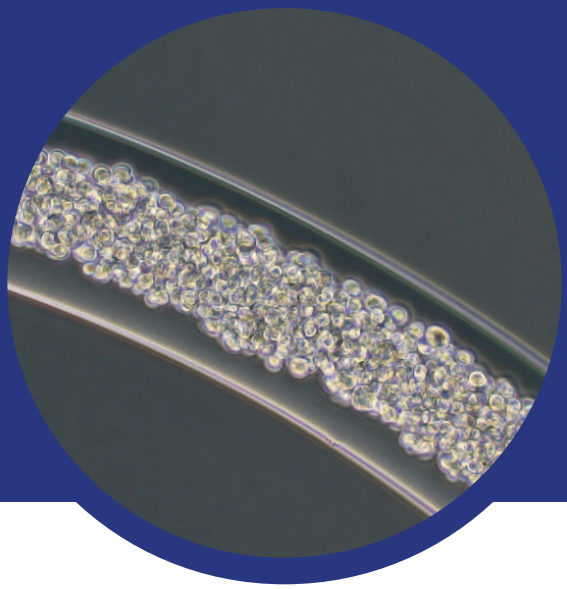
CellFiber

Cell Culture Reimagined

**Founded in 2015 and rooted in technology from the University of Tokyo, CellFiber is redefining how therapeutic cells are produced. Our mission is to make advanced 3D cell culture accessible at scale—driving innovation, consistency, and cost efficiency across cell manufacturing.**



## CellFiber® Technology

CellFiber **encapsulates** cells in medical-grade alginate fibers, creating a secure, biomimetic environment for **high-density 3D culture**. This natural marine biopolymer forms gentle, biocompatible hydrogel matrices that support fragile cells and improve viability.

Our proprietary microfluidics device produces uniform fibers in a continuous laminar flow fabrication process. These novel fibers enhance nutrient exchange, reduce cell variability, and increase productivity—all within a smaller footprint and at a lower cost than traditional 2D culture.

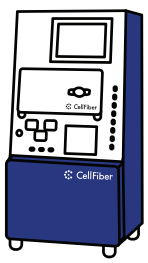
- **Streamlined Process Development**
- **Intensified Manufacturing**
- **Improved Efficacy**

## Workflow with CellFiber® Technology

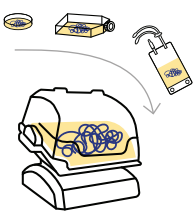
From PoC to Manufacture

**Cell Preparation**

**Encapsulation**




**Expansion Culture**

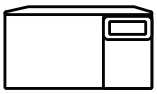


Cells within fiber = higher efficiency, uniform expansion

**Harvest**

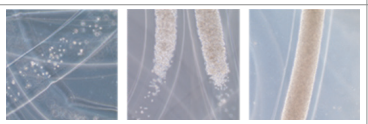
Non-enzymatic; easy and robust cell collection

**Formulation**



Safe, consistent quality and productivity

## Performance of Cell Expansion with CellFiber Technology

| | T Cells | iPSC | MSC |
|---|---|---|---|
| **Expansion Rate Increase**[1] | 620X | 54X | 50X |
| **Benefit Compared to Typical Platforms** | 15X reduction in required number of seeding cells[3] | 10X increase in Viable Cell Density[4] | 80% reduction in manufacturing cost/doses[5] |
| **Cell Growth Characteristics**[2] |  |  |  |

**Sources:**

[1] Measured using the NC-200 at the time of cell encapsulation and post-harvest. The culture scale was maintained at 1–2 L.
[2] Data is presented sequentially from the time of cell encapsulation to confluence.
[3] Comparison is made against typical suspension culture within a rocking-motion bioreactor.
[4] Based on a batch scale of $10^{10}$ cells.
[5] CellFiber in-house calculation comparing performance against 10-layer multilayer flasks.

**CellFiber encapsulation provides a biologically favorable environment that encourages healthy expansion of cells across a diversity of cell types and applications.**


## CellFiber Improves Productivity Across the Cell Therapy Process

**1**

**Expansion Culture**

Ensure scalable productivity with robust cell quality

**2**

**Differentiation**

Streamline workflows to simplify complicated manipulations

**3**

**Transfection**

Replace limited or risky enhancers with reliable and versatile fibers

## Ready to scale confidently?

**Partner with CellFiber to accelerate, simplify, and reduce the cost of your cell manufacturing process.**

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