

Blyscan Assay Citations in Scientific Literature

2010

Allen, K.A., Brown, R.L., Norris, G., Tyler, P.C., Watt, D.K. and Zubkova, O.V. (2010) Syntheses of novel azasugar-containing mimics of heparan sulfate fragments as potential heparanase inhibitors. *Carbohydrate Research*, doi:10.1016/j.carres.2010.05.032.

Articular Cartilage

Bae, J.Y., Han, D.W., Matsumura, K., Wakitani, S., Nawata, M. and Hyon, S.H. (2010) Nonfrozen Preservation of Articular Cartilage by Epigallocatechin-3-Gallate Reversibly Regulating Cell Cycle and NF- κ B Expression. *Tissue Engineering Part A*, **16**, 595.

Bronchial Epithelial Cell Lines, C38 and IB3-1, and Primary, Normal Human Bronchial/Tracheal Epithelial Cells

Bhattacharyya, S., Solakyildirim, K., Zhang, Z., Chen, M.L., Linhardt, R.J. and Tobacman, J.K. (2010) Cell-Bound IL-8 Increases in Bronchial Epithelial Cells after Arylsulfatase B Silencing due to Sequestration with Chondroitin-4-Sulfate. *American Journal of Respiratory Cell and Molecular Biology*, **42**, 51-61.

Rat Kidney Epithelial Cells

Bhattacharyya, S., Kotlo, K., Danziger, R. and Tobacman, J.K. (2010) Arylsulfatase B regulates interaction of chondroitin-4-sulfate and kininogen in renal epithelial cells. *Biochimica et Biophysica Acta (BBA)-Molecular Basis of Disease*, **1802**, 472-477.

Adult Human Bone Marrow-Derived Multipotent Progenitor Cells

Bobick, B.E., Tuan, R.S. and Chen, F.H. (2010) The intermediate filament vimentin regulates chondrogenesis of adult human bone marrow-derived multipotent progenitor cells. *Journal of Cellular Biochemistry*, **109**, 265-276.

Synovial Fluid from Equine Joints

Boom, R., Lest, C.H.A., Bull, S., Brama, P.A.J., Weeren, P.R. and Barneveld, A. (2010) Influence of repeated arthrocentesis and exercise on synovial fluid concentrations of nitric oxide, prostaglandin E₂ and glycosaminoglycans in healthy equine joints. *Equine Veterinary Journal*, **37**, 250-256.

Porcine IFP (Infrapatellar Fat Pad) Derived Mesenchymal Stem Cells

Buckley, C.T., Vinardell, T., Thorpe, S.D., Haugh, M.G., Jones, E., McGonagle, D. and Kelly, D.J. (2010) Functional properties of cartilaginous tissues engineered from infrapatellar fat pad-derived mesenchymal stem cells. *Journal of Biomechanics*, **43**, 920-926.

Human Certified Collagen I-Bone Hybrid Matrix Seeded With Human Bone Marrow Stromal Cells

Budde, S., Jagodzinski, M., Wehmeier, M., Hurschler, C., Richter, B., Broese, M., Paulsen, F., Tschernig, T., Krettek, C. and Haasper, C. (2010) No Effect In Combining Chondrogenic Predifferentiation And Mechanical Cyclic Compression On Osteochondral Constructs Stimulated In A Bioreactor. *Annals of Anatomy-Anatomischer Anzeiger* doi:10.1016/j.aanat.2010.04.001.

Poly- ϵ -Caprolactone Nanofiber Scaffolds Seeded *In Vivo* with Rabbit Periosteal Cells

Casper, M.E., Fitzsimmons, J.S., Stone, J.J., Meza, A.O., Huang, Y., Ruesink, T.J., O'Driscoll, S.W. and Reinholz, G.G. (2010) Tissue Engineering of Cartilage using Poly- ϵ -Caprolactone Nanofiber Scaffolds Seeded in vivo with Periosteal Cells. *Osteoarthritis and Cartilage* **18**, 981-991.

Human Neonatal Knee Articular Chondrocytes

Cheon,Y.W., Lee,W.J., Baek,H.S., Lee,Y.D., Park,J.C., Park,Y.H., Ki,C.S., Chung,K.H. and Rah,D.K. (2010) Enhanced Chondrogenic Responses of Human Articular Chondrocytes Onto Silk Fibroin/Wool Keratose Scaffolds Treated With Microwave-Induced Argon Plasma. *Artificial Organs*, **34**, 384-392.

Human Osteosarcomas

Eikenes,L., Tufto,I., Schnell,E.A., Bjørkøy,A. and de Lange Davies,C. (2010) Effect of Collagenase and Hyaluronidase on Free and Anomalous Diffusion in Multicellular Spheroids and Xenografts. *Anticancer Research*, **30**, 359 - 368.

Bovine Articular Cartilage Explants

Elder,B.D., Kim,D.H. and Athanasiou,K.A. (2010) Developing an Articular Cartilage Decellularization Process Toward Facet Joint Cartilage Replacement. *Neurosurgery*, **66**, 722 - 727.

Murine Mandibular Condylar Chondrocyte (MCC)

Embree,M.C., Kilts,T.M., Ono,M., Inkson,C.A., Syed-Picard,F., Karsdal,M.A., Oldberg,A., Bi,Y. and Young,M.F. (2010) Biglycan and Fibromodulin Have Essential Roles in Regulating Chondrogenesis and Extracellular Matrix Turnover in Temporomandibular Joint Osteoarthritis. *American Journal of Pathology*, **176**, 812 - 826.

Leporine Meniscus Cell-Seeded PLLA Scaffolds

Gunja,N.J. and Athanasiou,K.A. (2010) Additive and synergistic effects of bFGF and hypoxia on leporine meniscus cell-seeded PLLA scaffolds. *Journal of Tissue Engineering and Regenerative Medicine*, **4**, 115-122.

Chondrocytes Cultured in a Poly(L-lactic acid) (PLLA)-Collagen Hybrid Sponge

He,X., Lu,H., Kawazoe,N., Tateishi,T. and Chen,G. (2010) A Novel Cylinder-Type Poly (L-Lactic Acid)-Collagen Hybrid Sponge for Cartilage Tissue Engineering. *Tissue Engineering Part C: Methods*, **16**, 329.

Human Inner Annulus Fibrosus (AF) and Nucleus Pulposus (NP) Tissues

Hee,H.T., Zhang,J. and Wong,H.K. (2010) Effects of cyclic dynamic tensile strain on previously compressed inner annulus fibrosus and nucleus pulposus cells of human intervertebral disc-an in vitro study. *Journal of Orthopaedic Research*, **28**, 503-509.

Human Umbilical Cord Matrix Cells (HUCMs) and Adipose-Derived Stem Cells (ASCs)

Hildner,F., Wolbank,S., Redl,H., van Griensven,M. and Peterbauer,A. (2010) How chondrogenic are human umbilical cord matrix cells? A comparison to adipose-derived stem cells. *Journal of Tissue Engineering and Regenerative Medicine*, **4**, 242-245.

Nucleus Pulposus Cells

Hiyama,A., Gogate,S.S., Gajghate,S., Mochida,J., Shapiro,I.M. and Risbud,M.V. (2010) BMP-2 and TGF- stimulate expression of 1, 3-glucuronosyl transferase 1 (GlcAT-1) in nucleus pulposus cells through AP1, TonEBP, and Sp1: Role of MAPKs. *Journal of Bone and Mineral Research*, **25**, 1179-1190.

Human Cervical Cells

House,M., Sanchez,C.C., Rice,W.L., Socrate,S., Kaplan,D.L., Medford,M.A., House,M.D., Sanchez,C., Socrate,S. and Kaplan,D.L. (2010) Cervical Tissue Engineering Using Silk Scaffolds and Human Cervical Cells Tissue Engineering Part A, **16**, 2101-2112.

Stratified Osteochondral Graft

Jiang,J., Tang,A., Ateshian,G.A., Guo,X.E., Hung,C.T. and Lu,H.H. (2010) Bioactive Stratified Polymer Ceramic-Hydrogel Scaffold for Integrative Osteochondral Repair. *Annals of Biomedical Engineering*, **38**, 2183-2196.

Umbilical Cord Blood-Derived MSCs (UCB-MSCs)

Jin,H.J., Nam,H.Y., Bae,Y.K., Kim,S.Y., Im,I.R., Oh,W., Yang,Y.S., Choi,S.J. and Kim,S.W. (2010) GD2 expression is closely associated with neuronal differentiation of human umbilical cord blood-derived mesenchymal stem cells. *Cellular and Molecular Life Sciences*, **67**, 1845-1858.

Mesenchymal Stem Cells

Kalfa,D., Bel,A., Chen-Tournoux,A., la Martina,A., Rochereau,P., Coz,C., Bellamy,V., Bensalah,M., Vanneaux,V. and Lecourt,S. (2010) A polydioxanone electrospun valved patch to replace the right ventricular outflow tract in a growing lamb model. *Biomaterials*, **31**, 4056 - 4063.

Bone Marrow-Derived MSCs (BMMSCs) and Adipose Tissue-Derived MSCs (ATMSCs)

Kim,H.J. and Im,G.I. (2010) The Effects of ERK1/2 Inhibitor on the Chondrogenesis of Bone Marrow-and Adipose Tissue-Derived Multipotent Mesenchymal Stromal Cells. *Tissue Engineering Part A*, **16**, 851.

Mesenchymal Stem Cells on PCL (poly(ϵ -caprolactone) Scaffold

Kim,H.J., Lee,J.H. and Im,G.I. (2010) Chondrogenesis using mesenchymal stem cells and PCL scaffolds. *Journal of Biomedical Materials Research Part A*, **92**, 659-666.

Rabbit Articular Cartilage Explants

Kim,J., Kim,T., Park,S., Kim,H., Kim,S., Lee,S. and Lee,S. (2010) Protective Effects of Human Placenta Extract on Cartilage Degradation in Experimental Osteoarthritis. *Biological & Pharmaceutical Bulletin*, **33**, 1004-1010.

Human Stem Cell Factor (SCF)

Kishimoto,S., Oonuma,F., Nakamura,S., Hattori,H., Nakamura,S., Mori,Y., Tanaka,Y., Harada,Y., Tagawa,M. and Ishihara,M. (2010) Immobilization, stabilization, and activation of human stem cell factor (SCF) on fragmin/protamine microparticle (F/P MP)-coated plates. *Journal of Biomedical Materials Research Part B: Applied Biomaterials*, **92**, 32-39.

Human Bone Marrow-Derived Mesenchymal Stem Cells

Korecki,C.L., Taboas,J.M., Tuan,R.S. and Iatridis,J.C. (2010) Notochordal cell conditioned medium stimulates mesenchymal stem cell differentiation toward a young nucleus pulposus phenotype. *Stem Cell Research & Therapy* **1**,18.

Adipose-Tissue-Derived Mesenchymal Stem Cells

Lim,S.M., Jang,S.H., Oh,S.H., Yuk,S.H., Im,G.I. and Lee,J.H. (2010) Dual-Growth-Factor-Releasing PCL Scaffolds for Chondrogenesis of Adipose-Tissue-Derived Mesenchymal Stem Cells. *Advanced Engineering Materials*, **12**, B62-B69.

Ovine Forestomach

Lun,S., Irvine,S.M., Johnson,K.D., Fisher,N.J., Floden,E.W., Negron,L., Dempsey,S.G., McLaughlin,R.J., Vasudevamurthy,M. and Ward,B.R. (2010) A functional extracellular matrix biomaterial derived from ovine forestomach. *Biomaterials* **31**, 4517-4529.

Murine Articular Joint Cartilage

Miyaki,S., Sato,T., Inoue,A., Otsuki,S., Ito,Y., Yokoyama,S., Kato,Y., Takemoto,F., Nakasa,T. and Yamashita,S. (2010) MicroRNA-140 plays dual roles in both cartilage development and homeostasis. *Genes & Development*, **24**, 1173.

Low-Molecular-Weight Heparin/Protamine Nanoparticles (LMW-H/P NPs)

Mori, Y., Nakamura, S., Kishimoto, S., Kawakami, M., Suzuki, S., Matsui, T. and Ishihara, M. (2010) Preparation and characterization of low-molecular-weight heparin/protamine nanoparticles (LMW-H/P NPs) as FGF-2 carrier. *Int J Nanomedicine*, **5**, 147-155.

Developing Tissue Engineered Articular Cartilage

Natoli, R.M., Skaalure, S., Bijlani, S., Chen, K.X., Hu, J. and Athanasiou, K.A. (2010) Intracellular Na⁺ and Ca²⁺ modulation increases the tensile properties of developing engineered articular cartilage. *Arthritis & Rheumatism*, **62**, 1097-1107.

Rat Articular Cartilage

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Park, H., Karajanagi, S., Wolak, K., Aanestad, J., Daheron, L., Kobler, J.B., Lopez-Guerra, G., Heaton, J.T., Langer, R.S. and Zeitels, S.M. (2010) Three-Dimensional Hydrogel Model Using Adipose-Derived Stem Cells for Vocal Fold Augmentation. *Tissue Engineering Part A*, **16**, 535 - 543.

Decellularized Porcine Tracheal Extracellular Matrix

Remlinger, N.T., Czajka, C.A. and Juhas, M.E. (2010) Hydrated xenogeneic decellularized tracheal matrix as a scaffold for tracheal reconstruction. *Biomaterials*, **31**, 3520 - 3526.

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Rabbit Articular Chondrocytes

Schagemann, J.C., Chung, H.W., Mrosek, E.H., Stone, J.J., Fitzsimmons, J.S., O'Driscoll, S.W. and Reinholz, G.G. (2010) Poly-ε-caprolactone/gel hybrid scaffolds for cartilage tissue engineering. *Journal of Biomedical Materials Research Part A*, **93**, 454-463.

Vascularised Human Tissue Models

Schanz, J., Pusch, J., Hansmann, J. and Walles, H. (2010) Vascularised human tissue models: A new approach for the refinement of biomedical research. *Journal of Biotechnology*, **148**, 56-63.

Human Corneal Limbal Epithelial Cells (HCLEC)

Song, J., Li, Y., Ge, J., Duan, Y., Sze, S.C.W., Tong, Y., Shaw, P.C., Ng, T.B., Tsui, K.C. and Zhuo, Y. (2010) Protective effect of bilberry (*Vaccinium myrtillus* L.) extracts on cultured human corneal limbal epithelial cells (HCLEC). *Phytotherapy Research*, **24**, 520 - 524.

Tissue Engineered Vascular Graft

Stickler, P., De Visscher, G., Mesure, L., Famaey, N., Martin, D., Campbell, J.H., Van Oosterwyck, H., Meuris, B. and Flameng, W. (2010) Cyclically stretching developing tissue in vivo enhances mechanical strength and organisation of vascular grafts. *Acta Biomaterialia*, **6**, 2448-2456.

Rabbit Auricular Chondrocytes

Tani,G., Usui,N., Kamiyama,M., Oue,T. and Fukuzawa,M. (2010) In vitro construction of scaffold-free cylindrical cartilage using cell sheet-based tissue engineering. *Pediatric Surgery International*, **26**, 179-185.

Hyaluronan Hydrogel-Encapsulated Human Embryonic Stem Cell-Derived Chondrogenic Cells

Toh,W.S., Lee,E.H., Guo,X.M., Chan,J.K.Y., Yeow,C.H., Choo,A.B. and Cao,T. (2010) Cartilage repair using hyaluronan hydrogel-encapsulated human embryonic stem cell-derived chondrogenic cells. *Biomaterials*, **31**, 6968-6980.

Fetal Lamb Cervical Trachea

Turner,C.G.B., Klein,J.D., Ahmed,A., Zurakowski,D. and Fauza,D.O. (2010) A Large Animal Model of the Fetal Tracheal Stenosis/Atresia Spectrum. *Journal of Surgical Research*, doi: 10.1016/j.jss.2010.02.037.

Goat Chondrons and Chondrocytes from Articular Cartilage, Nucleus Pulposus and Annulus Fibrosus

Vonk,L.A., Doulabi,B.Z., Huang,C.L., Helder,M.N., Everts,V. and Bank,R.A. (2010) Preservation of the chondrocyte's pericellular matrix improves cell-induced cartilage formation. *Journal of Cellular Biochemistry*, **110**, 260-271.

Bovine Nasal Cartilage

Zheng,S.K. and Xia,Y. (2010) The Impact of the Relaxivity Definition on the Quantitative Measurement of Glycosaminoglycans in Cartilage by MRI dGEMRIC Method. *Magnetic Resonance in Medicine: Official Journal of the Society of Magnetic Resonance in Medicine/Society of Magnetic Resonance in Medicine*, **63**, 25 - 32.

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Goat Articular Chondrocytes (ACs) and Costal Chondrocytes (CCs)

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Brain and Somatic Organ Tissue

Aronovich,E.L., Bell,J.B., Khan,S.A., Belur,L.R., Gunther,R., Koniar,B., Schachern,P.A., Parker,J.B., Carlson,C.S. and Whitley,C.B. (2009) Systemic Correction of Storage Disease in MPS I NOD/SCID Mice Using the Sleeping Beauty Transposon System. *Molecular Therapy*, **17**, 1136-1144.

Bovine Articular Chondrocytes

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Bhattacharyya,S. and Tobacman,J.K. (2009) Arylsulfatase B regulates colonic epithelial cell migration by effects on MMP9 expression and RhoA activation. *Clinical & Experimental Metastasis*, **26**, 535-545.

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Articular Cartilage from Facet Joint

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Mesenchymal Stem Cells

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Co-Cultures of ACs and MCs

Gunja,N.J., Huey,D.J., James,R.A. and Athanasiou,K.A. (2009) Effects of agarose mould compliance and surface roughness on self-assembled meniscus-shaped constructs. *Journal of tissue engineering and regenerative medicine*, **3**, 521-530.

Co-Cultures of Meniscus Cells and Articular Chondrocytes

Gunja,N.J. and Athanasiou,K.A. (2009) Effects of co-cultures of meniscus cells and articular chondrocytes on PLLA scaffolds. *Biotechnology and Bioengineering*, **103**, 808-816.

Meniscus Cells

Gunja,N.J., Uthamanthil,R.K. and Athanasiou,K.A. (2009) Effects of TGF-B1 and hydrostatic pressure on meniscus cell-seeded scaffolds. *Biomaterials*, **30**, 565-573.

Human Bone Marrow Stromal cells (hBMSCs)

Haasper,C., Colditz,M., Budde,S., Hesse,E., Tschernig,T., Frink,M., Krettek,C., Hurschler,C. and Jagodzinski,M. (2009) Perfusion and cyclic compression of mesenchymal cell-loaded and clinically applicable osteochondral grafts. *Knee surgery, sports traumatology, arthroscopy: official journal of the ESSKA*, doi: 10.1007/s00167-009-0791-3.

Articular Cartilages from Human Knee Joint

Han,D.W., Bae,J.Y. and Hyon,S.H. (2009) Biochemical and Histological Evaluations of Articular Cartilages Preserved in Cold Storage Solution Containing Green Tea Catechin, EGCG. *Tissue Engineering and Regenerative Medicine*, **6**, 380-387.

Chondrocytes in a Hybrid Sponge

He,X., Lu,H., Kawazoe,N., Tateishi,T. and Chen,G. (2009) A Novel Cylinder-Type Poly (L-Lactic Acid)-Collagen Hybrid Sponge for Cartilage Tissue Engineering. *Tissue Engineering Part C: Methods*, doi: 10.1089/ten.tec.2008.0703.

Human Mesenchymal Stem Cells

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Nucleus Pulposus Cells

Hiyama,A., Gogate,S.S., Gajghate,S., Mochida,J., Shapiro,I.M. and Risbud,M.V. (2009) BMP-2 and TGF Stimulate Expression of 1, 3 Glucuronosyl Transferase-I (GlcAT-I) in Nucleus Pulposus Cells Through AP1, TonEBP and Sp1: Role of Map Kinases. *Journal of Bone and Mineral Research*, doi: 10.1359/jbmr.091202.

Human Embryonic Stem Cells (hESCs)

Hoben,G.M., Willard,V.P. and Athanasiou,K.A. (2009) Fibrochondrogenesis of hESCs: Growth Factor Combinations and Cocultures. *Stem Cells and Development*, **18**, 283-292.

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Human Umbilical Cord Blood-Derived Mesenchymal Stem Cells

Jin,H.J., Park,S.K., Oh,W., Yang,Y.S., Kim,S.W. and Choi,S.J. (2009) Down-regulation of CD105 is associated with multi-lineage differentiation in human umbilical cord blood-derived mesenchymal stem cells. *Biochemical and Biophysical Research Communications*, **381**, 676-681.

Human Stromal Vascular Fraction Cells

Jurgens,W.J.F.M., van Dijk,A., Doulabi,B.Z., Niessen,F.B., Ritt,M.J.P.F., van Milligen,F.J. and Helder,M.N. (2009) Freshly isolated stromal cells from the infrapatellar fat pad are suitable for a one-step surgical procedure to regenerate cartilage tissue. *Cytotherapy*, **11**, 1052-1064.

Rabbit Mesenchymal Stem Cells and Nucleus Pulposus Cells

Kim,D.H., Kim,S.H., Heo,S.J., Shin,J.W., Lee,S.W., Park,S.A. and Shin,J.W. (2009) Enhanced differentiation of mesenchymal stem cells into NP-like cells via 3D co-culturing with mechanical stimulation. *Journal of Bioscience and Bioengineering*, **108**, 63-67.

Adipose Tissue-Derived Mesenchymal Stem Cells and Bone Marrow-Derived Mesenchymal Stem Cells

Kim,H.J. and Im,G.I. (2009) Chondrogenic differentiation of adipose tissue-derived mesenchymal stem cells: Greater doses of growth factor are necessary. *Journal of Orthopaedic Research*, **27**, 612-619.

Bone Marrow Devived Mesenchymal Stem Cells and Adipose Tissue-Derived Mesenchymal Stem Cells

Kim,H-J. and Im,G-II. The Effects of ERK1/2 Inhibitor on the Chondrogenesis of Bone Marrow- and Adipose Tissue-Derived Multipotent Mesenchymal Stromal Cells. (2009) *Tissue Engineering Part A*, **16**, 851 - 860.

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Rabbit Costal Cartilages

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Murine Liver Tissue and Brain Cortex

Malinowska,M., Wilkinson,F.L., Bennett,W., Langford-Smith,K.J., O'Leary,H.A., Jakobkiewicz-Banecka,J., Wynn,R., Wraith,J.E., Wegrzyn,G. and Bigger,B.W. (2009) Genistein reduces lysosomal storage in peripheral tissues of mucopolysaccharide IIIB mice. *Molecular Genetics and Metabolism*, **98**, 235-242.

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Porcine Vocal Fold Fibroblasts

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Chondrocytes Seeded in Non-Adherent Agarose Molds

Natoli,R.M., Revell,C.M. and Athanasiou,K.A. (2009) Chondroitinase ABC Treatment Results in Greater Tensile Properties of Self-Assembled Tissue-Engineered Articular Cartilage. *Tissue Engineering Part A*, **15**, 3119-3128.

Bovine Chondrocytes

Natoli,R.M., Responde,D.J., Lu,B.Y. and Athanasiou,K.A. (2009) Effects of multiple chondroitinase ABC applications on tissue engineered articular cartilage. *Journal of Orthopaedic Research*, **27**, 949-956.

Mesenchymal Stem Cells

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Rabbit Bone Marrow Cells

Ohyabu,Y., Tanaka,J., Ikada,Y. and Uemura,T. (2009) Cartilage tissue regeneration from bone marrow cells by RWV bioreactor using collagen sponge scaffold. *Materials Science & Engineering C*, **29**, 1150-1155.

Bone Marrow Derived Mesenchymal Stem Cells

Ramaswamy,S., Gottlieb,D., Engelmayr,G.C., Aikawa,E., Schmidt,D.E., Gaitan-Leon,D.M., Sales,V.L., Mayer,J.E. and Sacks,M.S. (2009) The role of organ level conditioning on the promotion of engineered heart valve tissue development *in-vitro* using mesenchymal stem cells. *Biomaterials*, doi: 10.1016/j.biomaterials.2009.10.019.

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Ovine Peripheral Blood Progenitor Cells

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