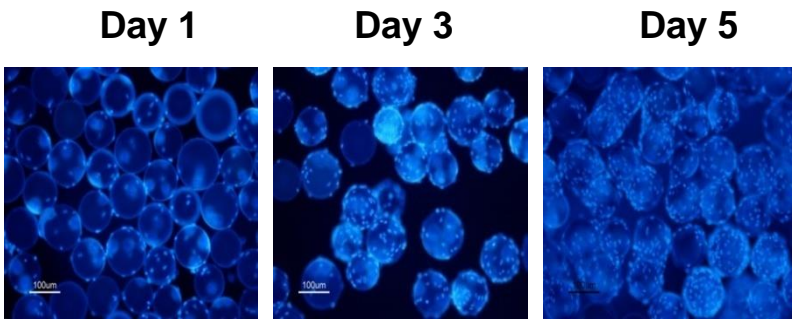
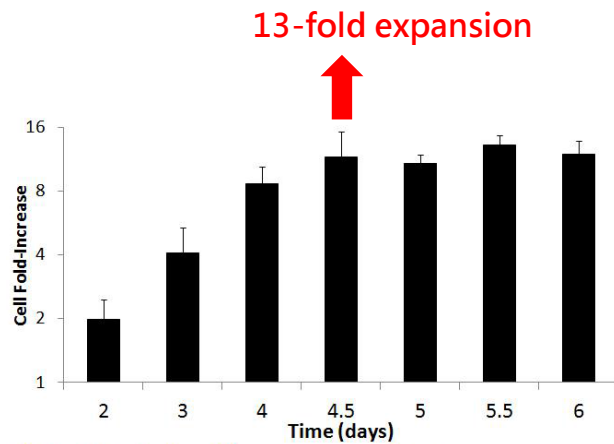
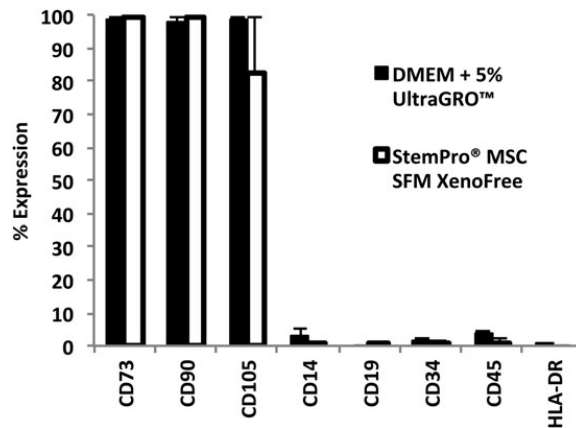


Table 1. Population doublings of umbilical cord matrix-derived mesenchymal stem/stromal cells ex vivo expanded under static conditions

Cell passage	DMEM + 5% UltraGRO <sup>™</sup>		StemPro <sup>®</sup> MSC SFM XenoFree	
	Population doublings	Passage duration (days)	Population doublings	Passage duration (days)
P2	5.2 ± 0.45	4.0 ± 0.010	4.4 ± 0.53	5.7 ± 0.33
P3	5.1 ± 0.28	4.3 ± 0.33	3.8 ± 0.12	5.3 ± 0.67
P4	4.6 ± 0.11	4.3 ± 0.33	4.1 ± 0.83	5.3 ± 0.33
P5	4.3 ± 0.45	4.3 ± 0.33	3.6 ± 0.18	5.0 ± 0.58



DAPI staining

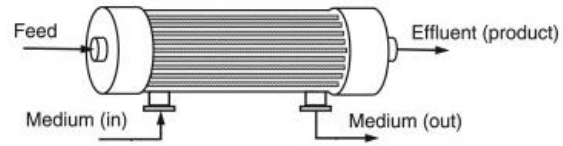
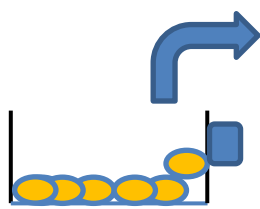


- ❖ Cell adhesion reagent is not required with UltraGRO<sup>™</sup>
- ❖ Obtaining meaningful MSC numbers for clinical transplantation; more UC MSC faster with UltraGRO<sup>™</sup> vs. serum-free medium

[J Tissue Eng Regen Med. 11\(5\):1630-1640 \(2017\)](#)



### AT MSC

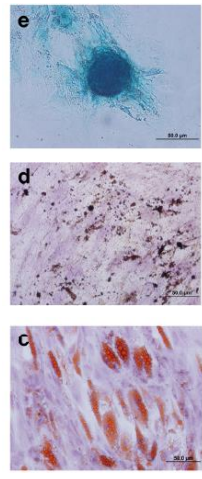


**Quantum  
Hollow  
Fiber**

### 5% UltraGRO™-PURE

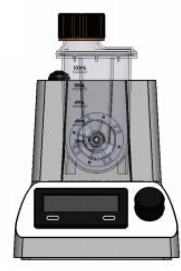
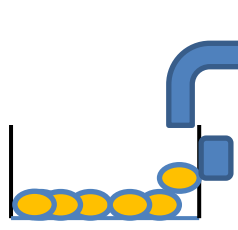
**Table 1** Summary of culture parameters and results of relevant studies present in the literature for the cultivation of human MSC in the Quantum system (Terumo BCT)

	Our Study	Lenchantuer et al. 2014 [4]	Haack-Sorensen et al. 2016 [5]	Lambrechts et al. 2016 [6]
Mathematics Subject Classification source	Adipose tissue	Bone marrow	Adipose tissue	Periosteum
Culture medium	DMEM + 5% hPL	DMEM + 10% FBS	αMEM + 10% FBS	DMEM + 10% FBS
Cells inoculated (x106 cells)	21	21	21	20
Total cell harvested (x106 cells)	240(±0.42)	208	99(± 12)	371
Fold increase	11(±2.0)	9.9	4.7	16
Population doublings	3.4(±0.61)	3.4	2.2±0.19	4.0
Culture duration (days)	5.0	7.0	17±6.0	8.1±0.14
Cell productivity (x106cells/day)	48	29	5.8	45



[Stem Cell Rev. 14\(1\):141-143. \(2018\)](https://doi.org/10.1002/stem.141)

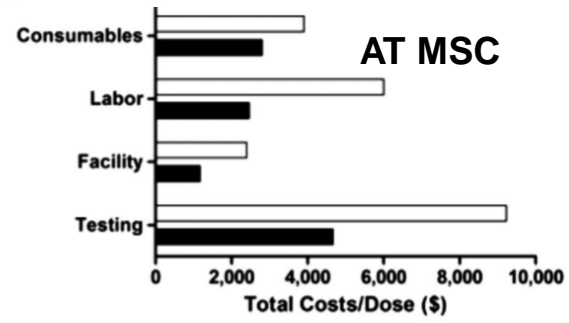
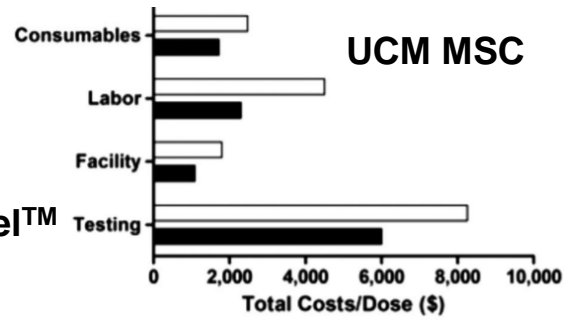
### AT/UCM MSC



**PBS  
Vertical  
Wheel**

### 5% UltraGR™-PURE

**T-Flask**  
**Vertical-Wheel™**



Biotechnology J. 2019 <https://doi.org/10.1002/biot.201800716>

