

Outcome Capital Life Sciences Market Pulse

August 2023

Reach the Right Outcome







Market Trends & Strategic Transactional Insights



Outcome Capital At A Glance...

A highly-specialized life sciences and healthcare 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 Sciences Verticals:

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

Transaction Focus:

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



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

Outcome Index Tracker

 Custom medtech, biotech/pharma, diagnostics, services & healthtech indices benchmarked to the S&P500

Transaction Lineup

 Snapshot of noteworthy life sciences deals highlighting industry-defining activity

Highlighted Transactions

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



Outcome Index Tracker



Outcome Capital Index Tracker (LTM)















August 2023 | Transaction Lineup



August 2023 Transaction Lineup

Date	Target	Buyer/ Investor	Target Description	Deal Type	Deal Value (\$M)	Up-Front Payment (\$M)	Vertical
8/2/2023	(7) apton	PacBi•	Developer of high throughput short- reader sequencing to enable sequencing billions of DNA clusters in one flow cell.	M&A	\$110	\$85	Life Science Tools
8/3/2023	IONIS	U NOVARTIS	Leader in RNA-targeted therapy developing novel medicines for patients with lipoprotein(a)-driven cardiovascular diseases.	Partnership	\$60	\$60	Biotech / Pharma
8/3/2023	*2 Alnylam*	≈ agios	Developer of novel RNAi (RNA interference) to facilitate gene silencing for disease modifications.	Partnership	\$147.5	\$17.5	Biotech / Pharma
8/8/2023	A astex ° pharmaceuticals	MERCK	Pharma company dedicated to discovering & developing novel small molecule therapeutics.	Partnership	\$535	\$35	Biotech / Pharma
8/9/2023	Decibel THERAPEUTICS"	REGENERON	Clinical-stage biotech company dedicated to developing treatments to restore hearing & balance.	M&A	\$213	\$109	Biotech / Pharma
8/9/2023	alltrna	Flagship Pioneering	Developer of platform for pioneering tRNA-based therapeutics to help regulate proteins & resolve diseases.	Financing	\$109	N/A	Biotech / Pharma

















August 2023 Transaction Lineup

Date	Target	Buyer/ Investor	Target Description	Deal Type	Deal Value (\$M)	Up-Front Payment (\$M)	Vertical
8/9/2023	•!][[[]i• GEDi Cube	Renovaro Biosciences	Cutting-edge Al/machine learning technology with validation in humans for early diagnosis of lung cancer.	M&A	Undisclosed	Undisclosed	Diagnostics
8/14/2023	Populi Populi	DEFINITIVE HEALTHCARE	Provider-focused data analytics company to optimize physician relationships & expand market share.	M&A	\$80	\$52	Services
8/15/2023	instylla	AMED Ventures Excelestar Hy CHANNY HERTORS SPARTA GROUP SPARTA GROUP	Delivers next-generation liquid embolics for interventional radiology focused on interventional oncology & peripheral hemostasis.	Financing	\$30	N/A	Medtech
8/15/2023	TENTARIX BIOTHERAPEUTICS	GILEAD Creating Possible	Developer of proprietary platform focused on discovering multifunctional protein therapeutics for oncology & inflammatory diseases.	Partnership	\$306	\$66	Biotech / Pharma
8/17/2023	<i>⊘</i> abcuro	SOLEUS CAPITAL A SOLEUS CAPITAL BlackRock Redmille Group Mass General Brighum BainCapital SMSMSR CEdia Response ILO SMSSR Bert Garden Bert Group SMSSR Bert Garden Bert Group Bert Group SMSSR Bert Group Ber	Biotech company developing cancer & autoimmune therapies through modulation of cytotoxic C & NK cells.	Financing	\$155	N/A	Biotech / Pharma
8/17/2023	Phenome The Functional Cell Biology Company	BRUKER	Cell biology company developing single-cell research tools to deliver deep insights into cellular functions.	M&A	\$105	N/A	Life Science Tools















August 2023 Transaction Lineup

Date	Target	Buyer/ Investor	Target Description	Deal Type	Deal Value (\$M)	Up-Front Payment (\$M)	Vertical
8/18/2023	OTH.ºO	doccla	Platform for healthcare professionals to remotely monitor patient statistics including heart rate & oxygen levels.	M&A	Undisclosed	Undisclosed	HealthTech
8/21/2023	Thyme	CASDIN town hall	Value-based care partner guiding patients through complex healthcare systems by offering personalized support.	Financing	\$60	N/A	Services
8/21/2023	TIMBER	LEO	Advancing innovative clinical research by evaluating novel treatments for rare dermatological diseases.	M&A	\$36	\$14	Biotech / Pharma
8/22/2023	·X Delphinus	Arboreturn VENTURES ATRINITY CAPITAL	Developer of tomography system to deliver a transformational approach to breast cancer detection.	Financing	\$12	N/A	MedTech
8/22/2023	Advanced NanoTherapies Inc.	B.E. CAPITAL MANAGEMENT FUND	Next-generation of drug coated balloons with higher potency, lower dosing & long-term release.	Financing	\$14	N/A	MedTech
8/23/2023	Ö CELLARES	Bristol Myers Squibb* KI KOCH. DEPUME TO NOLOGE OF DEPUME TO NOLOGE	Integrated development & manufacturing organization dedicated to clinical & industrial-scale cell therapy manufacturing.	Financing	\$255	N/A	Services

















August 2023 Transaction Lineup

Date	Target	Buyer/ Investor	Target Description	Deal Type	Deal Value (\$M)	Up-Front Payment (\$M)	Vertical
8/23/2023	FLUXION	Microsystems	Innovative cell analysis solutions utilizing automated patch clamp technology & cell-based assay tools.	M&A	Undisclosed	Undisclosed	Life Science Tools
8/25/2023	Genesis Therapeutics	ROCK SPRINGS WENLO VENTURES CAPITAL ACCORDANCE ROCK ROCK	Biotech company unlocking novel protein targets for development of medications through an advanced molecular proprietary Al platform.	Financing	\$224	N/A	Biotech / Pharma
8/28/2023	abcam	DANAHER	Producer & distributer of protein research tools & high-performance monoclonal antibodies.	M&A	\$5,700	\$5,700	Life Science Tools
8/28/2023	immun•gen.	Takeda	Developer of antibody-drug conjugates (ADCs) with enhanced anti-tumor activity and tolerability.	Partnership	\$34	\$34	Biotech / Pharma
8/30/2023	EMBARKBIOTECH	novo nordisk [®]	Biotech company discovering a novel target that suppresses appetite & increases insulin sensitivity.	M&A	\$490	\$16	Biotech / Pharma
8/31/2023	acertherapeutics	EXZEVRA THERAPEUTICS	Pharma company focused on acquisition, development & commercialization of therapies for serious rare & ultra-rare diseases.	M&A	\$91	\$15	Biotech / Pharma

















Highlighted Transactions



Danaher Adds Life Sciences Tool Giant Abcam To Portfolio of Businesses

abcam

\$5.7B

DANAHER

Target

Deal Size

Buyer





The life sciences tools segment is characterized by a small number of large cap entities and a fragmented small to mid-cap companies, which have carved a niche. Tool companies typically reach a glass revenue ceiling and, as a result, are forced to explore inorganic opportunities. Danaher, one of the most prominent acquirers in this segment, announced the acquisition of Abcam, a leading antibody and reagent provider, in August for \$5.7B. The acquisition price of \$24/share is in line with the public market value for last 3 months following Abcam's CEO letter to replace the company's directors, seeking to restore operational and financial performance and the subsequent announcement that the board was evaluating strategic alternatives. In line with the Danaher business strategy, Abcam will maintain their brand and continue as an operating business under the Danaher umbrella. The acquisition adds a high margin consumable business to Danaher's portfolio, which complements the company's existing manufacturing, instrumentation, imaging and diagnostic businesses.

Oded Ben-Joseph, PhD, MBA
Managing Partner
Outcome Capital, LLC
oben-joseph@outcomecapital.com





Regeneron Fortifies Gene Therapy & Hearing Loss Programs



209MDeal Size

REGENERON

Buyer

Target



Ellen Baron, PhD Managing Director Outcome Capital, LLC ebaron@outcomecapital.com

Regeneron Pharmaceuticals has agreed to acquire Decibel Therapeutics, a clinical-stage biotechnology company specializing in therapies to restore and improve hearing and balance, for an up-front payment of \$109 million. The two companies have collaborated since 2017 on three gene therapy programs targeting different forms of congenital, monogenic hearing loss. These include DB-OTO, an investigational cell-selective, adeno-associated virus gene therapy, currently in clinical trials. It is designed to provide physiological hearing to individuals with profound congenital hearing loss caused by mutations of the otoferlin gene. Milestone payments to Decibel associated with DB-OTO could bring the value of the deal to \$213 million. If biotech mergers and acquisitions are truly coming back as market-watchers assert, one important reason why is growing interest by buyers in hearing-loss drug developers or at least some of their treatments. Decibel is one of at least three hearing-loss drug developers that have seen themselves, or some of their assets, change hands over the past year. Eli Lilly purchased Akouos for up to \$610 million in December 2022. In March, Spiral Therapeutics paid an undisclosed amount for assets related to three treatment candidates initially developed by Otonomy. Just last month, Korro Bio agreed to combine with Frequency Therapeutics through a reverse merger set to close in the fourth quarter. Despite the headwinds encountered by Frequency, Otonomy, Akouos, and Decibel, the hearing loss drug market remains a healthy one. Delvelnsight Business Research has tallied some 32 companies working to develop 35 pipeline treatments, while Grand View Research has projected the size of the hearing loss drug market will jump 47%, from \$12.71 billion last year to an estimated \$18.66 billion in 2030, based on a CAGR) of 4.92% between this year and 2030.





Zevra Therapeutics Acquires Acer Therapeutics To Expand Rare Disease Portfolio



\$91M

Deal Size



Buyer







When two parties agree to get together, it's simply a matter of devising terms that address the interests of both, but flexibility is often required. Here, Zevra and Acer have utilized a blend of financial acronyms, including VWAP, CVRs and NOLs, to formulate a \$91 million stock-based transaction structure with a loan buyout and a bridge loan facility blended in to seal the deal. Cash is always king and the preferred legal tender, but liquid stock in a publicly traded company can be acceptable currency for an acquiree. Receiving shareholders have the option to sell the new shares for equivalent cash or to hold them as an investment, betting on the future success of the merged company. As a combined entity, Zevra now expands its rare disease portfolio and increases its revenues with the addition of a U.S. commercial asset. Acer brings rare disease specialization to support commercialization. Additional commercial synergy is realized through overlap of the aggregate portfolio products targeting physicians within complementary sales channels.





Tech-Enabled Cancer Care Co, Thyme Care, Lands \$60 Million Series B Round



Target

Deal Size











Investors







Value-based and tech-enabled cancer care management company, Thyme Care, recently closed a \$60MM Series B Round to further commercialization efforts of its oncology patient navigation platform. The firm, based in Nashville, TN, and founded in 2020 by oncologists and veterans of the tech-enabled cancer care space, utilizes a cross-functional care team model and partners with payers, employers and providers (featuring a network of more than 300 oncologists) to make cancer and whole person care more efficient and less costly, focusing on many of the day-to-day aspects, issues, co-morbidities, and SDOH-related factors to provide personalized interventions. As the experienced management team has been successful in both raising capital for and exiting its former businesses of Flatiron Health and OneOncology, seemingly they have determined there is considerable value yet to mine in the "in between", i.e., in between a cancer patient's typical office or clinic visits, providing personalized support and more timely access to both information and care better than traditional health systems or cancer centers are able to. The Series B was led by Town Hall Ventures and Foresite Capital, with participation from Andreessen Horowitz, AlleyCorp, Casdin Capital and Frist Cressey Ventures. The round brings the company's total funding to more than \$80 million. The firm is also one of the founding members of the White House's cancer "moonshot" initiative, CancerX, announced this past June.





Synergistic Acquisition Paves Way For Market Expansion



\$110M

PacBi

Target

Deal Size

Buyer







In many segments across the Life Sciences, we see a "build or buy" strategy, where the acquiring company looks to acquire technology where they can quickly integrate and leapfrog the competition. The proposed Pacific Biosciences acquisition of Apton Biosystems is a great example of this strategy in the life science tools segment. Apton Biosystems has developed a high-throughput, short read sequencer designed to offer billions of reads from one flow cell. This \$110M stock transaction will allow PacBio to quickly enter the high-throughput, short-read sequencing arena and directly compete with Illumina, who is the market leader in the space.





Instylla Draws Key Inventors To Liquid Embolics Platform















Investors





Thomas Busby, MBA Senior Vice President Outcome Capital, LLC tbusby@outcomecapital.com



While there has been a noted slowdown in medtech growth equity rounds, the recent \$30M raise by Instylla proves that innovative, therapeutic medtech opportunities with strong market alignment are still being funded. With a strong syndicate led by Delos capital, medtech management teams should note the novelty of the technology and the large market opportunities being addressed. The takeaway here is important: addressing large, unmet clinical needs with new therapeutic modalities and applications is a recipe for success in venture capital markets.





\$255M Series C Financing For Cellares Supports Robust Cell Therapy Industry Pipeline



\$255M

Deal Size

8VC EKOCH...
DISRUPTIVE TECHNOLOGIES





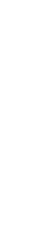
ر^{ااا} Bristol Myers Squibb ّ



Investors

Target







As the volume of advanced cell therapies continues to accelerate and more products are approved, the demand for outsourced services likewise rises. Biopharmaceutical companies are not only looking for capacity but are also seeking specialized capabilities needed to optimize and scale manufacturing. The requirement for specialization was broadly demonstrated during early stages of mRNA vaccine development for COVID, but has also been a focus for the industry with complex cell therapies progressing through development and towards commercialization. Cellares was founded in 2019 with the vision of providing an integrated development and manufacturing organization focused on CAR-T production. Having been one of the first movers with an improved, automated process to increase productivity and reduce price, Cellares has experienced exceptional growth with a large pharma partnership with BMS. This past month, Cellares raised an additional \$255 million to launch their third integrated manufacturing plant, which will be the first commercial-scale facility. Given Cellares' ability to assist in manufacturing and development of ~90% of cell therapies, this financing will position the company to on board more biopharma partners and demonstrate their value on a large scale.





Astex & Merck Enter \$500M Partnership To Develop Novel Compounds Targeting p53



\$535M

Deal Size



Partner

Target







While drug discovery & development partnerships are common within the biopharma industry, Merck is seeking to make a splash by putting \$35M to work upfront with Astex to develop new molecules targeting p53 with a total deal value upwards of \$500M factoring in milestones, P53 has long been considered 'undruggable' lacking many of the physical characteristics of typical drug targets, so Astex is relying on differentiation within its Pyramid drug discovery engine to generate leads. Rather than attempting to model large, complex drug-target interactions, Astex is employing a fragment-based approach to simplify the drua-molecule interaction. This approach lends itself to studies utilizing high resolution techniques including Xray crystallography and NMR. Astex is also exploring ways to incorporate Cryo-EM-based structural data to inform interaction characteristics. This is significant as Cryo-EM structural determination allows researchers to assess drug-compound interfaces in water rather than extreme crystallography conditions, which may replicate biological environments more accurately than traditional techniques, resulting in higher probability lead molecules. As technology progresses in the life sciences tool space, modality-enabling developments like direct electron detectors for biological imaging approaches and novel substrates on which to image drug-molecule interactions within cryogenic conditions (e.g., silicon nitride microchips), we expect drug discovery efforts to increasingly leverage Cryo-EM-based data to uncover new drug candidates with increased likelihood of success and lower clinical risk for strategics at earlier stages of development. In short, while the number of drug discovery platforms is large, strategics are seeking quality and relevance of the underlying data feeding those platforms to progress pipelines.





Definitive Healthcare Expands Data Set Across Patient Continuum



\$80M



Target

Deal Size

Buyer







Last month, Definitive Healthcare acquired data analytics startup, Populi, for \$52M upfront with an additional \$28M consideration upon achievement of performance milestones. Primarily a provider data company, Definitive Healthcare is seeking to acquire targets with unique, proprietary data sets as well as complementary analytic capabilities to build their offerings into a complete platform. Populi's data set allows Definitive to leverage >8B claims, EHR, lab, and consumer data transactions to bolster Definitive's commercial insights for providers. With that, Definitive now has a high-quality data set for use across provider departments as well as consumer insights to position the company as the go-to platform for providers.





Abcuro Advances Autoimmune Pipeline With Oversubscribed Series B Financing



Target

\$155M

Deal Size

sanofi ventures

BlackRock.



RACAPITAL





















Abcuro, Inc., a clinical stage biotechnology company focused on the precision targeting of highly cytotoxic T cells, has successfully closed an oversubscribed Series B, \$155M, financing round. Proceeds will be used to support development of its immunotherapy pipeline for the treatment of autoimmune diseases and cancer, and advance its lead candidate, ABC008, through a Phase 2/3 registrational clinical trial. ABC008 is a first-in-class antibody which addresses an important driver of autoimmunity, selective targeting of highly cytotoxic T cells to offer broader treatment ranges among various autoimmune disorders. The company's antibody has been designed to selectively target KLRG1 (killer cell lectin like receptor G1), a surface receptor expressed on late-differentiated effector memory T cells. ABC008's differentiated selectivity to this receptor has been shown to deplete the most mature, highly cytotoxic T cell populations that drive autoimmune disease progressions. Broad, non-selective T cell-depleting therapies have shown clinical benefit in many autoimmune diseases, such as multiple sclerosis and psoriasis, but their use has been limited by the adverse effects associated with broad immune-cell depletion. By targeting the specific immune cell population expressing KLRG1, ABC008 is designed to enable selective targeting of highly cytotoxic T cells while sparing key lymphocyte populations, including naïve, memory and regulatory T cells which are required to maintain normal immune system homeostasis. KLRG1 is an inhibitory immune checkpoint not targeted by any of the currently available therapies and it will be interesting to see what the initial, ongoing, Phase readouts of ABC008 in adult patients with inclusion body myositis reveal.





LEO Pharma Expands U.S. Presence With Acquisition Of Timber Pharmaceuticals



\$36M



Target

Deal Size

Buyer







"LEO Pharma has recently entered into an agreement to acquire Timber Pharmaceuticals for a total consideration of up to \$36 million, with the transaction anticipated to conclude during the fourth quarter of 2023. The composite value of this transaction comprises of an initial payment of \$14 million and a contingent value rights (CVRs) milestone component not exceeding \$22 million. These CVRs shall be actionable when TMB-001, Timber Pharmaceuticals' principal investigational product candidate, secures approval from the US Food and Drug Administration (FDA) and attains specified sales benchmarks. It is noteworthy that TMB-001 has previously received orphan and breakthrough designations from the FDA, and an approval decision is anticipated in 2025. This strategic acquisition of Timber Pharmaceuticals will endow LEO Pharma with access to TMB-001, a promising remedy for congenital ichthyosis, bolstering LEO Pharma's presence within the competitive US pharmaceutical landscape. TMB-001 is a topical reformulation of isotretinoin, a molecule that is currently only available as an oral formulation in the US. Isotretinoin is used to treat a variety of skin conditions, including acne and psoriasis. Congenital ichthyosis is a rare skin disease that is characterized by thick, scaling skin. TMB-001 has demonstrated positive results in a Phase II clinical trial while recruitment for a Phase III study is underway in Europe and the US. There are currently no approved prescription therapies available to treat the condition, highlighting the significance of this acquisition. The acquisition stands as a mutually advantageous development for both companies involved. LEO Pharma stands to benefit from a promising treatment option for a rare dermatological ailment, while Timber Pharmaceuticals' shareholders are positioned to receive a substantial premium for their equity holdings. Moreover, this acquisition contributes positively to the landscape of the US dermatological market, which exhibits potential for robust expansion in the forthcoming years."





Alltrna Secures \$109M To Advance Proprietary tRNA Platform

alltrna

\$109M

Flagship Pioneering

Target

Deal Size

Investor







Last month, Alltrna announced that it raised \$109M in a Series B financing led by Flagship Pioneering. The investment will be used to advance the company's proprietary platform, a machine-learning engine optimizing tRNA nucleotide sequences to generate tRNA molecules with potential medicinal and therapeutic properties. These modified tRNAs can identify premature termination codons causing truncations of biologically important protein sequences and restore the cellular production to full-length proteins. With approximately 10% of all people with genetic diseases occurring from these premature proteins, the market opportunity for this technology is expansive, representing approximately 30 million people worldwide. Especially after recent success in the harnessing of mRNA biology for the COVID-19 vaccine, investors are looking to find the new RNA molecule that could generate similar returns and impact. Alltrna's recent data validating design, modification, and production potential of the tRNA molecules identified by their platform was a defining factor in securing the funding from investors.





20 Custom House Street Suite 1200 Boston, MA 02110 (617) 431-2278

