



Outcome Capital Life Sciences Market Pulse

December 2023

Reach the Right Outcome



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OUTCOME CAPITAL | LIFE SCIENCES MARKET PULSE

Market Trends & Strategic Transactional Insights



Outcome Capital At A Glance...

A highly-specialized life sciences & 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
- › Pharma
- › Biotech
- › Diagnostics
- › Life Sciences Services
- › 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



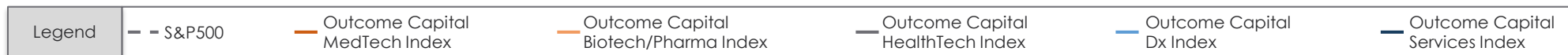
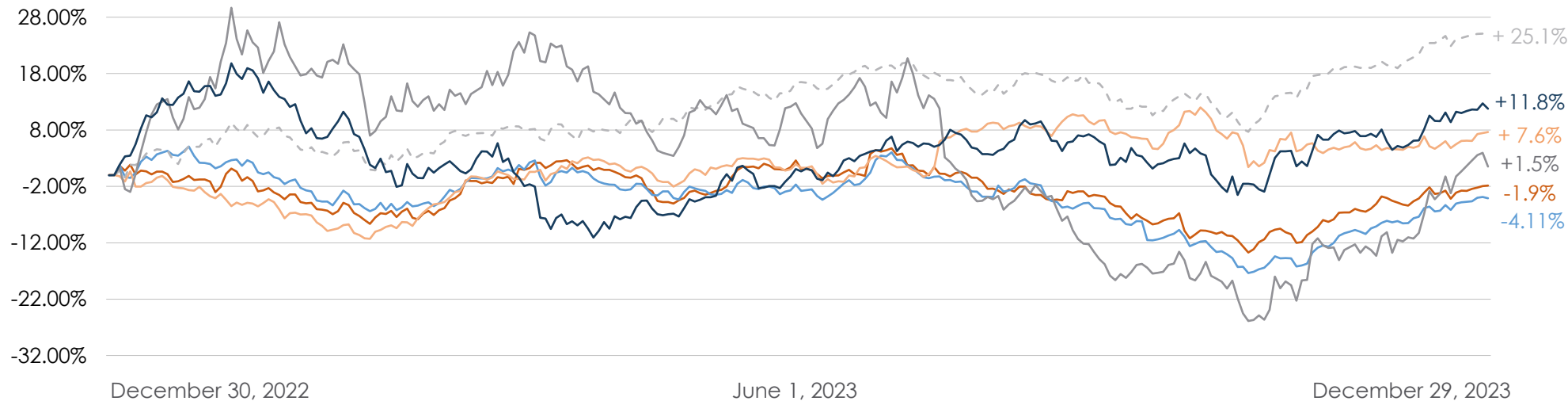
Outcome Index Tracker



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Outcome Capital Index Tracker (LTM)



Outcome Capital MedTech Index

Outcome Capital Biotech/Pharma Index

Outcome Capital HealthTech Index

Outcome Capital Diagnostics Index

Outcome Capital Services Index

















December 2023 | Transaction Lineup

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December 2023 Transaction Lineup

Date	Target	Buyer/ Investor	Target Description	Deal Type	Deal Value (\$M)	Up-Front Payment (\$M)	Vertical
12/3/2023			Clinical-stage biotechnology company dedicated to developing therapeutics for people diagnosed with diabetes and obesity	M&A	\$3,461	\$2,700	Biotech/ Pharma
12/6/2023			Developing a robust neuroscience pipeline with potential therapeutics for mental & mood disorders	M&A	\$9,080	\$9,080	Biotech/ Pharma
12/6/2023			Combining ML technologies with wet lab techniques to select antibodies for therapeutic targets	Partnership	\$325	\$30	Biotech/ Pharma
12/7/2023		  	Clinical-stage radiopharmaceutical company developing a new class of targeted alpha radioligand therapies	Financing	\$90	N/A	Biotech/ Pharma
12/11/2023			Specializes in developing innovative cancer treatments using established drug development platforms	Partnership	\$8,400	\$800	Biotech/ Pharma
12/12/2023			Clinical-stage biopharmaceutical company dedicated to advancing targeted protein degradation science	Partnership	\$3,110	\$10	Biotech/ Pharma

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 MedTech

 Biotech/Pharma

 HealthTech

 Diagnostics

















 Life Science Tools

 Services

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December 2023 Transaction Lineup

Date	Target	Buyer/ Investor	Target Description	Deal Type	Deal Value (\$M)	Up-Front Payment (\$M)	Vertical
12/13/2023	 applied biomath <small>REVOLUTIONIZING DRUG INVENTION</small>		Applies biosimulation to provide quantitative & predictive guidance to biotechnology and pharma	M&A	Undisclosed	Undisclosed	Biotech/ Pharma
12/13/2023			Innovator & market leader in ENT procedures with diverse portfolio of ear, nose & throat devices	Financing	\$280	N/A	MedTech
12/13/2023		    	Developer of AI-powered & robotics imaging technology to provide clear pictures during heart procedures	Financing	\$36	N/A	MedTech
12/13/2023			Clinical stage genome editing company focused on developing CRISPR/Cas12a & CRISPR/Cas9	Partnership	\$140	\$50	Biotech/ Pharma
12/14/2023			Global biotech company supporting target validation & antibody discovery of preclinical research	Partnership	\$1,303	\$53	Biotech/ Pharma
12/18/2023	 ZimVie Spine Business		Develops, manufactures & delivers comprehensive portfolio of products and solutions for spine & dental	M&A	\$375	\$315	MedTech

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Release](#)

 MedTech

 Biotech/Pharma

 HealthTech

 Diagnostics













 Life Science Tools

 Services

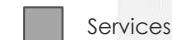
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December 2023 Transaction Lineup

Date	Target	Buyer/ Investor	Target Description	Deal Type	Deal Value (\$M)	Up-Front Payment (\$M)	Vertical
12/18/2023	 Immunogenx®	 First Wave BioPharma	Clinical-stage biopharma company developing latiglutenase (IMGX003) or celiac disease therapy	M&A	Undisclosed	Undisclosed	Biotech/Pharma
12/19/2023	 Lassen Therapeutics	 ALTA PARTNERS, FRAZIER HEALTHCARE PARTNERS, BVF PARTNERS LP, CATALIO CAPITAL MANAGEMENT	Clinical stage biotech company developing first-in-class antibody therapeutics targeting fibro-inflammatory diseases	Financing	\$85	N/A	Biotech/Pharma
12/20/2023	 TOMTEC	 Hudson ROBOTICS	Provider of automated liquid handling instruments primarily used for mass spectrometry sample preparation	M&A	Undisclosed	Undisclosed	Life Science Tools
12/20/2023	 SUDO BIOSCIENCES	 CITADEL, FRAZIER HEALTHCARE PARTNERS, ENAVATE, Monograph, KANOFI VENTURES, EVENTIDE, SURVEYOR, VELOCITY, TPG	Developing best-in-class precision tyrosine kinase inhibitors for immune-mediated dermatologic diseases	Financing	\$116	N/A	Biotech/Pharma
12/20/2023	 TriMed®	 HENRY SCHEIN®	Global developer of solutions for the orthopedic treatment of lower & upper extremities	M&A	Undisclosed	Undisclosed	MedTech
12/21/2023	 LYNDRA THERAPEUTICS	 SARISSA CAPITAL, SUN PHARMA, polarispartners	Developer of long-lasting oral therapies using LYNX drug delivery platforms	Financing	\$123	N/A	Biotech/Pharma












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Date	Target	Buyer/ Investor	Target Description	Deal Type	Deal Value (\$M)	Up-Front Payment (\$M)	Vertical
12/22/2023	 custom health	Berenson Acquisition Corp.	Leverages proprietary technology & network pharmacies to manage full cycle of patients care journey	M&A	\$185	Undisclosed	HealthTech
12/22/2023	 KARUNA THERAPEUTICS	 Bristol Myers Squibb™	Discovering & developing transformative medicines for psychiatric & neurological conditions	M&A	\$13,883	\$13,883	Biotech/ Pharma
12/26/2023	 GRACELL	 AstraZeneca	Developing innovative cell therapies for treatment of cancer & autoimmune diseases	M&A	\$1,137	\$1,000	Biotech/ Pharma
12/26/2023	 RayzeBio	 Bristol Myers Squibb™	Clinical-stage radiopharmaceutical therapeutics company focused on targeting treatment of solid tumors	M&A	\$4,152	\$4,152	Biotech/ Pharma
12/29/2023	 lumiraDx™	 Roche	Next generation point-of-care system with a single platform to strengthen community-based healthcare	M&A	\$350	\$295	Diagnostics
12/29/2023	 Devoted HEALTH PLANS	 andreessen. horowitz	Provides “all-in-one” care by combining Medicare advantage coverage with virtual in-home care provider	Financing	\$175	N/A	HealthTech

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MedTech



Biotech/Pharma



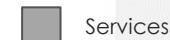
HealthTech



Diagnostics



Life Science Tools



Services

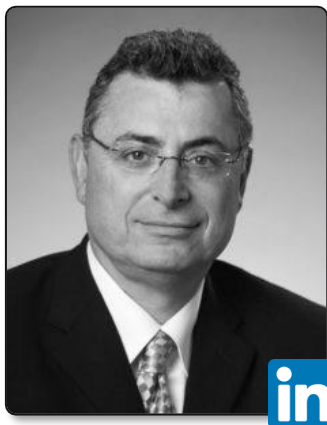


Highlighted Transactions

BMS Bolsters CNS Focus With Acquisition Of Neuro Leader, Karuna Therapeutics



\$13.9B
Deal Size



Oded Ben-Joseph, PhD, MBA
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While recent investment in the CNS space has primarily focused on neurodegenerative disease such as Alzheimer's, stemming from Biogen/Eisai approvals, significant advancement has been made in new therapies for neuropsychiatry applications. Exemplifying the recent advancement in neuropsychiatric disorders, the FDA approved the first new treatment for postpartum depression at the end of 2023 and additional new treatments are on the horizon. BMS identified significant potential in the space spending ~\$13 billion to acquire Karuna Therapeutics. Karuna, a leader in psychiatric conditions, has announced positive Phase 3 results for their lead drug, KarXT, in schizophrenia. KarXT, which is currently under registrational review, would offer a new modality in an indication that has been seeking new solutions for decades. Further supporting the acquisition of Karuna is the fact that KarXT offers potential to treat Alzheimer's-related psychosis, which further expands BMS' focus in neurodegenerative diseases. We are excited to see BMS recognize the unmet need within neuropsychiatry and look forward to see the impact of KarXT upon approval.



BMS Adds Premier Radiopharmaceutical Platform With Acquisition Of RayzeBio



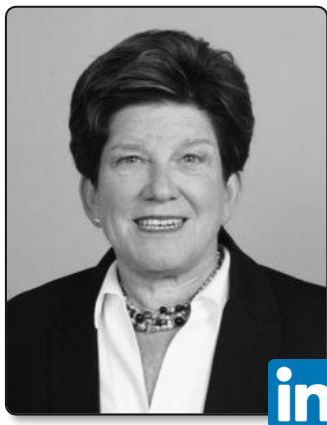
Target

\$4.2B

Deal Size



Buyer



Ellen Baron, PhD
Managing Director
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“

Radiopharmaceutical therapeutics are already transforming cancer care, and RayzeBio is at the forefront of pioneering a differentiated Actinium-Based Radiopharmaceutical Platform. In a sign of how much the radiopharma race has heated up in recent months, BMS is paying \$62.50 per share which equates to an equity value of \$4.1 billion. This share price is over triple the \$18 that RayzeBio secured for its IPO as recently as September, and is even double the \$30.50 that the stock was trading at by market close recently. Despite the high price tag, BMS can now go up against leading radiopharma player Novartis and potentially in the near future, Eli Lilly. Unlike Novartis' approved radiopharma therapies Lutathera and Pluvicto, which use a beta-emitting isotope called lutetium, RayzeBio's platform is based on an alpha-emitting isotope called actinium-225, establishing BMS' presence in one of the most promising and fastest-growing new modalities for the treatment of patients with solid tumors—delivering radioactive payloads to cancer cells in a targeted manner. As BMS continues to diversify its oncology portfolio, RayzeBio has a rich pipeline of multiple drug development programs to compliment BMS's growing oncology franchise and strengthens their growth opportunities in the back half of the decade and beyond. RayzeBio's lead Program, RYZ101, is in Phase 3 development for treatment of Gastroenteropancreatic Neuroendocrine tumors and early-stage development for treatment of small cell lung cancer and potentially other tumor types. RayzeBio offers BMS a robust IND engine and a soon-to-be completed state-of-the-art radiopharmaceutical manufacturing facility.

”

C4 Therapeutics Collaborates with Merck on Degradable-Antibody Conjugates (DACs)



Target

\$3.1 B

Deal Size



Buyer



Paul Mieyal, PhD, CFA
Managing Director
Outcome Capital, LLC
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In the familiar theme of using antibodies to deliver therapeutic payloads, C4 added an additional collaboration in December to its existing relationships with Roche, Biogen and Betta. Here, C4 is responsible for using its TORPEDO® platform to develop protein degrader payloads in the discovery phase while Merck is responsible for antibody conjugation and for advancing therapeutic candidates through preclinical and clinical development as well as commercialization. If Merck exercises all of its future options to extend the collaboration, C4 could receive up to \$2.5B in potential payments – that’s a lot of biobucks! However, only \$10M comes today as upfront cash, so C4 has leveraged the Merck cash plus a \$25M equity investment from Betta to access an additional \$72M from the sale of stock via an ATM facility. In total, C4 recently announced a cash balance of \$330M. Nonetheless, platforms can generate a high burn rate, so C4 also announced a 30% reduction in employees to right-size the company as its operations progress from discovery to clinical development.



MA-Focused Insurtech Devoted Health Raises \$175 Million Series E



Devoted
HEALTH PLANS
Target

\$175M
Deal Size



**andreessen.
horowitz**
Investor



Karl Hess, MBA
Managing Director
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“

While the Medicare Advantage “silver rush” seems to be coming to an end, there’s still money available for those few standouts that are executing better than their peers, witness Devoted Health’s recent \$175 million Series E, which brings their total fundraising to date to almost \$2.2 billion since its founding by brothers Ed and Todd Park in 2017. Devoted’s latest valuation was relatively flat, at \$12.87 billion, up slightly from \$12.7 billion, which was the post-money after 2021’s \$1.15 billion Series D. In terms of successful execution, Devoted has expanded its services to cover a total of 299 counties across 13 states, serving over 140,000 members as of December 2023, reflecting year-over-year growth of more than 70%. This was on top of 2022 revenues of \$1.1 billion, which were double the prior years. Perhaps one of the keys to the company’s success is its proprietary tech platform, called Orinoco, which serves and supports both payer and healthcare provider operations in a highly integrated fashion. The company plans to use the latest funds to continue to drive its growth and expansion plans.

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Roche Acquires LumiraDx Point-Of-Care Technology Platform For \$350M



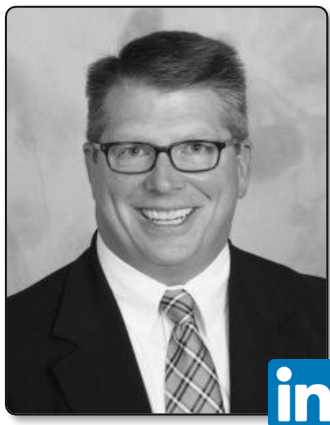
Target

\$350M

Deal Size



Buyer



Craig Steger

Director

Outcome Capital, LLC

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“

The COVID graveyard continues to add more tombstones, with the latest one being the Point-of-Care company, LumiraDx. In Sept. 2021, LumiraDx went public through a SPAC merger that valued the company at ~\$3B. Two years later, the company had announced that it would look to re-structure itself and laid off ~40% of its workforce. Now the POC assets of LumiraDx have been acquired by Roche Diagnostics for \$295M, with another \$55M going to directly to BioPharma Credit who is supporting the company during the transition. There will be no shareholder return on this transaction, as all the proceeds will be used to pay down debt. The upside of this transaction is for Roche Diagnostics. They acquire a POC platform to compete across much of the POC market: coagulation, cardiovascular, diabetes, inflammation and infectious diseases.

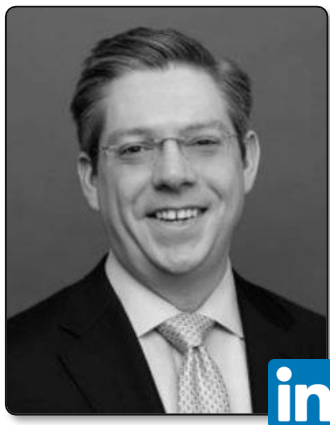
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ZimVie Repositions To Dental Pure Play, HIG Scores Premium Franchise

 **ZimVie**
Spine Business
Target

\$375M
Deal Size

H. I. G.
CAPITAL
Buyer



Thomas Busby, MBA
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Outcome Capital, LLC
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“ With their spine business running at a loss for Q3/23, and still burdened with a heavy debt load and flat stock price, ZimVie’s divestiture of the spine franchise to HIG is a deal with winners on all sides. Cash proceeds will help strengthen ZimVie’s balance sheet, and HIG’s leadership in the MedTech space (alongside ample capital to deploy) will ensure future value creation. It will not be surprising to see HIG bolt on a few innovative technologies to strength the portfolio as their management team takes hold.

”

AbbVie Taps BigHat's AI Platform To Advance Oncology & Neurology Therapies



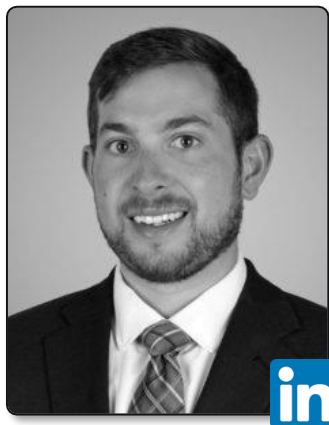
Target

\$325M

Deal Size

abbvie

Partner



Nick Frame, PhD

Senior Vice President
Outcome Capital, LLC
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“

Sandwiched in between AbbVie's transformative acquisitions of ImmunoGen and Cerevel, which strengthened their commercial and late-stage R&D portfolios in oncology and neurology, was the announcement of an early-stage partnership with BigHat Biosciences. The R&D collaboration, which focuses on developing therapies for oncology & neurology, leverages BigHat's AI platform combining machine learning with wet lab experiments to better design and select antibodies to identified targets. Like many AI drug discovery collaborations in the past, the BigHat platform promises to speed up the preclinical discovery process to develop better antibodies that will potentially result in enhanced therapeutic effect. In addition to conveying continued excitement in AI, the collaboration with BigHat in addition to the transformative acquisition, demonstrates AbbVie's commitment to oncology and neurology – two segments we are particularly excited about for 2024 and beyond.

”

Systemmune & BMS Lock Down Multi-Billion-Dollar Partnership For Bispecific ADCs



Target

\$8.4B

Deal Size



Michael Casasanta, PhD

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“

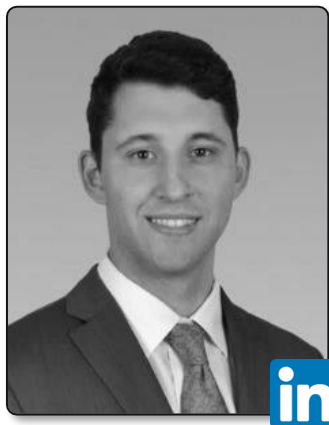
Bristol Myers Squibb continued the 2023 spending spree on antibody drug conjugates (ADCs). This time, BMS has tapped Systemmune's bispecific topoisomerase-inhibiting ADC, BL-B01D1, which has shown early clinical promise in treating patients with advanced NSCLC. BMS joins Pfizer, Merck, GSK, and AbbVie all making recent multi-billion-dollar bets on the modality to bolster their respective immuno-oncology offerings. Deals for ADCs span the clinical development spectrum for pre-clinical assets all the way to FDA-approved, commercialized therapies. The high premiums on these assets stem, in part, from their simple MoA. They are, in essence, next-generation, targeted chemotherapeutics - allowing companies to give precision tracking capabilities to highly cytotoxic compounds. Despite the promise, these compounds have shown significant clinical risk. Among other PK and formulation challenges, ADCs have been at the forefront of several high-profile clinical failures recently related to toxic side effects caused by premature release of the cytotoxic payload and elevated levels of drug needed for dosing required for efficacy. To mitigate this risk, BMS has limited its immediate cash outlay to an \$800M upfront payment, leaving >90% of the total deal value behind product development and commercial milestones. The deal allows BMS to develop and commercialize BL-B01D1 globally outside of mainland China further strengthening their position among their peers as the battle for ADC supremacy continues.

”

Novel Approach To Address Shortcomings From Existing Radioligand Therapies



\$90M
Deal Size



Carey Gallant, MBA
Associate
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“

Despite the promising outcomes resulting from current radioligand therapies (RTLs), there remains a need to provide patients with superior approaches for difficult to treat cancers; addressing systemic, off-target, induction of immune overactivation. ARTBIO, a clinical-stage radiopharmaceutical company pursuing a novel approach to radioligand therapy, is striving towards just this. Focused on identifying specific combinations of targets and drug molecules, ARTBIO leverages a new class of targeted alpha radioligand therapies (ARTs) built on its proprietary AlphaDirect™ platform – capable of isolating the rare medical radioisotope, Pb-212. The closing of this oversubscribed Series A financing, with participation from leading investors Third Rock Ventures, F-Prime Capital, and Omega Funds, highlights the excitement around ART, and the potential to deliver significantly better treatment and efficacy to cancer patients. The funds will be used to accelerate ARTBIO's pipeline development and fuel AlphaDirect™'s distributed manufacturing network ahead of lead candidate, AB001's, entrance into first-in-human clinical trials.

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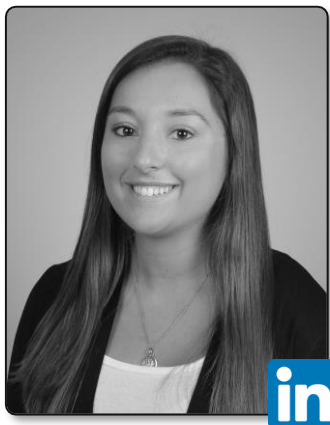


Enabling Technologies Become The Focus For MedTech Investors

LAZA
MEDICAL™
Target

\$36M
Deal Size

TCP PICARD ANGST GE HealthCare
DARA HOLDINGS UNorthodox
REAL ESTATE INVESTMENT STEWARDS Ventures
Investors



Elena Bonetti
Senior Analyst
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“

With the MedTech landscape continuing to become more and more digitized, we see targets companies, specifically early-stage targets, shifting from the device itself to enabling technologies. Laza Medical's \$36M Series A financing is a perfect example of MedTech market dynamics at play. The cardiovascular surgery segment is saturated with catheters and other interventional devices, leaving little room for true innovation and exponential improvement. Investors are now seeking opportunities to move across the provider and patient journeys for high-value targets. Laza Medical's technology allows surgeons to leverage AI and robotics for enhanced visualization and surgical navigation in interventional cardiology procedures, including structural heart and electrophysiology. This moves investors upstream in the surgical process, providing a truly differentiated opportunity to transform the way surgeries are performed.

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Henry Schein Strengthens Orthopedic Position



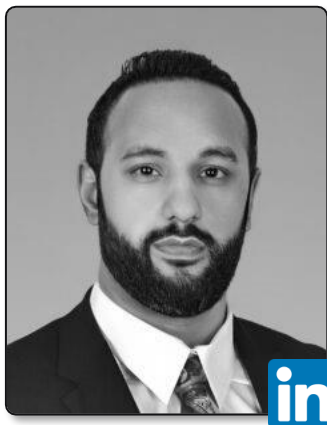
Target

Undisclosed

Deal Size



Buyer



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“ Henry Schein's acquisition of TriMed signifies its strategic entry into the orthopedic extremities market, expanding its healthcare offerings beyond dental and medical solutions. TriMed, a company known for its innovative surgical solutions for upper and lower extremities, is expected to strengthen Henry Schein's position in the rapidly growing orthopedic segment. The deal is expected to be neutral to Henry Schein's non-GAAP earnings per share in 2024 and accretive thereafter, underscoring its potential long-term value and impact on the company's market reach and product portfolio diversification. ”

Vertex Signs Non-Exclusive License To Progress CRISPR/Cas9 Technology

editas
MEDICINE
Target

\$140M
Deal Size

VERTEX
Partner



Roisin O'Brien, PhD
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“

Weeks after the FDA approved Vertex Pharmaceutical's first CRISPR/Cas9 therapy for sickle cell disease, the gene-editing biotech nabbed non-exclusive licensing rights of Editas Medicine's Cas9 technology for ex vivo targeting of the BCL11A gene. From this deal, Vertex will pay Editas up to \$100 million (including \$50 million in upfront cash and another \$50 million through contingent payment) plus potential licensing fees ranging from \$10 to \$40 million per year through the patent's expiry in 2034. The \$50 million upfront payment will extend Editas cash runway from Q3 2025 to 2026 while enabling Editas to drive further development of CRISPR-based therapeutics. Foundational to this decision was the U.S. Patent and Trademark Office 2022 ruling of CRISPR-Cas9 patents rights, after which Editas became exclusive licensee of specific Cas9 technology patents. Vertex may be the first of many genome-editing biotech companies to swoop in and secure licensing rights with Editas, while Editas could continue to benefit from future deals.

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