

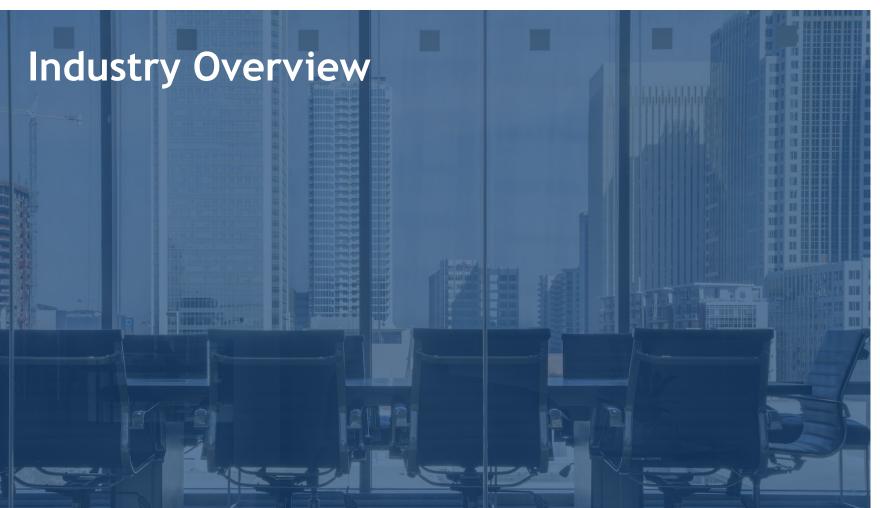
# Biostorage Services Market Insight

2023

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# **Key Industry Trends**

## What we are seeing in Biostorage Services

- Strong value proposition—the pharma industry loses \$35B annually as a result of failures in temperature-controlled logistics & storage<sup>(6)</sup>
- On-shoring supply chain initiatives have been fueled by supply chain disruption and government interaction amid drug shortages
- Significant generic entrants as 170 products lose exclusivity within the next seven years, which will increase demand for biostorage facilities with complex & biosimilar capabilities<sup>(11)</sup>
- mRNA development, propelled by COVID-19 vaccine success, is a growth driver for the biostorage industry
- Strong Investor Interest—particularly for biobanks that are focused on genetic testing and precision medicine, the preservation of cord blood stem cells from newborns, and research related to regenerative medicine
- Capital-intensive industry with significant regulatory hurdles creates a moat for existing business. On the other hand, the high cost of automated equipment and issues related to biospecimen sample management are restraining market growth<sup>(2)</sup>
- The success of CDMOs and their development services is highly correlated with the need for biostorage. Therefore, significant M&A of late-stage biotechs instead of research and development spending by big pharma could dampen demand

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# **Off-Site GMP Storage Providers**

## A critical resource for biopharmaceutical companies and CDMOs facing storage and overflow issues

## **Key Success Factors**



#### Site Security & Accessibility

Video Surveillance, Security and Fire Suppression Multi-level Access Controls and Personnel Authorization

#### **Precise Temperature Monitoring & Climate Control**

CTU Monitoring and Predictive Monitoring Units for Each CTU RH Control to Prevent Mold & Mildew Contamination

## 0

#### Strategic Geographic Location

Proximity to key pharma hubs, CDMOs, international ports and airstrips, and areas which are less prone to environmental disasters

#### **Facility & Equipment Integrity**

Redundant Backup Power with Automatic Transfer Calibrated and Validated Backup CTU Chambers



#### **Inventory Control & Product Safety**

Validated Inventory System to Track All Products Established Hazardous Material Control Programs

#### **Compliance Procedures**



Established Quality Management System Validation for All CTUs and Monitoring Systems

#### **Market Dynamics Dependent Upon Demand**

- The safe and proper storage of biopharma products is vital in the pharmaceutical manufacturing industry. Demand for storage is likely to grow in tandem with the increasing demand for contract manufacturing capabilities
- An off-site GMP storage provider is a valuable resource for keeping CDMO production lines moving by providing timely additional storage capacity and flexibility – CDMOs are susceptible to storage related bottlenecks, primarily before and after the manufacturing process
  - Some off-site GMP storage providers are seeing clients increase inventory levels and pay for storage as supply chain issues create problems with just-in-time inventory strategies
- As the industry grows, it is getting "ever-colder" (e.g., -80 °C)

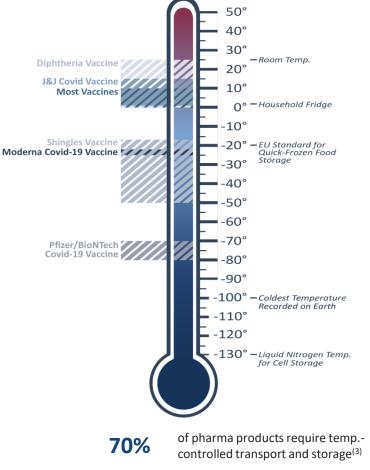
#### **Representative Market Sizes**

**Cold Chain**<sup>(15)</sup> Approx. \$29.6B by 2028 Lab Freezers<sup>(16)</sup> Approx. \$7.2B by 2030

Sample Handling<sup>(17)</sup> Approx. \$20.5B by 2030 **Biobanking**<sup>(18)</sup> Approx. \$138.1B by 2030

# **Big Picture Biopharma Logistics & Storage**

### **Temperature Ranges for Vaccine Storage (C°)**



## the increased diabetic population globally and personalized gene therapy drugs<sup>(6)</sup> **Colder Cold Chain**

**Global Demand for Sensitive Biopharmaceuticals** 

**Megatrends Influencing Biostorage & Logistics** 

During the development of the COVID-19 vaccine, the pharmaceutical and cold chain sectors innovated, creating temperature-controlled packages and solutions to meet the needs of new deep-frozen COVID-19 vaccine storage

Increased sensitivity of biopharmaceuticals and growing demand for specialized medicines is driving the need for tailored shipping and storage solutions. Specifically,

The success of the mRNA vaccines has unlocked future development within this class of drugs, many of which will require ultra-cold supply chain and storage

#### **Biosimilar & Complex Generics Demand**

Significant generic entrants, as 170 products lose exclusivity within the next seven years. This is expected to expand the needs for biopharma logistics and needs due to the rising number of complex and biosimilar generics driving demand<sup>(11)</sup>

#### **On-Shoring & Supply Chain Redundancy**

Global supply chain issues and national drug shortages are industry tailwinds. Companies are shifting away from just-in-time inventory and holding increased inventory levels



of variance can ruin product<sup>(6)</sup>

\$35B

\$50M

24/7

monitored/detailed history of temp. conditions across the shipping and storage chain required<sup>(3)</sup>

the average pharma cargo value; standard

shipping container load value is \$75K<sup>(6)</sup>

in annual losses as a result of failures in temp.controlled pharmaceutical logistics and storage<sup>(6)</sup>

# **Outsourcing Specialization & Decentralization**

Biostorage appears primed for growth alongside the rest of the supply chain as the shift towards specialization drives the need for equally specialized storage solutions

#### **COVID-19 spurred decentralization and regional manufacturing**

- Regional manufacturing hubs significantly de-risk a drug's supply chain and minimize disruptions
- It also increases the need for storage capacity and transportation capabilities of temperature-sensitive drug substances and products

## Outsourced storage allows biopharma & pharma companies to ramp-up manufacturing without worrying about increasing storage capabilities

- Emerging biopharma and pharma companies have even greater need to shift this risk because ramping up manufacturing must occur simultaneously with the drug approval process to maximize a drug's patent-protected time on market
  - Potential late-stage clinical trial failures could bankrupt smaller, limited drug portfolio firms without flexible in-house manufacturing
- Biostorage's ability to shorten the clinical development timeline generates meaningful value for its partners by generating \$8M a day for each additional day a blockbuster drug is on the market<sup>(14)</sup>

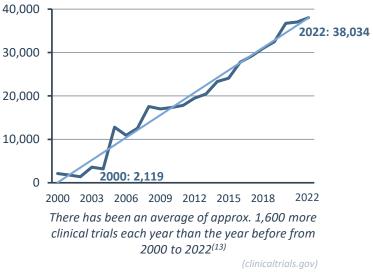
#### **CDMOs**

- Current outsourcing rate to CDMOs is about 40% worldwide<sup>(7)</sup>
- Increasing specialization of therapies in development drives need for flexible and scalable solutions
- Off-site GMP storage providers allow for leaner manufacturing facilities that are easier to set-up and reproduce. Storage providers do this by assuming responsibility for specialized storage requirements
  - As a drug's demand increases, technologies can simply be replicated in new facilities without worrying about recreating storage technology or increasing capacity
- Continuity is key for supply chain reliability

#### **CROs & Clinical Trials**

- The rise of hybrid and decentralized clinical trials is another factor disrupting an already-complex supply chain
  - Growing geographic scope, number of supplies, and pressures on the availability of supplies mean more qualified specialty partners are needed
- Patients must be informed on how to use and store products, with added complexity if temperature-controlled distribution and storage processes are needed enroute or at home
- Solutions include a strong global footprint for storage of clinical supply materials and drug product





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# High Switching Cost of Biostorage-Biologics

Increasing investments in biologics is a strong tailwind due to biologics' requirement for specialized manufacturing, processing, and storage facilities

## High switching costs are a key competitive advantage for biostorage and specialized CDMOs

- Compliance risks, lengthy processes, and other challenges in changing outsourced service providers binds biopharma & pharma companies into sticky relationships with outsourcing partners
- Unlike biopharma & pharma companies, biostorage avoids direct exposure to patent losses due to not having its revenue tied to any particular drug and its flexibility to shift from one product to another

## High switching costs are especially true for biologics, where the same cell line must reproduce for the entirety of the drug

**product's life** (Since the drug is essentially alive, switching is not as simple as recreating the line in a new location because the reactors output can vary each time it is run)

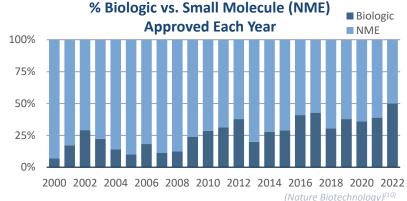
#### Switching storage provider requires either:

- Establishing a new cell line or transferring the cell line alive, both of which would likely result in variations
- Even the slightest change in routine or environment can alter cells and their production, risking creating a flawed product

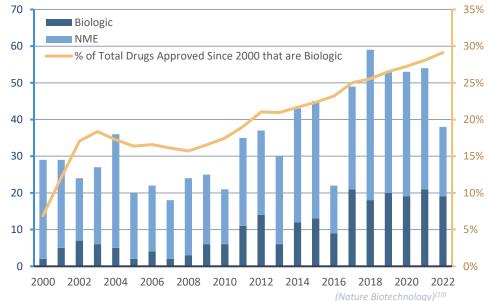
#### Investment in biologics has increased due to:

- Greater efficacy at targeting disease
- Its higher selling price compared to other drug types





#### Drugs Approved Each Year by Type vs. % Biologic





# **Industry Structure Biostorage Industry Segments**

# **Biopharma Cold Chain Logistics Market Overview**

## The global cold chain logistics market is expected to grow at a CAGR of 7.3% from 2021 to 2028

The biopharma cold chain market is comprised of the packaging, transportation, and data services used to maintain quality pharmaceuticals, blood products, vaccines, and other biologics from time of manufacture to point of administration

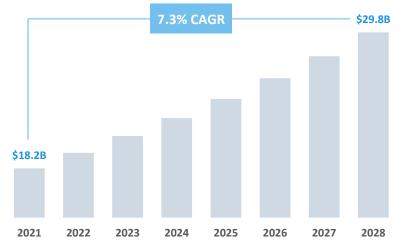
#### **Market Drivers**

Market growth is driven by the large demand of temperature-sensitive drugs and biopharmaceutical products such as life-saving vaccines and blood plasma in the developed economies

Market participants are continually developing their supply chain models while keeping an eye on latest technologies, including real time supply chain visibility, warehouse robotics, digital twins, blockchain and analytics, and autonomous vehicles

Growth in this segment is driven by demand for temperature-sensitive drugs and vaccines along with adoption of sea-based pharma logistics

#### Global Biopharma Cold Chain Market Size & Growth (\$B)<sup>(15)</sup>



#### **Market Segments**

**Storage Components:** Warehouses and Refrigerated Containers

**Transportation Components:** Sea Freight Logistics, Air Freight Logistics, Overland Logistics

Monitoring Components: Hardware (Sensors, RFID, Telematics, etc.) and Software

#### **Key Market Players**



# Laboratory Freezers Market Overview

## The global laboratory freezer market is expected to grow at a CAGR of 5.4% from 2021 to 2030

Laboratory freezers are used to store a variety of samples, including pharmaceutical, biological, and other commonly used lab samples

#### **Market Drivers**

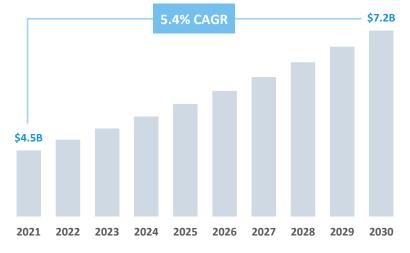
Market has seen notable growth over the last two years due to temperaturecontrolled storage requirements of COVID-19 vaccines

The growing use of refurbished laboratory freezers and refrigerators could restrain future growth – refurbished medical devices are generally available at 50–60% lower prices than new instruments

The global demand for blood and blood components is on the rise which will be a key driver for laboratory freezer demand

The COVID-19 pandemic has spurred vaccine development which, in turn, should boost demand for laboratory freezers

#### Global Laboratory Freezers Market Size & Growth (\$B)<sup>(16)</sup>



#### **Market Segments**

**Freezers:** Ultra Low Temperature, Laboratory, Plasma, Enzyme, Explosion-proof, and Flammable Material Freezers

**Refrigerators:** Laboratory, Blood Bank, Pharmacy, Flammable Material, Explosionproof, and Chromatography Refrigerators

**Cryopreservation Systems** 

#### **Key Market Players**



# **Biological Sample Handling Overview**

## The global bio sample handling market is expected to grow at a CAGR of 7.7% from 2022 to 2030

Biological sample handling is the process of collection, storage, and processing of biological samples for further study or use—compound management and biological sample management play significant roles in drug discovery process & DNA extraction

#### **Market Drivers**

Customer demand for sample integrity and assurance that standards are met during the collection, storage and processing stages of biological testing is a market driver

Clinical trials and other drug research and development entities rely on the biological sampling market to support their activities

The sample handling market is also growing due to the increase in precision medicine, which uses genetic profiling to develop treatments to meet the needs of a specific group of patients

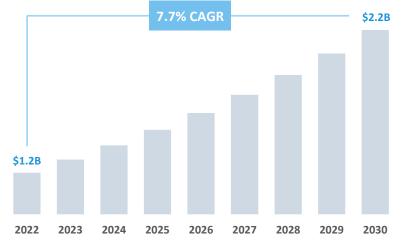
#### **Market Segments**

**Storage Type:** Cold storage and room temperature storage

**Application:** Drug discovery, forensic investigation, DNA extraction, proteomics, and genomics studies—the drug discovery segment holds a major market share in biological sample handling

Ownership: Commercial and academics / research

#### Bio Sample Handling Market Size & Growth (\$B)<sup>(17)</sup>



### (\$B)<sup>(17)</sup> Key Market Players



# **Biobanking Market Overview**

## The global biobanking market is expected to grow at a CAGR of 8.6% from 2022 to 2030

A biobank is a type of biorepository that stores biological samples (usually human) for use in research. Biobanks have become an important resource in medical research, supporting many types of cutting-edge therapies like genomics and personalized medicine

#### **Market Drivers**

R&D focus on advanced therapies such as regenerative medicine, personalized medicine, and cancer genomic studies continue to drive growth in the space

The market ability to serve drug discovery (clinical trials) as well as diagnostics is also increasing demand

Quality of specimens remains critical. Market participants continue to innovate and expand to meet demand and ensure quality is high

Precision and personalized medicine, which tailors treatments using genetic testing to meet specific groups of patient's needs, also drives market growth

#### Global Biobanking Market Size & Growth (\$B)<sup>(18)</sup>



#### **Market Segments**

Services Segments: Biobanking & Repository, Lab Processing, Qualification / Validation, Cold Chain Logistics, Other Services

**Product Segments:** Temperature Control Systems, Incubators & Centrifuges, Alarms & Monitoring Systems, Accessories & Other Equipment

Biospecimen Segments: Human Tissues, Organs, Stem Cells, Other Biospecimens

Application Segments: Therapeutics, Drug Discovery & Clinical Research, Clinical Diagnostics, Other Applications

#### **Key Market Players**



## Key Players by Segment





To discuss the private market landscape, contact us at

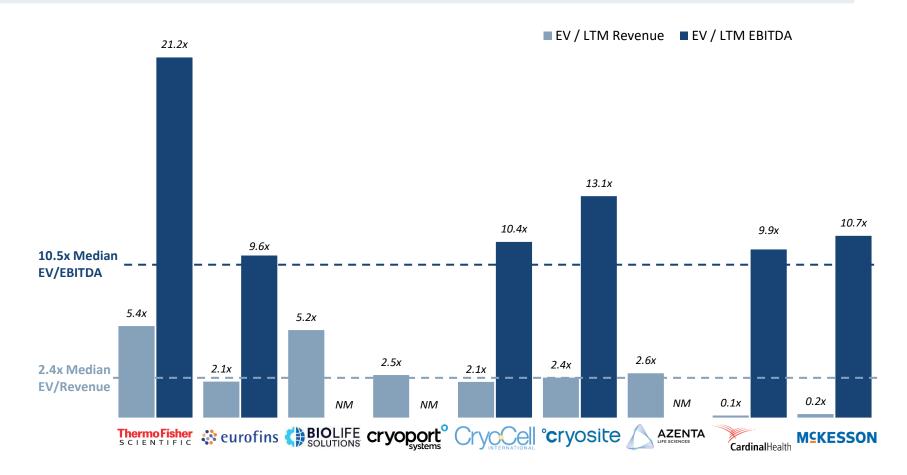
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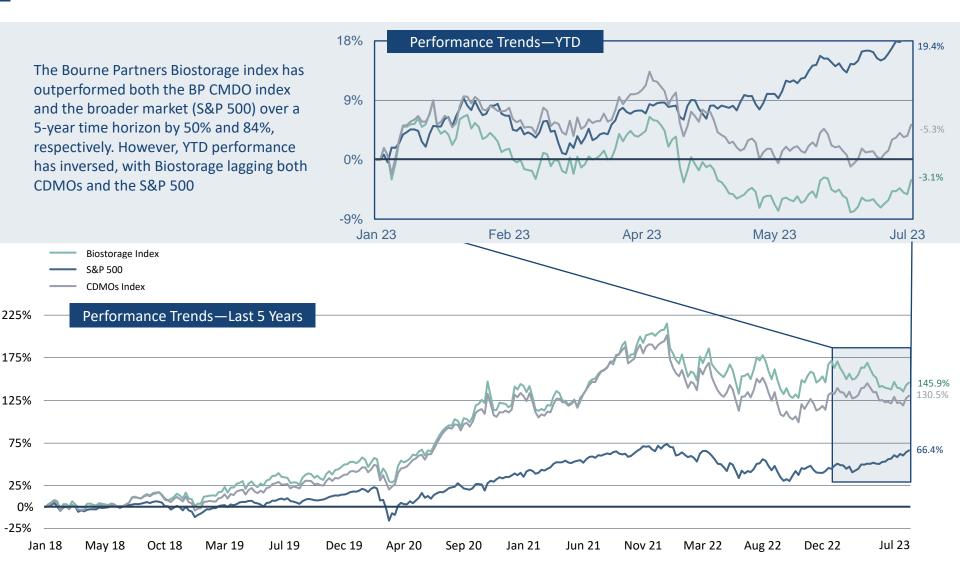
# Public Comps & M&A Activity Relevant Public Comps & Deal Profiles

# Public Company - Trading Comps

The most relevant public companies (although very few pure play comps exist) are currently trading at a median EV/EBITDA multiple of 10.5x, and a median EV/Revenue multiple of 2.4x as of July 18<sup>th</sup>, 2023



# **Comparable Public Companies - Trends**



# **Comparable Public Companies - Profiles**

Company		Description
ThermoFisher SCIENTIFIC	<b>Thermo Fisher Scientific</b> Waltham, MA NYSE:TMO	Thermo Fisher Scientific sells scientific instruments and laboratory equipment, diagnostics consumables, and life science reagents. It operates through four segments: analytical technologies; speciality diagnostic products; life science solutions; and lab products and services, which includes CRO services.
🔅 eurofins	Eurofins Scientific Luxembourg City, LU ENXTPA:ERF	Eurofins has three main business lines: food and environment testing, services to pharmaceutical and biotech companies, and clinical diagnostics. It provides analytical testing and laboratory services on a global scale and has a growing clinical diagnostics unit with specialties in infectious diseases, prenatal screening, and organ transfer.
	<b>BioLife Solutions</b> Bothell, WA NAS:BLFS	BioLife Solutions engages in developing, manufacturing, and marketing a portfolio of biopreservation tools and services for cells, tissues, and organs, including clinical grade cell and tissue hypothermic storage and cryopreservation freeze media and a biologistics cold chain management application for shippers.
<b>Cryoport</b> <sup>o</sup>	<b>Cryoport Systems</b> Brentwood, TN NAS:CYRX	Cryoport Inc. is a provider of temperature-controlled supply chain services for the life sciences industry with a platform of critical products and solutions including advanced packaging, informatics, specialty logistics services, biostorage services, and cryogenic life sciences equipment.
Cryccel	<b>Cryo-Cell International</b> Oldsmar, FL NAS:CCEL	Cryo-Cell International Inc. is engaged in cellular processing and cryogenic storage. It is organized in three reportable segments—cellular processing, cryogenic storage, and the manufacturing of Prepacyte CB units segment, which is a processing technology used to process umbilical cord blood stem cells.
CHOKSI	<b>Choksi Laboratories</b> Indore, India BOM:526546	Choksi Laboratories Ltd. is a contract laboratory services company. It provides instrument calibration and validation, environment management services, clinical research, and consultancy services in the field of pharmaceuticals, food and beverage analysis, water analysis, and construction material analysis.
° <b>c</b> ryosite	<b>Cryosite</b> South Granville, Australia ASX:CTE	Cryosite Ltd. engages in the provision of supply chain logistics, management of pharmaceutical products used in clinical trials. It's operating segment includes cord blood & tissue storage and clinical trials & biological services logistics. It generates maximum revenue from the clinical trials & biological services logistics segment.

# **Select Deal Profiles**



#### Acquired by:



#### August 1<sup>st</sup>, 2022

#### Price: Undisclosed

 Cedra Express, is a New Zealand-based transportation and logistics provider serving the life science and pharmaceutical segment. This acquisition will enhance Marken as a clinical trial and cell and gene logistics provider in the region





#### June 1<sup>st</sup>, 2022

#### Price: Undisclosed

- Q1 Scientific is a global provider of cGMP stability storage services to the pharma, med device, and life sciences industries
- Cambrex, a leading CDMO backed by Permira, reports this acquisition will help bridge a large gap in the European biobanking ecosystem



Acquired by:

## Blackstone

#### January 1<sup>st</sup>, 2022

#### Price: Undisclosed

- LifeScienve Logistics provides 3PL warehousing, distribution, and ancillary services with cold chain capabilities for both refrigerated and frozen storage needs
- The investment will help to accelerate the company's continued expansion within the pharmaceutical and medical device market with the opening of new facilities and growth of its customer base in the coming years



Acquired by:



#### December 15<sup>th</sup>, 2021

Price: Undisclosed

- Masy Bioservices was acquired by Alcami through an LBO
- Provider of cGMP bio storage and pharma support services to analyze and improve the quality of research laboratories and production environments



# **Select Deal Profiles**



Acquired by:



#### November 2<sup>nd</sup>, 2021

Price: Undisclosed

- Elkay Laboratory Products is a provider of critical laboratory consumables and offers liquid handling, storage, and biobanking services
- This acquisition helps further diversify Calibre's service offerings





#### January 7<sup>th</sup>, 2021

Price: Undisclosed

- Deco Pharma is a Spanish provider of integrated logistics services intended for pharmaceutical and MedTech industries. With 15K sqm of temperaturecontrolled facilities
- This acquisition will further strengthen BomiGroup's presence in South-West Europe and create important cross-selling activities across the region



Acquired by:

## **Biolife** Solutions

**October 1<sup>st</sup>, 2020** 

Price: \$36.53M

SciSafe is a provider of

temperature-controlled

storage facilities for the

This acquisition will allow

**Biolife Solutions to fully** 

leverage its relationships

with leading cell and gene

therapy companies to drive

sales of the company's suite

of biologic storage services

biological and pharma

sector



Acquired by:



#### July 5<sup>th</sup>, 2019

#### Price: Undisclosed

 Cryo Store specializes in biobanking, packaging and logistics, cold chain packaging, and clinical trial logistics. This acquisition will help LabConnect in supporting its central laboratory projects within Europe and offer clients analytically and logistically complex clinical trials



# **Bourne Partners Case Study** Alcami acquires Masy Bioservices

## BOURNE PARTNERS CASE STUDY: ALCAMI-MASY BIOSERVICES

#### **COMPANY OVERVIEWS**

#### MASY BIOSERVICES

Masy provides quality solutions to the life sciences community, meeting qualifications for NVLAP accreditation to ISO 17025:2017 as well as ISO 9001:2015 certification. Services include calibration of primary standards and critical test equipment; validation and IQ/OQ/PQ of environmental chambers, autoclaves, and thermal warehouse mapping; and lab equipment rentals and sales. Masy offers cGMP biorepository options, with secure and tightly controlled temperature storage from -196°C to 70°C, including all ICH stability conditions, for various materials including vaccines, biopharmaceuticals, cell banks, tissues, compounds, and medical devices

#### ALCAMI

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Alcami is a contract development and manufacturing organization headquartered in North Carolina with over 40 years of experience advancing products through every stage of the development lifecycle. Leveraging four US-based scientific campuses, Alcami serves pharmaceutical and biotech companies of all sizes providing customizable and innovative solutions for analytical development, clinical to commercial sterile and oral solid manufacturing, packaging, microbiology, and environmental monitoring services. Alcami is a portfolio company of Madison Dearborn Partners and Ampersand Capital Partners

## Undisclosed



Bourne Partners served as a strategic advisor to Alcami Corporation in its acquisition of Masy BioServices.



HOW BOURNE ADDS VALUE		Bourne Partners provides strategic and financial advisory services to clients throughout the business evolution life cycle. We play an active role in helping businesses grow and maximize outcomes by creating long-term, profitable relationships that extend beyond single transactions. It is our focus on relationships and results that has yielded us an impeccable track record of client satisfaction.
	RESULT	Alcami ultimately decided to move forward with its M&A interests with Masy BioServices, consummating a transaction with the company on December 15, 2021. The acquisition will allow Alcami to provide its customers with additional complementary service offerings and take advantage of prevailing industry tailwinds in the biostorage space
	PROCESS	Bourne Partners performed a strategic study on the biostorage space, conducting KOL interviews and a deep dive on the industry that explored industry tailwinds / headwinds, trends, competitive landscape and key industry players, and valuation trends in the public and private markets. Bourne Partners presented their findings to the Alcami and Madison Dearborn Partners teams for evaluation in connection with the transaction
	OBJECTIVE	Alcami engaged Bourne Partners to serve as a strategic advisor as it explored the biostorage sector, and more specifically, an acquisition of Masy BioServices



# **Bourne Partners Overview** Leading Healthcare Investment Banking Boutique

# **Bourne Partners Overview**

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### **Areas of Expertise**



Pharmaceuticals



Pharma Services



**Consumer Healthcare** 

## **Our Service Offering**

For over twenty years, Bourne Partners has focused exclusively on providing investment banking advisory services and making direct investments in the Pharmaceutical, Pharma Services, and Consumer Health and Wellness industries. Since 2015, we have successfully executed on over \$10B in transactions, having worked with many leading companies and private equity investors in these core focus areas.

#### **Investment Banking**

- Mergers and Acquisitions Sell-side and buy-side assignments Transaction Experience: \$10mm - \$3.5b
- Capital Sourcing

Debt / Equity / Hybrid

- \$10 \$500 million raises
- Business Development Support
  Development stage and approved products
  Local and international

#### **Strategic Capital**

Investment Focus

Direct investments in private companies

Selective approach in vital focus areas

Other Criteria

Cash flow positive opportunities

Complex situations with creative structures

Actionable growth stage or middle market business

Flexible investment targets with established private equity relationships

# +\$10 Billion

Pharma Transactions Since 2015



## **Geographic Coverage**

Dots represent the countries where the Bourne Partners team has transaction experience

# **Investment Banking**

## **Overview**

Bourne Partners Investment Banking provides investment banking services within the healthcare and life sciences sector for external clients as well as our portfolio companies.

## **Value Proposition**

- **Total Perspective** 
  - Experience advising, investing in, building, operating, • buying, and selling companies
  - Unmatched 360° perspective for every project
- **Uncompromised Service** 
  - Direct involvement of senior management throughout • process
  - High level of attention regardless of transaction value
- **Global Reach** 
  - Experience working with companies around the globe •
  - Extensive network of potential international buyers

## **Areas of Focus**

- Buy and Sell Side M&A
- Equity & Debt Capital
- Licensing / Partnering
- Strategic Consulting

## **Select Tombstones**

Cinven



#### **Recent Clients & Counterparties H**Fagron alcami AVISTA ProPhase Oaccelovance GlaxoSmithKline Cambrex Ashfield 🚧 endo. Engage **Partners, Sponsors, and Lenders**

COLBECK THE CARLYLE GROUP











# Strategic Capital

## **Overview**

Bourne Partners Strategic Capital ("BPSC") partners with/invests in pharma, pharma services, and consumer health opportunities where we can:

- 1) Invest a significant amount of our own capital
- 2) Add outsized value through industry relationships and expertise
- 3) Align incentives/partner with management

## Criteria

- Proven and experienced management teams
- Companies or platforms that align with incentives
- Highly flexible companies equity checks up to and > \$1B
- Cash flow positive, commercial stage transactions
- Companies where BPSC's value add can create a significant return on our personal capital

## **Track Record**

- 10 direct or co-investment platforms
- Investment in > 15 PE funds since inception
- Over \$20 billion in transaction experience
- >11x realized MOIC (average)

## **Current Portfolio Companies**





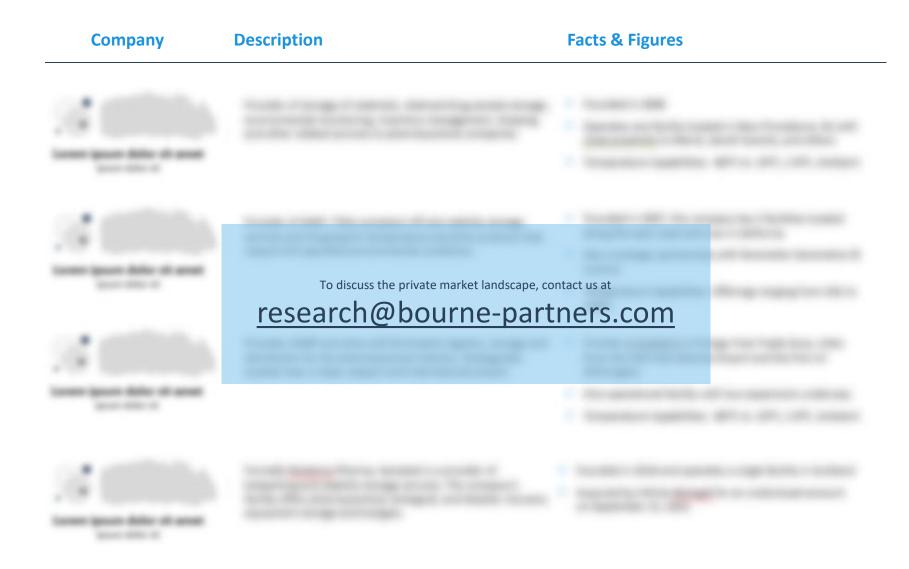




# **Comparable Private Company Profiles**



# **Comparable Private Company Profiles**



# **Comparable Private Company Profiles**



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#### **Bourne Partners' Index Details:**

- Biostorage Index consists of Thermo Fisher Scientific (NYSE:TMO), Eurofins Scientific (ENXTPA:ERF), BioLife Solutions (NYSE:BLFS), Cryoport (NYSE:CYRX), Cryo-Cell International (NYSE:CCEL), Choksi Laboratories (BSE:526546), Azenta (NasdaqGS:AZTA)
- CDMOs Index consists of—SWX:BANB, NYSE:TMO, NYSE:WST, ENXTPA:ERF, SWX:SFZN, NYSE:CTLT, NasdaqGS:BCPC, SWX:LONN, NYSE:BAX, XTRA:EVK, TSE:2802, NSEI:PPLPHARMA, SZSE:300363, SWX:SFZN. NasdaqCM:CDMO, NYSE:CRL. TSE:4901, KOSE:A207940



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