

Comparative Analysis of Biological Signatures between Freshly Preserved and Cryo-Preserved Bone Marrow Mesenchymal Stem Cells (Supplementary Materials)

Taesic Lee ^{1,2,†}, Sangwon Hwang ^{3,†}, Dongmin Seo ⁴, Sungyoon Cho ⁵,
Sunja Yang ⁵, Hyunsoo Kim ⁵, Jangyoung Kim ⁶ and Young Uh ^{7,*}

1 Division of Data Mining and Computational Biology, Regenerative Medicine Research Center,
Wonju Severance Christian Hospital, Wonju 26426, Republic of Korea; ddasic123@yonsei.ac.kr

2 Department of Family Medicine, Yonsei University Wonju College of Medicine,
Wonju 26426, Republic of Korea

3 Department of Precision Medicine, Yonsei University Wonju College of Medicine,
Wonju 26426, Republic of Korea; arsenal@yonsei.ac.kr

4 Department of Medical Information, Yonsei University Wonju College of Medicine,
Wonju 26426, Republic of Korea; dmseo@yonsei.ac.kr

5 Pharmicell Co., Ltd., Seongnam 13229, Republic of Korea; sungyoon9030@pharmicell.com (S.C.);
sun-ja@pharmicell.com (S.Y.); khsmid@pharmicell.com (H.K.)

6 Department of Internal Medicine, Yonsei University Wonju College of Medicine,
Wonju 26426, Republic of Korea; kimjy@yonsei.ac.kr

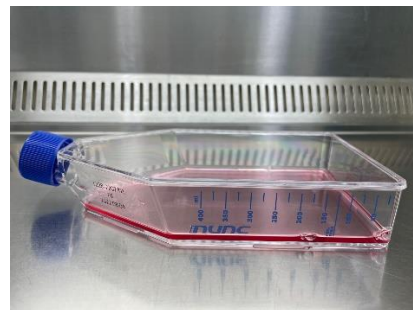
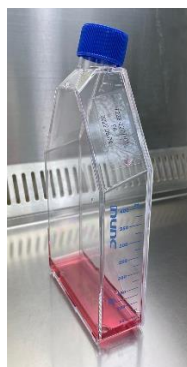
7 Department of Laboratory Medicine, Yonsei University Wonju College of Medicine,
Wonju 26426, Republic of Korea

* Correspondence: u931018@yonsei.ac.kr; Tel.: +82-33-741-1592

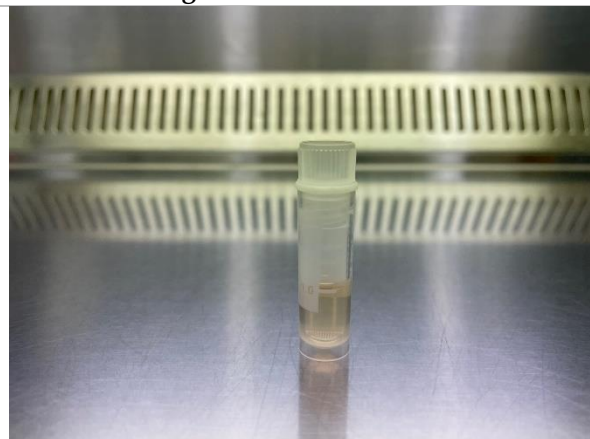
† These authors contributed equally to this work.

Supplementary Figure S1. Actual photographs for manufacturing MSC.

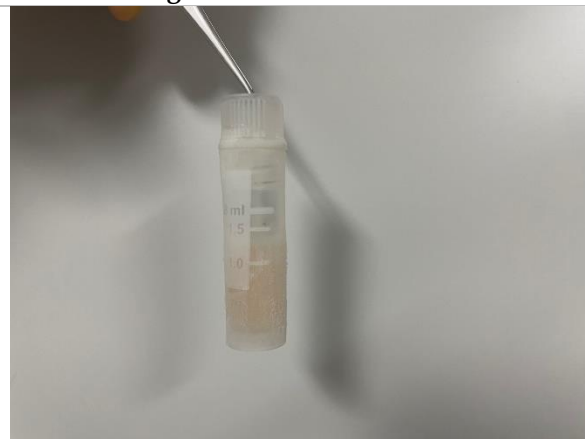
Culturing of MSC



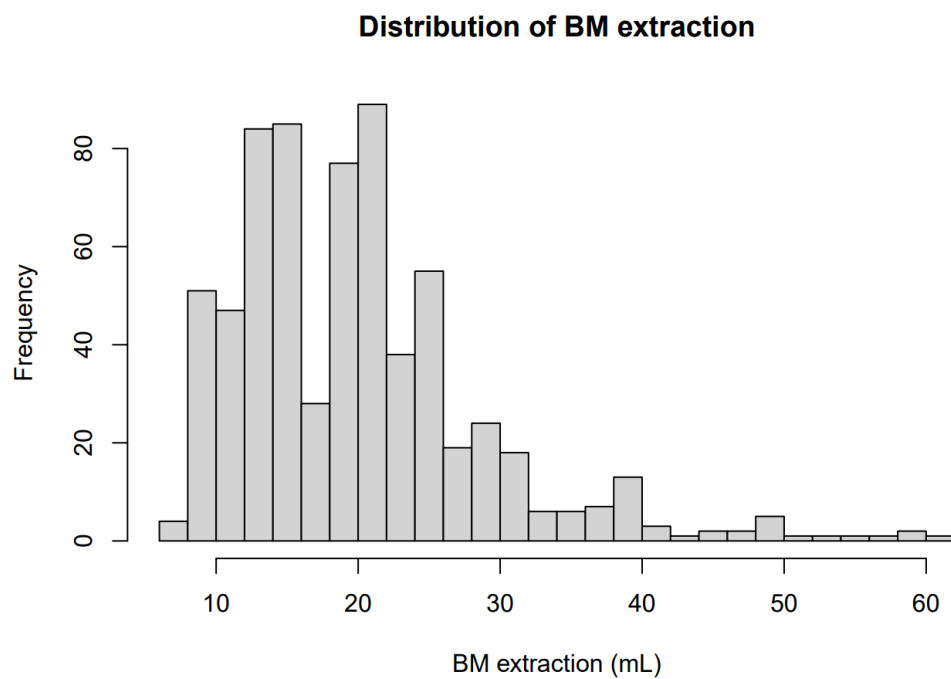
Before freezing



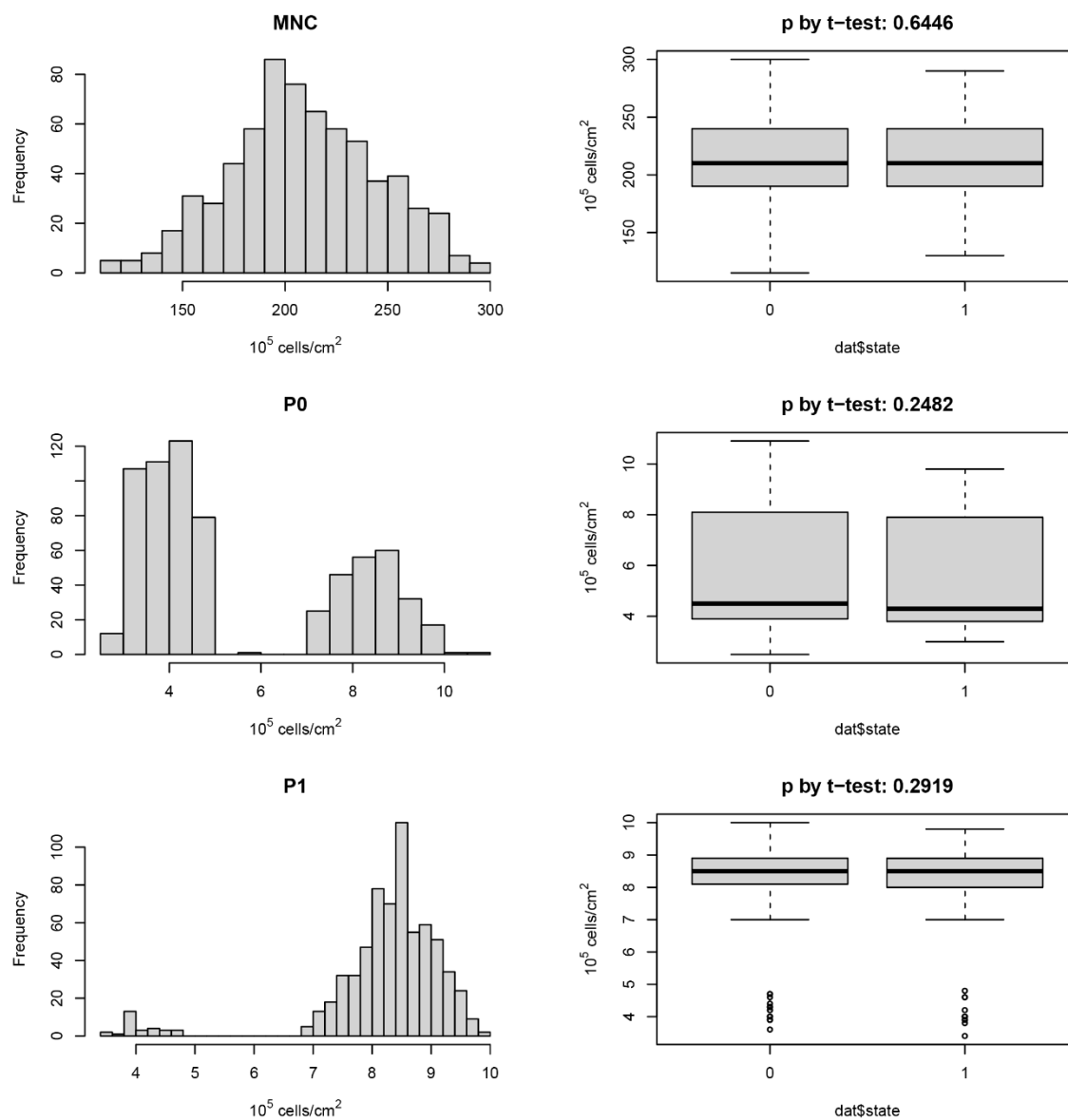
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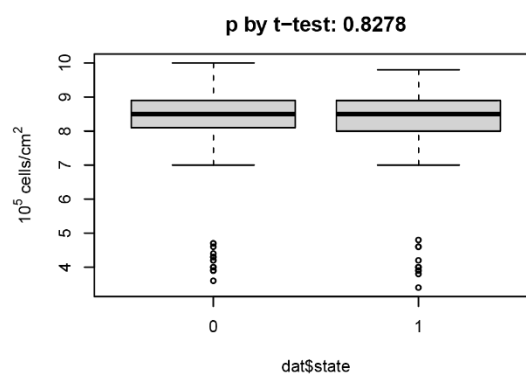
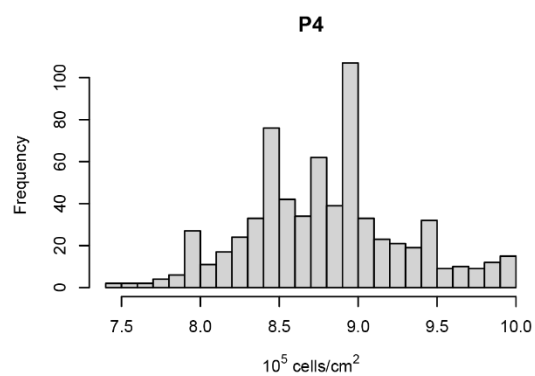
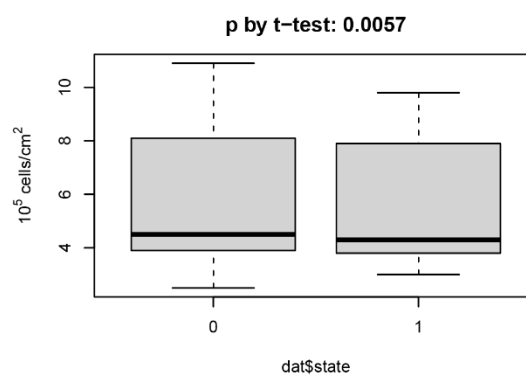
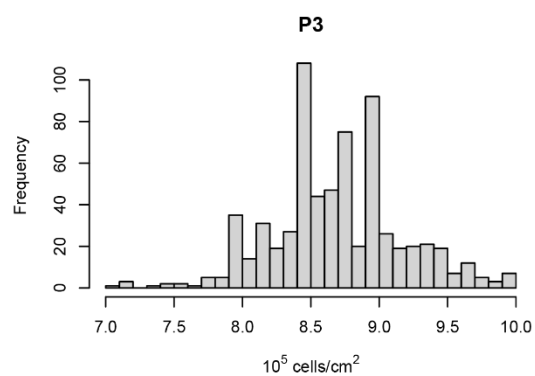
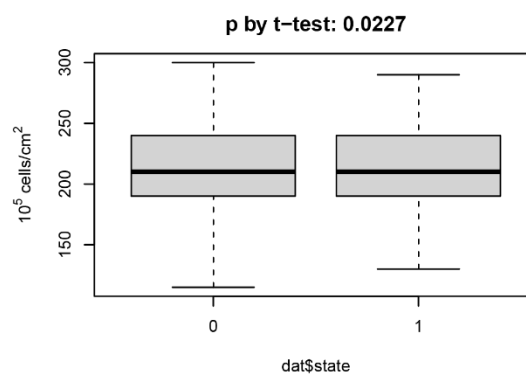
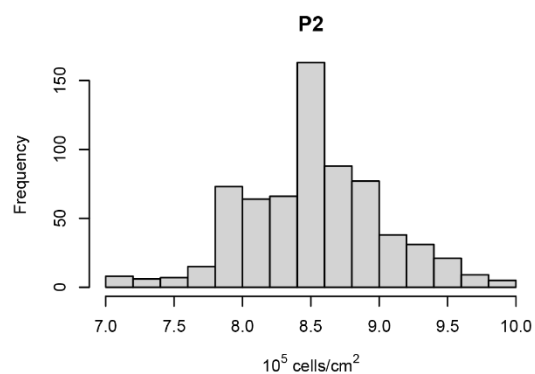
Supplementary Figure S2. Distribution of the amount of BM extracted.



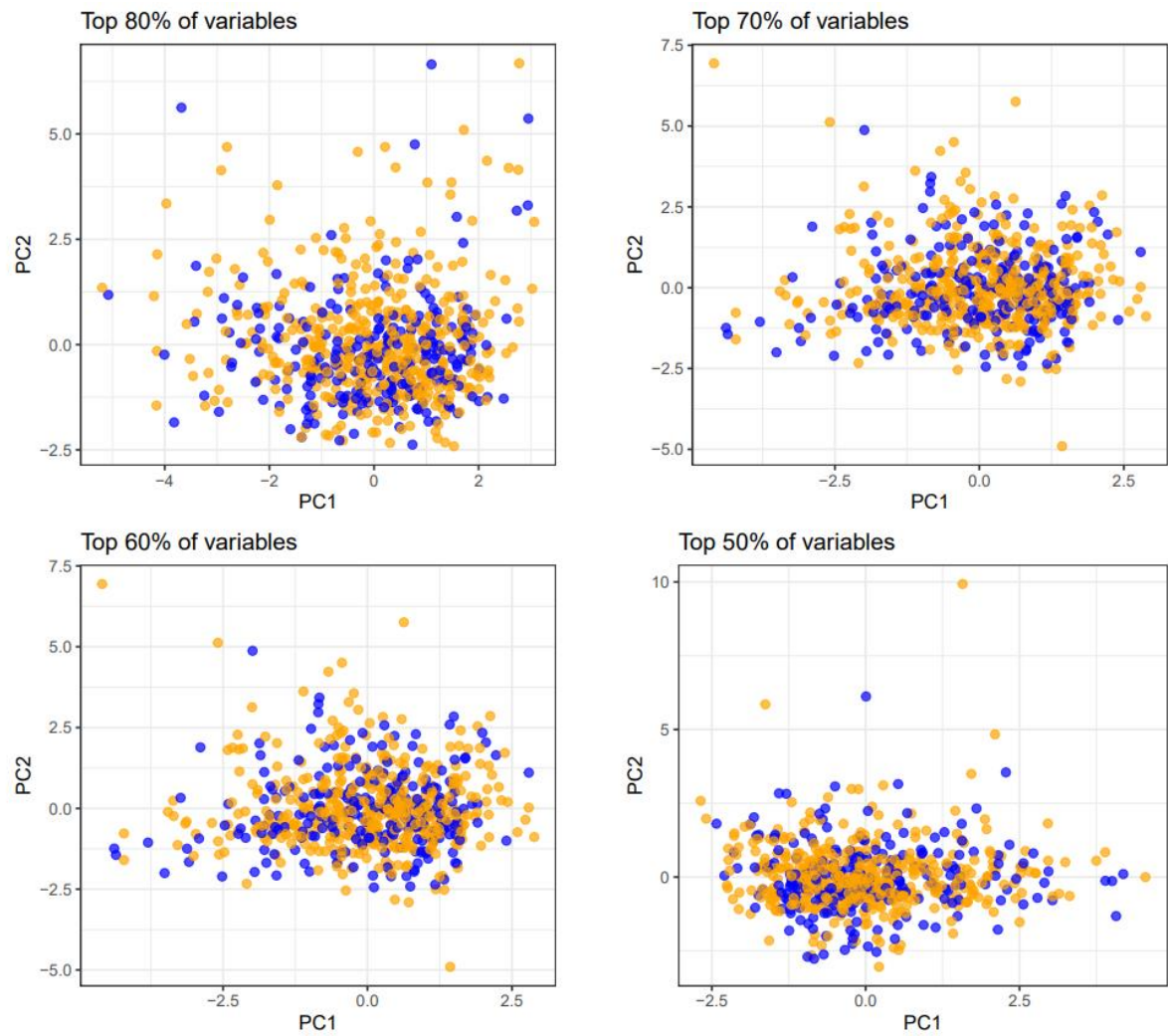
Supplementary Figure S3 Distribution of the number of MNCs at each passage according to the type of preservation.



Supplementary Figure S3. Distribution of the number of MNCs at each passage according to the type of preservation, continued.



Supplementary Figure S4 . MSC signatures abstracted with the PCA method.



Supplementary Table S1. General characteristics of BM-MSCs according to the method of preservation.

Features	Freshly preserved	Cryo-preserved	<i>p</i> -value
Number	426	245	
Age, years	58.5 ± 0.78	55 ± 1.34	0.024
Manufacturing duration, days	28.3 ± 0.11	28.2 ± 0.12	0.726
BM amount, mL	22.8 ± 0.43	16.1 ± 0.41	<0.001
MNC, 10 ⁵ cells/cm ²	213.2 ± 1.82	211.9 ± 2.14	0.645
MSC at P0, 10 ⁵ cells/cm ²	5.7 ± 0.11	5.4 ± 0.14	0.248
MSC at P1, 10 ⁵ cells/cm ²	8.3 ± 0.05	8.2 ± 0.07	0.292
MSC at P2, 10 ⁵ cells/cm ²	8.6 ± 0.02	8.5 ± 0.03	0.023
MSC at P3, 10 ⁵ cells/cm ²	8.8 ± 0.02	8.7 ± 0.03	0.006
MSC at P4, 10 ⁵ cells/cm ²	8.8 ± 0.02	8.8 ± 0.03	0.828

Continuous variables are expressed as mean ± standard deviation *p*-value was evaluated using Student's t-test.
Abbreviations: BM, bone marrow; MNC, mononuclear cell; MSC, mesenchymal stem cell; P, passage in cell culture

Supplementary Table S2 . Summary statistics (interquartile ranges and median) for PDT.

	25 percentiles	Median	75 percentiles
P0_doubling time	50.26	59.19	71.61
P1_doubling time	49.72	59.09	70.105
P2_doubling time	55.34	64.13	74.055
P3_doubling time	54.87	65.71	78.705
P4_doubling time	70.72	84.58	106.98

Supplementary Table S3 . Summary statistics (interquartile ranges and median) for MSC viability.

	25 percentiles	Median	75 percentiles
P0_viability	97.6	98.5	99.2
P1_viability	97.5	98.6	99.3
P2_viability	98	98.7	99.3
P3_viability	97.5	98.6	99.2
P4_viability	86.65	90.7	96.2

Supplementary Table S4 . Summary statistics (interquartile ranges and median) for CD markers.

	25 percentiles	Median	75 percentiles
CD105	98.335	99.36	99.76
CD73	99.73	99.91	99.97
CD34	0.63	0.77	0.92
CD45	0.56	0.73	0.88
CD14	0.81	0.99	1.21

Supplementary Table S5 . Summary statistics (interquartile ranges and median) for CD markers.

	25 percentiles	Median	75 percentiles
VEGF	1206.05	1537.8	2071.55
MCP.1	245.3	394	587.4
IL.6	1090.7	1664.8	2442.2