

■ Angiostatin	■ IGFBP-3	■ ACE-2	■ Adiponectin	■ Pref-1	■ Fetuin A
■ Galectin-7	■ Thyroglobulin	■ NSE	■ TSP-1	■ Follistatin-like 1	■ ANGPTL4
■ TIMP-2	■ OPN	■ PAI-1	■ Angiotensinogen	■ gp130	■ IGFBP-5
■ IL-1 F10	■ Furin	■ IL-1 F5	■ Serpin A4	■ RBP4	■ Adipsin
■ IGFBP-2	■ DKK-1	■ IL-1 F7	■ Midkine	■ hCgb	■ TIMP-1
■ FLRG	■ GROa	■ Gas 1	■ TGFb1	■ Legumain	■ LRIG3
■ IGFBP-6	■ PF4	■ CRP	■ IL-1 F6	■ Prolactin	■ IGFBP-1
■ Pentraxin 3	■ BMP-5	■ HGF	■ Dkk-3	■ bIG-H3	■ BMP-2
■ Resistin	■ Granulysin	■ 6Ckine	■ IL-1 F9	■ RANTES	■ HAI-2
■ CA9	■ Galectin-1	■ EG-VEGF	■ Osteoactivin	■ WIF-1	■ CXCL14
■ OSM	■ DAN	■ Cystatin B	■ DcR3	■ Galectin-3	■ IGFBP-4
■ TRAIL	■ IL-21	■ CHI3L1	■ Fractalkine	■ Follistatin	■ FSH
■ Thrombospondin-5	■ Clusterin	■ IL-17C	■ LAP(TGFb1)	■ APRIL	■ TRANCE
■ WISP-1	■ MIF	■ SP-D	■ IGF-2	■ Insulin	■ TWEEK
■ S100A8	■ GDF-15	■ uPA	■ DLL1	■ IL-24	■ Galectin-9
■ RGM-B	■ CEA	■ ANG-4	■ PDGF-BB	■ CF XIV	■ ADAMTS13
■ Marapsin	■ MIP-1a	■ Shh-N	■ Angiogenin	■ ULBP-1	■ ANG-2
■ PGRP-S	■ CXCL16	■ TSH	■ Cystatin A	■ Chemerin	■ MCP-2
■ Thrombospondin-2	■ CNTF	■ Renin	■ BMP-7	■ C5a	■ IL-27
■ aFGF	■ TPO	■ NT-4	■ MBL	■ MIG	■ HCC-1
■ FABP2	■ Procalcitonin	■ GASP-2	■ Cystatin E M	■ IL-23	■ Kallikrein 14
■ OPG	■ sFRP-3	■ ANGPTL3	■ NOV	■ IL-17B	■ bFGF
■ Trappin-2	■ FGF-19	■ FGF-6	■ Eotaxin-3	■ VEGF-C	■ ANG-1
■ Dkk-4	■ PDGF-AA	■ NAP-2	■ PDGF-AB	■ IL-6sR	■ IL-16
■ Lipocalin-2	■ MCP-1	■ BDNF	■ IL-33	■ MIP-1b	■ IL-11
■ Cystatin C	■ Kallikrein 5	■ ST2	■ SDF-1b	■ ENA-78	■ BLC
■ FGF-9	■ PARC	■ IL-34	■ IL-6	■ IL-20	■ IL-17E
■ IL-1ra	■ FGF-21	■ BAFF	■ BMP-9	■ TGFb2	■ TIMP-4
■ Leptin	■ VEGF	■ EGF	■ LIGHT	■ Lymphotactin	■ IL-3
■ MCSF	■ IP-10	■ GH	■ TNFb	■ AgRP	■ Galectin-2
■ Cripto-1	■ NT-3	■ IGF-I	■ IL-1a	■ TNFa	■ SCF
■ GASP-1	■ IL-18	■ BTC	■ NRG1-b1	■ I-TAC	■ GCP-2
■ TFPI	■ IL-8	■ TGFb3	■ FGF-7	■ Flt-3L	■ GM-CSF
■ GRO	■ IL-1 F8	■ MIP-1d	■ IL-32 alpha	■ IL-1b	■ Activin A
■ GDNF	■ VEGF-D	■ Ck beta 8-1	■ IL-7	■ G-CSF	■ IL-15
■ PIGF	■ I-309	■ IL-12p40	■ HB-EGF	■ IL-2	■ IL-4
○ Eotaxin-2	○ Eotaxin				

Supplementary Figure 1. Components found in amnion-derived mesenchymal stem cells with liquid matrix

Supplementary Table A. Mean arterial pressures (MAP) of treatment and controls groups from baseline to six months

Month	aMSCs+LM (n=9)		MCS Only (n=7)		P-value
	MAP(mmHg)	SD	MAP(mmHg)	SD	
Baseline	78	10.403	78	8.100	0.4364
1	82	6.076	74	9.478	0.0694
2	86	7.730	80	7.483	0.2389
3	79	7.542	79	3.944	0.5000
4	76	6.414	82	12.532	0.3520
5	77	6.737	79	10.008	0.4681
6	84	8.816	85	9.599	0.5000

Supplementary Table B: Number of heart failure medications prescribed to patients in the treatment and control groups at 3 and 6 months after left ventricular assist device implantation

Drug	Treatment Group (aMSCs + LM)		Control Group (MSC only)		P-values	
	3 Months	6 Months	3 Months	6 Months	3 Months	6 Months
Lisinopril	4	3	3	3	0.3855	0.3671
Carvedilol	6	4	2	2	0.1371	0.3304
Spironolactone	1	1	0	0	0.5625	0.5625
Losartan	8	5	5	4	0.3375	0.3855
Sildenafil	8	6	5	4	0.3375	0.3671
Calcium channel blocker	8	6	5	4	0.5625	0.3000

Supplementary Table C. Marker expression of human amniotic fluid-derived cells (AF) and amnion-derived mesenchymal stem cells with liquid matrix (aMSCs+LM)

Marker	AF cells	aMSCs+LM
CD44	12.5% ± 7.6%	19.2% ± 5.9%
CD73	22.95% ± 16.6%	39.2% ± 0.05%
CD90	2.7% ± 2.1%	7.5% ± 3.2%
CD105	12.4% ± 4.2%	12.4% ± 2.5%

Supplementary Table D. The type and concentration of cytokines and growth factors in amnion-derived mesenchymal stem cells with liquid matrix

Proteins	Properties
Collagen VI	Extracellular Matrix Structural
Collagen VII	Extracellular Matrix Structural
Collagen XII	Extracellular Matrix Structural
Fibronectin	Extracellular Matrix Structural
Vimentin	Extracellular Matrix Structural
Laminin subunit alpha-3	Extracellular Matrix Structural
Laminin subunit alpha-5	Extracellular Matrix Structural
Transforming Growth Factor β -induced protein ig-h3	Anti-inflammatory, cell differentiation
SIOOA3	Anti-Microbial
SIOOA9 eent	Anti-Microbial
caxim- related protein PTX3	Anti-Microbial