

Markedsobservationer marts 2024

~~Var det bunden?~~
~~Skal vi op?~~
~~Vi skulle ned igen~~
Er foråret på vej?

Onsdag d. 20. marts 2024

V/Steen Albrechtsen, Redaktør og Porteføljemanager



LIFE SCIENCE
Økonomisk Ugebrev

DISCLAIMER

Al investering er på eget ansvar

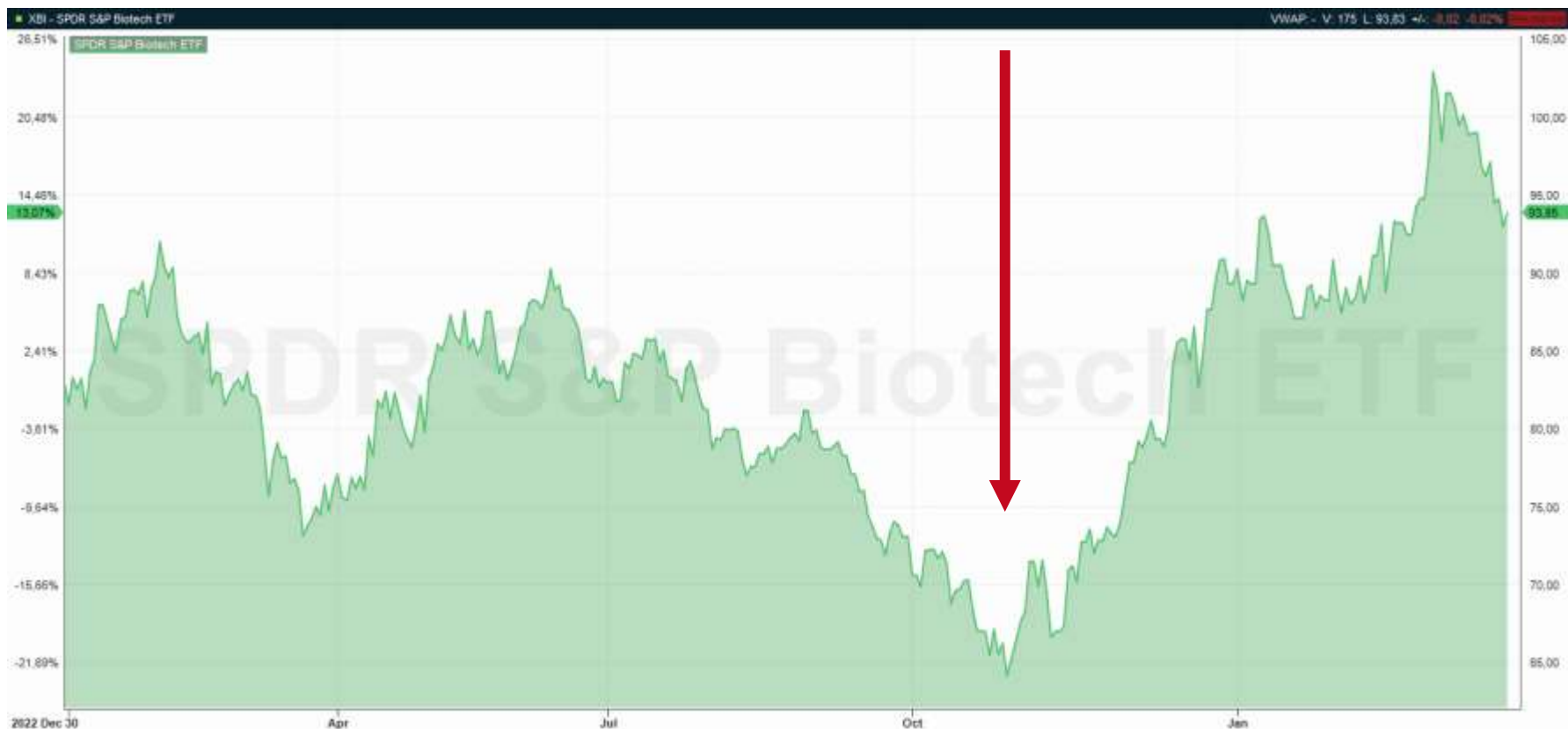
og stol ikke på noget af hvad jeg siger 😊

Fra
oktober
2023

XBI (S&P Biotech ETF) (år-til-dato)



XBI (S&P Biotech ETF) (2023-til-dato)



Nasdaq Bio vs. XBI (S&P Biotech ETF) (indekseret - 2023 til dato)



Hvilket indeks?

Understanding the XBI Vs. Our Measure of Biotech Value

We are showing a 19.8% increase in biotech sector EV so far in 2024 but the XBI is showing only a 4.3% rise. Why the wide discrepancy? The figures below provide insight into the question. First, we look at *enterprise value* not market cap and we look at R&D stage companies only rather than a mix of R&D stage and commercial stage companies. The reason is that we are trying to look at an economic sense of what the pre-commercial sector is worth rather than providing an investment benchmark *per se*. The total global biotech EV increase of 19.8% this year compares to a 10.8% increase in market cap of the same biotech group. Further, the median increase in value of an R&D-stage company in the XBI rose only 5.65% this year. While not a value-weighted index, the XBI overweights mid and large caps and these have not performed as well as small cap biotechs. Further, nearly half of the XBI comprises commercial pharma. These companies have a median return this year of -2.3%. If one is interested in how a U.S.-centric portfolio of popular mid and large cap biotech and specialty pharmas are doing then the XBI is a great benchmark. Otherwise, **it's not a great benchmark**.

Commercial Pharma in XBI

39% of companies
45% of weights

Median Return YTD:
-2.33%

R&D Stage Biotech in XBI

55% of companies
50% of weights

Median Return YTD:
5.65%

Diagnostics Companies in XBI

6% of companies
5% of weights

Median Return YTD:
11.2%

Total Global Biotech Change in Enterprise Value YTD: 19.8%
Total Global Biotech Change in Market Cap YTD: 10.8%

Source: CapitalIQ. Biotechs are defined as any therapeutics company without an approved product on any global stock exchange.

Flow? 19,6 mia. USD på vej? (kilde: Stifel)

Forty-Three Specialist Investors Have Made \$19.6 Billion in Proceeds from Pharma M&A Deals Since November 30, 2023

Much of these proceeds are expected to return to the market in the form of follow-ons, IPOs and open market purchases.

Source: Stifel analysis of CapIQ reports on holdings in last reporting period before deal announcement. Investors shown with at least one Ph.D. on staff. Investors with less than \$50 million of proceeds not included in table but are included in the total at bottom of table.

* Bain's percentage holding of Aiolos not disclosed. We assume it is 50%.

Dollars shown are in millions

Target	Aiolos Bio	Ambca	Harpoon	Gracell	RayzeBio	Karuna	icosavax	Cerevel	ImmunoGen	Total	Count
Buyer	GSK	J&J	Merck	AZ	BMS	BMS	AZ	AbbVie	AbbVie		
Announced	1/9/2024	1/8/2024	1/8/2024	12/26/2023	12/26/2023	12/22/2023	12/12/2023	12/6/2023	11/30/2023		
Uplift Cash \$mm	\$1,000	\$2,000	\$680	\$1,000	\$4,100	\$14,000	\$800	\$8,700	\$10,100		
Bain Life	\$500*	\$0	\$0	\$0	\$0	\$0	\$0	\$3,149	\$0	\$3,649	2
T. Rowe	\$0	\$26	\$0	\$0	\$69	\$3,023	\$76	\$351	\$147	\$3,693	6
Fidelity	\$0	\$42	\$0	\$0	\$76	\$1,059	\$35	\$465	\$218	\$1,895	6
Capital Research	\$0	\$0	\$0	\$0	\$84	\$1,497	\$0	\$41	\$0	\$1,622	3
Wellington	\$0	\$0	\$0	\$0	\$260	\$475	\$0	\$0	\$500	\$1,235	3
Viking	\$0	\$0	\$0	\$0	\$444	\$413	\$0	\$0	\$0	\$857	2
Redmile	\$0	\$0	\$0	\$0	\$125	\$0	\$0	\$0	\$661	\$785	2
RA Capital	\$0	\$0	\$0	\$86	\$0	\$0	\$94	\$0	\$503	\$743	1
Janus	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$668	\$668	1
Perceptiv	\$0	\$0	\$0	\$0	\$52	\$0	\$0	\$526	\$0	\$578	2
Darwin	\$0	\$528	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$528	1
Cormorant	\$0	\$314	\$63	\$0	\$79	\$0	\$0	\$0	\$0	\$456	3
Avoro	\$0	\$66	\$0	\$0	\$270	\$0	\$0	\$46	\$0	\$381	3
Rock Springs	\$0	\$0	\$0	\$0	\$0	\$186	\$14	\$121	\$0	\$321	3
Fairmount	\$0	\$0	\$0	\$0	\$82	\$0	\$0	\$0	\$224	\$306	2
Orbimed	\$0	\$0	\$0	\$96	\$176	\$0	\$0	\$0	\$0	\$273	2
Sofinova	\$0	\$0	\$0	\$0	\$162	\$0	\$0	\$0	\$77	\$239	2
Paradigm	\$0	\$111	\$0	\$0	\$0	\$0	\$0	\$122	\$0	\$233	2
Eventide	\$0	\$0	\$0	\$0	\$0	\$126	\$0	\$23	\$0	\$149	2
TCG X	\$0	\$0	\$0	\$31	\$58	\$0	\$58	\$0	\$0	\$148	3
Vivo Capital	\$0	\$0	\$0	\$113	\$0	\$0	\$27	\$0	\$0	\$139	2
Avidity	\$0	\$0	\$0	\$0	\$0	\$101	\$0	\$31	\$0	\$132	2
Point72	\$0	\$0	\$0	\$0	\$0	\$127	\$0	\$0	\$0	\$127	1
Samsara	\$0	\$0	\$0	\$0	\$124	\$0	\$0	\$0	\$0	\$124	1
Deep Track	\$0	\$117	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$117	1
Tavistock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$117	\$117	1
Commodore	\$0	\$111	\$5	\$0	\$0	\$0	\$0	\$0	\$0	\$117	2
Logos	\$0	\$0	\$0	\$26	\$0	\$0	\$44	\$34	\$0	\$103	3
Millennium	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$102	\$0	\$102	1
Nextach	\$0	\$99	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$99	1
Woodline	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$91	\$91	1
Citadel	\$0	\$24	\$41	\$0	\$0	\$0	\$25	\$0	\$0	\$90	3
Adage	\$0	\$0	\$0	\$9	\$0	\$0	\$0	\$72	\$0	\$81	2
Invus	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$78	\$0	\$78	1
Laurion	\$0	\$0	\$0	\$0	\$65	\$0	\$12	\$0	\$0	\$77	2
Federated	\$0	\$76	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$76	1
Franklin	\$0	\$0	\$0	\$0	\$55	\$0	\$0	\$0	\$0	\$55	1
Total	\$500	\$1,532	\$201	\$428	\$2,182	\$6,006	\$384	\$5,162	\$3,206	\$19,602	

Status i dag?

Symbol	Description	Last	1W +/-	1M +/-	3M +/-	1Y +/-	YTD +/-
CX20GI	OMX Copenhagen Health Care GI	12.081,07	-1,65%	4,98%	28,01%	66,33%	25,46%
N20EURGI	N Health Care EUR GI	9.445,83	-1,85%	4,16%	24,30%	55,36%	21,77%
OMXN40	OMX Nordic 40	2.793,36	-1,77%	2,81%	11,83%	27,67%	10,05%
XBI	SPDR S&P Biotech ETF	93,75	-2,55%	0,64%	8,48%	22,42%	5,02%
SX201030GI	OMX Stockholm Pharmaceuticals	6.669,05	-2,55%	2,01%	3,81%	10,32%	1,82%
SX20GI	OMX Stockholm Health Care GI	4.085,00	-1,99%	1,29%	3,16%	8,40%	1,42%
NBI	NASDAQ Biotechnology	4.372,42	-1,40%	-0,89%	2,97%	9,93%	0,04%
BIOTK	Next Biotech	2.024,82	-5,55%	-11,17%	-17,64%	-7,06%	-6,85%
HX20GI	OMX Helsinki Health Care GI	2.614,34	-1,27%	-8,15%	-5,39%	-14,79%	-8,31%
FN20GI	First North Health Care GI	897,95	-5,36%	-9,39%	-7,80%	-14,55%	-11,30%
OHCG	OBX Health Care GR	381,1	-2,15%	-31,73%	-31,11%	-33,05%	-34,95%

Fra
oktober
2023

XBI afkast-matrix

SPDR S&P Biotech ETF [NYFA] - Seasonality Matrix													
Periods	January	February	March	April	May	June	July	August	September	October	November	December	Full-year
Average	2,58%	0,29%	-0,69%	0,73%	1,56%	3,24%	3,30%	-0,44%	-1,01%	-1,74%	4,07%	-0,07%	11,09%
2023	7,11%	-6,81%	-6,01%	5,24%	4,64%	-0,86%	1,31%	-6,04%	-7,80%	-8,12%	N/A	N/A	-19,17%
2022	16,53%	-3,80%	0,32%	18,00%	-6,84%	7,98%	9,24%	-3,17%	-5,23%	3,57%	1,79%	-0,14%	-25,95%
2021	8,16%	-2,95%	-6,34%	0,85%	-6,21%	5,69%	-8,80%	7,54%	-5,37%	-9,83%	-6,50%	-3,95%	-20,50%
2020	-8,30%	0,07%	-13,16%	20,60%	10,89%	8,10%	-2,34%	2,27%	-0,34%	1,27%	16,57%	5,38%	18,96%
2019	16,52%	6,63%	1,57%	-5,90%	-6,78%	10,41%	-2,31%	-6,20%	-5,13%	7,06%	14,72%	1,56%	32,56%
2018	10,02%	-3,22%	-2,91%	-0,85%	8,84%	0,55%	0,11%	5,09%	-4,26%	-17,46%	3,21%	-12,12%	-15,46%
2017	9,65%	8,18%	-1,24%	3,03%	-5,22%	13,99%	1,28%	7,24%	3,27%	-3,38%	-0,54%	2,02%	43,39%
2016	10,10%	-5,19%	7,93%	4,29%	7,64%	-8,84%	14,77%	-3,19%	10,32%	-15,30%	11,61%	-5,55%	-15,68%
2015	7,07%	7,46%	2,63%	-6,24%	15,58%	5,73%	1,24%	-12,83%	-16,01%	7,21%	8,29%	-2,86%	12,95%
2014	15,37%	8,99%	-12,97%	-9,65%	2,77%	16,39%	-5,15%	10,58%	-3,43%	9,80%	4,98%	3,70%	43,21%
2013	8,17%	-1,20%	6,31%	5,94%	4,96%	-8,12%	17,56%	-2,70%	8,30%	-7,87%	9,66%	-0,22%	48,11%
2012	15,38%	0,33%	4,68%	1,09%	-1,11%	9,98%	1,59%	-1,50%	5,51%	-10,27%	6,02%	-1,08%	32,39%
2011	-2,01%	1,23%	6,71%	10,51%	1,92%	-2,79%	-2,68%	-11,24%	-5,78%	11,09%	-1,26%	1,72%	5,26%
2010	3,06%	1,86%	7,16%	0,02%	-10,31%	-4,36%	6,01%	-4,43%	13,19%	0,29%	-0,44%	6,41%	17,60%
2009	-1,59%	-11,31%	2,91%	-6,02%	3,73%	7,60%	10,45%	-2,67%	-1,20%	-13,03%	7,50%	6,92%	0,04%
2008	-5,59%	-3,81%	-0,71%	4,35%	7,34%	-3,90%	20,10%	-7,02%	-6,53%	-11,04%	-8,24%	9,25%	-9,67%
2007	3,55%	0,82%	0,17%	8,91%	2,28%	-5,38%	-1,10%	10,67%	4,26%	4,39%	0,19%	-2,23%	28,65%
2006	N/A	7,92%	-5,42%	-4,93%	-5,88%	2,09%	-1,94%	-3,38%	-2,00%	11,26%	-0,37%	-8,65%	-6,31%



XBI afkast-matrix

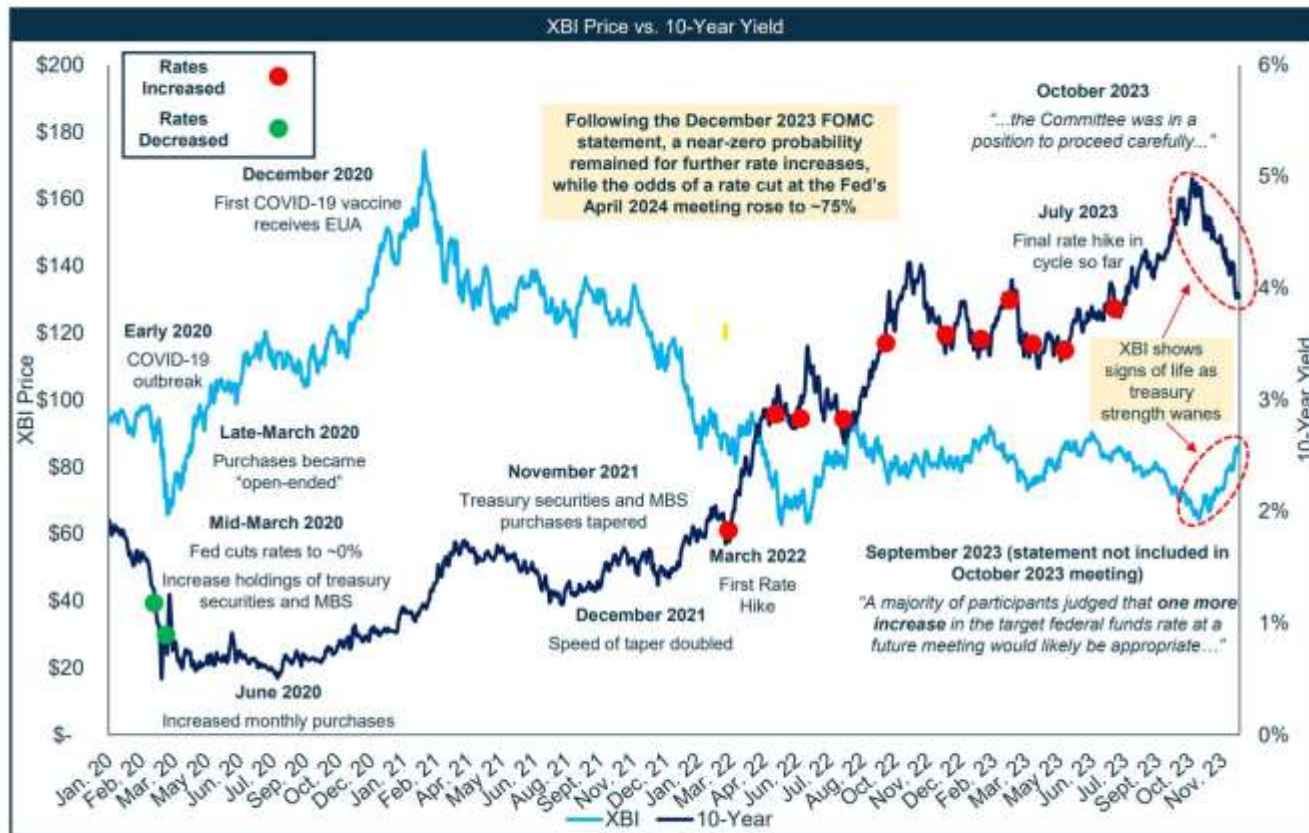
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Periods	January	February	March	April	May	June	July	August	September	October	November	December	Full-year
Average	2,32%	0,93%	-0,90%	0,73%	1,56%	3,24%	3,30%	-0,44%	-1,01%	-1,81%	4,62%	0,99%	12,18%
2024	-2,06%	12,57%	-4,64%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5,13%
2023	7,11%	-6,81%	-8,01%	5,24%	4,64%	-0,86%	1,31%	-6,04%	-7,80%	-9,30%	14,03%	18,21%	7,55%
2022	-16,69%	-3,80%	0,32%	-18,08%	-6,84%	7,98%	9,24%	3,17%	-5,23%	3,57%	1,79%	-0,74%	-25,95%
2021	8,16%	-2,95%	-8,34%	0,85%	-6,21%	5,69%	-8,80%	7,54%	-5,37%	-0,83%	-6,50%	-3,95%	-20,50%
2020	-6,30%	0,07%	-13,16%	20,60%	10,89%	8,10%	-2,34%	2,27%	-0,34%	1,27%	18,57%	5,38%	48,25%
2019	18,52%	6,63%	1,57%	-5,90%	-6,76%	10,41%	-2,31%	-6,20%	-5,13%	7,06%	14,72%	1,56%	32,56%
2018	10,02%	-3,22%	-2,91%	-0,85%	8,84%	0,55%	0,11%	5,09%	-4,26%	-17,48%	3,21%	-12,12%	-15,46%
2017	9,65%	8,18%	-1,24%	3,03%	-5,22%	13,99%	1,28%	7,24%	3,27%	-3,38%	-0,54%	2,02%	43,39%
2016	-20,02%	-5,19%	7,93%	4,29%	7,64%	-6,84%	14,77%	-3,19%	10,32%	-15,30%	11,61%	-5,55%	-15,68%
2015	7,07%	7,46%	2,63%	-6,24%	15,56%	5,73%	1,24%	-12,93%	-16,01%	7,21%	8,29%	-2,86%	12,95%
2014	15,37%	8,99%	-12,97%	-9,65%	2,77%	16,39%	-5,15%	10,58%	-3,43%	9,80%	4,98%	3,70%	43,21%
2013	8,17%	-1,20%	6,31%	5,94%	4,96%	-6,12%	17,56%	-2,70%	8,30%	-7,87%	9,66%	-0,22%	48,11%
2012	15,38%	0,33%	4,68%	1,09%	-1,11%	9,98%	1,59%	-1,50%	5,51%	-10,27%	6,02%	-1,08%	32,39%
2011	-2,01%	1,23%	6,71%	10,51%	1,92%	-2,79%	-2,68%	-11,24%	-5,76%	11,09%	-1,26%	1,72%	5,26%
2010	3,06%	1,86%	7,16%	0,02%	-10,31%	-4,36%	6,01%	-4,43%	13,19%	0,29%	-0,44%	6,41%	17,60%
2009	-1,59%	-11,31%	2,91%	-6,02%	3,73%	7,60%	10,45%	-2,67%	-1,20%	-13,03%	7,50%	6,92%	0,04%
2008	-5,59%	-3,81%	-0,71%	4,35%	7,34%	-3,90%	20,10%	-7,02%	-6,53%	-11,04%	-8,24%	9,25%	-9,67%
2007	3,55%	0,82%	0,17%	8,91%	2,28%	-5,36%	-1,10%	10,67%	4,26%	4,39%	0,19%	-2,23%	28,65%
2006	N/A	7,92%	-5,42%	-4,93%	-5,98%	2,09%	-1,94%	3,38%	-2,00%	11,26%	-0,37%	-8,65%	-6,31%

Redningskranse

- Patentkløft stadig på vej i 2025-2030 (200 mia. USD / 46%)
- Big Pharma har masser af cash (kan købe hele XBI)
- Platform-selskaber og/eller "ny" teknologi/MOA
- Udskilningsløb er ved at være overstået?
- ~~Kig på kassebeholdningen~~
- Emissioner → temperaturmåler på markedet
- ~~Generalist-fonde på vej ind?~~

- Rente/Inflation/Risk bestemmer dog i lang tid alt

Inflation/rente/risiko Kilde: Leerink



Source: Leerink Partners Research, Factset, CME Group FedWatch (Data as of December 19, 2023).



Inflation/rente/risiko

Kilde: Cowen

TD COWEN'S BIOTECH THERMOMETER

THE TD COWEN INSIGHT

Our Biotech Thermometer is intended to provide clients with a view on institutional investor sentiment toward the biotechnology sector, individual stocks, and upcoming events. We believe a better understanding of sentiment can facilitate a more effective investment strategy. The views expressed are based upon the team's interactions with investors during the month of February.

The optimism that smid cap biotech investors felt when 2024 began was rewarded in February, as the XBI broke above 100 for the first time since early 2022 and finished the month up 13% M/M. The XBI has outperformed the market to begin 2024 and in fact, with the XBI up 10% YTD, this has been the best two-month start to a year since 2019.

The feeling persists that the macro factors are setting up biotech to have a good 2024. Inflation is receding and the economy is still strong, making investors increasingly optimistic that a soft landing can be achieved. Biotech specialists are hopeful that declines in interest rates will be a boon for biotech stocks, particularly the smid caps. As rates go lower and risk tolerance increases, **the return of animal spirits is expected to continue to increase** the appetite for investment in the higher risk, higher reward developmental stage biotechs.

Moreover, smid biotechs are doing their part to highlight that the fundamentals of biotech are strong and that the bear market obscured years of fundamental progress. There have been a number of high profile clinical trial successes to start the year demonstrating that innovation is alive and well in the sector. With several resulting in dramatic stock price appreciation, investors are increasingly confident that diligence and prudent risk taking can be rewarded. Moreover, with several notably large acquisitions of developmental stage companies in late 2023 and early 2024, the theme that large biopharma companies look to their smaller biotech brethren to augment pipelines and inject innovation has been corroborated.

With stocks working and risk rewarded, the financing window is increasingly open. Companies are able to finance following pipeline success, and promising IPOs are not only pricing, but trading up in the aftermarket.

We look forward to furthering the biotech discussion during TD Cowen's 44th Annual Health Care Conference in Boston next week.

During February the NBI (+1% M/M, +1% YTD) and BTK (+2% M/M, -4% YTD), and DJIA (+2% M/M, +3% YTD) performed just under the S&P500 (+5% M/M, +7% YTD) and NASDAQ (+6% M/M, +7% YTD), while the XBI (+13% M/M, +10% YTD) outperformed all by a wide margin.

Please click on link for views toward individual stocks, upcoming events, emerging topics of



LIFE SCIENCE
Økonomisk Ugebrev

M&A (kilde: Cantor)

Assessing Interest Level in 2023 Acquisitions

Trend 6) Full Dataset for 2023 Acquisitions Maintains that Many Deals Are Competitive.

2023 data only in table.

Target/Acquirer	Therapeutic Category	Deal Value (\$M)	Interested Parties	Parties with Bids
Prometheus/Merck	Inflammation/Immunology	10,800	15	2
Concert/Sun	Inflammation/Immunology	576	10	1
EQRx/Revolution Med	Oncology	870	10	4
Dice/Lilly	Inflammation/Immunology	2,400	9	1
Iyeric/Astellas	Ophthalmology	5,900	9	3
Pardes/Medipacific	Infectious Disease	100	9	3
Sigilon/Lilly	Rare/Genetic Disease	36	9	4
Intercept/Alfasigma	Rare/Genetic Disease	800	8	3
Amryt/Chiesi	Endocrinology	1,480	7	4
Decibel/Regeneron	Ear, Nose, and Throat	109	7	1
Icosavax/AstraZeneca	Infectious Disease	800	7	1
Orchard Therapeutics/Kyowa Kirin	Rare/Genetic Disease	478	7	2
Paratek/Gurnet Point, Novo	Infectious Disease	330	7	4
Acer/Zevra	Rare/Genetic Disease	15	6	4
ImmunoGen/AbbVie	Oncology	10,100	6	3
Albireo/Ipsen	Rare/Genetic Disease	952	5	2
Mirati/Bristol Myers Squibb	Oncology	5,800	5	1
Seagen/Pfizer	Oncology	43,000	5	4
Cerevel Therapeutics/AbbVie	Neurology	8,700	4	1
Cincor/Astrazeneca	Cardiovascular	1,300	4	1
CTI Bio/Sobi	Oncology	1,700	4	2
RayzeBio/Bristol Myers Squibb	Oncology	4,100	4	3
Spectrum/Assertio	Supportive Care	210	4	3
Surface Oncology/Coherus	Oncology	65	4	1
Jounce/Concentra	Oncology	100	3	2
Point Biopharma Global/Eli Lilly	Oncology	1,400	3	2
Timber/LEO Pharma	Dermatology	14	3	3
Chinook/Novartis	Nephrology	3,200	2	1
Greenlight/Fall Line Capital	Infectious Disease	45	2	1
Karuna Therapeutics/Bristol Myers Squibb	Neurology	14,000	2	1
Reata/Biogen	Neurology	7,300	2	2
Satsuma/Shin Nipon	Neurology	30	2	2
VectivBio/Ironwood	Rare gastroenterology	1,000	2	1
Provention/Sanofi	Endocrinology	2,900	1	1
Zynherba/Harmony	Neurology	60	1	1

- **Inflammation/Immunology (e.g., autoimmune) + Rare/Genetic Disease are concentrated at the top** drew the most interest.

- **Oncology, concentrated roughly in the middle of the list, drew less interest but more deals overall.**

- **Neurology is concentrated near the bottom.**

- The number of interested parties could signal hot areas and/or areas in which there are few available assets.

Themes emerging so far in 2024: Solid tumor oncology has drawn the most interest in Abmrx Biopharma (n=9) and Harpoon Therapeutics (n=3). There were five interested parties in CymaBay's Hepatology (PBC) drug seladelpar.

Footnote: Table has the 35 2023 deals w/ 14A & 14D-9 filings. We define interest by # of initial parties with mutual interest. BMY & REGN are Neutral-rated (covered by O. Brayer); LLY, MRK, NVO, PFE, & ZVRA are OW-rated (covered by L. Chen); HRMY is OW-rated, and CERE & KRTX are Neutral-rated (covered by C. Duncan); others are private/not covered.

M&A (kilde: Cantor)

More Protracted Deals Closed in 2023

Trend 4) Timelines Suggest Lengthy Negotiations Were Driving Toward Completion in 2023.

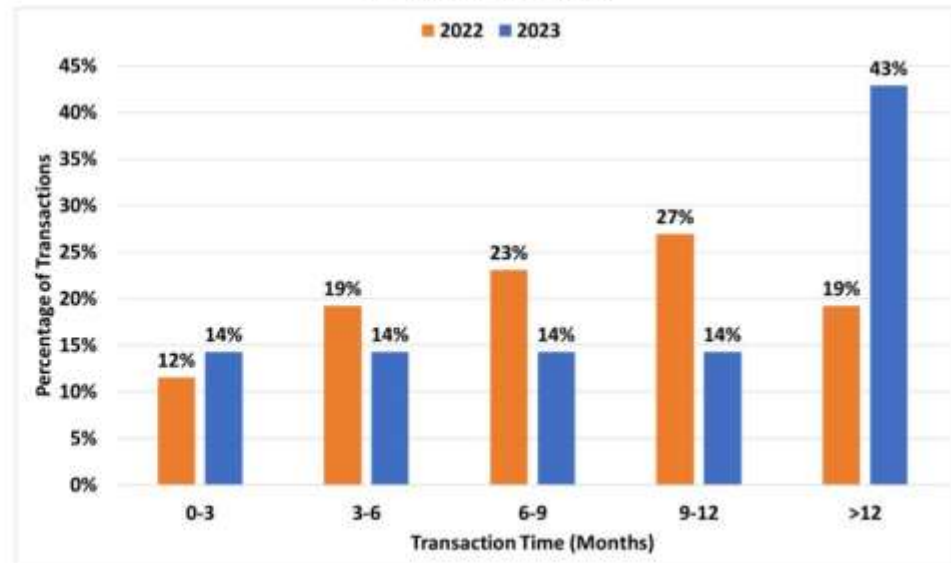
- Based on estimated transaction times from SEC filings, transactions in 2023 were closing (defined as from start of deal talks to deal announcement) after being discussed for more than a year (average time to completion: 9.5 months in 2022 vs. 12.9 months in 2023).
- **Negotiations may be taking longer because of increased competition and show that companies may be performing more and more diligence before consummating an acquisition.**

Average Time to a Deal by Stage

Stage	Avg Deal Time (Months)	
	2022	2023
Preclinical	10.0 (n=2)	2.0 (n=1)
Phase 1	8.0 (n=1)	16.0 (n=2)
Phase 1/2	8.5 (n=2)	18.0 (n=1)
Phase 2	12.0 (n=4)	12.5 (n=6)
Phase 3	6.0 (n=1)	7.3 (n=9)
Regulatory review	16.0 (n=1)	11.0 (n=2)
Approved	8.8 (n=15)	17.0 (n=14)
Average	9.5 (n=26)	12.9 (n=35)

**Of the three acquisitions in 2024 (excluded from above) for which filings are available two were Phase 1/2 programs with an average deal time of 15.5 months and one was at the Regulatory review stage with a deal time of ~15 months.

Time to a Deal by Year



Fra
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2023

IPO 2021 - selskaberne skal hente kapital

Biotechnology: Capital Markets

The 2021 IPO class on track for a -50% mean and -77% median return (1/2)

Pricing Date	Lockup Expiration	Ticker	Issuer Name	Offer Size (M)	Offer Price	Last Price	Mkt Cap (\$M)	Mkt Cap At IPO (\$M)	Performance To Date	Day 1 %	Week 1 %	Month 1 %	Key Focus Area	Lead Product	Stage at IPO	Lead Indication
3/12/21	9/8/21	RDX	Prometheus Biosciences	\$190	\$10.00	\$109.73	\$5.097	\$389	997%	153%	112%	129%	Autoimmune	PRA023	Phase I	UC, Crohn's
2/5/21	8/4/21	IMCR	Immunocore	\$258	\$26.00	\$58.59	\$2.807	\$1.100	125%	66%	83%	58%	Oncology	Tebentafusp	Phase III	Uveal melanoma
7/16/21	1/12/22	IMGO	Imago Biosciences	\$134	\$16.00	\$35.87	\$1.213	\$514	124%	2%	4%	29%	Oncology	Bomedemstat	Phase II	Essential Thrombocythemia
10/21/21	4/19/22	VTYX	Ventyx Biosciences	\$152	\$16.00	\$34.28	\$1.941	\$783	114%	17%	25%	37%	Autoimmune	VTX958	Preclinical	Crohn's, Psoriasis, PsA
9/15/21	3/14/22	DICE	DICE Therapeutics	\$204	\$17.00	\$33.84	\$1.292	\$618	99%	104%	92%	57%	Autoimmune	S011806	Preclinical	Psoriasis
6/30/21	12/27/21	AVTE	Aerovate Therapeutics	\$122	\$14.00	\$26.30	\$647	\$324	88%	39%	23%	-8%	Pulmonary	AV-101	Phase II	PAH
7/29/21	1/25/22	NUVL	Nuvalent	\$156	\$17.00	\$31.12	\$1.756	\$796	83%	7%	46%	104%	Oncology	NVL-520	Preclinical	NSCLC (ROS1)
5/14/21	11/10/21	VERA	Vera Therapeutics	\$48	\$11.00	\$19.50	\$539	\$234	77%	5%	80%	33%	Rare Diseases	Atacicept	Phase II	IgA Nephropathy (Kidney)
6/17/21	12/14/21	VERV	Verve Therapeutics	\$267	\$19.00	\$22.45	\$1.383	\$876	18%	100%	92%	156%	Cardiovascular	VERVE-101	Preclinical	HeFH
10/29/21	4/27/22	TRDA	Entrada Therapeutics	\$182	\$20.00	\$20.50	\$642	\$598	2%	20%	24%	45%	Rare Diseases	ENTR-601-44	Preclinical	DMD, DM1
10/29/21	4/27/22	AURA	Aura Biosciences	\$76	\$14.00	\$12.07	\$353	\$398	-14%	6%	34%	62%	Oncology	AU-011	Phase II	Choroidal Melanoma
6/11/21	12/8/21	JANX	Janux Therapeutics	\$194	\$17.00	\$14.31	\$596	\$678	-16%	48%	16%	63%	Oncology	PSMA-TRACT	Preclinical	Prostate Cancer (mCRPC)
7/29/21	1/25/22	RANI	Rani Therapeutics	\$73	\$11.00	\$8.20	\$203	\$528	-25%	0%	7%	82%	Various	RT-101	Phase I	NETs/ Acromegaly
6/25/21	12/22/21	GHRX	GH Research	\$160	\$16.00	\$10.87	\$565	\$808	-32%	20%	33%	8%	Neurology	GH001	Phase I/II	TRD Depression
6/25/21	12/22/21	ACXP	Acux Pharmaceuticals	\$15	\$6.00	\$3.60	\$34	\$57	-40%	32%	-3%	-7%	Antibiotics	Ibezapolstat	Phase II	Clotridium difficile
1/8/21	7/7/21	CGEM	Cullinan Management	\$250	\$21.00	\$11.85	\$542	\$869	-44%	42%	67%	73%	Oncology	CLN-081	Phase I/II	NSCLC (Exon 20)
5/6/21	11/2/21	VALN-US	Valvea SE	\$61	\$26.41	\$14.39	\$994	\$1.293	-46%	12%	8%	2%	Infectious	Ixiaro	Marketed	Japanese encephalitis
12/16/21	6/14/22	BNOX	Bionomics	\$20	\$12.35	\$6.66	\$54	\$93	-46%	5%	0%	1%	Neurology	BNC210	Phase II	PTSD, SAD
7/23/21	1/19/22	CRBU	Caribu Biosciences	\$304	\$16.00	\$8.20	\$500	\$907	-49%	2%	1%	63%	Oncology	CB-010	Phase I	NHL
4/9/21	10/6/21	VECT	VectivBio Holding	\$128	\$17.00	\$8.49	\$345	\$578	-50%	43%	-5%	-21%	Rare Diseases	Apraglutide	Phase III	Short Bowel Syndrome
3/26/21	9/22/21	EWTX	Edgewise Therapeutics	\$176	\$16.00	\$7.98	\$504	\$761	-50%	88%	88%	72%	Rare Diseases	EDG-5506	Phase I	DMD, BMD, LGMD
4/16/21	10/13/21	RXR	Recursion Pharma	\$436	\$18.00	\$8.85	\$1,678	\$2,919	-51%	74%	66%	18%	Various	REC-4881	Phase I	FAP (cancer)
6/24/21	12/21/21	GLUE	Monte Rosa Therapeutics	\$222	\$19.00	\$9.03	\$437	\$808	-52%	-1%	17%	23%	Various	Undisclosed	Preclinical	NSCLC, SCLC
12/15/21	6/13/22	GNTA	Genenta Science	\$28	\$11.50	\$5.31	\$97	\$208	-54%	-2%	1%	-11%	Oncology	Temferon	Phase I/II	GBM
7/29/21	1/25/22	RLYB	Rallybio	\$81	\$13.00	\$5.90	\$219	\$406	-55%	31%	80%	0%	Various	RLYB211	Phase I/II	Maternal Fetal Blood Disorders
3/26/21	9/22/21	DSGN	Design Therapeutics	\$240	\$20.00	\$9.03	\$505	\$1,076	-55%	107%	49%	-4%	Rare Diseases	Undisclosed	Preclinical	Friedreich Ataxia
4/23/21	10/20/21	RAIN	Rain Therapeutics	\$126	\$17.00	\$7.56	\$196	\$441	-56%	-7%	-4%	-6%	Oncology	RAIN-32	Phase I	Solid Tumors
5/7/21	11/3/21	ANEB	Anebulo Pharmaceuticals	\$21	\$7.00	\$3.07	\$79	\$163	-56%	1%	0%	5%	Abuse/Addiction	ANEB-001	Phase I	Cannabinoid Overdose
6/18/21	12/15/21	IPSC	Century Therapeutics	\$211	\$20.00	\$8.73	\$515	\$1,096	-56%	14%	12%	38%	Oncology	CNTY-101	Preclinical	Lymphoma
2/5/21	8/4/21	PHVS	Pharvaris N.V.	\$165	\$20.00	\$8.57	\$284	\$637	-57%	45%	33%	44%	Rare Diseases	PHA121	Phase I	HAE
4/16/21	10/13/21	BMEA	Biomea Fusion	\$153	\$17.00	\$7.21	\$212	\$489	-58%	9%	-1%	-7%	Oncology	BMF-219	Preclinical	Menin Dependent Cancers
9/16/21	3/15/22	TYRA	Tyra Biosciences	\$173	\$16.00	\$6.69	\$282	\$655	-58%	24%	13%	2%	Oncology	TYRA-300	Preclinical	Bladder and Solid Tumors
2/5/21	8/4/21	VOR	Vor Biopharma	\$177	\$18.00	\$7.43	\$287	\$624	-59%	108%	171%	85%	Oncology	VCAR-33	Phase I/II	AML
11/4/21	5/3/22	EVO	Evotech SE	\$435	\$21.75	\$8.49	\$3,000	\$890	-61%	4%	8%	3%	Various	EVT-201	Phase III	Insomnia
7/29/21	1/25/22	OMGA	Omega Therapeutics	\$126	\$17.00	\$6.49	\$312	\$794	-62%	-6%	-2%	12%	Various	OTX-2002	Preclinical	Hepatocellular Carcinoma
7/1/21	12/28/21	ABOS	Acumen Pharmaceuticals	\$160	\$16.00	\$5.83	\$239	\$618	-64%	27%	11%	-3%	Neurology	ACU193	Phase I	Alzheimer's
10/7/21	4/5/22	THR	Theseus Pharmaceuticals	\$160	\$16.00	\$5.50	\$213	\$600	-66%	5%	-1%	2%	Oncology	THE-630	Preclinical	GIST
2/12/21	8/11/21	LGVN	Longeveron	\$27	\$10.00	\$3.36	\$71	\$187	-66%	-26%	-38%	-19%	Anti-Aging	Lomecel-B	Phase II	Aging Frailty
7/30/21	1/26/22	IMRX	Immuneering	\$113	\$15.00	\$5.00	\$132	\$366	-67%	17%	88%	78%	Oncology	IMM-1-104	Preclinical	Solid Tumors (RAS)
6/16/21	12/13/21	MOLN	Molecular Partners	\$64	\$21.25	\$6.91	\$249	\$683	-67%	-7%	-9%	-14%	Various	Abicipar	Phase III	Neovascular AMD
3/25/21	9/21/21	LVTX	Lava Therapeutics	\$101	\$15.00	\$4.64	\$120	\$380	-69%	-17%	-13%	-19%	Oncology	LAVA-051	Preclinical	GLI, MM, AML
7/16/21	1/12/22	ERAS	Erasca	\$300	\$16.00	\$4.93	\$679	\$1,858	-69%	9%	20%	26%	Oncology	ERAS-007	Phase II	Solid Tumors

Source: Jefferies estimates, FactSet
Data as of 12.13.22



Fra oktober 2023

IPO 2021 - selskaberne skal hente kapital

Biotechnology: Capital Markets

The 2021 IPO class on track for a -50% mean and -77% median return (1/2)

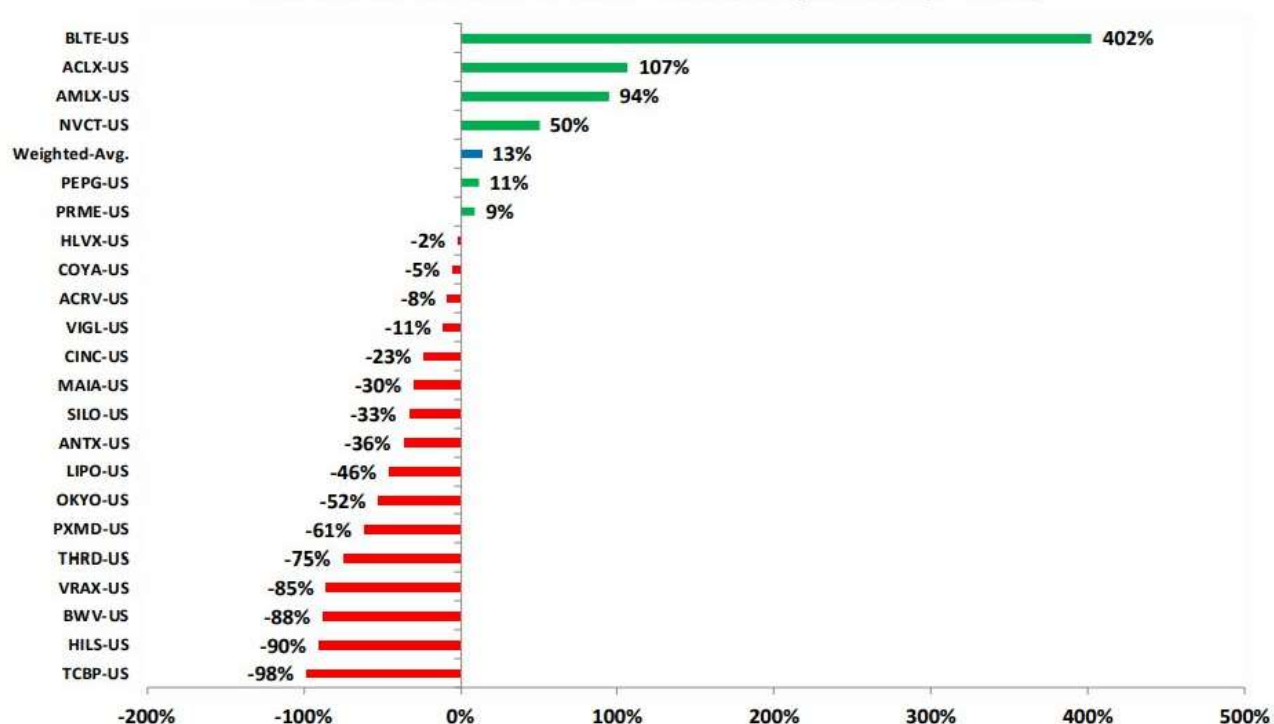
Pricing Date	Lockup Expiration	Ticker	Issuer Name	Offer Size (M)	Offer Price	Last Price	Mkt Cap (\$M)	Mkt Cap At IPO (\$M)	Performance To Date	Day 1 %	Week 1 %	Month 1 %	Key Focus Area	Lead Product	Stage at IPO	Lead Indication
12/16/21	6/14/22	IMMX	Immix Biopharma	\$21	\$5.00	\$1.46	\$20	\$38	-71%	-20%	-41%	17%	Oncology	IMX-110	Phase III	Soft Tissue Sarcoma
7/29/21	1/25/22	ICVX	kosava	\$182	\$15.00	\$4.20	\$168	\$863	-72%	66%	120%	164%	Infectious	IVX-411	Phase III	COVID19
3/18/21	9/14/21	GANX	Gain Therapeutics	\$40	\$11.00	\$3.05	\$36	\$125	-72%	11%	13%	32%	Rare Diseases	GLB1	Preclinical	GM1 Gangliosidosis
12/9/21	6/7/22	NRSN	NeuroSense Therapeutics	\$12	\$8.00	\$1.57	\$18	\$68	-74%	-47%	-45%	-57%	Neurology	PrimeC	Phase II	ALS
3/12/21	9/8/21	LBPB	Longboard Pharmaceuticals	\$80	\$16.00	\$4.00	\$69	\$271	-75%	4%	2%	0%	Neurology	LP352	Phase I	Rare Epilepsy (DEEs)
4/23/21	10/20/21	MPL	Impel NeuroPharma	\$80	\$15.00	\$3.68	\$71	\$291	-75%	0%	1%	-9%	Neurology	Trudhesa	Filed	Acute Migraine
7/20/21	1/16/22	HCWB	HCW Biologics	\$58	\$8.00	\$1.93	\$69	\$285	-76%	-36%	-32%	-46%	Oncology	HCW9201	Phase II	AML
1/29/21	7/28/21	NLSP	NLS Pharmaceuticals	\$26	\$4.15	\$0.95	\$17	\$49	-77%	-30%	-27%	-31%	Neurology	Quilence	Phase II	Daytime Sleepiness/ ADHD
8/10/21	2/6/22	ELYM	Eliem Therapeutics	\$80	\$12.50	\$2.85	\$76	\$317	-77%	65%	35%	105%	Neurology	ETX-810	Phase II	DPNP and Lumbar Pain
8/26/21	2/22/22	RNKT	RenovoRx	\$17	\$9.00	\$2.00	\$18	\$75	-78%	-14%	-4%	-22%	Oncology	RenovoGem	Phase III	Pancreatic Cancer
7/30/21	1/26/22	NAB	InBio	\$40	\$10.00	\$2.17	\$53	\$188	-78%	0%	-3%	-27%	Oncology	INB-200	Phase I	GBM
10/1/21	3/30/22	EXAI	Exscientia	\$305	\$22.00	\$4.73	\$581	\$2,603	-79%	23%	9%	1%	Various	ESX21548	Phase I	Solid Tumors
10/8/21	4/6/22	CGTX	Cognition Therapeutics	\$46	\$12.00	\$2.56	\$61	\$256	-79%	6%	-1%	0%	Neurology	CT1812	Phase II	Alzheimer's
8/15/21	12/12/21	ALZN	Alzamend Neuro	\$13	\$5.00	\$1.06	\$101	\$425	-79%	107%	68%	40%	Neurology	AL001	Preclinical	Alzheimer's
8/17/21	12/14/21	LYEL	Lyell Immunopharma	\$425	\$17.00	\$3.60	\$898	\$4,070	-79%	-5%	-6%	-1%	Oncology	Undisclosed	Preclinical	NSCLC, TNBC, other
2/11/21	8/10/21	BVS	Bioventus	\$104	\$13.00	\$2.74	\$213	\$723	-79%	32%	5%	10%	Musculoskeletal	BMP Asset	Preclinical	TLF, PLIF
8/18/21	12/15/21	ATAI	ATAI Life Sciences	\$225	\$15.00	\$3.10	\$514	\$2,289	-79%	30%	19%	16%	Neurology	PCN-101	Phase I	TDR Depression
2/5/21	8/4/21	EVAX	Evoxion Biotech	\$30	\$10.00	\$2.02	\$47	\$192	-80%	-1%	-8%	-30%	Oncology	EVX-01	Phase III	Melanoma, NSCLC, bladder
11/5/21	5/4/22	IDBT	IO Biotech	\$100	\$14.00	\$2.78	\$80	\$388	-80%	12%	-18%	-22%	Oncology	ID102-103	Phase III	Melanoma
10/15/21	4/13/22	INKT	MINK Therapeutics	\$40	\$12.00	\$2.30	\$78	\$402	-81%	0%	0%	37%	Oncology	AGENT-797	Phase I	Solid Tumors, Multiple Myeloma
6/25/21	12/22/21	GRPH	Graphite Bio	\$238	\$17.00	\$3.19	\$186	\$952	-81%	9%	67%	4%	Rare Diseases	GPH101	Preclinical	Sickle Cell Disease (SCD)
5/28/21	11/24/21	CNTA	Centessa Pharma	\$330	\$20.00	\$3.75	\$355	\$330	-81%	9%	14%	23%	Various	Lixiviaptan	Phase III	Polycystic Kidney Disease
2/4/21	8/3/21	SANA	Sana Biotechnology	\$588	\$25.00	\$4.52	\$862	\$4,558	-82%	56%	73%	-4%	Various	SG295	Preclinical	NHL/ALL/CLL
10/29/21	4/27/22	BFRI	Bifrontera	\$18	\$5.00	\$0.90	\$21	\$58	-82%	-12%	-36%	58%	Dermatology	Ameliz	Marketed	Actinic Keratosis
3/26/21	9/22/21	KNA	Ikena Oncology	\$125	\$16.00	\$2.79	\$97	\$553	-83%	100%	63%	31%	Oncology	IK-930	Preclinical	Hippo-Mutated Cancers
12/8/21	6/6/22	CING	Cingulate	\$25	\$6.00	\$1.01	\$11	\$68	-83%	-35%	-50%	-59%	Neurology	CTx-1301	Phase III	ADHD
9/15/21	3/14/22	KTTA	Pasithea Therapeutics	\$24	\$5.00	\$0.82	\$11	\$65	-84%	-33%	-45%	-40%	Neurology	Undisclosed	Preclinical	Undisclosed
7/30/21	1/26/22	TNYA	Teraya Therapeutics	\$180	\$15.00	\$2.78	\$152	\$890	-84%	2%	23%	78%	Cardiology	MYBP3C	Preclinical	gHCM
10/20/21	4/18/22	CNTX	Context Therapeutics	\$25	\$5.00	\$0.37	\$12	\$51	-84%	23%	34%	-2%	Oncology	ONA-XR	Phase III	Breast Cancer, Solid Tumors
10/22/21	4/20/22	XLO	Xilo Therapeutics	\$118	\$16.00	\$2.41	\$66	\$427	-85%	0%	5%	42%	Oncology	XTX101	Phase I	Solid Tumors
7/13/21	1/9/22	UNCY	Unicyclic Therapeutics	\$25	\$5.00	\$0.74	\$11	\$87	-85%	-24%	-43%	-44%	Renal	Renazorb	Phase I	CKD Hyperphosphatemia
5/26/21	11/22/21	DYNS	Day One Biopharma	\$200	\$10.00	\$1.44	\$94	\$257	-86%	1%	0%	-1%	Oncology	DAY101	Phase II	Brain Cancer (pLGG)
4/9/21	10/6/21	RPHM	Renec Pharmaceuticals	\$94	\$15.00	\$2.11	\$52	\$363	-86%	-7%	-13%	0%	Rare Diseases	REN001	Phase II	PNM
4/30/21	10/27/21	VACC	Vaccitech	\$111	\$17.00	\$2.37	\$81	\$579	-86%	-17%	-20%	-13%	Various	VTP-800	Phase III	Prostate Cancer
7/16/21	1/12/22	TCCR	TScan Therapeutics	\$100	\$15	\$2.01	\$38	\$359	-87%	-30%	-33%	-31%	Oncology	TSC-100	Preclinical	AML, MDS, ALL
1/8/21	7/7/21	GRCL	Gracell Biotechnologies	\$209	\$19.00	\$2.48	\$183	\$1,248	-87%	32%	26%	61%	Oncology	GO012F	Phase I	Multiple Myeloma
4/30/21	10/27/21	HOWL	Werewolf Therapeutics	\$120	\$16.00	\$2.05	\$63	\$441	-87%	1%	-11%	-7%	Oncology	WTX124	Preclinical	Solid Tumors
7/9/21	1/5/22	RNAZ	Transcode Therapeutics	\$25	\$4.00	\$0.49	\$6	\$48	-88%	32%	-20%	-21%	Oncology	TTX-MC138	Preclinical	Metastatic Cancer, GBM
8/18/21	12/15/21	AMAM	Ambix Biopharma	\$120	\$18.00	\$2.04	\$79	\$678	-89%	-5%	-4%	9%	Various	ARX201	Phase II	Growth Hormone Deficiency
8/6/21	2/2/22	ADGI	Adagio Therapeutics	\$309	\$17.00	\$1.76	\$192	\$1,836	-90%	23%	57%	146%	Infectious	ADG20	Phase I	COVID19
11/1/21	4/30/22	LIAN	LianBio	\$325	\$16.00	\$1.44	\$156	\$425	-91%	-16%	-12%	-25%	Various	Navacamtan	Filed	Obstructive HCM
2/17/21	8/16/21	VRPX	Virpax Pharmaceuticals	\$18	\$10.00	\$0.82	\$4	\$49	-92%	-39%	-41%	-47%	Neurology	Epocladem	Preclinical	Acute Pain
10/8/21	4/6/22	PYXS	Pyxis Oncology	\$168	\$16.00	\$1.16	\$38	\$524	-93%	-18%	-26%	-25%	Oncology	PYX-201	Preclinical	NSCLC, Breast
2/9/21	8/9/21	ADAG	Adagene	\$140	\$19.00	\$1.36	\$59	\$801	-93%	38%	35%	13%	Oncology	ADG106	Phase I	Solid Tumors, NHL
2/5/21	8/4/21	BOLT	Bolt Therapeutics	\$230	\$20.00	\$1.32	\$50	\$690	-93%	61%	67%	50%	Oncology	BDC-1001	Phase III	HER2 Breast/Gastric Cancer
6/25/21	12/22/21	ELEV	Elevation Oncology	\$100	\$16.00	\$0.93	\$22	\$372	-94%	-29%	-4%	-45%	Oncology	Seribantamab	Phase II	Solid Tumors
2/5/21	8/4/21	ANGN	Angion Biomedica	\$80	\$16.00	\$0.87	\$26	\$460	-95%	6%	22%	0%	Various	ANG-3777	Phase III	Kidney Injury
3/19/21	9/15/21	FNCH	Finch Therapeutics	\$128	\$17.00	\$0.89	\$43	\$801	-95%	25%	-6%	-6%	Microbiome	CP101	Phase II	Recurrent C. Difficile
3/19/21	9/15/21	CNTB	Connect Biopharma	\$191	\$17.00	\$0.86	\$47	\$191	-95%	9%	-6%	2%	Autoimmune	CBP-201	Phase II	Atopic Dermatitis
3/19/21	9/15/21	TIL	Intill Bio	\$320	\$20.00	\$0.67	\$87	\$2,518	-97%	32%	36%	-5%	Oncology	ITIL168	Phase I	Melanoma
2/10/21	8/9/21	VLON	Vallon Pharmaceuticals	\$18	\$8.00	\$0.25	\$2	\$49	-97%	-5%	-7%	-31%	Neurology	ADAIR	Phase I	ADHD, Narcolepsy
8/13/21	2/9/22	DRMA	Dermta Therapeutics	\$18	\$7.00	\$0.19	\$2	\$58	-97%	-26%	-34%	-5%	Dermatology	DMT310	Phase II	Acne
2/10/21	8/9/21	BPTS	Biophytis	\$20	\$16.75	\$0.40	\$5	\$192	-98%	0%	-9%	-13%	Rare Diseases	Sarcneos	Phase II	Sarcopenia
2/4/21	8/3/21	LABP	Landos Biopharma	\$100	\$16.00	\$0.33	\$13	\$627	-98%	-31%	-16%	-22%	Autoimmune	BT-11	Phase II	UC, Crohn's, Lupus, etc
2/12/21	8/11/21	NEXI	NexImmune	\$110	\$17.00	\$0.31	\$8	\$368	-98%	49%	35%	48%	Oncology	NXE1-001	Phase I	AML, MDS

Average: -50%
Median: -77%

Source: Jefferies estimates, FactSet
Data as of 12.13.22

IPO i fremdrift

2022 Biotech IPO Returns to YE22 (Weighted-Avg. +13%)

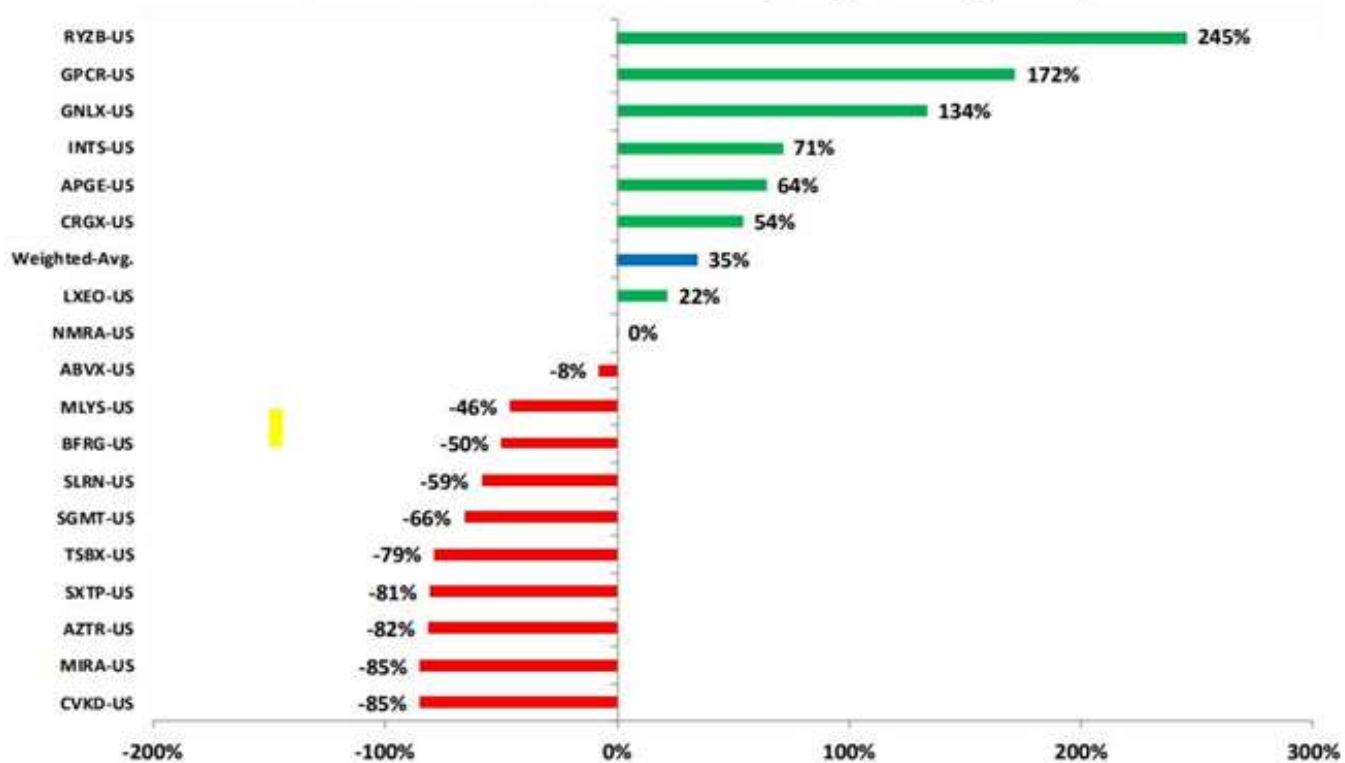


Note: These results cannot and should not be viewed as an indicator of future performance; Return calculations exclude applicable costs, including commission and interest.

Source: Bloomberg, FactSet, Oppenheimer & Co.

IPO i fremdrift

2023 Biotech IPO Returns to YE23 (Weighted-Avg. +35%)



23 M&A > 1 mia. USD

CENTER|VIEW PARTNERS

2023 bød på 23 M&A-deals
på over 1 mia. USD.

Centerview Partners rådgav
på 19 af dem!

Deal Announcement Date	Acquiring Company	Target Company or Business Unit
12/26/2023	BMJ	RayzeBio
12/26/2023	Astrazeneca	Gracell
12/22/2023	BMJ	Karuna
12/12/2023	Astrazeneca	Icosavax
12/6/2023	AbbVie	Cerevel
11/30/2023	AbbVie	ImmunoGen
11/22/2023	BI	T3
11/8/2023	Alfasigma	Intercept
10/19/2023	Eli Lilly	Mablink
10/20/2023	AbbVie	Mitokinin
10/8/2023	BMJ	Mirati
10/3/2023	Eli Lilly	Point
9/25/2023	Regeneron	Decible
8/31/2023	Otsuka	Mindset
8/30/2023	Novo Nordisk	Embark
8/10/2023	Novo Nordisk	Inversago
7/28/2023	Biogen	Reata
7/17/2023	Novartis	DTx
7/14/2023	Eli Lilly	Versaris
6/29/2023	Eli Lilly	Sigilon
6/26/2023	Shionogi	Qpex Biopharma
6/20/2023	Eli Lilly	DICE
6/16/2023	Cohesus	Surface
6/12/2023	Novartis	Chinook
6/6/2023	Gurnet Point, Novo	Paratek
5/22/2023	Ironwood	VectivBio
5/10/2023	Sobi	CTI
4/30/2023	Astellas	Meric
4/25/2023	Assertio	Spectrum
4/18/2023	GlaxoSmithKline	Bellus
4/13/2023	Shin Nipon	Satsuma
4/16/2023	Merck	Prometheus
3/13/2023	Pfizer	Seagen
3/13/2023	Sanofi	Provention
1/19/2023	Sun	Concert
1/9/2023	Ipsen	Albireo
1/9/2023	Astrazeneca	Cinooor
1/8/2023	Chiesi	Amnyt

Fedme og Novo – Novo og Lilly klart i front

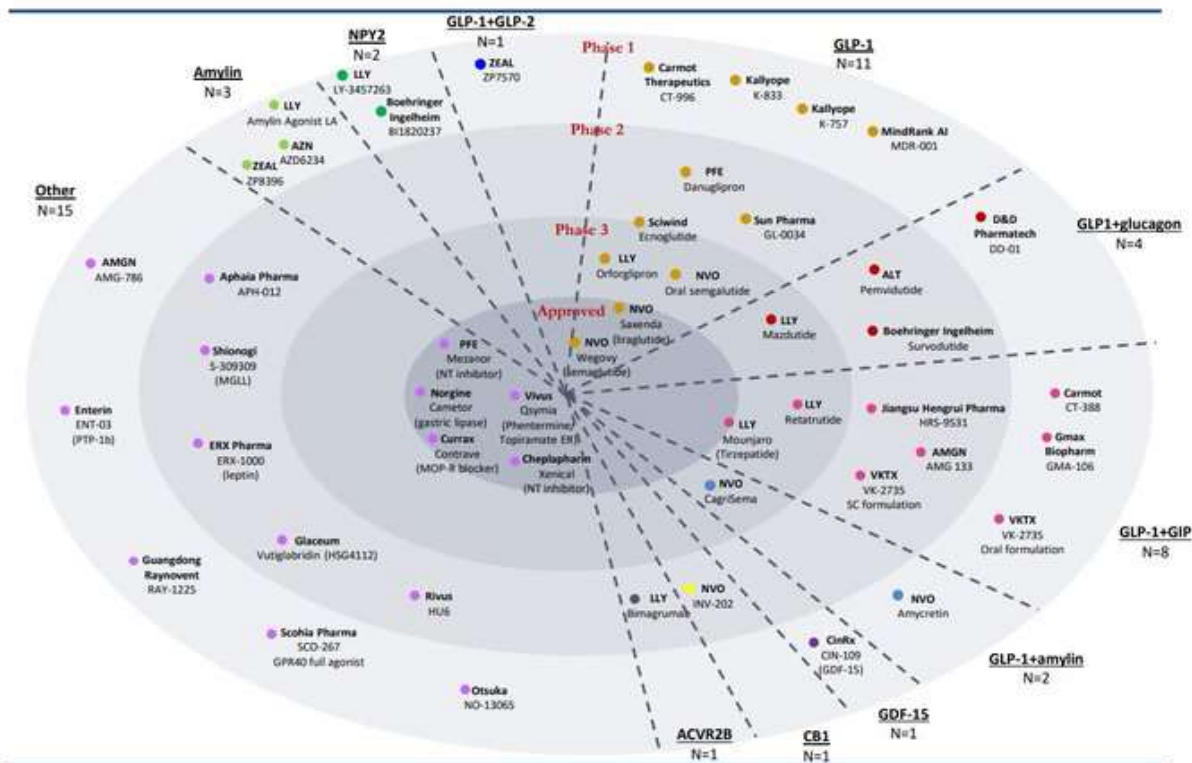
Presence of large pharma in obesity is highly concentrated



Kilde: Evercore

Fedme og Novo – Novo og Lilly klart i front

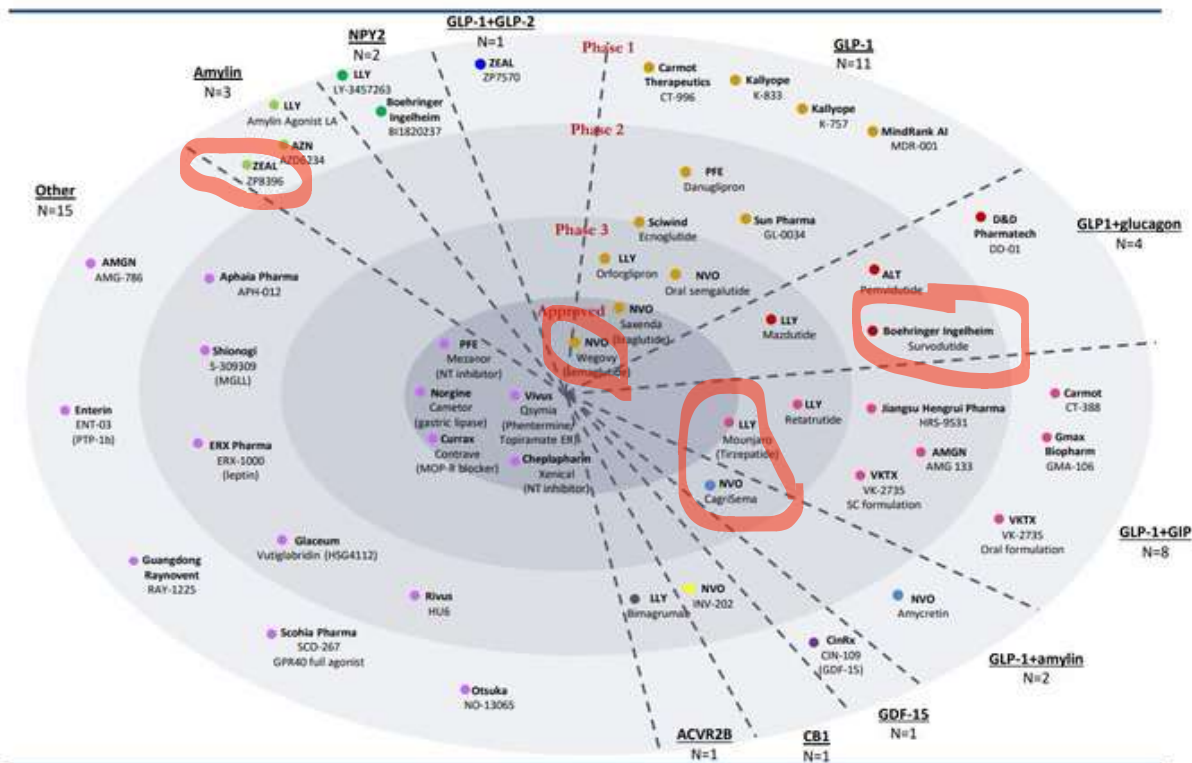
Obesity Landscape on a Page: 49 Programs from 34 Companies



Kilde: Evercore

Fedme og Novo – Novo og Lilly klart i front

Obesity Landscape on a Page: 49 Programs from 34 Companies

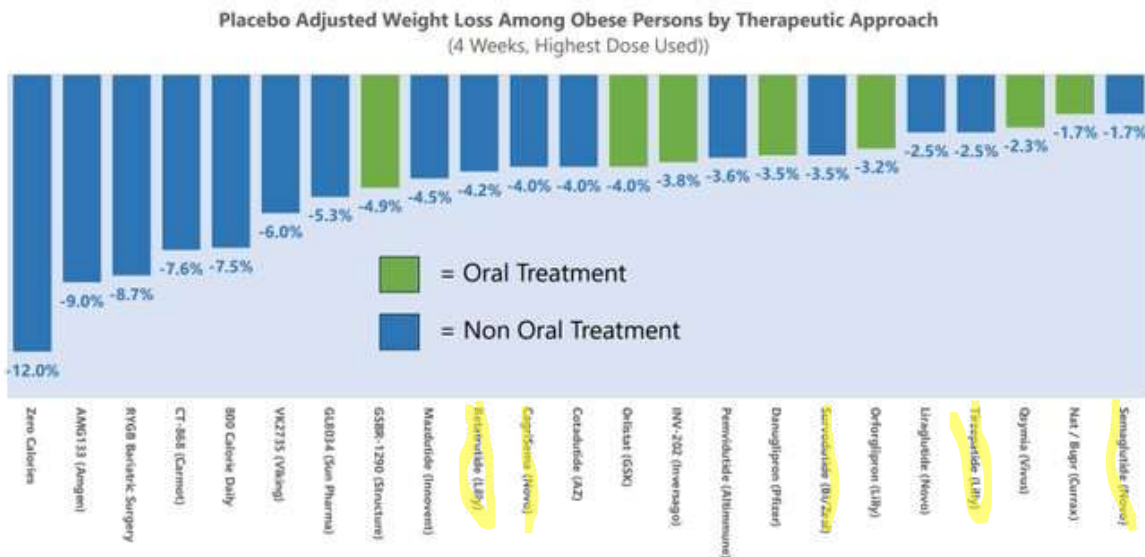


Kilde: Evercore

Fra
oktober
2023

Fedme og Novo – Novo og Lilly klart i front

Structure's GSKR-1290 Weight Loss Is The Most Impressive 4-Week Weight Loss Seen to Date With an Oral Treatment



Kilde: Stifel

Fedme og Novo – GPCR – IPO 2023 succes



Fedme – GPCR – realismen indfandt sig



Fedme – GPCR – realismen indfandt sig

Hot markets crave hot data

You've probably heard of the popular medicines for weight loss and type 2 diabetes, like Ozempic by **Novo Nordisk** and Mounjaro, made by **Eli Lilly (LLY 1.33%)**. Those drugs are what's called glucagon-like peptide-1 receptor agonists, or GLP-1 RAs for short.

By 2031, the market for GLP-1 RA drugs could be as large as \$90 billion, according to an estimate by **Pfizer's** CEO. So it's no surprise that biotechs like Structure are looking to get in on the action during the market's heady days.

Enter GSB-1290, Structure's GLP-1 RA program, which is currently in phase 2 clinical trials for diabetes and obesity. Unlike Mounjaro and Ozempic, GSB-1290 is a pill rather than as an injection, so it could be more appealing to patients. But when Structure published an update with some of its phase 2 data on Dec. 18, the stock crashed.

Investors seem to be assuming that Eli Lilly's oral GLP-1 RA candidate, which is in phase 3 trials (called orforglipron), is more effective than Structure's. According to the published data from a phase 2 study of orforglipron, patients taking it to treat obesity experienced an average decrease in weight of 8.6% to 12.6% after 26 weeks of treatment.

Structure's interim phase 2 data shows that patients treated for obesity with GSB-1290 lost between 3.3% to 3.5% of their body weight after 12 weeks of treatment, with the pace of loss slowing toward the end of the period. While drawing firm conclusions will need to wait until the full data set is reported (possibly as soon as the second quarter of 2024), it does indeed look like GSB-1290 is a bit less potent than Eli Lilly's entrant.

Fedme – targets og selskaber

WHO HAS WHAT? OBESITY TARGETS WE'RE WATCHING

		Gut Hormones										TGF-beta Family			Mitochondrial Targeting			Other																	
		SC GLP1	Oral GLP1	GLP1/ GIP	GLP1/ GIP Antagonist	GLP1/GLP2	GIP	GLP/ GLUC	GGG	PYY	Nutrient Receptor	Bitter Taste	Amylin	Amylin/ GLP1	Amylin/ calcitonin	Acbvin	Myostatin	TGFb Ligand Trap	AcRll	ACC2	AMPK	CMA/Protonophore	Apelin	CB1	GDF15	GPR75	MGAT2	SARM	Undisclosed						
Pharma	Amgen (AMGN)																																		
	AstraZeneca (AZN)																																		
	Boehringer Ingelheim																																		
	Eli Lilly (LLY)																																		
	Merck (MRK)																																		
	Novo (NVO)																																		
	Pfizer (PFE)																																		
	Regeneron (REGN)																																		
	Roche (RHHBY)																																		
Biotech	35Pharma																																		
	Aardvark																																		
	Altimmune (ALT)																																		
	Amplifier																																		
	Biohaven (BHVH)																																		
	Corbus																																		
	GmaxBio																																		
	Gubra																																		
	Kallyope																																		
	Keros (KROS)																																		
	Nimbus																																		
	OrsoBio																																		
	Rhythm (RYTM)																																		
	Scholar Rock (SRRK)																																		
	SciWind																																		
	Shionogi																																		
	Structure (GPCR)																																		
	Terns (TERN)																																		
	Rivus																																		
Veru																																			
Viking (VCTX)																																			
Zealand (ZEAL)																																			

Abbreviations: SC, subcutaneous
 * Investments made in companies with targets



Fedme – Viking Therapeutics (VKTX)



Fedme – Viking Therapeutics (VKTX)

[<< Back](#)

Viking Therapeutics Announces Positive Top-Line Results from Phase 2 VENTURE Trial of Dual GLP-1/GIP Receptor Agonist VK2735 in Patients with Obesity



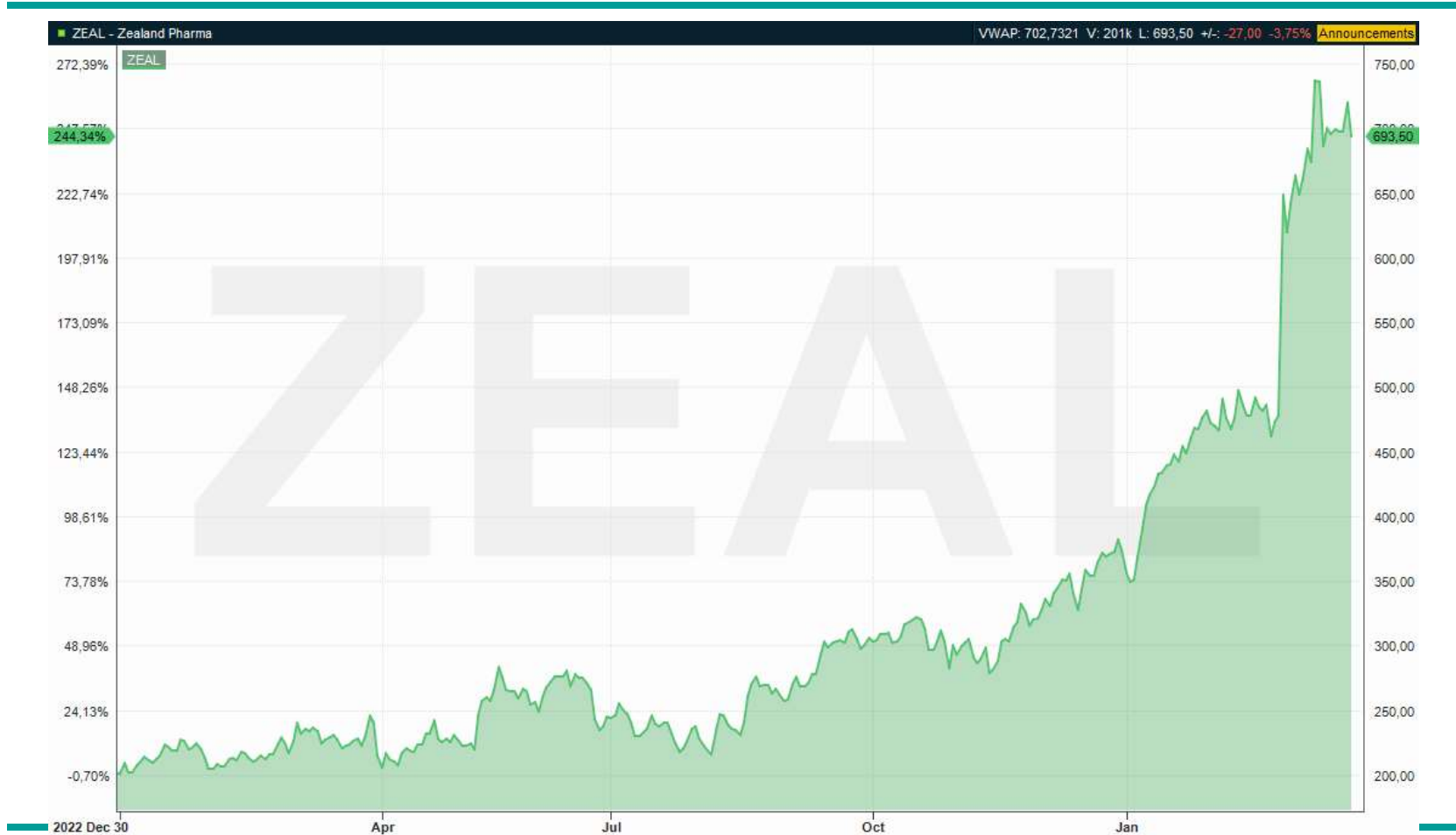
Study Achieves Primary and all Secondary Endpoints, Demonstrating Statistically Significant Reductions in Body Weight at all Doses as Compared to Placebo

Up to 13.1% Placebo-Adjusted Mean Weight Loss (14.7% From Baseline) Observed After 13 Weeks of Treatment; No Plateau Observed

VK2735 Shown to be Safe and Well-Tolerated in 13-Week Study; 95% of GI-specific Treatment Emergent Adverse Events Considered Mild or Moderate

Conference Call Scheduled for 8:00 a.m. ET Today

Fedme – Zealand Pharma (ZEAL)



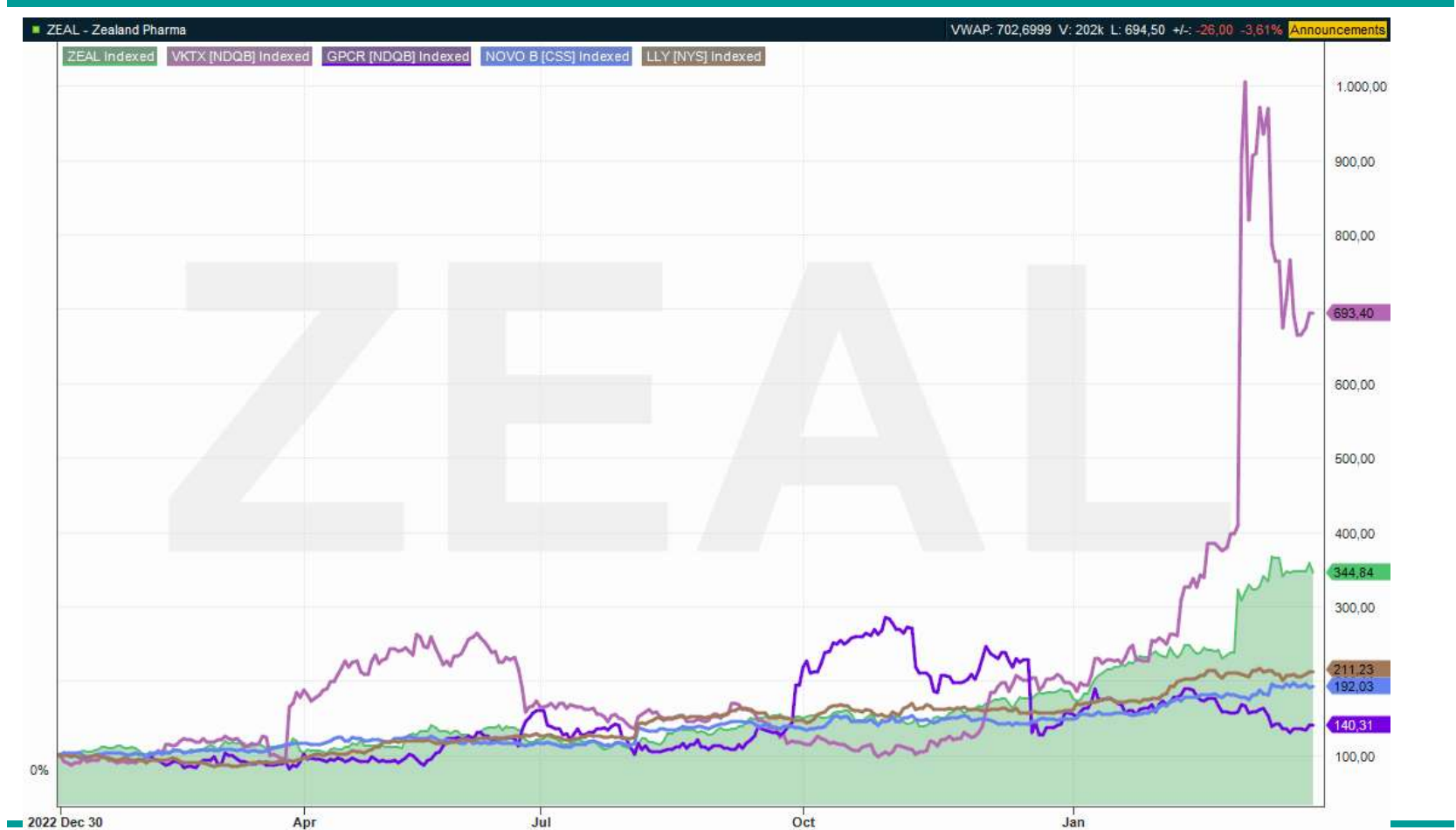
Fedme – Zealand Pharma (ZEAL)



Fedme – GPCR – VKTX - ZEAL

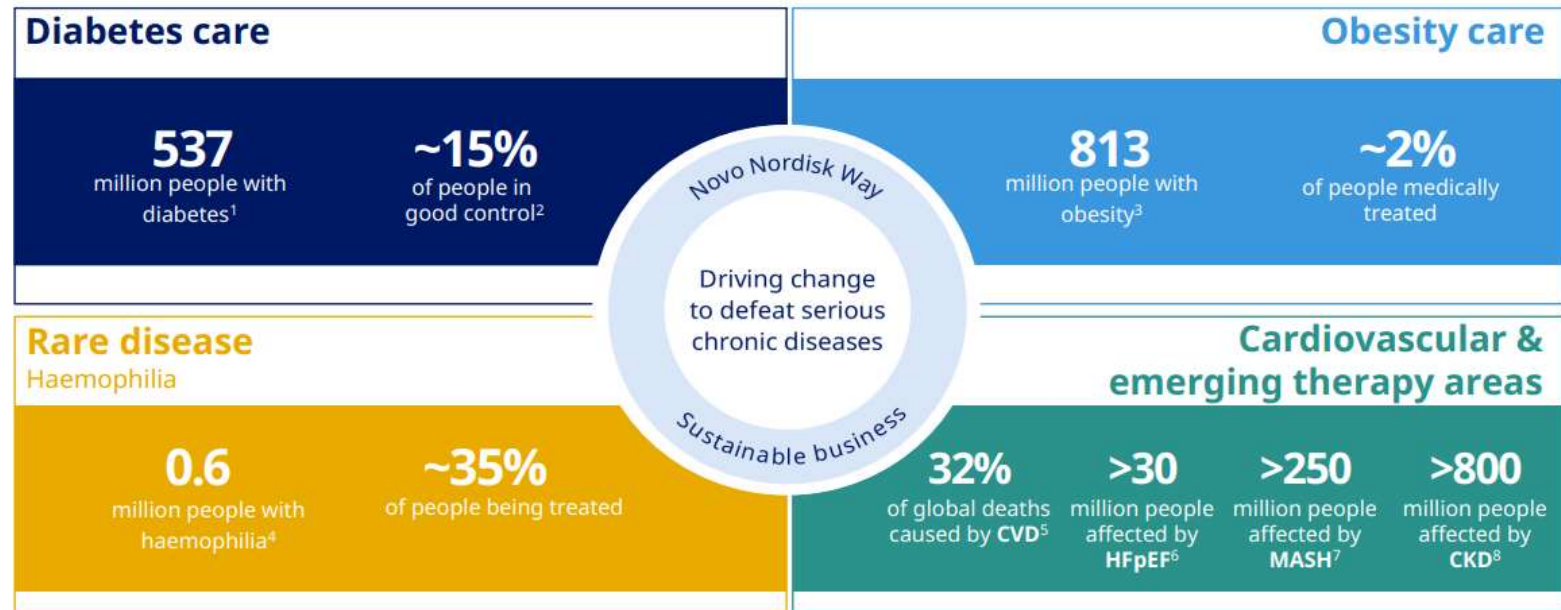


Fedme – GPCR – VKTX – ZEAL – NOVO - LILLY



Novo - CMD

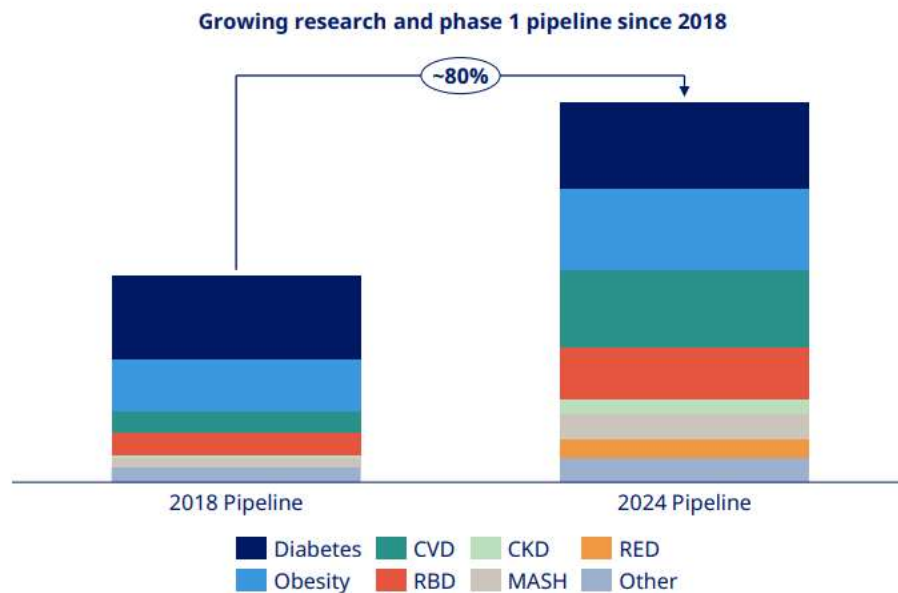
Innovation starts with addressing unmet needs, improving outcomes and reaching more patients



¹International Diabetes Federation: Diabetes Atlas 10th edition, 2021; ²Real-world studies indicate between 30-55% of patients reach HbA_{1c} target <7% e.g. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4388968/>, taking 42.5% in good control of treated people; ³World Obesity Atlas, 2023; ⁴WFH annual survey 2020 (120 of 147 countries responded); Prevalence by calculating expected number of patients using 20.9 per 100,000 in haemophilia - Identified patients as proxy for receiving some sort of treatment; ⁵WHO. Cardiovascular Diseases 2023; ⁶Chris J Kapelios et al Cardiac Failure Review 2023;9:e14; ⁷Younossi ZM et al. Hepatology. 2023;77:1335-1347; ⁸Kovesdy CP. Epidemiology of chronic kidney disease: an update 2022. Kidney Int Suppl (2011). 2022 Apr;12(1):7-11
 CKD: Chronic kidney disease; CVD: Cardiovascular disease; HFpEF: Heart failure with preserved ejection fraction; MASH: Metabolic dysfunction-associated steatohepatitis; WHO: World Health Organization

Novo - CMD

The research and early development pipeline is broad and has increased across therapy areas since 2018



Strategic changes made since 2018

-  Continued key focus on diabetes and obesity
-  Broadening and advancing CVD pipeline
-  Increased commitment in Rare blood disorders
-  Increased investments

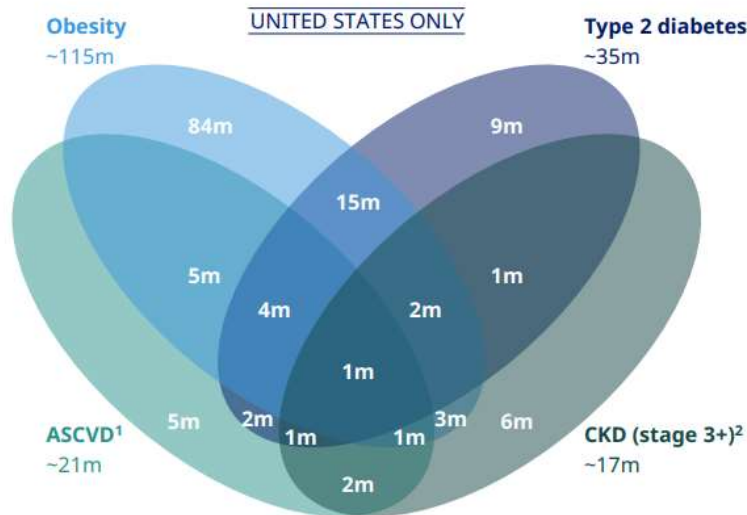
CKD: Chronic kidney disease; CVD: Cardiovascular disease; MASH: Metabolic dysfunction-associated steatohepatitis; RBD: Rare blood disorders; RED: Rare endocrine disorders

CMD24
CAPITAL MARKETS DAY

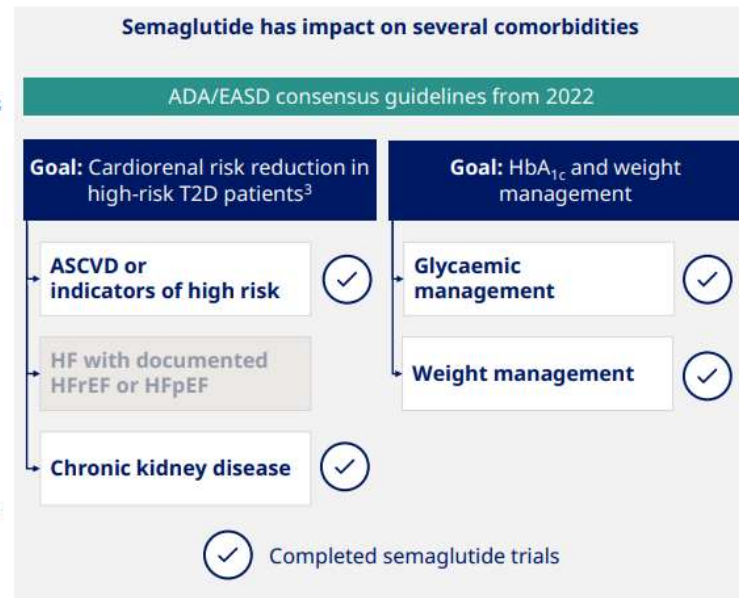
Novo – CMD - Semaglutide

Semaglutide addresses many of the comorbidities associated with type 2 diabetes – with a potential of further additions

Patient overlaps for key focus areas in type 2 diabetes



Semaglutide has impact on several comorbidities



¹Myocardial infarction, stroke and coronary heart disease; ²eGFR <60 ml/min/1.73m²; ³On top of cardiovascular standard of care
 ADA: American Diabetes Association; ASCVD: Atherosclerotic cardiovascular disease; CKD: Chronic kidney disease; CV: Cardiovascular; EASD: European Association for the Study of Diabetes; HbA_{1c}: Haemoglobin A_{1c}; HF: Heart failure; HFrEF: Heart failure with reduced ejection fraction; HFpEF: Heart failure with preserved ejection fraction
 Note: Prevalence overlaps have been estimated on patient-level data from NHANES. Post-estimation adjustments have been undertaken to match certain key metrics as reported by publicly available sources. Numbers are rounded
 Source: NHANES (waves 2003-2004, 2013-2014, 2015-2016 and 2017-2020); UN World Population Prospects 2022; International Diabetes Federation: Diabetes Atlas 10th edition, 2021; World Obesity Atlas 2023

Novo – CMD - Fedme

Novo Nordisk unlocked the market with Wegovy® and reached the commercial strategic aspiration for obesity



NN: Novo Nordisk
Note: Numbers may not add up due to rounding

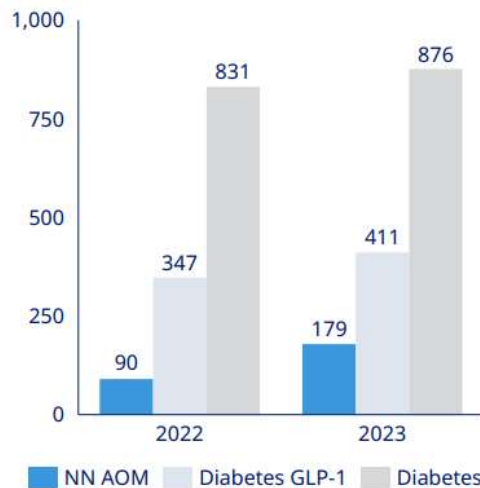
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CAPITAL MARKETS DAY

Novo – CMD - Fedme

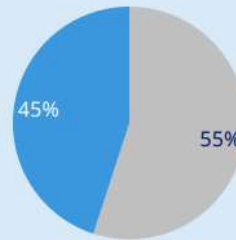
The launch of Wegovy® drove increased number of prescribers, but still lags diabetes products

More doctors write prescriptions for AOMs

Number of prescribers (000's)



Wegovy® has many new prescribers



Non-call plan Call plan

Rx depth: Education to drive improved prescription habits from non-call plan that the sales force does not interact with

- **Call plan:** ~6 Rx per writing physician
- **Non-call plan:** ~3 Rx per writing physician

HCP engagement is still relevant



Rethink
Obesity®

Sales force:

- Obesity care specialist sales team
- Dedicated CV care specialist for SELECT

Medical liaisons:

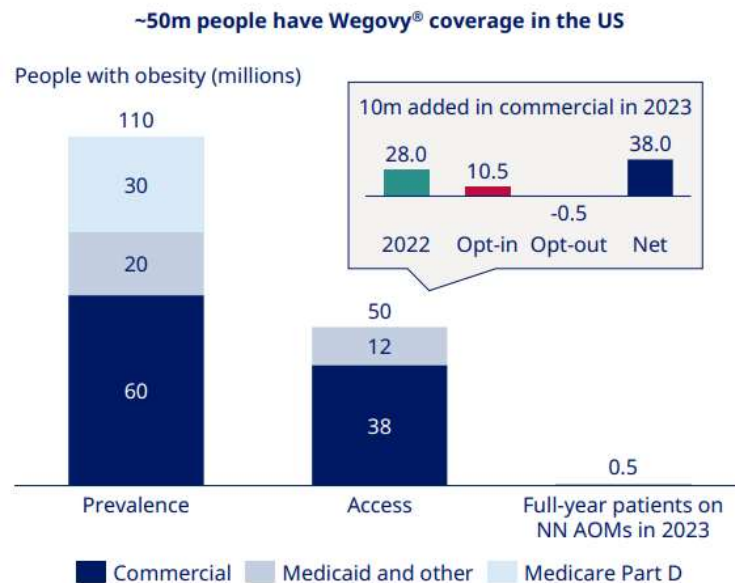
- Obesity field medical team
- First and only Obesity educator team

AOM: Anti-obesity medication; CV: Cardiovascular; HCP: Healthcare professional; NN: Novo Nordisk; Rx: Prescriptions
Source: Wegovy® Early Real-World Insights (December 2023)

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CAPITAL MARKETS DAY

Novo – CMD - Fedme

Novo Nordisk has expanded affordable care access to Wegovy[®] to ~50 million people and SELECT is set to help improve it



Progress across all channels in 2023

Commercial

- ✓ Broad formulary access and progress on employer opt-in
- ✓ >80% of patients pay \$25 or less per prescription

Medicaid and other

- ✓ **Federal coverage:** Examples include DoD, Federal employees Health Plan, veteran affairs, and Indian Health service
- ✓ **Medicaid states:** +5 states added in 2023/2024; 18 states total

Medicare Part D

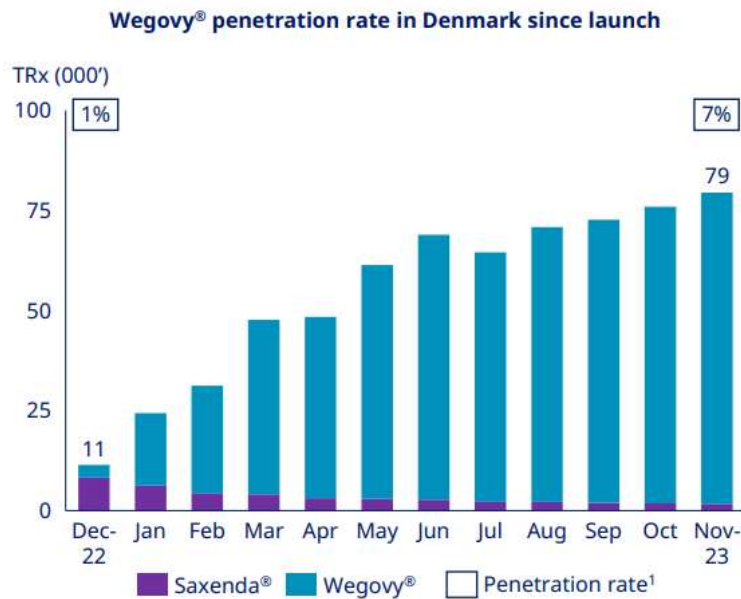
- Reimbursement of AOMs prohibited by law
- SELECT increases opportunity for additional access including Medicare Part D coverage

AOM: Anti-obesity medications; DoD: Department of Defence; NAO: North America Operations
Source: Novo Nordisk Annual Report 2023

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CAPITAL MARKETS DAY

Novo – CMD - Fedme

The unmet need in Denmark is underlined by Wegovy® penetration rate of 7% in the obese population



Characteristics for patients on Wegovy® in Denmark

- 71% female**
Most patients between 40-59 years
- Average BMI of 36**
- ~80% have comorbidities**
- Fully out-of-pocket payment**

CONTINUED DILEMMAS...

- Pressure on **HCP capacity**, especially GP
- Inequality** in health

¹Within obese population
 BMI: Body mass index; GP: General practitioner; HCP: Healthcare professional; TRx: total prescriptions
 Note: Obesity prevalence in Denmark is 18.5% out of the total population of 5.9 million according to OECD (Health at a Glance 2023 Country Note: Denmark)
 Source: The Danish Health Data Authority (Sundhedsdatastyrelsen), Real-world evidence and market research

Novo – CMD - Fedme

Novo Nordisk is continuing the development of a portfolio of superior treatment solutions for obesity

Building a leading portfolio

Our key focus areas



Double-digit weight loss



Composition of weight loss



Co-morbidity impact



Safety and tolerability



Dosing frequency

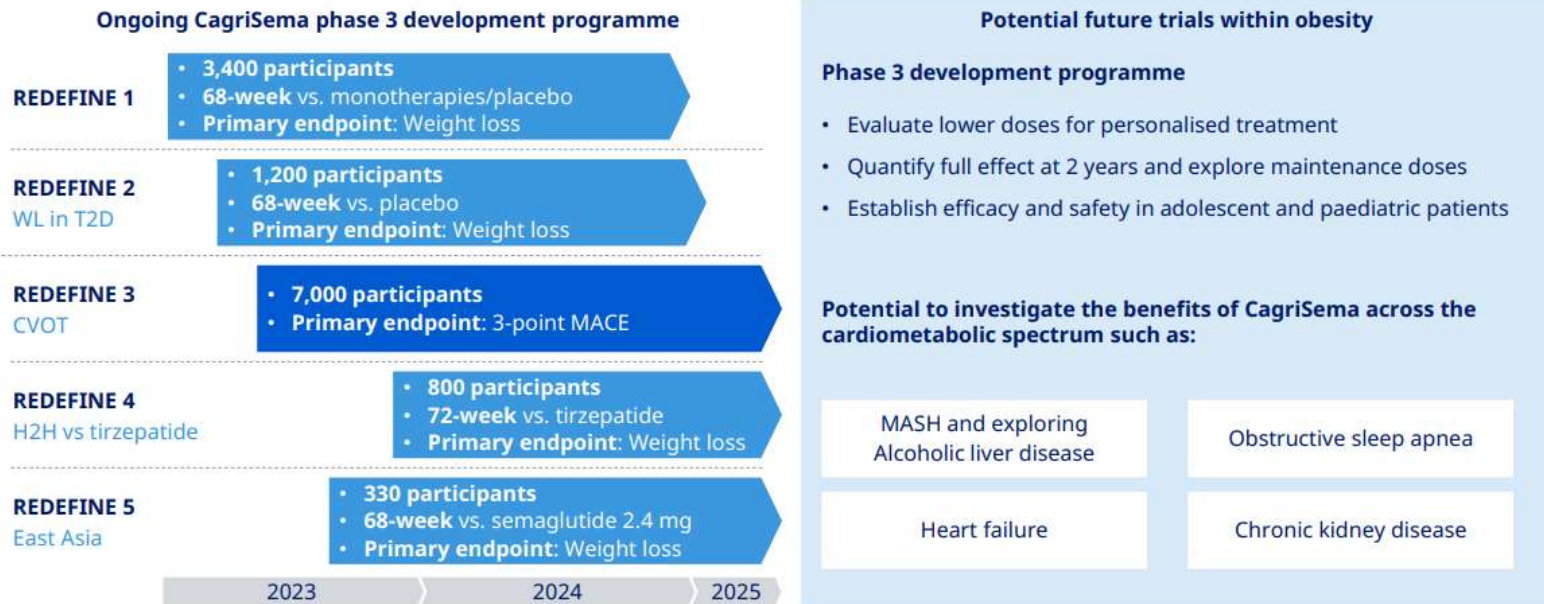
Development pipeline

	2024	2025	2026	2027
Obesity SELECT , sema 2.4 mg, CVOT	Regulatory decision in US and EU			
STEP HFpEF¹ , sema 2.4 mg	Regulatory decision in US and EU			
Oral semaglutide , 25 and 50 mg	Ph 3			
Semaglutide 7.2 mg	Phase 3			
CagriSema	Phase 3			
Monlunabant (INV-202) Oral CB1R inverse agonist	Phase 2			
OW GIP/GLP-1	Phase 2			
GELA² Peripheral focused ultrasound	Phase 2			
INV-347 Oral CB1R inverse agonist	Phase 1			
Amycretin OW sc and OD oral co-agonist ³	Phase 1			

¹ Includes both the STEP HFpEF obesity trial and the type 2 diabetes trial; ² In collaboration with GE Healthcare; ³ Note this trial was completed in Q4 2023. Hence, the ongoing phase 1 trial is OW sc amycretin
EU: European Union, US: United States
CB1R: Cannabinoid receptor 1; CVOT: Cardiovascular outcome trial; GIP: Gastric inhibitory polypeptide; OD: Once-daily; OW: Once-weekly; Ph: Phase; Sc: Subcutaneous; Sema: Semaglutide; Ph: Phase

Novo – CMD - Fedme

We are planning a comprehensive phase 3 programme in Obesity with CagriSema including several outcome trials

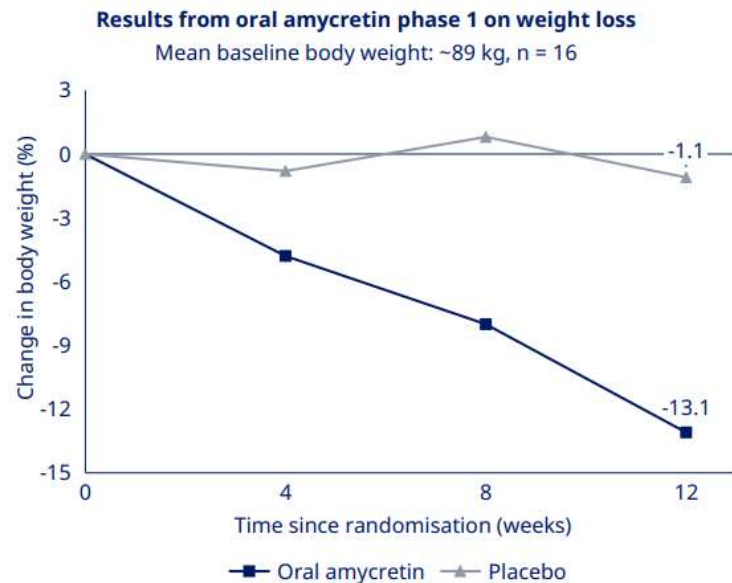


Note: The 44-week REDEFINE 6 trial in China is also ongoing with 300 participants
 CVOT: Cardiovascular Outcomes Trial; H2H: Head-to-Head; MACE: Major adverse cardiovascular event; MASH: Metabolic dysfunction-associated steatohepatitis; WL: Weight Loss; ORC: Obesity-related comorbidity

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Novo – CMD - Fedme

Oral amycretin phase 1 trial completed and subcutaneous amycretin phase 1 trial ongoing with expected read-out in 2025



Amycretin development programme in obesity

Phase 1:

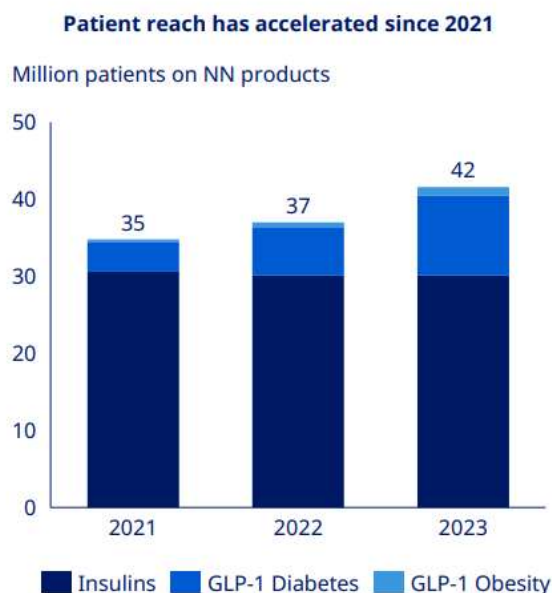
- ✓ Oral amycretin phase 1 completed
- Subcutaneous amycretin phase 1 ongoing

Next steps:

- Subcutaneous amycretin phase 1 expected completion in 2025
- Clinical development programme to be defined based on subcutaneous amycretin phase 1 data

Novo – CMD - Kapacitet

Product supply has continued step-up in investments and employees to support growth



Product supply has expanded to enable the current growth

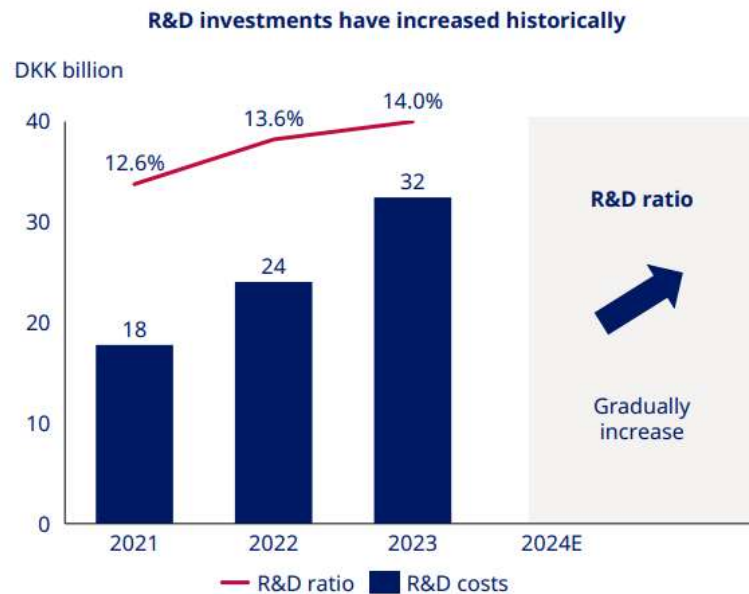
	2021	2023
Number of employees	~16,000 employees	~25,000 employees
CAPEX investment level CAPEX to sales ratio	6 bDKK 4%	26 bDKK 11%
Ozempic® devices	Index 100	Index ~300
Semaglutide API	Index 100	Index ~400

API: Active Pharmaceutical Ingredient; CAPEX: Capital Expenditure; NN: Novo Nordisk
 Note: Insulin includes new-generation insulins, modern insulins and human insulins
 Sources: Novo Nordisk Annual Report 2023

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CAPITAL MARKETS DAY

Novo – CMD – R&D

Step-up in R&D investments to expand and diversify pipeline



AD: Alzheimer's disease; CKD: Chronic kidney disease; CVD: Cardiovascular disease; MASH: Metabolic dysfunction-associated steatohepatitis; PD: Parkinson's disease; RBD: Rare blood disorder; RED: Rare endocrine disorder; R&D: Research and development

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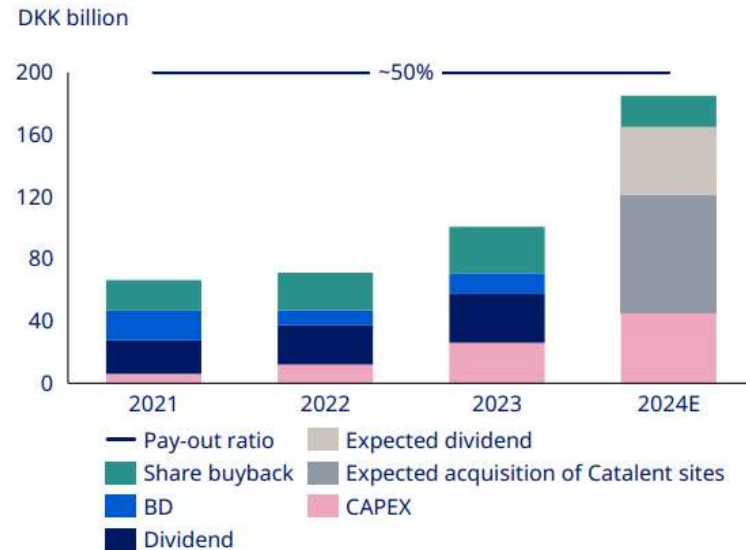
Novo – CMD – R&D

Novo Nordisk's capital allocation allows for investing in the business while maintaining attractive shareholder returns

Strategic capital allocation priorities

- 1 Internal growth opportunities: R&D and PS investments
- 2 Attractive annual dividend
- 3 BD investments to enhance R&D pipeline
- 4 Flexible share buybacks to distribute excess cash

Stable dividend pay-out ratio despite increased CAPEX and BD



BD: Business development; CAPEX: Capital expenditure; E: Estimated; PS: Product supply; R&D: Research and development
 Note: All numbers except for pay-out ratio are based on cash flow statement. Pay-out ratio calculated as total dividends for the year as a percentage of net profit for the same year

Noget positivt at slutte med NASH-kirkegården er historie?



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Madrigal Pharmaceuticals Announces FDA Approval of Rezdiffra™ (resmetirom) for the Treatment of Patients with Noncirrhotic Nonalcoholic Steatohepatitis (NASH) with Moderate to Advanced Liver Fibrosis

[PDF Version](#)

- Rezdiffra becomes the first and only medication approved by the FDA for the treatment of NASH (also known as "MASH")
- Accelerated approval was based on Phase 3 data demonstrating that Rezdiffra improved liver fibrosis and resolved NASH in patients with noncirrhotic NASH with moderate to advanced liver fibrosis
- Rezdiffra prescribing information does not include a liver biopsy requirement for diagnosis
- Madrigal conference call scheduled for March 14, 2024, at 5:15 pm ET

Noget alternativt at slutte af med

The Median Pharma Sustains \$3.7 Million in Market Cap for Every Employee. In Contrast Bayer Sustains \$300k in Market Cap Per Employee.



Bayer is in dead last in terms of its ratio of market value per employee (among the top 30 pharmas by market cap).

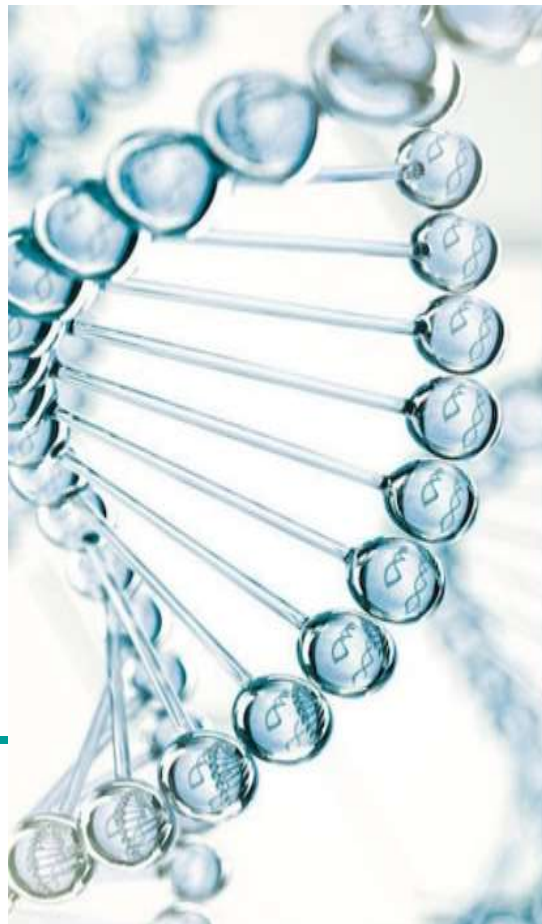
The only company that is anywhere close is Sun Pharma which has most of its employees in India. And these are engaged in generics manufacture.

Even then, Sun's MC/Emp ratio is three times higher than that of Bayer.



Noget kommercielt at slutte af med

- **Investér i DKs eneste børsnoterede biotekfond
Advice Capital Breakthrouh Biotech (ticker: ACIBB)**



Breakthrough Biotech

Specialist fond designet til at finde de mest lovende lægemidler og opnå godkendelse i USA indenfor 3 år.

Derefter høste værditilvæksten ved at lade kommercialiseringen udfolde sig i 4 år.

35 selskaber primært i cancer og sjældne sygdomme

68% af fondens midler placeret i kommercielle biotekselskaber.



ADVICE CAPITAL
BREAKTHROUGH BIOTECH
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Announce

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Tak for i dag!

Økonomisk Ugebrev A/S



Spørgsmål, abonnement, ris/ros eller kommentarer

sa@ugebrev.dk