

Outcome Capital Life Sciences Market Pulse
May 2023

Reach the Right Outcome





Strategic Transactional Insights & Market Trends



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.

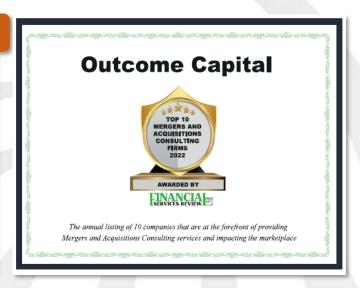
Life Sciences Verticals:

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

Transaction Focus:

M&A

- Partnering
- Management
 Buyouts & Roll-Ups
- 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

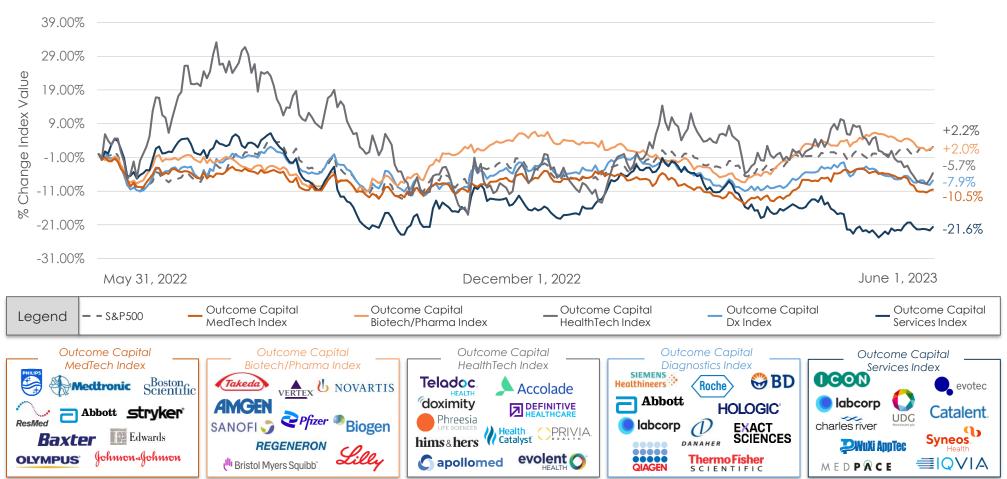
 Strategic analysis from Outcome Capital's life sciences-dedicated deal team



Outcome Index Tracker



Outcome Capital Index Tracker (LTM)





May 2023 | Transaction Lineup



May 2023 Transaction Lineup

Date	Target	Buyer/ Investor	Target Description	Deal Type	Deal Value (\$M)	Up-Front Payment (\$M)	Vertical
5/1/23		A T P Apple Tree Partners*	Biotech company developing medicines that block notoriously difficult-to-drug protein targets with a new node of action.	Financing	75	N/A	Biotech / Pharma
5/1/23		ZIMMER BIOMET	Medical device company specializing in personalized 3D printed implants & complex hip replacements.	M&A	Undisclosed	Undisclosed	MedTech
5/3/23	magenta THERAPEUTICS	DIANTHUS THERAPEUTICS	Clinical-stage biotech company advancing next-generation antibody complement therapeutics.	M&A	Undisclosed	Undisclosed	Biotech / Pharma
5/3/23	PharmaSys COMPLIANCE SOLUTIONS	Cellab	Provider of commissioning, qualification & validation as well as compliance solutions for biopharma & medical device companies.	M&A	Undisclosed	Undisclosed	Services
5/8/23	©CYCLICA	Recursion	Developer of robust & sustainable drug discovery portfolio focused on CNS, oncology & auto-immune diseases.	M&A	40	40	Biotech / Pharma
<u>5/8/23</u>	Valence	Q Recursion	Developer of AI & physics-based technologies to enable design of differentiated small molecules with improved properties & functionality.	M&A	48	48	Biotech / Pharma



















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<u>5/8/23</u>	GINKGO BIOWORKS™ THE ORGANISM COMPANY	Boehringer Ingelheim	Natural product discovery capabilities used to accelerate discovery & development of novel therapeutic molecules out of reach of conventional drug discovery.	Partnership	406	Undisclosed	Biotech / Pharma
5/9/23	XinThera	Ø GILEAD	Biotech company developing best-in-class small molecule drugs to treat cancer & immunologic diseases.	M&A	Undisclosed	Undisclosed	Biotech / Pharma
5/9/23	終 赞荣医药 Zion Pharma	Roche	Orally administered selective tyrosine kinase inhibitor targeting the Human Epidermal Growth Factor Receptor 2.	Partnership	680	70	Biotech / Pharma
5/10/23	bioventus* Wound Care Business	LifeNet Health Saving Lives. Restoring Health, Giving Hope.	Wound care business of Bioventus consisting of proprietary innovations in skin substitutes.	M&A	85	35	MedTech
5/10/23	bicycle therapeutics	BAYER BAYER ER	Discovery, development & commercialization of Bicycle radioconjugates for multiple agreed upon oncology targets.	Partnership	1,745	45	Biotech / Pharma
5/11/23	NEW BIOLOGIX	Recipharm	Developer of proprietary & breakthrough platform for advanced engineering of cell lines used on gene & cell therapy manufacturing.	Financing	50	N/A	Biotech / Pharma



















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5/12/23	LaNova 礼新医药	AstraZeneca	Pre-clinical antibody drug conjugate being developed as potential new treatment for relapsed/refractory multiple myeloma.	Partnership	600	55	Biotech / Pharma
5/17/23	MOON SURGICAL	Sofinnova partners NVENTURES NVIDIA.	Developer of robotic surgical system to improve efficiency in operating rooms & provide better surgical care.	Financing	55	N/A	MedTech
<u>5/22/23</u>	VectivBio Transforming Lives	V Ironwood	Clinical-stage biopharma company pioneering novel, transformational treatments for severe rare gastrointestinal conditions.	M&A	1,181	1,181	Biotech / Pharma
<u>5/23/23</u>	TISSIUM	Sofinnova MERIEUX DESCRIPTION OF THE PROPERTY	Developer of product portfolio leveraging proprietary biosynthetic, biomorphic & programmable polymers for tissue reconstruction.	Financing	54	N/A	MedTech
<u>5/24/23</u>	Artelon	V E N S A N A CAPITAL	Medical device company developing surgical solutions to enhance soft tissue repair while restoring stability & motion in the ankle.	Financing	20	N/A	MedTech
5/24/23	elevate bia	MATRIX OF FAMOUR SURVEYOR ECOR1 SoftBank Vision Fund F2 Ventures Redmile Group MOODLINE SURVEYOR SAMSARA	Technology-driven company developing transformative cell & gene therapies using multiple R&D platforms & proprietary iPSC platform.	Financing	401	N/A	Biotech / Pharma

Hyperlinked to Press Release















Life Science Tools





May 2023 Transaction Lineup

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5/24/23	life edit [®] an elevatebia company	novo nordisk [®]	Discovery & development of gene editing therapies for select therapeutic agents targeting rare genetic disorders & cardiometabolic diseases.	Partnership	1,920	Undisclosed	Biotech / Pharma
<u>5/25/23</u>	⊠ Bench Sci	inovid TCV GCLDEN F4PRIME generation	Developer of Al solutions for drug discovery to help pharma companies transform R&D by surfacing underlying disease biology.	Financing	95	N/A	Biotech / Pharma
5/30/23	Xtal≥i	Lilly	Integrated AI capabilities & robotics platform for the <i>de novo</i> design of drug candidates for an undisclosed target.	Partnership	250	Undisclosed	Biotech / Pharma
5/31/23	kailos	healthŌme	CLIA-certified & CAP-accredited genetic testing laboratory & supplier of clinical grade NGS laboratory reagents.	M&A	Undisclosed	Undisclosed	Services
5/31/23	HIGH PURITY	GETINGE 🛠	Provider of comprehensive range of proprietary & distributed products from drug discovery, upstream/downstream processing to fill-&-finish.	M&A	290	120	Life Science Tools
5/31/23	strîve	Health. Ventures town hall NEA echo Ascension CapitalG	Leader in value-based kidney care using a unique combination of tech-enabled interventions & seamless integration with local providers.	Financing	166	N/A	HealthTech







Biotech/Pharma













Highlighted Transactions



Zimmer Biomet Strengthens Push For Orthopedics Market Leadership



Undisclosed



Target

Deal Size

Buyer



Zimmer's spinoff of ZimVie signaled a shift in strategic focus towards maintaining market leadership across high-growth orthopedic segments, including Knees, Hips and Sports Medicine, among others. After snapping up Embody and their collagen-based implants for soft tissue disorders earlier in the year, Zimmer strengthened their portfolio through the acquisition of OSSIS. OSSIS is a leading provider of personalized, 3D-printed implants with its flagship products in complex hip replacements and pelvic tumors, an approach that is truly differentiated from current off-the-shelf solutions. Prior to the acquisition, Zimmer and OSSIS entered into a strategic partnership to distribute implants in the APAC region. This early partnership established Zimmer's comfort with the commercial model of patient-specific implants and revenue profile, which likely catalyzed the acquisition despite turbulent market conditions. This acquisition will further Zimmer's brand of offering state-of-the-art solutions.





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Xtalpi Announces \$250M Al Drug Discovery Collaboration With Eli Lilly



\$250M



Target

Deal Size





Shenzhen-based Xtalpi, an Al-powered drug discoverer, has partnered with pharma giant Eli Lilly in a deal worth up to \$250M to unearth potential medicines for an undisclosed disease. Over the last year, multiple Big Pharma Companies (NovoNordisk/Microsoft; Google Cloud/Mayo Clinic; Pfizer with AI partnerships including Truveta, Gero, CytoReason and Tempus as well as data-sharing agreement with Vysioneer; AZ with Clinithink, Qure.ai, BenevolentAI and Medsol AI Solutions; Janssen's exploration of the use of AI across drug development activities) have consummated deals to use AI, predictive models and machine learning algorithms in healthcare, and more specifically for detecting new targets and validating disease biomarkers. Xtalpi has a unique closed loop AI and quantum physics algorithms working in sync with the data factory of large-scale robotics experiments to tackle challenging novel targets. Xtalpi was cofounded by Ma Jian, Wen Shuhao and Lai Lipeng—three Chinese quantum physicists from the Massachusetts Institute of Technology—in 2014. It seeks to speed up the drug discovery process and success rate by using AI, quantum physics and robotic automation. Xtalpi has been recently funded, closing a mammoth \$318.8M Series C in September 2020, following it up with an even more massive \$400M financing in August 2021, bringing its total valuation to approximately \$2B. The Series D was co-led by OrbiMed Healthcare Fund Management and HOPU Investments, a change-up from the previous round's trio of headlining investors: SoftBank's Vision Fund 2, PICC Capital and Morningside Venture Capital. AI could be the most disruptive technology innovation of our lifetime. Enterprises are embracing AI applications and leveraging a variety of data types (structured, unstructured, and semi-structured) for integrated processes across all lines of business and industries.





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Roche Bets \$700M On Zion Pharma Drug



\$680M



Target

Deal Size





Roche has an existing HER2 franchise for the treatment of breast cancer. This transaction provides an additional HER2 drug for its portfolio as well as an expansion of the addressable market by targeting metastases beyond the periphery and into the CNS with a blood-brain-barrier-penetrant molecule. The CNS delivery aspect is a broadly investable life sciences theme, and large pharma is actively continuing to partner with smaller companies for access to permeabilizing agents, prodrugs and direct access systems such as EnClear Therapies. ZN-A-1041 is currently in Phase 1 clinical development. Zion will receive up to \$70M in upfront and near-term milestone payments. Zion will also be eligible for up to \$610M in additional payments as well as tiered royalties on sales.





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Value-Based Kidney Care Scores Another "Mega Round" In \$166M Series C



















Investors



Want to raise a \$100M funding 'mega round' in the digital health space? It's easy, just pick a key underserved area of health care, ripe for value-based arrangements, and show significant progress across outcomes and relationships with payers, providers and patients. Founded in 2018, Strive Health's machine-learning-enabled platform, which supports CKD, ESRD, dialysis and kidney transplants in both clinical settings and at a patient's home, utilizes predictive analytics to determine a patient's disease progression, and then intervenes with targeted care to shift the cost and outcome curves more favorably. To date, Stive claims its approach has led to a 20% reduction in the cost of kidney care and a 42% reduction in hospitalizations. The company has raised close to \$400M, and currently serves 80K patients across 30 states, with partnerships with more than 600 nephrologists representing over \$2.5B in annual medical spending. Strive plans to use the latest round to break into new (state) markets and expand partnerships with providers and payers, seeking to get to 100K patients by the end of 2023.





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Synergistic Acquisition Paves Way For Market Expansion



\$290M



Target

Deal Size

Buyer



Getinge is expanding its offering in the Life Sciences segment by acquiring High Purity New England. This is a highly synergistic transaction for Getinge that extends their products beyond Applikon bioreactors and expands their offering into the lucrative single-use disposable products that the bioprocessing market often prefers. High Purity New England's history of success will be well compensated as this structured transaction will have \$120M cash at closing and has revenue milestones across 2024 – 2026 for an additional \$170M.



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Bioventus Exits The Wound Care Business With Divestiture



Wound Care Business Target



Deal Size





Bioventus' recent divestiture follows a series of similar transactions in medtech, with Johnson & Johnson, Medtronic and Baxter all announcing significant strategic shifts, and consequently, shedding non-core franchises and businesses. The benefits of these re-alignments, beyond liquidity for shareholders, are garnered with newly optimized sales channels, higher-margin product portfolios, and a cleaner value creation story for investors. This was a smart transaction paving the way towards a stronger balance sheet and enabling strategic optionality.





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Bicycle Therapeutics Driving Future Radiopharmaceuticals After Bayer Deal



Deal Size



Investors



Since Bayer's acquisition of Progenics in 2016 and the more publicized 2017 Novartis acquisition of AAA, the radiopharmaceutical seament has been growing. Radiopharmaceuticals offer an exciting cancer treatment option that enable both tumor diagnosis and imaging of treatment efficacy. The underlying mechanism links a radioactive compound to a targeting molecule which binds to a tumorassociated cell surface receptor. Upon binding, the radioactive molecule damages the targeted and surrounding cells, thereby treating the disease. More recent deals have focused on identifying new targets beyond fibroblast activation proteins (FAP) and prostate-specific membrane antigen (PSMA). To develop new targets, Bayer laid out \$45M upfront and up to \$1.7B to partner with Bicycle for access to their proprietary bicyclic peptide technology. This deal comes just months after a similar partnership between Novartis and Bicycle. With these agreements Bicycle is shaping the future of radiotherapy.





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Initial Therapeutics Lands \$75M For Novel Protein Synthesis



Deal Size

Apple Tree Partners®

Investor

Target



Protein degrader therapeutics have been a hot ticket item for venture groups and big pharma alike with >\$1.8B in the last 3 years alone committed to finance companies seeking to bring these technologies to market. With the potential to treat 'undruggable' targets in any number of diseases by manipulating the ubiquitin-proteasome system, it makes sense that venture dollars would flow to this space. With Initial Therapeutics' financing and launch, it confirms the biotech community is firmly on the hunt for the next bia technology in disrupting protein synthesis. This time, Apple Tree Partners is placing it's bet on Initial Therapeutics' technology targeting the ribosome and stalling protein synthesis before it can begin in a highly specific manner via their STOPS technology (Selective Targeting Of Protein Synthesis). The company hopes to use its technology to continue the trend of drugging the 'undruggable' targets in cancer initially. The technology behind Initial Therapeutics grew out of insights from the co-founders labs at UC Berkley & UC Irvine using insights from structural biology to develop a novel way of targeting ribosomes to treat disease. This further adds to the value of structural biology to the industry-wide therapeutic pipeline with everything from computational approaches to drug discovery to, now, ribosome targeting therapeutics owing some credit to the field.





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Surgical Robotics Continue To Garner Investor Interest



\$55M

Sofinnova partners





Target

Deal Size

Investors



Medical robotics, particularly for routine surgical procedures, continue to capture the attention of investors– from traditional MedTech to true digital groups. As traditional MedTech continues to mature as a segment, surgical robotics provides a value-enhancing bridge from device to surgeon by integrating the procedure workflow itself. With Moon Surgical's \$55.4M round, the company plans to continue development of its Maestro surgical system and accelerate commercialization in laparoscopic surgery settings. Of note in this round, Moon Surgical adds Dr. Fred Moll as both an investor and board chair. Moll, founder of robotics leader Intuitive Surgical, draws on previous experience with Auris Health (J&J's robotic surgery system). This addition further validates Moon Surgical's position for commercial success as a truly innovative technology. This financing comes shortly after the company's \$31M series A in June 2022, with the proceeds used for both U.S. and E.U. regulatory clearances. As robotics continue to be developed for the life sciences and healthcare space, it will be interesting to see how this technology segment continues to morph, which players will come out as leaders, and what market dynamics will result from ongoing innovation.





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VectivBio Acquisition Pioneers Treatments For Severe Rare GI Conditions



\$1.2B

Ironwood

Target

Deal Size





VectivBio, a clinical-stage pioneer developing novel treatments for severe rare gastrointestinal conditions, entered into a definitive agreement to be acquired by Ironwood Pharmaceuticals for \$17.00/share in an all-cash transaction with an estimated aggregate consideration of ~\$1B. VectivBio develops treatments for conditions including Short Bowel Syndrome with Intestinal Failure (SBS-IF) and acute Graft versus Host Disease (aGvHD). SBS-IF is a severe condition that requires ongoing administration of fluids and nutrients, resulting in significant mortality, economic burden, and reduced quality of life. VectivBio's lead investigational asset, apraglutide, is a next-generation GLP-2 analog currently in Phase 3 trials, with expected results by the end of this year. Apraglutide shows promise as a potential best-in-class therapy for SBS-IF due to its potency, unique weekly dosing convenience, and a robust Phase 3 study designed to evaluate its clinical benefits. Ironwood believes that if apraglutide is successful and approved, it has the potential to generate peak net sales of \$1B. The acquisition of VectivBio and apraglutide presents an opportunity for Ironwood to strengthen its portfolio and pipeline gastrointestinal diseases. The acquisition also aligns with Ironwood's strategic goals and complements its existing assets, including the blockbuster product LINZESS. Ironwood's established commercial infrastructure and relationships within gastroenterology position them well to bring apraglutide to patients suffering from SBS-IF and other GI conditions.





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TISSIUM Financing Fuels Commercial Launch Of Tissue Reconstruction Product

TISSIUM

Target

\$54M

Deal Size

Sofinnova partners







Crédit Mutuel Innovation

Investors



TISSIUM, a developer of biodegradable sealants and adhesives for surgical-wound closure, has garnered the attention of leading investors in the form of a \$53.5M Series D financing. Proceeds from the round will propel TISSIUM's leading products, aiming to alleviate current suboptimal reconstructive solutions for damaged tissues, towards commercialization. Remaining capital from the round will be allocated towards pipeline and portfolio expansions within the areas of peripheral nerve, GI, ENT, and cardiovascular interventions. CE marked in 2017 for damaged vasculature sealing, and again in 2020 for pre-filled syringe injection, TISSIUM's proprietary polymers facilitate superior tissue reconstruction through cutting-edge biomorphic and programmable characteristics. Leveraging naturally occurring compounds, TISSIUM's viscous pre-polymer technology is precisely applied to tissues with minimal displacement during surgical procedures. The programmable polymer building-blocks dynamically adjust to match tissue-specific environments, maximizing conformation and integration. In addition to proven applications within tissue reconstruction, TISSIUM is exploring the potential for ECM-like 3D matrices, for controlled and localized drug release for several ENT diseases. This exciting technology creates an opportunity for effective, and localized, treatment of various indications.





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Novel Orthopedic Solutions Enhance Biological & Mechanical Reconstruction







Target

Deal Size

Investors



Artelon, Inc., an orthopedics company focused on bringing innovative soft tissue reconstructive procedures and products to market, has announced the closing of \$20M in Series B funding. The round was led by Vensana Capital with additional funding expected from existing investors. The funds will support clinical research and commercial development of Artelon's surgical products for the ankle and other joints. Artelon is committed to developing surgical solutions for ankle instability and notes the large market is underserved with current procedures resulting in extended recovery times, residual pain, and a lack long-term efficacy. Through recent fundraising efforts the company will seek expansion into additional orthopedic soft tissue reconstruction indications while continuing its path toward market leadership in ankle instability.





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Pharma Tech Company Newbiologix Raises \$50M In Series A







Investors



NewBiologix successfully raised \$50M in a series A round led by Recipharm, with additional funding from the company's cofounders, Igor Fish and Nicolas Mermod. NewBiologix focuses on advanced engineering of human and mammalian cell lines used to manufacture gene and cell therapies. The company's DNA-based platform aims to overcome the current manufacturing challenges associated with the production of viral delivery agents. Recombinant adeno-associated viruses (rAAVs) are effective delivery vehicles for gene therapies; however, they result in high production costs due to limited scalability, unpredictability, varying quality and low reproducibility. By integrating genes necessary for rAAV production directly into their human and mammalian cell lines, NewBiologix's prototypes produce higher yields, predictability and scalability, while ultimately reducing production costs. With this funding, NewBiologix plans to test its rAAV cell lines with key collaborators in 2024 and release commercially available viral production cell lines by 2026. Recipharm's investment in NewBiologix not only highlights pharmaceutical interest in rAAV production, but additionally underscores an unmet need within the gene and cell therapy segment. As the number of gene and cell therapies under development and in the clinic continues to grow, the high manufacturing costs will only continue to limit their accessibility and capabilities within the market.





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