SUPPLEMENTARY DATA

CM potentials	References
Neurogenesis	[14], [78], [52], [86], [92], [72], [87], [36], [76], [44], [54], [88], [57], [75], [83], [77], [94], [107], [15], [35], [119], [115], [117]
Neuroprotection	[17], [78], [52], [86], [39], [79], [24], [88], [15]
Angiogenesis	[29], [30], [38], [41], [48], [61], [70], [73], [74], [75], [77], [79], [87], [88], [92], [95], [104], [103], [114]
Osteogenesis	[27], [28], [66], [107], [96], [99], [120]
Anti-apoptosis	[16], [19], [37], [54], [49], [74], [60], [85], [72], [71], [75], [77], [93], [96], [102], [97]
Cytoprotection	[92], [62], [76], [13], [46], [59], [102], [118]
Cell proliferation	[60], [20], [48], [37], [88], [89], [71], [75], [93], [58], [113], [58], [61], [50], [96], [119]
Cell migration	[49], [55], [74], [60], [36], [76], [95], [48], [29], [37], [54], [46], [88], [89], [75], [77], [107], [58], [65], [58], [50], [104], [114]
Dentinogenesis	[73], [53], [107], [56], [105], [69], [113], [125], [124], [122], [126], [123], [50]
Parodontogenesis	[64], [101], [30], [110], [111], [112], [128], [127]
Immunomodulation	[49], [76], [54], [43], [75], [83], [84], [94], [67], [26], [80], [87], [79], [18], [24], [19], [23], [22], [109], [25], [21], [64], [101], [116]

Supplementary Table S1: Summary of CM potentials in studies using DMSC secretome for tissue regeneration.

References	DMSC type	Stem cell characterization	Teeth	Donors				
				Species	Number	Age	Gender	Notes
Kumar 2017 [33]	DPSC	+		Human	5	6 → 25 years		
Kumar 2018 [34]	DPSC	+		Human	>= 3	6 → 26 years		Healthy non-decayed teeth
Kumar 2017 [35]	DPSC	+		Human		12 → 25 years		
Gervois 2017 [36]	DPSC	+		Human		14 → 19 years	Both	
Horibe 2014 [37]	DPSC	+		Human	12	19→30/44→70 years		
Zhou 2020 [38]	DPSC	+		Human	5	24 → 41 years	3 F, 2 M	5 periodontally healthy teeth / 6 periodontitis teeth form healthy donors
Venugopal 2018 [39]	DPSC	+		Human				Healthy donors
Caseiro 2019 [40]	DPSC	+		Human				
Shen 2015 [41]	DPSC	+		Human				
Mead 2014 [42]	DPSC	+		Human	3			
Wada 2009 [43]	DPSC	+	Premolars	Human				Healthy teeth
Kolar 2017 [44]	DPSC	+	Maxillary second premolar and mandibular third molars	Human	2	12 and 18 years	F	Similar tooth developmental stage, approximately 70% of root-formation completed
Bronckaers 2013 [45]	DPSC	+	Third molars	Human		15 → 20 years		
Paschalidis 2014 [46]	DPSC	+	Third molars	Human	= or > 3	16 → 18 years		Healthy donors
Piva 2017 [47]	DPSC	+	Third molars	Human		18 → 22 years		

Gharaei 2018 [48]	DPSC	+	Third molars	Human		18 → 25 years		Healthy donors
Murakami 2013 [49]	DPSC	+	Third molars	Human	12	18 → 29 years		
Li 2019 [50]	DPSC	+	Third molars	Human	12	19 → 28 years		Impacted healthy teeth
Yamamoto 2014 [51]	DPSC	+	Third molars	Human		18 → 30 years		
Sakai 2012 [52]	DPSC	+	Third molars	Human		19 → 30 years		
Hu 2019 [53]	DPSC	+	Third molars	Human	10	22 → 36 years	5 F, 5 M	Fully erupted healthy teeth
Wang 2019 [17]	DPSC	+	Third molars	Human				
Nakayama 2017 [54]	DPSC	-	Third molars	Human	4	14 →19 years		Immature teeth
Merckx 2020 [55]	DPSC	-	Third molars	Human	13	14 → 23 years	Both	Healthy donors
Swanson 2020 [56]	DPSC	-	Third molars	Human	4	>24		
Gervois 2019 [57]	DPSC	-	Third molars	Human	7	14 →26 years	Both	
Ivica 2020 [58]	DPSC	-	Third molars	Human	3	16 → 25 years		Healthy teeth
Zhang 2020 [59]	DPSC	-	Third molars	Human	3	18 → 25 years	2F, 1M	Free of caries and/or periodontitis
Yamamoto 2016 [60]	DPSC	-	Third molars	Human		18 → 29 years		
Ahmed 2016 [13]	DPSC	-	Third molars	Human		20 → 28 years		
Xian 2018 [61]	DPSC	-	Third molars and premolars	Human		18 → 25 years		
Song 2015 [62]	DPSC	-	Permanent teeth	Human	10	14 → 22 years	6 F, 4 M	clinically healthy
Joo 2018 [63]	DPSC	-	Immature teeth, supernumerary teeth, or premolars or third molars having an immature root apex	Human	7	12 → 20 years	4F, 3M	

Shen 2020 [64]	DPSC	-	Exfoliated teeth	Human				Healthy donors
Akazawa 2015 [65]	DPSC	-	Deciduous teeth	Human	3	6 → 8 years		Healthy teeth
De rosa 2011 [66]	DPSC	-		Human		21 → 45 years		
Ji 2019 [67]	DPSC	-		Human	8	25 → 35 years		Caries free teeth, healthy donors
Aranha 2010 [68], Huang 2016 [69]	DPSC	-		Human				
Lambricht 2017 [70]	DPSC			Human				
Iohara 2008 [71]	DPSC	+	Tooth germ	Porcine				
Ishizaka 2013 [72]	DPSC	+	Premolars	Porcine				
Kawamura 2016 [73]	DPSC	-	Premolars	Porcine				
Hayashi 2015 [74]	DPSC	-		Porcine	4			
Iohara 2014 [75]	DPSC	+	Upper canine		4	5 → 6 years		
Iohara 2014 [75]	DPSC	+	Upper canine	Dogs	4	8 →10 months		
Iohara 2013 [76]	DPSC	+	Upper canine	Dogs		8 →10 months		
Murakami 2015 [77]	DPSC	+	Upper canine	Dogs	5	8 →10 months	F	
Omi 2017 [78]	DPSC	+	Incisors	Rats		6 weeks	M	
Makino 2019 [79]	DPSC	-	Incisors	Rats		6 weeks	M	
Omi 2016 [80]	DPSC	+		Rats		6 weeks		
Chen 2019 [81]	DPSC	+		Rats			M	
Li 2017 [82]	SHED	+	Deciduous teeth	Human		6 → 8 years		Clinically healthy teeth
Pivoraite 2015 [25], Jarmalaviciute 2015 [16]	SHED	+	Deciduous teeth	Human	1	6 years		
Kano 2017 [83], Matsubara 2015 [84], Matsushita 2017 [21]	SHED	+	Deciduous teeth	Human	3	6 → 12 years		

Omori 2015 [27]	SHED	+	Deciduous teeth	Human		6 → 12 years		Healthy donors
Yamagata 2013 [85], Fujii 2015 [86], Tsuruta 2018 [87], Shimojima 2016 [24], Yamaguchi 2015 [19], Sugimura-Wakayama 2015 [88], Han 2020 [89], Sakai 2012 [52], Yamamoto 2014 [51]	SHED	+	Deciduous teeth	Human		6 → 12 years		
Chen 2020 [15]	SHED	+	Deciduous teeth	Human	3	7 → 9 years	M	
Mussano 2018 [90]	SHED	+	Deciduous teeth	Human	10	9.2 ±2.2 years		
Gunawardena 2019 [31], De cara 2019 [29]	SHED	+	Deciduous teeth	Human				
Wang 2020 [91]	SHED	+	Deciduous teeth	Human				Non-carious teeth
Hiraki 2020 [28]	SHED	+	Upper right primary canine	Human		11 years	M	Clinically healthy patients
Miura-Yura 2020 [92], Ishikawa 2016 [26], Wakayama 2015 [23], Izumoto-Akita 2015 [20], Ogasawara 2020 [93], Sakai 2020 [94]	SHED	-	Deciduous teeth	Human		6 → 12 years		
Hirata 2016 [22]	SHED	-	Deciduous teeth	Human		7 → 12 years		
Asadi-Golshan 2018 [14]	SHED	-	Deciduous teeth	Human				
Mita 2015 [18]	SHED	-	Deciduous teeth	Human				Clinically healthy teeth
Inoue 2013 [95]	SHED	-	Deciduous teeth	Human	8			Clinically healthy teeth

Wei 2020 [96]	SHED		Deciduous teeth	Human				
Li 2019 [97]	SHED		Deciduous teeth	Human				
Kang 2018 [98]	PDLSC	+		Human				
Diomede 2018 [99]	PDLSC	+		Human	5			
Aghamohamadi 2020 [100]	PDLSC	+	Premolars	Human		Young individuals		Healthy periodontal ligament tissue and teeth
Kolar 2017 [44]	PDLSC	+	Maxillary second premolar and mandibular third molars	Human	2	12 and 18 years	F	Similar tooth developmental stage, approximately 70% of root-formation completed
Nagata 2017 [101]	PDLSC	+	Premolars or third molars	Human	11	12 → 29 years		Healthy donors
Cianci 2016 [102]	PDLSC	+		Human		20 → 35 years		Healthy donors
Wada 2009 [43]	PDLSC	+	Premolars	Human				Healthy teeth
Qiu 2020 [30]	PDLSC	-	Premolars and impacted third molars	Human	15	19 → 29 years		
Zhang 2020 [103]	PDLSC	-	Impacted premolars	Human				
Kolar 2017 [44]	SCAP	+	Maxillary second premolar and mandibular third molars	Human	2	12 and 18 years	F	Similar tooth developmental stage, approximately 70% of root-formation completed
Kumar 2017 [35]	SCAP	+		Human		12 → 25 years		
Kumar 2017 [33]	SCAP	+		Human	5	6 → 25 years		
Kumar 2018 [34]	SCAP	+		Human	>= 3	6 → 26 years		Healthy non-decayed teeth
Bakopoulou 2015 [104]	SCAP	+	Third molars	Human	3	15, 17, and 19		Healthy donors

						years		
Zhuang 2020 [105]	SCAP	+	Impacted third molars with immature roots	Human		12 → 25 years		Healthy donors
Yu 2016 [106]	SCAP	+	Impacted third molars with immature roots	Human	5	16 → 24 years		Healthy donors
Yu 2020 [107]	SCAP	+	Impacted third molars with immature roots	Human	5	16 → 30 years		Healthy donors
Yu 2020 [108]	SCAP	-	Impacted third molars with immature roots	Human		16 → 30 years		Healthy donors
Kumar 2017 [35]	DFSCs	+		Human		12 → 25 years		
Kumar 2017 [33]	DFSCs	+		Human	5	6 → 25 years		
Kumar 2018 [34]	DFSCs	+		Human	>= 3	6 → 26 years		Healthy non-decayed teeth
Chen 2018 [109]	DFSCs	+		Rats		7 days		
Wen 2015 [110]	DFSCs	+	First molars	Rats		6 days		
Wen 2011 [111]	DFSCs	-	First molars	Rats		6 days		
Liu 2014 [112]	DFSCs	-	First molars	Rats				
Wu 2013 [113]	DFSCs	-	Impacted third molars	Human	8	13 → 18 years		Teeth at root-developing stage
Wang 2011 [122]	TGPC	-	Tooth germs	Pigs / human fetuses		3 months/ 6 months of gestational age		
Huo 2010 [123]	TGPC	-	Mandibular first molar	Rats		14-day embryonic		

			germ			and 1-day postnatal		
Ye 2015 [124]	TGPC	-	Mandibular first molar germ	Rats		2 days		
Yu 2006 [125]	TGPC	-	Lower incisor	Rats	20			
Shan 2015 [126]	TGPC	-		Mice				
Yang 2009 [127]	TGPC	-	Mandibular first molar germ	Rats	20	8 days		
Yang 2009 [128]	TGPC	-	Mandibular first molar germ	Rats		8 days		
Jin 2020 [114]	GMSC	+		Human	6			
Qiu 2020 [30]	GMSC	+		Human	3	18 → 25 years		
Mao 2019 [115]	GMSC	+		Human	5	20 → 24 years		Healthy human subjects
Wang 2020 [116]	GMSC	+		Human		19 → 26 years		Healthy human subjects
Zhang 2019 [117]	GMSC	+		Human				Healthy human subjects
Rajan 2017 [118]	GMSC	+		Human				Donors without any systemic and oral diseases
Rao 2019 [119]	GMSC	+		Human				healthy patients without a history of periodontal disease
Diomede 2018 [120]	GMSC	+		Human		Adults		Healthy volunteers with no gingival inflammation
Silvestro 2020 [121]	GMSC	-		Human	6	Adults		

Supplementary Table S2: Summary of DMSC sources and donor characteristics in studies using DMSC-CM for tissue regeneration. F: female, M: male, +: characterized, -: not characterized, empty cells mean that data were not provided, DPSC: Dental Pulp Stem Cells, SHED: Stem Cells from Human Exfoliated Deciduous Teeth, PDLSC: Periodontal Ligament Stem Cells, SCAP: Stem Cells from the Apical Papilla, DFPC: Dental Follicle Progenitor Cells, TGPC: Tooth Germ Progenitor Cells, GMSC: Gingival Mesenchymal Stem Cells.

DMSC passage number	References
1	[25], [80], [44], [69], [62], [115]
2	[118], [120], [121], [99], [80], [44], [69], [14], [97], [62], [45], [103], [42], [104], [101], [115], [36], [57]
3	[49], [79], [31], [110], [15], [105], [100], [114], [44], [69], [14], [97], [78], [62], [45], [103], [42], [81], [18], [95], [109], [61], [107], [59], [61], [50], [119], [104], [101], [43], [41], [102], [115], [55], [53], [33], [35], [36], [57], [48], [34], [27], [24], [23], [83], [84], [51]
4	[44], [69], [14], [97], [78], [116], [62], [45], [103], [42], [81], [18], [95], [109], [61], [107], [59], [61], [50], [119], [74], [39], [73], [13], [104], [101], [43], [41], [102], [115], [55], [53], [33], [35], [96], [36], [57], [48], [34], [46], [27], [24], [23], [83], [84], [51], [22]
5	[45], [103], [42], [81], [18], [95], [109], [61], [107], [59], [61], [50], [119], [74], [39], [73], [13], [104], [101], [43], [41], [102], [37], [115], [55], [53], [33], [35], [96], [17], [89], [36], [57], [48], [34], [46], [27], [24], [23], [83], [84], [51], [22], [26]
6	[28], [104], [101], [43], [41], [102], [37], [55], [53], [33], [35], [96], [17], [89], [54], [36], [57], [48], [34], [46], [27], [24], [23], [83], [84], [51], [22], [26]
7	[55], [53], [33], [35], [96], [17], [89], [54], [36], [57], [48], [34], [46], [27], [24], [23], [83], [84], [51], [22], [26]
8	[19], [36], [57], [48], [34], [46], [27], [24], [23], [83], [84], [51], [22], [26]
9	[93], [21], [19], [27], [24], [23], [83], [84], [51], [22], [26]
10	[19]

11	[47]
12	[47]

Supplementary Table S3: Passage number of DMSC used to prepare CM in the literature.

Cell confluency at the beginning of conditioning	**Conditioning period**	**References**
	2 hours	[90]
50%	24 hours	[73], [74]
60%	24 hours	[49], [13], [37], [77]
70%	24 hours	[78], [109], [39], [60], [96]
80%	24 hours	[31], [89], [40]
90%	24 hours	[106]
Full confluence	24 hours	[113], [56], [69]
	24 hours	[68], [98], [79], [80], [47], [102]
50%	48 hours	[76], [72], [71], [75]
60-70%	48 hours	[33], [34]
60-80%	48 hours	[105]
70-80%	48 hours	[48], [27], [24], [23], [22], [26], [19], [85], [28], [83], [84], [93], [59], [50], [21], [51], [100], [101], [116]
80%	48 hours	[14], [81], [92], [20], [88], [87], [30], [63], [94], [67], [61], [40]
80-90%	48 hours	[97]
Full confluence	48 hours	[58]
	48 hours	[43], [54], [16], [62], [55], [53], [36], [57], [38], [82], [45], [18], [95], [35], [103], [102], [115], [119], [42], [121], [99]
70-80%	72 hours	[107], [104]
80%	72 hours	[17], [15], [41], [64], [114], [140]
Full confluence	72 hours	[29], [127]
	72 hours	[25], [66], [102], [118], [120], [119]
70-80%	96 hours	[46]

Full confluence	96 hours	[125], [128], [122], [126], [123]

Supplementary Table S4: DMSC confluency and period of medium conditioning in studies using DMSC-CM for tissue regeneration. Empty cells mean that data were not provided.

Medium			References
Type	Serum	Washing before medium replacement	
DMEM	Serum-free		[49], [79], [78], [18], [95], [74], [73], [13], [62], [37], [76], [88], [87], [72], [85], [60], [27], [77], [94], [67], [61], [96]
DMEM	Serum-free	Once	[14], [23], [22], [19], [21], [51]
DMEM	Serum-free	Twice	[24], [26], [83], [84], [93]
DMEM	Serum-free	Thrice	[92], [20], [59], [41], [101], [97], [114]
DMEM	Serum-free	Three to five times	[48]
DMEM	0.5% FBS	Once	[100]
DMEM	1% FBS		[80]
DMEM	10% FBS		[110], [68], [112], [125], [123]
DMEM	Exosome-free FBS		[82]
DMEM			[75], [111]
Low-glucose DMEM	Serum-free		[17]
Low-glucose DMEM + 2 mM glutamine + 1 mM Sodium pyruvate	Serum-free	Twice	[55]
Glucose free DMEM	2% FBS		[104]
DMEM/F12	Serum-free	Once	
DMEM/F12	10% FBS		[126]
DMEM/F12	10% exosome-depleted FBS		[64]
DMEM/F12	Serum-free		[81]

DMEM/F12	Serum-free	Twice	[107]
KO-DMEM	Serum-free	Thrice	[39]
DMEM/Ham's F12	Serum-free		[29]
DMEM/HBSS			[15]
EBM2			[71]
Alpha-MEM	Serum-free		[30], [89], [28], [105]
Alpha-MEM	Serum-free	Once	[53], [63], [47]
Alpha-MEM	Serum-free	Twice	[98], [107]
Alpha-MEM	Serum-free	Thrice	[38], [33], [34]
Alpha-MEM	Serum-free	Five times	[108], [106]
Alpha-MEM	0.1% FBS	Twice	[45]
Alpha-MEM	0.5% FBS	Twice	[46]
Alpha-MEM	10% FBS		[43], [65], [128], [127], [122]
Alpha-MEM			[44], [124], [35]
Alpha-MEM	Exosome-free FBS		[119]
Alpha-MEM	1% exosome-depleted FBS		[115]
Alpha-MEM	10% exosome-depleted FBS		[116]
Neurobasal-A	Serum-free	Once	[57]
MSC NutriStem XF	Serum-free		[16], [25]
Ham's F-12K	Serum-free		[109]
STK2	Serum-free		[31]

SH-SY5Y	0.1% FBS		[36]
CCM	Exosome-free FBS		[50]
Vesicle-free medium	Vesicle-free serum		[103]
Exosome-free medium			[58]
Odontogenic media	Serum-free	With serum-free media	[56], [69]
TheraPEAK MSCGM-CD	Serum-free		[118], [121], [99]
RPMI	Serum-free		[90]

Supplementary Table S5: Culture medium used for the preparation of DMSC-CM in literature. FBS: fetal bovine serum, empty cells mean that data were not provided.

Microenvironment cues	**References**
3D culture	[16]
Stimulation with NRG1-beta1, bFGF, PDGF and forskolin	[44]
Lipopolysaccharide (LPS)-preconditioning	[50]
	[98]
Hypoxia (1% O2, 5% CO2, and 94% N2)	[68]
Hypoxic preconditioning through stabilization of hypoxia-inducible factor 1α (HIF-1α)	[89]
Oxygen deprivation	[104]
Odontogenic induction	[53], [91], [56], [69]
Osteo-differentiation	[66], [90]
FGF-2 gene-modification using lentiviral transfection	[114]

Supplementary Table S6: The microenvironmental conditions and DMSC population selections used to prepare CM in the literature. Empty cells mean that data were not provided.

Centrifugation	Ultrafiltration	Filtration	Dilution	References
At 726 g for 5min	Concentration with a cutoff of 3-kDa	0.2 µm		[97]
	Concentration with a cutoff of 3 kDa			[72], [71]
At 1800 g for 10 min	Concentration 5X with a cutoff of 3 kDa			[40]
	Concentration 10X with a cutoff of 3 kDa			[79]
	Concentration 25X with a cutoff of 3 kDa			[49], [74], [73]
At 269 g for 6 min	Concentration 25X with cutoff of 3 KDa	0.2 µm		[55]
	Concentration 40X with a cutoff of 3 kDa			[13], [37]
	Concentration 80X with a cutoff of 3 kDa			[77]
	Concentration 10X with a cutoff of 10 kDa			[78], [80]
At 1500 rpm for 5 min → 3000 rpm for 3 min	Concentration 10X with a cutoff of 10 kDa			[14]
At 1000 g for 3 min	Concentration 30X with cutoff of 10 KDa	0.2 µm	2-, 5- 10- fold	[59]
	Concentration 40X with a cutoff of 10 kDa			[28]
At 1000 rpm for 10 min	Concentration 50X with a cutoff of 10 kDa	0.2 µm		[114]
At 173 g for 5min	Concentration 100X with a cutoff of 10 kDa	0.2 µm		[30]
At 1000 rpm for 5 min	Concentration 17 – 31 X and 450 X with a cutoff of 10 kDa	0.2 µm		[101]
At 2500 rpm for 3 min	Concentration with a cutoff of 5 - 30 kDa			[81], [15]
Centrifugation	Concentration 10X			[68]
	Concentration			[60], [76]
At 130 g for 10 min	Concentration	0.2 µm		[106]
At 130 g for 10 min		0.2 µm		[107]
Centrifugation		0.2 µm		[41]

Centrifugation		0.2 µm		[102]
At 310 g for 6 min		0.2 µm		[31]
At 1500 rpm for 5 min → 3000 rpm for 3 min		0.2 µm		[48], [38]
At 3000 rpm for 5 min		0.2 µm		[33], [34]
At 1500 rpm		0.2 µm		[89]
At 250 g for 10 min		0.2 µm		[39]
At 200 g for 5 min		0.2 µm		[104]
At 1000 g for 4 min		0.2 µm		[113]
At 3000 g for 3 min and 1500 g for 5 min		0.2 µm		[100]
		0.2 µm		[66], [98]
At 1000 g for 5 min		0.2 µm		[17]
		0.2 µm	1-fold	[109]
		0.2 µm	1-fold	[110], [111], [112], [124], [128], [123]
At 3000 rpm for 5 min		0.2 µm	1-fold	[35]
At 200 g for 5 min		0.2 µm	1-fold	[46]
At 2000 g for 20 min		0.2 µm	1-fold	[125], [126]
Centrifugation		0.2 µm	1-fold	[122]
Centrifugation		0.2 µm		[41]
At 2000 g for 15 min				[127]
300 g for 10 min → 2000 g for 10 min			1 fold	[96]
		0.45 µm		[43]
At 22140 g for 5 min → 44280 g for 3 min				[27]
At 22140 g for 4–5 min → brief re-				[85], [52]

centrifugation				
At 440 g for 4–5 min →17400 g for 1 min				[86], [23], [84], [21], [51]
At 3000 g for 5 min				[92]
At 3000 g for 15 min				[121], [99]
At 440 g for 5 min →17400 g for 3 min				[87], [83], [94]
At 440 g for 3 min				[93]
At 300 g				[36]
At 22140 g twice for 5 min				[20]
At 1500 rpm for 5 min → 3000 rpm for 3 min				[18], [62], [88], [95], [22]
At 1200 rpm for 5 min → 3000 rpm for 3 min				[120], [118]
At 440 g for 3 min → 17400 g for 3 min				[24]
At 440 g for 3 min → 1740 g for 3 min				[19]
At 440 g for 3 min → 1750 g for 3 min				[26]
At 15000 g for 5 min				[29]
At 300 g for 6 min				[57]

Supplementary Table S7: Summary of CM purification procedures in studies using DMSC-CM for tissue regeneration. Empty cells mean that data were not provided.

Purification of EVs	EV size range (nm)	References
Differential centrifugation/ Ultracentrifugation		[16], [98], [103], [92]
	30–70	[25]
	100	[96]
	120.6	[105]
	40–140	[91]
	135	[56]
	87 - 143	[61]
	30–150	[50], [116]
	30–200	[38]
	30–250	[67]
	50–200	[64]
	50–300	[55]
Isolation using exosome isolation reagent		[39], [69], [121]
	95.8 ± 5.8	[117]
	30–100	[82]
	102	[119]
	103.8 ± 2.1	[115]
	30–150	[53]
	45–156	[58]
	90 ± 20 and 1,200 ± 400	[99]

Supplementary Table S8: Summary of extravesicles (EVs) purification procedures in studies using DMSC-CM derived products for tissue regeneration. Empty cells mean that data were not provided.

DMSC-CM storage	References
Used fresh	[43], [13], [35]
4 ℃	[87], [94], [88], [28]
-20 ℃	[78], [80], [79], [127], [122]
-30 ℃ up to one month	[13]
-70 ℃	[29], [25], [41]
-80 ℃	[88], [28], [35], [55], [68], [92], [66], [14], [17], [39], [36], [38], [110], [46], [48], [45], [30], [57], [109], [91], [34], [107], [59], [111], [112], [113], [56], [105], [61], [123], [104], [103], [102], [64], [97], [114], [116], [40], [74], [73], [16]
-20°C → lyophilization → 4°C	[100]
Protease inhibitor	[13], [74], [73], [16]

Supplementary Table S9: Summary of CM storage conditions in studies using DMSC-CM for tissue regeneration. Empty cells mean that data were not provided.

Characterization methods	**References**
Bradford protein assay	[49], [74], [73], [77], [65], [120], [13], [118]
BCA protein assay	[60], [24], [23], [18], [53], [83], [67], [56], [105], [61], [50], [51], [64], [97], [116], [119], [81], [57], [21], [48], [45], [109], [63], [104], [30], [84], [15], [108], [34], [106]
ELISA	[55], [68], [92], [66], [44], [88], [89], [47], [35], [41], [114], [48], [45], [109], [63], [104], [84], [15], [42]
Antibody array	[81], [57], [21], [48], [45], [109], [63], [104], [28], [84], [15], [101]
Multiplex immunoassay	[31], [102], [90], [13]
Multiplex Bead Array Assays	[40]
LC-MS/MS	[93], [33], [108], [34], [101], [106]
Western blot	[118], [106]
Proton NMR spectroscopy	[40]
Quantitative RT-PCR	[42], [106]

Supplementary Table S10: Summary of CM characterization methods in studies using DMSC-CM for tissue regeneration. BCA: Bicinchoninic Acid, ELISA: Enzyme-Linked Immunosorbent Assay, LC-MS/MS: Liquid Chromatography with Tandem Mass Spectrometry, NMR: Nuclear Magnetic Resonance, RT-PCR: Reverse Transcription Polymerase Chain Reaction. +: done.