

# Cell and Gene Therapy (CGT) Manufacturing Landscape

The rising incidence of cancer, metabolic and chronic diseases, advancements in exponential technologies, and increasing R&D spending by pharmaceutical companies are fueling significant interest and growth in the CGT market.

**CGT Manufacturers** 





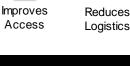


# Technologies Powering the Future of CGT Manufacturing

**Automation in** 

Manufacturing











Reduces







**Improves** 

Quality







Single-use

Technologies (SUTs)



### Decentralized satellite Automated smart-Bedside Manufacturing Geo Hubs facility satellite facility facility

### continent or region. Provide balance of

scale and market proximity

One location per

## standards Close to a clinic or at another off-site location

operate within cGMP

Facilities that can

**NEAR-TERM INNOVATIONS** 



requirements

Self-contained and

Located close to a clinic

automated facility

- CELLARES
- systems End-to-end closed process automation

Bedside manufacturing

- therapies



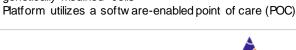
orgenesis

procision.

MGBCK

**Automation of CGT Manufacturing** 

### FRED HUTCH POC Gene Therapy Platform: Mobile Processing Units and Lab (OMPUL):



POC Immunotherapy:

manufacturing at home

**SUTs** 

Oncology

CGT demand

genetically-modified cells

and cell modifying surface

· A cell modification device, with a centrifugation chamber

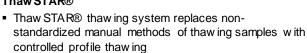
Ex vivo isolation, production, and formulation of

SQZ® eAPC Platform

Portable POC manufacturing platform suitable for

# Thaw STAR®

network of partners and collaborators



• OMPUL technology, intended for use through the POC

# Bio4C™ ■ Bio4C<sup>™</sup> Orchestrator enables to connect and integrate

# w orkflow s.

Single-use system used following processes: Buffer preparation, Media preparation, Chromatography, Clarification, Ultrafiltration or Diafiltration.

bioprocess systems and fully digitize their process

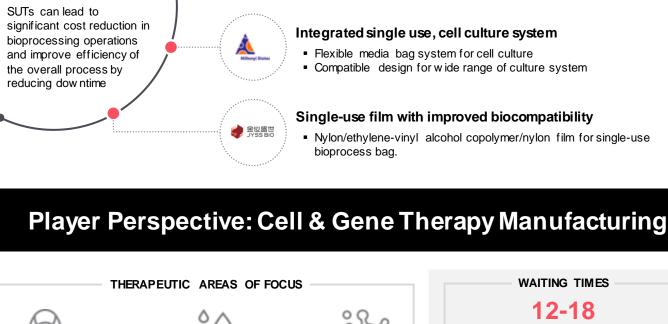
## Innovations in OPUS® Pre-packed Chromatography Columns

MERCK

cytiva

Innovations in Single-use Technologies (SUTs)

Mobius FlexReady



**Immunology** 

## Integrated single use, cell culture system Flexible media bag system for cell culture

Pre-packed resin columns

- Single-use film with improved biocompatibility Nylon/ethylene-vinyl alcohol copolymer/nylon film for single-use bioprocess bag.

Capture biologics during downstream processes.

Neurology

Infections



Haematology



- CGT Manufacturing Challenges: Scaling-up operations, high cost of processes and raw materials, product CDMO Dependence Challenges: Increased reliance on CDMOs, potential for extended waiting times due to high
- Key Considerations for CGT Decision Makers: Outsourcing preferences and practices and challenges in selecting the right solution providers

FutureBridge tracks and advises on the future of industries from a 1-to-25 year perspective. We keep you ahead on the technology curve, propel your growth, identify new opportunities, markets and business

models, answer your unknowns, and facilitate best-fit solutions and partnerships using our platforms, programs, and

 Selecting the right solution providers is crucial for effectively managing CGT manufacturing challenges, including scaling-up, cost optimization, and reproducibility, and also for meeting the growing demand for CGTs in the future.

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About FutureBridge