



## Outcome Capital Life Sciences Market Pulse

September 2022

Reach the Right Outcome



[www.outcomecapital.com](http://www.outcomecapital.com)

# OUTCOME CAPITAL | LIFE SCIENCES MARKET PULSE

## Strategic Transactional Insights & Market Trends



### Outcome Capital At A Glance...

Outcome Capital is a highly-specialized life sciences advisory & investment banking firm providing middle-market transactional expertise underpinned by a value-added, market-aligned approach to strategy execution. Our industry-dedicated specialists leverage significant operational, strategic & scientific knowledge in sharing their insights on industry-defining transactions.

#### Life Science Verticals:

- › MedTech
- › Pharma
- › Biotech
- › Diagnostics
- › Life Sciences Services
- › Digital Health

#### Transaction Focus:

- › M&A
- › Management Buyouts & Roll-Ups
- › Partnering
- › Equity Financings

#### Expertise Across the Value Chain:

- › Scientific
- › Regulatory
- › Reimbursement
- › Legal & IP
- › Operational
- › Transactional

### Outcome Capital Pulse: Monthly Insights of Life Science Deal Action & Drivers

#### Highlighted Transactions

- › Strategic analysis from Outcome Capital's life sciences-dedicated deal team

#### Transaction Lineup

- › Snapshot of noteworthy life sciences deals highlighting industry-defining activity

#### Outcome Index Tracker

- › Custom medtech, biopharma, diagnostics, services & healthtech indices benchmarked to the S&P500



## Highlighted Transactions

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## Novo Bolsters Rare Disease Franchise With Hematology Pipeline



Target

\$1.1B

Deal Size



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While the patient populations for rare diseases are limited in size, many leading biotech companies have an emphasis on developing therapeutics for these conditions. Although Novo Nordisk may best be known for their diabetes treatments, they are among the global leaders in rare diseases, including sickle cell anemia. The recent \$1.1B acquisition of Forma Therapeutics expands Novo's focus on rare blood cell disorders, adding an extensively studied Phase 2/3 asset (etavopivat). While etavopivat is approaching FDA submission, the acquisition comes at an interesting time given recent market news in both sickle cell disease and thalassemia where gene therapy has shown potential in treating the underlying condition. In assessing the potential of etavopivat in the market, it will be essential to monitor newer gene therapy approaches.

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## Autobahn Therapeutics Raises \$33M To Advance Novel CNS Targeting Platform



Target

\$33M

Deal Size



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Oncology applications receive the lion's share of investment dollars and continue to make advances; however, neurological applications are the final frontier. In September, Autobahn Therapeutics completed a \$33M equity financing which included investment from Biogen, BMS, Arch Ventures, BVF Partners, Invus and others. A unique challenge for neurotherapies is crossing the blood-brain barrier to access the CNS. While liposomal delivery and other permeabilizing approaches continue to evolve, the combined use of prodrugs with inhibitors (as in Parkinson's Disease) has been a classical pharmacologic approach to minimize off-target peripheral complications. Autobahn's novel platform combines the enzymatic activity and brain-focused tissue distribution profile of fatty-acid amide hydrolase (FAAH) with peripherally restricted FAAH inhibitors. The current funding will support Autobahn's lead program for the development of a thyroid receptor (TR $\beta$ ) agonist for the treatment of depression and multiple sclerosis.

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## The Billion Dollar Access Battle: CVS Health Acquires Signify Health for \$8B



Target

\$8.0B

Deal Size



Buyer

“

To get into the provision of care, primary or otherwise, these days, at either a large regional or national scale, there is seemingly only one way to do it: Acquire. After losing out on One Medical to Amazon, we learned on Labor Day of CVS Health's successful bid for Signify Health, with CVS acquiring SGFY for \$30.50 per share – at a valuation of \$8 billion (\$7.6B equity, \$8B EV). CVS' winning bid was enough to fend off the likes of Amazon and UnitedHealth – themselves recent and traditional acquirers of scale (and providers). The deal checks numerous benefits / capabilities boxes for CVS Health, namely “home health”, “primary care”, “Medicare Advantage” and “value-based care” (with related technology platform) and is expected to be accretive to CVS' earnings in 2024 (i.e., when the deal is expected to close). The deal gets CVS – and presumably, more of its other assets, over time – closer to the consumer and into the home environment, and via a profitable beach head in Signify, with the addition of 10K clinicians nationwide, who provide health and wellness visits to some 2.5M consumers in their homes. In addition, Cano Health may also be on the table, as it is being reported that both Humana and CVS are involved in that sale process as well. All in all, big moves by one of the biggest players in the industry, and it will be very interesting to see how the other payers and big tech companies respond over time, in this broader battle for access and scale.

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## Private Equity Acquisition Will Propel Future Inorganic Growth



Target

Undisclosed

Deal Size



Ampersand

Investors

“

*Continuing with their long history of acquiring well-managed and growing pharma services providers, Ampersand Capital acquired iuvo biosciences. iuvo has established themselves as a growing leader in both discovery and clinical development in ophthalmology. They have seen consistent growth over the past few years, but now this transaction will provide the needed capital for future bolt-on acquisitions and has the potential to allow them to capture a larger portion of the CRO market.*

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## Rapid EEG System Attracts Growth Capital



**ceribell<sup>®</sup>**

Target

**\$103M**

Deal Size



RACapital



RED TREE  
VENTURE CAPITAL

Redmile Group



Investors



*The medical device digital revolution continues to garner investor interest when strong product-market-fit has been proven. Leveraging four 510(k) clearances (the first in 2017), Ceribell has unlocked a market segment ripe for digital innovation. This growth capital is pegged for expansion into emergency departments and ICU's while also improving existing functionality. By keying into enhanced patient outcomes as a predicate for future financial success, Ceribell is cornering a market and entrenching their platform.*



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## Cell Therapy Treatment Of Solid Tumors – ArsenalBio's Ambition



**ArsenalBio™**

Target

**\$220M**

Deal Size

SoftBank Vision Fund

Bristol Myers Squibb™

**HITACHI**  
Inspire the Next



PARKER  
INSTITUTE  
FOR CANCER  
IMMUNOTHERAPY



UCSF

**SIXTH STREET™**

Foundation  
Investment Company



EUCLIDEAN CAPITAL  
Emerson  
Collective

WESTLAKE VILLAGE  
VENTURES

Waycross  
Ventures

**KLEINER PERKINS**

HYERS CAPITAL PARTNERS

Investors

“

Despite the promise of cell-based immunotherapies, solid tumors have remained elusive to current cell therapy approaches. ArsenalBio's programmable technology brings together multiple well-known techniques to attack this challenge. Integrating high-throughput gene profiling, gene-editing, and artificial intelligence, the ArsenalBio platform can be fine tuned to address multiple cancer types. This potential has been recognized by leading venture capital groups with the most recent \$220M Series B round, which brings the total funding to >\$300M. In addition to the large financings, ArsenalBio had partnered with BMS and, just following this financing, announced a second partnership with Genentech. Interestingly, ArsenalBio has elected to take an autologous approach, which many have shifted away from in favor of the potential of streamlined manufacturing and administration simplification using allogenic approaches. To us, this highlights the efficacy variability from general IO approaches.

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## Pretzel Continues Novel Therapy Development Targeting Mitochondrial Diseases



**\$73M**  
Deal Size



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Pretzel Therapeutics added to the growing list of headlines stemming from advancements in gene therapies as they secured \$72M to advance their platform technology. Unlike competitors in this space who are targeting human genetic defects, the company is seeking to advance technologies to manipulate mitochondrial genes related to disease pathology. Mitochondrial diseases represent a vast pool of illnesses with a wide range of rarities encompassing both rare and common disorders. This allows the company to leverage regulatory incentives to develop therapies for rare diseases and establish clinical proof of concept that can then be applied to more common diseases in the future. While most are familiar with the modification of human genes to address disease following the rise to prominence of CRISPR-based gene editing, the concept of mitochondrial DNA manipulation represents a differentiated approach to therapy that may provide options to patients with debilitating disease beyond antioxidants and vitamins. ARCH Venture Partners and Mubadala Capital Ventures led the round betting on this unique approach addressing a largely neglected patient population.

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## Consolidation Continues In The Life Sciences Services Segment



► **PHARMALEX**

Target

**\$1.3B**

Deal Size

**AmerisourceBergen**

Buyer

“

Given the increasingly complex development & regulatory environments, scientific innovators rely on outsourced specialty service providers for commercial success. As a result, service providers seek to differentiate themselves in a high-demand, yet highly-fragmented market. AmerisourceBergen (NYSE: ABC), a leading biopharma manufacturer and distributor, is following this trend with its acquisition of PharmaLex. The acquisition adds scientific, regulatory, safety and compliance consulting capabilities to ABC's offerings, building out its presence across the biopharma value chain. In their last earnings call, ABC indicated its commitment to strengthening long-term partnerships as well as expanding impact on innovation within the pharma space. PharmaLex's offerings address both points, while coupling with ABC's market access and distribution competencies to become an end-to-end pharma service provider. We expect to see service providers continuing to develop their capabilities with the intent of becoming an end-to-end platform, from concept to commercialization, as the segment remains highly-saturated and competitive.

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September 2022 | Transaction Lineup

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## September 2022 Transaction Lineup



Date	Target	Buyer/ Investor	Target Description	Deal Type	Deal Value (\$M)	Up-Front Payment (\$M)	Vertical
<a href="#">9/1/22</a>	KATERIC	PROPHARMA GROUP®	Global medical writing provider of individualized, single-source solutions for biopharma, device & diagnostics sectors.	M&A	Undisclosed	Undisclosed	Services
<a href="#">9/1/22</a>	forma THERAPEUTICS	novo nordisk®	Clinical-stage biopharma company focused on novel therapeutics to transform the lives of patients with rare hematological diseases & cancers.	M&A	1,100	1,100	Biotech / Pharma
<a href="#">9/1/22</a>	Achrom	calibre SCIENTIFIC LAB UNLIMITED	Belgium-based distributor of chromatography consumables, equipment & accessories in the Benelux region.	M&A	Undisclosed	Undisclosed	Life Science Tools
<a href="#">9/5/22</a>	signifyhealth®	CVSHealth®	Leading healthcare platform leveraging advanced analytics, technology & provider networks to create value-based payment programs.	M&A	8,000	8,000	HealthTech
<a href="#">9/6/22</a>	ArsenalBio™	Collaborative Ventures	Programmable cell therapy company engineering advanced CAR T therapies for solid tumors.	Financing	220	N/A	Biotech / Pharma
<a href="#">9/6/22</a>	elephas	SANDS CAPITAL	Developer of oncology diagnostics platform to predict patient response to immunotherapies.	Financing	42	N/A	Diagnostics

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<a href="#">9/7/22</a>	SpringWorks THERAPEUTICS	GSK	License & collaboration agreement for investigational oral gamma secretase inhibitor with antibody-drug conjugate targeting B-cell maturation antigen.	Partnership	625	75	Biotech / Pharma
<a href="#">9/8/22</a>	INNERVACE	DEERFIELD Advancing Healthcare® ipgroup Penn Medicine WARF VENTURES BioAdvance	Regenerative medicine company developing the first implantable biofabricated neural pathway to restore brain circuitry.	Financing	40	N/A	Biotech / Pharma
<a href="#">9/8/22</a>	Autobahn Therapeutics	Pfizer Ventures ALEXANDRIA SAMSARA BIOCAPITAL Biogen COWEN ARCH Section 32 INVUS Bristol Myers Squibb	Biotech company leveraging proprietary brain-targeting chemistry platform to unlock new therapeutics.	Financing	33	N/A	Biotech / Pharma
<a href="#">9/8/22</a>	Beth Israel Lahey Health Beth Israel Deaconess Medical Center	DEERFIELD Advancing Healthcare®	Research collaboration to accelerate discovery of novel therapeutics & transformative medicines.	Partnership	130	130	Biotech / Pharma
<a href="#">9/12/22</a>	PHANTOM NEURO	BREAKOUT VENTURES LionBird DRAPER ASSOCIATES TIME R2	Neurotech startup that delivers a low power, highly accurate system for lifelike control of robotic orthopedics.	Financing	6	N/A	MedTech
<a href="#">9/12/22</a>	PRETZEL THERAPEUTICS	UNIVERSITY OF CAMBRIDGE GU Ventures Cambridge Innovation Capital INVUS HealthCap G/A Angell Fir Ventures ARCH Karolinska Institutet MUBADALA	Biotech company harnessing the intricacies of mitochondrial biology to develop groundbreaking therapies.	Financing	73	N/A	Biotech / Pharma



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<a href="#">9/12/22</a>	neuroLens®	MVM PARTNERS KKR PALCON VISION MARSHALL WACE BLUESTEM CAPITAL PARTNERS	Developer of patented Contoured Prism technology to improve vision care by bringing the eyes into better alignment.	Financing	67	N/A	MedTech
<a href="#">9/13/22</a>	PHARMALEX	AmerisourceBergen	Provider of specialized scientific, regulatory, safety & compliance services for the life sciences industry.	M&A	1,300	Undisclosed	Services
<a href="#">9/15/22</a>	LifeImage®	Intelera®	Image exchange network of curated clinical & imaging data, creating the world's largest medical image resource.	M&A	Undisclosed	Undisclosed	HealthTech
<a href="#">9/20/22</a>	Takeda	Puma Biotechnology	License agreement to research, develop & commercialize a selective, small-molecule, orally-administered inhibitor of aurora kinase targeting tumors.	Partnership	294	7	Biotech / Pharma
<a href="#">9/26/22</a>	LAVA THERAPEUTICS	Seagen®	License agreement for an advanced preclinical asset targeting epidermal growth factor receptor-expressing solid tumors.	Partnership	700	50	Biotech / Pharma
<a href="#">9/27/22</a>	scribe THERAPEUTICS	sanofi	Research collaboration to accelerate breakthrough CRISPR-based cell therapies for cancer treatment.	Partnership	1,025	25	Biotech / Pharma



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<a href="#">9/27/22</a>	ArsenalBio™	<b>Genentech</b> <small>A Member of the Roche Group</small>	Collaboration deploying proprietary technology for high-throughput screening & T cell engineering to identify critical success circuits in T cell-based therapies.	Partnership	70	Undisclosed	Biotech / Pharma
<a href="#">9/28/22</a>	juvo Partner Research Organization	Ampersand	Specialty CRO providing laboratory services, preclinical & clinical development services as well as consulting.	M&A	Undisclosed	Undisclosed	Services
<a href="#">9/28/22</a>	ceribell®	RACAPITAL <small>Ally Bridge Group</small> Redmile Group Longitude CAPITAL RED TREE VENTURE CAPITAL	Cloud-linked, portable EEG device assessing brain waves to identify occurrence of seizures & other intensive care conditions.	Financing	103	N/A	MedTech
<a href="#">9/29/22</a>	Versantis	GENFIT <small>TOWARDS BETTER MEDICINE</small>	Clinical-stage biotech company focused on addressing the growing unmet medical need in liver diseases.	M&A	109	Undisclosed	Biotech / Pharma
<a href="#">9/29/22</a>	Ventus THERAPEUTICS	novo nordisk®	License agreement to develop & commercialize candidates from Ventus' portfolio of peripherally-restricted NLRP3 inhibitors.	Partnership	703	70	Biotech / Pharma
<a href="#">9/30/22</a>	AAVANTIBIO	SOLID BIOSCIENCES	Gene therapy company focused on advancing innovative gene therapies in areas of high unmet clinical need.	M&A	Undisclosed	Undisclosed	Biotech / Pharma

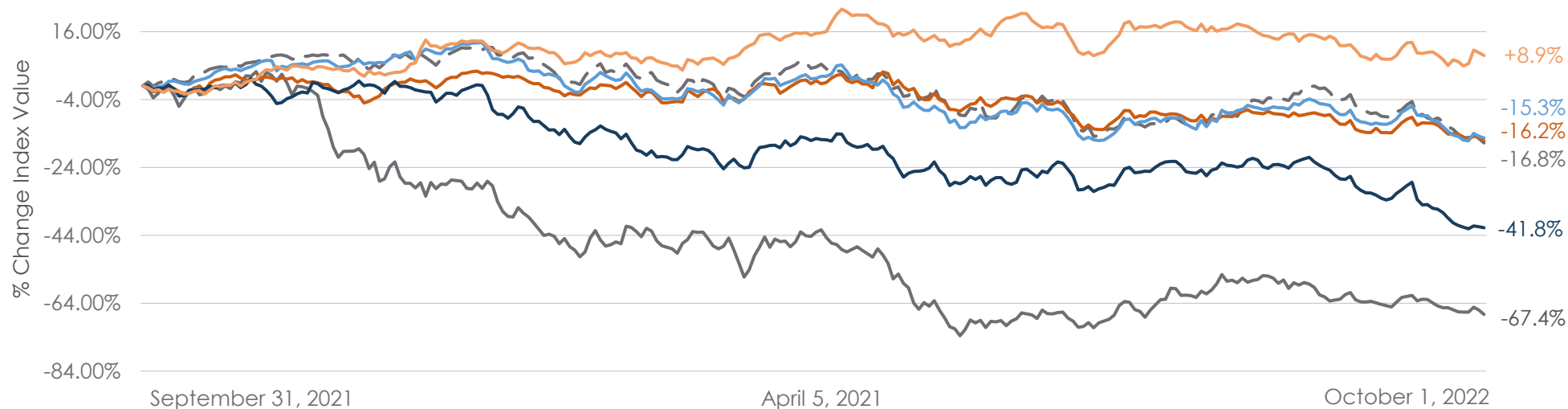




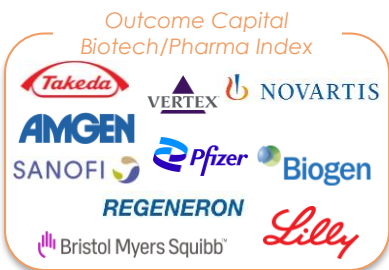
## Outcome Index Tracker

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## Outcome Capital Index Tracker (LTM)



Legend    - - S&P500    Outcome Capital MedTech Index    Outcome Capital Biotech/Pharma Index    Outcome Capital HealthTech Index    Outcome Capital Dx Index    Outcome Capital Services Index





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