

Supplementary material 1 Keyword-based clustering summary.

Selected	ClusterID	Size	Silhouette	mean(Year)	Label (LSI)	Label (LLR)	Label (MI)
false	0	89	0.714	2014	mesenchymal stem cells; knee osteoarthritis; osteochondrosis dissecans; bone marrow concentration; medial patella luxation tissue engineering; mesenchymal stem cell; adipose stem cell; knee osteoarthritis; osteochondrosis dissecans	tissue engineering (34.82, 1.0E-4); osteoarthritis (23.2, 1.0E-4); meniscus (17.15, 1.0E-4); regeneration (16.43, 1.0E-4); mesenchymal stem cells (16.36, 1.0E-4)	bone marrow concentration (1.45); allografts (1.45)
false	1	81	0.683	2015	mesenchymal stem cells; cartilage repair; cell therapy; supramolecular hydrogels; tissue chondrogenic differentiation; stem cell; knee osteoarthritis; cross linking; cruciate ligament	gene expression (18.84, 1.0E-4); synovial fluid (17.08, 1.0E-4); chondrogenic differentiation (16.56, 1.0E-4); human articular chondrocyte (14.73, 0.001); rheumatoid arthritis (14.73, 0.001)	egf (0.81); epigenetics (0.81); bmp-9 (0.81); doubl
false	2	75	0.694	2016	mesenchymal stem cells; adipose-derived stromal cells; wrist osteoarthritis; animal models; biologic therapy platelet-rich plasma; regenerative medicine; musculoskeletal diseases; bone-marrow aspirate; saline	platelet rich plasma (58.39, 1.0E-4); platelet-rich plasma (39.85, 1.0E-4); hyaluronic acid (36.66, 1.0E-4); knee osteoarthritis (28.88, 1.0E-4); injection (27.25, 1.0E-4)	biotherapy (1.06); cell source (1.06); fibrinogen
false	3	68	0.626	2016	mesenchymal stem cells; regenerative medicine; extracellular vesicles; trophic factors; immune modulation mesenchymal stem cell; stromal vascular fraction; knee osteoarthritis; adipose-derived stem cells; adipose tissue	umbilical cord blood (21.09, 1.0E-4); cartilage defect (17.45, 1.0E-4); stromal cells (16.87, 1.0E-4); cartilage injury (13.23, 0.001); cartilage regeneration (13.17, 0.001)	cultured (0.7); compressive loading (0.7); collage
false	4	62	0.694	2017	subchondral bone; platelet-rich plasma; intra-osseous infiltration;	subchondral bone (77.13, 1.0E-4); tgf beta (25.19,	orthopedic (0.43); m6a

					gene delivery; mesenchymal stromal cells mesenchymal stem; growth factor; murine knee; acid repeat; mesenchymal stem cells	1.0E-4); mesenchymal stem cells (16.22, 1.0E-4); tissue engineering (12.96, 0.001); cartilage repair (12.28, 0.001)	(0.43); eswt (0.43); osteoa
false	5	60	0.634	2016	intra-articular injection; stromal vascular fraction; articular cartilage; bone marrow concentrate; mesenchymal stem cell mesenchymal stem cells; adipose tissue; cartilage repair; infrapatellar fat pad; partial meniscectomy	intra-articular injection (23.35, 1.0E-4); adipose-derived mesenchymal stem cells (14.72, 0.001); intra-articular injections (11.96, 0.001); intra-articular injection (11.96, 0.001); cellular therapy (11.45, 0.001)	interleukin-1 (0.38); transgenic mice (0.38); peri
false	6	46	0.75	2017	extracellular vesicles; oxidative stress; adipose tissue-derived mesenchymal stem cells; bone marrow; stromal stem cells mesenchymal stem cells; antigen-induced arthritis; cartilage cells; mesenchymal stromal cell; marrow-derived mesenchymal stromal cell	receptor (21.34, 1.0E-4); posttraumatic osteoarthritis (16.48, 1.0E-4); oxidative stress (12.21, 0.001); osteoarthritis (oa) (10.84, 0.001); bone marrow (10.8, 0.005)	post-traumatic osteoarthritis (ptoa) (0.36); me
false	7	37	0.698	2017	regenerative medicine; cartilage regeneration; extracellular vesicles; cell-free therapy; to-cell communication cell therapy; rheumatic diseases; cartilage repair; immune modulation; posttraumatic osteoarthritis	regenerative medicine (39.64, 1.0E-4); cell therapy (36.75, 1.0E-4); rheumatic diseases (17.12, 1.0E-4); mesenchymal stromal cells (14.44, 0.001); polycaprolactone (11.41, 0.001)	same surgical procedure exemption (0.29); nanom
false	8	25	0.855	2014	mesenchymal stem cells; adipose tissue; hyaline cartilage; anterior cruciate ligament; gene therapy	adipose tissue (12.59, 0.001); hyaline cartilage (11.04, 0.001); cartilage	serum-free (0.32);

				cartilage repair; growth factor; infrapatellar fat pad-derived mesenchymal stem cells; human bone; dental pulp	regeneration (8.6, 0.005); regeneration (7.94, 0.005); stem cells (5.91, 0.05)	craniofacial (0.32); cell pr
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