LACTEL Absorbable Polymers

Recent References on the Use of LACTEL® Absorbable Polymers for Drug Delivery Applications

L00352 Rahman S, Mahoney C, Sankar J, Marra K, Bhattarai N. Synthesis and characterization of magnesium gluconate containedpoly(lactic-co-glycolic acid)/chitosan microspheres. Materials Science and Engineering B 2016; 203:59-66. >>> Poly(DL-lactide-co-glycolide) acid terminated; 50:50; IV 0.15-0.25 dL/g; Drug delivery (nanoparticles, magnesium gluconate dihydrate); "PLGA-based microspheres are ideal vehicles for many controlled release drug delivery applications" (pg. 59); microspheres were fabricated by utilizing the double emulsion solvent evaporation technique with some modifications (pg. 60); "Cytotoxicity levels did not surpass the 15% cytotoxicity marker…which indicates sufficient biocompatibility" (pg. 64).

L00349 Wanawananona K, Moulton S, Wallaceban G, Liawruangrath S. Fabrication of novel core–shell PLGA and alginate fiber for dual-drug delivery system. Polym Adv Technol 2016; 27:1014-1019. >>> Poly(DL-lactide-co-glycolide); 50:50; Drug delivery (biodegradable fibers, dexamethasone); degradation profile available (pg 1018); Filament processed by wet-spinning procedure.

L00354 Dutta, D, Salifu M, Sirianni R, Stabenfeldt S. Tailoring sub-micron PLGA particle release profiles via centrifugal fractioning. J Biomed Mater Res Part A 2016; 104(A):688-696. >>> Poly(DL-lactide-co-glycolide) ester terminated; 50:50; IV 0.55-0.75 dL/g; Drug delivery (nanoparticles, in vitro, protein); particles were synthesized via a W/O/W emulsion technique; centrifugal fractioning used to control population distribution of particles.

L00353 Gupta A, Sharma D, Meena J, Pandya S, Sachan M, Kumar S et al. Preparation and Preclinical Evaluation of Inhalable Particles Containing Rapamycin and Anti-Tuberculosis Agents for Induction of Autophagy . Pharm Res 2016; 33:1899-1912. >>> Poly(DL-lactide-co-glycolide); Poly(L-lactide); 50:50; IV 0.55-075 dL/g (PLGA), IV 0.90-1.20 dL/g (PLA); Drug delivery (particles, rapamycin, isoniazid, rifabutin); mice (BALB/c); particles prepared by spray-drying; targeted delivery (lung).

L00346 D'Apolito R, Taraballi F, Minardi S, Liu X, Caserta S, Cevenini A et al. Microfluidic interactions between red blood cells and drug carriers by image analysis techniques. Medical Engineering and Physics 2016; 38:17-23. >>> Poly(DL-lactide-co-glycolide); 50:50; IV 0.95-1.20 dL/g; Drug delivery (microspheres); microspheres were prepared by a modified S/O/W emulsion method.

L00342 Adjei IM, Sharma B, Peetla C, Labhasetwar V. Inhibition of bone loss with surface-modulated, drug-loaded nanoparticles in an intraosseous model of prostate cancer. Journal of Controlled Release 2016; 232:83-92. >>> Poly(DL-lactide-co-glycolide); 50:50; IV 0.26–0.54 dL/g; Drug delivery (nanoparticles, paclitaxel, NIR dye SDB5700); mice (male, athymic, nude); Nanoparticles were prepared by a single oil-in-water emulsion solvent evaporation method.

L00332 Petro M, Jaffer H, Yang J, Kabu S, Morris VB, Labhasetwar V. Tissue plasminogen activator followed by antioxidant-loaded nanoparticle delivery promotes activation/mobilization of progenitor cells in infarcted rat brain. Biomaterials 2016; 81:169-180. >>> Poly(DL-lactide-co-glycolide); 50:50; IV 0.76-0.94 dL/g; Drug delivery (nanoparticles, superoxide dismutase, catalase); rat (male Sprague-Dawley); double-emulsion solvent-evaporation method used for nanoparticle production; "delivery of nano-CAT/SOD at the time of reperfusion effectively protects neuronal cells" (pg. 178).

L00347 Dutta D, Salifu M, Sirianni RW, Stabenfeldt SE. Tailoring sub-micron PLGA particle release profiles via centrifugal fractioning. Journal of Biomedical Materials Research Part A 2016; 104A(3):688-696. >>> Poly(DL-lactide-co-glycolide) ester terminated; 50:50; IV 0.55-0.75 dL/g; Drug delivery (sub-micron particles, bovine serum albumin); particles synthesized via a W/O/W technique.

L00355 Gwak SJ, Yun Y, Yoon DH, Kim KN, Ha Y. Therapeutic Use of 3B-[N-(N',N'-Dimethylaminoethane) Carbamoyl] Cholesterol-Modified PLGA Nanospheres as Gene Delivery Vehicles for Spinal Cord Injury. PloS one 2016; 11(1):1-14. >>> Poly(DL-lactide-co-glycolide); MW 66 kDa; Drug delivery (nanoparticles, pDNA); Rat; prepared using a double emulsion-solvent evaporation method; spinal cord injury; testing done on drug release, cytotoxicity, cellular uptake, and transfection.

L00364 Manna S, Banerjee RK, Augsburger JJ, Al-Rjoub MF, Correa ZM. Ultrasonographical assessment of implanted biodegradable device for long-term slow release of methotrexate into the vitreous. Experimental Eye Research 2016; 148:30-32. >>> Poly(DL-lactide); IV 1.16 dL/g at 30C in chloroform; Drug delivery (implant, methotrexate); rabbit (New Zealand); targeted delivery (eye, vitreous).

L00356 Hlavaty KA, McCarthy DP, Saito E, Yap WT, Miller SD, Shea LD. Tolerance induction using nanoparticles bearing HY peptides in bone marrow transplantation. Biomaterials 2016; 76:1-10. >>> Poly(DL-lactide-co-glycolide); 50:50; Drug delivery (particles, CD4 and CD8 peptide antigens); mice (C57/BL6); particles were prepared using a single emulsion technique.

L00319 Zamani M, Prabhakaran MP, Thian ES, Ramakrishna S. Controlled delivery of stromal derived factor-1alpha from poly lactic-co-glycolic acid core-shell particles to recruit mesenchymal stem cells for cardiac regeneration. Journal of Colloid and Interface Science 2015; 451:144-152. >>> Poly(DL-lactide-co-glycolide); 50:50; MW 31.3-57.6 kDa; Drug delivery (nanoparticles, stromal derived factor-1a); Coaxial electrospraying; sterilized using UV radiation.

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.

L00318 Zhan X, Shen H. Programming the composition of polymer blend particles for controlled immunity towards individual protein antigens. Vaccine 2015; 33:2719-2726. >>> Poly(DL-lactide-co-glycolide); 50:50; IV 0.55-0.75 dL/g; Drug delivery (nanoparticles, ovalbumin, Type 2 Herpes Simplex Virus glycoprotein D); C57BL/6 mice;

L00323 Wang XP, Lian K, Chen TN. Experiment Research on Bonding Effect of Poly(lactic-co-glycolic acid) Device by Surface Treatment Method. INTERNATIONAL JOURNAL OF POLYMER SCIENCE 2015;U1-U7. >>> Poly(DL-lactide-co-glycolide); 50:50; IV 0.55-0.75 dL/g; Drug delivery (film production); "excellent biocompatibility, biodegradability, lack of toxicity, and good thermoplasticity" (pg. 1); sterilization by UV radiation.

L00324 Wang F, Gao WW, Thamphiwatana S, Luk BT, Angsantikul P, Zhang QZ et al. Hydrogel Retaining Toxin-Absorbing Nanosponges for Local Treatment of Methicillin-Resistant Staphylococcus aureus Infection. Advanced Materials 2015; 27:3437-3443. >>> Poly(DL-lactide-co-glycolide) ester terminated; 50:50; IV 0.67 dL/g; Drug delivery (nanoparticles, nanosponge, a-toxin); mice; produced through nanoprecipitation in acetone.

L00325 Wang XP, Li W, Chen TN. Simulation and Experimental Validation of the Hot Embossing Process of Poly(lactic-co-glycolic acid) Microstructures. INTERNATIONAL JOURNAL OF POLYMER SCIENCE 2015;U1-U9. >>> Poly(DL-lactide-co-glycolide); 50:50; Drug delivery (mesh microstructure); microstructures were fabricated by hot embossing method; Elastic modulus testing at different temperatures.

L00326 Vilos C, Velasquez LA, Rodas PI, Zepeda K, Bong SJ, Herrera N et al. Preclinical Development and In Vivo Efficacy of Ceftiofur-PLGA Microparticles. PloS one 2015; 10(4):U325-U343. >>> Poly(DL-lactide-co-glycolide) acid-terminated; 50:50; IV 0.26-0.54 dL/g; Drug delivery (nanoparticles,

ceftiofur); Rat (Sprague-Dawley); Nanoparticles were prepared by double-emulsion method; sustained release profile of drug for 20 days.

L00334 Madsen CG, Skov A, Baldursdottir S, Rades T, Jorgensen L, Medlicott NJ. Simple measurements for prediction of drug release from polymer matrices - Solubility parameters and intrinsic viscosity. EUROPEAN JOURNAL OF PHARMACEUTICS AND BIOPHARMACEUTICS 2015; 92:1-7. >>> Poly(DL-lactide-co-glycolide) acid terminated; 50:50; MW 57.6 kDa; Drug delivery; Solubility parameters and intrinsic viscosity of PLGA in various solvents (pg. 4); cast with bovine serum albumin (BSA) as a model drug.

L00367 Phongpradist R, Chaiyana W, Anuchapreeda S. Curcumin-loaded multi-valent ligands conjugated-nanoparticles for anti-inflammatory activity. International Journal of Pharmacy and Pharmaceutical Sciences 2015; 7(4):203-208. >>> Poly(DL-lactide-co-glycolide) acid terminated; 50:50; IV 0.67 dL/g - MW 90 kDa; Drug delivery (nanoparticles, curcumin); formulated by solvent displacement method; cIBR, cLABL peptides conjugated on surface of PLGA nanoparticles using carbodiimide reaction; in vitro cytotoxicity testing (pg. 206).

L00359 Hu Y, Hoerle R, Ehrich M, Zhang CM. Engineering the lipid layer of lipid-PLGA hybrid nanoparticles for enhanced in vitro cellular uptake and improved stability. Acta Biomaterialia 2015; 28:149-159. >>> Poly(DL-lactide-co-glycolide); 50:50; Drug delivery (nanoparticles, bovine serum albumin); nanoparticles prepared by double emulsion solvent evaporation method with modifications.

L00370 Lopalco A, Ali H, Denora N, Rytting E. Oxcarbazepine-loaded polymeric nanoparticles: development and permeability studies across in vitro models of the blood-brain barrier and human placental trophoblast. International Journal of Nanomedicine 2015; 10:1985-1996. >>> Poly(DL-lactide-co-glycolide); 50:50; IV 0.15-0.25 dL/g; Drug delivery (nanoparticles, oxcarbazepine); prepared at room temperature (22°C-23°C) by a modified solvent displacement method; particle size, size distribution, and zeta potential measurements (in vitro); drug release profile (pg. 1994).

L00369 Puntel A, Maeda A, Golczak M, Gao S, Yu G, Palczewski K et al. Prolonged prevention of retinal degeneration with retinylamine loaded nanoparticles. Biomaterials 2015; 44:103-110. >>> Poly(L-lactide); MW 91-130 kDa; Drug delivery (nanoparticles, retinylamine); Mice (C57BL/6J); nanoparticles containing retinylamine were fabricated by a single emulsion technique; prevention of retinal degeneration.

L00358 Hu Y, Zhao ZM, Ehrich M, Fuhrman K, Zhang CM. In vitro controlled release of antigen in dendritic cells using pH-sensitive liposome-polymeric hybrid nanoparticles. Polymer 2015; 80:171-179. >>> Poly(DL-lactide-co-glycolide); 50:50; Drug delivery (nanoparticles, antigen); nanoparticles prepared using a double emulsion solvent evaporation method with modifications.

L00348 Gavrilov K, Seo YE, Tietjen GT, Cui JJ, Cheng CJ, Saltzman WM. Enhancing potency of siRNA targeting fusion genes by optimization outside of target sequence. PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA 2015; 112:E6597-E6605. >>> Poly(DL-lactide-co-glycolide) ester terminated; 50:50; IV 0.55-0.75 dL/g; Drug delivery (nanoparticles, siRNA); nanoparticles were prepared using a modified water-in-oil-in-water double-emulsion solvent evaporation technique.

L00350 Guimaraes PPG, Oliveira MF, Gomes ADM, Gontijo SML, Cortes ME, Campos PP et al. PLGA nanofibers improves the antitumoral effect of daunorubicin. COLLOIDS AND SURFACES B-BIOINTERFACES 2015; 136:248-255. >>> Poly(DL-lactide-co-glycolide); 50:50; IV 0.82 dL/g in HFIP; Drug delivery (nanofibers, daunorubicin); mice (male, Swiss); electrospinning.

L00357 Hu CMJ, Fang RH, Wang KC, Luk BT, Thamphiwatana S, Dehaini D et al. Nanoparticle biointerfacing by platelet membrane cloaking. NATURE 2015; 526:118-121. >>> Poly(DL-lactide-co-glycolide) acid terminated; 50:50; IV 0.67 dL/g; Drug delivery (nanoparticles, docetaxel); rat (male, Sprague-Dawley); particles prepared in a nanoprecipitation process.

L00266 Adjei IM, Peetla C, Labhasetwar V. Heterogeneity in nanoparticles influences biodistribution and targeting. Nanomedicine 2014; 9(2):267-278. >>> Poly(DL-lactide-co-glycolide); 50:50; IV 0.15-0.25 dL/g; drug delivery (nanoparticles, cucurbitacin I); two methods of nanoparticle preparation compared: emulsion solvent evaporation vs. nanoprecipitation.

L00267 Angamuthu M, Nanjappa SH, Raman V, Jo S, Cegu P, Murthy SN. Controlled-release injectable containing Terbinafine/PLGA microspheres for Onychomycosis Treatment. Journal of pharmaceutical sciences 2014; 103(4):1178-1183. >>> Poly(DL-lactide-co-glycolide); 50:50; 0.6 dL/g in HFIP; drug delivery (microspheres, terbinafine HCl); microspheres produced by oil/water emulsification method; drug release evaluated in vitro (water and agar) and ex vivo (cadaver toe model).

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.

L00265 Ahmed TA, Ibrahim HM, Samy AM, Kaseem A, Nutan MT, Hussain MD. Biodegradable Injectable In Situ Implants and Microparticles for Sustained Release of Montelukast: In Vitro Release, Pharmacokinetics, and Stability. AAPS PharmSciTech 2014; 15(3):1-9. >>> Poly(DL-lactide-co-glycolide); 50:50; IV 0.5 dL/g - MW 60-70 kDa; drug delivery; rat; stability of formulations evaluated for various temperatures and durations (p. 774).

L00268 Ankrum JA, Miranda OR, Ng KS, Sarkar D, Xu C, Karp JM. Engineering cells with intracellular agent–loaded microparticles to control cell phenotype. Nature protocols 2014; 9(2):233-245. >>> Poly(DL-lactide-co-glycolide)-COOH; 50:50; IV 0.15-0.25, 0.55-0.75 dL/g; drug delivery; particles prepared using single-emulsion evaporation technique.

L00273 Alshamsan A. Nanoprecipitation is more efficient than emulsion solvent evaporation method to encapsulate cucurbitacin I in PLGA nanoparticles. Saudi Pharmaceutical Journal 2014; 22:219-222. >>> Poly(DL-lactide-co-glycolide); 50:50; IV 0.15-0.25 dL/g; drug delivery (cucurbitacin, nanoparticles); 50:50; examination of various drug loading techniques: single emulsion, double emulsion, nanoprecipitation.

L00275 Deng Y, Saucier-Sawyer JK, Hoimes CJ, Zhang J, Seo YE, Andrejecsk JW et al. The effect of hyperbranched polyglycerol coatings on drug delivery using degradable polymer nanoparticles. Biomaterials 2014; 35(24):6595-6602. >>> Poly(L-lactide); MW 20.2 kDa; drug delivery (nanoparticles, fluorescent dye, camptothecin); mice; biodistribution evaluated after IV injection in mice with Lewis lung carcinoma tumors; "no significant in vivo toxicity was observed for all formulations" (p. 6599).

L00269 Arora S, Swaminathan SK, Kirtane A, Srivastava SK, Bhardwaj A, Singh S et al. Synthesis, characterization, and evaluation of poly (D, L-lactide-co-glycolide)-based nanoformulation of miRNA-150: potential implications for pancreatic cancer therapy. International Journal of Nanomedicine 2014; 9:2933-2942. >>> Poly(DL-lactide-co-glycolide); 50:50; MW 40 kDa; drug delivery (nanoparticles, miRNA); in vitro (pancreatic cell culture); nanoparticles prepared using double emulsion solvent evaporation method.

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- $\beta 1$); electrospraying; PCL layer was integrated with a PEG hydrogel layer.

L00197 Psimadas D, Baldi G, Comes Franchini M, Locatelli E, Innocenti C, Sangregorio C et al. Comparison of the magnetic, radiolabeling, hyperthermic and biodistribution properties of hybrid

nanoparticles bearing CoFe2O4 and Fe3O4 metal cores. Nanotechnology 2014; 25:1-9. >>> Poly(DL-lactide-co-glycolide); 75:25; MW 76-120 kDa; drug delivery (metal oxide nanoparticles); "Hybrid CoFe2O4 NPs were prepared by adding an acetone solution of... PLGA... at a concentration of 0.1% and CoFe2O4-EHO (0.04%) to a water solution containing 0.1% w/w of BSA...".

L00142 Devalliere J, Chang WG, Andrejecsk JW, Abrahimi P, Cheng CJ, Jane-wit D et al. Sustained delivery of proangiogenic microRNA-132 by nanoparticle transfection improves endothelial cell transplantation. The FASEB Journal 2014; 28(2):908-922. >>> Poly(DL-lactide-*co*-glycolide); 50:50; IV 0.55-0.75 dL/g; drug delivery (nanoparticles, miRNA, siRNA, coumarin 6); "nanoparticles composed of PLGA, a biodegradable and nontoxic polymer, have been shown to be efficient and chemically modifiable carriers of siRNA and miRNA." (p. 909); siRNAs targeted survivin, caveolin 1, clathrin and AP2M1; ester terminated.

L00168 Almeria B, Gomez A. Electrospray synthesis of monodisperse polymer particles in a broad (60nm-2um) diameter range: guiding principles and formulation recipes. Journal of Colloid and Interface Science 2014; 417:121-130. >>> Poly(DL-lactide-co-glycolide) ester terminated; 50:50; MW 11-136 kDa; drug delivery (nanoparticles); electrospraying.

L00188 Xia Y, Xu Q, Wang C, Pack DW. Protein Encapsulation in and Release from Monodisperse Double-Wall Polymer Microspheres. Journal of pharmaceutical sciences 2014; 102(5):1601-1609. >>> Poly(DL-lactide-co-glycolide); poly(L-lactide); 50:50; MW 4.2 kDa (PLGA); MW 43 kDa, 106 kDa, 192 kDa (PLA); drug delivery (microspheres, BSA); 70-80 days; biodegradable polymer double-wall microspheres (DWMS).

L00237 Kulkarni SS, Kompella UB. Nanoparticles for Drug and Gene Delivery in Treating Diseases of the Eye. Methods in Pharmacology and Toxicology 2014;291-316. >>> Poly(L-lactide); IV 0.9-1.2 dL/g in chloroform (PLA); drug delivery (nanoparticles); detailed steps for nanoparticle preparation by single emulsion method for hydrophobic drugs and double emulsion method for hydrophilic drugs; also used 50:50 PLGA from another manufacturer; detailed methods for nanoparticle characterization and drug release analysis.

L00252 Martin DT, Steinbach JM, Liu J, Shimizu S, Kaimakliotis HZ, Wheeler MA et al. Surface modified nanoparticles enhance transurothelial penetration and delivery of survivin siRNA in treating bladder cancer. Molecular Cancer Therapeutics 2014; 13:71-81. >>> Poly(DL-lactide-co-glycolide); drug delivery (nanoparticles, penatratin, chitosan, coumarin-6, survivin siRNA); mouse; targeted delivery (bladder; tumor).

L00261 Rescignano N, Fortunati E, Montesano S, Emiliani C, Kenny JM, Martino S et al. PVA bio-nanocomposites: a new take-off using cellulose nanocrystals and PLGA nanoparticles. Carbohydrate polymers 2014; 99:47-58. >>> Poly(DL-lactide-co-glycolide); 50:50; IV 0.95-1.20 dL/g; drug delivery (nanoparticles, bovine serum albumin fluorescein isothiocynate conjugate);

L00246 Lu Y, Sturek M, Park K. Microparticles produced by the hydrogel template method for sustained drug delivery. International Journal of Pharmaceutics 2014; 461(1):258-269. >>> Poly(DL-lactide-co-glycolide); 50:50; 65:35; 75:25; 85:15; drug delivery (microparticles, risperidone, paclitaxel, methylprednisolone acetate); model drugs were chosen for their hydrophobicity.

L00247 Luk BT, Hu CMJ, Fang RH, Dehaini D, Carpenter C, Gao W et al. Interfacial interactions between natural RBC membranes and synthetic polymeric nanoparticles. Nanoscale 2014; 6:2730-2737. >>> Poly(DL-lactide-co-glycolide); 50:50; IV 0.67 dL/g; drug delivery (nanoparticles); red blood cell membrane-cloaked nanoparticle platform.

L00278 Ferenz KB, Waack IN, Laudien J, Mayer C, Broecker-Preuss M, Groot Hd et al. Safety of poly(ethylene glycol)-coated perfluorodecalin-filled poly(lactide-co-glycolide) microcapsules following intravenous administration of high amounts in rats. Results in Pharma Sciences 2014; 4:8-18. >>>

Poly(DL-lactide-co-glycolide); 50:50; IV 0.67 dL/g in chloroform; drug delivery (microcapsules, perfluorodecalin); rat; IV administration.

L00292 Minardi S, Sandri M, Martinez JO, Yazdi IK, Liu X, Ferrari M et al. Multiscale Patterning of a Biomimetic Scaffold Integrated with Composite Microspheres. Small 2014;1-11. >>> Poly(DL-lactide-co-glycolide); 50:50; drug delivery (microspheres: BSA labelled with fluoroscein isothiocyanate or tetromethylrhodamine isothiocyanate);

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.

L00302 Thiruppathi E, Mani G. Vitamin-C Delivery from CoCr alloy Surfaces Using Polymer-Free and Polymer-Based Platforms For Cardiovascular Stent Applications. Langmuir 2014; 30:6237-6249. >>> Poly(DL-lactide-co-glycolide); 50:50; IV 0.64 dL/g; MW 44.8 kDa; drug delivery (stent coating; ascorbic acid); "For the polymer-based platform, L-AA was incorporated into PLGA at 5, 25, and 50 wt %, and the drug/polymer films were uniformly deposited on the CoCr surface...A sustained release of L-AA was observed from the PLGA platform." (p. 6247).

L00315 Ayre A, Lalitha KG, Ruckmani K, Khutle N, Pawar H, Dand N et al. ICH Q8 Guidelines in Practice: Spray Drying Process Optimization by 23 Factorial Design for the Production of Famotidine Nanoparticles . Pharmaceutical Nanotechnology 2014; 2:138-148. >>> Poly(DL-lactide-co-glycolide); 50:50; MW 11.1 kDa; Drug delivery (nanoparticles, famotidine); authors achieved 52% drug loading and 76.64% encapsulation efficiency (p. 143).

L00307 Xia Y, Pack DW. Pulsatile Protein Release from Monodisperse Liquid-Core Microcapsules of Controllable Shell Thickness. Pharmaceutical Research 2014;1-10. >>> Poly(DL-lactide-co-glycolide); 50:50; MW 15, 38, 88 kDa; drug delivery (microcapsules: bovin serum albumen); in vitro release profiled.

L00289 Lee W, Frank CW, Park J. Directed Axonal Outgrowth Using a Propagating Gradient of IGF−1. Advanced Materials 2014; 26:4936-4940. >>> Poly(DL-lactide-co-glycolide); 85:15, 75:25, 65:35, 50:50; MW 85 kDa (85:15), 75 kDa (75:25); 95 kDa (65:35); 85 kDa (50:50); drug delivery (microspheres, IGF-I); microspheres prepared using double emulsion process; microspheres were incorporated into a hydrogel matrix for evaluation of release profiles.

L00311 Zamani M, Prabhakaran MP, Thian ES, Ramakrishna S. Protein encapsulated core-shell structured particles prepared by coaxial electrospraying: Investigation on material and processing variables. International Journal of Pharmaceutics 2014; 473:134-143. >>> Poly(DL-lactide-co-glycolide); 50:50; drug delivery (particles: bovine serum albumen); electrospraying.

L00279 Filipovic N, Stevanovic M, Nunic J, Cundric S, Filipic M, Uskokovic D. Synthesis of poly (ε-caprolactone) nanospheres in the presence of the protective agent poly (glutamic acid) and their cytotoxicity, genotoxicity and ability to induce oxidative stress in HepG2 cells. Colloids and Surfaces B: Biointerfaces 2014; 117:414-424. >>> Poly(ε-caprolactone) ester terminated; IV 0.55-0.75 dL/g; drug delivery (nanospheres); PCL particles synthesized using solvent/non-solvent method.

L00281 Gadde S, Even-Or O, Kamaly N, Hasija A, Gagnon PG, Adusumilli KH et al. Development of Therapeutic Polymeric Nanoparticles for the Resolution of Inflammation. Advanced healthcare materials 2014. >>> Poly(DL-lactide); Poly(DL-lactide-co-glycolide); 50:50; IV 0.55-0.75 and 0.15-0.25 dL/g (PLGA); drug delivery (nanoparticles, LXR agonist GW3965); mice (C57Bl6); nanoparticles synthesized by nanoprecipitation process; in vivo evaluation in model of peritonitis.