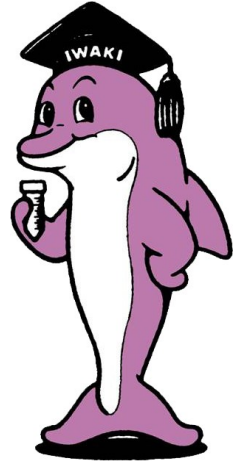
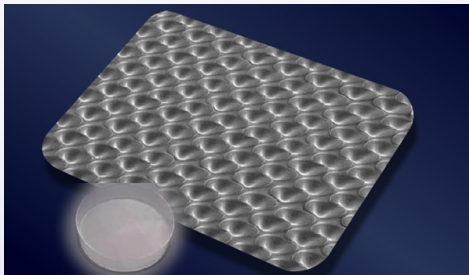


SPHEROID的進擊!



由日本IWAKI原廠研發，3D 細胞培養的新利器 EZSPHERE™，讓您培養出上千上萬個大小均勻的球狀細胞體(Spheroid)。尤其針對幹細胞、癌細胞及再生醫學的研究，培養出的Spheroid在保持 stemness、生長速度、分泌的生長激素...等等，都比傳統細胞為佳⁽¹⁾。醫學上，移植的Spheroid有非常好的存活率與再生性⁽²⁾。藥物測試中，Spheroids在細胞之間的 interactions 及藥物反應上，更有生理上的參考價值⁽³⁾。IWAKI EZSPHERE™ 快速而方便的大量Spheroids培養，讓您的細胞培養實驗走在科技的最尖端!

EZSPHERE™

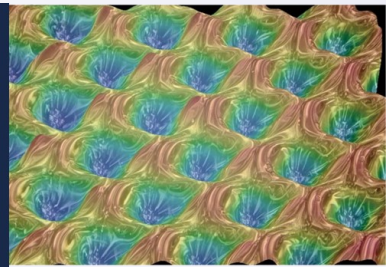
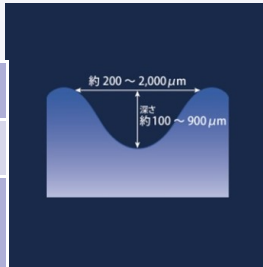


多種孔洞
大小可供
選擇

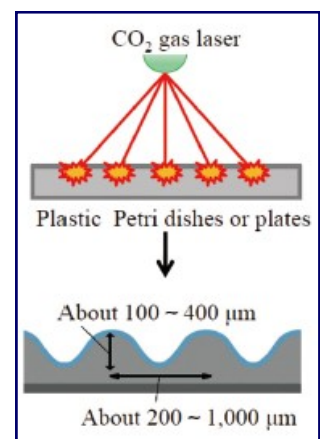
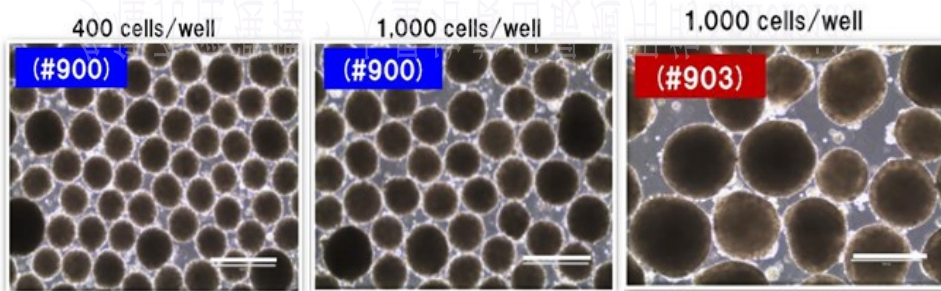
Well diameter	500 – 800 μm
Well depth	100 – 400 μm
Well number (Φ 35-mm dish)	2,300—1,000 wells

Culture vessel for spheroid formation

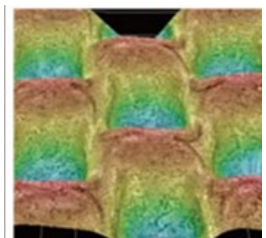
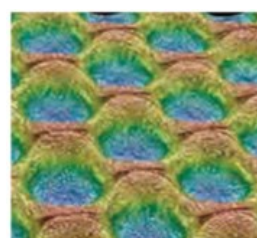
* 由 CO₂ 雷射打出的光滑均勻曲面，加上獨家的反貼附塗層，讓細胞在 wells 底部自然聚集成為 spheroids。高透度的薄透底層，最適合用於 phase contrast 顯微鏡的觀察。



多種孔徑選擇，大量培養出最適用的Spheroids



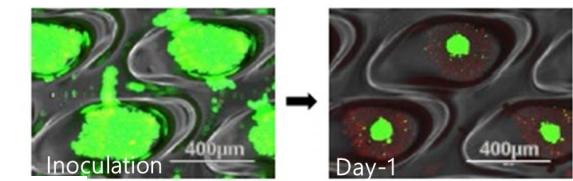
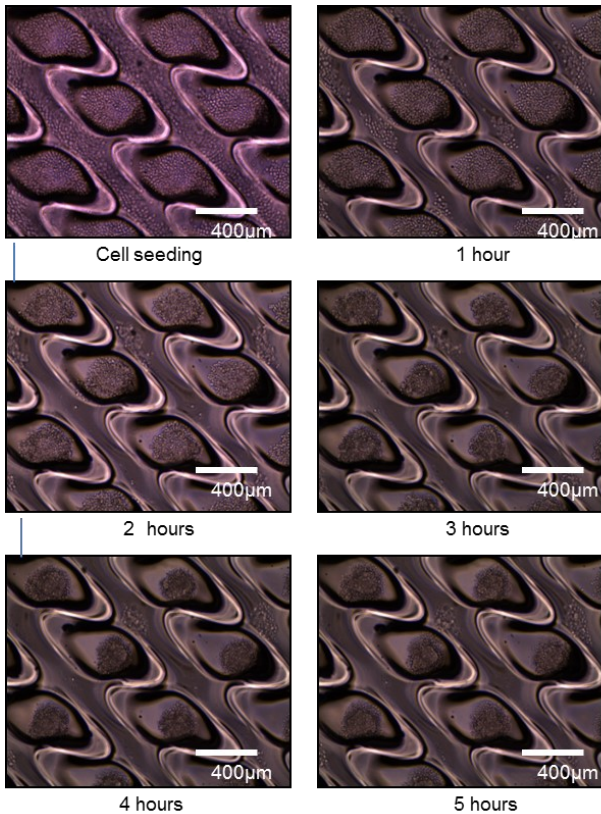
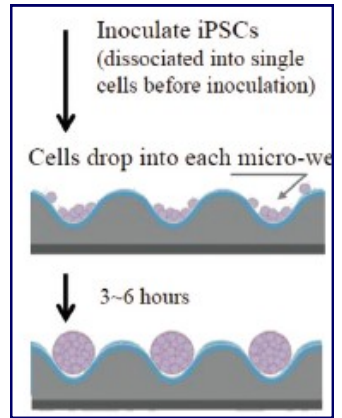
Spheroid 大小可由 EZSPHERE 的孔徑及一開始 seeding 細胞的密度來控制。Variety Pack (35mm) 可讓第一次使用者測試最適合實驗目的的 Spheroid 大小。應用上可直接培養做實驗、或換上 Differentiating Medium 做分化的動作。



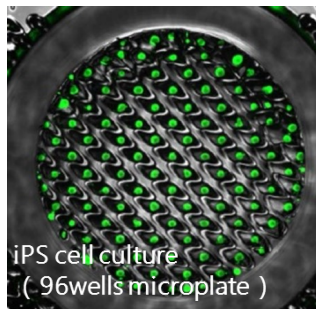
#900—徑 500 深 100 μm #903—徑 800 深 400 μm

Spheroid 的形成

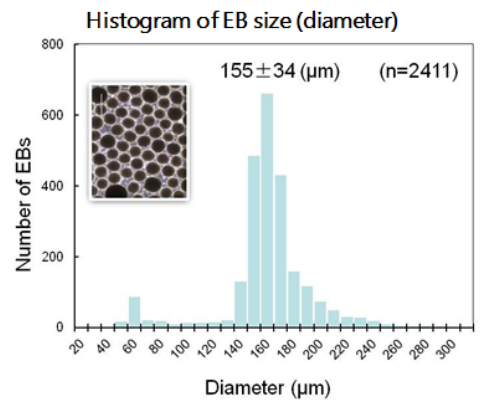
EZSPHERE™ 表面 coating 了一層反貼覆性的創新 AGC polymer，在 seeding 後的幾小時內 (左圖)，便可在顯微鏡下看到細胞集聚於 wells 的底部。Seeding 後 1 天以 Calcein AM 染色 (左下)，可見到活細胞 (綠色) 都已自動聚集於 Spheroid 中。下圖為 iPS 細胞在 96-welled EZSPHERE™ 中形成的 Embryoid Bodies (EBs)，及測量 2411 顆後得到的 size 大小分布圖。



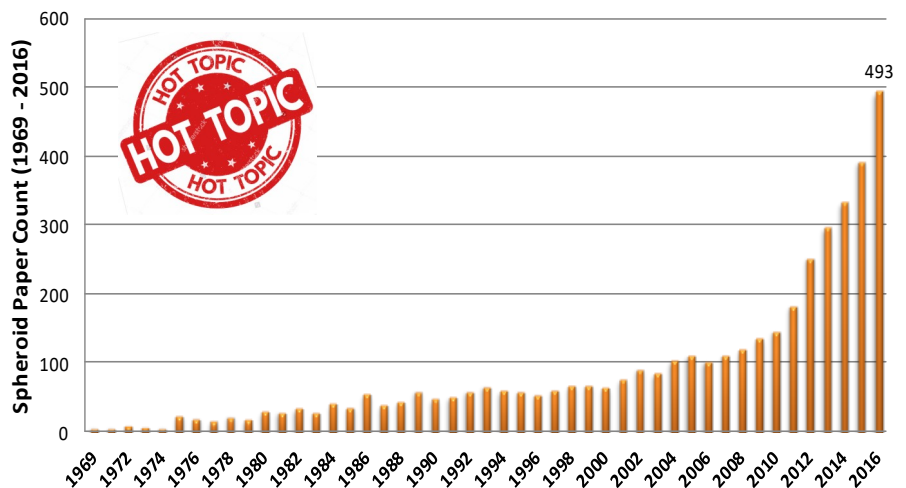
Side View



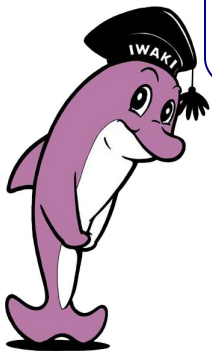
iPS cell culture (96wells microplate)



Spheroid Papers (PubMed)



使用 Spheroids 來做實驗的 papers 近年來激增!



Reference:

- (1) Three-dimensional spheroid culture promotes the stemness maintenance of cranial stem cells by activating PI3K/AKT and suppressing NF-κ B pathways. He D *et. al*, BBRC, 2017.
- (2) Human mesenchymal stem cell spheroids in fibrin hydrogels exhibit improved cell survival and potential for bone healing. Murphy KC *et. al*, Cell Tissue Res. 2014.
- (3) Ovarian cancer spheroid shrinkage following continuous exposure to cisplatin is a function of spheroid diameter. Tanenbaum LM *et. al*, Gynecol Oncol. 2017