

FiberCell Systems
A BETTER WAY TO GROW CELLS

中空纖維生物反應器



3-D Cell Culture

The medium-sized cartridge offers 3,000 cm² of surface area, equivalent to 40 T-75 flasks, but can support up to 2x10⁹ cells



Monoclonal Antibody Production

In the HFBR, hybridomas can yield up to 100 mg of antibody every two days, for months of culture



Recombinant Protein Production

Typical protein harvests from FiberCell Systems' cartridges contain 100 µg/mL/day or higher. Daily harvests are 2 mg to 10 mg a day.



Exosome Production

Gram quantities of exosomes can be produced in HRBRs



Cell Co-Culture

The PVDF fiber allows various matrix proteins to be bound to its surface



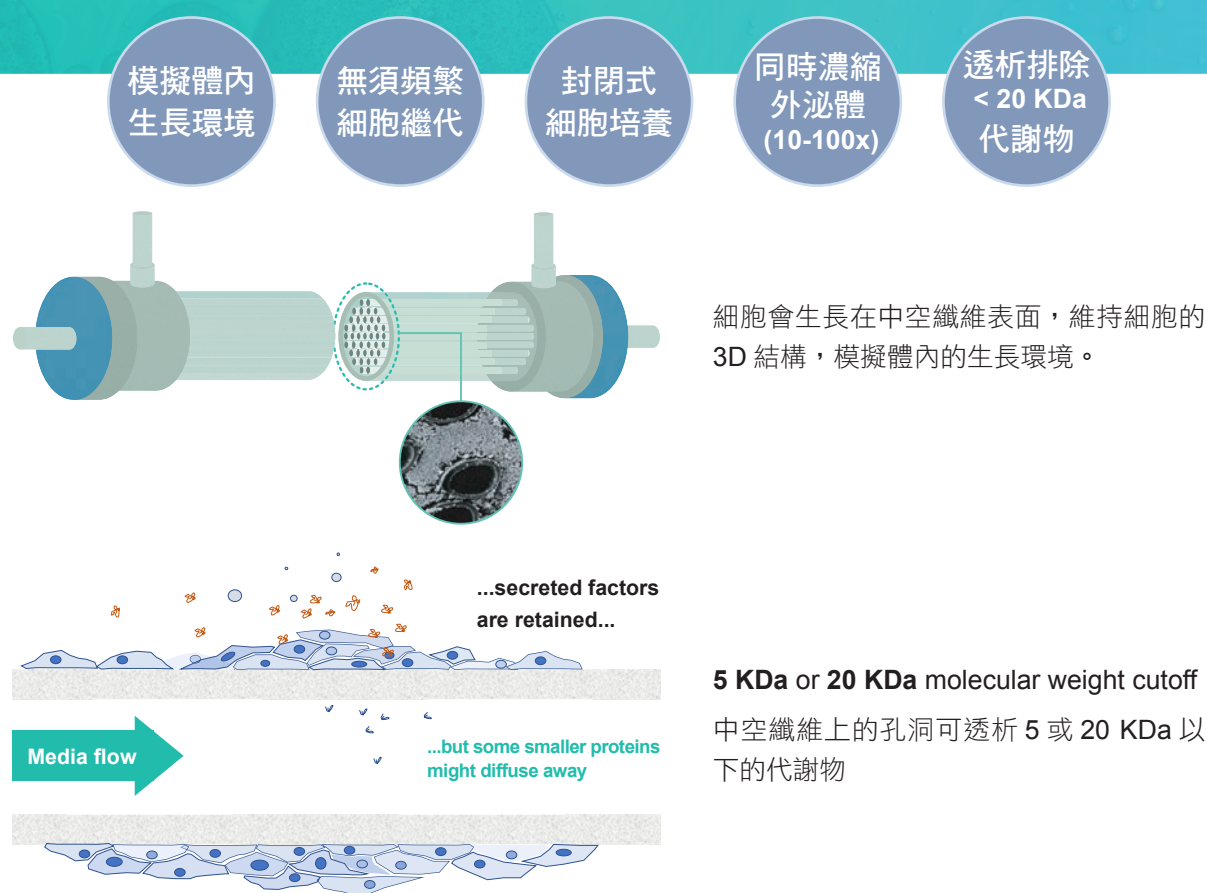
PK/PD

Mimic human bioavailability of antibiotics

中空纖維 生物反應器

利用 **Hollow fiber** 裝置達到大量培養細胞的需求，
可以節省空間，也大幅減少人力需求。

- 適用各種細胞 (貼附型或懸浮型)
- 可維持細胞的 **3D** 結構，模擬體內的生長環境，讓細胞長的更好
- 可大量細胞培養，也可以長時間培養至數月
- 有不同材質不同孔洞大小的 **hollow fiber** 可以選擇，達到去除代謝物及濃縮蛋白質產物 (**10-100x**)



Comparison of flask culture to a C2011 HFBR
for the production of exosomes from mesenchymal stem cells

	Collection Volume (mL)	Total Exosome Protein (mg)	Total Exosome Particles (10 ¹⁰)
HFBR			
Cartridge #1 (7 weeks, collection every week)	240	11.82	95.78
Cartridge #2 (4 weeks , 6 collections)	120	14.45	326.9
Flasks			
130 T225	4000	0.9	1.6