



# Corporate Overview

4 Mar 2024



REDEFINE QUALITY • DRIVE PRODUCTIVITY

CONFIDENCE IN EVERY SAMPLE

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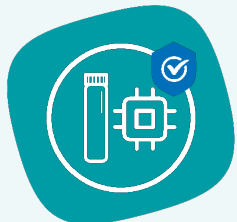
# Bluechip Fundamentals



**Drives  
productivity**



**Redefines  
Quality**



**Confidence in  
every sample**

- World first, highly differentiated technology: 41 granted patents
- >>\$1B growing target markets: Pharma, clinical trials, cell therapies, biobanking, IVF and vaccines requiring Ultra Low temperature ID and temperature traceability
- >>300M/yr high value bio-samples handled at -80°C & -196°C
- New Go To Market Strategy: CE & FDA Registered Bluechip Enabled Solutions
- Expanded US sales team driving significant customer pipeline
- Growing customer base – 28 Labs across 17 customers, over 130 lab opportunities
  - 3 Global top 20 pharma customers, 2 labs live in Feb, additional 9 in pipeline
  - IVY league research institute and leading biopharma groups as customers
- Accelerating revenue from direct customers 6 mths FY'24 \$300k, FY'23 \$214k
- FujiFilm Partnership in IVF
- \$3m inventory & scaled production capacity of over 5m chips/yr

# Bluechiip Overview



[Link to corporate video](https://www.bluechiip.com/investor/company-overview/)

<https://www.bluechiip.com/investor/company-overview/>



# Key Achievements

## Bluechiip Enabled Solutions Product in Market

- ISO9001, CFR21-11 software, CE IVD & FDA registration
- Scaled chip supply chain (3m+)
- Hierarchy of Storage Range Released
- Refined Bluechiip reader platforms
- Stream '23 software released

## Accelerating Customer Adoption & Pipeline Building

- Expanded US sales & Marketing Team
  - 2 in FY'23 to 7 in FY'24
- Customer adoption with rapidly growing repeat orders
  - 3 top 20 Global Pharma Companies users, 14 in pipeline
  - Expansion identified with existing customer base progressing to orders
- Rapidly expanded customer opportunity pipeline
  - >100 opportunities up from ~12 in 2022

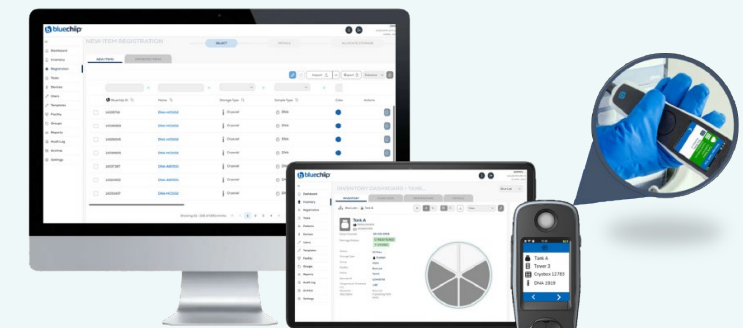
### Bluechiip Enabled Storage



### Bluechiip Readers



### Bluechiip Stream Software



# Bluechiip Enabled Laboratories

## End-user Feedback and Market Progression



*"The Bluechiip System allows me to have a significant amount of oversight throughout our banking process"*

Dr Akhil Chawla MD  
Clinical Assistant Professor of Surgery



*"Bluechiip helps us work more efficiently with confidence in sample integrity and identity"*

Dr Mary Clare McCorry  
Director of Technology and Process Development

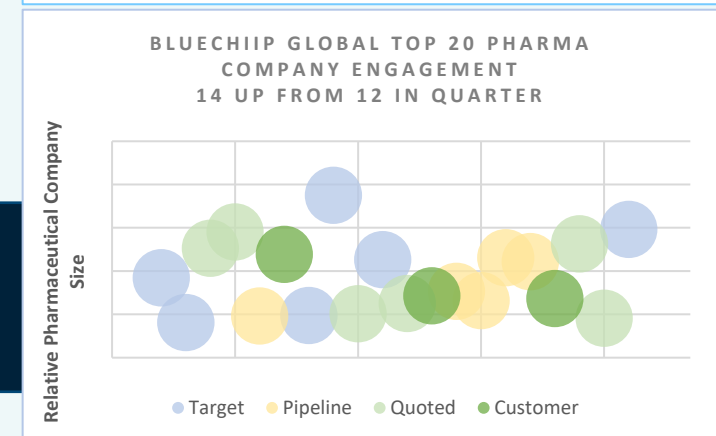
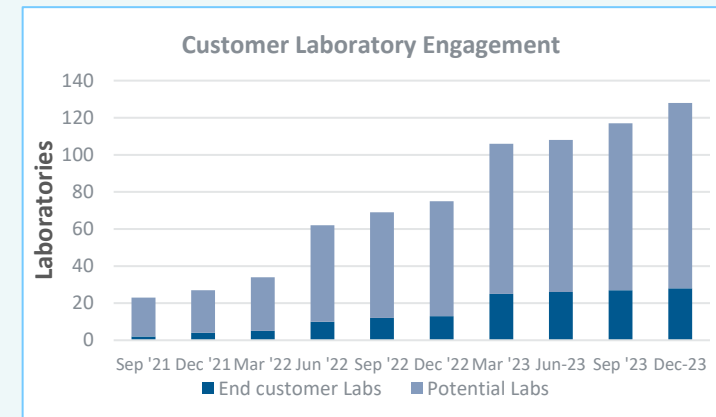
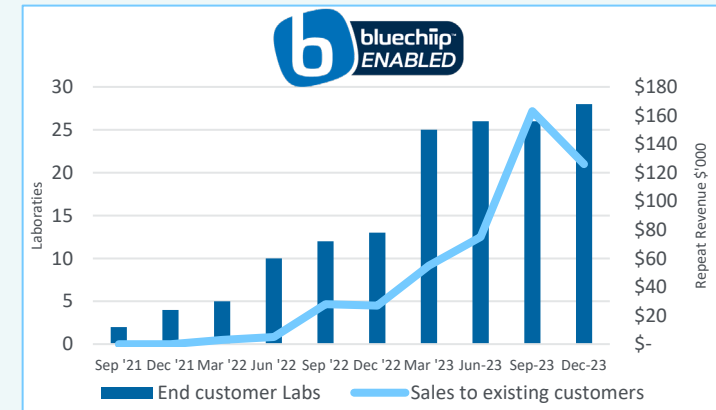


*"The Bluechiip system provides a full audit trail to help us adhere to Good Manufacturing Practice"*

Dominika Lykova  
Cell Therapy Specialist



Palacký University  
Olomouc



**Growing install base 28 labs across 17 accounts including 3 large Global Pharma companies & Ivy League Core Facility**

## Vision

To be the global leader in ID and sensing technology for extreme environments

## Mission

To advance research and medicine by providing confidence in every sample

# Major ID and Sensing Technology Sectors

## Primary Focus



### Lifesciences Cold Chain incl Logistics, Storage and Monitoring

Item level **ID and temperature tracking** of containers holding high value samples through-out the **cryogenic** cold chain cycle. Including Banking, Transport and Monitoring where **frost** is usually present, and **ID errors have high risk and impact.**



### Cold Chain Logistics Food

Item level **tracking** of **frozen**, and **temperature sensitive** food products through-out the cold chain cycle.



### Industrial and Manufacturing

Item level ID and **high/low temperature tracking** tools and parts, structural health monitoring, items exposed to **ionizing radiation** such as nuclear products, sterilised medical devices, disposables and some food products.



### Security and Defence

**Anti counterfeiting** fashion, art, and high value commercial items. Cloning a bluechiip tag is extremely difficult. Parts that are exposed to **ionizing radiation**, security and defence.

Bluechiip is highly differentiated in Lifescience Cold Chain with core technology benefits and large market opportunity



# Life-science Cold Chain Market Trends



Increasing sample numbers and retrieval rates

## PRODUCTIVITY

Minimise total cost of sample ownership and ROI



Increased demand for advanced therapies and sensitive samples

## SAMPLE VALUE

ID tech needs to keep up with higher value samples



Criticality of sample history maps and reports

## SAMPLE QUALITY

Maximise specimen integrity via adequate cold chain handling and reporting



Increasing demand for cryo (-196°C and -80°C) storage

## CRYO TECH

Utilisation of cryo-safe technology and processes

# Biosample Management Technology is Not Keeping up With the Increasing Value of Biosamples

Tissue



Blood



IVF Sperm/Eggs



Vaccines



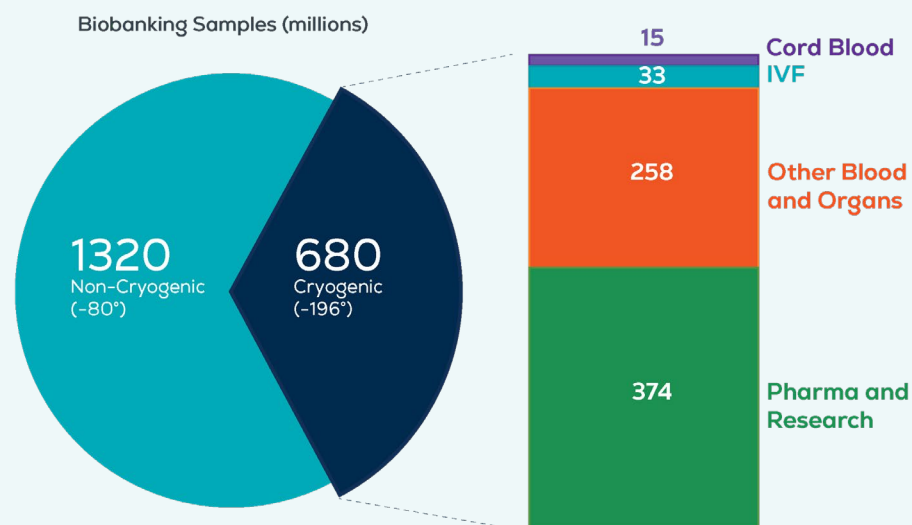
Stem Cell



# Primary Market Opportunity

Global Bio-Preservation Market \$3.1B in 2020 –  
Projected \$4.9B in 2025 (CAGR 9.2%)^

## Samples in Storage\*



## Primary Bluechiip Applications

### Life Science Market Opportunities









| Target Market                          | Market Size by Samples   | Bluechiip Addressable Market |
|--|--|------------------------------|
| Bio-preservation                       | 300m+ samples/year<br>>2B in storage   | US\$600m+                    |
| Assisted Reproductive Technology (IVF) | 2.5m IVF Cycles/year<br>5-8 consumables per cycle<br>>33m samples in storage | US\$50m+                     |
| Clinical trials and research           | >35m samples/year  | US\$70m+                     |
| Cell therapies, Pharmaceuticals        | 3m samples/year<br>15m+ in storage   | US\$30-50m+                  |

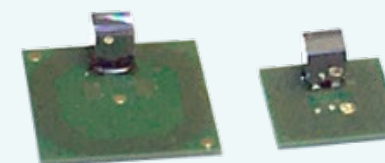
**Total Bio-Preservation: 2B Samples in Storage**  
300M new samples per year in over 10,000 laboratories

Sources: ^Markets and Markets 2020 \*Visual Fuse and MarketsandMarkets 2014

# Bluechiip MEMS Core Technology Advantages

Bluechiip's sensor tag consists of a silicon chip (1mm<sup>2</sup>) with 52 mechanical beams that provide a unique ID when read. The chip is connected to an antenna available in multiple form factors, providing communication of both ID and temperature to a centralized database. Bluechiip's Tag provides key advantages over other forms of ID in cryogenic environments.

|   |  RFID |  Barcodes |  Bluechiip |
|---|--|--|---|
|  <b>Non-visual ID</b><br>Reads through frost                            | ~*   | ✗  | ✓   |
|  <b>Cryosafe</b><br>Operates down to -196C                              | ✗  | ✗  | ✓   |
|  <b>Guaranteed unique ID</b><br>ID cannot be overwritten or duplicated | ✗  | ✗  | ✓   |
|  <b>On-board sensor</b><br>Senses temperature on each scan            | ✗  | ✗  | ✓   |
|  <b>Sterilization proof</b><br>Gamma, E-beam, Autoclave               | ✗ <sup>^</sup>   | ✓  | ✓   |



\*Majority of RFID unreliable below -40C.

<sup>^</sup>Some newer RFID's have resistance



# Bluechiip offers the only Advanced Sample Management solution providing **sample temperature with ID** in cryogenic environments

We understand that every sample is critical and managing each one with optimal quality, in the most efficient way is the objective

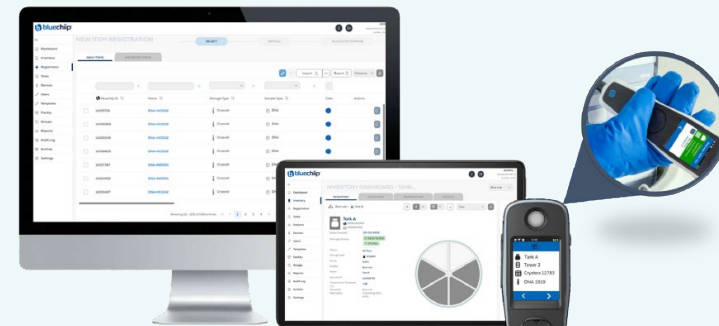
## Bluechiip Enabled Storage



## Bluechiip Readers



## Bluechiip Stream Software



Bluechiip's goal is to deliver confidence in every sample





# Bio-Pharma – Single Tank Revenue Model



Bluechip Readers



\$5.3k each



\$19k

Stream Sample Manager  
Software



\$8k

**Initial Capital Expenditure**

**\$42.9k**

\$4.3



65k vial tank  
**\$280k/yr**



Modular software license  
**\$12k/yr**

**Yearly revenue**

**\$292k**



Scalability of  
**\$280k in every tank**



Additional lab  
expansion across  
customers sites

# Confidence in Every Sample

Bluechiip's unique and patented technology is designed to operate across a wide temperature range from -196°C to over +150°C, creating the perfect system for managing sensitive samples. Bluechiip Enabled Sample Storage, Readers and Software combine to provide an unparalleled ability to track and store sample level data, including temperature across the cold chain process.

## Redefining Quality

- Eliminating errors through optimized inventory management
- Enabling compliance to industry standards and internal procedures
- Capturing ID and temperature at the sample level for cold chain integrity
- Reducing the risk of temperature excursions in cryogenic conditions
- Providing key workflow insights to drive continuous improvement



## Driving Productivity

- Reducing manual processes and eliminating double witnessing
- Identifying multiple samples instantly through frost
- Simplifying inventory handling for faster processing
- Driving efficiency at every step of the workflow





# Bluechip Enablement – Research Institute



## Challenge

The Research Institute needed a solution to centralize and standardize sample management across multiple user groups and locations, many without traceability of their freezers' contents.

## Solution

By digitizing existing and new sample inventory, Bluechip provides the Institute with a single, easy to use platform to track a variety of sample types across multiple freezers.

Starting with 5 freezers and 1 user group, the system has now been **rolled out to more than 20 lab groups across the freezer farm.**



**Lab Groups 12+**



**Freezers 45+**



**Samples 0.5M+**

# Bluechip Enablement Global Pharma R&D Lab



**Automated LN2 tank**



**Multiple -80 Freezers**



**Reagent tracking at -20C**

## Challenge

A major pharmaceutical R&D facility had poor control of cryovial location data within their LN2 storage tank. Required a solution that could operate across their LN2 sample inventories and their -80C and reagent (-20C) freezers.

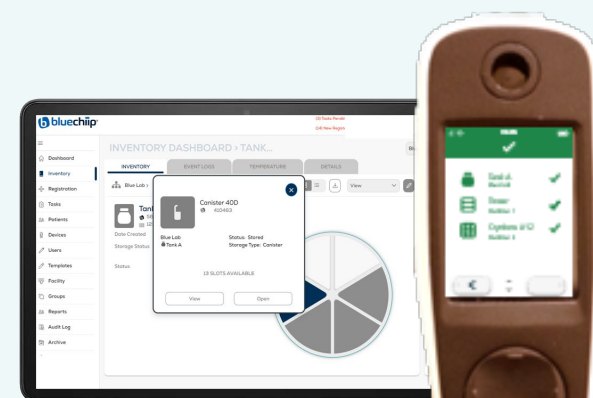
## Solution

Bluechip's Multivial reader provides the laboratory a reliable traceability of individual cryovial locations within cryoboxes being transferred into and out of the automated LN2 store.

The laboratory manages their entire inventory of tanks and freezers in the Bluechip Stream database and Bluechip's Flexi Module is being utilized to enabled the registration and tracking of reagents in the -20C freezer.



# Bluechiip Enablement Global Pharma Gene Therapy



## Challenge

Pharma company required a better solution for managing cryobags storing Gene Therapy products in their -80 Freezers. Manual tracking and non-standard storage equipment meant significant time spent looking for samples.

Quarterly audits had become a prohibitively labor-intensive process with discrepancies between manual records and physical storage.

## Solution

Working with the pharma company, Bluechiip developed and supplied a custom racking solution for their Cassette Frames in the -80 Freezers. Bluechiip Enabled Tags and Cryolabels enable the digitization of sample records and Bluechiip readers help automate inventory location updates ensuring samples are easily located and audits are dramatically streamlined.

Multiple adjacent laboratory groups identified

## Key benefits

**Turn-key solution**

**Automated reporting – capacity, audit, chain-of-custody**

**Dramatically reduced labor and audit time**

**Optimized storage utilization**





# Bluechiip - Path to Market



## Bluechiip Direct Solutions

Direct to market: North America

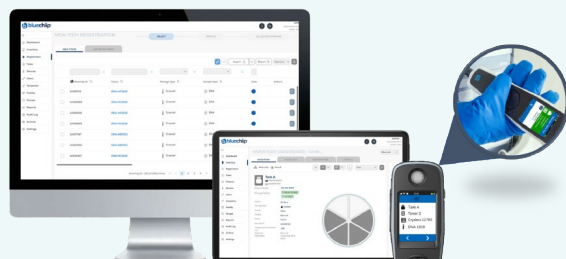
Global distribution network

Consumables, Readers, Software Sales model



## Primary Target Markets

- Bio-preservation
- Clinical trials and research
- Cell therapies & Pharmaceuticals



## Partnerships: Bluechiip Enabled Solutions

- Developer kits sold to global corporations for due diligence
- Conversion to licence agreements and Bluechiip Enabled solutions
- Ongoing licence fees
- Development and service revenues
- Sale of Bluechiip Enabled Consumables, readers & software



## Major Licence agreements

- Finalising development and proceeding towards a subsequent supply agreement with FujiFilm Industries Irvine Scientific for the IVF market
- Labcon distribution agreement

# Growth Initiatives For Sustainable Bluechiip Future

- Aggressive Sales & Marketing in North America
- Driving Repeat Revenue through expansion within accounts
- Growing direct customer base globally across the \$1B+ market
- Execution and conversion of our Major partnerships
- Building operational & manufacturing capabilities to meet demand



**Landing and expanding**  
new accounts, new labs and  
growing repeat orders



**Building**  
global distribution channels



**Execution**  
of OEM agreements



**Continuing**  
refinement  
of product & scaling  
manufacturing

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