LACTEL Absorbable Polymers

Recent References on the Use of LACTEL® Absorbable Polymers for Tissue Engineering Applications

L00360 Thomas M, Arora A, Katti D. Surface hydrophilicity of PLGA fibers governs in vitro mineralization and osteogenic differentiation. Materials Science & Engineering C-Materials for Biological Applications 2017; 45:320-332. >>> Poly(DL-lactide-co-glycolide); 85:15; Tissue engineering (microfibers, orthopedic, bone regeneration); Electrospinning; in vitro mineralization of microfiber meshes; control of surface hydrophobicity to improve performance.

L00338 Karaman O, Kumar A, Moeinzadeh S, He X, Cui T, Jabbari E. Effect of surface modification of nanofibres with glutamic acid peptide on calcium phosphate nucleation and osteogenic differentiation of marrow stromal cells. Journal of tissue engineering and regenerative medicine 2017; 10:E132-E146. >>> Poly(DL-lactide-co-glycolide); 50:50; IV 1.1 dL/g - MW 105 kDa; Tissue engineering (nanofibers); rat; formation of microsheets; effects on osteogenic differentiation of rat marrow stromal cells; "potentially useful as a biomimetic matrix in the regeneration of skeletal tissues" (pg. E144).

L00345 Caminal M, Peris D, Fonseca C, Barrachina J, Codina D, Rabanal RM et al. Cartilage resurfacing potential of PLGA scaffolds loaded with autologous cells from cartilage, fat, and bone marrow in an ovine model of osteochondral focal defect. Cytotechnology 2016; 68:907-919. >>> Poly(DL-lactide-co-glycolide); 50:50, 75:25; IV 0.55-0.75 dL/g; Tissue engineering (scaffold); scaffolds prepared using a solution-casting/salt-leaching technique.

L00322 Baker SR, Banerjee S, Bonin K, Guthold M. Determining the mechanical properties of electrospun poly-epsilon-caprolactone (PCL) nanofibers using AFM and a novel fiber anchoring technique. Materials Science & Engineering C-Materials for Biological Applications 2016; 59:203-212. >>> Poly(e-caprolactone); IV 1.0-1.3 dL/g in chloroform - MW 120-300 kDA; Tissue engineering; electrospinning.

L00344 Birthare K, Shojaee M, Jones CG, Brenner JR, Bashur CA. Collagen incorporation within electrospun conduits reduces lipid oxidation and impacts conduit mechanics. Biomedical Materials 2016; 11(025019). >>> Poly(e-caprolactone); IV 1.0-1.3 dL/g in chloroform; Tissue engineering (vascular scaffold); rat; electrospinning.

L00362 Leong NL, Kabir N, Arshi A, Nazemi A, Jiang J, Wu B et al. Use of Ultra-High Molecular Weight Polycaprolactone Scaffolds for ACL Reconstruction. Journal of Orthopaedic Research 2016; 34:828-835. >>> Poly(e-caprolactone); MW 500 kDa, 80 kDa; Tissue engineering (scaffold);

L00361 Keeney M, Chung MT, Zielins ER, Paik KJ, McArdle AMSD, Ransom RCBN et al. Scaffold-mediated BMP-2 minicircle DNA delivery accelerated bone repair in a mouse critical-size calvarial defect model. Journal of Biomedical Materials Research A 2016; 104A(8):2099-2107. >>> Poly(DL-lactide-co-glycolide) ester terminated; 85:15; IV 0.55-0.75 dL/g; Tissue engineering (scaffold containing DNA); mice (CD-1 nude); DNA encoded for BMP-2, luciferase or green fluorescent protein; targeted delivery (bone defect); scaffold prepared using a supercritical CO2 method; achieved sustained delivery over 2 months.

L00285 Chia HN, Wu BM. High-resolution direct 3D printed PLGA scaffolds: print and shrink. Biofabrication 2015; 7(1):1-11. >>> Poly(DL-lactide-co-glycolide); 85:15; IV 0.63 dL/g; Tissue engineering (scaffold); microparticles formed by emulsion solvent evaporation; 3D printing.

L00321 You JO, Rafat M, Almeda D, Maldonado N, Guo P, Nabzdyk CS et al. pH-responsive scaffolds generate a pro-healing response. Biomaterials 2015; 57:22-32. >>> Poly(DL-lactide-co-glycolide); 50:50; Tissue engineering (scaffold); Scaffolds created by dissolving PLG in chloroform, mixing with sieved sucrose particles and drying until all solvent evaporated.

L00328 Stevanovic M, Filipovic N, Djurdjevic J, Lukic M, Milenkovic M, Boccaccini A. 45S5 Bioglass(R)-based scaffolds coated with selenium nanoparticles or with poly(lactide-co-glycolide)/selenium particles: Processing, evaluation and antibacterial activity. COLLOIDS AND SURFACES B-BIOINTERFACES 2015; 132:208-215. >>> Poly(DL-lactide-co-glycolide); 50:50; MW 40-50 kDa in acetone; Tissue engineering (scaffold); PLGA/SeNp microspheres were produced using a physicochemical solvent/nonsolvent method.

L00314 Ahn H, Ju YM, Takahashi H, Williams DF, Yoo, J.J. et al. Engineered small diameter vascular grafts by combining cell sheet engineering and electrospinning technology. Acta Biomaterialia 2015; 16:14-22. >>> Poly(e-caprolactone); IV 1.77 dL/g; Tissue engineering (vascular graft); electrospinning.

L00317 Barati D, Walters JD, Shariati SRP, Moeinzadeh, S., Jabbari E. Effect of Organic Acids on Calcium Phosphate Nucleation and Osteogenic Differentiation of Human Mesenchymal Stem Cells on Peptide Functionalized Nanofibers. Langmuir 2015; 31:5130-5140. >>> Poly(DL-lactide); Poly(DL-lactide-co-glycolide); 50:50; DLPLA: IV 0.65 dL/g & Mw 90 kDa; PLGA: IV 1.1 dL/g & Mw 105 kDa; Tissue engineering (orthopedic); electrospinning.

L00313 Castro NJ, O'Brien J, Zhang LG. Integrating biologically inspired nanomaterials and table-top stereolithography for 3D printed biomimetic osteochondral scaffolds. Nanoscale 2015; 7:14010-14022. >>> Poly(DL-lactide-co-glycolide); Drug delivery (nanospheres, TGF-B1); Tissue engineering (scaffold); nanospheres fabricated by coaxial electrospraying; 3D printing of PLGA.

L00340 Castro NJ, O'Brien C, Zhang LG. Integrating biologically inspired nanomaterials and table-top stereolithography for 3D printed biomimetic osteochondral scaffolds. Nanoscale 2015; 7:14010-14022. >>> Poly(DL-lactide-co-glycolide); Tissue engineering (scaffold, 3D printing); "3D printer and the nano-ink (i.e., nHA + nanosphere + hydrogel) were employed to fabricate a porous and highly interconnected osteochondral scaffold with hierarchical nano-to-micro structure and spatiotemporal bioactive factor gradients" (pg. 14010); 3D scaffold design and printing (pg. 14012).

L00339 Ferdous J, Kolachalama VB, Kolandaivelu K, Shazly T. Degree of bioresorbable vascular scaffold expansion modulatesloss of essential function. Acta Biomaterialia 2015; 26:195-204. >>> Poly(DL-lactide-co-glycolide) ester terminated; 50:50; IV 0.82 dL/g; Tissue engineering (scaffold, vascular); pg. 198; treatment of obstructive artery disease; degradation, mechanical, and in vitro drug release testing.

L00368 Petrigliano FA, Arom G, Nazemi A, Yeranosian M, Wu B, McAllister DR. In vivo evaluatin of electrospun polycaprolactone graft for anterior cruciate ligament engineering. Tissue Engineering Part A 2015; 21(7, 8):1228-1236. >>> Poly(e-caprolactone); MW 110 kDa; Tissue engineering (orthopedic, ACL); Rat (Sprague-Dawley); Electrospinning; biocompatibility testing (pg 1231).

L00363 Rowe M, Kamocki K, Pankajakshan D, Li D, Bruzzaniti A, Thomas V et al. Dimensionally stable and bioactive membrane for guided bone regeneration: An in vitro study. J Biomed Mater Res Part B 2015;1-12. >>> Poly(DL-lactide), Poly(e-caprolactone); IV 0.55-0.75 dL/g in chloroform (DL-PL); IV 1.29 dL/g in chloroform (PCL); Tissue engineering (microfibers, orthopedic, in vitro); Electrospinning; two-step method used to obtain BBG-containing PLA:PCL membranes.

L00336 Leong NL, Kabir N, Arshi A, Nazemi A, Wu B, Petrigliano FA et al. Evaluation of Polycaprolactone Scaffold with Basic Fibroblast Growth Factor and Fibroblasts in an Athymic Rat Model for Anterior Cruciate Ligament Reconstruction. Tissue Engineering Part A 2015; 21:1859-1868. >>> Poly(e-caprolactone); IV 1.15 dL/g in chloroform - MW 140 kDa; Tissue engineering (scaffold); rat (male, athymic); Electrospinning; collagen coating; "The electrospun polymer scaffold facilitated both cell and matrix alignment in the regenerated ACL. These grafts resulted in successful bony integration with increased strength over time..." (pg. 1864).

L00337 Kobayashi M, Lei NY, Wang QQ, Wu BM, Dunn JCY. Orthogonally oriented scaffolds with aligned fibers for engineering intestinal smooth muscle. Biomaterials 2015; 61:75-84. >>> Poly(e-caprolactone); Tissue engineering (scaffolds, small intestine); mice (syngeneic wild type adult C57BL/6); 3-6 months; Electrospinning; solution made in hexafluoro-2-propanol; smooth muscle strips seeded into scaffold; "ePCL in vivo degradation studies showed
only 20-30% molecular weight reduction after 3-6 months, without structural deterioration" (pg. 82).

L00282 Jamuna-Thevi K, Saarani NN, bdul Kadir MR, Hermawan H. Triple-layered PLGA/nanoapatite/lauric acid graded composite membrane for periodontal guided bone regeneration. Materials Science and Engineering: C 2014; 43:253-263. >>> Poly(DL-lactide-co-glycolide); 85:15; IV 0.55-0.75 dL/g in chloroform; tissue engineering (composite membrane with nanoapatite, lauric acid);

L00277 Eftekhari S, El Sawi I, Bagheri ZS, Turcotte G, Bougherara H. Fabrication and characterization of novel biomimetic PLLA/cellulose/hydroxyapatite nanocomposite for bone repair applications. Materials Science and Engineering: C 2014; 39:120-125. >>> Poly(L-lactide); MW □ 85 kDa; tissue engineering (orthopedic nanocomposite, hydroxyapatite, microcrystalline cellulose);

L00164 Bashur CA, Ramamurthi A. Composition of intraperitoneally implanted electrospun conduits modulates cellular elastic matrix generation. Acta Biomaterialia 2014; 10(1):163-172. >>> Poly(e-caprolactone); IV 1.0-1.3 dL/g; tissue engineering (scaffold); electrospinning.

L00283 Jeon JE, Vaquette C+, Theodoropoulos C, Klein TJ, Hutmacher DW. Multiphasic construct studied in an ectopic osteochondral defect model. Journal of The Royal Society Interface 2014; 11(95):20140184. >>> Poly(e-caprolactone); tissue engineering (orthopedic); rat (SC); electrospinning.

L00274 Costello CM, Hongpeng J, Shaffiey S, Yu J, Jain NK, Hackam D et al. Synthetic Small Intestinal Scaffolds for Improved Studies of Intestinal Differentiation. Biotechnol Bioeng 2014; 111(6):1222-1232. >>> Poly(DL-lactide-co-glycolide); tissue engineering (scaffold); PLGA scaffolds were fabricated using a modified version of a porogen leaching/thermally induced phase separation technique.

L00264 Admane P, Anish C, Panda AK. Fusion and self assembly of biodegradable polymer particles into scaffold and membrane like structures at room temperature for regenerative medicine. Molecular Pharmaceutics 2014; 11:2190-2202. >>> Poly(DL-lactide); Poly(DL-lactide-co-glycolide); Poly(L-lactide); IV 0.55-0.75 dL/g in chloroform (DLPLA), 0.26-0.54 (PLGA); 50 kDa (PLA); tissue engineering (scaffold, membrane); drug delivery; rat; particles prepared using double emulsion solvent evaporation method; scaffold was evaluated in vivo as skin substitute.

L00173 Whited BM, Rylander MN. The influence of electrospun scaffold topography on endothelial cell morphology, alignment, and adhesion in response to fluid flow. Biotechnology and bioengineering 2014; 111(1):184-195. >>> Poly(e-caprolactone); tissue engineering (scaffold, composite with type I collagen); electrospinning.

L00271 Castro NJ, O'Brien CM, Zhang LG. Biomimetic biphasic 3□D nanocomposite scaffold for osteochondral regeneration. AIChE Journal 2014; 60(2):432-442. >>> Poly(DL-lactide-co-glycolide)-COOH; tissue engineering (scaffold); drug delivery (nanospheres, BMP-2 and TGF-□□□□; electrospraying; PCL layer was integrated with a PEG hydrogel layer.

L00270 Behrens AM, Casey BJ, Sikorski MJ, Wu KL, Tutak W, Sandler AD et al. In Situ Deposition of PLGA Nanofibers via Solution Blow Spinning. ACS Macro Letters 2014; 3:249-254. >>> Poly(DL-lactide-co-glycolide); 50:50; IV 0.64; 0.93 dL/g in HFIP; tissue engineering (mat); pig; Mats applied to various in vivo defects (intestinal anastomoses, liver injury, lung segmentectomy and diaphragm defect).

L00341 Castro NJ, Zhang LG, O'Brien C. Biomimetic Biphasic 3-D Nanocomposite Scaffold for Osteochondral Regeneration. AIChE Journal 2014; 60(2):432-442. >>> Poly(DL-lactide-co-glycolide);

Tissue engineering (scaffold, cartilage, bone, 3D printing); Electrospraying to produce nanospheres; encapsulation efficiency and release studies of protein encapsulated nanospheres (pg. 433, 436).

L00310 Yu NY, Gdalevitch M, Murphy CM, Mikulec K, Peacock L, Fitzpatrick J et al. Spatial control of bone formation using a porous polymer scaffold co-delivering anabolic rhBMP-2 and anti-resorptive agents. European Cells and Materials 2014; 27:98-111. >>> Poly(DL-lactide-co-glycolide); 50:50; IV 0.95-1.2 dL/g; tissue engineering (scaffold) drug delivery (recombinant human bone morphogenic proteins, zoledronic acid, hydroxyapatite); rat (femoral bone defect);
scaffolds were manufactured by thermally-induced phase separation.

L00333 Niu G, Sapoznik E, Lu P, Criswell T, Mohs A, Wang G et al. Fluorescent imaging of endothelial cells in bioengineered blood vessels: the impact of crosslinking of the scaffold. Journal of tissue engineering and regenerative medicine 2014. >>> Poly (e-caprolactone); IV 1.7.1.9 dl/g at 30C in chloroform; Tissue engineering (scaffold); Electrospinning; see "Characterization of scaffolds" (pg. 3) for details on scaffold structure qualities (i.e. microstructure, crosslinking, wettability, etc.).

L00327 Sullins VF, Justin P.Wagner, Arnold T.Suwarnasarn, Steven L.Lee, Benjamin M.Wu, James C.Y.Dunn. A novel biodegradable device for intestinal lengthening. Journal of Pediatric Surgery 2014; 49:109-113. >>> Poly(e-caprolactone); Tissue engineering; Rat (Sprague-Dawley); PCL solutions were spraycoated onto spinning steel to form polymer tubes; PCL spring devices placed into rat jejunum for lengthening.

L00309 Yang W, Both SK, van Osch GJVM, Wang Y, Jansen JA, Yang F. Performance of different three-dimensional scaffolds for in vivo endochondral bone generation. European cells & materials 2014; 27:350-364. >>> Poly(e-caprolactone); tissue engineering (scaffold); rat (nude); wet electrospinning method; scaffolds implanted SC.

L00298 Rutledge KE, Cheng Q, Pryzhkova M, Harris G, Jabbarzadeh E. Enhanced differentiation of human embryonic stem cells on ECM-containing osteomimetic scaffolds for bone tissue engineering. Tissue Engineering 2014; 20(11):1-10. >>> Poly(DL-lactide-co-glycolide); 75:25; tissue engineering (scaffold); scaffolds were prepared from lyophilized microspheres by placing in mold, heating and sintering.

L00297 Pu J, Komvopoulos K. Mechanical properties of electrospun bilayer fibrous membranes as potential scaffolds for tissue engineering. Acta Biomaterialia 2014; 10(6):2718-2726. >>> Poly(L-lactide); IV 1.09 dL/g; tissue engineering (scaffold); electrospinning.

L00305 Walthers CM, Nazemi AK, Patel SL, Wu BM, Dunn JC. The effect of scaffold macroporosity on angiogenesis and cell survival in tissue-engineered smooth muscle. Biomaterials 2014; 35(19):5129-5137. >>> Poly(e-caprolactone); tissue engineering (scaffold); electrospinning.

L00300 Schulz S, Angarano M, Fabritius M, M++lhaupt R, Dard M, Obrecht M et al. Nonwoven-Based Gelatin/Polycaprolactone Membrane Proves Suitability in a Preclinical Assessment for Treatment of Soft Tissue Defects. Tissue Engineering Part A 2014; 20(13-14):1935-1947. >>> Poly(e-caprolactone); tissue engineering (membrane); minipig; membrane implanted in oral soft tissue defects following dental procedure.

L00149 Fonseca C, Caminal M, Peris D, Barrachina J, F+ábregas PJ, Garcia F et al. An arthroscopic approach for the treatment of osteochondral focal defects with cell-free and cell-loaded PLGA scaffolds in sheep. Cytotechnology 2013;1-10. >>> Poly(DL-lactide-co-glycolide); IV 0.55-0.75 dL/g; tissue engineering (scaffold, orthopedic); sheep; scaffolds prepared using solution-casting/salt leaching technique; "PLGA was chosen because it is one of the few synthetic materials approved by the FDA as scaffolding material for clinical applications and it has been previously used in articular cartilage treatment, emerging as a valuable chondrocyte and MSC delivery vehicle." (p. 9).

L00208 Zhao W, Ju YM, Christ G, Atala A, Yoo JJ, Lee SJ. Diaphragmatic muscle reconstruction with an aligned electrospun poly (+¦-caprolactone)/collagen hybrid scaffold. Biomaterials 2013; 34(33):8235-8240. >>> Poly(e-caprolactone); IV 1.77 dL/g in HFP; tissue engineering (scaffold); electrospinning; scaffolds were fabricated by electrospinning a blend of PCL and collagen type I.

L00153 Gershovich JG, Dahlin RL, Kasper FK, Mikos AG. Enhanced Osteogenesis in Cocultures with Human Mesenchymal Stem Cells and Endothelial Cells on Polymeric Microfiber Scaffolds. Tissue Engineering Part A 2013; 19(23-24):2565-2576. >>> Poly(e-caprolactone); IV 1.0-1.3 dL/g; tissue engineering (scaffold); electrospinning; nonwoven scaffold using 18 wt% PCL with average fiber diameter of 10 micrometer and average thickness of 1.05 +/- 0.05 mm.

L00200 Beltzer C, Hagele J, Kratz M, Fuhrmann R, Wilke A, Franke RP et al. Monitoring Degradation Process of PLGA/Cap Scaffolds Seeded With Mesenchymal Stem Cells in a Critical-Sized Defect in the Rabbit Femur using Raman Spectroscopy. Journal of Bone Marrow Research 2013; 1(4):1-6. >>> Poly(DL-lactide-co-glycolide); 75:25; tissue engineering (scaffold); rabbit (female, chinchilla-bastard, 6 mo old); 4 weeks; "The strain Chinchilla-Bastard was used because other rabbit strains common for *in vivo* testing like New Zealand White are known to be more stress-susceptible and therefore have a higher narcosis risk..."; PLGA/calcium phosphate scaffolds.

L00137 Dahlin RL, Gershovich JG, Kasper FK, Mikos AG. Flow Perfusion Co-culture of Human Mesenchymal Stem Cells and Endothelial Cells on Biodegradable Polymer Scaffolds. Annals of Biomedical Engineering 2013;1-10. >>> Poly(e-caprolactone); IV 1.0-1.3 dL/g; tissue engineering (scaffold); electrospinning; sterilization by ETO.

L00135 Costa PF, Vaquette C+, Zhang Q, Reis RL, Ivanovski S, Hutmacher DW. Advanced Tissue Engineering Scaffold Design for Regeneration of the Complex Hierarchical Periodontal Structure. Journal of clinical periodontology 2013; 41:283-294. >>> Poly(e-caprolactone); tissue engineering (scaffold); rat; electrospinning; scaffolds implanted SC in rats.

L00141 DeConde AS, Sidell D, Lee M, Bezouglaia O, Low K, Elashoff D et al. Bone morphogenetic protein□2□impregnated biomimetic scaffolds successfully induce bone healing in a marginal mandibular defect. The Laryngoscope 2013; 123:1149-1155. >>> Poly(DL-lactide-*co*-glycolide); 85:15; IV 0.61 dL/g; tissue engineering (scaffold); rat; disinfected by ETOH immersion; "PLGA is a common synthetic polymer with an established safety record in humans and not considered osteoinductive" (p. 1152).

L00172 Thayer PS, Dimling AF, Plessl DS, Hahn MR, Guelcher SA, Dahlgren LA et al. Cellularized Cylindrical Fiber/Hydrogel Composites for Ligament Tissue Engineering. Biomacromolecules 2013; 15(1):75-83. >>> Poly(DL-lactide-co-glycolide); 85:15; IV 0.55-0.75 dL/g; tissue engineering (scaffold); electrospinning.

L00166 Yeatts AB, Both SK, Yang W, Alghamdi HS, Yang F, Fisher JP et al. In vivo bone regeneration using tubular perfusion system bioreactor cultured nanofibrous scaffolds. Tissue Engineering Part A 2013; 20(1-2):139-146. >>> Poly(e-caprolactone); IV 1.0-1.3 dL/g; tissue engineering (scaffold); electrospinning; "The electrospinning solution was prepared by dissolving PLGA/PCL (3:1 weight ratio) in trifluoroethanol/HFIP (9:1 volume
ratio) at a concentration of 20% w/v".

L00165 Bashur CA, Eagleton MJ, Ramamurthi A. Impact of Electrospun Conduit Fiber Diameter and Enclosing Pouch Pore Size on Vascular Constructs Grown Within Rat Peritoneal Cavities. Tissue Engineering Part A 2013; 19(7-8):809-823. >>> Poly(e-caprolactone); IV 1.0-1.3 dL/g; tissue engineering (scaffold); rat (Sprague Dawley, 200-250 g, male); electrospinning.

L00171 Schindler C, Williams BL, Patel HN, Thomas V, Dean DR. Electrospun polycaprolactone/polyglyconate blends: Miscibility, mechanical behavior, and degradation. Polymer 2013;

54(25):6824-6833. >>> Poly(e-caprolactone); IV 1.15 dL/g; tissue engineering (scaffold); 24 months *in vitro*; electrospinning.

L00170 Cheng Q, Lee BLP, Komvopoulos K, Li S. Engineering the Microstructure of Electrospun Fibrous Scaffolds by Microtopography. Biomacromolecules 2013; 14(5):1349-1360. >>> Poly(L-lactide); IV 1.09 dL/g; tissue engineering (scaffold); electrospinning; "PLLA pellets were first dissolved in HFIP (19% w/v) in an ultrasonic water bath. The polymer solution was then delivered through a stainless steel 23G dispensing needle by a syringe pump." pg 1350.

L00194 Niu G, Criswell T, Sapoznik E, Lee SJ, Soker S. The influence of cross-linking methods on the mechanical and biocompatible properties of vascular scaffold. Journal of Science and Applications: Biomedicine 2013; 1(1):1-7. >>> Poly(e-caprolactone); IV 1.7-1.9 dL/g in chloroform at 30C; tissue engineering (vascular scaffold); electrospinning; "GN (genipin) cross-linking is a promising method for cross-linking PCL/collagen scaffolds for vascular graft applications".

L00198 Bhamidipati M, Sridharan BP, Scurto AM, Detamore MS. Subcritical CO2 sintering of microspheres of different polymeric materials to fabricate scaffolds for tissue engineering. Materials Science and Engineering C 2013; 33:4892-4899. >>> Poly(DL-lactide-co-glycolide); poly(e-caprolactone); 50:50; IV 1.3 dL/g - 42-44 kDa; IV 1.1-1.3 dL/g - 110- 125 kDa; tissue engineering (scaffold); < 3 months; < 24 months; "Uniform PLGA and PCL microspheres were lyophilized for 48 h and stored at 20 °C. A 10% polymer solution for PCL and a 20% polymer solution for PLGA were used to prepare the microspheres.".

L00234 Knight TA, Payne RG. Characterization of a PGA-Based Scaffold for Use in a Tissue-Engineered Neo-Urinary Conduit. Organ Regeneration 2013; 1001:179-188. >>> Poly(DL-lactide-co-glycolide); 50:50; IV 0.55-0.75 dL/g; tissue engineering (scaffold); methods described for tensile testing and biological characterization (cell viability and proliferation).

L00192 Cheng Q, Blais MO, Jabbarzadeh E. PLGA-Carbon Nanotube Conjugates for Intercellular Delivery of Caspase-3 into Osteosarcoma Cells. PloS one 2013; 8(12):1-10. >>> Poly(DL-lactide-co-glycolide); 75:25; drug delivery (carbon nanotube, BSA, fluorescent BSA, caspase-3); tissue engineering (scaffold, bone);

L00284 Knight T, Basu J, Rivera EA, Spencer T, Jain D, Payne R. Fabrication of a multi-layer three-dimensional scaffold with controlled porous micro-architecture for application in small intestine tissue engineering. Cell adhesion & migration 2013; 7(3):267-274. >>> Poly(e-caprolactone); Poly(DL-lactide-co-glycolide); MW < 160 kDa (PCL); 32.25 kDa (PLGA); tissue engineering (scaffold); combined compression molding with solvent casting/particulate leaching to develop multi-layered scaffold.