

## 2023 AGM Presentation

Bluechiip Limited (**Bluechiip** or the **Company**) (**ASX: BCT**), a leader in the development of advanced sample management solutions for harsh environments, provides the 2023 Annual General Meeting presentation.

**END.**

**Authorised for release by the Bluechiip Limited Board**

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### About Bluechiip Limited

Bluechiip understands that every biological sample – stem cells, blood, eggs, sperm and other biospecimens – is critical, so our objective is to manage each one with optimal quality in the most efficient way. Bluechiip's Advanced Sample Management Solution is the only one that provides sample temperature with ID in cryogenic environments, driving productivity and improving quality. Bluechiip's solution delivers confidence in every sample.

Bluechiip's unique patented technology is a MEMS-based wireless tracking solution that contains no electronics. It represents a generational change from current tracking methods such as labels (hand-written and pre-printed), barcodes (linear and 2D), and Radio Frequency Identification. Bluechiip tags are either embedded or manufactured into storage products such as vials or bags. Each product is easily identified and critical information, such as sample temperature, detected by readers and stored in the Bluechiip software. In addition to functioning in extreme temperatures, the Bluechiip<sup>®</sup> Advanced Sample management solution can survive autoclaving, gamma irradiation sterilization, humidification, centrifuging, cryogenic storage and frosting.

Bluechiip listed on the ASX in June 2011. Since then, we have significantly developed our technology. Today it has applications in healthcare, including in cryogenic storage facilities (biobanks and

biorepositories), pathology, clinical trials and forensics. Other key markets include cold-chain logistics/supply chain, security/defence, industrial/manufacturing and aerospace/aviation.

**Bluechiip: Delivering confidence in every sample.**

Further information is available at [www.bluechiip.com](http://www.bluechiip.com)

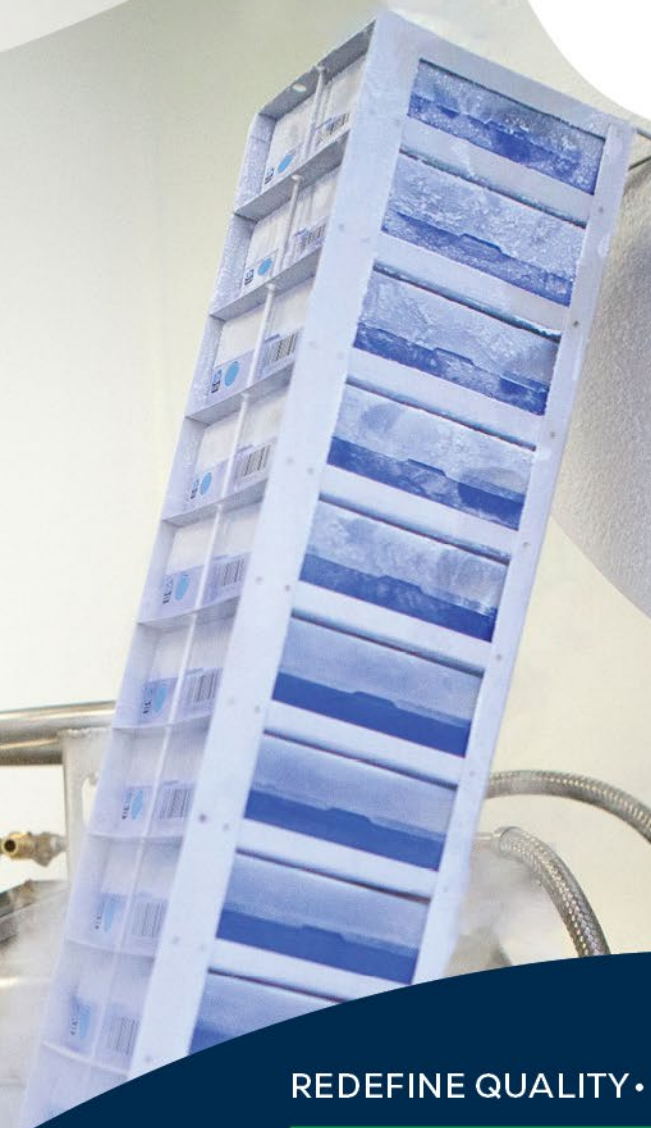
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# Annual General Meeting

November 2023



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REDEFINE QUALITY • DRIVE PRODUCTIVITY

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CONFIDENCE IN EVERY SAMPLE

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# Bluechip Fundamentals



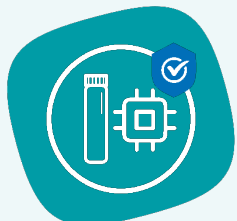
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**Drives  
productivity**



**Redefines  
Quality**



**Confidence in  
every sample**

- World first, highly differentiated technology: 40 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 with over 130 lab opportunity
  - 3 Global top 20 pharma already customers
  - IVY league research institute and leading biopharma groups as customers
- Accelerating repeat orders from customer base up 85% growth Qtr on Qtr
- 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/>

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# Key Achievements

## Bluechip Enabled Solutions Product in Market

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

## Accelerating Customer Adoption & Pipeline Building

- Expanded US sales & Marketing Team from 2 to 7
- Customer adoption in EU, US & APAC with rapidly growing repeat orders
- Rapidly expanded customer opportunity pipeline

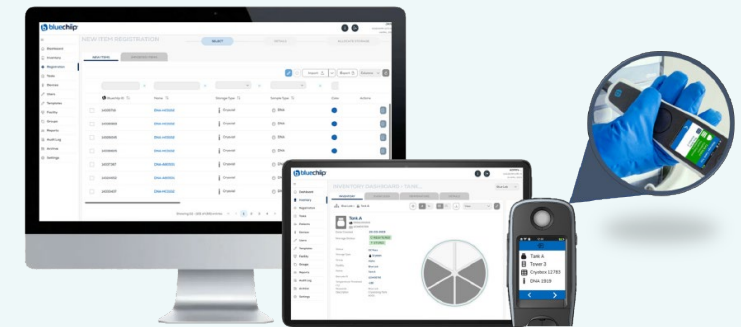
### Bluechip Enabled Storage



### Bluechip Readers



### Bluechip Stream Software



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# 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



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

Dominika Lykova  
Cell Therapy Specialist

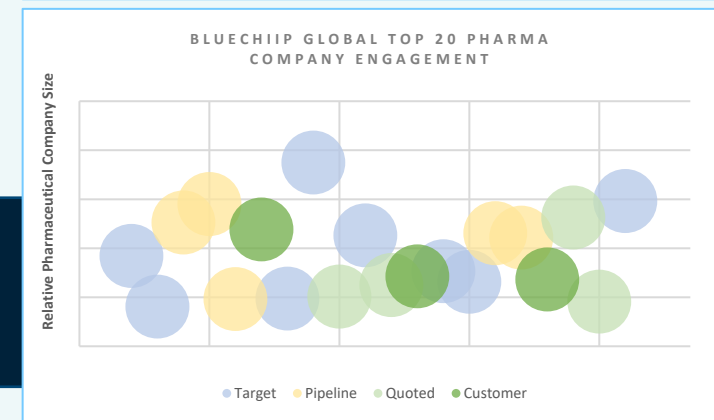
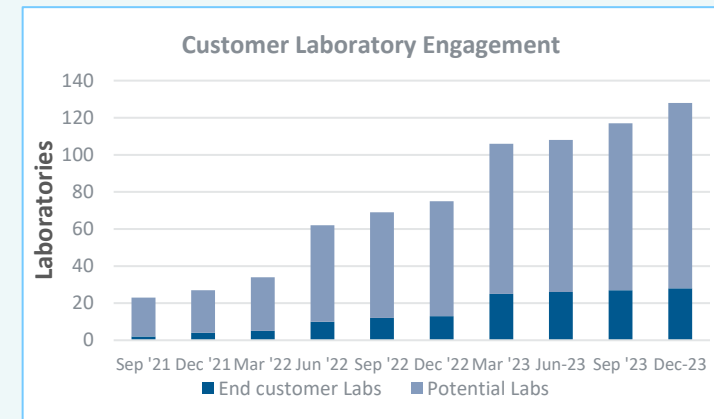
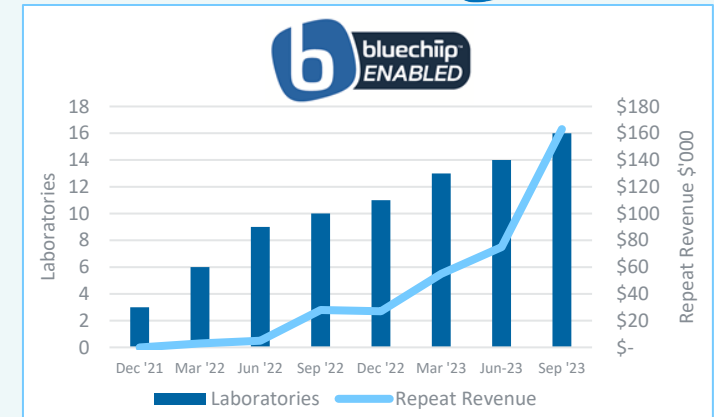


*"Bluechiip helps us work more efficiently with confidence in sample integrity and identity"*

Dr Mary Clare McCorry  
Director of Technology and Process Development



Palacký University  
Olomouc



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



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## 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

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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

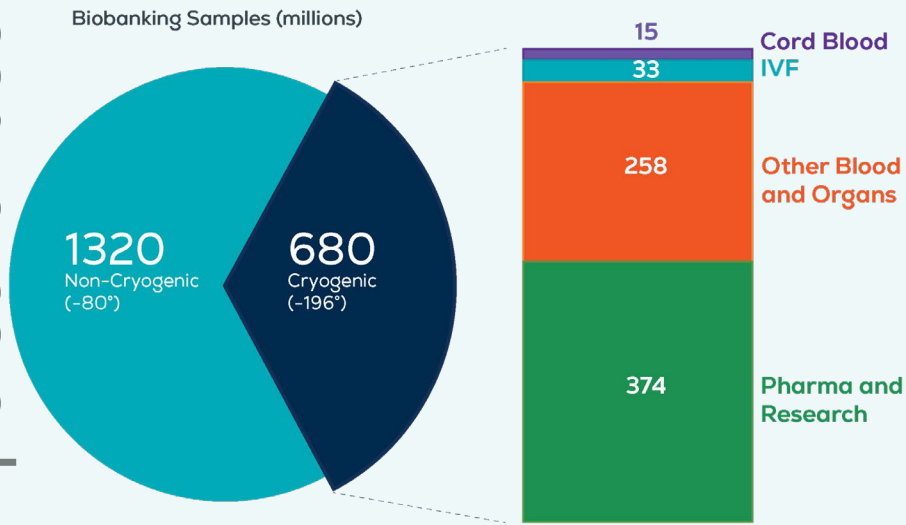


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# Primary Market Opportunity

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 >2B in storage	US\$600m+
Assisted Reproductive Technology (IVF)	2.5m IVF Cycles/year 5-8 consumables per cycle >33m samples in storage	US\$50m+
Clinical trials and research	>35m samples/year	US\$70m+
Cell therapies, Pharmaceuticals	3m samples/year 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

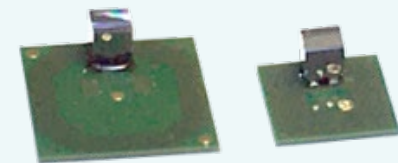
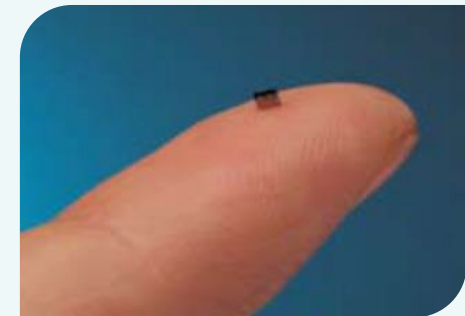
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# Bluechiip MEMS Core Technology Advantages

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.

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



\*Majority of RFID unreliable below -40C.  
^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

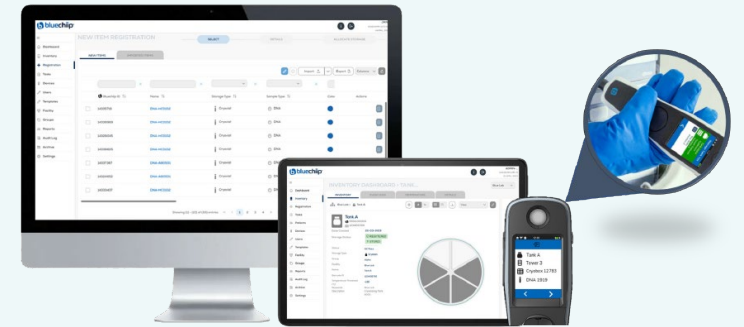
## Bluechiip Enabled Storage



## Bluechiip Readers



## Bluechiip Stream Software



Bluechiip's goal is to deliver confidence in every sample



# Bio-Pharma – Single Tank Revenue Model



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Bluechip Readers



\$5.3k each



\$19k

Stream Sample Manager Software



\$8k



\$4.3



65k vial tank  
\$280k/yr



Modular software license  
\$12k/yr

Initial Capital Expenditure  
**\$42.9k**

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  $-196^{\circ}\text{C}$  to over  $+150^{\circ}\text{C}$ , 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



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# Bluechip Enablement – Research Institute



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## 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



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## 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 Multival 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.



**Automated LN2 tank**



**Multiple -80 Freezers**



**Reagent tracking at -20C**

# Bluechip - Path to Market



## Bluechip Direct Solutions

Direct to market: North America

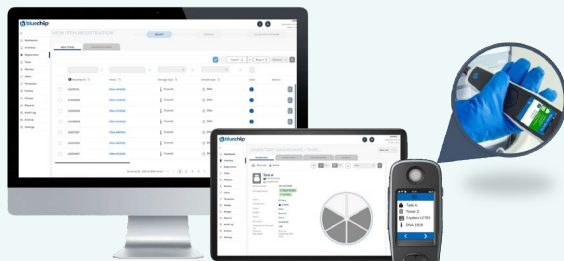
Global distribution network

Consumables, Readers, Software Sales model



## Primary Target Markets

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



## Partnerships: Bluechip Enabled Solutions

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



## Major Licence agreements

- FujiFilm Industries Irvine Scientific
- Labcon distribution agreement

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# Growth Initiatives For A Bluechiip Future



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- Landing New Accounts through Aggressive Sales & Marketing in US
- Expanding within accounts into new labs & expanding repeat revenue
- Building distribution networks in Europe & Asia in FY'24
- Growing our direct customer base globally across the >>\$1B, Ultra Low temperature clinical trials, cell therapies, pharma biobanking markets
- Execution and conversion of our Major partnerships
- Continued expansion and protection of our world first, highly differentiated technology: >40 granted patents
- 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**  
expansion and refinement  
of product range

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