

Executive Summary

Delancey Street Partners is pleased to present our Outsourced Pharmaceutical Services Sector Review for the year ended 2022. In 2022, overall M&A activity remained robust in the sector with strategics and private equity-backed companies pursuing acquisitions to fill in gaps in their portfolio of capabilities. A number of privately-held companies across clinical, commercialization, and contract manufacturing services attracted institutional capital from private equity for the first time, while many financial sponsors backed a broad array of existing platforms and aggressively pursued bolt-on acquisitions. Large strategics were less active in pursuing large M&A due to market volatility and pressure on stock prices. As a result, there were fewer blockbuster acquisitions compared to previous years. Notably, no large public CROs were acquired or taken private, in contrast to 2021.



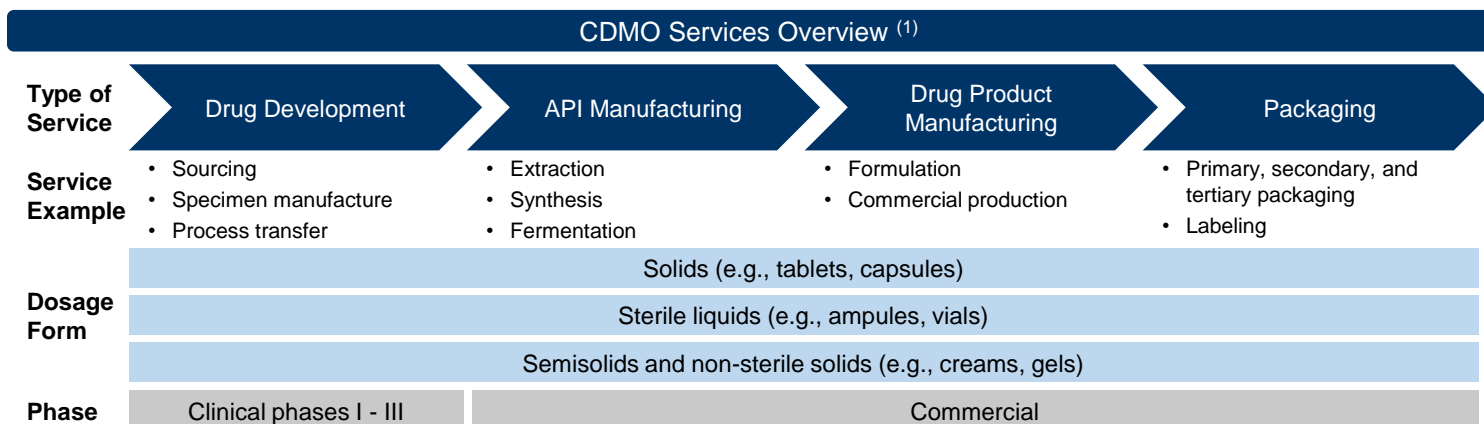
Topics of Discussion

- DSP Spotlight Trend: Role of CDMOs
- Review of public company stock performance
- Notable M&A activity

DSP Spotlight Trend: Role of CDMOs

In this year's report, we are expanding the scope of our outsourced pharmaceutical services review to include contract development and manufacturing organizations ("CDMOs"). Historically, DSP has primarily focused on Clinical Research Organizations ("CROs") and commercialization companies, which provide a range of outsourced clinical research and marketing services to pharmaceutical ("pharma") and biotechnology ("biotech") companies including clinical trial management, regulatory affairs, and product launch support. As pharma and biotech companies continue their shift toward an asset-light business model, these organizations are also partnering with CDMOs to gain access to specialized manufacturing resources, facilities, and capabilities.

CDMOs are an increasingly important part of the pharma industry, providing a range of development and manufacturing services to companies outsourcing critical operations. These services include process development, analytical testing, formulation development, and clinical and commercial-scale manufacturing, among others. A diagram illustrating the range of CDMO services is presented below. Contract manufacturing has grown significantly in recent years, largely due to major pharma companies selling their manufacturing facilities to CDMOs in an effort to reduce fixed costs. This trend has enabled CDMOs to quickly build capabilities and market share while taking on a more strategic role in the drug development life cycle with greater influence across the pharma value-chain.



DSP Spotlight Trend (cont'd)

The CDMO market has experienced significant growth in recent years due to a number of factors, including: i) the increasing complexity of drug development; ii) the continuing trend of outsourcing non-core activities in the pharma and biotech industry; and iii) the growing global demand for large molecule drugs. The need for more efficient and cost-effective manufacturing processes has also contributed to the expansion of the CDMO market.

The proliferation of CDMOs is underpinned by the value proposition they provide to pharma companies, including:

Expertise in Dosage Forms & Therapies

CDMOs often specialize in specific dosage forms, such as solid dosage, semi-solids, sterile liquids, and non-sterile liquids, and possess extensive knowledge and experience in these areas. In addition, CDMOs provide expertise in the manufacture of both large and small molecule drugs. Large molecule drugs are often more complex and require specialized knowledge and techniques to manufacture properly. CDMOs also have domain expertise in FDA regulatory requirements and the ability to support pharmaceutical companies through all phases of drug development projects. This is particularly valuable as pharma companies increasingly shift internal resources to focus on research and marketing rather than manufacturing.

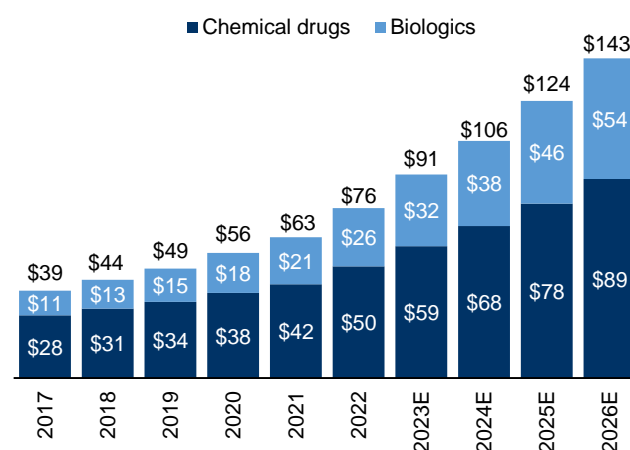
Advanced Equipment and Facilities

CDMOs invest in advanced technologies and facilities to manufacture cutting-edge products which are not available or feasible for small and medium pharma / biotech companies to produce on their own. Additionally, larger pharma companies seeking to manage capacity and avoid capital expenditure can partner with CDMOs to gain access to these resources without the expense of ownership. This trend has helped reduce excess production capacity and eliminate fixed costs for pharma and biotech companies. The rise of novel modalities such as cell therapies, gene therapies, and mRNA therapies in recent years has also required a significant investment in new manufacturing capabilities, including viral vectors, cell manipulation, nucleic acids and lipid-based formulations. Many CDMOs have actively added capacity for these more capital-intensive biologics.

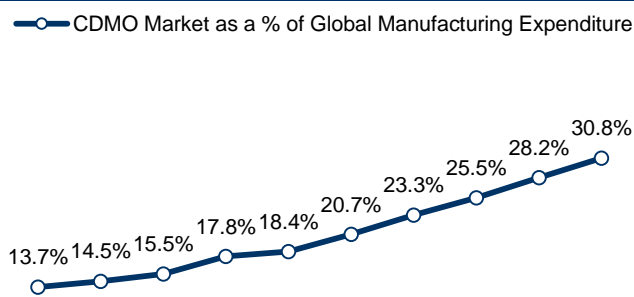
Scalability of Production

CDMOs offer a range of benefits related to the scalability of commercial production for drugs. These organizations have access to state-of-the-art manufacturing facilities and fully-integrated infrastructure, which can significantly reduce the time it takes for drugs to reach the market and accelerate the introduction of new products. CDMOs are often integrated into pharma and biotech companies' commercialization strategies and can help streamline supply chains. In addition, CDMOs' purpose-built infrastructure can provide flexibility and reduce the risk associated with shifts in production volume or product variants, which can be costly and risky to manage internally. It is important to note that once a CDMO is integrated into a pharma or biotech company's commercialization strategy, switching to a different CDMO can involve significant transfer costs.

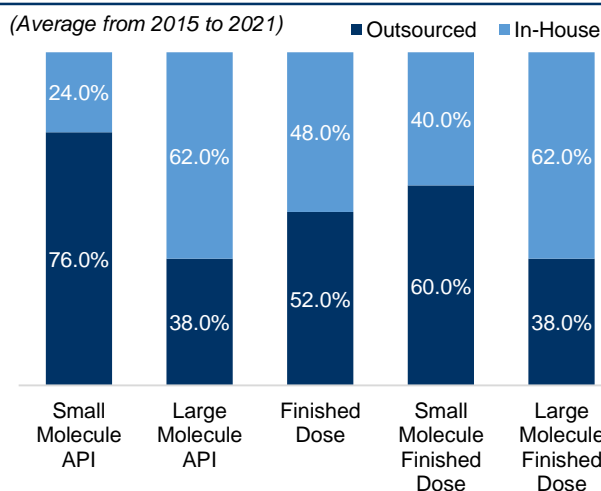
Global CDMO Market Size (\$ in billions) ⁽²⁾



Growth in Global CDMO Manufacturing ⁽²⁾



Manufacturing Breakdown by Dosage Form ⁽³⁾



DSP Spotlight Trend (cont'd)

On-Going Consolidation Trends Among CDMOs

In recent years, the CDMO market has experienced consolidation, with companies pursuing both horizontal and vertical integration strategies to expand or diversify their capabilities in specific dosage forms. According to EY, approximately 40.0% of CDMO M&A transactions in 2021 were centered on novel modalities. M&A activity in the CDMO market has also included targeted acquisitions of specific sites and production facilities. The large, fragmented nature of the CDMO market has presented opportunities for substantial returns and attracted capital from private equity investors interested in backing CDMOs that specialize in specific stages of the drug development process and have established niche positions in the market. Private equity firms have established numerous middle-market platforms and made strategic decisions to focus on small molecule drugs or biologics, with a particular emphasis on sterile liquids.

On the other hand, large strategic acquirers have been capitalizing on pharma's desire to work with fewer vendors by pursuing M&A to extend their vertically-integrated, end-to-end capabilities across dosage forms and technologies. As a result, these large consolidators such as Catalant are able to service drug sponsors from early Phase One trials to commercial manufacturing, creating a "one-stop-shop" for their customers.

Dosage Form Capabilities of Select CDMOs ⁽⁴⁾

Company Name	Small Molecule		Biologics			
	API	Finished Dose	API	Finished Dose	Gene Therapy	Cell Therapy
Alcami (GHO Capital & Vistria)	✓	✓		✓		
Almac (Private)	✓	✓				
Boehringer (Private)			✓	✓		
Cambrex (Permira)			✓	✓		
Catalent (NYSE:CTLT)	✓	✓	✓	✓	✓	✓
CordenPharma (Astorg)	✓	✓	✓	✓		
EUROAPI (ENXTPA:EAPI)	✓	✓				
Lonza (SWX:LONN)	✓	✓	✓	✓	✓	✓
PCI Pharma Services (Kohlberg)		✓		✓		
Recipharm (EQT)	✓	✓	✓	✓		
SamsungBiologics (KRX: 207940)			✓	✓		
Siegfried Holding (SWX:SFZN)	✓	✓				
Sterling Pharma Solutions (GHO)	✓	✓				
Thermo Fisher Scientific (NYSE:TMO)	✓	✓	✓	✓	✓	✓
WuXi Apptec (SHSE:60325)	✓	✓	✓	✓	✓	✓

What This Means

DSP expects the CDMO market to continue its strong growth driven by the increasing demand for specialized services from pharmaceutical and biotechnology companies seeking to outsource their non-core operations. DSP believes that M&A activity in the industry will be supported by companies seeking to expand their service capabilities through targeted horizontal and vertical acquisitions. As the complexity of drug development increases and the need for specialized expertise and equipment and facilities grows, CDMO platforms that are able to offer a wide range of services and capabilities are expected to be particularly attractive targets for M&A activity.

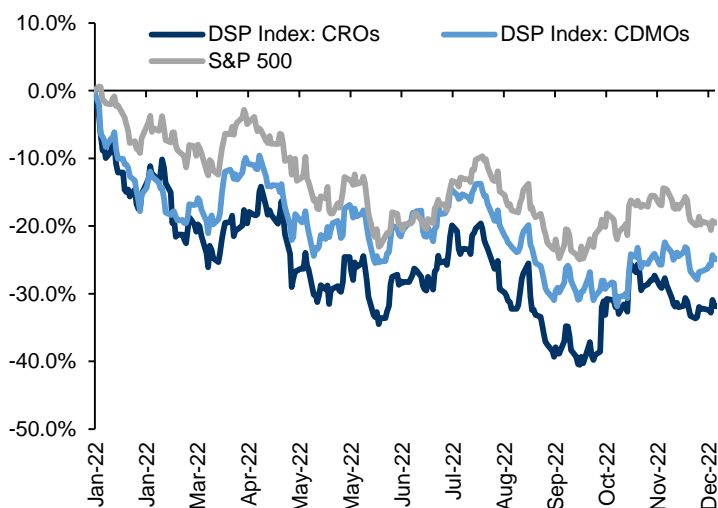
Review of Public Company Stock Performance

In this year's report, we have introduced a new compset specifically for CDMOs. Furthermore, we have included Ergomed (LON:ERGO) as a new addition to our CRO compset in recognition of its status as a provider of scale for pharmacovigilance and clinical research services.

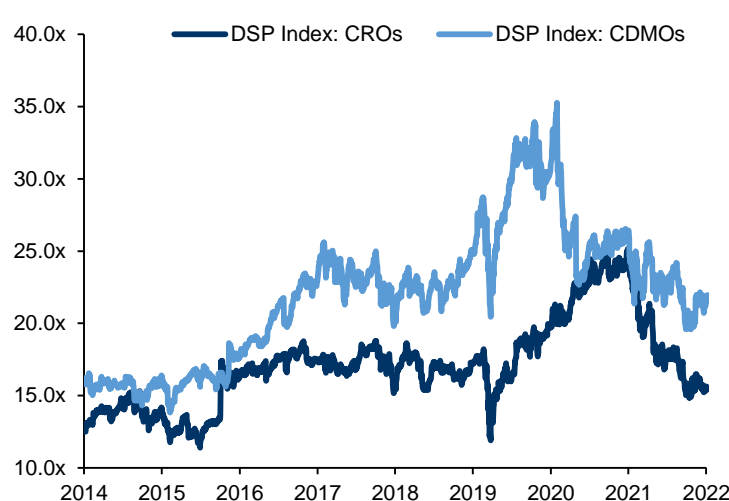
Both CRO and CDMO stocks underperformed in 2022, with an average annual return of -31.9% and -29.0%, respectively, compared to the S&P which returned -19.4%. Contributing to the underperformance of the sector were: (i) an increase in volatility arising from macroeconomic factors and rising interest rates; (ii) a decrease in funding for small to medium-sized biotech companies; (iii) a growing number of trial sponsors postponing projects as they adopted cost-saving measures; and (iv) a decline of 5.0% to 10.0% in trial starts in 2022 compared to 2019 levels.

As demonstrated in the charts below, valuations for both CROs and CDMOs have receded from the highs observed in 2020 and 2021. In addition, CROs have historically traded at a discount to CDMOs. As of year-end 2022, CROs traded at a median LTM EBITDA multiple of 14.5x compared to 17.2x for CDMOs. CDMOs typically trade at a premium to CROs due to their long-term contracts, higher-margin manufactured products, and reduced reliance on individual clinical trials.

One Year Stock Performance (5) (6) (7)



Historical EV / LTM EBITDA Multiple (5) (6) (7) (8)









Comparable Company Analysis: Outsourced Pharma Services (5)

CROs															
Company	Price 12/30/2022	30 Day % Change	YTD % Change	Market Value (\$mm)	Enterprise Value (\$mm)	Gross Profit % Margin	2022P EBITDA % Margin	EV / Rev			EV / EBITDA			P / E	
								LTM	2022P	2023P	LTM	2022P	2023P	2022P	2023P
Charles River Laboratories (NYSE:CRL)	217.90	(4.7%)	(42.2%)	11,086.5	14,289.5	37.2%	25.0%	3.8x	3.7x	3.4x	14.5x	14.6x	13.4x	20.0x	19.1x
Ergomed (AIM:ERGO)	15.33	(3.4%)	(24.5%)	768.9	757.6	41.3%	19.8%	4.3x	4.3x	3.9x	24.6x	21.8x	19.4x	30.9x	27.3x
ICON (LSE:ICON)	194.25	(9.8%)	(37.3%)	15,859.6	20,267.4	28.6%	19.0%	2.6x	2.6x	2.5x	14.4x	13.8x	12.5x	16.6x	15.5x
IQVIA (NYSE:IQV)	204.89	(6.0%)	(27.4%)	38,056.3	49,348.3	34.9%	23.2%	3.4x	3.4x	3.2x	17.9x	14.8x	13.5x	20.2x	19.6x
LabCorp (NYSE:LHC)	235.48	(2.2%)	(25.1%)	20,863.5	26,826.1	29.9%	19.8%	1.8x	1.8x	1.8x	8.5x	9.0x	10.2x	11.8x	13.3x
Medpace (NASDAQ:MEDP)	212.41	1.2%	(2.4%)	6,588.6	6,855.2	29.6%	21.1%	5.0x	4.7x	4.1x	24.6x	22.4x	20.5x	29.0x	25.8x
Syneos (NASDAQ:SYNH)	36.68	4.0%	(64.3%)	3,774.5	6,636.0	23.7%	15.1%	1.2x	1.2x	1.3x	9.1x	8.2x	8.7x	7.8x	9.8x
Overall Group Mean		(3.0%)	(31.9%)	13,856.8	17,854.3	32.2%	20.4%	3.2x	3.1x	2.9x	16.2x	14.9x	14.0x	19.5x	18.6x
Overall Group Median		(3.4%)	(27.4%)	11,086.5	14,289.5	29.9%	19.8%	3.4x	3.4x	3.2x	14.5x	14.6x	13.4x	20.0x	19.1x
Overall Group Max		4.0%	(2.4%)	38,056.3	49,348.3	41.3%	25.0%	5.0x	4.7x	4.1x	24.6x	22.4x	20.5x	30.9x	27.3x
Overall Group Min		(9.8%)	(64.3%)	768.9	757.6	23.7%	15.1%	1.2x	1.2x	1.3x	8.5x	8.2x	8.7x	7.8x	9.8x

CDMOs															
Catalent (NYSE:CTLT)	45.01	(23.8%)	(64.8%)	8,100.2	11,972.2	32.7%	26.4%	2.5x	2.5x	2.5x	10.8x	9.3x	9.8x	11.8x	14.2x
EUROAPI (EPA: EAP)	14.80	(23.8%)	3.4%	1,391.5	1,397.9	19.3%	12.4%	1.3x	1.4x	1.3x	14.7x	10.9x	8.0x	N.A.	20.2x
Lonza Group (SWX:LONN)	490.01	(13.8%)	(41.2%)	36,353.6	36,400.1	39.2%	31.7%	5.8x	5.6x	4.9x	26.1x	17.7x	15.1x	31.5x	29.1x
Samsung Biologics (KRX: 207940)	652.83	(2.7%)	(14.0%)	46,241.0	45,722.3	48.0%	39.0%	N.M.	N.M.	N.M.	N.M.	N.M.	N.M.	N.M.	N.M.
Siegfried Holding (SWX:SFZN)	663.48	(27.5%)	(31.8%)	2,817.5	3,256.2	26.1%	22.2%	2.5x	2.5x	2.3x	11.4x	11.2x	10.9x	18.3x	18.2x
Thermo Fisher Scientific (NYSE:TMO)	550.69	(13.6%)	(17.5%)	216,998.3	243,417.3	43.5%	27.1%	5.5x	5.6x	5.5x	19.6x	20.5x	20.4x	23.9x	23.2x
WuXi AppTec (SHSE:603259)	11.74	(20.6%)	(37.1%)	34,767.9	33,802.3	36.7%	27.4%	6.4x	5.8x	5.0x	25.5x	21.2x	18.5x	29.3x	24.3x
Overall Group Mean		(18.0%)	(29.0%)	49,524.3	53,709.8	35.1%	26.6%	4.0x	3.9x	3.6x	18.0x	15.1x	13.8x	23.0x	21.5x
Overall Group Median		(20.6%)	(31.8%)	34,767.9	33,802.3	36.7%	27.1%	4.0x	4.0x	3.7x	17.2x	14.4x	13.0x	23.9x	21.7x
Overall Group Max		(2.7%)	3.4%	216,998.3	243,417.3	48.0%	39.0%	6.4x	5.8x	5.5x	26.1x	21.2x	20.4x	31.5x	29.1x
Overall Group Min		(27.5%)	(64.8%)	1,391.5	1,397.9	19.3%	12.4%	1.3x	1.4x	1.3x	10.8x	9.3x	8.0x	11.8x	14.2x

Stock Performance Commentary: CROs

Stats  2022P Sales: \$3,910mm 2022P EBITDA: \$979mm EBITDA %: 25.0%	<ul style="list-style-type: none"> • Stock return of -42.2% • CRL reported revenue growth of 10.4% YoY in Q3 2022; Management cited the DSA segment grew 16.5% YoY driven by meaningful price increases and higher study volumes • Regulators announced in December 2022 that exports of non-human primates for CRL's RMS business would be halted by the government, which is expected to result in lost revenue in 1H 2023 • CRL announced it has signed a definitive agreement to divest its Avian Vaccine business for approximately \$170 million in cash
Stats  2022P Sales: \$176mm 2022P EBITDA: \$35mm EBITDA %: 19.8%	<ul style="list-style-type: none"> • Stock return of -24.5% • Ergomed reported revenue growth of 22.5% YoY for FY 2022. Management cited the growth was a result of capturing market share and the company's exposure to fast-growing rare diseases • The company reported a robust order book of £295.0 million for 2022, implying a YoY growth rate of 23.1% and book-to-bill ratio of 1.4x • Management continued to execute on its M&A strategy; Ergomed acquired ADAMAS Consulting in February 2022 to bolster its pharmacovigilance and pharmaceutical manufacturing expertise
Stats  2022P Sales: \$7,746mm 2022P EBITDA: \$1,472mm EBITDA %: 19.0%	<ul style="list-style-type: none"> • Stock return of -37.3% • ICON reported revenue growth of 3.9% YoY in Q3 2022; Management cited the growth was a result of accelerated demand for clinical development services • The company stated its backlog has not been significantly impacted by changes in biotech funding, and it anticipates the biotech environment to be reset by 2H 2023 • ICON continued to leverage scale from its acquisition of PRA Health to "be at the seat of the table at every large RFP"
Stats  2022P Sales: \$14,379mm 2022P EBITDA: \$3,339mm EBITDA %: 23.2%	<ul style="list-style-type: none"> • Stock return of -27.4% • IQVIA reported revenue growth of 5.0% YoY in Q3 2022; Management cited the growth was a result of strong demand across its commercial and clinical portfolios • The company's R&DS segment delivered over \$2.0 billion in quarterly bookings for the first time ever • IQVIA cited an improvement in winning business and taking market share among emerging biopharma and large pharma companies
Stats  2022P Sales: \$14,948mm 2022P EBITDA: \$2,966mm EBITDA %: 19.8%	<ul style="list-style-type: none"> • Stock return of -25.1% • LabCorp reported revenue declined by -11.2% YoY in Q3 2022; Management cited the Diagnostics segment underperformed due to a decrease in COVID-19 PCR and antibody testing • Revenue for the Drug Development segment decreased by -3.7% YoY due to reduced COVID-19 related work and the Ukraine / Russia crisis • LabCorp announced on July 28, 2022 that its Board of Directors authorized a plan to spin off the company's Clinical Development business into an independent, publicly traded company in 2H 2023
Stats  2022P Sales: \$1,453mm 2022P EBITDA: \$306mm EBITDA %: 21.1%	<ul style="list-style-type: none"> • Stock return of -2.4% • Medpace reported revenue growth of 29.8% YoY in Q3 2022; Management cited net new business awards were \$470.9 million, representing a 15.4% YoY increase • The company's stock rose 38.0% on October 25th as a result of earnings announcement for Q3 2022 • Medpace stated that it is poised to increase bookings at a low-teens rate in 2023, performing better than its CRO competitors in navigating the challenging biotech funding landscape
Stats  2022P Sales: \$5,318mm 2022P EBITDA: \$805mm EBITDA %: 15.1%	<ul style="list-style-type: none"> • Stock return of -64.3% • Syneos reported revenue declined by -0.9% YoY in Q3 2022; Management cited significant headwinds in net awards, revenue and margins in the quarter than originally anticipated • New bookings for Clinical Solutions and Commercial Solutions declined by -80.0% and -12.3% YoY in Q3 2022, respectively • The Company stated the underperformance was primarily due to the impact of lower net new business awards, delays in backlog conversion and customer delays in its FSP business within Clinical Solutions

Stock Performance Commentary: CDMOs

Catalent

Stats

2022P Sales: \$4,848mm
2022P EBITDA: \$1,281mm
EBITDA %: 26.4%

- **Stock return of -64.8%**
- Catalent reported revenue growth of 21.0% YoY in FY 2022
- Management cited performance was due to i) significant investments in production capacity at drug manufacturing facilities in both North America and Europe and ii) robust customer demand in 1H 2022. The company reported customer demand deteriorated in 2H 2022
- Catalent noted it anticipates to face headwinds in 2023, including: i) discretionary spending impacting the company's consumer health segment and ii) clients delaying projects

EUROAPI

Stats

2022P Sales: \$1,033mm
2022P EBITDA: \$129mm
EBITDA %: 12.4%

- **Stock return of 3.4%**
- Sanofi completed the spin-out of its API manufacturing business, EUROAPI, on 5/6/2022 with shares in the new company listed at \$14.32
- EUROAPI reported revenue growth of 10.1% YoY in H1 2022; Management cited the revenue growth was a result strong momentum in large molecule business
- The company issued a profit warning on 12/6/2022, following a temporary suspension of prostaglandin manufacturing at their Budapest site

Lonza

Stats

2022P Sales: \$6,490mm
2022P EBITDA: \$2,057mm
EBITDA %: 31.7%

- **Stock return of -41.2%**
- Lonza reported revenue growth of 15.0% YoY for FY 2022; Management cited the growth was a result of robust demand from biopharmaceutical companies through 1H 2022
- Lonza increased its business mix towards biologic therapies relative to other competitors; Management noted the biologics division grew by 21.7% YoY for FY 2022
- The company added 115 new customers and 375 new clinical and commercial programs in 2022

**SAMSUNG
BIOLOGICS**

Stats

2022P Sales: \$2,204mm
2022P EBITDA: \$860mm
EBITDA %: 39.0%

- **Stock return of -14.0%**
- Samsung Biologics reported revenue growth of 55.0% YoY for FY 2022; Management cited strong performance due to i) the full utilization of its production plans; ii) increased drug product revenue; and iii) eight new signed contracts to produce 11 products
- In April 2022, Samsung Biologics successfully acquired the remaining shares owned by Biogen in their Samsung Bioepis joint venture for \$2.3 billion

Siegfried

Stats

2022P Sales: \$1,312mm
2022P EBITDA: \$292mm
EBITDA %: 22.2%

- **Stock return of -31.8%**
- Siegfried reported revenue and EBITDA growth of 25.0% YoY and 60.0% YoY for of 1H 2022; Management cited momentum in its drug substances and drug products segments which grew by 23.7% and 28.5% YoY, respectively
- Management stated it is evaluating M&A opportunities in i) adjacencies (e.g., large molecule formulation, encapsulation, etc.), and ii) new, high-growth cell & gene, and viral vector markets

**ThermoFisher
SCIENTIFIC**

Stats

2022P Sales: \$43,845mm
2022P EBITDA: \$11,866mm
EBITDA %: 27.1%

- **Stock return of -17.5%**
- Thermo reported revenue growth of 15.0% YoY for FY 2022; Management cited growth was a result of i) laboratory products and biopharma services growing 51.5% YoY; and ii) advancing scale and capabilities with new manufacturing facilities
- Thermo's CDMO division, Patheon, gained market share through its broad offering across API and finished dose for both small and large molecule drugs
- Management noted higher customer demand than capacity for its CDMO services

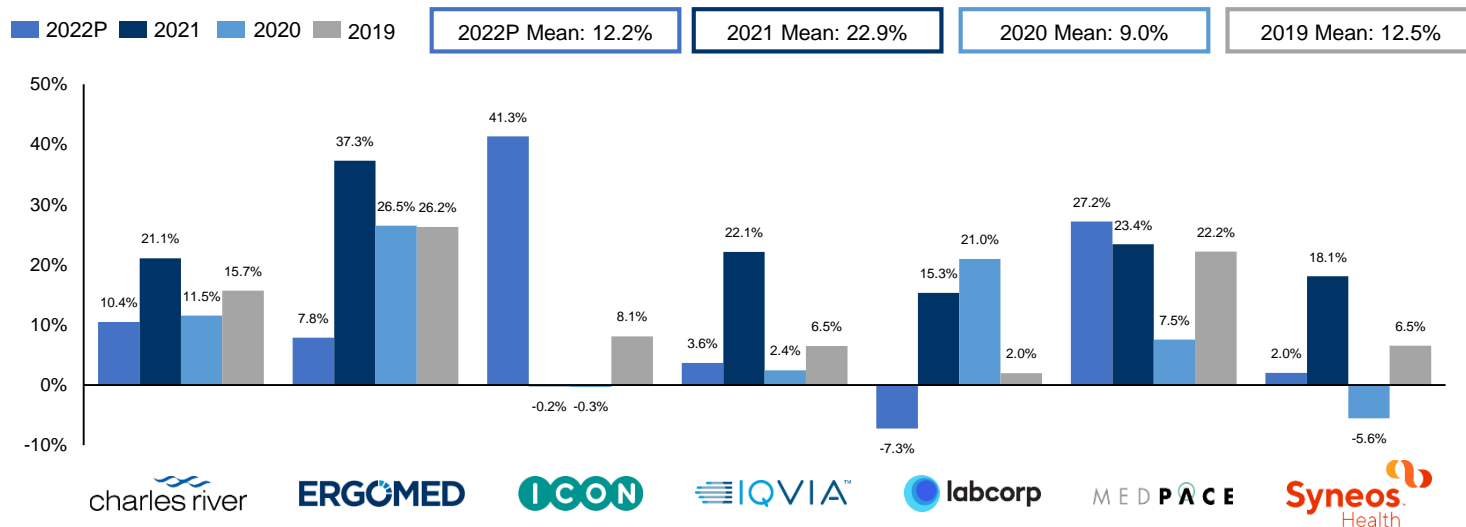
WuXi AppTec

Stats

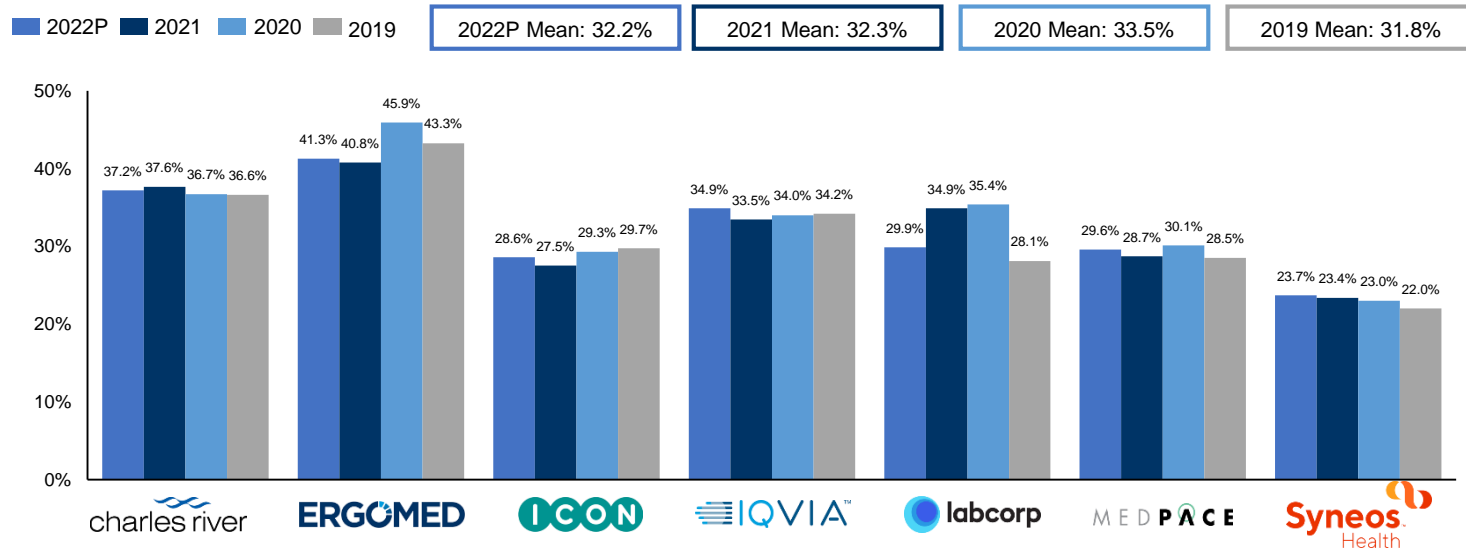
2022P Sales: \$5,826mm
2022P EBITDA: \$1,597mm
EBITDA %: 27.4%

- **Stock return of -37.1%:**
- WuXi AppTec reported YoY revenue growth of 72.0% for FY 2022; Management cited growth was a result of rapidly growing demand in the Chinese CDMO market
- The company outperformed analyst estimates due to continued momentum in commercial project deliveries (added 219 new molecules in 3Q 2022)
- Management stated in October 2022 that WuXi AppTec's customer base has grown to 5,900+ active accounts by adding 1,000 customers in 2022

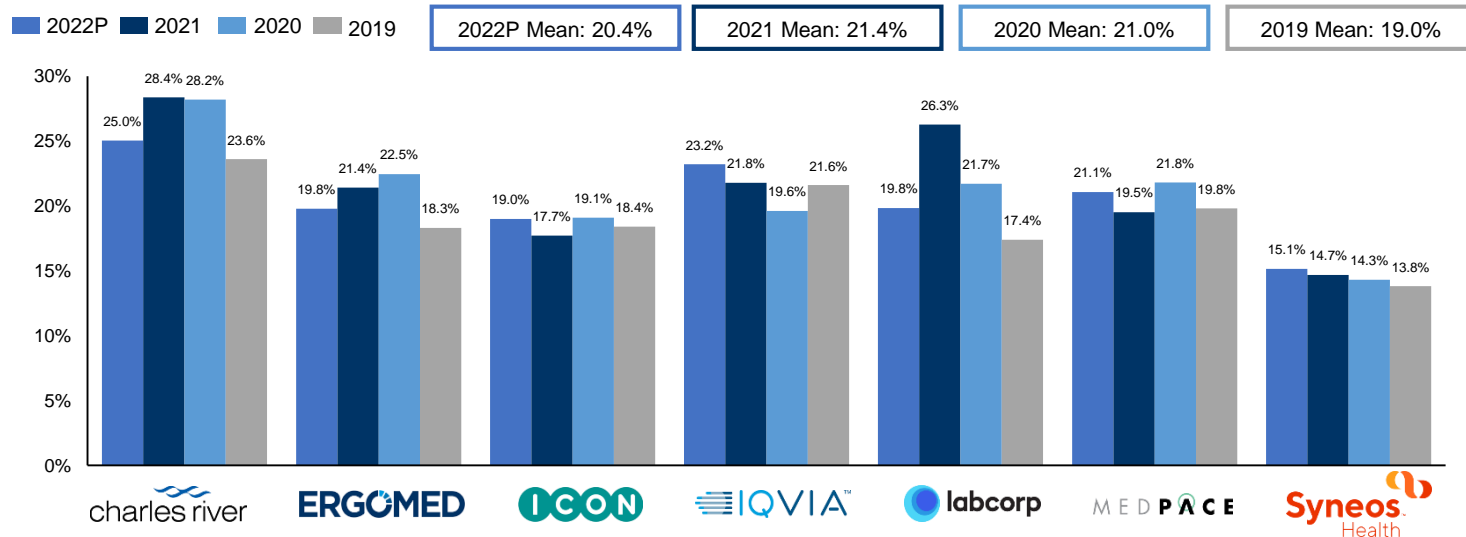
Revenue Growth of CROs ⁽⁵⁾ ⁽⁹⁾



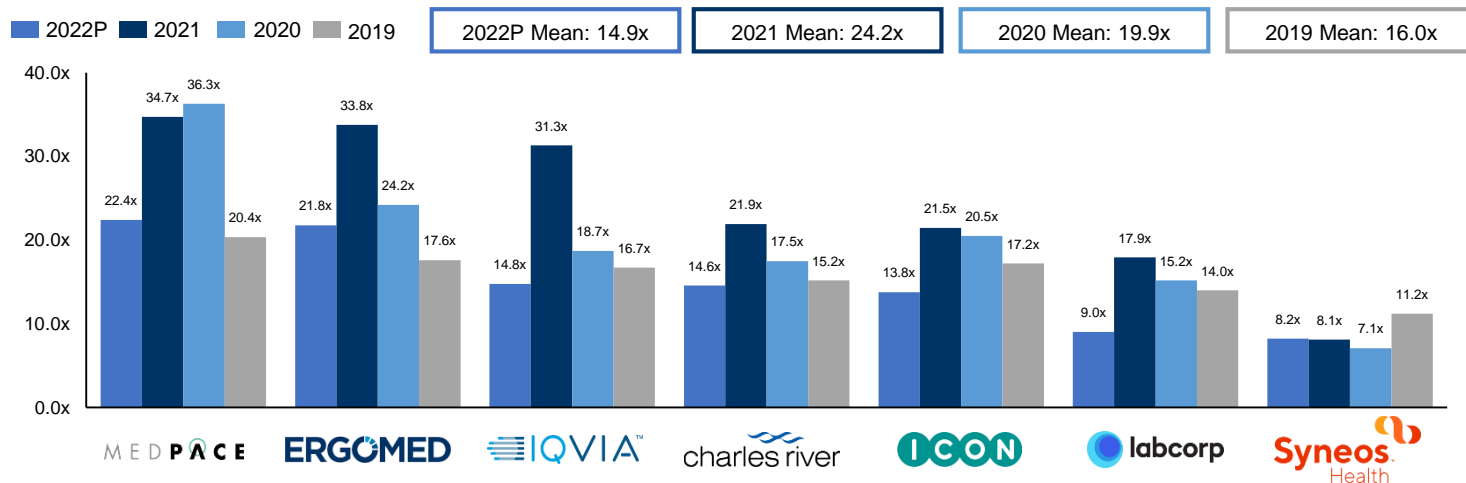
Gross Profit Margins of CROs ⁽⁵⁾ ⁽⁹⁾



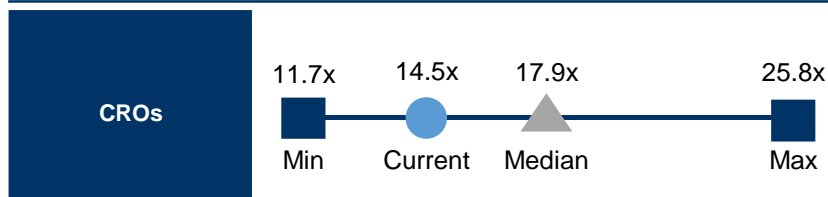
EBITDA Margins of CROs ⁽⁵⁾



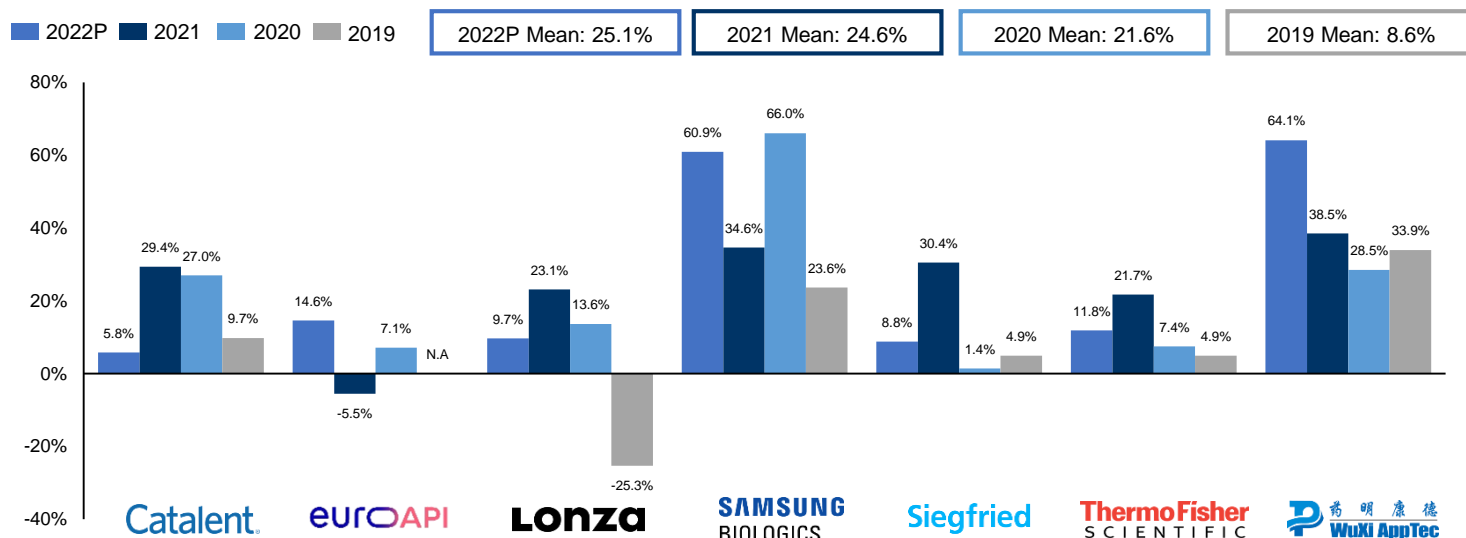
EV / EBITDA of CROs ⁽⁵⁾ ⁽¹⁰⁾



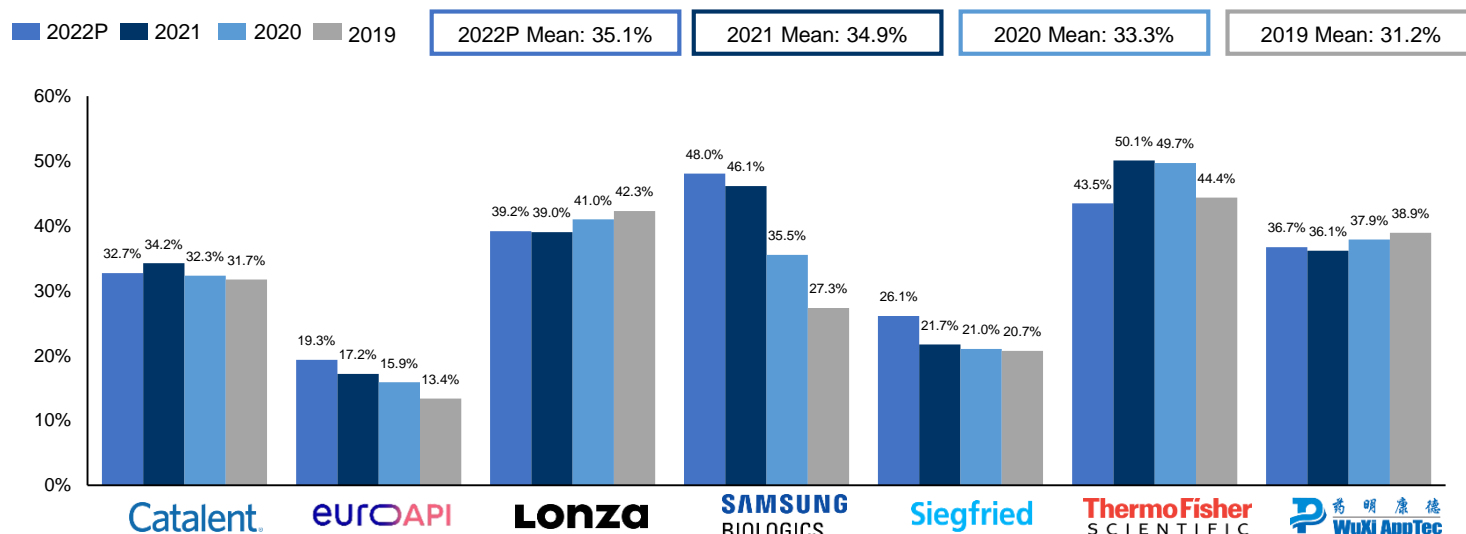
CRO 5-Year Trading Statistics (Median EV / LTM EBITDA) ⁽⁵⁾ ⁽⁶⁾



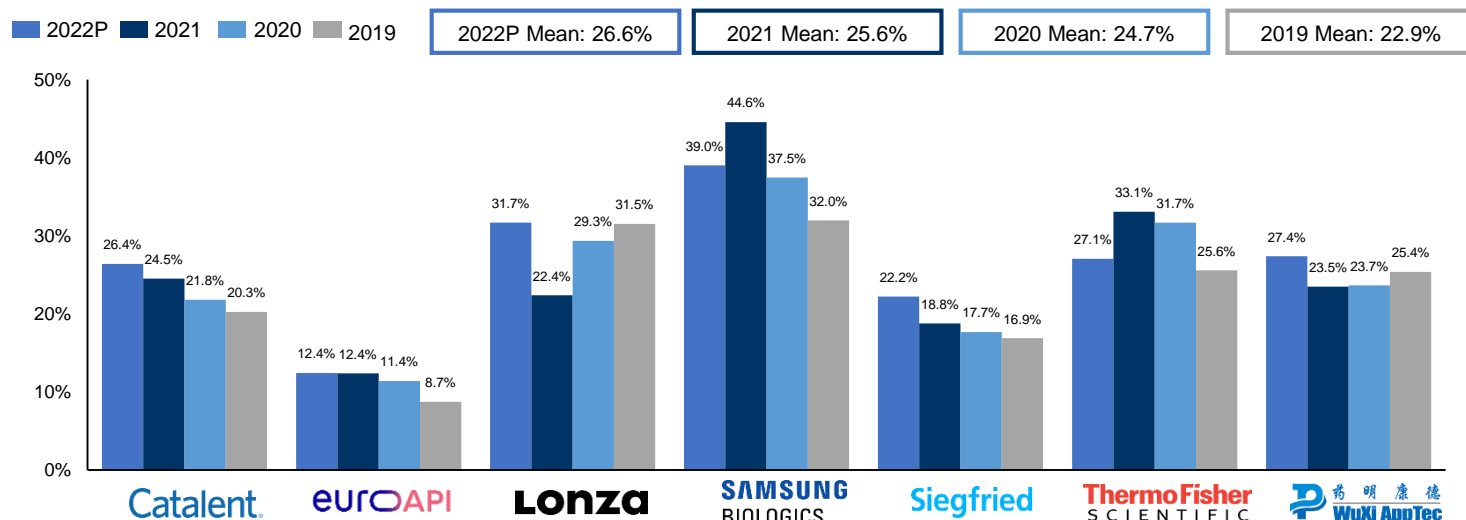
Revenue Growth of CDMOs ⁽⁵⁾



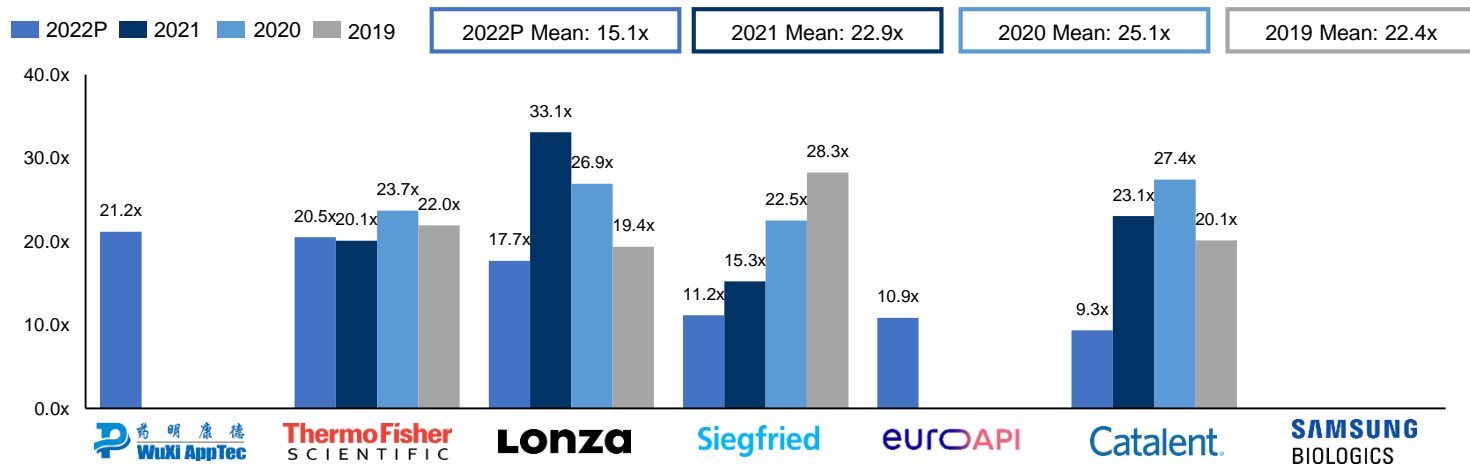
Gross Profit Margins of CDMOs ⁽⁵⁾



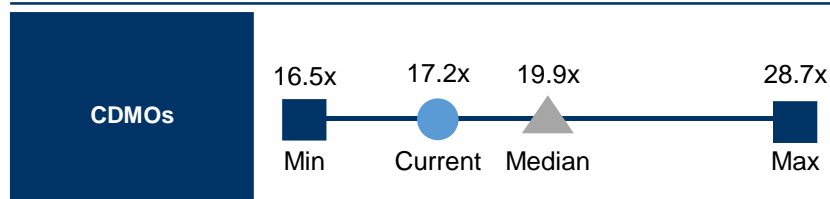
EBITDA Margins of CDMOs ⁽⁵⁾



EV / EBITDA of CDMOs (5) (11) (12)

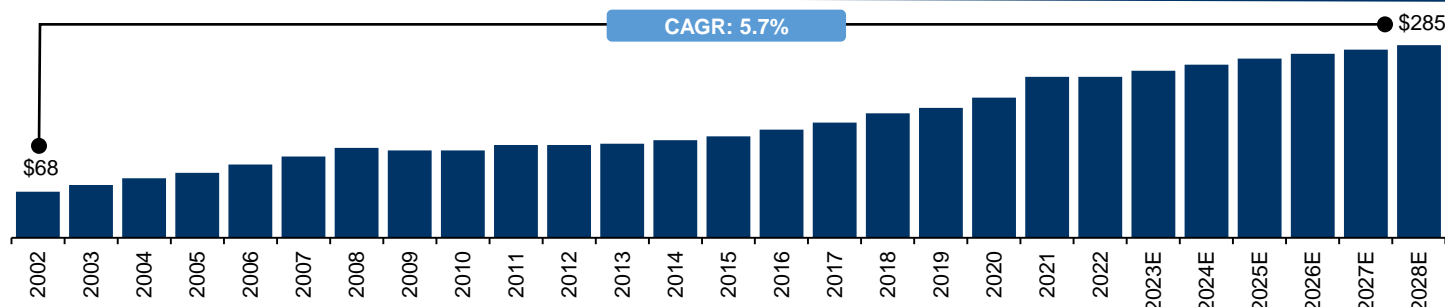


CDMO 5-Year Trading Statistics (Median EV / LTM EBITDA) (5) (7)

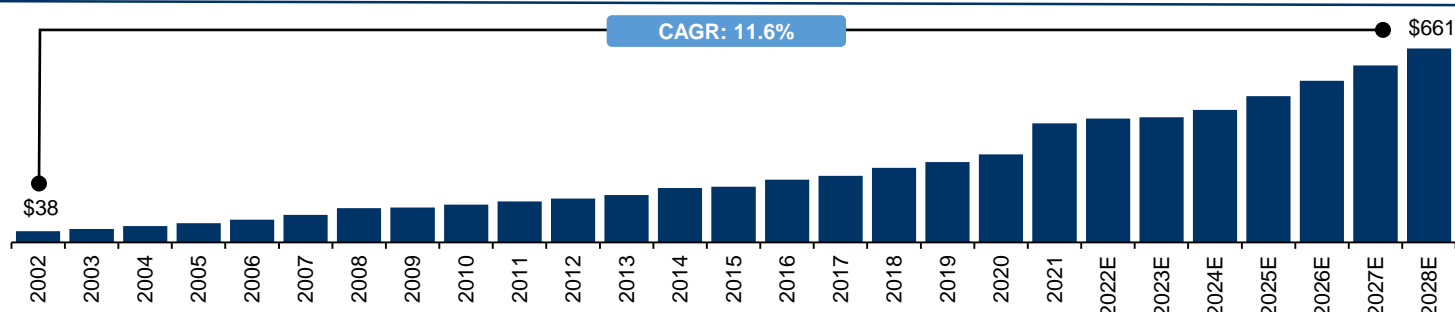


Industry Data

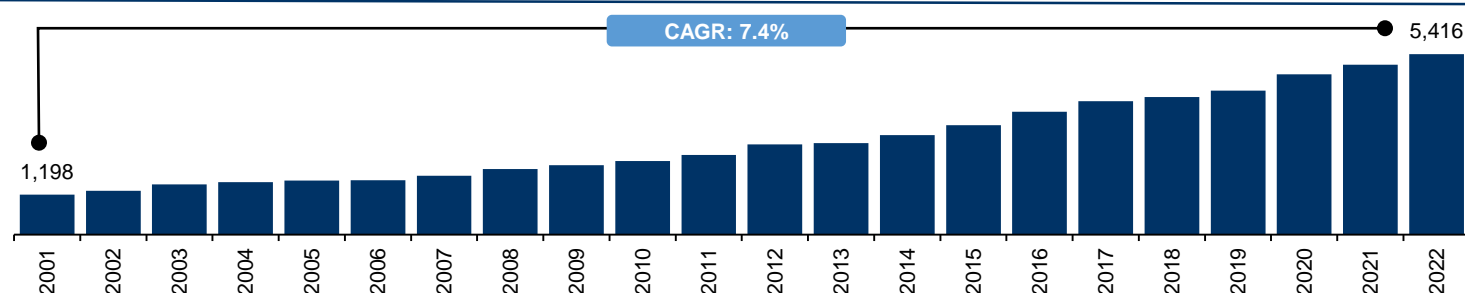
Drug R&D Spend by the Top 500 Pharma and Biotech Companies (\$ in billions) ⁽¹³⁾



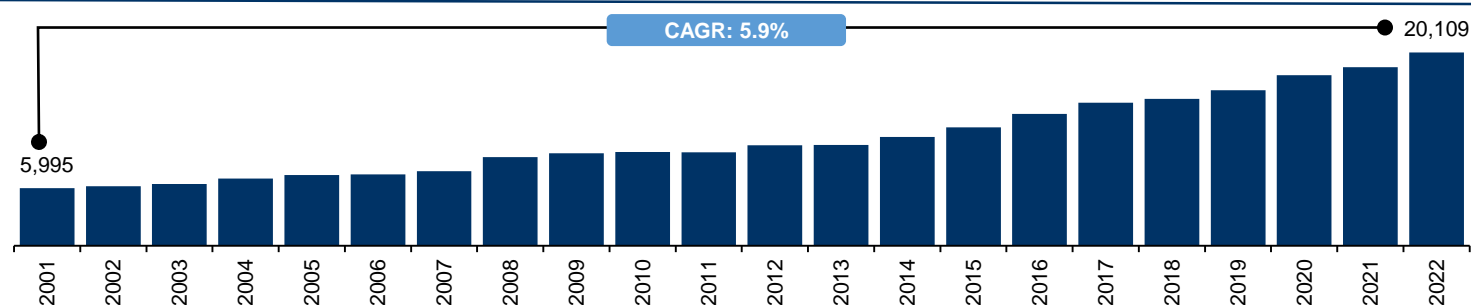
Biotech Drug Sales (\$ in billions) ⁽¹³⁾



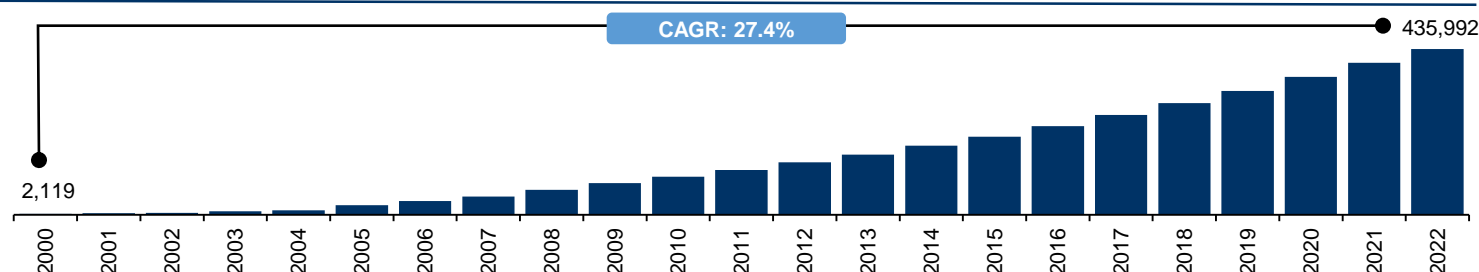
Number of Pharma Companies with Active Pipelines (\$ in billions) ⁽¹⁵⁾



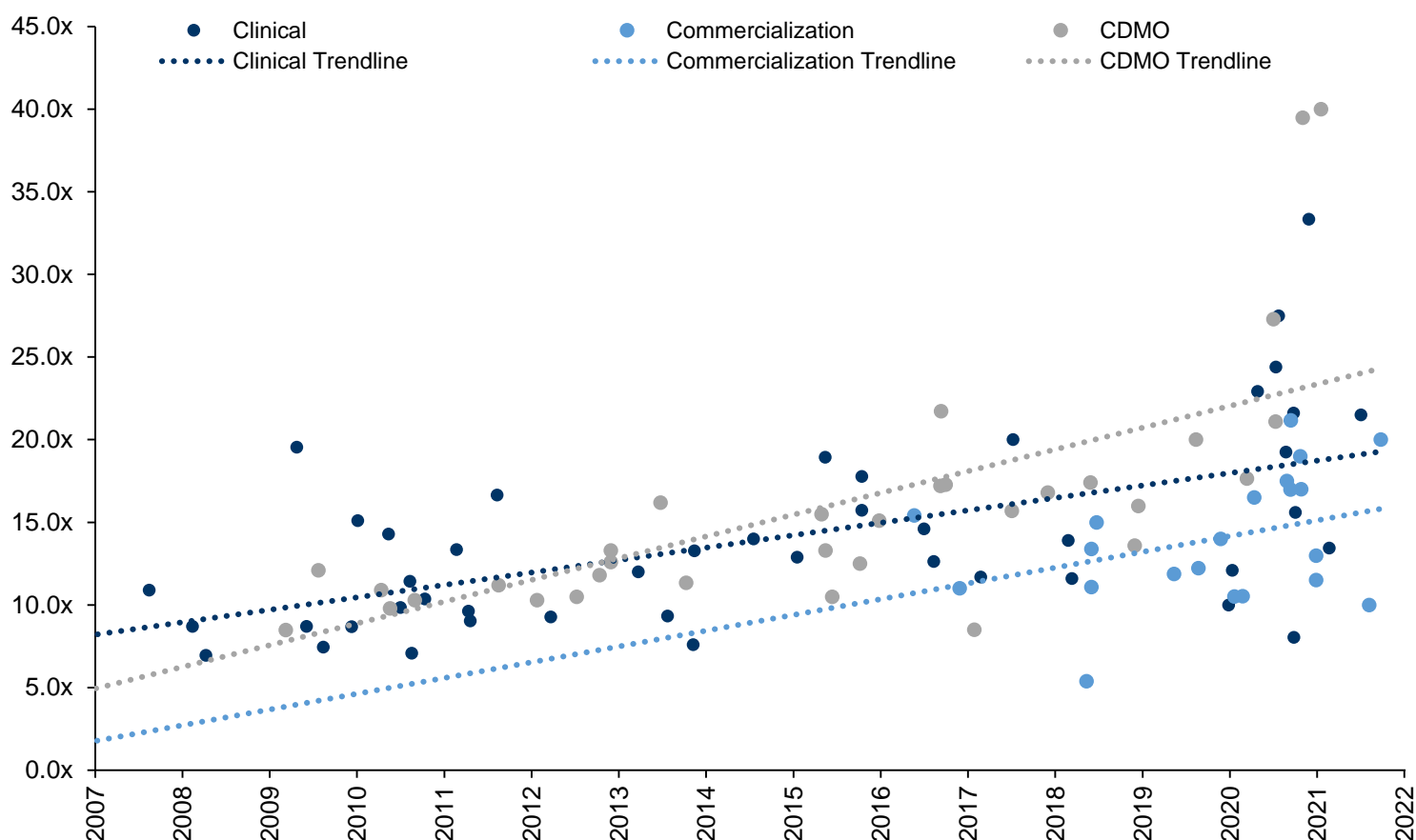
Number of Drugs in Global R&D Pipeline ⁽¹⁴⁾



Number of Registered Studies ⁽¹⁵⁾



M&A Transactions: Regression Analysis ⁽⁵⁾ ⁽¹⁶⁾



All Outsourced Pharma Services (102 Transactions)

Metric	Mean	Median
EV	\$1,726.0	\$405.1
EV / LTM Revenue	2.7x	2.2x
EV / LTM EBITDA	14.6x	13.3x
LTM Revenue	\$1,695.2	\$198.4
LTM EBITDA	\$120.6	\$29.4

Clinical Research Services (45 Transactions)

Metric	Mean	Median
EV	\$2,336.3	\$253.9
EV / LTM Revenue	2.4x	2.1x
EV / LTM EBITDA	14.1x	12.9x
LTM Revenue	\$2,651.6	\$113.0
LTM EBITDA	\$163.5	\$20.0

Commercialization Services (22 Transactions)

Metric	Mean	Median
EV	\$743.3	\$280.0
EV / LTM Revenue	2.6x	2.4x
EV / LTM EBITDA	14.0x	13.4x
LTM Revenue	\$440.6	\$32.1
LTM EBITDA	\$52.4	\$20.0

CDMOs (35 Transactions)






Metric	Mean	Median
EV	\$1,525.0	\$772.7
EV / LTM Revenue	3.2x	3.0x
EV / LTM EBITDA	15.8x	13.4x
LTM Revenue	\$538.0	\$283.5
LTM EBITDA	\$102.0	\$55.2

Notable M&A Activity ⁽⁵⁾

In the past few years, Outsourced Pharmaceutical Services companies have actively used M&A to acquire additional capabilities and specialized expertise. Multiple mega mergers and acquisitions have occurred leading to consolidation in the industry. Several noteworthy transactions included:

- 2021:** Clayton, Dubilier & Rice's acquisition of UDG Healthcare
- 2021:** EQT Private Equity and Goldman Sachs Asset Management's acquisition of Parexel
- 2021:** ICON's acquisition of PRA Health Sciences
- 2021:** Thermo Fisher's acquisition of PPD
- 2020:** Arsenal Capital Partners' acquisition of Cello Health (Pharma Value Demonstration)
- 2020:** Clayton, Dubilier & Rice's acquisition of Huntsworth
- 2017:** Merger of INC Research and inVentiv Health, forming Syneos Health
- 2017:** Pamplona take private of PAREXEL
- 2016:** Merger of Quintiles and IMS Health, forming IQVIA
- 2015:** Labcorp's acquisition of Covance

Representative transactions that were made by each of the large public and private Outsourced Pharmaceutical Services companies in 2022 are detailed below:

Company Name	# of 2022 Transactions	Description
	3	<ul style="list-style-type: none"> • Metrics, Inc – Provider of formulation development, analytical testing and commercial manufacturing services for the life sciences industry • Erytech Facility – Provider of commercial-scale cell therapy manufacturing services • VMIC Facility – Manufacturer of biologic therapies and vaccines, including mRNA, proteins, and other advanced modalities
	1	<ul style="list-style-type: none"> • Explora BioLabs (\$295.0 million) – Provider of contract vivarium research services
	1	<ul style="list-style-type: none"> • Adamas Consulting (\$37.8 million) – Provider of mission-critical regulatory compliance and consulting services to the global pharmaceutical industry
	-	<ul style="list-style-type: none"> • No identified disclosed acquisitions in 2022
	1	<ul style="list-style-type: none"> • Spun off from Sanofi as a stand-alone publicly traded company in May 2022, trading on the Euronext Paris stock exchange • No identified disclosed acquisitions in 2022

Notable M&A Activity (cont'd) ⁽⁵⁾

Company Name	# of 2022 Transactions	Description
	4	<ul style="list-style-type: none"> • Lasso – Provider of cloud-based, omnichannel healthcare marketing and analytics services • Pharmaspectra (\$100.0 million) – Provider of medical key opinion leader (“KOL”) databases to the pharmaceutical and biotechnical industries • Silverbullet A/S – Provider of IT consulting and technology management services for the life sciences industry • Nexelis – Provider of immunology-centric preclinical models and clinical assay development services
	-	<ul style="list-style-type: none"> • Announced a plan to spin off the Company’s Clinical Development business into an independent, publicly traded company by the second half of 2023 (please see page 19 for additional detail) • No identified disclosed acquisitions in 2022 for LabCorp’s Clinical Development business
Lonza	-	<ul style="list-style-type: none"> • No identified disclosed acquisitions in 2022
	-	<ul style="list-style-type: none"> • No identified disclosed acquisitions in 2022
	-	<ul style="list-style-type: none"> • No identified disclosed acquisitions in 2022 related to ThermoFisher’s CDMO business
	-	<ul style="list-style-type: none"> • No identified disclosed acquisitions in 2022 related to ThermoFisher’s CRO and drug development business
SAMSUNG BIOLOGICS	1	<ul style="list-style-type: none"> • Samsung Bioepis (\$2.3 billion) – Provider of CDMO services for biopharmaceutical and biosimilar products. The Company was a joint venture between Samsung Biologics and Biogen. Samsung Biologics acquired the remaining shares owned by Biogen
Siegfried	-	<ul style="list-style-type: none"> • No identified disclosed acquisitions in 2022
	1	<ul style="list-style-type: none"> • BOCO Digital Media – Provider of global training and development services to the life sciences industries designed to improve customer engagements
	-	<ul style="list-style-type: none"> • No identified disclosed acquisitions in 2022

Recent M&A and Strategic Commentary: CROs



"The distinguishing feature of Charles River has been our platform. It's primarily been the result of 20 years of M&A, about 60 acquisitions, which has distinguished us from the competition, and we're working across all drug modalities. Our flexibility and openness to work in a multiplicity of ways has been helpful. We have a large client base and have almost no volatility in our business model. All of our Discovery and Safety businesses were acquired. We made seven acquisitions over the last two years in the cell and gene therapy space. We will add to the portfolio through M&A and we want Charles River to be a place where great scientists will not only come, but will come and stay."

- **James Foster, Chairman, CEO and President, 1/10/23**



"We've done about nine acquisitions since IPO and have grown this business by organic growth and with smaller acquisitions. In 2020, we made two strategic U.S. acquisitions, and the CAGR was over 20.0% throughout all these years. Ergomed is well positioned for organic growth augmented by strategic acquisitions. We have a track record of strategic acquisitions and integration. Particularly, I would stress the importance of recent acquisitions in the U.S. where we have established a growing presence."

- **Miroslav Reljanović, Executive Chairman, 9/27/22**



"We've made acquisitions both in North America and in Europe around site networks that allow us to build and progress projects more effectively and efficiently. M&A has enabled us to mitigate challenges our sites encounter as they run clinical trials. We've achieved scale by bringing together ICON and PRA Health Sciences. We brought together number five and number six in the industry to be number one or two in most of the segments that we operate in."

- **Steve Cutler, CEO and Director, 1/10/23**



"We made an important acquisition of Lasso Marketing which compliments our DMD Marketing business that we acquired in 2021. Lasso helps our clients plan, execute, and measure digital marketing strategies across multiple platforms and DMD provides information that goes into those marketing campaigns. We're going to continue looking at acquisitions. We have a higher cost of capital and will be more picky about the acquisitions that we might pursue."

- **Ari Bousbib, Chairman, President & CEO, 11/08/22**



"When you think about the spin and the value creation by having a pure-play, late-stage clinical business trading more in line with the CROs that traded at a premium relative to the lab space, there's normally a 40% premium to that. We're now going to incur new public company costs with that, but obviously a little bit lower on the profitability, now that the clinical business gets burdened with those additional costs, but now at a much higher valuation."

- **Glenn Eisenberg, CFO, 1/10/23**



"We acquired Boco Digital, which is a tailored digital learning solutions platform. We're using Boco Digital for ourselves and for our customers on the Clinical side, as well as our sales teams on the Commercial side. We will continue to evaluate tuck-in acquisition opportunities that add capabilities to our model and catalyze long-term growth. We are very focused on paying down our debt right now."

- **Michelle Keefe, CEO, 12/01/22**

Recent M&A and Strategic Commentary: CDMOs

Catalent

"We recently completed the Metrics acquisition, which gives us high potent capability on the oral side, which is a great technology and is one that we've been looking at building organically. The Metrics acquisition enabled us to bolt-on a leader in the space. We've done a lot of M&A to-date. We have the right assets in place now and it's about generating the returns around those assets. There is a lot for us to digest and execute. M&A is a lower priority right now."

- **Thomas Castellano, CFO, 11/16/22**

Lonza

"We are continuing our focus on organic investment and attractive bolt-on M&A. Our M&A focus is both in the field of technologies and manufacturing capacities. We like very early technologies. We prefer to make multiple small technology investments rather than buying a late-stage technology in a catch-up mode. We are also looking at adding capacity. Historically, building capacity ourselves was more economical than buying capacity on the market." (*Philippe Deecke, CFO, 1/11/23*)

- **Philippe Deecke, CFO, 1/11/23**

Siegfried

"We continue to have appetite for M&A. Our outlook and ambitions are to grow organically, as well as acquisitively. We will continue to use M&A to enter into adjacencies and beyond, even in turbulent times. There are clearly identified areas we like, such as adding attractive, small molecule drug substance capacity. Adding capacity in this area compared to the competition would always be attractive. We would also be ready to acquire attractive assets in the biologics drug substances space."

- **Wolfgang Wienand, CEO, 8/18/22**

**ThermoFisher
SCIENTIFIC**

"We focus primarily on M&A to strengthen the company and create value. We did selective bolt-on acquisitions to add capabilities, not necessarily to add scale. The most important criteria is "does it strengthen us strategically" or "would this be appreciated and valued by our customers". That is our high-level criteria. We are not going to get bigger for bigger sake. We're going to pursue opportunities that better position us for our customers." (*Marc Casper, CEO, 11/29/2022*)

- **Marc Casper, CEO, 11/29/2022**

Select New Private Equity Backed Platforms

In addition to strategic M&A activity, a number of privately-held outsourced pharmaceutical services companies attracted first-time institutional capital from private equity investors resulting in the formation of new platforms. The following are examples of companies that received private equity capital for the first time in 2022:

Financial Sponsor	Portfolio Company	Classification	Business Description
	 Formulation Development and Clinical Supply Manufacturing	CDMO	CDMO that provides formulation and manufacture of solid dosage oral pharmaceuticals for preclinical and clinical pre-commercialization trials
		Commercialization	Regulatory-driven medicines information and software solutions for pharmaceutical companies, healthcare professionals, and patients
		Clinical	Drug discovery services for biopharmaceutical clients including biochemical assays, compound screening, studies, and cell-based assays
		Clinical	Integrated Research Organization (IRO) that provides clinical trial access solutions through research staff and infrastructure
		Clinical	Acquirer of companies in the tech-enabled pharma services industry that improve the efficiency of drug research and development
		Clinical	Cloud-based software solutions for clinical trial research sites, site networks, sponsors and CROs to manage complex clinical research processes
	 The difference is in the data.™	Clinical	Regulatory affairs, biostatistics, regulatory and medical writing, and pharmacovigilance services
		Clinical	Network of 100+ clinical trial specialized in hepatology and NASH research clinical trials
	 get noticed in life sciences.	Commercialization	Commercialization and marketing services for the pharmaceutical and biotech industries
		Commercialization	Strategic commercialization and analytics services for the pharmaceutical, biotechnology, and medical device industries
	 DEDICATED TO OPHTHALMICS	Clinical	Ophthalmic commercialization services for the biopharma and medical device industries
		Commercialization	Outsourced commercialization services for the pharmaceutical industry including remote detailing, virtual events and multi-channel manager software
		Clinical	CRO specializing in the Central Nervous System sector providing services such as trial design & management, biostatistics, and regulatory affairs

Select Existing Private Equity Platforms Acquired by Sponsors

In addition to newly formed platforms that received first-time institutional capital, private equity firms have also invested in existing Outsourced Pharmaceutical Services platforms as they continued to grow and gain critical scale. The following are examples of private equity owned platforms that were acquired by other financial sponsors in 2022:

Prior Financial Sponsor	Current Financial Sponsor	Portfolio Company	Classification	Business Description
			Commercialization	Scientific communications and market access services to the pharmaceutical industry
			CDMO	Outsourced development and manufacturing of ophthalmology drugs, respiratory drugs, and vaccines using blow-fill-seal (BFS) technology
			Clinical	Cloud-based clinical trial software designed to optimize clinical trial workflows
			Clinical	CRO providing biostatistics and clinical trial management services to public health and biopharmaceutical clients
			Commercialization	Multi-channel marketing solutions, medical affairs, and commercialization services for the biopharmaceutical industry
			Clinical	Regulatory, quality, and compliance solutions and clinical trial services for the life sciences sector
			CDMO	Active pharmaceutical ingredients and excipients manufacturing services
			CDMO	Formulation development, analytical method development and validation, packaging, and other related services
			Clinical	Management of clinical studies for medical technology, IVDs, biologics, and device-drug combination products internationally
			Clinical	Pharmaceutical manufacturing consulting services for small molecule therapeutics

Case Study – LabCorp Announces Spin-Off of its Clinical Development Business ⁽⁵⁾

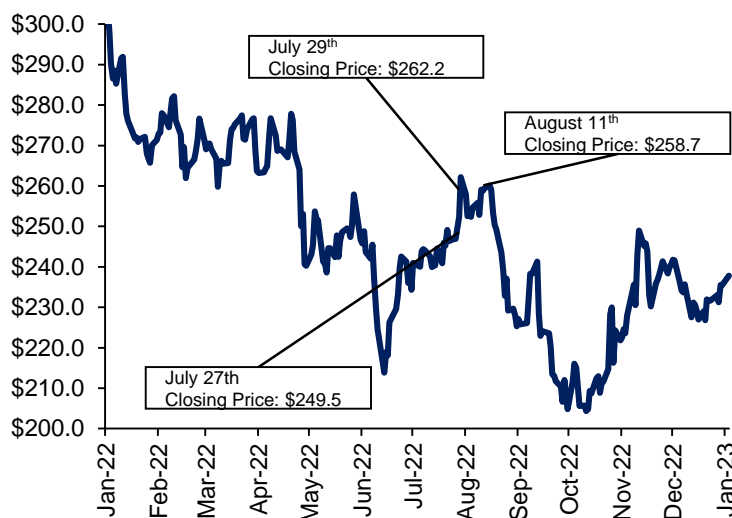
- On July 28, 2022, Laboratory Corporation of America Holdings (“LabCorp” or the “Company”) announced that its Board of Directors authorized a plan to spin off the Company’s Clinical Development business into an independent, publicly traded company.
- Post spin-off, LabCorp will retain its laboratory business (comprising of routine and esoteric labs, central labs, and early development research labs) and will continue to be publicly listed on the New York Stock Exchange under the ticker LH
- The Clinical Development business (NewCo.) will operate as Contract Research Organization (CRO) and will be a newly listed public entity
- The Clinical Development business was created in 2015 through the \$5.7 billion acquisition of Covance Inc.
 - Generated revenue for the trailing twelve month period ending June 30, 2022 of \$3.0 billion
 - Grew 8.0% on a CAGR basis from second quarter 2019 to second quarter 2022 and is expected to generate high-single-digit revenue growth moving forward
- On February 9, 2023 LabCorp announced that NewCo will be known as Fortrea and will be led by Thomas Pike, an industry executive and prior CEO of Quintiles
- The spin-off is expected to be completed in the second half of 2023 subject to the satisfaction of customary legal and regulatory requirements and approvals



“Spinning off the Clinical Development business will benefit customers and shareholders by creating two standalone businesses that are poised to accelerate growth and focus resources on distinct strategic priorities, customer needs and value creation. We’ve determined that a separation by spin will enhance value, but it’s also going to give both companies the ability to get sustainable growth.”

– Adam Schechter, Chairman & CEO of LabCorp

LabCorp (NYSE:LH) Stock Performance



Overview of the Clinical Development Business

- The Clinical Development business is a leading, global CRO providing Phase I-IV clinical trial management, market access and technology solutions to pharmaceutical and biotechnology organizations
- Offers a full suite of nonclinical, clinical, and commercialization services with global capabilities and expertise in oncology, cell & gene therapy, rare disease and other therapeutic areas
- The Clinical Development business represents ~12% of the overall \$25 billion global CRO market according to the company estimates



Strategic Rationale for Spin-Off

- The Clinical Development business offers a compelling growth opportunity as the global addressable CRO market (\$25 billion) is poised to grow at a CAGR of ~6% from 2022-2030E. The Clinical Development business itself is projected to deliver high single-digit revenue growth going forward.
- Post spin-off, both companies will have the opportunity to target key markets independently with tailored capital structures, focus on achieving above-market growth, and continue to enhance shareholder value
- As a standalone public company, the Clinical Development business should garner a multiple higher than the laboratory business. Prior to announced spin-off, the combined entity was trading in line with clinical laboratory peers at ~8-10x LTM EV/EBITDA compared to clinical CRO peers of ~15-18x

M&A Transaction Case Study – AmerisourceBergen Announces Acquisition of PharmaLex


- On September 12, 2022, AmerisourceBergen (NYSE:ABC) entered into a definitive agreement to acquire PharmaLex from AUCTUS Capital Partners (“AUCTUS”) for a total enterprise value of approximately \$1.3 billion. PharmaLex is a provider of tech-enabled, clinical development consulting and marketing services to the pharmaceutical, biotechnology, and MedTech industries. The transaction closed on January 3, 2023
- The acquisition of PharmaLex is expected to advance AmerisourceBergen’s role as partner of choice for biopharmaceutical manufacturers by enhancing its global portfolio of services to support manufacturer partners across the pharmaceutical development and commercialization lifecycle

“The strategic acquisition of PharmaLex will expand our global platform of biopharma services, further advancing the strategy of enhancing our value proposition to pharmaceutical manufacturers as we support end-to-end clinical and commercial enablement solutions”

– Steven Collis, Chairman & CEO of AmerisourceBergen, 9/12/23

- PharmaLex has an established history of achieving significant scale and growth through acquisitions. In 2015, AUCTUS, a German-based private equity firm, acquired PharmaLex with the strategy to diversify its service offerings and expand its international footprint within the U.S. From 2015 to 2022, PharmaLex successfully acquired 25 companies

Financial Terms

Target	 PHARMALEX
Buyer	AmerisourceBergen
Enterprise Value	\$1.3 billion
EBITDA Multiple	Not disclosed

Source: AmerisourceBergen Press Release

AmerisourceBergen (NYSE:ABC) Stock Performance



Select Acquisition History of PharmaLex

Date	Target	Description
10/13/2022	NeoHealth	Market access and data consulting services
3/09/2022	EBMA Consulting	Pricing, market access, and health economics consulting
1/25/2022	Phlexglobal	Regulatory and clinical trial SaaS services
1/18/2022	MAP Group	Market access, product launch, and communication services
1/8/2022	Ascent Development Services	Commercialization services for the Asia-Pacific market
11/30/2021	PharmaSol	Pharmacovigilance services
6/1/2021	Obilkue Consulting	Pricing and reimbursement market access services
4/20/2021	Brandwood CKC	Regulatory and commercialization services for medical devices
3/11/2021	Archemin BVBA	Pharmacovigilance and market access consulting services
3/3/2021	ERA Consulting	Product development and regulatory consulting services
9/16/2020	BioStat Solutions	Bioinformatics and biostatistics services
9/11/2020	Biopharma Excellence	Strategic consulting services for biologic drugs

Private Equity Platform Case Study – Fishawack Health Completes Two Add-ons

- On March 3, 2022, Fishawack Health (“Fishawack”), completed its acquisition of Policy Analysis Inc. (“PAI”), a U.S.-based health economics and outcomes research (“HEOR”) consultancy. The transaction expands Fishawack’s market access capabilities with PAI’s real-world evidence (“RWE”) expertise and strategy consulting services. As part of the transaction, Fishawack also acquired Health Economics in R Online (“HeRo”), PAI’s integrated SaaS modeling platform that offers technology-enabled value demonstration solutions
- On June 7, 2022, Fishawack announced its acquisition of Avalere, a national provider of US-based policy, market access, and strategic consulting services to the life sciences industry. Avalere possesses deep understanding of the US federal policy environment and offers extensive market access services. The transaction represents Fishawack’s development from a medical communications agency into a global, full-service commercialization and healthcare advisory partner
- Fishawack has a history of private equity ownership. In 2017, Lloyds Banking Group (“LDC”) acquired the company to support a series of add-on acquisitions to expand the company’s footprint and services. LDC sold Fishawack to Bridgepoint in 2020

“Fishawack has done a great job of putting the right kind of sticks in the sand around where we need to construct or build capabilities. I think it’s more rounding out, but there are great capabilities in the marketplace. We’re well positioned to take advantage of these opportunities. I would say that value, evidence and access are real close to the top priority because we have great capabilities and those need to be broader and more geographically diverse.”

– Jonathan Koch, CEO of Fishawack Health

2022 M&A Timeline & Capabilities Acquired

Date	Target	Enterprise Value	Capabilities
3/3/2022	Policy Analysis Inc & HeRo	Not Disclosed	HEOR & RWE consulting
6/7/2022	Avalere	Not Disclosed	Market access consulting

Overview of Fishawack Health

- Fishawack is a global provider of medical communication, marketing, and consulting services to the biopharmaceutical, medical technology, and life sciences industries. The company’s commercialization service offerings span the entire product lifecycle from R&D to post-launch services
- Fishawack has completed a total of 10 acquisitions since 2018, Fishawack was acquired by Bridgepoint in 2020
- The company was founded in 2001 and is headquartered in Knutsford, United Kingdom with satellite offices throughout the U.S., Europe, and Asia



Overview of Policy Analysis & HeRo

- PAI provides HEOR consulting services to US, European, and Asian biopharmaceutical companies
- The company’s core services include strategy development, evidence generation planning, economic modeling, RWE-analytics, and evidence synthesis
- The company is based in Chestnut Hill, MA



Overview of Avalere

- Avalere provides US-based policy and market access consulting services to global pharmaceutical clients
- Avalere was acquired from Inovalon, a leading provider of cloud-based platforms that empower data-driven healthcare.
- The company is based in Washington DC



Private Equity Platform Case Study – ProPharma Group Health Completes Three Add-ons

- ProPharma Group (“PPG”) has a history of private equity ownership. In 2016, Linden Capital Partners (“Linden”) acquired PPG. In 2020, Odyssey Investment Partners agreed to acquire PPG from Linden for \$500+ million
- On March 16, 2022, PPG completed its acquisition of M Squared Associates (“M2”), a leading provider of clinical, regulatory and quality consulting services to the medical device and diagnostic industry. The transaction broadens PPG’s capabilities and positions it as a global single-source provider of services throughout the full product lifecycle for the biopharmaceutical, medical device and diagnostic industries

“This acquisition is a pivotal move that will positively impact our combined client base to provide full end-to-end support for getting medical devices, combination products and diagnostics to market.”

– Michael Stomberg, CEO of PPG

- On August 23, 2022, PPG completed its acquisition of OneSource Regulatory (“OSR”), a provider of pre- and post-approval regulatory, medical and marketing operations services across the product development and commercial lifecycle. The addition of OSR’s leadership and expertise expands PPG’s capabilities around regulatory compliance and extends its regulatory offerings further into the commercialization lifecycle
- On September 1, 2022, PPG completed its acquisition of Kateric, a provider of outsourced medical writing and clinical trials disclosure support services. Kateric’s established reputation across the medical writing product lifecycle substantially enhances PPG’s comprehensive suite of services

“This is an incredible opportunity to supplement ProPharma Group’s services and stay ahead of the significant medical writing demand worldwide. We are confident in our ability to seize the enormous opportunities ahead to support our clients as the market leader in this segment.”

– Michael Stomberg, CEO of PPG

2022 M&A Timeline & Capabilities Acquired

Date	Target	Enterprise Value	Capabilities
3/16/2022	M Squared Associates	Not Disclosed	Regularity & quality consulting
8/23/2022	OneSource Regulatory	Not Disclosed	Regulatory & marketing services
9/1/2022	Kateric	Not Disclosed	Medical writing

Overview of ProPharma Group

- PPG provides regulatory, clinical and compliance services to pharmaceutical, biotechnology, and medical device companies
- Founded in 2001, ProPharma Group employs more than 2,500 colleagues worldwide
- The company is based in Overland Park, KS with satellite offices in Europe



Overview of M Squared Associates

- M2 provides clinical, regulatory and quality consulting services
- The company specializes in devices, biologics, and combination products for a wide range of therapeutic areas and disease spaces
- The company is based in New York, NY



Overview of OneSource Regulatory

- OSR provides regulatory, medical and marketing operations services to the life sciences industry
- The company’s core offering includes advertising review support, regulatory affairs strategy, and process optimization
- The company is based in McKinney, TX



Overview of Kateric

- Kateric provides medical writing services to biopharma, device, and diagnostic companies
- The company positions itself as a single-source provider of medical writing services across document and therapeutic areas
- The company is based in Ann Arbor, MI



Select M&A Transactions

Date	Target (Seller)	Acquiror	Target Business Description
12/2/22	Brightech International	Everest Clinical Research (Arlington Capital Partners)	CRO specializing in biostatistics, programming, and clinical data management services
12/2/22	Bioassay GmbH	Reaction Biology (Cobepa S.A.)	Potency assays and functional bioassays for regulated clinical and commercial functions
11/17/22	Egin Research	Velocity Clinical Research (GHO Capital)	Integrated research site organization serving the biopharmaceutical industry
11/9/22	Clarion Healthcare (Svoboda Capital Partners)	Lumanity (Arsenal Capital Partners)	Strategic consulting services to biotech and pharma companies across multiple therapeutic areas
11/8/22	Alcami (Ampersand & Madison Dearborn Partners)	GHO Capital & Vistria	CDMO services including biologics, small molecule lab services, and cGMP biostorage
11/3/22	Celerion (Court Square)	H.I.G. Capital	CRO providing early stage services including trial design, patient recruitment, clinical site management, bioanalytical testing, and data management
11/3/22	vivoPharm, subsidiary of Vyant Bio (Nasdaq: VYNT)	Reaction Biology (Cobepa S.A.)	Drug discovery services for complex neurodevelopmental and neurodegenerative disorders
11/1/22	Taconic Biosciences (H.I.G. Capital)	Avista Capital Partners	Genetically engineered research models for use in drug discovery research and non-clinical safety testing
10/26/22	Summit Clinical Research	LongueVue Capital	100+ clinical trial sites worldwide focused on hepatology and NASH research
10/26/22	Cognitive Research Corporation	RC Capital	Full-service CRO specializing in the CNS sector
10/23/22	LAXAI	SIGNET Healthcare Partners	Drug discovery, R&D, and GMP manufacturing services to the life sciences industry
10/19/22	CultHealth	Indegene (Carlyle Group, Brighton Park)	Medical strategy, creative and omnichannel planning services
10/18/22	Jupiter Point Pharma Consulting	Cognitive Research Corporation	Clinical trial biostatistics services to emerging and large pharmaceutical companies
10/13/22	NeoHealthHub	PharmaLex (AmerisourceBergen)	Market access and data services to the pharmaceutical industry
10/11/22	Clarvin	Veranex, Inc. (Summit Partners)	Regulatory affairs and quality assurance consulting services to medical device manufacturers
10/11/22	Devicia	Veranex, Inc. (Summit Partners)	Full-service consulting firm offering clinical expertise for medical devices
9/30/22	Lasso	IQVIA (NYSE:IQV)	Cloud-based, omnichannel healthcare marketing and analytics services
9/28/22	Iuvo	Ampersand Capital Partners	Specialty CRO providing laboratory services, preclinical and clinical development services, and scientific consulting services
9/28/22	Clinical Edge	Emmes (New Mountain Capital)	Visual acuity examiner and certification services for ophthalmology clinical trials
9/20/22	Earthware	Prime Global (Levine Leichtman)	Digital healthcare agency that provides medical communications services
9/20/22	Parsons Medical	Fingerprint (Knox Lane)	Eye care-specific commercialization strategy services to pharmaceutical companies
9/20/22	Medidee Services SA	Veranex, Inc. (Summit Partners)	Regulatory affairs, clinical development and quality assurance services to MedTech companies
9/12/22	Jupiter Life Science Consulting	Red Nucleus (The Riverside Company)	Commercial and market access strategies for global pharma, biotech companies
9/12/22	PharmaLex (Auctus)	AmerisourceBergen Corporation (NYSE:ABC)	Scientific, regulatory, and safety consulting services to biopharma companies
9/7/22	JordiLabs, LLC	RQM+ Corporation (Linden)	Chemical characterization, deformation, and contaminant services to MedTech companies
9/7/22	MedPharmics, LLC	Velocity Clinical Research (GHO Capital)	Clinical research sites for patient engagement and clinical trials
9/6/22	C3 Associates	Avance Clinical (The Riverside Company)	CRO providing clinical monitoring, project management, medical writing, and pharmacovigilance services
9/1/22	Kateric LLC	ProPharma Group (Odyssey Investment Partners)	Compliance, validation, and technical services to the pharmaceutical and life sciences industry
8/23/22	OneSource Regulatory	ProPharma Group (Odyssey Investment Partners)	Regulatory, medical, marketing operations, and compliance consulting services
8/18/22	Boco Digital Media	Syneos Health, Inc. (NASDAQGS:SYNH)	Global training and development services to the life sciences industries
8/16/22	DRA Consulting	PharmaLex (Auctus)	Regulatory, quality, pharmacovigilance and market access consulting services
8/12/22	Pharmaspectra (Inflexion)	IQVIA (NYSE:IQV)	Medical KOL databases to the pharmaceutical and biotechnical industries
8/11/22	Aurora Healthcare Comm.	Spectrum Science Communications	Provider of communications consulting services to top global pharmaceutical companies
8/11/22	TME BCN	Aptitude Health (Linden)	Operator of network of clinicians and researchers, providing medical education services
8/11/22	GL Chemtec	Edgewater Capital Management, LLC	CDMO focused on the custom synthesis of fine chemicals and intermediates for life sciences industries
8/1/22	Sound Healthcare Communications	Medical Knowledge Group (Novo Holdings)	Full-service, healthcare communications company for biopharmaceutical clients
8/1/22	The CM Group (NaviMed Capital)	OPEN Health (Astorg Partners)	Scientific and commercialization strategies and services to the life sciences industry
7/28/22	MNG Health	Medscape (WebMD)	Virtual broadcasts, advisory boards, and digital healthcare marketing services
7/27/22	RevHealth	WindRose Health Investors	Marketing services including promotion, strategy development, and patient education services

Select M&A Transactions (cont'd)

Date	Target (Seller)	Acquiror	Target Business Description
7/26/22	Verge Scientific	Deerfield Agency (The Edgewater Funds)	Brand strategy and strategic communications services the pharmaceutical industry
7/25/22	Emcay	Fingerprint (Knox Lane)	Agency services focused on multicultural insights
7/19/22	D Cube Analytics	Trinity Life Sciences (Kohlberg & Company)	Technology-enabled commercial insights & data analytics for life science companies
7/7/22	Lexitas Pharma Services	QHP Capital	Clinical trial and medical strategy solutions to biopharma and medical device companies
7/4/22	DACIMA Software	EvidentIQ	Electronic Data Capture (EDC) platform for the design and management of clinical trials
7/1/22	Silverbullet A/S	IQVIA (NYSE:IQV)	IT consulting and technology management services for the life sciences industry
6/30/22	Informa Business Intelligence	Norstell	Data analysis and research intelligence tools for CROs
6/30/22	Peninsula Research Associates	Headlands Research (KKR)	Operator of clinical research sites specializing in pediatric, allergy, and asthma therapeutic areas
6/22/22	Emmes (Behrman Capital)	New Mountain Capital	CRO serving biopharmaceutical and government agencies
6/20/22	Avania LLC (Kester Capital)	Astorg Partners	CRO for medical devices and biologics studies
6/16/22	Dacima Software Inc.	EvidentIQ Group GmbH	EDC and clinical data management software for clinical trials
6/16/22	Apex Innovative Sciences	CenExel Clinical Research (Webster Equity Partners)	CRO that conducts clinical trials for new medications and treatments
6/14/22	Endpoint Outcomes	Lumanity (Arsenal Capital Partners)	Scientific consulting services including medical, commercial, and regulatory affairs
6/11/22	Advarra, Inc. (Genstar, Linden)	Blackstone Inc. (NYSE:BX)	Independent institutional review board services to the life sciences industry
6/9/22	Seismic Marketing	Spectrum Science Communications	Public relations agency that provides medical communications services
6/7/22	Ohio Clinical Trials	Evolution Research Group (Linden Capital Partners)	Clinical research site specialized in human abuse potential studies, pain modeling, respiratory depression, and alcohol interaction
6/7/22	SAI MedPartners	Northlane Capital Partners	Strategic advisory services to the pharmaceutical and biotechnology industries
6/7/22	Avalere Health	Fishawack Limited (Bridgepoint)	Public policy and market access services
6/7/22	SONIC Health	Spectrum Science Communications	Life sciences marketing company that offers strategic agency services
6/2/22	Random42 Limited	The Lockwood Group (Ares Management)	3D medical animation, medical writing, and other digital solutions to the life sciences industry
6/1/22	Pharma Intelligence	Warburg Pincus LLC; Mubadala	Specialist intelligence, data, and software services for clinical trials, drug development, and regulatory compliance
6/1/22	Open Health (Amulet Capital Partners)	Astorg Partners	Provider of healthcare communications and market access services
5/24/22	Corealis Pharma, Inc.	CDPQ; ArchiMed SAS	R&D and manufacturing services to the pharmaceutical and biotechnology industries
5/18/22	Market Access Transformation	Genesis Research (GHO Capital)	Digital platform for pharma and life sciences companies to secure on-demand, payer insights
5/16/22	Agati Systems LLC	Clinscience US LLC	Clinical data services including data management, biostatistics, and regulatory services
5/11/22	Division of Boehringer Ingelheim	ArisGlobal (Nordic Capital)	Software to support causal analysis of drug safety data in a highly regulated environment
5/10/22	Republic M! B.V.	Queen's Park Equity Partners	Outsourced commercialization services to the pharmaceutical industry
5/4/22	Aptus Clinical Ltd	Catalyst Clinical Research	Clinical research solutions in oncology, cell and gene therapies, and rare diseases
5/3/22	iResearch Atlanta, LLC	CenExel Clinical Research (Webster Equity Partners)	Multi-specialty clinical research center that provides therapeutic clinical trials in Phases I-IV
4/30/22	Yukon Training LLC	Red Nucleus (The Riverside Company)	Professional training services for life sciences companies
4/21/22	Reify Health, Inc.	Adams Street Partners, ICONIQ Growth	Cloud-based software to harmonize biopharma and research site workflows for CROs
4/20/22	Ramarketing & PR Ltd.	NorthEdge Capital LLP	PR, digital, and marketing services to the pharmaceutical and biotechnology industries
4/19/22	CureClick, LLC	THREAD (Waterstreet, JLL Partners)	Clinical trial recruitment platform to improve patient education for clinical trials
4/14/22	vitaCare	GoodRX (NASDAQ:GDRX)	Pharmacy services platform that improve patient access and adherence to affordable brand drugs
4/12/22	Triangle Insights Group	TrialCard (Odyssey Investment Partners)	Commercialization consulting services with a focus on patient services and market access
4/12/22	Javara Inc.	General Atlantic	Patient enrollment services that enables clinical trial access at the point of care
4/11/22	Vibalogics GmbH	Recipharm AB (publ)	CDMO that produces therapeutic and prophylactic vaccines and biological products
4/11/22	Arranta Bio Holdings, LLC	Recipharm AB (publ)	CDMO that develops live biopharmaceutical products for clinical and commercial supply
4/7/22	ARTIMED Medical Consulting GmbH	Labquality Oy	Clinical research services for medical devices and pharmaceuticals

Select M&A Transactions (cont'd)

Date	Target (Seller)	Acquiror	Target Business Description
4/5/22	conversationHEALTH	Real Chemistry (New Mountain Capital)	SaaS applicant tracking system for the medical device and pharmaceutical industries
4/5/22	Explora BioLabs Holdings	Charles River Laboratories (NYSE:CRL)	In-vivo discovery pharmacology and on-demand vivarium services to the life sciences industry
4/4/22	MyMedsandMe Limited	D.S.P.S Solutions (Stanley Capital Partners)	Online platform that allows its patients to share product feedback and medical information
3/31/22	TARA Biosystems, Inc.	Valo Health, Inc.	Organ-on-a-chip technology for evaluating new therapies and drug compounds
3/30/22	Delta Project Management	Verista Inc.	Validation, compliance, technical, and engineering services to the pharmaceutical industry
3/30/22	Innovative Edge Limited	Lumanity (Arsenal Capital Partners)	Pharmaceutical product launch services
3/21/22	AKRN Scientific Consulting	North American Science Associates, Inc.	Regulatory and clinical services to the medical device and diagnostic industries
3/16/22	M Squared Associates, Inc.	ProPharma Group (Odyssey Investment Partners)	Regulatory and clinical consulting services to the United States and international medical technology firms.
3/15/22	Reaction Biology	Cobepa S.A.	CRO that provides biochemical assay and screening services to biopharma companies
3/10/22	Casimir	Emmes (Behrman Capital)	CRO focused on rare disease progression and treatment
3/9/22	MarketShare Movers	UBC Patient Access Services	Co-pay and drug prescription affordability analysis services
3/9/22	EBMA Consulting Srl	PharmaLex (Auctus)	Health economics, pricing, and market access consulting services
3/3/22	Policy Analysis Inc.	Fishawack Limited (Bridgepoint)	HEOR consulting services to biotech and pharmaceutical companies
3/3/22	Health Economics in R Online (heRo)	Fishawack Limited (Bridgepoint)	Integrated HEOR SaaS modeling platform
3/3/22	The Research Partnership	Ashfield Advisory (CD&R)	Healthcare market research and consulting services
3/2/22	Strategic North Limited	Prescient Healthcare Group (Bridgepoint)	Global research and commercial strategy consulting services to pharmaceutical companies
3/2/22	Amici Clinical Research LLC	The IMA Group	Clinical research and drug development services
3/1/22	Clara Health	M&B Sciences Inc.	Software platform that enables users to participate in clinical trials and market research
2/28/22	Datapharm Limited	CGE Partners LLP	Leading regulatory-driven medicine information software to the pharmaceutical industry
2/28/22	Carmona AB	CSAM Health Group AS (OB:CSAM)	Patient data solutions to CROs, healthcare providers, and quality registers
2/22/22	CTSdatabase, LLC	CenExel Clinical Research (Webster Equity Partners)	Global patient registry services to detect clinical trial subjects
2/22/22	Axon Communications, Inc.	Relevate Health Group, Inc.	Educational programs for the pharmaceutical, biotech, and medical device industries
2/21/22	CSC Events, LLC	MJH Life SCIENCES LLC	Organizer of bi-annual scientific and medical events
2/18/22	Analytical Wizards, Inc.	Definitive Healthcare, LLC	Commercial data science and analytics platform for the life sciences industry
2/18/22	The Ritedose Corporation	Novo Holdings A/S	Aseptic manufacturing and liquid packaging of respiratory and ophthalmic products
2/8/22	Tryl, Inc.	YPrime, LLC	Patient engagement and enrollment software for clinical trials
2/8/22	Highline Consulting LLC	Tempus Labs, Inc.	Operator of an oncology-focused CRO
2/7/22	Adamas Consulting Ltd.	Ergomed plc (AIM:ERGO)	Clinical quality assurance, quality management, pharmacovigilance, and training services
2/2/22	Medical Knowledge Group, LLC	Novo Holdings A/S	Medical communications, healthcare consulting, and data analysis services
2/2/22	Propeller Consulting, Inc.	Omnicom Health Group Inc.	Digital marketing and communications services for the pharmaceutical industry
2/1/22	GenIBET Biopharmaceuticals, S.A.	Recipharm AB (publ)	cGMP services for the production of non-sterile biological active pharmaceutical ingredients
1/31/22	D.S.P.S.S.	Stanley Capital Partners LLP	Outsourced services to support clinical safety and pharmacovigilance commitments
1/28/22	Ascent Development Services	PharmaLex (Auctus)	Drug development and clinical trial implementation services
1/25/22	Phlexglobal Ltd.	PharmaLex (Auctus)	Technology-enabled electronic Trial Master File and document management solutions
1/21/22	Advera Health Analytics, Inc.	TriNetX, Inc.	Pharmacovigilance software for detection, management, and mitigation of drug safety concerns
1/20/22	Blue Fin Group	Integrichain	Strategy consulting and market access services to pharmaceutical companies
1/18/22	MAP GROUP	PharmaLex (Auctus)	Integrated market access, communication, and educational services
1/13/22	Spherix Global Insights US, Inc.	Susquehanna Private Capital, LLC	Market research, marketing, and strategic consulting services
1/13/22	RealTime Software Solutions, LLC	LLR Partners, Inc.	Cloud-based clinical trial management system

Select M&A Transactions (*cont'd*)

Date	Target (Seller)	Acquiror	Target Business Description
1/10/22	Zipher Medical Affairs Co., LLC	Lumanity (Arsenal Capital Partners)	Medical affairs strategic consulting services
1/10/22	Integrated Laboratory Systems, Inc.	Inotiv, Inc. (NASDAQCM:NOTV)	CRO that provides a diverse range of toxicology testing solutions
1/10/22	Nixelis	IQVIA (NYSE:IQV), Q2 Solutions LLC	Immunology-centric preclinical models and clinical assay development services
1/3/22	Human Care Systems	CareMetX (General Atlantic & Vistria)	Technology-enabled patient services designed to lower access barriers for specialty therapies








Recent Healthcare Transaction Experience

Outsourced Pharmaceutical Services

 <p>has received an investment from</p> <p>DFW CAPITAL PARTNERS</p> <p>Advisor to Herspiegel</p>	 <p>has acquired</p>  <p>pharmatech associates</p> <p>Advisor to USP</p>	 <p>has received an investment from</p> <p>the edgewater funds</p> <p>Advisor to Deerfield</p>
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Healthcare Services

 <p>has completed a growth equity financing with</p>  <p>VSS</p> <p>Advisor to GLOBO</p>	 <p>has been acquired by</p>  <p>CROSS COUNTRY HEALTHCARE</p> <p>Advisor to Seller</p>	 <p>has been acquired by</p>  <p>ELEVATE PATIENT FINANCIAL SOLUTIONS</p> <p>a portfolio company of</p>  <p>FRAZIER HEALTHCARE PARTNERS</p> <p>and</p> <p>the edgewater funds</p> <p>Advisor to Seller</p>
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 <p>has completed a senior debt financing with</p>  <p>Santander</p> <p>Advisor to KPS Life</p>	 <p>has been acquired by</p>  <p>W2O</p> <p>a portfolio company of</p>  <p>NMC NEW MOUNTAIN CAPITAL LLC</p> <p>Advisor to Seller</p>	 <p>has merged with</p>  <p>rednucleus</p> <p>a portfolio company of</p>  <p>RENOVUS CAPITAL</p> <p>Advisor to Pyxa</p>
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 <p>has been acquired by</p>  <p>MEDNAX NATIONAL MEDICAL GROUP</p> <p>Advisor to Seller</p>	 <p>has been acquired by</p>  <p>PIVOT HEALTH SOLUTIONS</p> <p>a portfolio company of</p>  <p>CI CAPITAL PARTNERS</p> <p>Advisor to Seller</p>	 <p>The GEO Group, Inc. (NYSE: GEO)</p> <p>has divested</p>  <p>GEO Care</p> <p>in a Management Buyout</p> <p>Advisor to Independent Committee Fairness Opinion</p>
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Life Science Tools

 <p>has completed a majority recapitalization with</p>  <p>BEHRMAN CAPITAL</p> <p>Advisor to Emmes</p>	 <p>has been acquired by</p>  <p>WATER STREET</p> <p>Advisor to Seller</p>	 <p>has been acquired by</p>  <p>PAREXEL</p> <p>Advisor to Seller</p>
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 <p>a portfolio company of</p>  <p>FRIEDMAN FREEMAN & COMPANY</p> <p>and</p>  <p>GROTECH VENTURES</p> <p>has been acquired by</p>  <p>METTLER TOLEDO</p> <p>Advisor to Seller</p>	 <p>has been acquired by</p>  <p>METTLER TOLEDO</p> <p>Advisor to Seller</p>
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Delancey Street Partners

Delancey Street Partners is an independent, industry-focused investment bank. We serve CEOs, Entrepreneurs, Shareholders and Boards of Directors of high growth and middle market private and public companies. Our services include strategic advisory, capital raising and independent board advice. We advise on sell-side and buy-side M&A, growth capital financings and recapitalizations. Our focus sectors include Healthcare, Business Services & Technology, Industrial & Industrial Technology, and Infrastructure.

Delancey Street Partners Leadership

B. Andrew Schmucker
Managing Partner
484.533.6313
aschmucker@delanceystreetpartners.com

Patrick E. Dolan
Managing Director
484.533.6311
pdolan@delanceystreetpartners.com

William J. Filip
Managing Director
484.533.6312
wfilip@delanceystreetpartners.com

Steven D. Higgins
Managing Director
484.533.6308
shiggins@delanceystreetpartners.com

James R. McNaughton
Managing Director
484.533.6307
jmcnaughton@delanceystreetpartners.com

Shane M. Carroll
Vice President
484.533.6316
scarroll@delanceystreetpartners.com

Sean T. Cincotta
Vice President
484.533.6314
scincotta@delanceystreetpartners.com

Suite 420 | 300 Barr Harbor Drive | West Conshohocken, PA 19428

www.delanceystreetpartners.com

Securities offered through DSP Securities, LLC Member SIPC | Member FINRA

All other transactions effectuated through Delancey Street Partners, LLC

Appendix

1. PricewaterhouseCoopers. "2022 Global CDMO Study of Pharmaceutical Operations." PwC, <https://www.strategyand.pwc.com/de/en/industries/health/2022-global-cdm-study.html>
2. Ng, Cyrus. 2023, Contract Research Organizations: Short-Term Uncertainty Not Hurting Long-Term Potential
3. Smock, Max, et al. 2022, Updating FDA Approval Analysis for 2021 Data; Attractive Outsourcing Trends Represent Tailwind for CDMO Industry
4. Company press releases, websites, investor presentations, and public filings
5. CapIQ and public company filings (10-Ks, 10-Qs, and investor presentations)
6. DSP CRO Index includes: Charles River Laboratories, Ergomed, ICON, IQVIA, LabCorp, Medpace, and Syneos Health. The multiples also include public outsourced pharma companies that have been acquired / taken private (Parexel, PPD, UDG Healthcare) or merged into the entities above (PRA Health Sciences, Qunitiles, IMS Health, INC Research)
7. DSP CDMO Index includes: Catalent, EUROAPI, Lonza, Samsung Biologics, Siegfried, Thermo Fisher Scientific, WuXi AppTec
8. LabCorp is excluded from the EV/EBITDA index for publicly traded CROs. LabCorp has been excluded due to the announced spin-off of their drug development business. This spin-off is expected to be completed in 2023 and historically, LabCorp has traded at a discount from an EV / EBITDA perspective to the rest of the CRO comps as medical diagnostics providers typically trade at a discount to outsourced pharmaceutical services companies
9. On July 2, 2021, ICON completed the acquisition of PRA Health Sciences. ICON's 2021 FY revenue growth of 96% reflects the pro forma combined revenue of the two entities and has been excluded from the mean revenue growth calculation for the compset. In addition, the gross margin of 27.5% reflects ICON's standalone margin as the pro forma financials of the combined entities did not include gross profit and the associated gross margin
10. Based on stock prices as of 12/30/2022. In addition, ICON's 2021 24.3x EV / EBITDA multiple reflects the \$1.2 billion pro forma EBITDA of the combined ICON and PRA entities, assuming a transaction on January 1, 2021
11. EUROAPI was listed on the Euronext N.V. stock exchange on May 6, 2022. Therefore, there is no historical data available for EV / EBITDA for EUROAPI
12. Samsung Biologics was excluded from the chart and mean EV / EBITDA calculation due to its consistently elevated valuation compared to its CDMO peers. This was evident in Samsung Biologics' EV / EBITDA multiple of 50.0x in 2022 and 80.5x in 2021. Furthermore, WuXi AppTec has also been excluded from the chart and mean EV / EBITDA calculation for 2019 through 2021 due to its elevated valuation of 47.1x in 2021 and 62.3x in 2020. WuXi AppTec has been included for 2022 given that the company is trading more in-line with its CDMO peers
13. Evaluate Pharma. 2022, World Preview 2022 Outlook to 2028: Patents and Pricing
14. "30th Annual Pharma Research and Development Review 2022, Navigating the Landscape." *Citeline Pharma Intelligence*, <https://pages.pharmaintelligence.informa.com/rdreview>
15. "Trends, Charts, and Maps." ClinicalTrials.gov, <https://www.clinicaltrials.gov/ct2/resources/trends>
16. DSP Proprietary Database