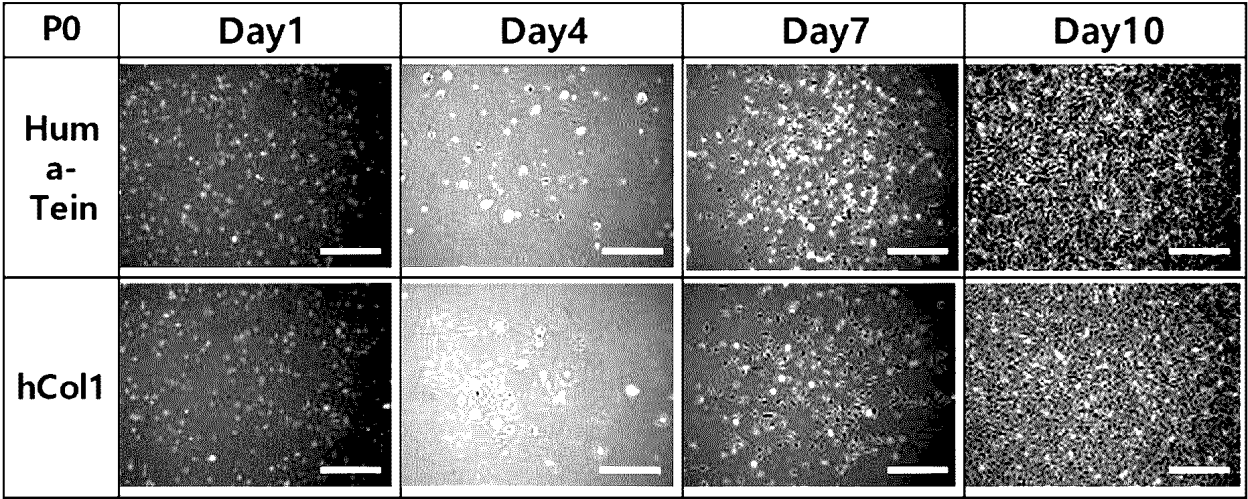


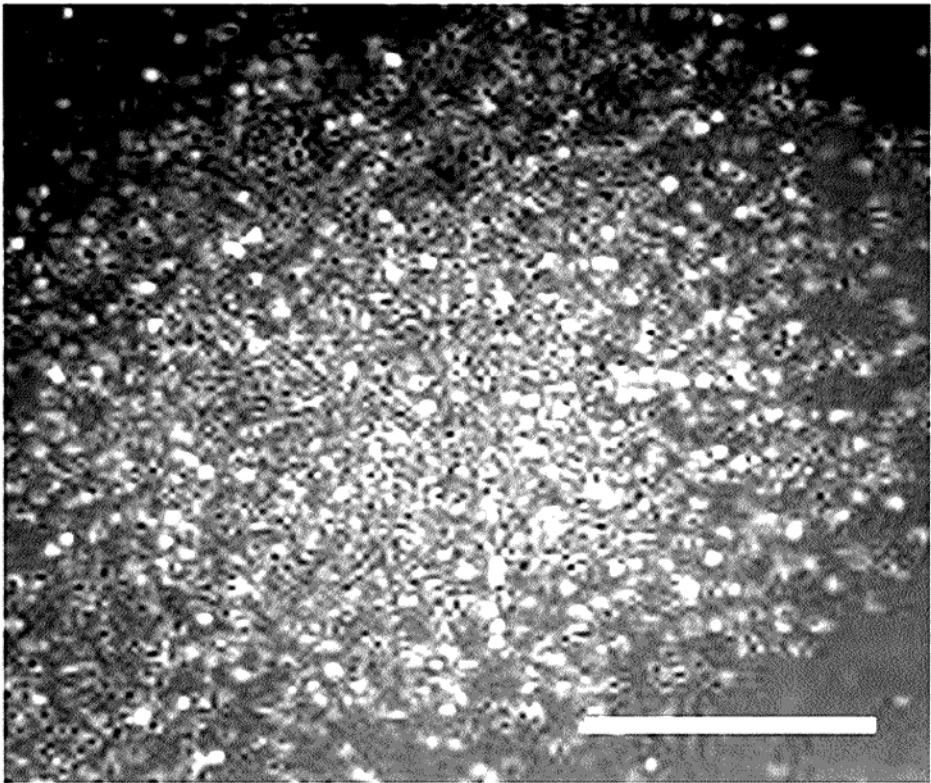
【Drawings】

【Fig. 1a】



【Fig. 1b】

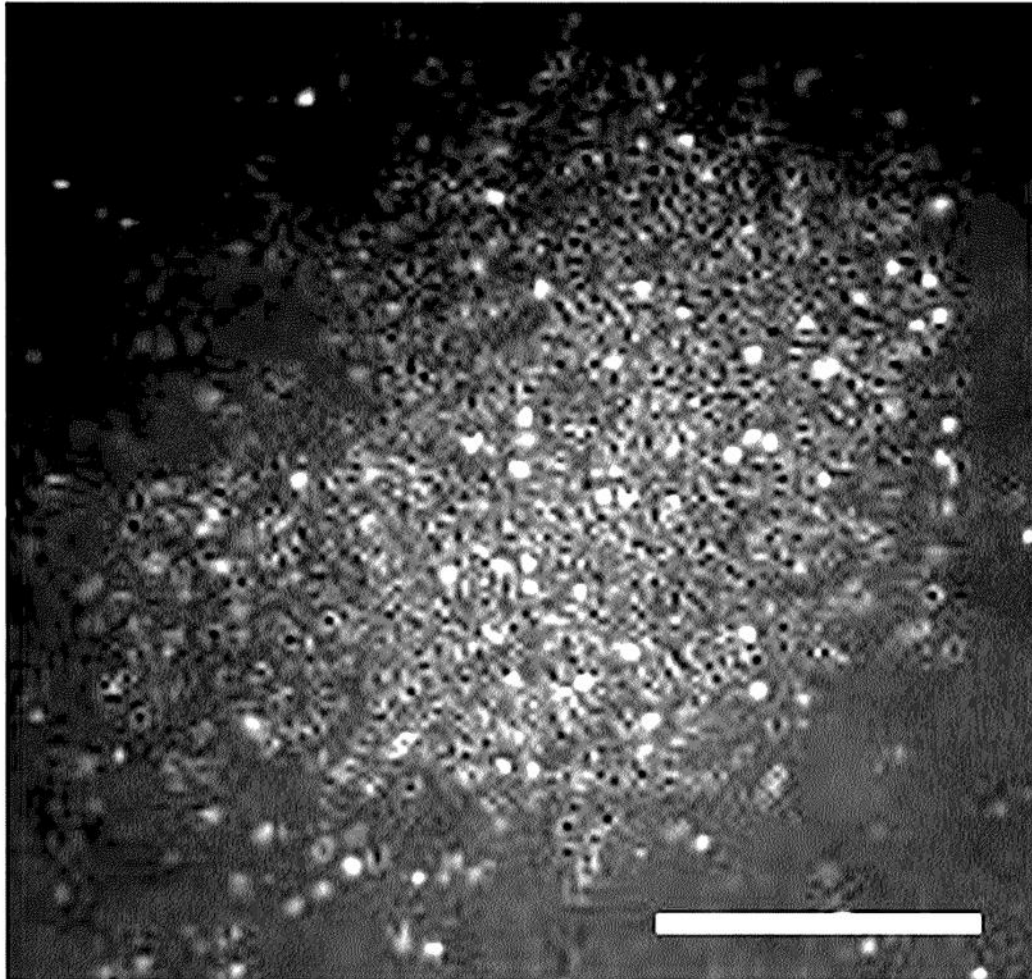
Human fibronectin



Scale bar=500μm

【Fig. 1c】

Rat tail-derived type 1 collagen



5

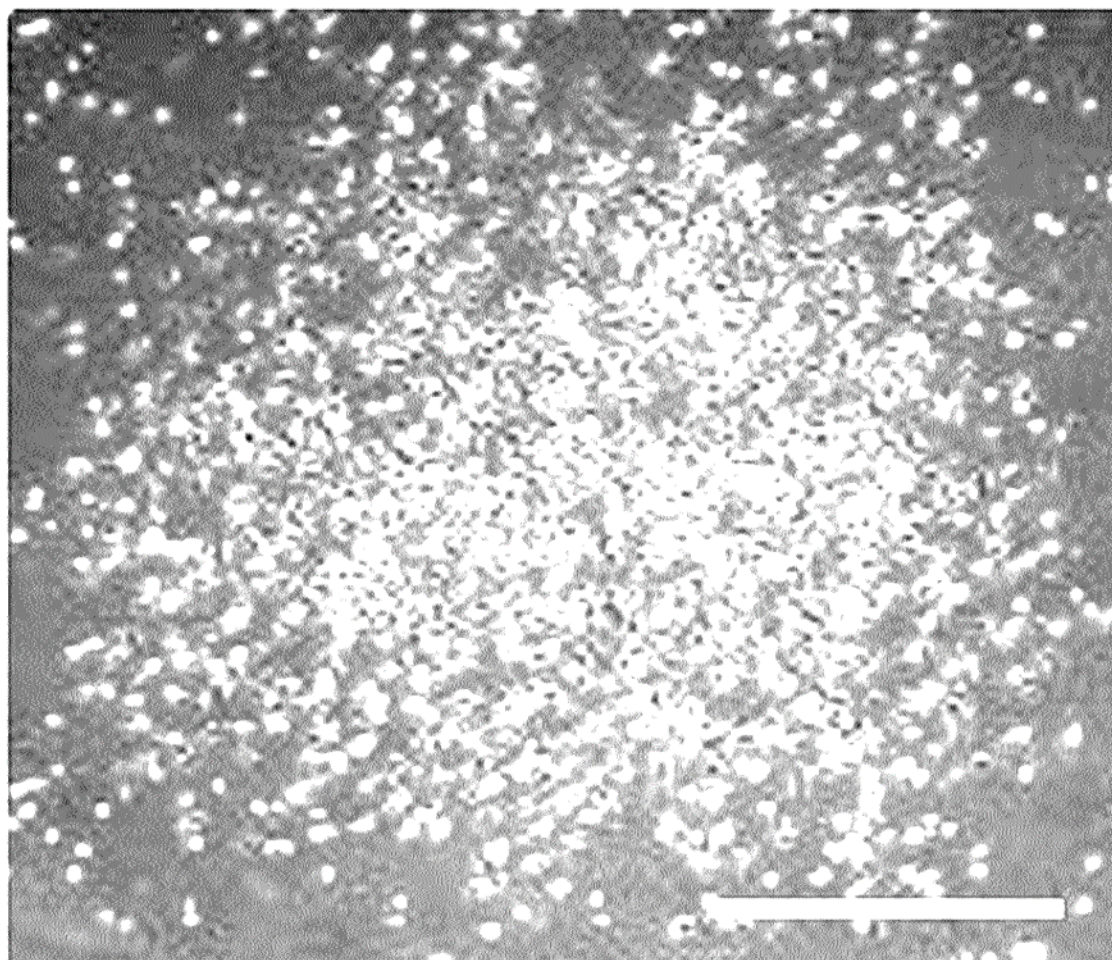
10

15

20

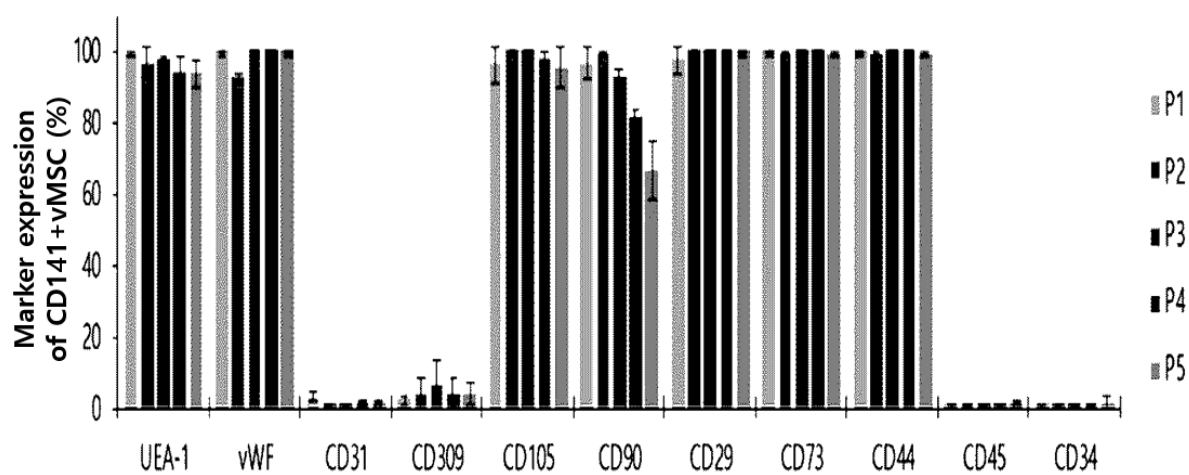
【Fig. 1d】

ECM Mimetic collagen I peptide

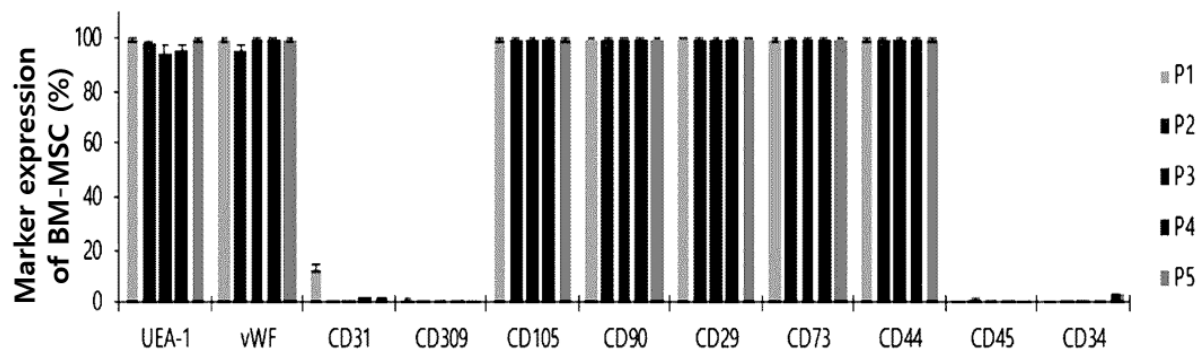


Scale bar=500μm

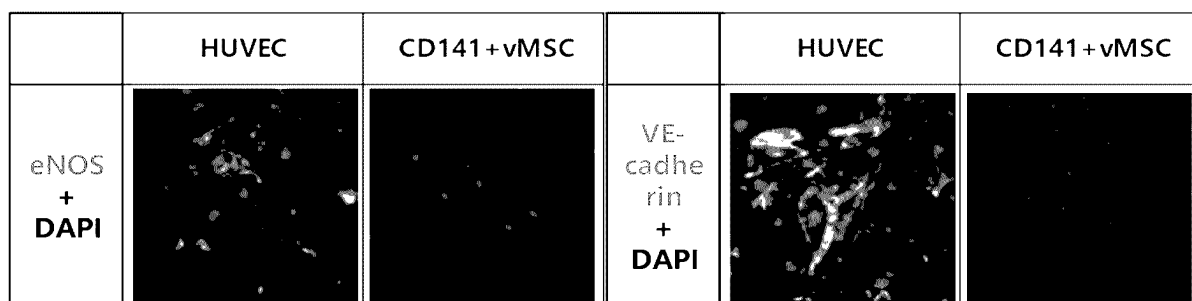
【Fig. 2a】



【Fig. 2b】



【Fig. 2c】



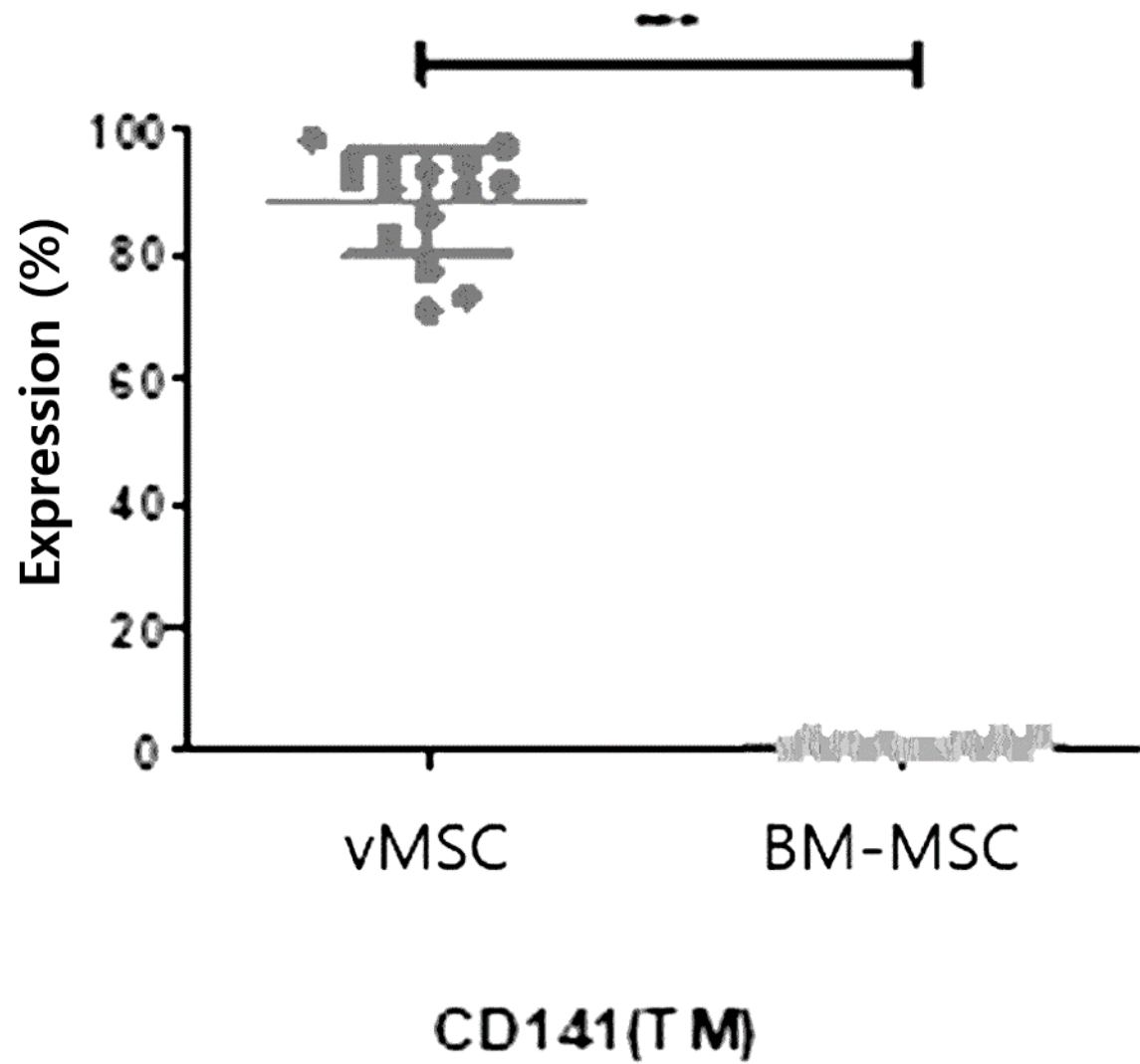
【Fig. 3a】

Antibody	CD141+vMSC	BM-MSc
CD66c	10.64%	92.30%
CD102	89.25%	30.14%
CD141	89.67%	13.25%
CD172g	33.37%	95.91%
CD253	94.68%	20.20%
CD282	90.43%	10.98%
CD302	79.01%	5.47%
CD303	75.76%	1.01%
CD310	80.29%	7.37%
CD317	87.91%	14.36%
CD319	75.61%	5.16%

Antibody	CD141+vMSC	BM-MSc
DCIR	74.54%	4.43%
fMLP-receptor	81.31%	6.27%
FPRL1_FPR2	55.10%	0.24%
HLA E	89.27%	4.15%
Integrin b6	77.62%	2.08%
LT bR	99.88%	31.85%
MDL-1	81.83%	3.42%
Notch2	57.95%	0.43%
OSCAR	92.94%	5.47%
PEAR1	93.89%	9.67%

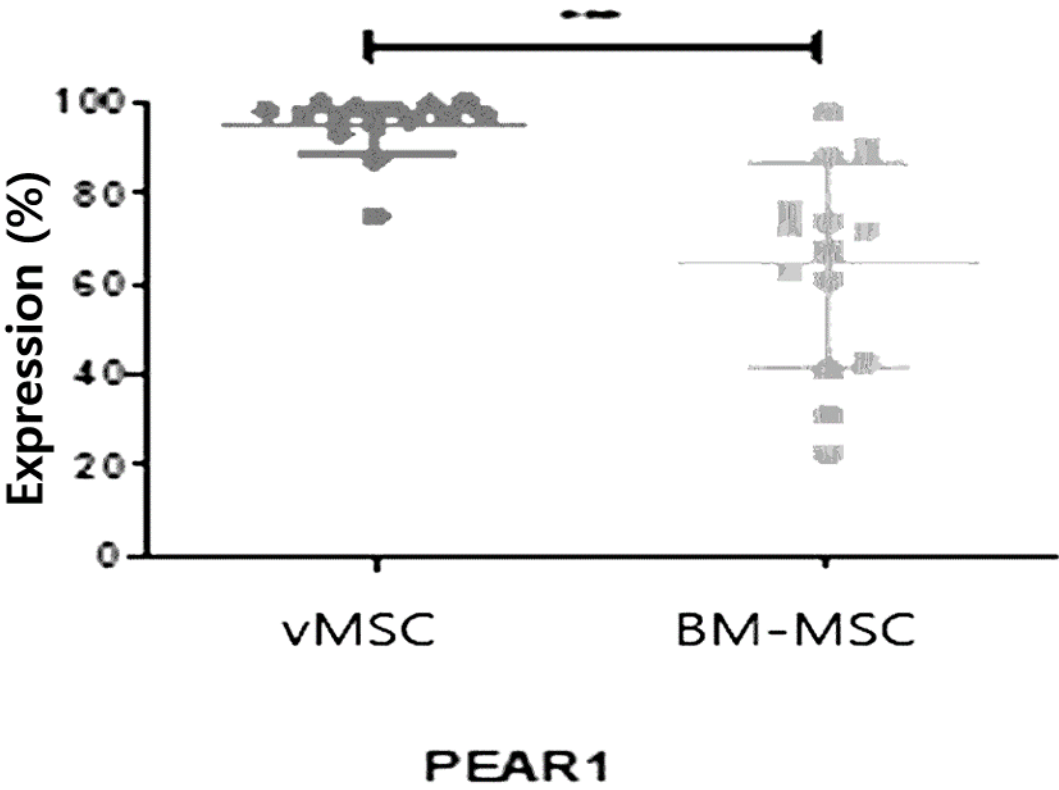
90%<
80%<
70%<
60%<
50%<
40%<
30%<
20%<
10%<
10%>=

【Fig. 3b】

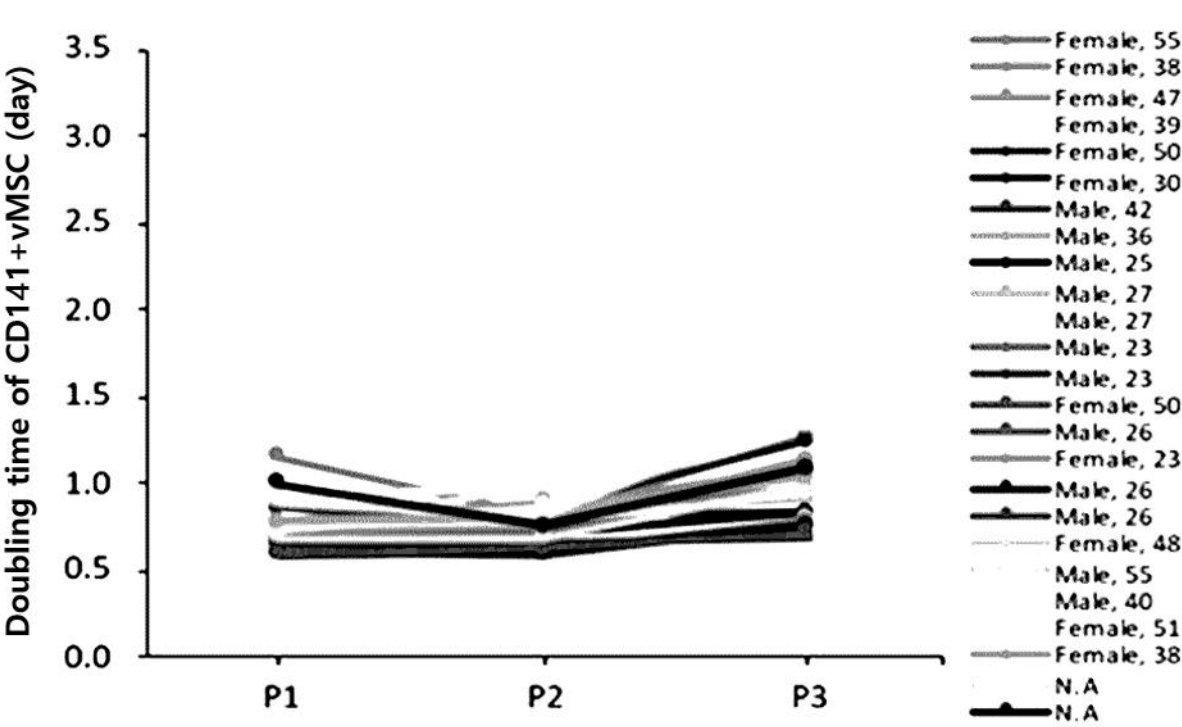


[illegible]

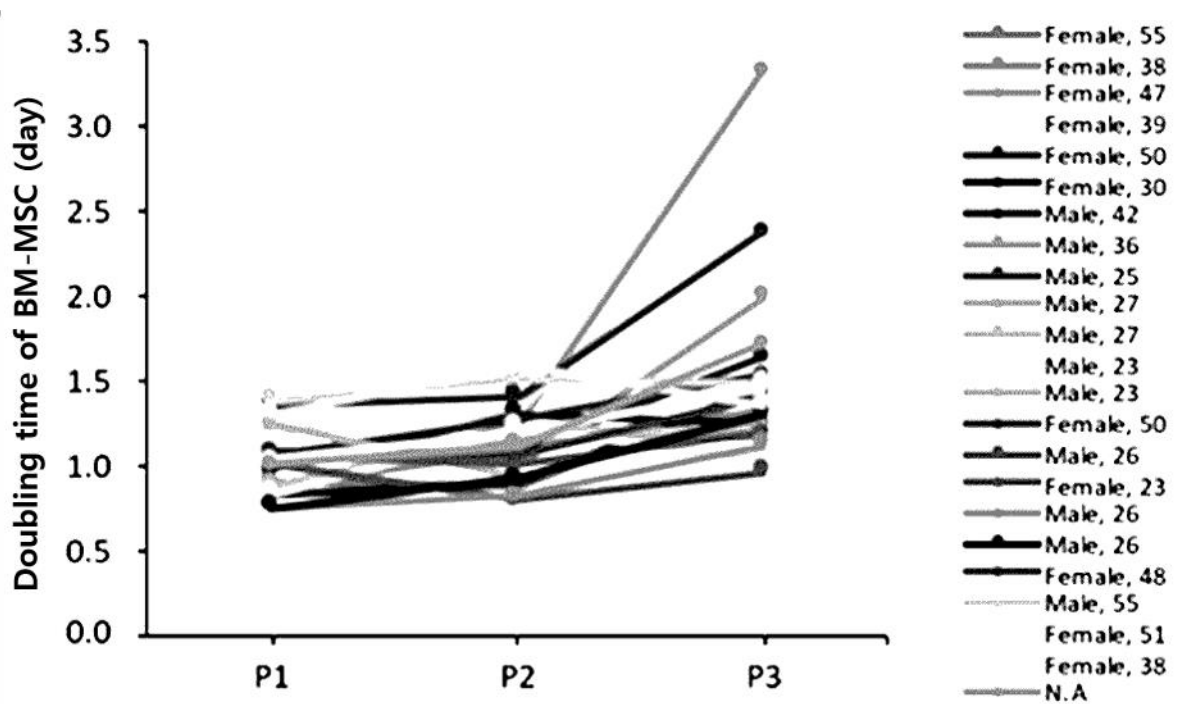
【Fig. 3d】



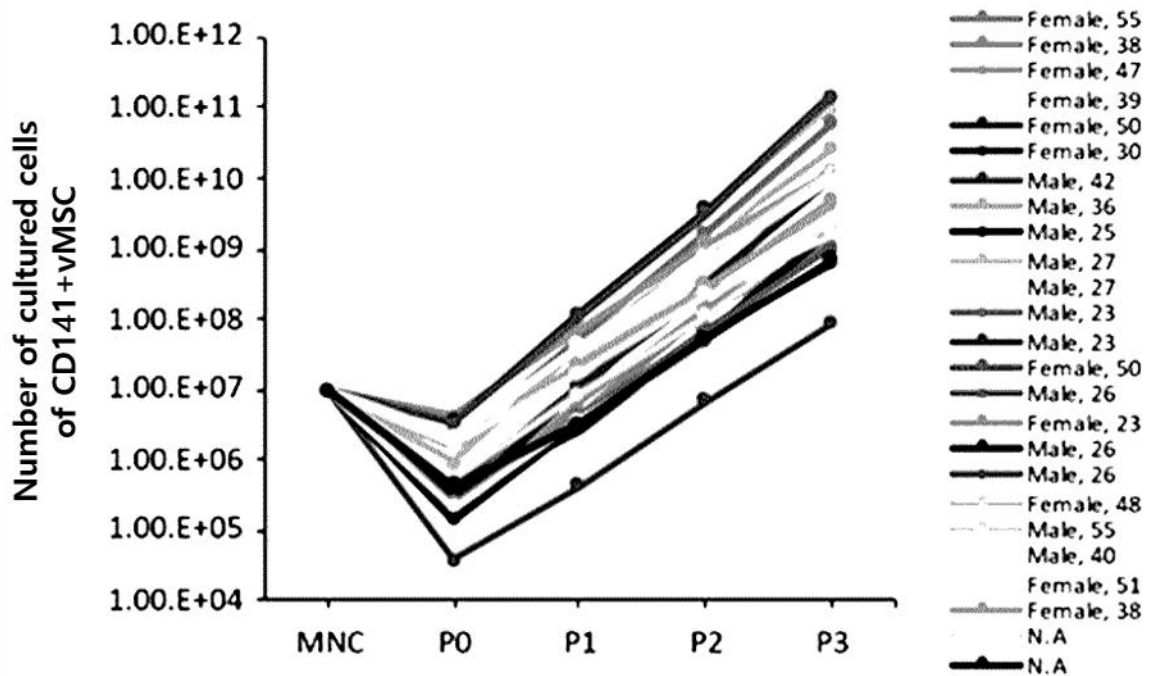
【Fig. 4a】



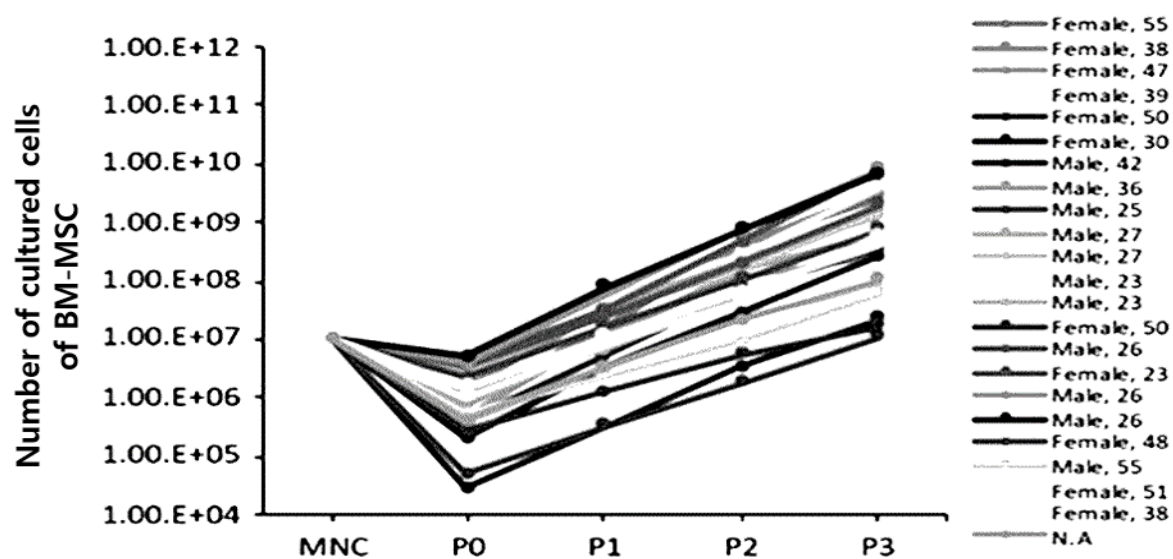
【Fig. 4b】



【Fig. 4c】



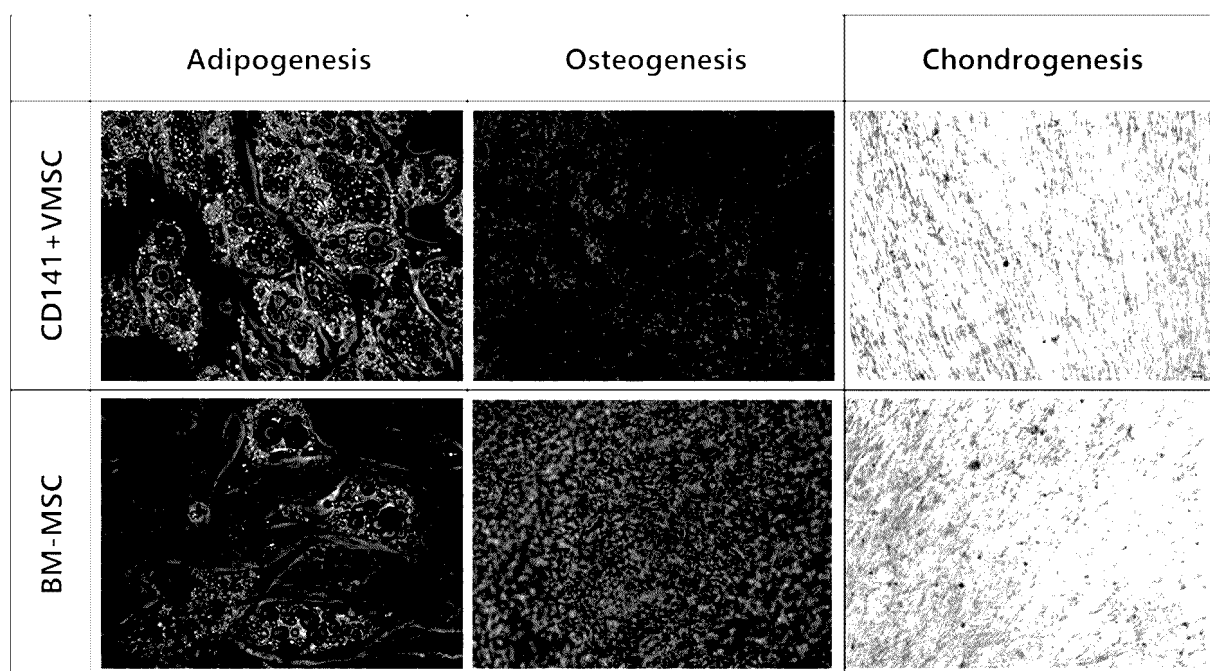
【Fig. 4d】



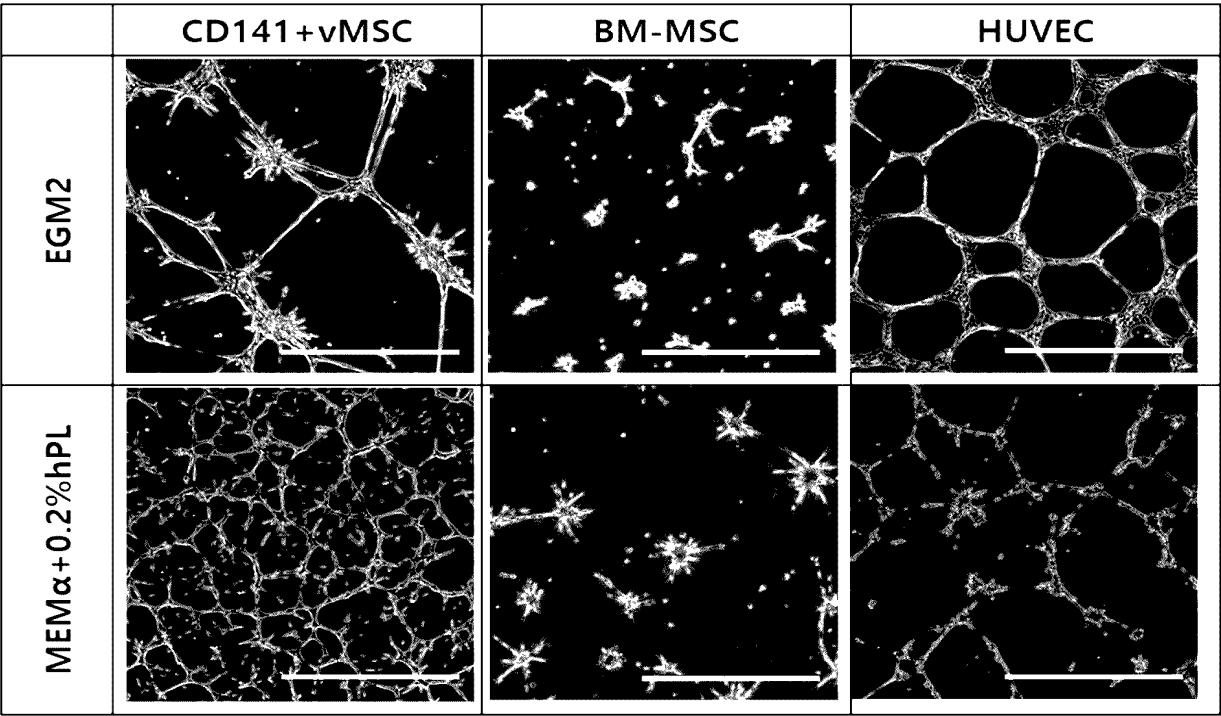
【Fig. 4e】

		P0	P1	P2	P3
Average cumulative culture period (day)	CD141+VMSC				
	BM-MSC	10	13	17	21
Average cumulative cell number	CD141+VMSC	1.33.E+06	3.63.E+07	9.30.E+08	2.99.E+10
	BM-MSC	1.63.E+06	1.93.E+07	1.86.E+08	1.80.E+09
Average PDT (hour)	CD141+VMSC		17.8	18.3	24.4
	BM-MSC		24.6	27.4	37.4

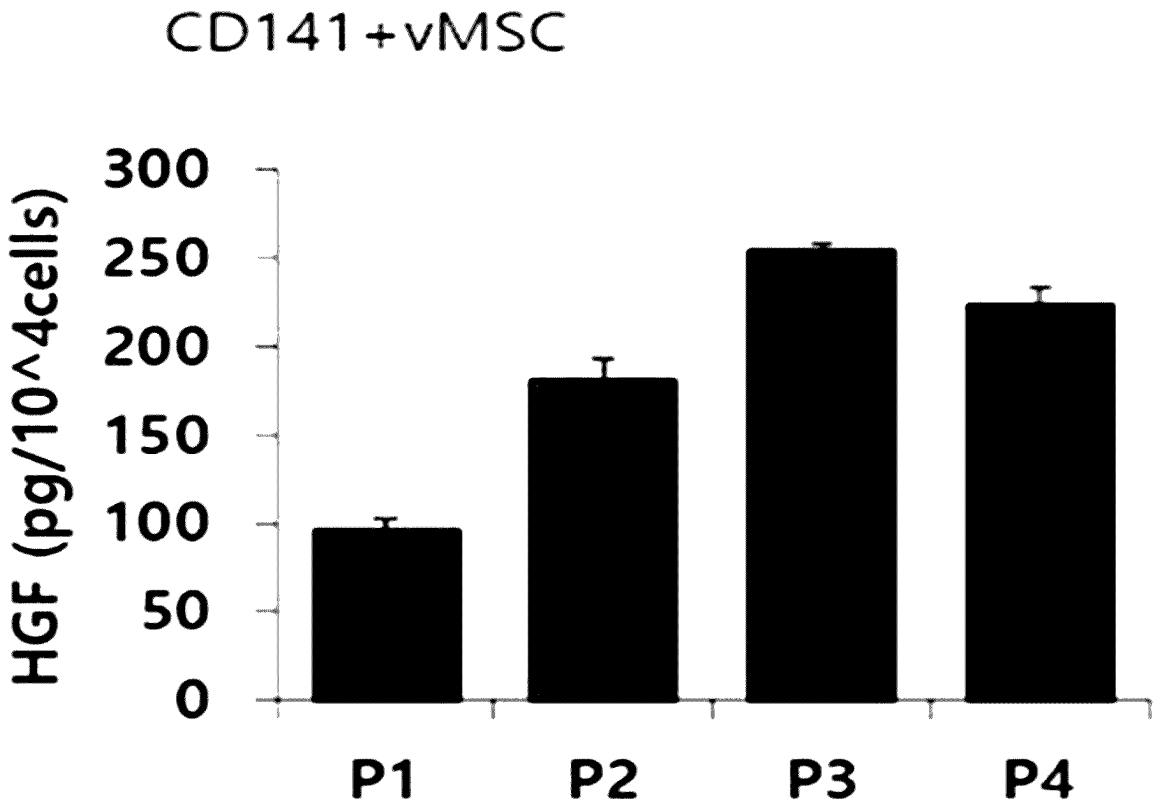
【Fig. 5】



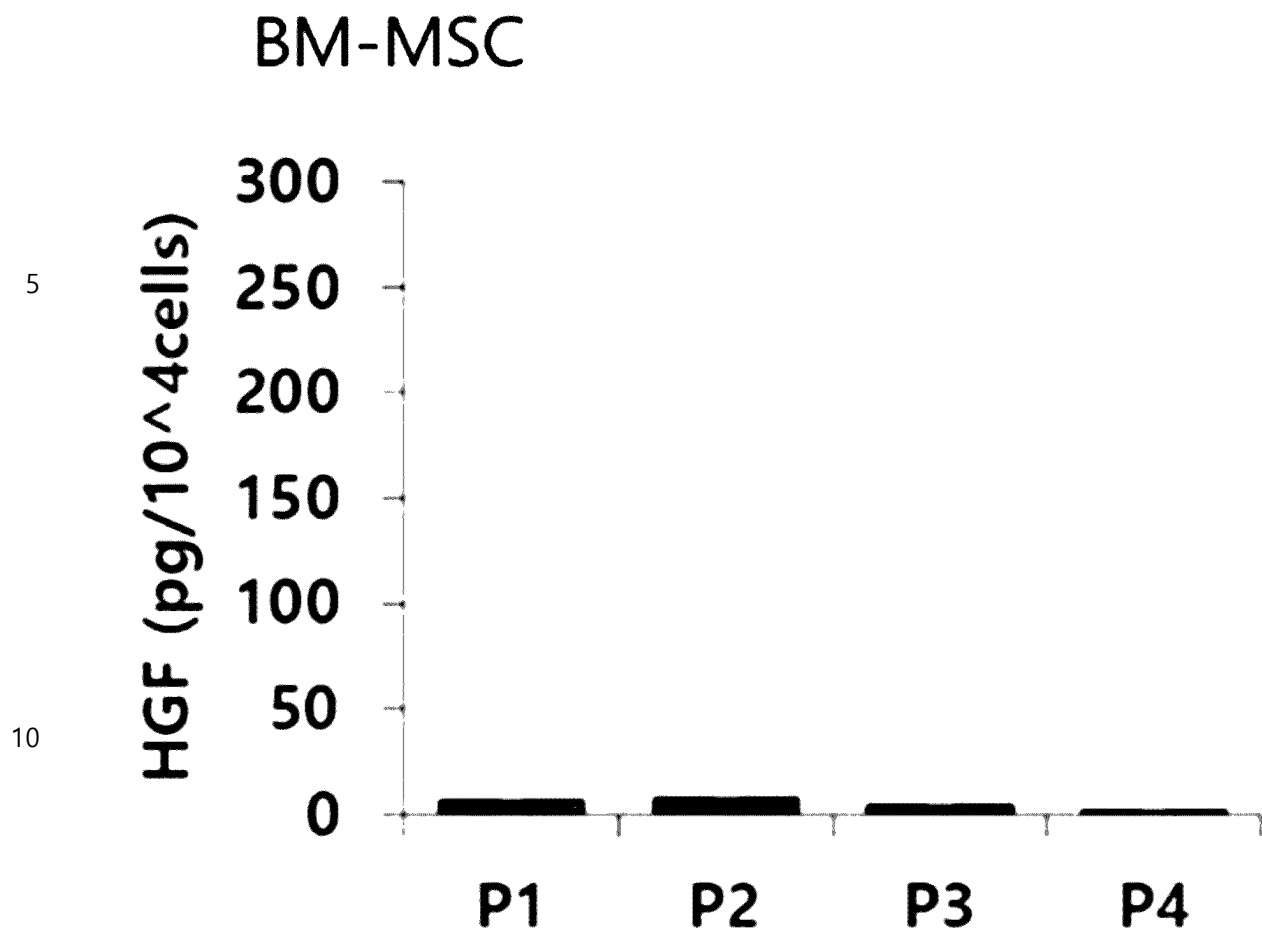
【Fig. 6】



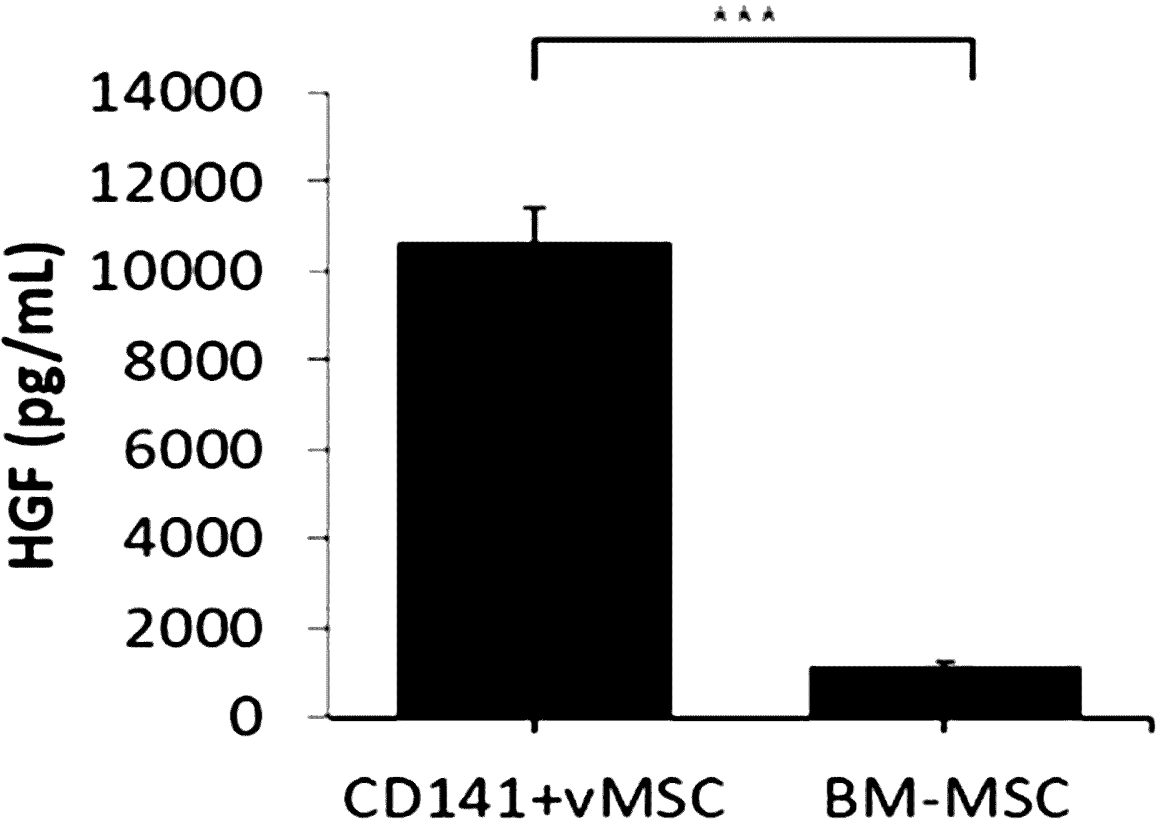
【Fig. 7a】



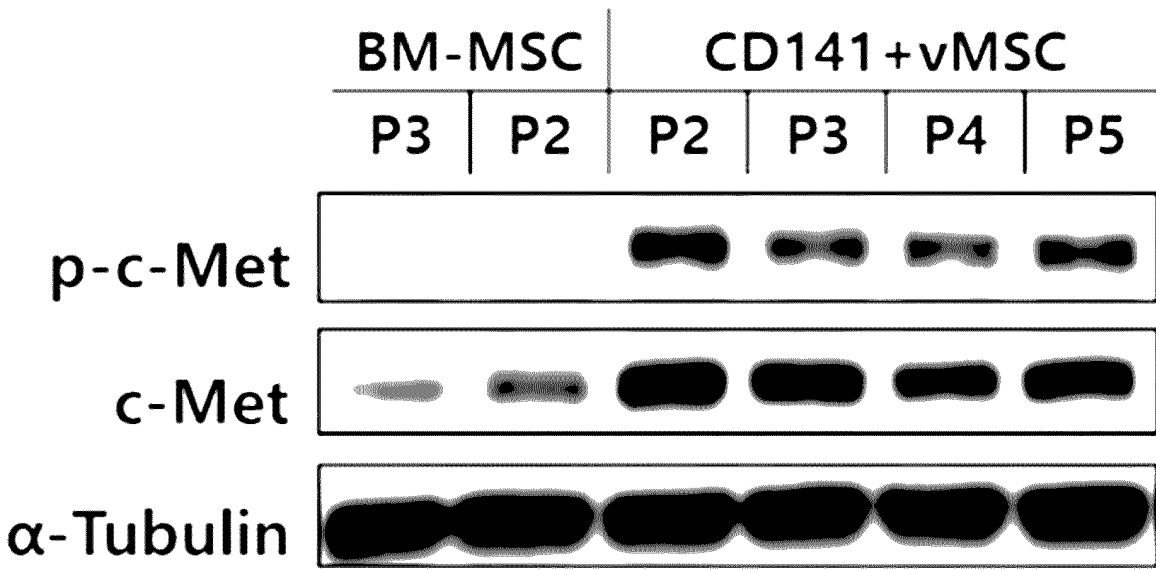
【Fig. 7b】



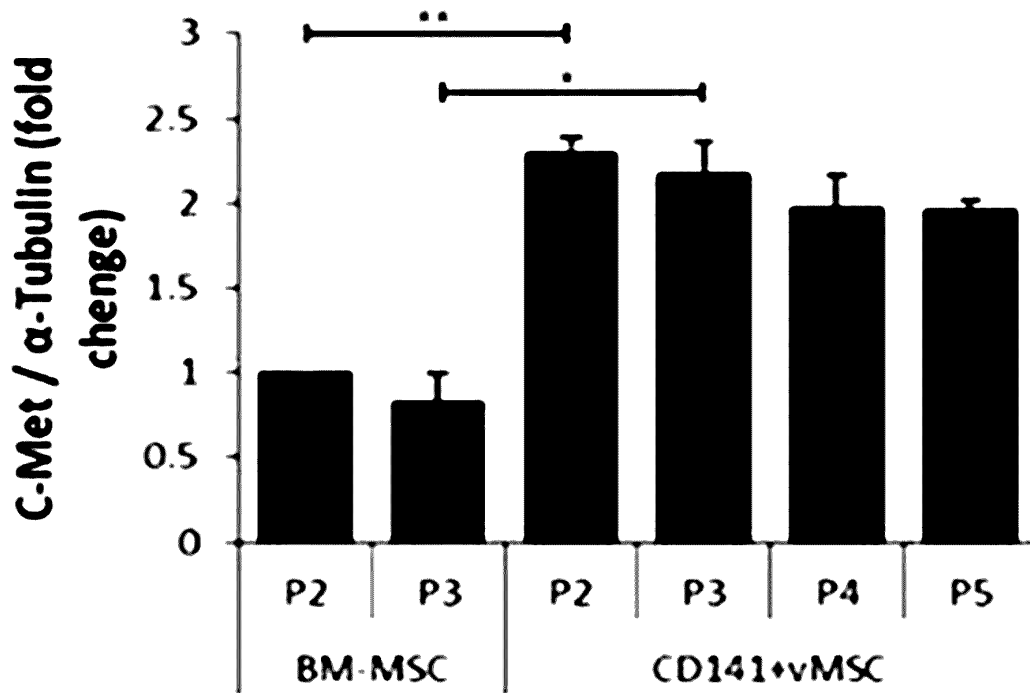
【Fig. 7c】



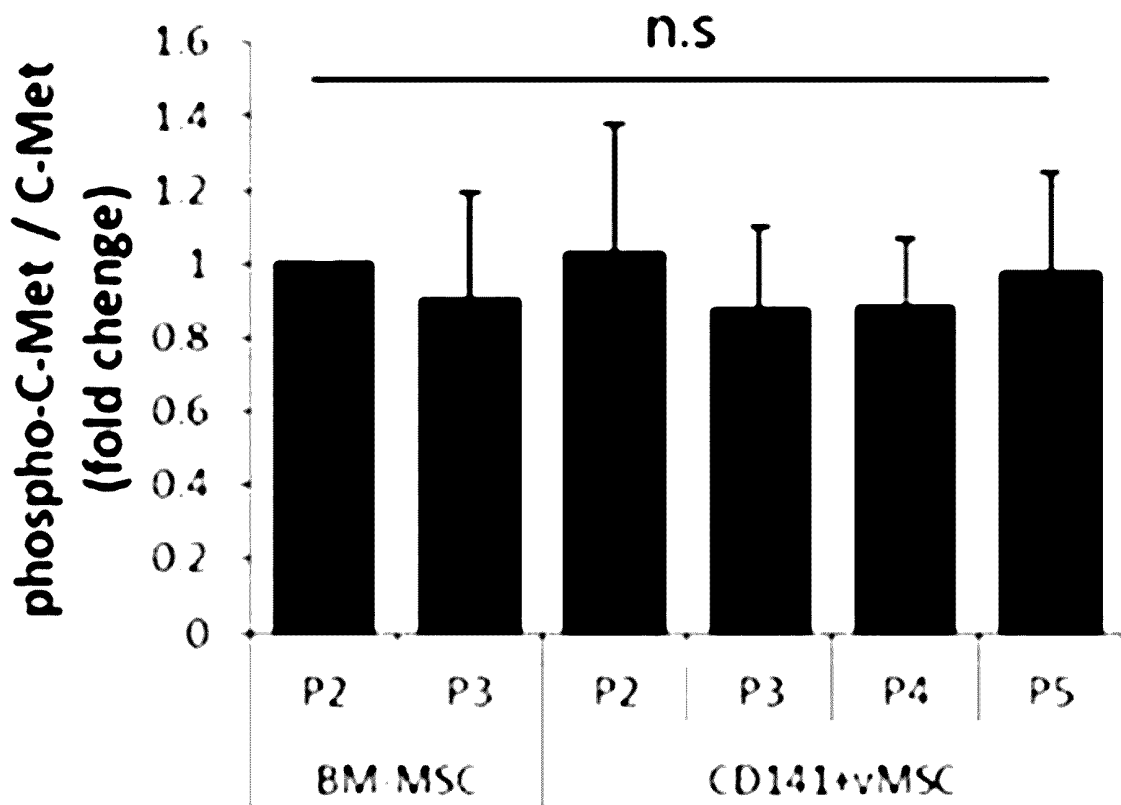
【Fig. 7d】



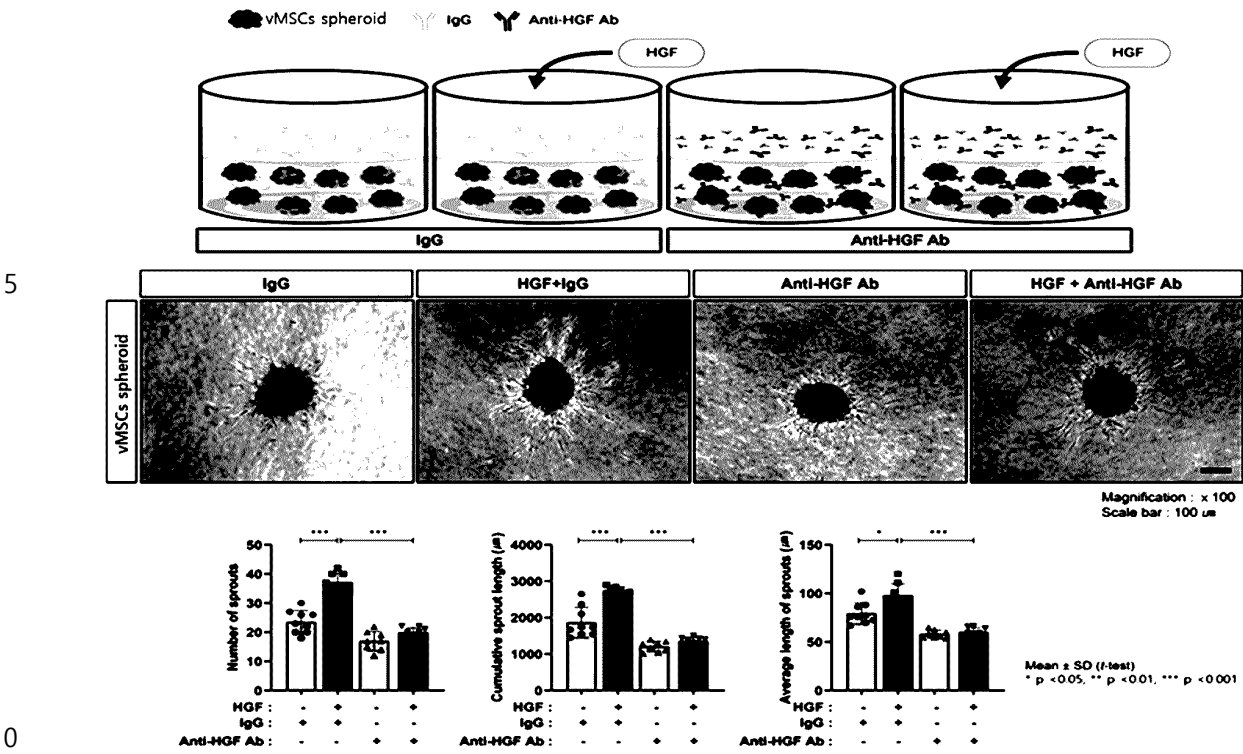
【Fig. 7e】



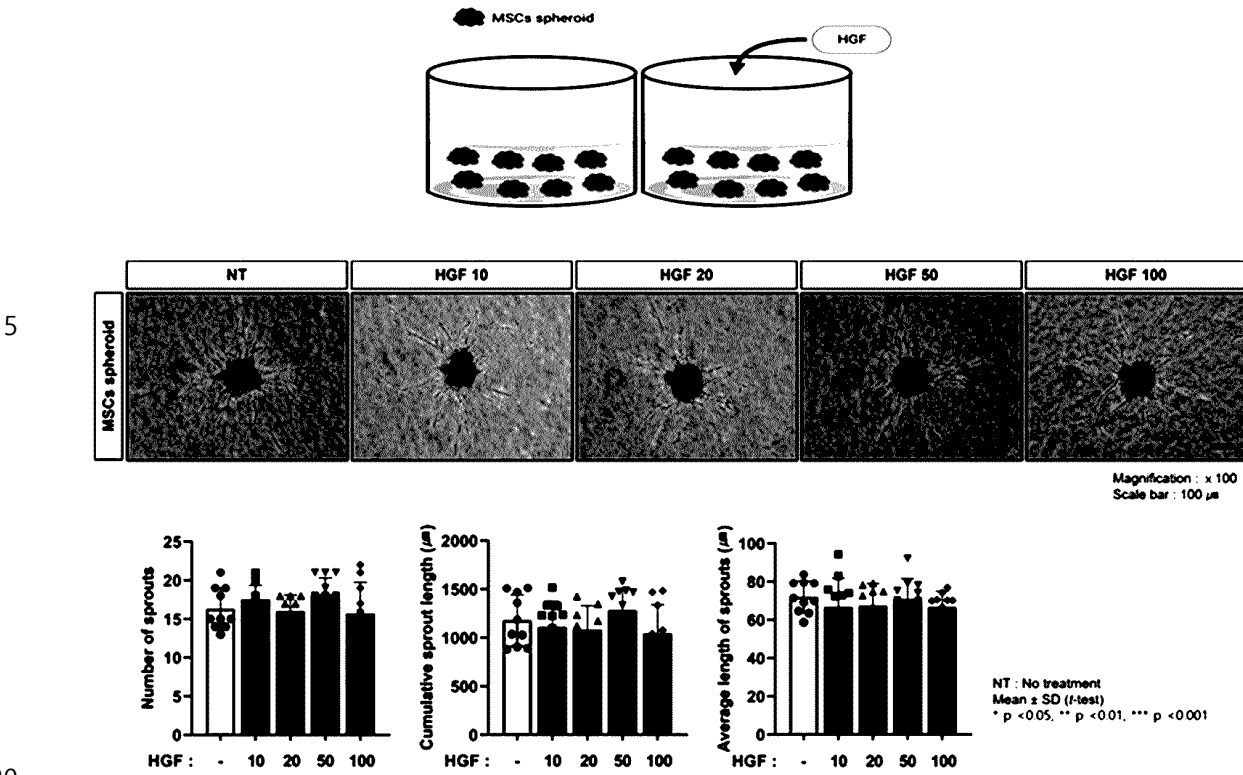
【Fig. 7f】



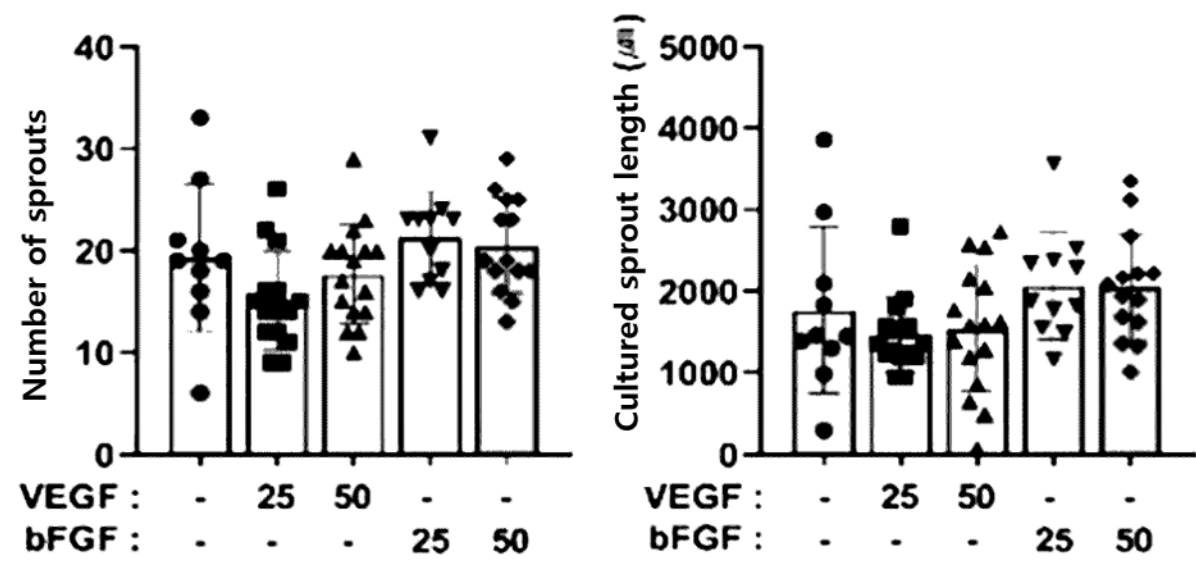
【Fig. 8a】



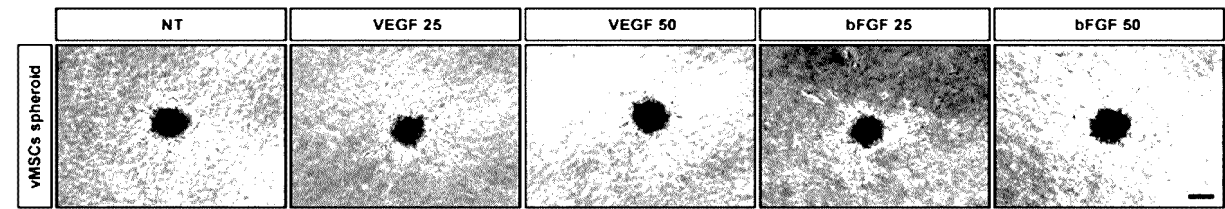
【Fig. 8b】



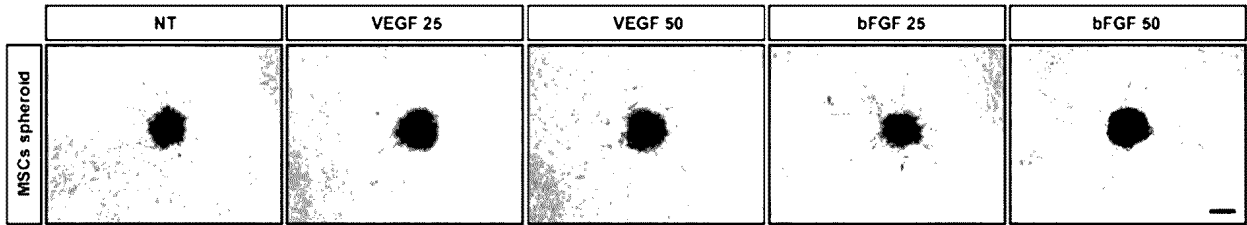
【Fig. 10b】



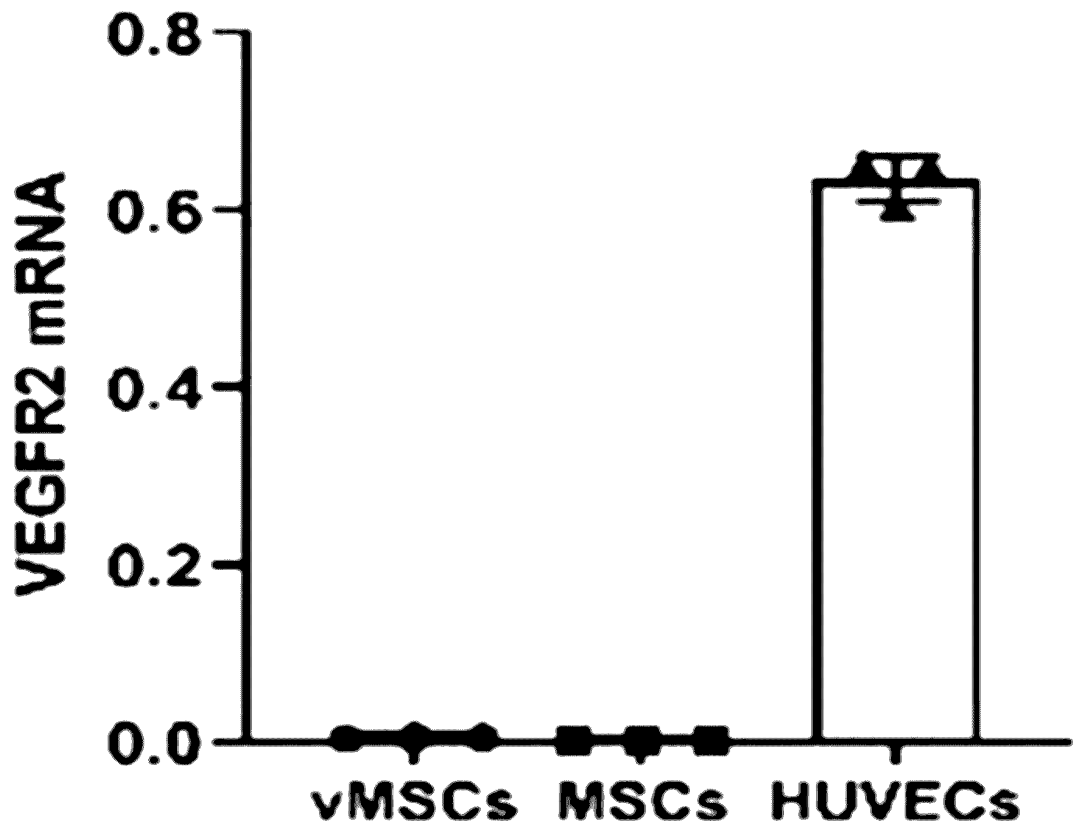
【Fig. 10c】



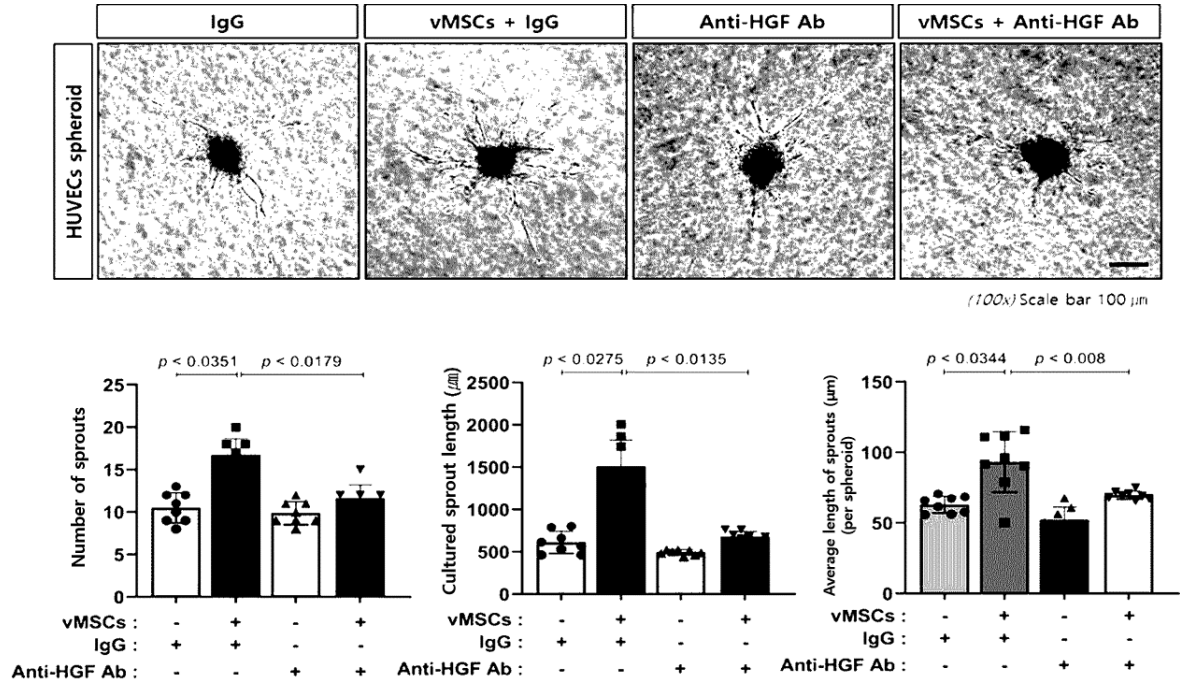
【Fig. 10d】



【Fig. 10e】



【Fig. 11】



【Fig. 12】

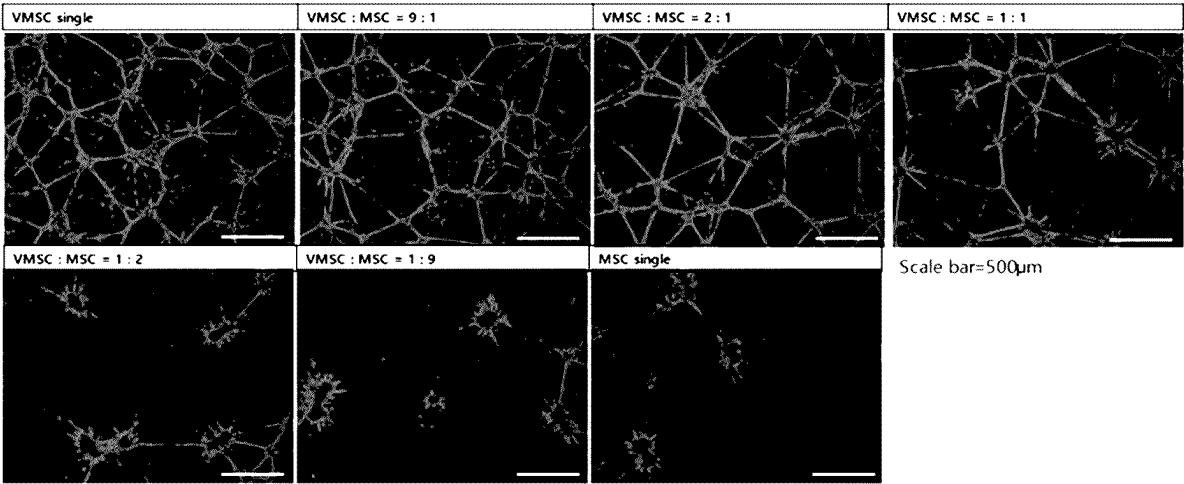
	Endothelial progenitor cells			Newly identified bone marrow-derived cells
	CFU-HILL [1, 2, 3, 4, 6]	CAC [2,4,5]	ECFC [1,2,4,7]	CD141+ vMSC
Source	Monocytes of peripheral blood	Monocytes of umbilical cord blood	Monocytes of peripheral blood or umbilical cord blood	Monocytes of Bone marrow aspirate
Isolation method	Non-adherent cell population (2 days) on culture dish coated with fibronectin	Non-adherent cell population (4-7 days) on culture dish coated with fibronectin	Adherent cell population (1 day) on culture dish coated with rat type 1 collagen	Adherent cell population (1 day) on culture dish coated with extracellular matrix
Time of colony appearance	4-9 days	No colonies formed	7-21 days	4-7 days
Morphology	Elongated sprouting cells radially extending with round cells as central nucleus	Cobblestone	Cobblestone	Spindle-shape
Self-replicating division	-	-	+	+
Reseeding ability (subculture)	-	-	+	+
In vitro blood vessel formation	+/-	+/-	+	+
In vivo blood vessel formation	-	-	+	+
Promotion of angiogenesis by paracrine effect	+	+	+/-	+
CD34	+/-	+/-	+	-
CD45	+/-	+/-	-	-
CD133 (Prominin-1)	+	+	-	-
CD309 (VEGFR2, KDR)	+	+	+	-
CD144 (VE-cadherin)	+/-	+	+	-
CD31 (PECAM)	+	+	+	-
acLDL Absorption	Yes	Yes	Yes	Yes
UEA-1 Lectin attachment	Yes	Yes	Yes	Yes
eNOS	+	+	+	-
Von Willibrand Factor	+	+	+	+

CFU-HILL: Colony forming unit-Hill & CFU-endothelial cell(EC)

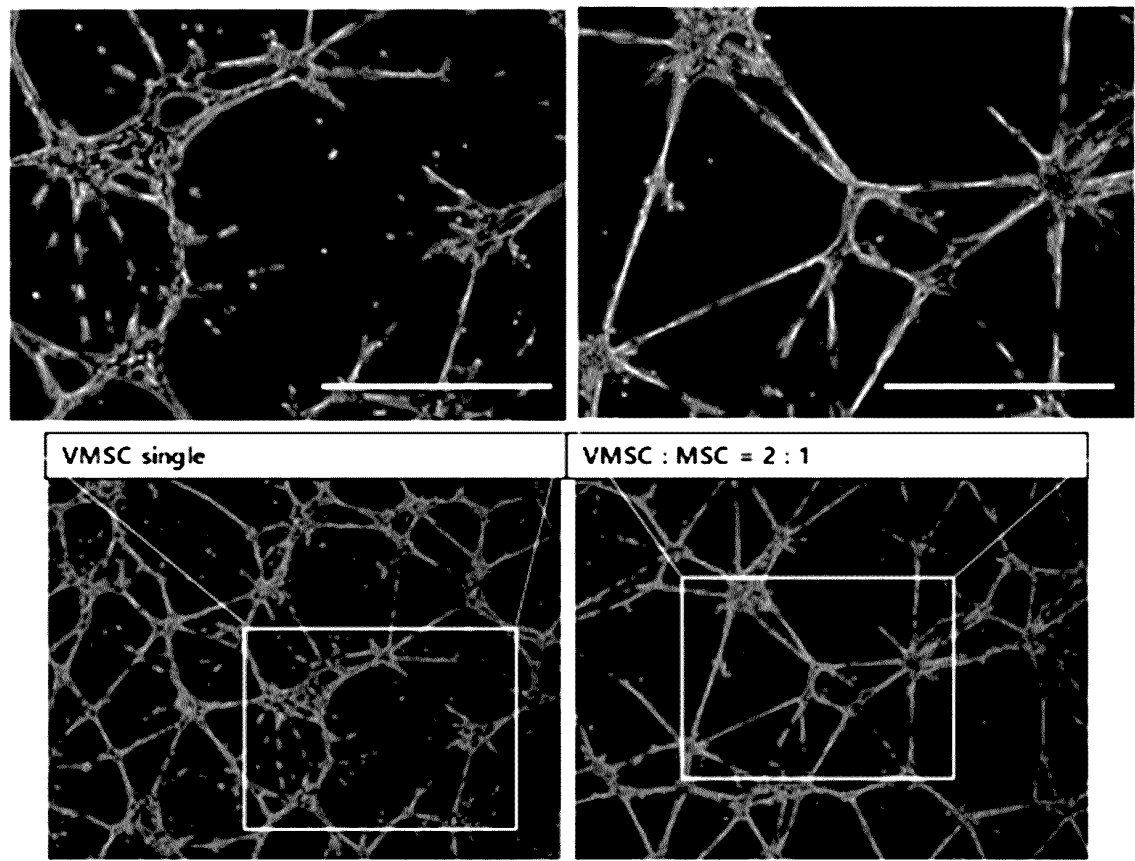
CAC: Circulating Angiogenic Cells

ECFC: Late outgrowth endothelial cells (OECs) or endothelial colony-forming cells (ECFCs)

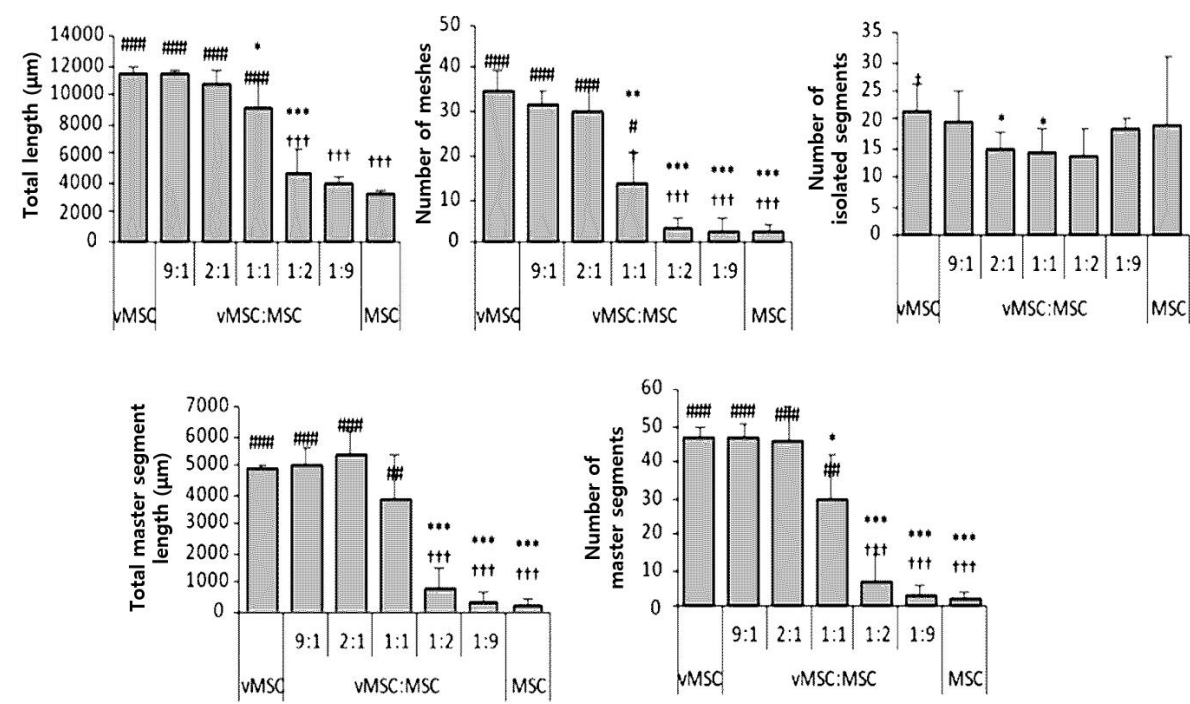
【Fig. 13a】



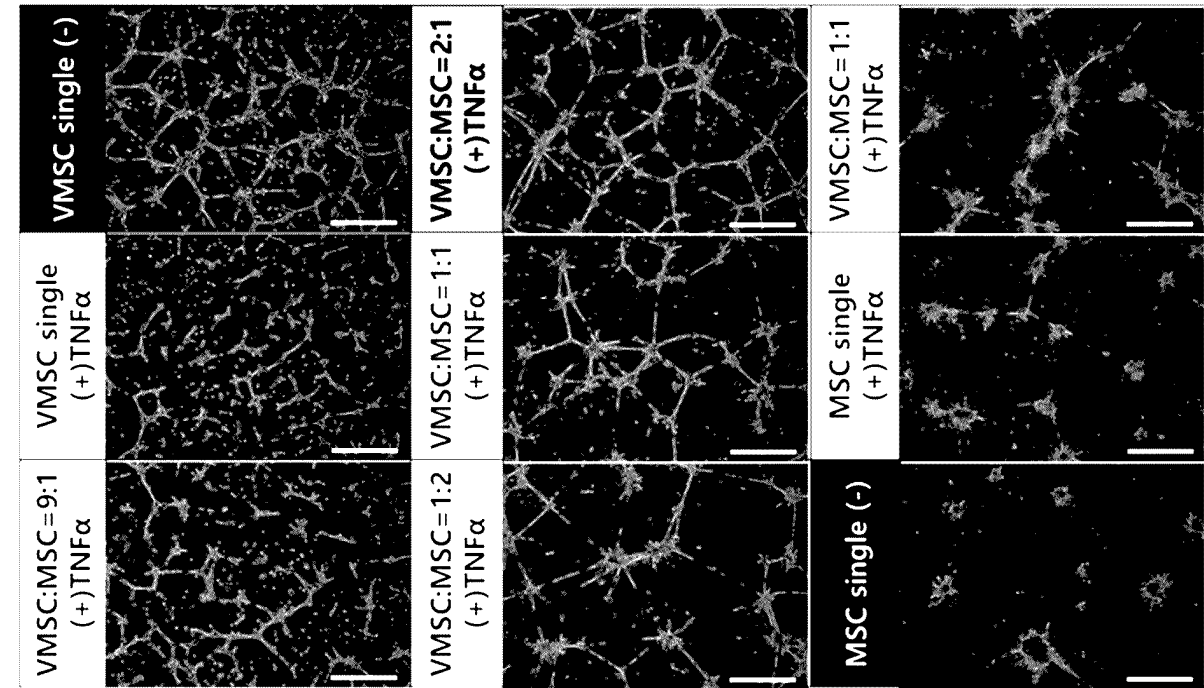
【Fig. 13b】



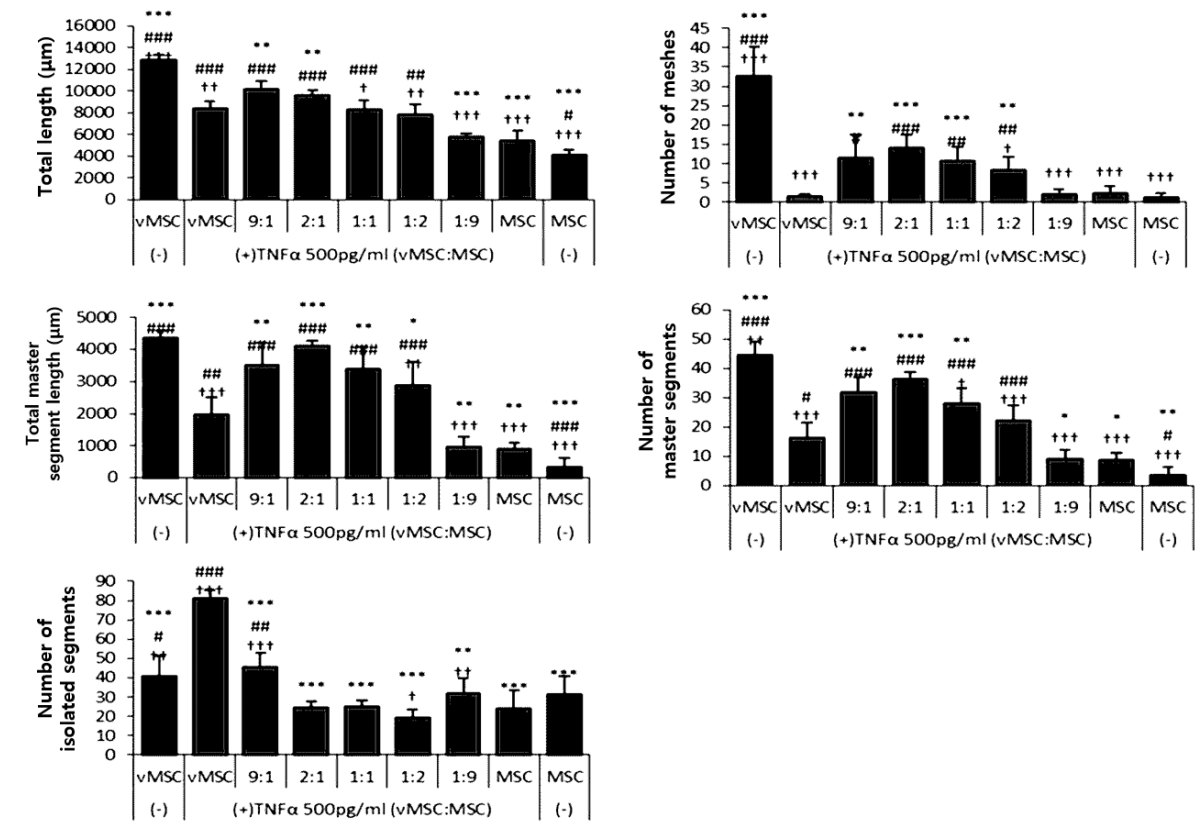
【Fig. 13c】



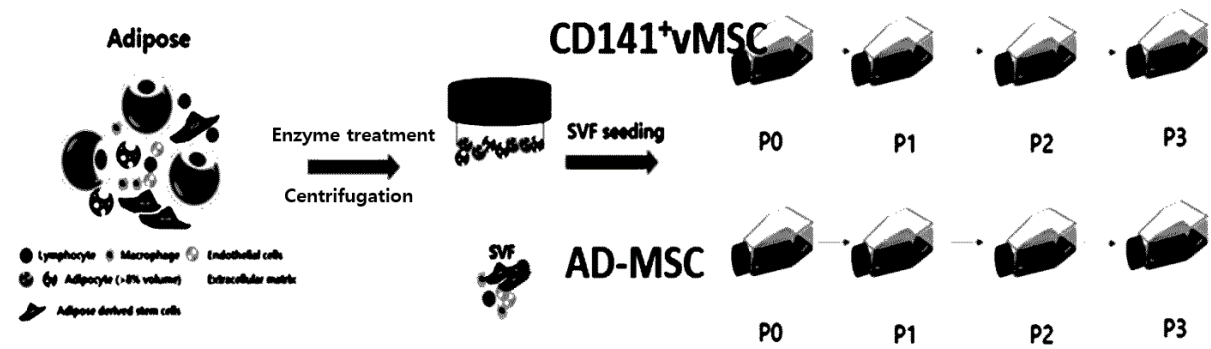
【Fig. 14】



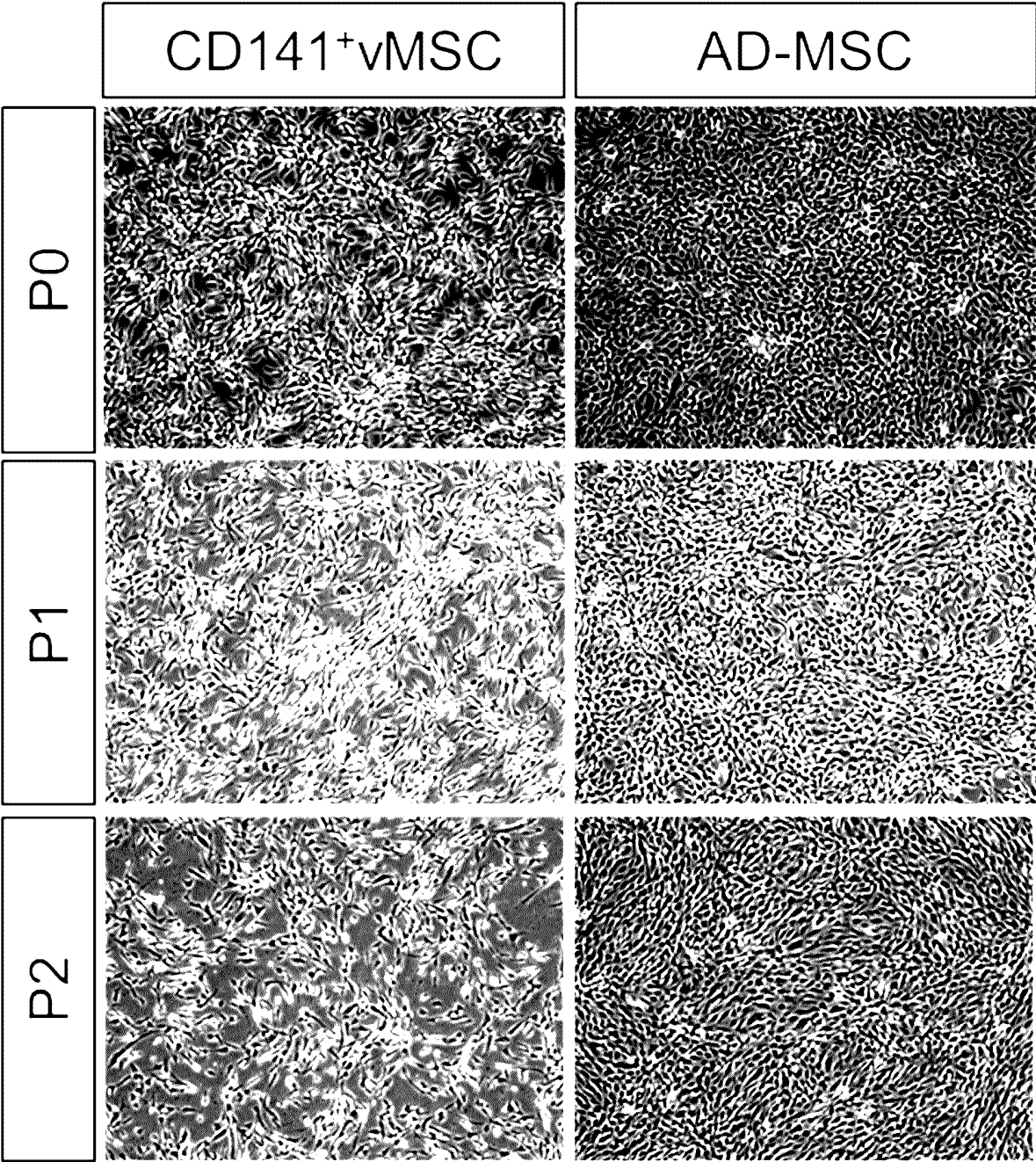
【Fig. 14b】



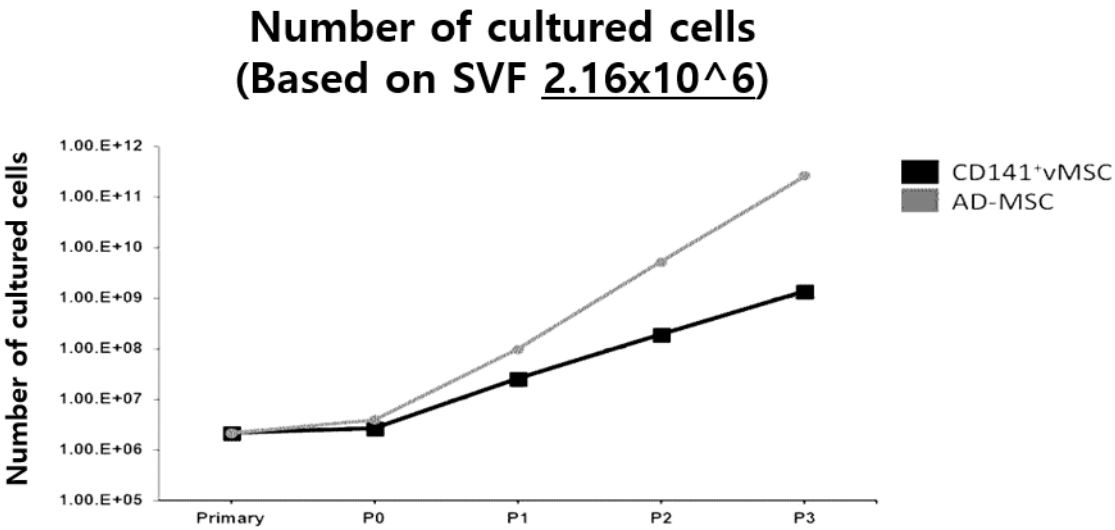
【Fig. 15】



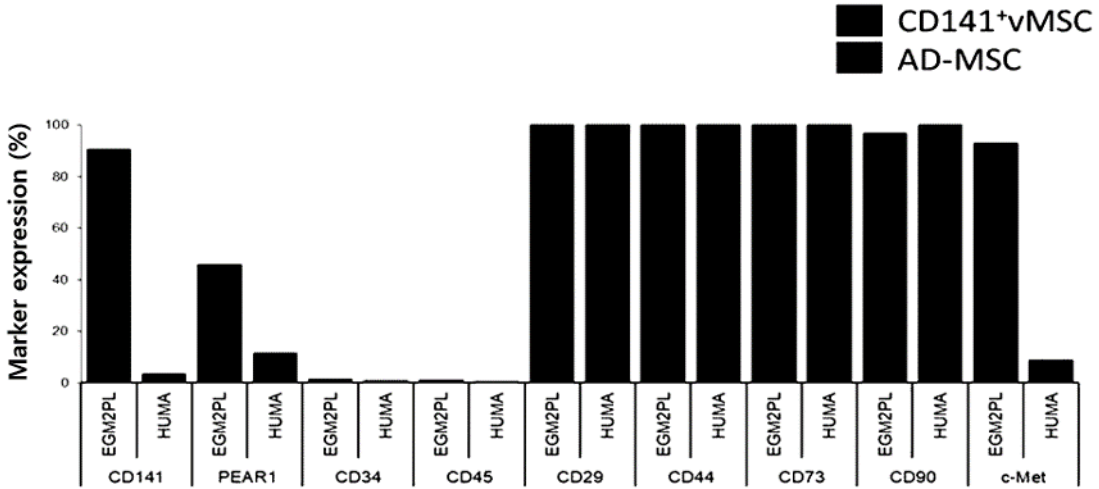
【Fig. 16】



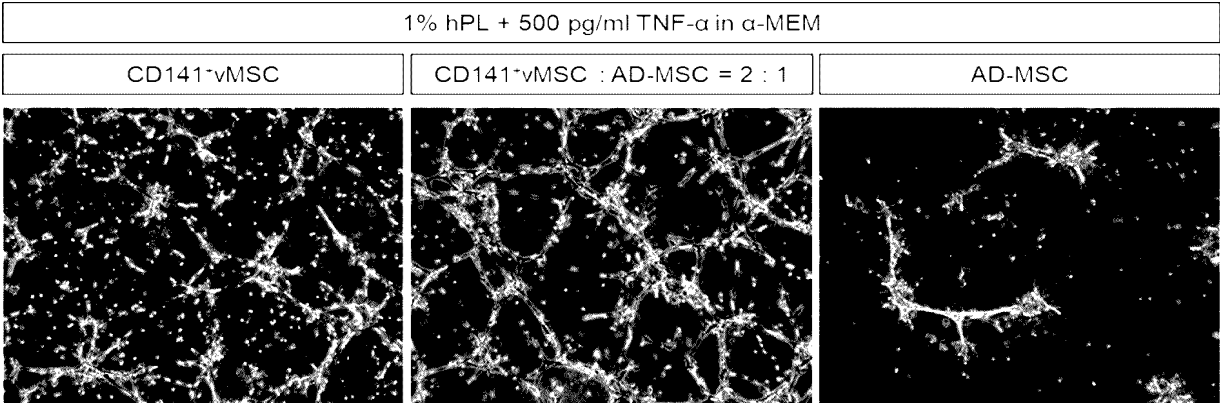
【Fig. 17】



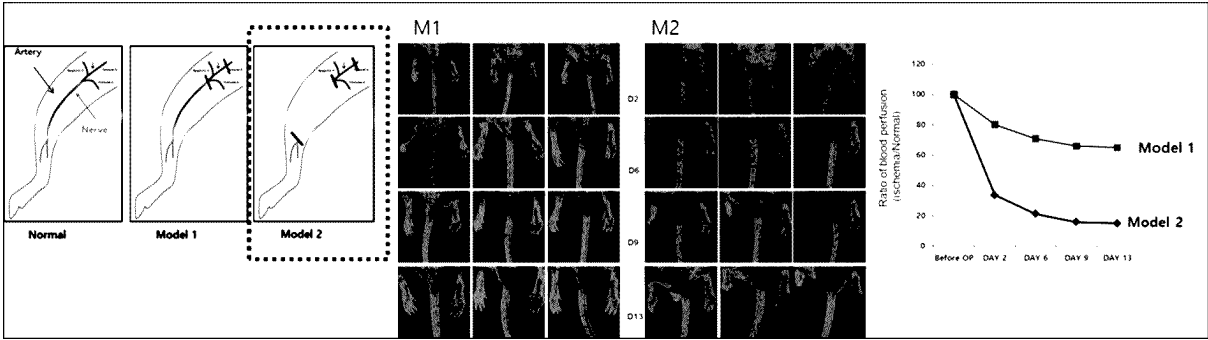
【Fig. 18】



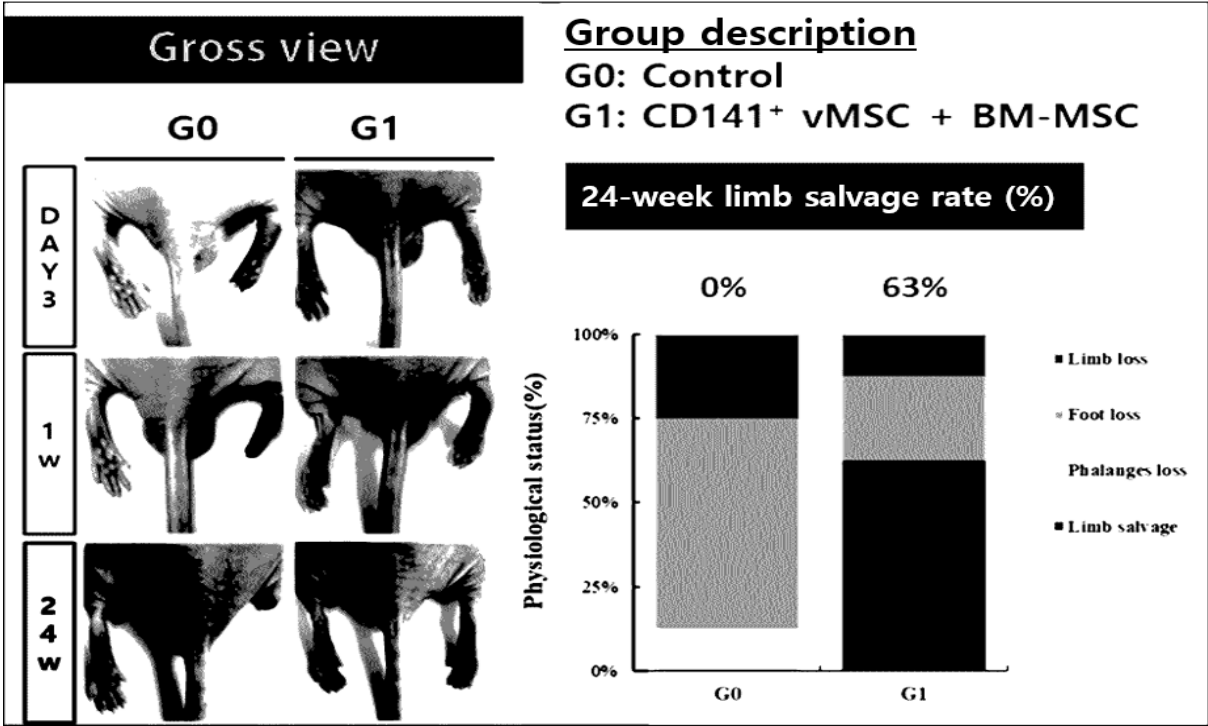
【Fig. 19】



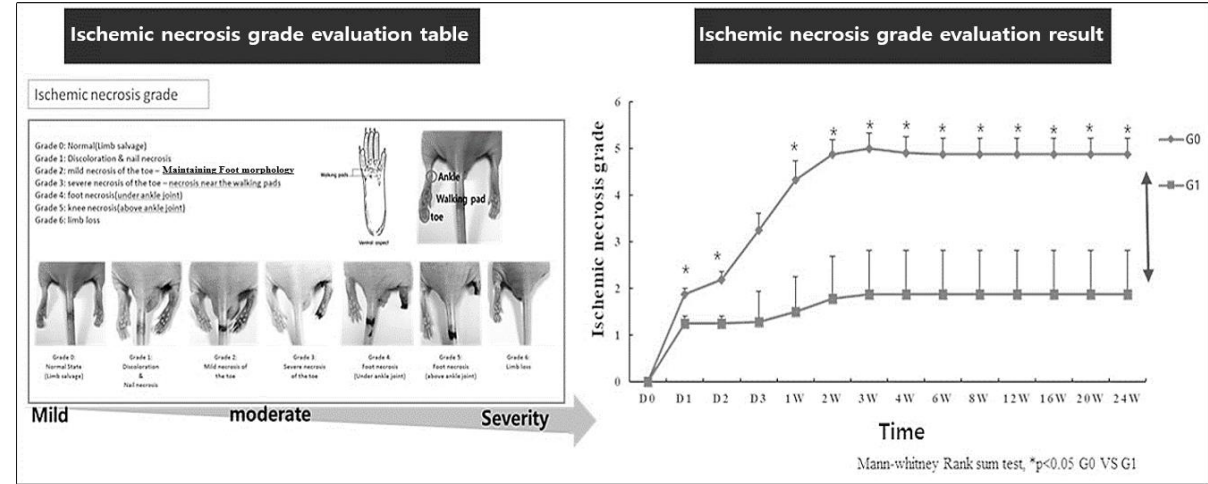
【Fig. 20】



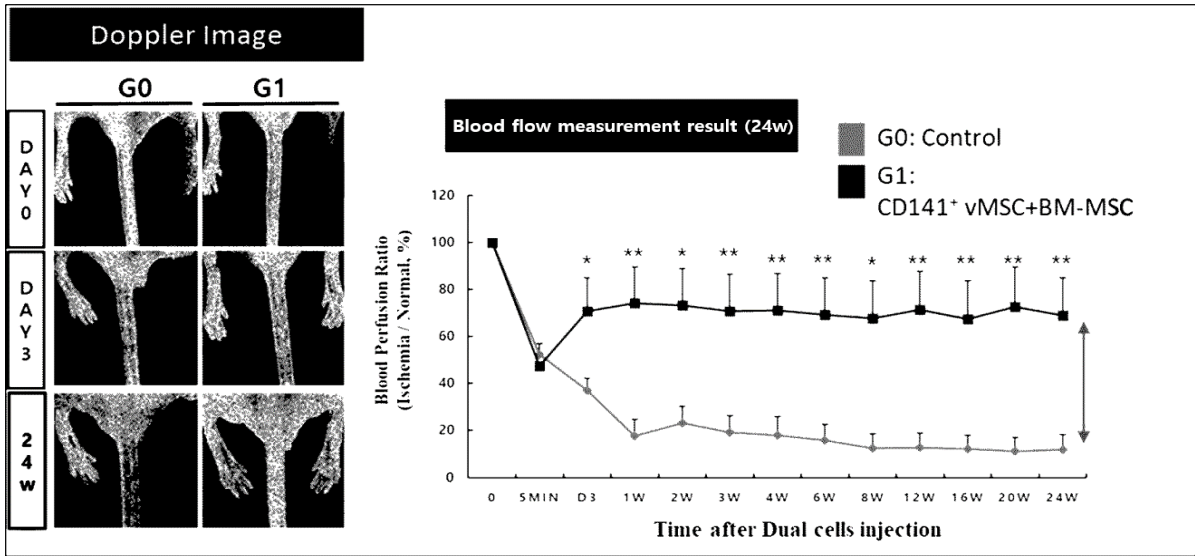
【Fig. 21】



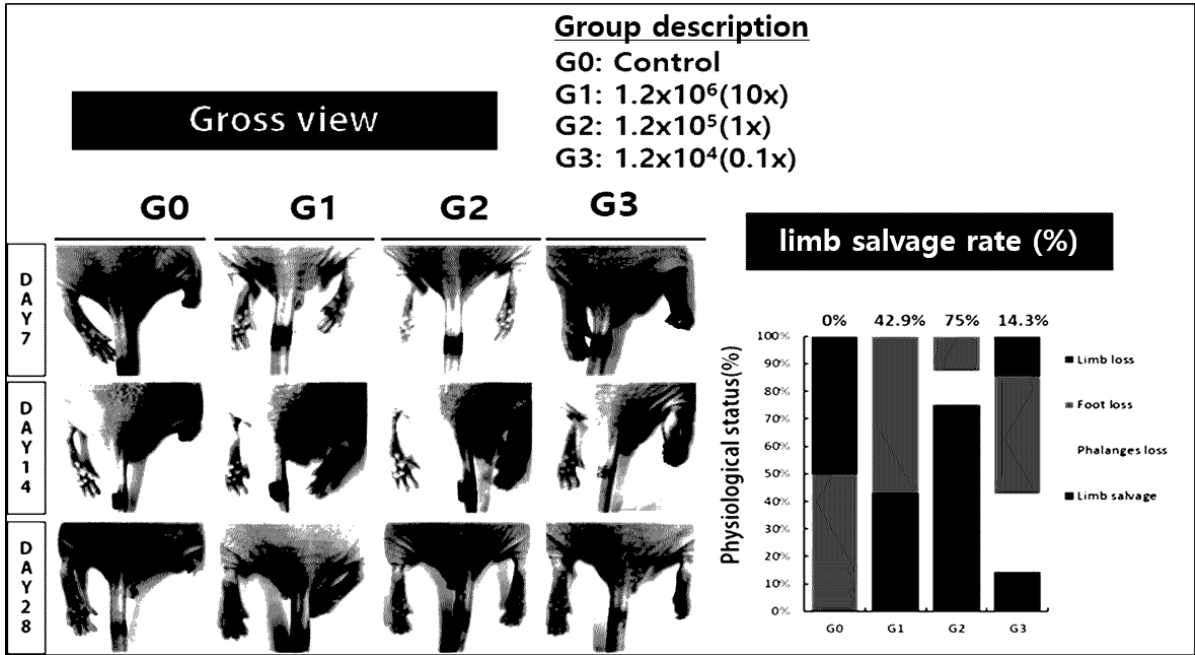
【Fig. 22】



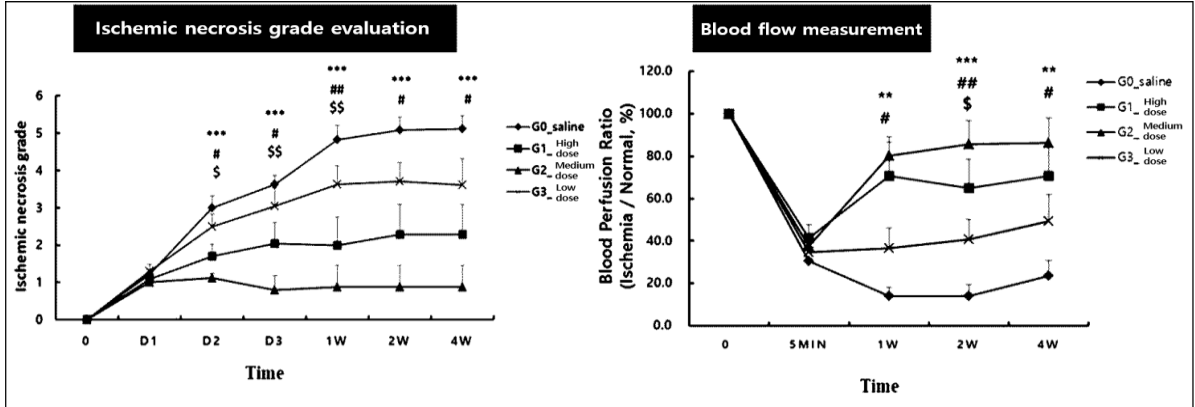
【Fig. 23】



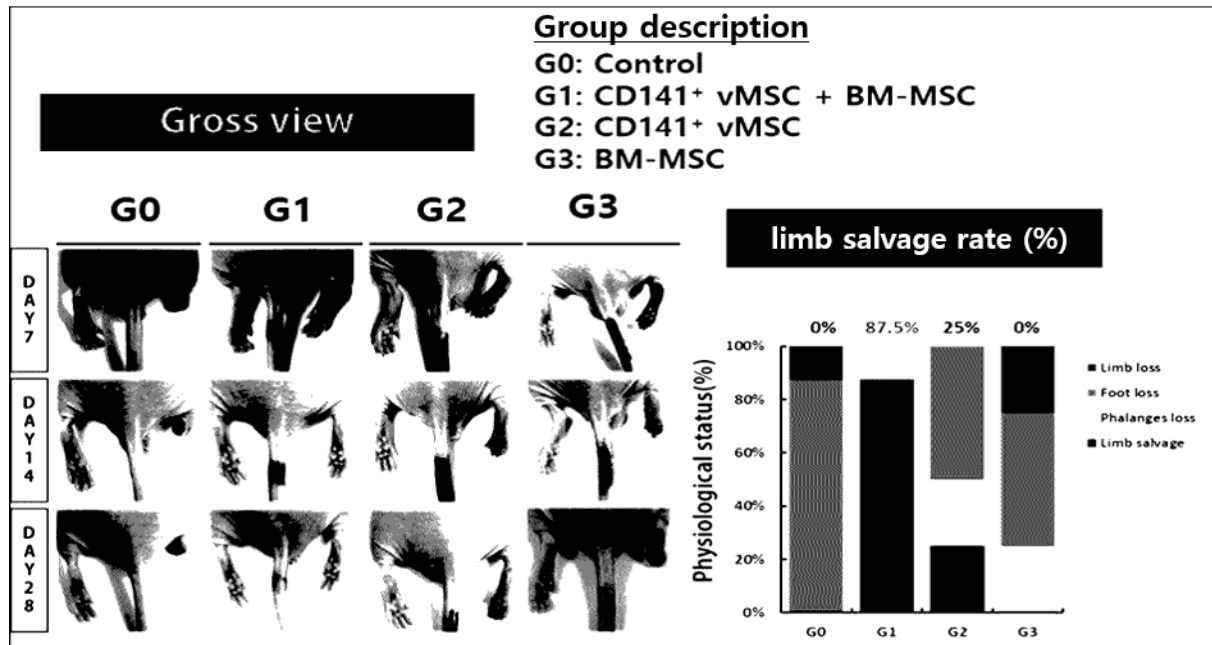
【Fig. 24】



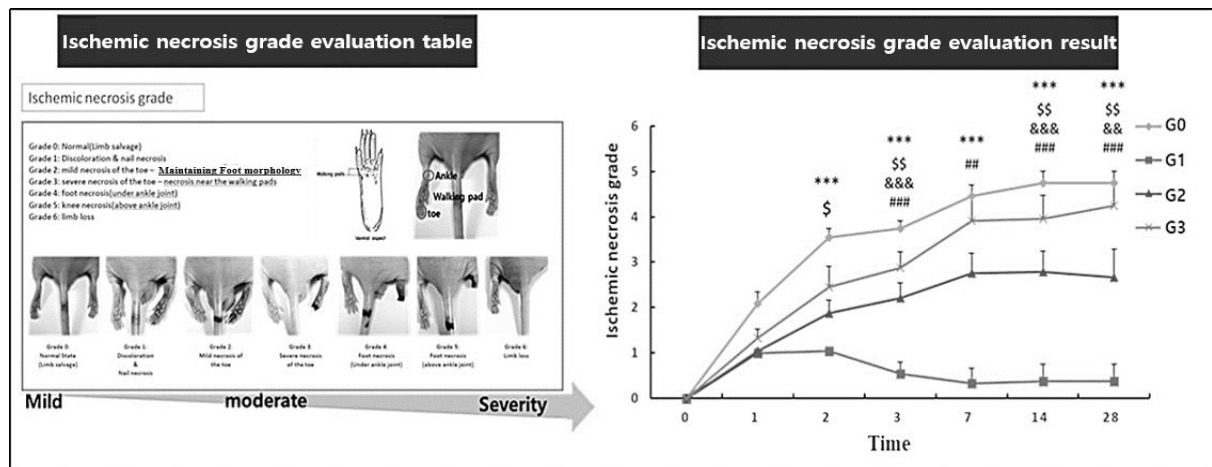
【Fig. 25】



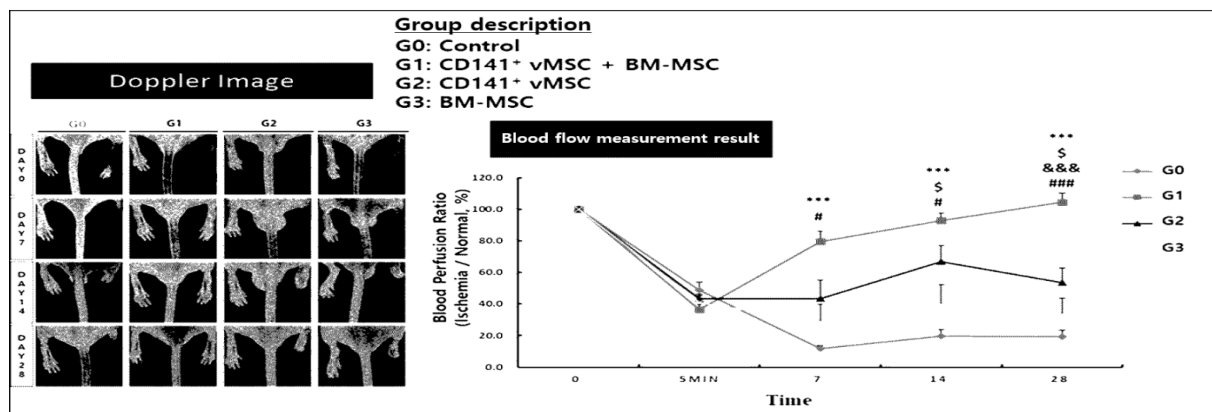
【Fig. 26】



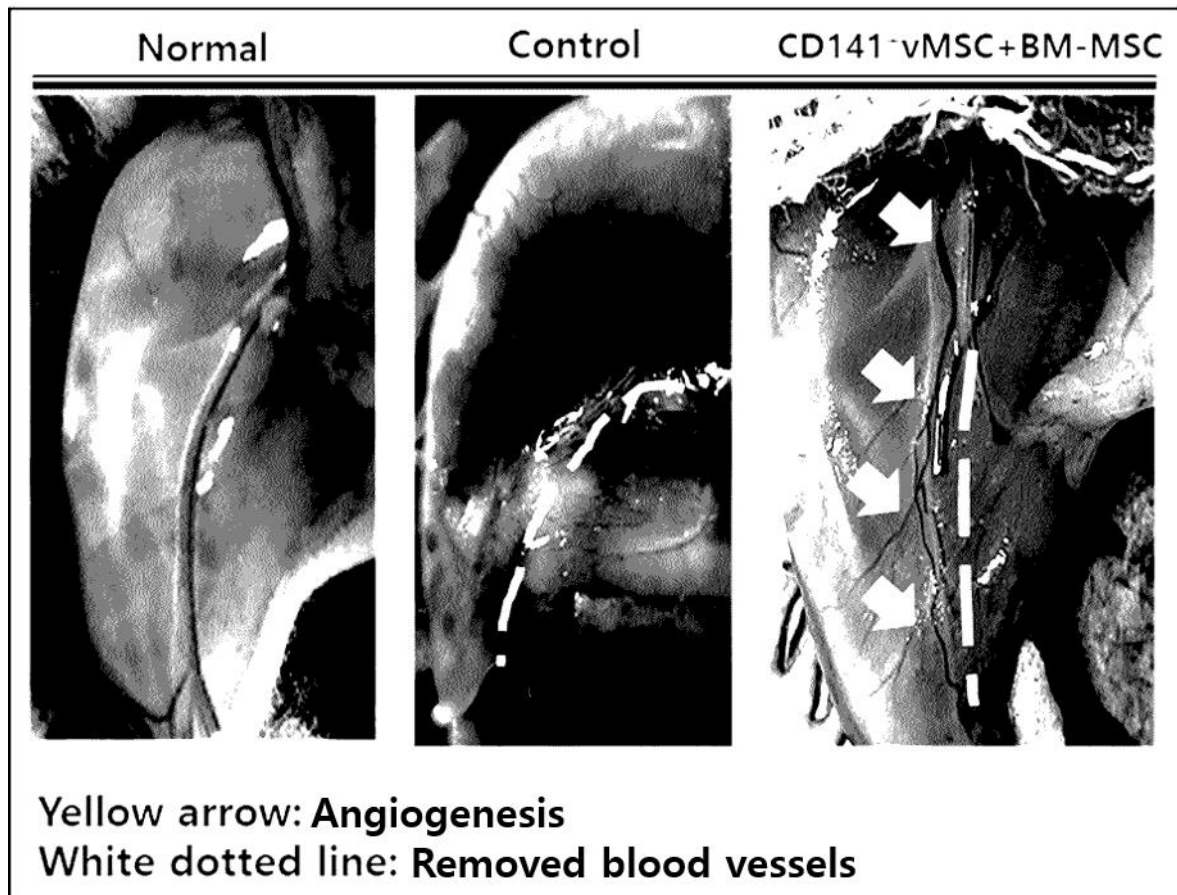
【Fig. 27】



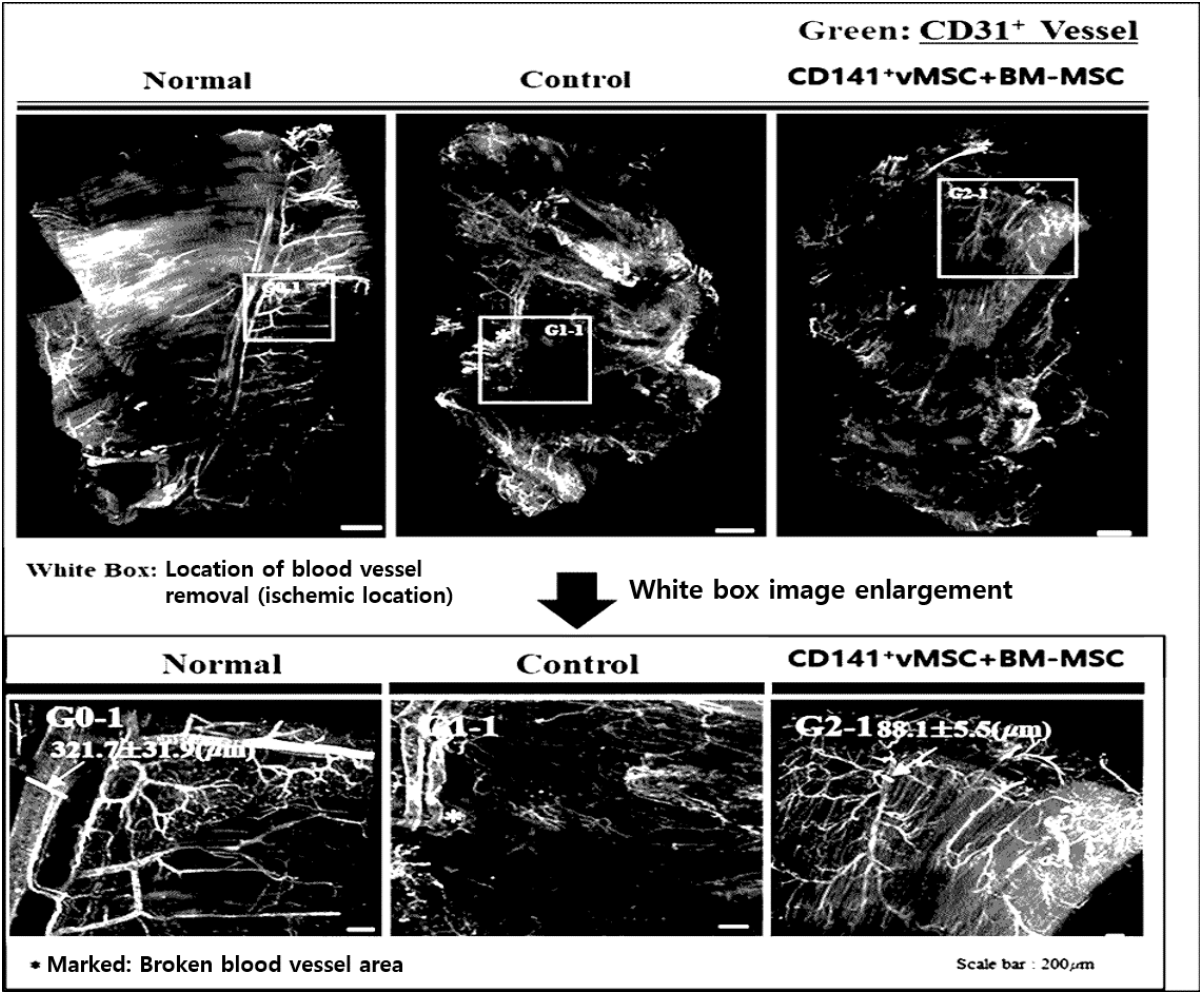
【Fig. 28】



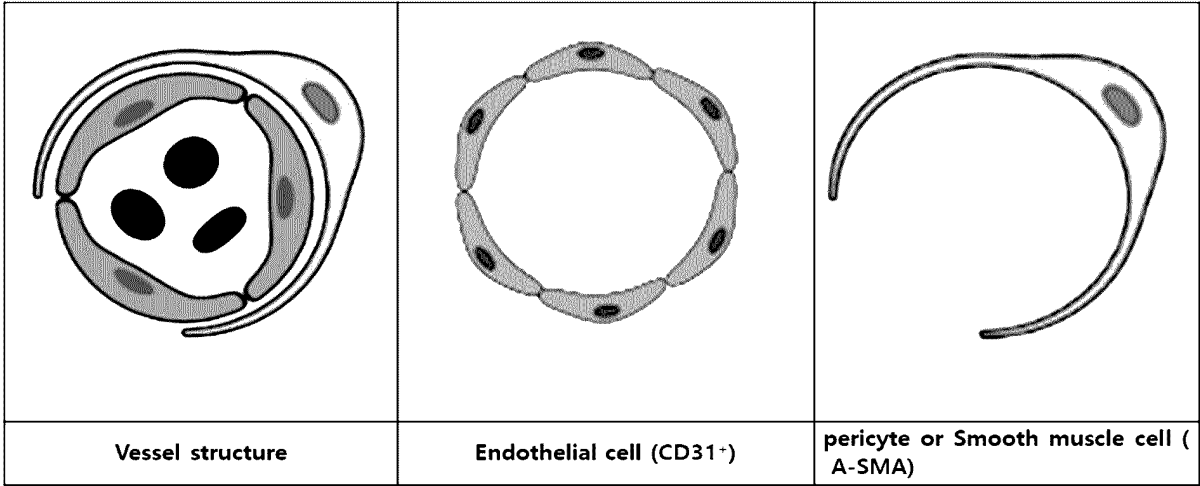
【Fig. 29】



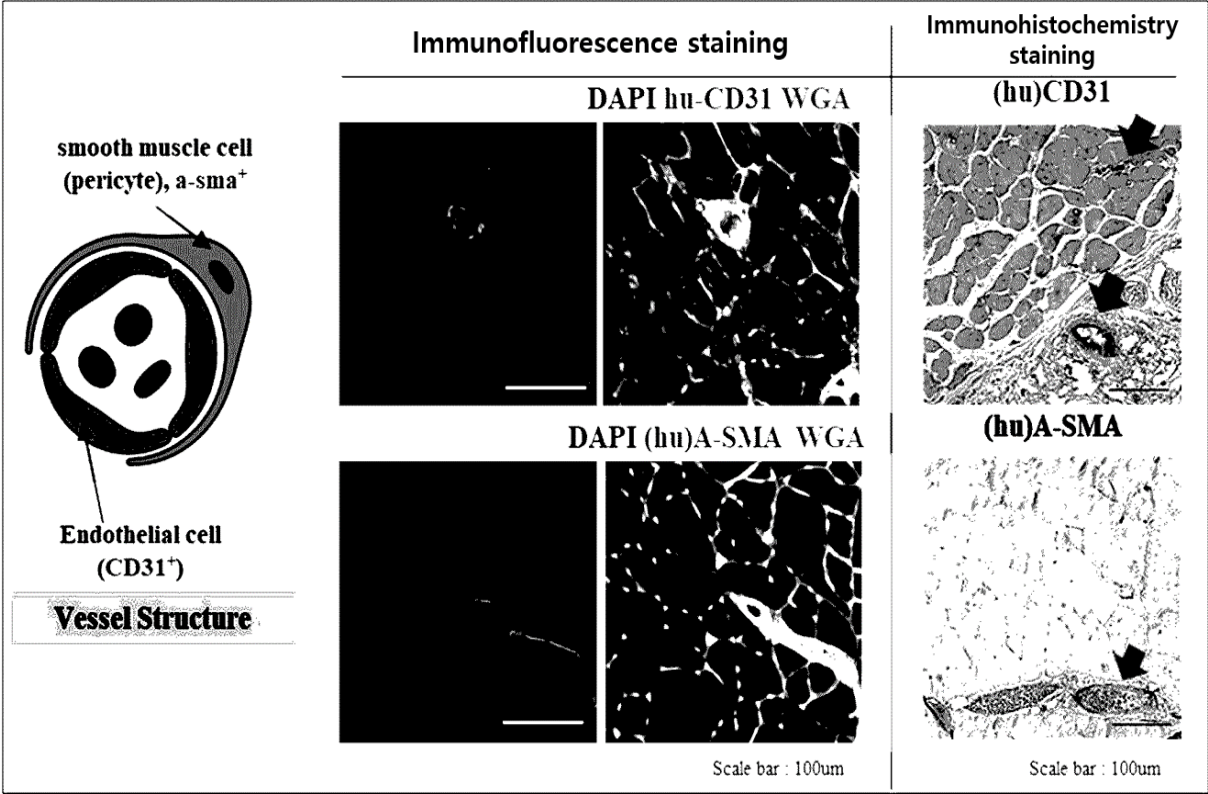
【Fig. 30】



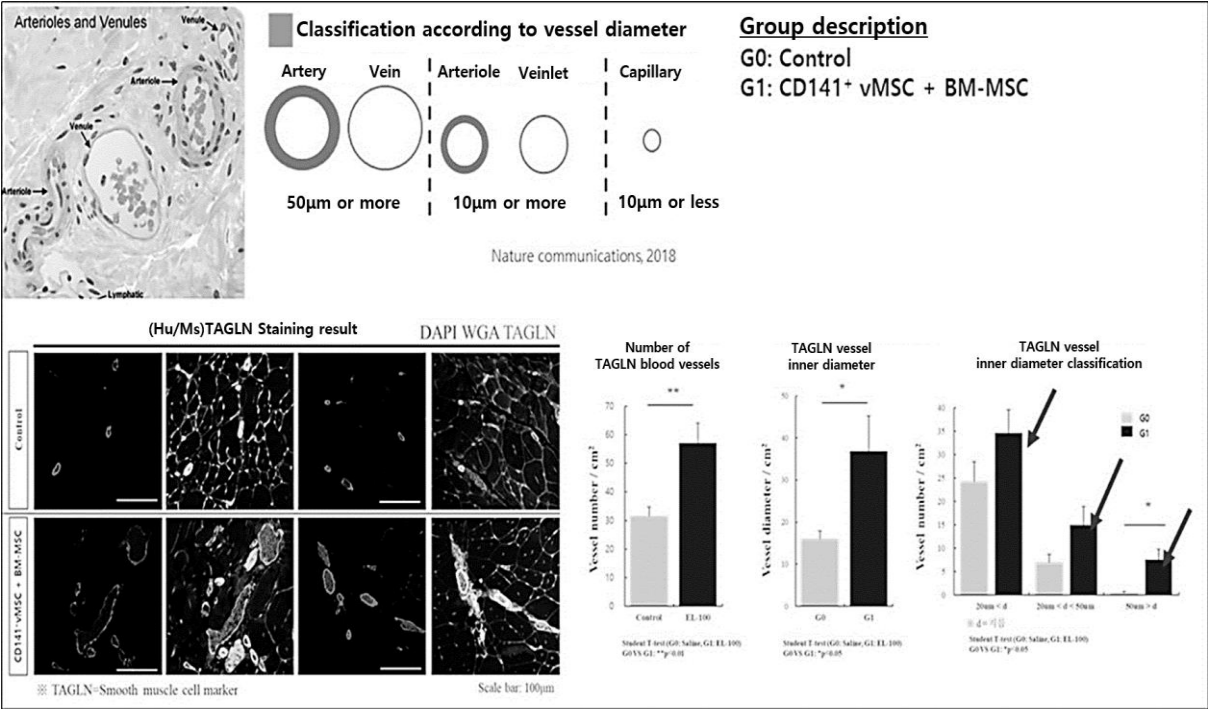
【Fig. 31a】



【Fig. 31b】



【Fig. 32】



【Fig. 33】

