of ongoing therapies in trials, or commercialization scale-up.



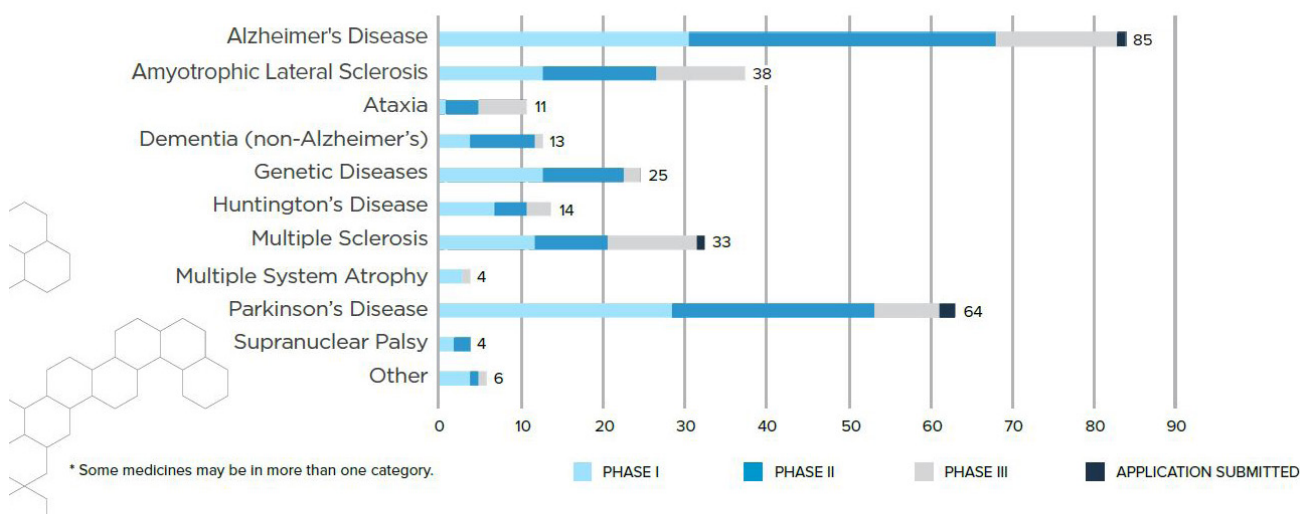
Source: Next Edge Capital Corp. as of September 2023

Their clients are generally highly profitable BioPharma giants.

The Fund also has a significant holding in companies focussed on neurological breakthroughs targeting Alzheimer's, Parkinson's, ALS, and MS among others. Finally, we have been accumulating certain deep value companies, trading well below net-cash, yet with significant clinical potential and years of cash runway ahead in which to achieve clinical success. We will continue to deploy cash as prices are gifted to us.

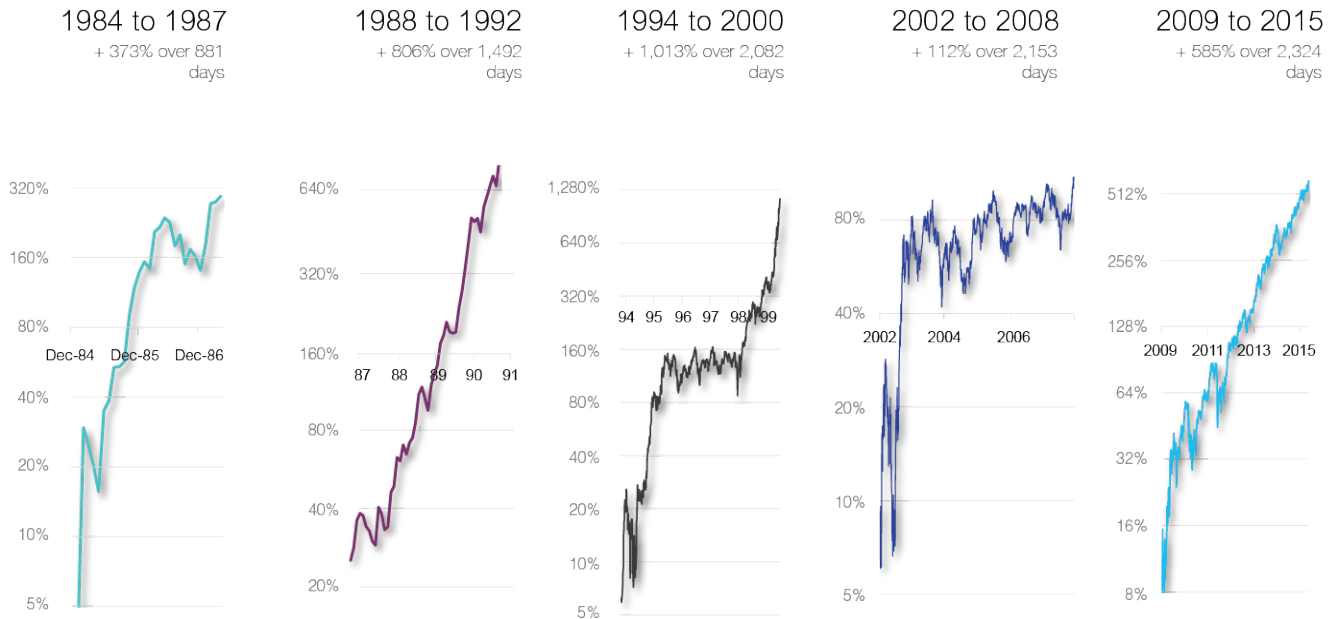
A Virtuous Investment – Significant Research and Investment into Future Breakthroughs.

### Medicines in Development for Neurodegenerative Diseases



Source: Medicines In Development | 2021 Report: Neurodegenerative Disease

Finally, as biotech valuation metrics descend to rarefied readings only consistent with secular bear market lows of 1994, 2002, and 2009, it is doing so at a time when biotech tends to make lows in October, and, over the past 29 years, embark on a historically positive November through February seasonally positive period. Either way, exceptional asymmetric risk/reward exists in buying risk-mitigated biotech companies selling at uncommon valuations.



Source: Next Edge Capital Corp., Bloomberg Data, Reuters-Datastream.  
 Biotech represented by the Reuters Datastream World DS Biotechnology Index from 1980-1992 and by the Nasdaq Biotechnology Index from 1992 to Present. The dates chosen were based on the research and assessment of Next Edge Capital Corp., and to a certain extent, the start and end dates of such events are subjective and different sources may suggest different date ranges, leading to different performance figures.



# APPENDIX

NBI Index		Spread Builder		View		Edit		Seasonality Chart					
Last Price	Local CCY	Spread		<Type security>		Last Price							
29 <sup>+</sup> Years	Ending 2023 <sup>+</sup>	Percent Change		Net Change		High/Low/Avg							
Calendar Year	Trailing 12M	01-Jan	31-Dec	Monthly		Line	Heat Map	Securities/Lines		Map Options			
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
29 Yr Avg		2.21	.63	-1.60	.36	1.76	1.37	2.58	1.21	.68	-.33	2.88	2.50
2023		3.50	-6.55	1.23	1.50	-2.73	.10	1.30	-.37	-4.11			
2022		-11.87	-4.12	4.25	-9.73	-1.32	1.02	4.11	-1.06	-2.44	8.91	5.87	-3.01
2021		6.25	-2.37	-4.29	2.97	-2.03	8.00	-.20	4.09	-4.91	-1.89	-3.95	-1.31
2020		-5.60	.30	-5.38	14.97	8.45	1.61	-1.70	.90	-.13	-3.73	11.14	4.49
2019		13.40	2.67	-.88	-4.82	-6.10	9.20	-3.08	-2.64	-3.30	7.73	11.44	.84
2018		6.96	-5.36	-1.28	-2.97	4.69	1.35	6.17	4.81	-.19	-14.60	4.69	-11.25
2017		4.96	6.79	-1.23	1.48	-3.95	8.49	2.90	4.53	.06	-5.81	.54	1.47
2016		-21.01	-4.87	2.51	2.87	4.22	-7.88	12.43	-2.98	3.02	-11.38	6.78	-3.21
2015		5.90	4.90	1.91	-2.75	9.24	1.13	3.58	-10.58	-11.46	7.61	2.57	1.21
2014		8.41	7.63	-10.70	-2.69	4.21	7.30	-2.34	10.26	-1.16	8.52	2.48	-.07
2013		6.22	1.39	8.33	7.73	4.10	-3.15	13.93	-2.08	8.21	-2.06	9.15	1.26
2012		11.22	2.54	3.56	1.63	-1.65	5.55	2.95	1.86	4.85	-7.45	5.14	-1.06
2011		.41	.97	5.83	7.33	1.63	-2.37	-2.51	-7.44	-3.06	5.26	4.17	2.03
2010		1.96	2.18	6.85	.19	-10.96	-4.51	4.51	-2.86	10.24	3.61	-2.17	6.90
2009		-.11	-11.08	5.37	-1.20	3.67	7.17	8.22	-.32	3.84	-9.87	6.76	4.41
2008		-3.58	-2.62	-.40	2.35	2.33	-2.99	15.67	-3.46	-5.63	-12.13	-8.27	8.25
2007		2.47	-3.38	-1.71	8.33	-.77	-3.89	-2.29	3.75	5.00	4.39	-2.86	-3.62
2006		4.21	4.40	-2.17	-5.64	-5.35	-1.13	-1.38	2.96	.00	8.04	.91	-2.91
2005		-5.63	-4.29	-6.28	-.59	4.86	1.80	11.96	.26	1.27	-3.83	3.76	.91
2004		6.98	.66	-.23	.47	-2.44	-.44	-9.51	.67	3.30	-2.72	3.47	6.85
2003		-2.16	-1.39	6.84	12.10	18.95	-1.57	9.01	1.10	-2.75	-.73	-2.79	4.14
2002		-14.17	-4.47	3.72	-15.72	-10.97	-12.05	.65	-4.68	-4.98	10.00	9.09	-10.94
2001		-3.86	-7.70	-20.34	18.96	8.30	2.64	-14.27	1.03	-15.41	16.29	9.55	-3.96
2000		15.20	45.34	-25.75	-13.09	-2.80	31.38	-7.66	21.31	-3.51	-8.14	-13.19	3.40
1999		10.23	-5.86	9.80	-8.77	7.69	3.61	12.93	9.70	-6.20	1.70	12.94	30.26
1998		-.34	4.26	7.48	-2.25	-3.49	-.65	3.03	-21.98	24.91	8.35	3.47	22.48
1997		9.06	2.67	-13.41	-4.98	14.74	-3.56	3.34	-2.70	10.02	-6.03	-2.50	-3.29
1996		7.71	-3.13	-4.21	4.20	3.81	-10.42	-9.37	6.36	7.84	-3.04	-1.14	3.29
1995		4.94	3.69	-1.68	3.64	.42	12.30	9.07	12.51	2.89	-3.44	5.21	17.54
1994		5.89	-11.34	-12.90	-3.48	1.47	-8.33	4.74	11.68	-.48	-3.27	1.29	-2.60



## IMPORTANT NOTES

The “Next Edge Biotech and Life Sciences Opportunities Fund” or “Fund” means the “Next Edge Biotech and Life Sciences Opportunities Fund”. This communication is not, and under no circumstances is to be construed as, an invitation to make an investment in the Fund nor does it constitute a public offering to sell the Fund or any other products described herein. Applications for the Fund will only be considered on the terms of the Prospectus. Each purchaser of the units (the “Units”) may have statutory or contractual rights of action under certain circumstances as disclosed in the Prospectus. Please review the provisions of the applicable securities legislation for particulars of these rights.

Potential investors should note that alternative investments can involve significant risks and the value of an investment may go down as well as up. There is no guarantee of trading performance and past or projected performance is not indicative of future results. Investors should review the Prospectus in its entirety for a complete description of the Fund, its risks, and consult their registered dealers before making an investment. Any descriptions or information involving investment process or strategies is provided for illustration purposes only, may not be fully indicative of any present or future investments, may be changed at the discretion of the Portfolio Manager and are not intended to reflect performance. The following does not purport to be a complete summary of all of the risks associated with an investment in the Fund. Please see the Fund’s Prospectus for a complete listing and description of the risks associated with an investment in the Fund. The Fund is generally exposed to the following risks: Biotechnology Industry Risk; Borrowing Risk; Counterparty Risk; Credit Risk; Cybersecurity Risk; Derivatives Risk; Equity Securities Risk; ETF Risk; Foreign Currency Risk; Foreign Securities Risk; Interest Rate Risk; Legislation and Litigation Risk; Leverage Risk; Liquidity Risk; Multiple Class Risk; Options Risk; Price Volatility Risk; Repurchase and Reverse Repurchase Transactions and Securities Lending Risk; Short Selling Risk; Stock Market Risk; Substantial Securityholder Risk and Tax Risk.

The Fund is not a trust company and does not carry on business as a trust company and, accordingly, the Fund is not registered under the trust company legislation of any jurisdiction. Units of the Fund are not “deposits” within the meaning of the Canada Deposit Insurance Corporation Act (Canada) are not insured under provisions of that Act or any other legislation.

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