

- [1] Zhang J, Hu ZQ, Turner NJ, Teng SF, Cheng WY, Zhou HY, Zhang L, Hu HW, Wang Q, Badylak SF. Perfusion-decellularized skeletal muscle as a three-dimensional scaffold with a vascular network template. *Biomaterials*. 2016;89:114-26.
- [2] Zhang J, Cheng WY, Hu ZQ, Turner NJ, Zhang L, Wang Q, Badylak SF. A panel data set on harvest and perfusion decellularization of porcine rectus abdominis. *Data Brief*. 2016;7:1375-82.
- [3] Wu Y, Wang J, Shi Y, Pu H, Leak RK, Liou AK, Badylak SF, Liu Z, Zhang J, Chen J, Chen L. Implantation of Brain-derived Extracellular Matrix Enhances Neurological Recovery after Traumatic Brain Injury. *Cell transplantation*. 2016.
- [4] Tukmachev D, Forostyak S, Koci Z, Zaviskova K, Vackova I, Vyborny K, Sandvig I, Sandvig A, Medberry CJ, Badylak SF, Sykova E, Kubinova S. Injectable Extracellular Matrix Hydrogels as Scaffolds for Spinal Cord Injury Repair. *Tissue engineering Part A*. 2016;22(3-4):306-17.
- [5] Takanari K, Hong Y, Hashizume R, Huber A, Amoroso NJ, D'Amore A, Badylak SF, Wagner WR. Abdominal wall reconstruction by a regionally distinct biocomposite of extracellular matrix digest and a biodegradable elastomer. *Journal of tissue engineering and regenerative medicine*. 2016;10(9):748-61.
- [6] Swinehart IT, Badylak SF. Extracellular matrix bioscaffolds in tissue remodeling and morphogenesis. *Dev Dyn*. 2016;245(3):351-60.
- [7] Shaffiey SA, Jia H, Keane T, Costello C, Wasserman D, Quidley M, Dziki J, Badylak S, Sodhi CP, March JC, Hackam DJ. Intestinal stem cell growth and differentiation on a tubular scaffold with evaluation in small and large animals. *Regenerative medicine*. 2016;11(1):45-61.
- [8] Quijano LM, Lynch KM, Allan CH, Badylak SF, Ahsan T. Looking Ahead to Engineering Epimorphic Regeneration of a Human Digit or Limb. *Tissue engineering Part B, Reviews*. 2016;22(3):251-62.
- [9] Matsui D, Zaidi AH, Martin SA, Omstead AN, Kosovec JE, Huleihel L, Saldin LT, DiCarlo C, Silverman JF, Hoppe T, Finley GG, Badylak SF, Kelly RJ, Jobe BA. Primary tumor microRNA signature predicts recurrence and survival in patients with locally advanced esophageal adenocarcinoma. *Oncotarget*. 2016.
- [10] Loneker AE, Faulk DM, Hussey GS, D'Amore A, Badylak SF. Solubilized liver extracellular matrix maintains primary rat hepatocyte phenotype in-vitro. *J Biomed Mater Res A*. 2016;104(7):1846-7.
- [11] Londono R, Gorantla VS, Badylak SF. Emerging Implications for Extracellular Matrix-Based Technologies in Vascularized Composite Allotransplantation. *Stem cells international*. 2016;2016:1541823.
- [12] Keane TJ, Dziki J, Sobieski E, Smoulder A, Castleton A, Turner N, White LJ, Badylak SF. Restoring Mucosal Barrier Function and Modifying Macrophage Phenotype with an Extracellular Matrix Hydrogel: Potential Therapy for Ulcerative Colitis. *Journal of Crohn's & Colitis*. 2016.
- [13] Jin T, Nicholls FJ, Crum WR, Ghuman H, Badylak SF, Modo M. Diamagnetic chemical exchange saturation transfer (diaCEST) affords magnetic resonance imaging of extracellular matrix hydrogel implantation in a rat model of stroke. *Biomaterials*. 2016;113:176-90.
- [14] Naranjo JD, Scarritt ME, Huleihel L, Ravindra A, Torres CM, Badylak SF. Regenerative Medicine: Lessons from Mother Nature. *Regenerative medicine*. 2016;In Press.
- [15] Huleihel L, Hussey GS, Naranjo JD, Zhang L, Dziki JL, Turner NJ, Stoltz DB, Badylak SF. Matrix-bound nanovesicles within ECM bioscaffolds. *Sci Adv*. 2016;2(6):e1600502.
- [16] Han N, Yabroudi MA, Stearns-Reider K, Helkowski W, Sicari BM, Rubin JP, Badylak SF, Boninger ML, Ambrosio F. Electrodiagnostic Evaluation of Individuals Implanted With Extracellular Matrix for the Treatment of Volumetric Muscle Injury: Case Series. *Physical therapy*. 2016;96(4):540-9.
- [17] Ghuman H, Massensini AR, Donnelly J, Kim SM, Medberry CJ, Badylak SF, Modo M. ECM hydrogel for the treatment of stroke: Characterization of the host cell infiltrate. *Biomaterials*. 2016;91:166-81.

- [18] Dziki JL, Wang DS, Pineda C, Sicari BM, Rausch T, Badylak SF. Solubilized extracellular matrix bioscaffolds derived from diverse source tissues differentially influence macrophage phenotype. *J Biomed Mater Res A*. 2016.
- [19] Dziki JL, Sicari BM, Wolf MT, Cramer MC, Badylak SF. Immunomodulation and Mobilization of Progenitor Cells by Extracellular Matrix Bioscaffolds for Volumetric Muscle Loss Treatment. *Tissue engineering Part A*. 2016;22(19-20):1129-39.
- [20] Dziki J, Badylak S, Yabroudi M, Sicari B, Ambrosio F, Stearns K, Turner N, Wyse A, Boninger ML, Brown EH. An acellular biologic scaffold treatment for volumetric muscle loss: results of a 13-patient cohort study. *npj Regenerative Medicine*. 2016;1:16008.
- [21] Dearth CL, Slivka PF, Stewart SA, Keane TJ, Tay JK, Londono R, Goh Q, Pizza FX, Badylak SF. Inhibition of COX1/2 alters the host response and reduces ECM scaffold mediated constructive tissue remodeling in a rodent model of skeletal muscle injury. *Acta biomaterialia*. 2016;31:50-60.
- [22] Dearth CL, Keane TJ, Carruthers CA, Reing JE, Huleihel L, Ranallo CA, Kollar EW, Badylak SF. The effect of terminal sterilization on the material properties and in vivo remodeling of a porcine dermal biologic scaffold. *Acta biomaterialia*. 2016;33:78-87.
- [23] D'Amore A, Yoshizumi T, Luketich SK, Wolf MT, Gu X, Cammarata M, Hoff R, Badylak SF, Wagner WR. Bi-layered polyurethane - Extracellular matrix cardiac patch improves ischemic ventricular wall remodeling in a rat model. *Biomaterials*. 2016;107:1-14.
- [24] Costa A, Naranjo JD, Turner NJ, Swinehart IT, Kolich BD, Shaffey SA, Londono R, Keane TJ, Reing JE, Johnson SA, Badylak SF. Mechanical strength vs. degradation of a biologically-derived surgical mesh over time in a rodent full thickness abdominal wall defect. *Biomaterials*. 2016;108:81-90.
- [25] Badylak SF, Dziki JL, Sicari BM, Ambrosio F, Boninger ML. Mechanisms by which acellular biologic scaffolds promote functional skeletal muscle restoration. *Biomaterials*. 2016;103:128-36.
- [26] Badylak SF. A scaffold immune microenvironment. *Science*. 2016;352(6283):298.
- [27] Zaidi AH, Saldin LT, Kelly LA, Bergal L, Londono R, Kosovec JE, Komatsu Y, Kasi PM, Shetty AA, Keane TJ, Thakkar SJ, Huleihel L, Landreneau RJ, Badylak SF, Jobe BA. MicroRNA signature characterizes primary tumors that metastasize in an esophageal adenocarcinoma rat model. *PloS one*. 2015;10(3):e0122375.
- [28] Wolf MT, Vodovotz Y, Tottey S, Brown BN, Badylak SF. Predicting in vivo responses to biomaterials via combined in vitro and in silico analysis. *Tissue engineering Part C, Methods*. 2015;21(2):148-59.
- [29] Wolf MT, Dearth CL, Sonnenberg SB, Loba EG, Badylak SF. Naturally derived and synthetic scaffolds for skeletal muscle reconstruction. *Advanced drug delivery reviews*. 2015;84:208-21.
- [30] Wang YY, Chatzistavrou X, Faulk D, Badylak S, Zheng L, Papagerakis S, Ge L, Liu H, Papagerakis P. Biological and bactericidal properties of Ag-doped bioactive glass in a natural extracellular matrix hydrogel with potential application in dentistry. *Eur Cell Mater*. 2015;29:342-55.
- [31] Turner NJ, Pezzone D, Badylak SF. Regional variations in the histology of porcine skin. *Tissue engineering Part C, Methods*. 2015;21(4):373-84.
- [32] Turner NJ, Badylak SF. The Use of Biologic Scaffolds in the Treatment of Chronic Nonhealing Wounds. *Advances in wound care*. 2015;4(8):490-500.
- [33] Sicari BM, Londono R, Badylak SF. Strategies for skeletal muscle tissue engineering: seed vs. soil. *Journal of Materials Chemistry B*. 2015;3(40):7881-95.
- [34] Sicari BM, Dziki JL, Badylak SF. Strategies for functional bioscaffold-based skeletal muscle reconstruction. *Annals of translational medicine*. 2015;3(17):256.

- [35] Shin SS, Grandhi R, Henchir J, Yan HQ, Badylak SF, Dixon CE. Neuroprotective effects of collagen matrix in rats after traumatic brain injury. *Restorative neurology and neuroscience*. 2015;33(2):95-104.
- [36] Meng FW, Slivka PF, Dearth CL, Badylak SF. Solubilized extracellular matrix from brain and urinary bladder elicits distinct functional and phenotypic responses in macrophages. *Biomaterials*. 2015;46:131-40.
- [37] Massensini AR, Ghuman H, Saldin LT, Medberry CJ, Keane TJ, Nicholls FJ, Velankar SS, Badylak SF, Modo M. Concentration-dependent rheological properties of ECM hydrogel for intracerebral delivery to a stroke cavity. *Acta biomaterialia*. 2015;27:116-30.
- [38] Londono R, Badylak SF. Biologic scaffolds for regenerative medicine: mechanisms of in vivo remodeling. *Annals of biomedical engineering*. 2015;43(3):577-92.
- [39] Londono R, Badylak SF. Regenerative Medicine Strategies for Esophageal Repair. *Tissue engineering Part B, Reviews*. 2015;21(4):393-410.
- [40] Keane TJ, Swinehart IT, Badylak SF. Methods of tissue decellularization used for preparation of biologic scaffolds and in vivo relevance. *Methods*. 2015;84:25-34.
- [41] Keane TJ, Dziki J, Castelton A, Faulk DM, Messerschmidt V, Londono R, Reing JE, Velankar SS, Badylak SF. Preparation and characterization of a biologic scaffold and hydrogel derived from colonic mucosa. *Journal of biomedical materials research Part B, Applied biomaterials*. 2015.
- [42] Keane TJ, DeWard A, Londono R, Saldin LT, Castleton AA, Carey L, Nieponice A, Lagasse E, Badylak SF. Tissue-Specific Effects of Esophageal Extracellular Matrix. *Tissue engineering Part A*. 2015;21(17-18):2293-300.
- [43] Keane TJ, Badylak SF. The host response to allogeneic and xenogeneic biological scaffold materials. *Journal of tissue engineering and regenerative medicine*. 2015;9(5):504-11.
- [44] Hart JA, Philips EJ, Badylak S, Dix N, Petrinec K, Mathews AL, Green W, Srifa A. Phytoplankton biomass and composition in a well-flushed, sub-tropical estuary: The contrasting effects of hydrology, nutrient loads and allochthonous influences. *Marine environmental research*. 2015;112(Pt A):9-20.
- [45] Faulk DM, Wildemann JD, Badylak SF. Decellularization and cell seeding of whole liver biologic scaffolds composed of extracellular matrix. *Journal of clinical and experimental hepatology*. 2015;5(1):69-80.
- [46] Dreifuss SE, Wollstein R, Badylak SF, Rubin JP. Acellular micronized extracellular matrix and occlusive dressings for open fingertip injuries. *Plast Aesthet Res*. 2015;2:282-3.
- [47] Dearth CL, Keane TJ, Scott JR, Daly KA, Badylak SF. A Rodent Model to Evaluate the Tissue Response to a Biological Scaffold When Adjacent to a Synthetic Material. *Tissue engineering Part A*. 2015;21(19-20):2526-35.
- [48] Carruthers CA, Dearth CL, Reing JE, Kramer CR, Gagne DH, Crapo PM, Garcia O, Jr., Badhwar A, Scott JR, Badylak SF. Histologic characterization of acellular dermal matrices in a porcine model of tissue expander breast reconstruction. *Tissue engineering Part A*. 2015;21(1-2):35-44.
- [49] Angelozzi M, Miotti M, Penolazzi L, Mazzitelli S, Keane T, Badylak SF, Piva R, Nastruzzi C. Composite ECM-alginate microfibers produced by microfluidics as scaffolds with biomimetic potential. *Materials science & engineering C, Materials for biological applications*. 2015;56:141-53.
- [50] Wolf MT, Dearth CL, Ranallo CA, LoPresti ST, Carey LE, Daly KA, Brown BN, Badylak SF. Macrophage polarization in response to ECM coated polypropylene mesh. *Biomaterials*. 2014;35(25):6838-49.
- [51] Slivka PF, Dearth CL, Keane TJ, Meng FW, Medberry CJ, Riggio RT, Reing JE, Badylak SF. Fractionation of an ECM hydrogel into structural and soluble components reveals distinctive roles in regulating macrophage behavior. *Biomaterials science*. 2014;2(10):1521-34.

- [52] Sicari BM, Zhang L, Londono R, Badylak SF. An assay to quantify chemotactic properties of degradation products from extracellular matrix. *Methods in molecular biology*. 2014;1202:103-10.
- [53] Sicari BM, Rubin JP, Dearth CL, Wolf MT, Ambrosio F, Boninger M, Turner NJ, Weber DJ, Simpson TW, Wyse A, Brown EH, Dziki JL, Fisher LE, Brown S, Badylak SF. An acellular biologic scaffold promotes skeletal muscle formation in mice and humans with volumetric muscle loss. *Sci Transl Med*. 2014;6(234):234ra58.
- [54] Sicari BM, Dziki JL, Siu BF, Medberry CJ, Dearth CL, Badylak SF. The promotion of a constructive macrophage phenotype by solubilized extracellular matrix. *Biomaterials*. 2014;35(30):8605-12.
- [55] Sicari BM, Dearth CL, Badylak SF. Tissue engineering and regenerative medicine approaches to enhance the functional response to skeletal muscle injury. *Anatomical record*. 2014;297(1):51-64.
- [56] Sanz AF, Hoppo T, Wittelman BP, Brown BN, Gilbert TW, Badylak SF, Jobe BA, Nieponice A. In vivo assessment of a biological occluder for NOTES gastrotomy closure. *Surgical laparoscopy, endoscopy & percutaneous techniques*. 2014;24(4):322-6.
- [57] Nieponice A, Ciotola FF, Nachman F, Jobe BA, Hoppo T, Londono R, Badylak S, Badaloni AE. Patch esophagoplasty: esophageal reconstruction using biologic scaffolds. *The Annals of thoracic surgery*. 2014;97(1):283-8.
- [58] Meng F, Modo M, Badylak SF. Biologic scaffold for CNS repair. *Regenerative medicine*. 2014;9(3):367-83.
- [59] Keane TJ, Badylak SF. Biomaterials for tissue engineering applications. *Seminars in pediatric surgery*. 2014;23(3):112-8.
- [60] Gentile NE, Stearns KM, Brown EH, Rubin JP, Boninger ML, Dearth CL, Ambrosio F, Badylak SF. Targeted rehabilitation after extracellular matrix scaffold transplantation for the treatment of volumetric muscle loss. *American journal of physical medicine & rehabilitation / Association of Academic Physiatrists*. 2014;93(11 Suppl 3):S79-87.
- [61] Faulk DM, Londono R, Wolf MT, Ranallo CA, Carruthers CA, Wildemann JD, Dearth CL, Badylak SF. ECM hydrogel coating mitigates the chronic inflammatory response to polypropylene mesh. *Biomaterials*. 2014;35(30):8585-95.
- [62] Faulk DM, Johnson SA, Zhang L, Badylak SF. Role of the extracellular matrix in whole organ engineering. *Journal of cellular physiology*. 2014;229(8):984-9.
- [63] Faulk DM, Carruthers CA, Warner HJ, Kramer CR, Reing JE, Zhang L, D'Amore A, Badylak SF. The effect of detergents on the basement membrane complex of a biologic scaffold material. *Acta biomaterialia*. 2014;10(1):183-93.
- [64] Crapo PM, Tottey S, Slivka PF, Badylak SF. Effects of biologic scaffolds on human stem cells and implications for CNS tissue engineering. *Tissue engineering Part A*. 2014;20(1-2):313-23.
- [65] Chatzistavrou X, Fenno JC, Faulk D, Badylak S, Kasuga T, Boccaccini AR, Papagerakis P. Fabrication and characterization of bioactive and antibacterial composites for dental applications. *Acta biomaterialia*. 2014;10(8):3723-32.
- [66] Carey LE, Dearth CL, Johnson SA, Londono R, Medberry CJ, Daly KA, Badylak SF. In vivo degradation of 14C-labeled porcine dermis biologic scaffold. *Biomaterials*. 2014;35(29):8297-304.
- [67] Brown BN, Sicari BM, Badylak SF. Rethinking Regenerative Medicine: A Macrophage-Centered Approach. *Frontiers in immunology*. 2014;5:510.
- [68] Brown BN, Badylak SF. Extracellular matrix as an inductive scaffold for functional tissue reconstruction. *Translational research : the journal of laboratory and clinical medicine*. 2014;163(4):268-85.

- [69] Badylak SF. Decellularized allogeneic and xenogeneic tissue as a bioscaffold for regenerative medicine: factors that influence the host response. *Annals of biomedical engineering*. 2014;42(7):1517-27.
- [70] Zhang L, Zhang F, Weng Z, Brown BN, Yan H, Ma XM, Vosler PS, Badylak SF, Dixon CE, Cui XT, Chen J. Effect of an inductive hydrogel composed of urinary bladder matrix upon functional recovery following traumatic brain injury. *Tissue engineering Part A*. 2013;19(17-18):1909-18.
- [71] Wolf MT, Carruthers CA, Dearth CL, Crapo PM, Huber A, Burnsed OA, Londono R, Johnson SA, Daly KA, Stahl EC, Freund JM, Medberry CJ, Carey LE, Nieponice A, Amoroso NJ, Badylak SF. Polypropylene surgical mesh coated with extracellular matrix mitigates the host foreign body response. *J Biomed Mater Res A*. 2013;35(25):6838-49.
- [72] Wang JY, Liou AK, Ren ZH, Zhang L, Brown BN, Cui XT, Badylak SF, Cai YN, Guan YQ, Leak RK, Chen J, Ji X, Chen L. Neurorestorative effect of urinary bladder matrix-mediated neural stem cell transplantation following traumatic brain injury in rats. *CNS & neurological disorders drug targets*. 2013;12(3):413-25.
- [73] Turner NJ, Londono R, Dearth CL, Culiat CT, Badylak SF. Human NELL1 protein augments constructive tissue remodeling with biologic scaffolds. *Cells, tissues, organs*. 2013;198(4):249-65.
- [74] Turner NJ, Keane TJ, Badylak SF. Lessons from developmental biology for regenerative medicine. *Birth defects research Part C, Embryo today : reviews*. 2013;99(3):149-59.
- [75] Turner NJ, Badylak SF. Biologic Scaffolds for Musculotendinous Tissue Repair. *Eur Cells Mater*. 2013;25:130-43.
- [76] Sicari B, Turner N, Badylak SF. An in vivo model system for evaluation of the host response to biomaterials. *Methods in molecular biology*. 2013;1037:3-25.
- [77] Sawkins MJ, Bowen W, Dhadda P, Markides H, Sidney LE, Taylor AJ, Rose FR, Badylak SF, Shakesheff KM, White LJ. Hydrogels derived from demineralized and decellularized bone extracellular matrix. *Acta biomaterialia*. 2013;9(8):7865-73.
- [78] Nieponice A, Gilbert TW, Johnson SA, Turner NJ, Badylak SF. Bone marrow-derived cells participate in the long-term remodeling in a mouse model of esophageal reconstruction. *The Journal of surgical research*. 2013;182(1):e1-7.
- [79] Modo M, Ambrosio F, Friedlander RM, Badylak SF, Wechsler LR. Bioengineering solutions for neural repair and recovery in stroke. *Current opinion in neurology*. 2013;26(6):626-31.
- [80] Medberry CJ, Crapo PM, Siu BF, Carruthers CA, Wolf MT, Nagarkar SP, Agrawal V, Jones KE, Kelly J, Johnson SA, Velankar SS, Watkins SC, Modo M, Badylak SF. Hydrogels derived from central nervous system extracellular matrix. *Biomaterials*. 2013;34(4):1033-40.
- [81] Keane TJ, Londono R, Carey RM, Carruthers CA, Reing JE, Dearth CL, D'Amore A, Medberry CJ, Badylak SF. Preparation and characterization of a biologic scaffold from esophageal mucosa. *Biomaterials*. 2013;34(28):6729-37.
- [82] Goh SK, Bertera S, Olsen P, Candiello JE, Halfter W, Uechi G, Balasubramani M, Johnson SA, Sicari BM, Kollar E, Badylak SF, Banerjee I. Perfusion-decellularized pancreas as a natural 3D scaffold for pancreatic tissue and whole organ engineering. *Biomaterials*. 2013;34(28):6760-72.
- [83] Gilbert TW, Badylak SF, Beckman EJ, Clower DM, Rubin JP. Prevention of seroma formation with TissuGlu(R) surgical adhesive in a canine abdominoplasty model: long term clinical and histologic studies. *Journal of plastic, reconstructive & aesthetic surgery : JPRAS*. 2013;66(3):414-22.
- [84] Burk J, Badylak SF, Kelly J, Brehm W. Equine cellular therapy-from stall to bench to bedside? *Cytometry Part A : the journal of the International Society for Analytical Cytology*. 2013;83(1):103-13.

- [85] Brown BN, Badylak SF. Expanded applications, shifting paradigms and an improved understanding of host-biomaterial interactions. *Acta biomaterialia*. 2013;9(2):4948-55.
- [86] Benders KE, van Weeren PR, Badylak SF, Saris DB, Dhert WJ, Malda J. Extracellular matrix scaffolds for cartilage and bone regeneration. *Trends in biotechnology*. 2013;31(3):169-76.
- [87] Wolf MT, Daly KA, Reing JE, Badylak SF. Biologic scaffold composed of skeletal muscle extracellular matrix. *Biomaterials*. 2012;33(10):2916-25.
- [88] Wolf MT, Daly KA, Brennan-Pierce EP, Johnson SA, Carruthers CA, D'Amore A, Nagarkar SP, Velankar SS, Badylak SF. A hydrogel derived from decellularized dermal extracellular matrix. *Biomaterials*. 2012;33(29):7028-38.
- [89] Wainwright JM, Hashizume R, Fujimoto KL, Remlinger NT, Pesyna C, Wagner WR, Tobita K, Gilbert TW, Badylak SF. Right ventricular outflow tract repair with a cardiac biologic scaffold. *Cells, tissues, organs*. 2012;195(1-2):159-70.
- [90] Turner WS, Wang X, Johnson S, Medberry C, Mendez J, Badylak SF, McCord MG, McCloskey KE. Cardiac tissue development for delivery of embryonic stem cell-derived endothelial and cardiac cells in natural matrices. *Journal of biomedical materials research Part B, Applied biomaterials*. 2012;100(8):2060-72.
- [91] Turner NJ, Badylak SF. Regeneration of skeletal muscle. *Cell Tissue Res*. 2012;347(3):759-74.
- [92] Turner NJ, Badylak JS, Weber DJ, Badylak SF. Biologic scaffold remodeling in a dog model of complex musculoskeletal injury. *The Journal of surgical research*. 2012;176(2):490-502.
- [93] Sicari BM, Johnson SA, Siu BF, Crapo PM, Daly KA, Jiang H, Medberry CJ, Tottey S, Turner NJ, Badylak SF. The effect of source animal age upon the in vivo remodeling characteristics of an extracellular matrix scaffold. *Biomaterials*. 2012;33(22):5524-33.
- [94] Sicari BM, Agrawal V, Siu BF, Medberry CJ, Dearth CL, Turner NJ, Badylak SF. A murine model of volumetric muscle loss and a regenerative medicine approach for tissue replacement. *Tissue engineering Part A*. 2012;18(19-20):1941-8.
- [95] Ribeiro AJ, Tottey S, Taylor RW, Bise R, Kanade T, Badylak SF, Dahl KN. Mechanical characterization of adult stem cells from bone marrow and perivascular niches. *Journal of biomechanics*. 2012;45(7):1280-7.
- [96] Penolazzi L, Mazzitelli S, Vecchiatini R, Torreggiani E, Lambertini E, Johnson S, Badylak SF, Piva R, Nastruzzi C. Human mesenchymal stem cells seeded on extracellular matrix-scaffold: viability and osteogenic potential. *Journal of cellular physiology*. 2012;227(2):857-66.
- [97] Medberry CJ, Tottey S, Jiang H, Johnson SA, Badylak SF. Resistance to infection of five different materials in a rat body wall model. *The Journal of surgical research*. 2012;173(1):38-44.
- [98] Marcal H, Ahmed T, Badylak SF, Tottey S, Foster LJ. A comprehensive protein expression profile of extracellular matrix biomaterial derived from porcine urinary bladder. *Regenerative medicine*. 2012;7(2):159-66.
- [99] Londono R, Jobe BA, Hoppo T, Badylak SF. Esophagus and regenerative medicine. *World journal of gastroenterology : WJG*. 2012;18(47):6894-9.
- [100] Keane TJ, Londono R, Turner NJ, Badylak SF. Consequences of ineffective decellularization of biologic scaffolds on the host response. *Biomaterials*. 2012;33(6):1771-81.
- [101] Huber A, McCabe GP, Boruch AV, Medberry C, Honerlaw M, Badylak SF. Polypropylene-containing synthetic mesh devices in soft tissue repair: a meta-analysis. *Journal of biomedical materials research Part B, Applied biomaterials*. 2012;100(1):145-54.

- [102] Huber A, Boruch AV, Nieponice A, Jiang H, Medberry C, Badylak SF. Histopathologic host response to polypropylene-based surgical mesh materials in a rat abdominal wall defect model. *Journal of biomedical materials research Part B, Applied biomaterials*. 2012;100(3):709-17.
- [103] Huber A, Badylak SF. Phenotypic changes in cultured smooth muscle cells: limitation or opportunity for tissue engineering of hollow organs? *Journal of tissue engineering and regenerative medicine*. 2012;6(7):505-11.
- [104] Hoppo T, Badylak SF, Jobe BA. A novel esophageal-preserving approach to treat high-grade dysplasia and superficial adenocarcinoma in the presence of chronic gastroesophageal reflux disease. *World J Surg*. 2012;36(10):2390-3.
- [105] Hong Y, Takanari K, Amoroso NJ, Hashizume R, Brennan-Pierce EP, Freund JM, Badylak SF, Wagner WR. An elastomeric patch electrospun from a blended solution of dermal extracellular matrix and biodegradable polyurethane for rat abdominal wall repair. *Tissue engineering Part C, Methods*. 2012;18(2):122-32.
- [106] Daly KA, Liu S, Agrawal V, Brown BN, Johnson SA, Medberry CJ, Badylak SF. Damage associated molecular patterns within xenogeneic biologic scaffolds and their effects on host remodeling. *Biomaterials*. 2012;33(1):91-101.
- [107] Daly KA, Liu S, Agrawal V, Brown BN, Huber A, Johnson SA, Reing J, Sicari B, Wolf M, Zhang X, Badylak SF. The host response to endotoxin-contaminated dermal matrix. *Tissue engineering Part A*. 2012;18(11-12):1293-303.
- [108] Crapo PM, Medberry CJ, Reing JE, Tottey S, van der Merwe Y, Jones KE, Badylak SF. Biologic scaffolds composed of central nervous system extracellular matrix. *Biomaterials*. 2012;33(13):3539-47.
- [109] Brown BN, Ratner BD, Goodman SB, Amar S, Badylak SF. Macrophage polarization: an opportunity for improved outcomes in biomaterials and regenerative medicine. *Biomaterials*. 2012;33(15):3792-802.
- [110] Brown BN, Londono R, Tottey S, Zhang L, Kukla KA, Wolf MT, Daly KA, Reing JE, Badylak SF. Macrophage phenotype as a predictor of constructive remodeling following the implantation of biologically derived surgical mesh materials. *Acta biomaterialia*. 2012;8(3):978-87.
- [111] Brown BN, Chung WL, Almarza AJ, Pavlick MD, Reppas SN, Ochs MW, Russell AJ, Badylak SF. Inductive, scaffold-based, regenerative medicine approach to reconstruction of the temporomandibular joint disk. *J Oral Maxillofac Surg*. 2012;70(11):2656-68.
- [112] Bible E, Dell'Acqua F, Solanky B, Balducci A, Crapo PM, Badylak SF, Ahrens ET, Modo M. Non-invasive imaging of transplanted human neural stem cells and ECM scaffold remodeling in the stroke-damaged rat brain by ^{(19)F}- and diffusion-MRI. *Biomaterials*. 2012;33(10):2858-71.
- [113] Badylak SF, Weiss DJ, Caplan A, Macchiarini P. Engineered whole organs and complex tissues. *Lancet*. 2012;379(9819):943-52.
- [114] Badylak SF, Hirschi KK, Niklason LE. Cardiovascular regenerative biology. *Cells, tissues, organs*. 2012;195(1-2):4.
- [115] Badylak SF. Invited commentary. *The Annals of thoracic surgery*. 2012;93(4):1093.
- [116] Agrawal V, Siu BF, Chao H, Hirschi KK, Raborn E, Johnson SA, Tottey S, Hurley KB, Medberry CJ, Badylak SF. Partial Characterization of the Sox2+ Cell Population in an Adult Murine Model of Digit Amputation. *Tissue engineering Part A*. 2012;18(13):1454-63.
- [117] Turner NJ, Pezzone MA, Brown BN, Badylak SF. Quantitative multispectral imaging of Herovici's polychrome for the assessment of collagen content and tissue remodelling. *Journal of tissue engineering and regenerative medicine*. 2011;7(2):139-48.

- [118] Tottey S, Johnson SA, Crapo PM, Reing JE, Zhang L, Jiang H, Medberry CJ, Reines B, Badylak SF. The effect of source animal age upon extracellular matrix scaffold properties. *Biomaterials*. 2011;32(1):128-36.
- [119] Tottey S, Corselli M, Jeffries EM, Londono R, Peault B, Badylak SF. Extracellular matrix degradation products and low-oxygen conditions enhance the regenerative potential of perivascular stem cells. *Tissue engineering Part A*. 2011;17(1-2):37-44.
- [120] Soto-Gutierrez A, Zhang L, Medberry C, Fukumitsu K, Faulk D, Jiang H, Reing J, Gramignoli R, Komori J, Ross M, Nagaya M, Lagasse E, Stoltz D, Strom SC, Fox IJ, Badylak SF. A whole-organ regenerative medicine approach for liver replacement. *Tissue engineering Part C, Methods*. 2011;17(6):677-86.
- [121] Mazzitelli S, Luca G, Mancuso F, Calvitti M, Calafiore R, Nastruzzi C, Johnson S, Badylak SF. Production and characterization of engineered alginate-based microparticles containing ECM powder for cell/tissue engineering applications. *Acta biomaterialia*. 2011;7(3):1050-62.
- [122] Marongiu F, Gramignoli R, Dorko K, Miki T, Ranade AR, Paola Serra M, Doratiotto S, Sini M, Sharma S, Mitamura K, Sellaro TL, Tahan V, Skvorak KJ, Ellis EC, Badylak SF, Davila JC, Hines R, Laconi E, Strom SC. Hepatic differentiation of amniotic epithelial cells. *Hepatology*. 2011;53(5):1719-29.
- [123] Hong Y, Huber A, Takanari K, Amoroso NJ, Hashizume R, Badylak SF, Wagner WR. Mechanical properties and in vivo behavior of a biodegradable synthetic polymer microfiber-extracellular matrix hydrogel biohybrid scaffold. *Biomaterials*. 2011;32(13):3387-94.
- [124] Hammond JS, Gilbert TW, Howard D, Zaitoun A, Michalopoulos G, Shakesheff KM, Beckingham IJ, Badylak SF. Scaffolds containing growth factors and extracellular matrix induce hepatocyte proliferation and cell migration in normal and regenerating rat liver. *Journal of hepatology*. 2011;54(2):279-87.
- [125] Daly KA, Wolf M, Johnson SA, Badylak SF. A rabbit model of peripheral compartment syndrome with associated rhabdomyolysis and a regenerative medicine approach for treatment. *Tissue engineering Part C, Methods*. 2011;17(6):631-40.
- [126] Crapo PM, Gilbert TW, Badylak SF. An overview of tissue and whole organ decellularization processes. *Biomaterials*. 2011;32(12):3233-43.
- [127] Brown BN, Freund JM, Han L, Rubin JP, Reing JE, Jeffries EM, Wolf MT, Tottey S, Barnes CA, Ratner BD, Badylak SF. Comparison of three methods for the derivation of a biologic scaffold composed of adipose tissue extracellular matrix. *Tissue engineering Part C, Methods*. 2011;17(4):411-21.
- [128] Brown BN, Chung WL, Pavlick M, Reppas S, Ochs MW, Russell AJ, Badylak SF. Extracellular matrix as an inductive template for temporomandibular joint meniscus reconstruction: a pilot study. *J Oral Maxillofac Surg*. 2011;69(12):e488-505.
- [129] Barnes CA, Brison J, Michel R, Brown BN, Castner DG, Badylak SF, Ratner BD. The surface molecular functionality of decellularized extracellular matrices. *Biomaterials*. 2011;32(1):137-43.
- [130] Badylak SF, Taylor D, Uygun K. Whole-organ tissue engineering: decellularization and recellularization of three-dimensional matrix scaffolds. *Annu Rev Biomed Eng*. 2011;13:27-53.
- [131] Badylak SF, Hopko T, Nieponice A, Gilbert TW, Davison JM, Jobe BA. Esophageal preservation in five male patients after endoscopic inner-layer circumferential resection in the setting of superficial cancer: a regenerative medicine approach with a biologic scaffold. *Tissue engineering Part A*. 2011;17(11-12):1643-50.
- [132] Badylak SF, Brown BN, Gilbert TW, Daly KA, Huber A, Turner NJ. Biologic scaffolds for constructive tissue remodeling. *Biomaterials*. 2011;32(1):316-9.

- [133] Agrawal V, Tottey S, Johnson SA, Freund JM, Siu BF, Badylak SF. Recruitment of progenitor cells by an extracellular matrix cryptic peptide in a mouse model of digit amputation. *Tissue engineering Part A*. 2011;17(19-20):2435-43.
- [134] Agrawal V, Kelly J, Tottey S, Daly KA, Johnson SA, Siu BF, Reing J, Badylak SF. An isolated cryptic peptide influences osteogenesis and bone remodeling in an adult mammalian model of digit amputation. *Tissue engineering Part A*. 2011;17(23-24):3033-44.
- [135] Wang G, Badylak SF, Heber-Katz E, Braunhut SJ, Gudas LJ. The effects of DNA methyltransferase inhibitors and histone deacetylase inhibitors on digit regeneration in mice. *Regenerative medicine*. 2010;5(2):201-20.
- [136] Wainwright JM, Czajka CA, Patel UB, Freytes DO, Tobita K, Gilbert TW, Badylak SF. Preparation of cardiac extracellular matrix from an intact porcine heart. *Tissue engineering Part C, Methods*. 2010;16(3):525-32.
- [137] Vorotnikova E, McIntosh D, Dewilde A, Zhang J, Reing JE, Zhang L, Cordero K, Bedelbaeva K, Gourevitch D, Heber-Katz E, Badylak SF, Braunhut SJ. Extracellular matrix-derived products modulate endothelial and progenitor cell migration and proliferation in vitro and stimulate regenerative healing in vivo. *Matrix biology : journal of the International Society for Matrix Biology*. 2010;29(8):690-700.
- [138] Valentin JE, Turner NJ, Gilbert TW, Badylak SF. Functional skeletal muscle formation with a biologic scaffold. *Biomaterials*. 2010;31(29):7475-84.
- [139] Turner NJ, Yates AJ, Jr., Weber DJ, Qureshi IR, Stoltz DB, Gilbert TW, Badylak SF. Xenogeneic extracellular matrix as an inductive scaffold for regeneration of a functioning musculotendinous junction. *Tissue engineering Part A*. 2010;16(11):3309-17.
- [140] Turner NJ, Johnson SA, Badylak SF. A histomorphologic study of the normal healing response following digit amputation in C57bl/6 and MRL/MpJ mice. *Arch Histol Cytol*. 2010;73(2):103-11.
- [141] Sellaro TL, Ranade A, Faulk DM, McCabe GP, Dorko K, Badylak SF, Strom SC. Maintenance of human hepatocyte function in vitro by liver-derived extracellular matrix gels. *Tissue engineering Part A*. 2010;16(3):1075-82.
- [142] Remlinger NT, Czajka CA, Juhas ME, Vorp DA, Stoltz DB, Badylak SF, Gilbert S, Gilbert TW. Hydrated xenogeneic decellularized tracheal matrix as a scaffold for tracheal reconstruction. *Biomaterials*. 2010;31(13):3520-6.
- [143] Reing JE, Brown BN, Daly KA, Freund JM, Gilbert TW, Hsiong SX, Huber A, Kullas KE, Tottey S, Wolf MT, Badylak SF. The effects of processing methods upon mechanical and biologic properties of porcine dermal extracellular matrix scaffolds. *Biomaterials*. 2010;31(33):8626-33.
- [144] Mase VJ, Jr., Hsu JR, Wolf SE, Wenke JC, Baer DG, Owens J, Badylak SF, Walters TJ. Clinical application of an acellular biologic scaffold for surgical repair of a large, traumatic quadriceps femoris muscle defect. *Orthopedics*. 2010;33(7):511.
- [145] El-Bialy T, Uludag H, Jomha N, Badylak SF. In vivo ultrasound-assisted tissue-engineered mandibular condyle: a pilot study in rabbits. *Tissue engineering Part C, Methods*. 2010;16(6):1315-23.
- [146] Derwin KA, Badylak SF, Steinmann SP, Iannotti JP. Extracellular matrix scaffold devices for rotator cuff repair. *J Shoulder Elbow Surg*. 2010;19(3):467-76.
- [147] Badylak SF, Nerem RM. Progress in tissue engineering and regenerative medicine. *Proceedings of the National Academy of Sciences of the United States of America*. 2010;107(8):3285-6.
- [148] Ambrosio F, Wolf SL, Delitto A, Fitzgerald GK, Badylak SF, Boninger ML, Russell AJ. The emerging relationship between regenerative medicine and physical therapeutics. *Physical therapy*. 2010;90(12):1807-14.

- [149] Allen RA, Seltz LM, Jiang H, Kasick RT, Sellaro TL, Badylak SF, Ogilvie JB. Adrenal extracellular matrix scaffolds support adrenocortical cell proliferation and function in vitro. *Tissue engineering Part A*. 2010;16(11):3363-74.
- [150] Agrawal V, Johnson SA, Reing J, Zhang L, Tottey S, Wang G, Hirschi KK, Braunhut S, Gudas LJ, Badylak SF. Epimorphic regeneration approach to tissue replacement in adult mammals. *Proceedings of the National Academy of Sciences of the United States of America*. 2010;107(8):3351-5.
- [151] Witteman BP, Foxwell TJ, Monsheimer S, Gelrud A, Eid GM, Nieponice A, O'Rourke RW, Hoppo T, Bouvy ND, Badylak SF, Jobe BA. Transoral Endoscopic Inner Layer Esophagectomy: Management of High-Grade Dysplasia and Superficial Cancer with Organ Preservation. *Journal of gastrointestinal surgery : official journal of the Society for Surgery of the Alimentary Tract*. 2009;13(12):2104-12.
- [152] Valentin JE, Stewart-Akers AM, Gilbert TW, Badylak SF. Macrophage participation in the degradation and remodeling of extracellular matrix scaffolds. *Tissue engineering Part A*. 2009;15(7):1687-94.
- [153] Valentin JE, Freytes DO, Grasman JM, Pesyna C, Freund J, Gilbert TW, Badylak SF. Oxygen diffusivity of biologic and synthetic scaffold materials for tissue engineering. *J Biomed Mater Res A*. 2009;91(4):1010-7.
- [154] Reing JE, Zhang L, Myers-Irvin J, Cordero KE, Freytes DO, Heber-Katz E, Bedelbaeva K, McIntosh D, Dewilde A, Braunhut SJ, Badylak SF. Degradation products of extracellular matrix affect cell migration and proliferation. *Tissue engineering Part A*. 2009;15(3):605-14.
- [155] Parekh A, Mantle B, Banks J, Swarts JD, Badylak SF, Dohar JE, Hebda PA. Repair of the tympanic membrane with urinary bladder matrix. *Laryngoscope*. 2009;119(6):1206-13.
- [156] Nieponice A, McGrath K, Qureshi I, Beckman EJ, Luketich JD, Gilbert TW, Badylak SF. An extracellular matrix scaffold for esophageal stricture prevention after circumferential EMR. *Gastrointest Endosc*. 2009;69(2):289-96.
- [157] Kelly DJ, Rosen AB, Schuld AJ, Kochupura PV, Doronin SV, Potapova IA, Azeloglu EU, Badylak SF, Brink PR, Cohen IS, Gaudette GR. Increased myocyte content and mechanical function within a tissue-engineered myocardial patch following implantation. *Tissue engineering Part A*. 2009;15(8):2189-201.
- [158] Gilbert TW, Freund JM, Badylak SF. Quantification of DNA in biologic scaffold materials. *The Journal of surgical research*. 2009;152(1):135-9.
- [159] Gilbert TW, Agrawal V, Gilbert MR, Povirk KM, Badylak SF, Rosen CA. Liver-derived extracellular matrix as a biologic scaffold for acute vocal fold repair in a canine model. *Laryngoscope*. 2009;119(9):1856-63.
- [160] Duncan D, Rubin JP, Golitz L, Badylak S, Kesel L, Freund J. Refinement of technique in injection lipolysis based on scientific studies and clinical evaluation. *Clin Plast Surg*. 2009;36(2):195-209, v-vi; discussion 11-3.
- [161] Daly KA, Stewart-Akers AM, Hara H, Ezzelarab M, Long C, Cordero K, Johnson SA, Ayares D, Cooper DK, Badylak SF. Effect of the alphaGal epitope on the response to small intestinal submucosa extracellular matrix in a nonhuman primate model. *Tissue engineering Part A*. 2009;15(12):3877-88.
- [162] Brown BN, Valentin JE, Stewart-Akers AM, McCabe GP, Badylak SF. Macrophage phenotype and remodeling outcomes in response to biologic scaffolds with and without a cellular component. *Biomaterials*. 2009;30(8):1482-91.
- [163] Brown BN, Barnes CA, Kasick RT, Michel R, Gilbert TW, Beer-Stolz D, Castner DG, Ratner BD, Badylak SF. Surface characterization of extracellular matrix scaffolds. *Biomaterials*. 2009;31(3):428-37.

- [164] Boruch AV, Nieponice A, Qureshi IR, Gilbert TW, Badylak SF. Constructive remodeling of biologic scaffolds is dependent on early exposure to physiologic bladder filling in a canine partial cystectomy model. *The Journal of surgical research*. 2009;161(2):217-25.
- [165] Beattie AJ, Gilbert TW, Guyot JP, Yates AJ, Badylak SF. Chemoattraction of progenitor cells by remodeling extracellular matrix scaffolds. *Tissue engineering Part A*. 2009;15(5):1119-25.
- [166] Badylak SF, Freytes DO, Gilbert TW. Extracellular matrix as a biological scaffold material: Structure and function. *Acta biomaterialia*. 2009;5(1):1-13.
- [167] Agrawal V, Brown BN, Beattie AJ, Gilbert TW, Badylak SF. Evidence of innervation following extracellular matrix scaffold-mediated remodelling of muscular tissues. *Journal of tissue engineering and regenerative medicine*. 2009;3(8):590-600.
- [168] Stankus JJ, Freytes DO, Badylak SF, Wagner WR. Hybrid nanofibrous scaffolds from electrospinning of a synthetic biodegradable elastomer and urinary bladder matrix. *Journal of biomaterials science Polymer edition*. 2008;19(5):635-52.
- [169] Ota T, Gilbert TW, Schwartzman D, McTiernan CF, Kitajima T, Ito Y, Sawa Y, Badylak SF, Zenati MA. A fusion protein of hepatocyte growth factor enhances reconstruction of myocardium in a cardiac patch derived from porcine urinary bladder matrix. *The Journal of thoracic and cardiovascular surgery*. 2008;136(5):1309-17.
- [170] Marra KG, Defail AJ, Clavijo-Alvarez JA, Badylak SF, Taieb A, Schipper B, Bennett J, Rubin JP. FGF-2 enhances vascularization for adipose tissue engineering. *Plast Reconstr Surg*. 2008;121(4):1153-64.
- [171] Gilbert TW, Wognum S, Joyce EM, Freytes DO, Sacks MS, Badylak SF. Collagen fiber alignment and biaxial mechanical behavior of porcine urinary bladder derived extracellular matrix. *Biomaterials*. 2008;29(36):4775-82.
- [172] Gilbert TW, Nieponice A, Spievack AR, Holcomb J, Gilbert S, Badylak SF. Repair of the thoracic wall with an extracellular matrix scaffold in a canine model. *The Journal of surgical research*. 2008;147(1):61-7.
- [173] Gilbert TW, Gilbert S, Madden M, Reynolds SD, Badylak SF. Morphologic assessment of extracellular matrix scaffolds for patch tracheoplasty in a canine model. *The Annals of thoracic surgery*. 2008;86(3):967-74; discussion -74.
- [174] Gilbert TW, Badylak SF, Guseenoff J, Beckman EJ, Clower DM, Daly P, Rubin JP. Lysine-derived urethane surgical adhesive prevents seroma formation in a canine abdominoplasty model. *Plast Reconstr Surg*. 2008;122(1):95-102.
- [175] Freytes DO, Tullius RS, Valentin JE, Stewart-Akers AM, Badylak SF. Hydrated versus lyophilized forms of porcine extracellular matrix derived from the urinary bladder. *J Biomed Mater Res A*. 2008;87(4):862-72.
- [176] Freytes DO, Stoner RM, Badylak SF. Uniaxial and biaxial properties of terminally sterilized porcine urinary bladder matrix scaffolds. *Journal of biomedical materials research Part B, Applied biomaterials*. 2008;84(2):408-14.
- [177] Freytes DO, Martin J, Velankar SS, Lee AS, Badylak SF. Preparation and rheological characterization of a gel form of the porcine urinary bladder matrix. *Biomaterials*. 2008;29(11):1630-7.
- [178] Crisan M, Yap S, Casteilla L, Chen CW, Corselli M, Park TS, Andriolo G, Sun B, Zheng B, Zhang L, Norotte C, Teng PN, Traas J, Schugar R, Deasy BM, Badylak S, Buhring HJ, Giacobino JP, Lazzari L, Huard J, Peault B. A perivascular origin for mesenchymal stem cells in multiple human organs. *Cell Stem Cell*. 2008;3(3):301-13.

- [179] Brennan EP, Tang XH, Stewart-Akers AM, Gudas LJ, Badylak SF. Chemoattractant activity of degradation products of fetal and adult skin extracellular matrix for keratinocyte progenitor cells. *Journal of tissue engineering and regenerative medicine*. 2008;2(8):491-8.
- [180] Badylak SF, Valentin JE, Ravindra AK, McCabe GP, Stewart-Akers AM. Macrophage phenotype as a determinant of biologic scaffold remodeling. *Tissue engineering Part A*. 2008;14(11):1835-42.
- [181] Badylak SF, Gilbert TW. Immune response to biologic scaffold materials. *Semin Immunol*. 2008;20(2):109-16.
- [182] Sellaro TL, Ravindra AK, Stoltz DB, Badylak SF. Maintenance of hepatic sinusoidal endothelial cell phenotype in vitro using organ-specific extracellular matrix scaffolds. *Tissue engineering*. 2007;13(9):2301-10.
- [183] Ota T, Gilbert TW, Badylak SF, Schwartzman D, Zenati MA. Electromechanical characterization of a tissue-engineered myocardial patch derived from extracellular matrix. *The Journal of thoracic and cardiovascular surgery*. 2007;133(4):979-85.
- [184] Gilbert TW, Stewart-Akers AM, Sydeski J, Nguyen TD, Badylak SF, Woo SL. Gene expression by fibroblasts seeded on small intestinal submucosa and subjected to cyclic stretching. *Tissue engineering*. 2007;13(6):1313-23.
- [185] Gilbert TW, Stewart-Akers AM, Simmons-Byrd A, Badylak SF. Degradation and remodeling of small intestinal submucosa in canine Achilles tendon repair. *J Bone Joint Surg Am*. 2007;89(3):621-30.
- [186] Gilbert TW, Stewart-Akers AM, Badylak SF. A quantitative method for evaluating the degradation of biologic scaffold materials. *Biomaterials*. 2007;28(2):147-50.
- [187] Brune T, Borel A, Gilbert TW, Franceschi JP, Badylak SF, Sommer P. In vitro comparison of human fibroblasts from intact and ruptured ACL for use in tissue engineering. *Eur Cell Mater*. 2007;14:78-90; discussion -1.
- [188] Badylak SF. The extracellular matrix as a biologic scaffold material. *Biomaterials*. 2007;28(25):3587-93.
- [189] Zantop T, Gilbert TW, Yoder MC, Badylak SF. Extracellular matrix scaffolds are repopulated by bone marrow-derived cells in a mouse model of achilles tendon reconstruction. *Journal of orthopaedic research : official publication of the Orthopaedic Research Society*. 2006;24(6):1299-309.
- [190] Wearden PD, Morell VO, Keller BB, Webber SA, Borovetz HS, Badylak SF, Boston JR, Kormos RL, Kameneva MV, Simaan M, Snyder TA, Tsukui H, Wagner WR, Antaki JF, Diao C, Vandenberghe S, Gardiner J, Li CM, Noh D, Paden D, Paden B, Wu J, Bearson GB, Jacobs G, Kirk J, Khanwilkar P, Long JW, Miles S, Hawkins JA, Kouretas PC, Shaddy RE. The PediaFlow pediatric ventricular assist device. *Semin Thorac Cardiovasc Surg Pediatr Card Surg Annu*. 2006;92-8.
- [191] Valentin JE, Badylak JS, McCabe GP, Badylak SF. Extracellular matrix bioscaffolds for orthopaedic applications. A comparative histologic study. *J Bone Joint Surg Am*. 2006;88(12):2673-86.
- [192] Ringel RL, Kahane JC, Hillsamer PJ, Lee AS, Badylak SF. The application of tissue engineering procedures to repair the larynx. *J Speech Lang Hear Res*. 2006;49(1):194-208.
- [193] Nieponice A, Gilbert TW, Badylak SF. Reinforcement of esophageal anastomoses with an extracellular matrix scaffold in a canine model. *The Annals of thoracic surgery*. 2006;82(6):2050-8.
- [194] Gurewich V, Pannell R, Simmons-Byrd A, Sarmientos P, Liu JN, Badylak SF. Thrombolysis vs. bleeding from hemostatic sites by a prourokinase mutant compared with tissue plasminogen activator. *J Thromb Haemost*. 2006;4(7):1559-65.
- [195] Gilbert TW, Sellaro TL, Badylak SF. Decellularization of tissues and organs. *Biomaterials*. 2006;27(19):3675-83.

- [196] Gilbert TW, Sacks MS, Grashow JS, Woo SL, Badylak SF, Chancellor MB. Fiber kinematics of small intestinal submucosa under biaxial and uniaxial stretch. *Journal of biomechanical engineering*. 2006;128(6):890-8.
- [197] Freytes DOaB, S.F. Sterilization of Biologic Scaffold Materials. *The Encyclopedia of Medical Devices and Instrumentation*. Hoboken, NJ: John Wiley & Sons, Inc.; 2006. p. pp. 273 – 82.
- [198] Freytes DO, Tullius RS, Badylak SF. Effect of storage upon material properties of lyophilized porcine extracellular matrix derived from the urinary bladder. *Journal of biomedical materials research Part B, Applied biomaterials*. 2006;78(2):327-33.
- [199] Brown B, Lindberg K, Reing J, Stoltz DB, Badylak SF. The basement membrane component of biologic scaffolds derived from extracellular matrix. *Tissue engineering*. 2006;12(3):519-26.
- [200] Brennan EP, Reing J, Chew D, Myers-Irvin JM, Young EJ, Badylak SF. Antibacterial activity within degradation products of biological scaffolds composed of extracellular matrix. *Tissue engineering*. 2006;12(10):2949-55.
- [201] Borovetz HS, Badylak S, Boston JR, Johnson C, Kormos R, Kameneva MV, Simaan M, Snyder TA, Tsukui H, Wagner WR, Woolley J, Antaki J, Diao C, Vandenbergh S, Keller B, Morell V, Wearden P, Webber S, Gardiner J, Li CM, Paden D, Paden B, Snyder S, Wu J, Bearnson G, Hawkins JA, Jacobs G, Kirk J, Khanwilkar P, Kouretas PC, Long J, Shaddy RE. Towards the development of a pediatric ventricular assist device. *Cell transplantation*. 2006;15 Suppl 1:S69-74.
- [202] Badylak SF, Kochupura PV, Cohen IS, Doronin SV, Saltman AE, Gilbert TW, Kelly DJ, Ignotz RA, Gaudette GR. The use of extracellular matrix as an inductive scaffold for the partial replacement of functional myocardium. *Cell transplantation*. 2006;15 Suppl 1:S29-40.
- [203] Wood JD, Simmons-Byrd A, Spievack AR, Badylak SF. Use of a particulate extracellular matrix bioscaffold for treatment of acquired urinary incontinence in dogs. *Journal of the American Veterinary Medical Association*. 2005;226(7):1095-7.
- [204] Robinson KA, Li J, Mathison M, Redkar A, Cui J, Chronos NA, Matheny RG, Badylak SF. Extracellular matrix scaffold for cardiac repair. *Circulation*. 2005;112(9 Suppl):I135-43.
- [205] Kochupura PV, Azeloglu EU, Kelly DJ, Doronin SV, Badylak SF, Krukenkamp IB, Cohen IS, Gaudette GR. Tissue-engineered myocardial patch derived from extracellular matrix provides regional mechanical function. *Circulation*. 2005;112(9 Suppl):I144-9.
- [206] Haviv F, Bradley MF, Kalvin DM, Schneider AJ, Davidson DJ, Majest SM, McKay LM, Haskell CJ, Bell RL, Nguyen B, Marsh KC, Surber BW, Uchic JT, Ferrero J, Wang YC, Leal J, Record RD, Hodde J, Badylak SF, Lesniewski RR, Henkin J. Thrombospondin-1 mimetic peptide inhibitors of angiogenesis and tumor growth: design, synthesis, and optimization of pharmacokinetics and biological activities. *J Med Chem*. 2005;48(8):2838-46.
- [207] Gilbert TW, Stoltz DB, Biancaniello F, Simmons-Byrd A, Badylak SF. Production and characterization of ECM powder: implications for tissue engineering applications. *Biomaterials*. 2005;26(12):1431-5.
- [208] Freytes DO, Rundell AE, Vande Geest J, Vorp DA, Webster TJ, Badylak SF. Analytically derived material properties of multilaminated extracellular matrix devices using the ball-burst test. *Biomaterials*. 2005;26(27):5518-31.
- [209] Badylak SF, Vorp DA, Spievack AR, Simmons-Byrd A, Hanke J, Freytes DO, Thapa A, Gilbert TW, Nieponice A. Esophageal reconstruction with ECM and muscle tissue in a dog model. *The Journal of surgical research*. 2005;128(1):87-97.
- [210] Badylak SF. Regenerative medicine and developmental biology: the role of the extracellular matrix. *Anat Rec B New Anat*. 2005;287(1):36-41.

- [211] Badylak SF. Regenerative medicine approach to heart valve replacement. *Circulation*. 2005;111(21):2715-6.
- [212] Obermiller JF, Hodde JP, McAlexander CS, Kokini K, Badylak SF. A comparison of suture retention strengths for three biomaterials. *Med Sci Monit*. 2004;10(1):PI1-5.
- [213] Musahl V, Abramowitch SD, Gilbert TW, Tsuda E, Wang JH, Badylak SF, Woo SL. The use of porcine small intestinal submucosa to enhance the healing of the medial collateral ligament--a functional tissue engineering study in rabbits. *Journal of orthopaedic research : official publication of the Orthopaedic Research Society*. 2004;22(1):214-20.
- [214] Lin P, Chan WC, Badylak SF, Bhatia SN. Assessing porcine liver-derived biomatrix for hepatic tissue engineering. *Tissue engineering*. 2004;10(7-8):1046-53.
- [215] Li F, Li W, Johnson SA, Ingram DA, Yoder MC, Badylak SF. Low-molecular-weight peptides derived from extracellular matrix as chemoattractants for primary endothelial cells. *Endothelium-Journal of Endothelial Cell Research*. 2004;11(3-4):199-206.
- [216] Freytes DO, Badylak SF, Webster TJ, Geddes LA, Rundell AE. Biaxial strength of multilaminated extracellular matrix scaffolds. *Biomaterials*. 2004;25(12):2353-61.
- [217] Badylak SF. Extracellular matrix as a scaffold for tissue engineering in veterinary medicine: applications to soft tissue healing. *Clinical Techniques in Equine Practice*. 2004;3(2):173-81.
- [218] Badylak SF. Xenogeneic extracellular matrix as a scaffold for tissue reconstruction. *Transplant immunology*. 2004;12(3-4):367-77.
- [219] Badylak S, Yoder M. The extracellular matrix as a substrate for stem cell growth and development and tissue repair. In: Burt R, editor. *Stem Cell Therapy for Autoimmune Disease*: Landes Bioscience; 2004. p. 87-91.
- [220] Huber JE, Spievack A, Simmons-Byrd A, Ringel RL, Badylak S. Extracellular matrix as a scaffold for laryngeal reconstruction. *The Annals of otology, rhinology, and laryngology*. 2003;112(5):428-33.
- [221] Badylak SF, Wu CC, Bible M, McPherson E. Host protection against deliberate bacterial contamination of an extracellular matrix bioscaffold versus Dacron mesh in a dog model of orthopedic soft tissue repair. *Journal of biomedical materials research Part B, Applied biomaterials*. 2003;67(1):648-54.
- [222] Badylak S, Obermiller J, Geddes L, Matheny R. Extracellular matrix for myocardial repair. *The heart surgery forum*. 2003;6(2):E20-6.
- [223] Sarikaya A, Record R, Wu CC, Tullius B, Badylak S, Ladisch M. Antimicrobial activity associated with extracellular matrices. *Tissue engineering*. 2002;8(1):63-71.
- [224] Raeder RH, Badylak SF, Sheehan C, Kallakury B, Metzger DW. Natural anti-galactose alpha1,3 galactose antibodies delay, but do not prevent the acceptance of extracellular matrix xenografts. *Transplant immunology*. 2002;10(1):15-24.
- [225] Palmer EM, Beilfuss BA, Nagai T, Semnani RT, Badylak SF, van Seventer GA. Human helper T cell activation and differentiation is suppressed by porcine small intestinal submucosa. *Tissue engineering*. 2002;8(5):893-900.
- [226] Hodde JP, Record RD, Tullius RS, Badylak SF. Retention of endothelial cell adherence to porcine-derived extracellular matrix after disinfection and sterilization. *Tissue engineering*. 2002;8(2):225-34.
- [227] Hodde J, Record R, Tullius R, Badylak S. Fibronectin peptides mediate HMEC adhesion to porcine-derived extracellular matrix. *Biomaterials*. 2002;23(8):1841-8.
- [228] Ferraro KF, Su YP, Gretebeck RJ, Black DR, Badylak SF. Body mass index and disability in adulthood: a 20-year panel study. *Am J Public Health*. 2002;92(5):834-40.

- [229] Badylak SF, Grompe M, Caplan AI, Greisler HP, Guldberg RE, Taylor DA. In vivo remodeling: breakout session summary. *Annals of the New York Academy of Sciences*. 2002;961:319-22.
- [230] Badylak SF. The extracellular matrix as a scaffold for tissue reconstruction. *Semin Cell Dev Biol*. 2002;13(5):377-83.
- [231] Badylak S, Kokini K, Tullius B, Simmons-Byrd A, Morff R. Morphologic study of small intestinal submucosa as a body wall repair device. *The Journal of surgical research*. 2002;103(2):190-202.
- [232] Badylak S. Modification of natural polymers: collagen. In: Atala A, Lanza R, editors. *Methods of Tissue Engineering*. San Diego, CA: Academic Press; 2002. p. 505-14.
- [233] Badylak S. In vivo studies to evaluate tissue engineering techniques. *Annals of the New York Academy of Sciences*. 2002;961:302-4.
- [234] Allman AJ, McPherson TB, Merrill LC, Badylak SF, Metzger DW. The Th2-restricted immune response to xenogeneic small intestinal submucosa does not influence systemic protective immunity to viral and bacterial pathogens. *Tissue engineering*. 2002;8(1):53-62.
- [235] Record RD, Hillegonds D, Simmons C, Tullius R, Rickey FA, Elmore D, Badylak SF. In vivo degradation of 14C-labeled small intestinal submucosa (SIS) when used for urinary bladder repair. *Biomaterials*. 2001;22(19):2653-9.
- [236] Lindberg K, Badylak SF. Porcine small intestinal submucosa (SIS): a bioscaffold supporting in vitro primary human epidermal cell differentiation and synthesis of basement membrane proteins. *Burns*. 2001;27(3):254-66.
- [237] Hodde JP, Record RD, Liang HA, Badylak SF. Vascular endothelial growth factor in porcine-derived extracellular matrix. *Endothelium*. 2001;8(1):11-24.
- [238] Hillegonds DJ, Record R, Rickey FA, Badylak SF, Jackson GS, Simmons-Byrd A, Ellmore D, Lipschutz ME. Prime lab sample handling and data analysis for acclererator-based biomedical radiocarbon analysis. *Radiocarbon*. 2001;43:305-11.
- [239] Chen MK, Badylak SF. Small bowel tissue engineering using small intestinal submucosa as a scaffold. *The Journal of surgical research*. 2001;99(2):352-8.
- [240] Badylak SF, Park K, Peppas N, McCabe G, Yoder M. Marrow-derived cells populate scaffolds composed of xenogeneic extracellular matrix. *Experimental hematology*. 2001;29(11):1310-8.
- [241] Badylak S, Kokini K, Tullius B, Whitson B. Strength over time of a resorbable bioscaffold for body wall repair in a dog model. *The Journal of surgical research*. 2001;99(2):282-7.
- [242] Allman AJ, McPherson TB, Badylak SF, Merrill LC, Kallakury B, Sheehan C, Raeder RH, Metzger DW. Xenogeneic extracellular matrix grafts elicit a TH2-restricted immune response. *Transplantation*. 2001;71(11):1631-40.
- [243] Rickey F, Elmore D, Hillegonds D, Badylak S, Record R. Regeneration of tissue about an animal-based scaffold: AMS studies of the fate of the scaffold. *Nuclear Instruments and Methods in Physics Research*. 2000;172:1097-103.
- [244] McPherson TB, Liang H, Record RD, Badylak SF. Galalpha(1,3)Gal epitope in porcine small intestinal submucosa. *Tissue engineering*. 2000;6(3):233-9.
- [245] Hodde J, Record R, Badylak SF. Assessment of angiogenesis in an in vitro three-dimensional assay. *Cardiac and Vascular Regeneration*. 2000;4:1-10.
- [246] Badylak S, Meurling S, Chen M, Spievack A, Simmons-Byrd A. Resorbable bioscaffold for esophageal repair in a dog model. *Journal of pediatric surgery*. 2000;35(7):1097-103.

- [247] Suckow MA, Voytik-Harbin SL, Terril LA, Badylak SF. Enhanced bone regeneration using porcine small intestinal submucosa. *Journal of investigative surgery : the official journal of the Academy of Surgical Research*. 1999;12(5):277-87.
- [248] Cobb MA, Badylak SF, Janas W, Simmons-Byrd A, Boop FA. Porcine small intestinal submucosa as a dural substitute. *Surgical neurology*. 1999;51(1):99-104.
- [249] Badylak S, Liang A, Record R, Tullius R, Hodde J. Endothelial cell adherence to small intestinal submucosa: an acellular bioscaffold. *Biomaterials*. 1999;20(23-24):2257-63.
- [250] Badylak S, Arnoczky S, Plouhar P, Haut R, Mendenhall V, Clarke R, Horvath C. Naturally occurring extracellular matrix as a scaffold for musculoskeletal repair. *Clinical orthopaedics and related research*. 1999;(367 Suppl):S333-43.
- [251] Whitson BA, Cheng BC, Kokini K, Badylak SF, Patel U, Morff R, O'Keefe CR. Multilaminate resorbable biomedical device under biaxial loading. *Journal of biomedical materials research*. 1998;43(3):277-81.
- [252] Voytik-Harbin SL, Brightman AO, Waisner B, Lamar CH, Badylak SF. Application and evaluation of the alamarBlue assay for cell growth and survival of fibroblasts. *In vitro cellular & developmental biology Animal*. 1998;34(3):239-46.
- [253] Peel SF, Chen H, Renlund R, Badylak SF, Kandel RA. Formation of a SIS-cartilage composite graft in vitro and its use in the repair of articular cartilage defects. *Tissue engineering*. 1998;4:143-55.
- [254] McPherson T, Badylak SF. Characterization of fibronectin derived from porcine small intestinal submucosa. *Tissue engineering*. 1998;4:75-83.
- [255] Kropp BP, Ludlow JK, Spicer D, Rippy MK, Badylak SF, Adams MC, Keating MA, Rink RC, Birhle R, Thor KB. Rabbit urethral regeneration using small intestinal submucosa onlay grafts. *Urology*. 1998;52(1):138-42.
- [256] Badylak SF, Record R, Lindberg K, Hodde J, Park K. Small intestinal submucosa: a substrate for in vitro cell growth. *Journal of biomaterials science Polymer edition*. 1998;9(8):863-78.
- [257] Badylak SF, Kropp B, McPherson T, Liang H, Snyder PW. Small intestinal submucosa: a rapidly resorbed bioscaffold for augmentation cystoplasty in a dog model. *Tissue engineering*. 1998;4(4):379-87.
- [258] Voytik-Harbin SL, Brightman AO, Kraine MR, Waisner B, Badylak SF. Identification of extractable growth factors from small intestinal submucosa. *J Cell Biochem*. 1997;67(4):478-91.
- [259] Hodde JP, Badylak SF, Shelbourne KD. The effect of range of motion on remodeling of small intestinal submucosa (SIS) when used as an Achilles tendon repair material in the rabbit. *Tissue engineering*. 1997;3(1):27-37.
- [260] Vaught JD, Kropp BP, Sawyer BD, Rippy MK, Badylak SF, Shannon HE, Thor KB. Detrusor regeneration in the rat using porcine small intestinal submucosal grafts: functional innervation and receptor expression. *The Journal of urology*. 1996;155(1):374-8.
- [261] Kropp BP, Sawyer BD, Shannon HE, Rippy MK, Badylak SF, Adams MC, Keating MA, Rink RC, Thor KB. Characterization of small intestinal submucosa regenerated canine detrusor: assessment of reinnervation, in vitro compliance and contractility. *The Journal of urology*. 1996;156(2 Pt 2):599-607.
- [262] Kropp BP, Rippy MK, Badylak SF, Adams MC, Keating MA, Rink RC, Thor KB. Regenerative urinary bladder augmentation using small intestinal submucosa: urodynamic and histopathologic assessment in long-term canine bladder augmentations. *The Journal of urology*. 1996;155(6):2098-104.
- [263] Hodde JP, Badylak SF, Brightman AO, Voytik-Harbin SL. Glycosaminoglycan content of small intestinal submucosa: a bioscaffold for tissue replacement. *Tissue engineering*. 1996;2(3):209-17.

- [264] Erdman SE, Kanki PJ, Moore FM, Brown SA, Kawasaki TA, Mikule KW, Travers KU, Badylak SF, Fox JG. Clusters of lymphoma in ferrets. *Cancer investigation*. 1996;14(3):225-30.
- [265] Cobb MA, Badylak SF, Janas W, Boop FA. Histology after dural grafting with small intestinal submucosa. *Surgical neurology*. 1996;46(4):389-93; discussion 93-4.
- [266] Clarke KM, Lantz GC, Salisbury SK, Badylak SF, Hiles MC, Voytik SL. Intestine submucosa and polypropylene mesh for abdominal wall repair in dogs. *The Journal of surgical research*. 1996;60(1):107-14.
- [267] Sandusky GE, Lantz GC, Badylak SF. Healing comparison of small intestine submucosa and ePTFE grafts in the canine carotid artery. *The Journal of surgical research*. 1995;58(4):415-20.
- [268] Reuter DG, Tacker WA, Jr., Babbs CF, Badylak SF, Voorhees WD, 3rd, Konrad PE. Preliminary results of deferoxamine and L1 treatment of spinal cord ischemia. *The Journal of thoracic and cardiovascular surgery*. 1995;109(5):1017-9.
- [269] Prevel CD, Eppley BL, Summerlin DJ, Sidner R, Jackson JR, McCarty M, Badylak SF. Small intestinal submucosa: utilization as a wound dressing in full-thickness rodent wounds. *Ann Plast Surg*. 1995;35(4):381-8.
- [270] Prevel CD, Eppley BL, Summerlin DJ, Jackson JR, McCarty M, Badylak SF. Small intestinal submucosa: utilization for repair of rodent abdominal wall defects. *Ann Plast Surg*. 1995;35(4):374-80.
- [271] May CL, Hodde JP, Badylak SF, Smith GF. Infective Endocarditis in a Collegiate Wrestler. *J Athl Train*. 1995;30(2):105-7.
- [272] Kropp BP, Eppley BL, Prevel CD, Rippy MK, Harruff RC, Badylak SF, Adams MC, Rink RC, Keating MA. Experimental assessment of small intestinal submucosa as a bladder wall substitute. *Urology*. 1995;46(3):396-400.
- [273] Kropp BP, Badylak S, Thor KB. Regenerative bladder augmentation: a review of the initial preclinical studies with porcine small intestinal submucosa. *Advances in experimental medicine and biology*. 1995;385:229-35.
- [274] Hiles MC, Badylak SF, Lantz GC, Kokini K, Geddes LA, Morff RJ. Mechanical properties of xenogeneic small-intestinal submucosa when used as an aortic graft in the dog. *Journal of biomedical materials research*. 1995;29(7):883-91.
- [275] Badylak SF, Tullius R, Kokini K, Shelbourne KD, Klootwyk T, Voytik SL, Kraine MR, Simmons C. The use of xenogeneic small intestinal submucosa as a biomaterial for Achilles tendon repair in a dog model. *Journal of biomedical materials research*. 1995;29(8):977-85.
- [276] Prevel CD, Eppley BL, McCarty M, Jackson JR, Voytik SL, Hiles MC, Badylak SF. Experimental evaluation of small intestinal submucosa as a microvascular graft material. *Microsurgery*. 1994;15(8):586-91; discussion 92-3.
- [277] Knapp PM, Lingeman JE, Siegel YI, Badylak SF, Demeter RJ. Biocompatibility of small-intestinal submucosa in urinary tract as augmentation cystoplasty graft and injectable suspension. *J Endourol*. 1994;8(2):125-30.
- [278] Geddes LA, Janas W, Cook J, Hinds M, Badylak SF. Stroke volume with dynamic cardiomyoplasty during ventricular fibrillation in the acute dog. *Jpn Heart J*. 1994;35(1):73-80.
- [279] Geddes LA, Janas W, Badylak SF. Nonpharmacologic circulatory support in the brain-dead animal. *Biomed Instrum Technol*. 1994;28(1):37-42.
- [280] Geddes LA, Hinds M, Janas W, Badylak SF. Cardiac output and the extra-aortic balloon pump: a preliminary report. *Med Biol Eng Comput*. 1994;32(2):210-3.

- [281] Badylak SF, Coffey AC, Lantz GC, Tacker WA, Geddes LA. Comparison of the resistance to infection of intestinal submucosa arterial autografts versus polytetrafluoroethylene arterial prostheses in a dog model. *J Vasc Surg.* 1994;19(3):465-72.
- [282] Aiken S, Badylak SF, Toombs JP, Shelbourne KD, Hiles MC, Lantz GC, Van Sickle D. Small intestinal submucosa as an intra-articular ligamentous graft material: a pilot study in dogs. *Vet Comp Orthopedics Traumatology.* 1994;7:124-8.
- [283] Voytik SL, Przyborski M, Badylak SF, Konieczny SF. Differential expression of muscle regulatory factor genes in normal and denervated adult rat hindlimb muscles. *Dev Dyn.* 1993;198(3):214-24.
- [284] Smith A, Luschei E, Denny M, Wood J, Hirano M, Badylak S. Spectral analyses of activity of laryngeal and orofacial muscles in stutterers. *J Neurol Neurosurg Psychiatry.* 1993;56(12):1303-11.
- [285] Lantz GC, Badylak SF, Hiles MC, Coffey AC, Geddes LA, Kokini K, Sandusky GE, Morff RJ. Small intestinal submucosa as a vascular graft: a review. *Journal of investigative surgery : the official journal of the Academy of Surgical Research.* 1993;6(3):297-310.
- [286] Hiles MC, Badylak SF, Geddes LA, Kokini K, Morff RJ. Porosity of porcine small-intestinal submucosa for use as a vascular graft. *Journal of biomedical materials research.* 1993;27(2):139-44.
- [287] Herbert ST, Badylak SF, Geddes LA, Hillberry B, Lantz GC, Kokini K. Elastic modulus of prepared canine jejunum, a new vascular graft material. *Annals of biomedical engineering.* 1993;21(6):727-33.
- [288] Geddes LA, Janas W, Hinds M, Badylak SF, Cook J. The ventricular-synchronous, skeletal-muscle ventricle: preliminary feasibility studies. *Pacing Clin Electrophysiol.* 1993;16(6):1310-22.
- [289] Ferrand BK, Kokini K, Badylak SF, Geddes LA, Hiles MC, Morff RJ. Directional porosity of porcine small-intestinal submucosa. *Journal of biomedical materials research.* 1993;27(10):1235-41.
- [290] Wang CC, Badylak JA, Lux SE, Moriyama R, Dixon JE, Low PS. Expression, purification, and characterization of the functional dimeric cytoplasmic domain of human erythrocyte band 3 in Escherichia coli. *Protein Sci.* 1992;1(9):1206-14.
- [291] Sandusky GE, Jr., Badylak SF, Morff RJ, Johnson WD, Lantz G. Histologic findings after in vivo placement of small intestine submucosal vascular grafts and saphenous vein grafts in the carotid artery in dogs. *The American journal of pathology.* 1992;140(2):317-24.
- [292] Reuter DG, Tacker WA, Jr., Badylak SF, Voorhees WD, 3rd, Konrad PE. Correlation of motor-evoked potential response to ischemic spinal cord damage. *The Journal of thoracic and cardiovascular surgery.* 1992;104(2):262-72.
- [293] Marcotte PA, Henkin F, Credo RB, Badylak SF. A-chain isozymes of recombinant and natural urokinases: preparation, characterization, and their biochemical and fibrinolytic properties. *Fibrinolysis.* 1992;6:69-78.
- [294] Magovern JA, Christlieb IY, Badylak SF, Lantz GC, Kao RL. A model of left ventricular dysfunction caused by intracoronary adriamycin. *The Annals of thoracic surgery.* 1992;53(5):861-3.
- [295] Lantz GC, Badylak SF, Hiles MC, Arkin TE. Treatment of reperfusion injury in dogs with experimentally induced gastric dilatation-volvulus. *Am J Vet Res.* 1992;53(9):1594-8.
- [296] Lantz GC, Badylak SF, Coffey AC, Geddes LA, Sandusky GE. Small intestinal submucosa as a superior vena cava graft in the dog. *The Journal of surgical research.* 1992;53(2):175-81.
- [297] Geddes LA, Janas W, Badylak SF. Use of impedance ratio for the continuous measurement of stroke volume of a valveless pouch used as a cardiac-assist device. *IEEE Trans Biomed Eng.* 1992;39(3):310-3.

- [298] Geddes LA, Badylak SF, Tacker WA, Janas W. Output power and metabolic input power of skeletal muscle contracting linearly to compress a pouch in a mock circulatory system. *The Journal of thoracic and cardiovascular surgery*. 1992;104(5):1435-42.
- [299] Badylak SF, Wessale JE, Geddes LA, Tacker WA, Janas W. The effect of skeletal muscle ventricle pouch pressure on muscle blood flow. *Asaio J*. 1992;38(1):66-71.
- [300] Badylak SF, Henkin J, Burke SE, Sasahara AA. New developments in thrombolytic therapy. *Adv Pharmacol*. 1992;23:227-62.
- [301] Badylak SF, Chiu RCJ. Summary of the second conference on skeletal muscle for cardiac assistance. *Journal of Heart and Lung Transplantation*. 1992;11:297-8.
- [302] Badylak S. Small Intestinal Submucosa (SIS): A Biomaterial Conducive to Smart Tissue Remodeling. *Tissue Engineering Symposium; Keystone, Colorado*1992.
- [303] Babbs CF, Gregor MD, Badylak SF. Histochemical demonstration of endothelial superoxide and hydrogen peroxide generation in ischaemic and reoxygenated rat tissues. *Cardiovascular research*. 1992;26(6):593-602.
- [304] Wessale JL, Geddes LA, Badylak SF, Tacker WA, Janas W. Pumping capabilities of the latissimus dorsi and rectus abdominis muscles wrapped around a valved pouch in a mock circulatory system. *ASAIO Trans*. 1991;37(4):615-9.
- [305] Wessale JL, Geddes LA, Badylak SF, Janas W. Use of electrical impedance for continuous measurement of stroke volume of a skeletal muscle-powered cardiac assist device. *Med Biol Eng Comput*. 1991;29(2):207-11.
- [306] Tacker WA, Jr., Geddes LA, Janas W, Babbs CF, Badylak SF. Comparison of canine skeletal muscle power from twitches and tetanic contractions in untrained muscle: a preliminary report. *J Card Surg*. 1991;6(1 Suppl):245-51.
- [307] Poehlman ET, Melby CL, Badylak SF. Relation of age and physical exercise status on metabolic rate in younger and older healthy men. *J Gerontol*. 1991;46(2):B54-8.
- [308] Kern KB, Sanders AB, Janas W, Nelson JR, Badylak SF, Babbs CF, Tacker WA, Ewy GA. Limitations of open-chest cardiac massage after prolonged, untreated cardiac arrest in dogs. *Ann Emerg Med*. 1991;20(7):761-7.
- [309] Geddes LA, Badylak SF. Power capability of skeletal muscle to pump blood. *ASAIO Trans*. 1991;37(1):19-23.
- [310] Badylak SF, Voytik SL, Henkin J, Burke SE, Sasahara AA, Simmons A. Enhancement of the thrombolytic efficacy of prourokinase by lys-plasminogen in a dog model of arterial thrombosis. *Thromb Res*. 1991;62(3):115-26.
- [311] Badylak SF, Voytik SL, Henkin J, Burke S, Sasahara AA, Simmons A. The beneficial effect of lys-plasminogen upon the thrombolytic efficacy of urokinase in a dog model of peripheral arterial thrombosis. *Haemostasis*. 1991;21(5):278-85.
- [312] Badylak SF. The potential power output for skeletal muscle to provide cardiac assistance. *Semin Thorac Cardiovasc Surg*. 1991;3(2):116-8.
- [313] Babbs CF, Gregor MD, Turek JJ, Badylak SF. Endothelial superoxide production in the isolated rat heart during early reperfusion after ischemia. A histochemical study. *The American journal of pathology*. 1991;139(5):1069-80.
- [314] Babbs CF, Gregor MD, Turek JJ, Badylak SF. Endothelial superoxide production in buffer perfused rat lungs, demonstrated by a new histochemical technique. *Laboratory investigation; a journal of technical methods and pathology*. 1991;65(4):484-96.

- [315] Voytik SL, Babbs CF, Badylak SF. Simple electrical model of the circulation to explore design parameters for a skeletal muscle ventricle. *J Heart Transplant*. 1990;9(2):160-74.
- [316] Voytik S, Badylak SF, Burke S, Klabunde RE, Henkin J, Simmons A. The protective effect of heparin in a dog model of rethrombosis following pharmacologic thrombolysis. *Thromb Haemost*. 1990;64(3):438-44.
- [317] Lantz GC, Badylak SF, Coffey AC, Geddes LA, Blevins WE. Small intestinal submucosa as a small-diameter arterial graft in the dog. *Journal of investigative surgery : the official journal of the Academy of Surgical Research*. 1990;3(3):217-27.
- [318] Geddes LA, Wessale JL, Badylak SF, Janas W, Tacker WA, Voorhees WD. The use of an electrically activated valve to control preload and provide maximal muscle blood flow with a skeletal-muscle ventricle. *Pacing Clin Electrophysiol*. 1990;13(6):783-95.
- [319] Geddes LA, Badylak SF, Wessale J, Janas W, Bourland JD, Tacker WA, Stevens L. The use of electrically stimulated skeletal muscle to pump blood. *Pacing Clin Electrophysiol*. 1990;13(3):344-62.
- [320] Badylak SF, Wessale JE, Geddes LA, Janas W. Optimization of pulse train duration for the electrical stimulation of a skeletal muscle ventricle in the dog. *Annals of biomedical engineering*. 1990;18(5):467-78.
- [321] Badylak SF, Voorhees WD. Summary statement of the first Purdue conference on skeletal muscle use for cardia assistance. *Journal of Heart Transplantation*. 1990;9:145.
- [322] Badylak SF, Lantz GC, Jeffries M. Prevention of reperfusion injury in surgically induced gastric dilatation-volvulus in dogs. *Am J Vet Res*. 1990;51(2):294-9.
- [323] Badylak SF, Hinds M, Geddes LA. Comparison of three methods of electrical stimulation for converting skeletal muscle to a fatigue resistant power source suitable for cardiac assistance. *Annals of biomedical engineering*. 1990;18(3):239-50.
- [324] Stevens L, Badylak SF, Janas W, Gray M, Geddes LA, Voorhees WD, 3rd. A skeletal muscle ventricle made from rectus abdominis muscle in the dog. *The Journal of surgical research*. 1989;46(1):84-9.
- [325] Poehlman ET, Melby CL, Badylak SF, Calles J. Aerobic fitness and resting energy expenditure in young adult males. *Metabolism*. 1989;38(1):85-90.
- [326] McCallum T, Badylak SF, Van Vleet JF, Reed WM. Furazolidone-induced injury in the isolated perfused chicken heart. *Am J Vet Res*. 1989;50(7):1183-5.
- [327] Kern KB, Elchisak MA, Sanders AB, Badylak SF, Tacker WA, Ewy GA. Plasma catecholamines and resuscitation from prolonged cardiac arrest. *Crit Care Med*. 1989;17(8):786-91.
- [328] Badylak SF, Stevens L, Janas W, Gray MH, Geddes LA, Voorhees WD, 3rd. Cardiac assistance with electrically stimulated skeletal muscle. *Med Biol Eng Comput*. 1989;27(2):159-62.
- [329] Badylak SF, Lantz GC, Coffey A, Geddes LA. Small intestinal submucosa as a large diameter vascular graft in the dog. *The Journal of surgical research*. 1989;47(1):74-80.
- [330] Poehlman ET, Melby CL, Badylak SF. Resting metabolic rate and postprandial thermogenesis in highly trained and untrained males. *Am J Clin Nutr*. 1988;47(5):793-8.
- [331] Poehlman ET, Arciero PJ, Melby CL, Badylak SF. Resting metabolic rate and postprandial thermogenesis in vegetarians and nonvegetarians. *Am J Clin Nutr*. 1988;48(2):209-13.
- [332] Klabunde RE, Hemenway CC, Mohrman SJ, Henkin J, Badylak SF. Optimizing the bolus/infusion ratio for intravenous administration of urokinase in dogs. *Thromb Res*. 1988;50(6):857-64.

- [333] Badylak SF, Voytik S, Klabunde RE, Henkin J, Leski M. Bolus dose response characteristics of single chain urokinase plasminogen activator and tissue plasminogen activator in a dog model of arterial thrombosis. *Thromb Res.* 1988;52(4):295-312.
- [334] Badylak SF, Voorhees WD, 3rd, Babbs CF, Simmons A. The effectiveness of postischemic oxypurinol administration upon myocardial function in the isolated rat heart. *Resuscitation.* 1988;16(1):31-43.
- [335] Badylak SF, Poehlman E, Williams C, Klabunde RE, Turek J, Schoenlein W. Simple canine model of arterial thrombosis with endothelial injury suitable for investigation of thrombolytic agents. *J Pharmacol Methods.* 1988;19(4):293-304.
- [336] Badylak SF. Coagulation disorders and liver disease. *The Veterinary clinics of North America Small animal practice.* 1988;18(1):87-93.
- [337] Kern KB, Sanders AB, Badylak SF, Janas W, Carter AB, Tacker WA, Ewy GA. Long-term survival with open-chest cardiac massage after ineffective closed-chest compression in a canine preparation. *Circulation.* 1987;75(2):498-503.
- [338] Badylak SF, Simmons A, Turek J, Babbs CF. Protection from reperfusion injury in the isolated rat heart by postischaemic deferoxamine and oxypurinol administration. *Cardiovascular research.* 1987;21(7):500-6.
- [339] Badylak SF, Kern KB, Tacker WA, Ewy GA, Janas W, Carter A. The comparative pathology of open chest vs. mechanical closed chest cardiopulmonary resuscitation in dogs. *Resuscitation.* 1986;13(4):249-64.
- [340] Badylak SF, Babbs CF, Koulias C, Blaho K. Effect of allopurinol and dimethylsulfoxide on long-term survival in rats after cardiorespiratory arrest and resuscitation. *Am J Emerg Med.* 1986;4(4):313-8.
- [341] Badylak SF, Babbs CF. The effect of carbon dioxide, lidoflazine and deferoxamine upon long term survival following cardiorespiratory arrest in rats. *Resuscitation.* 1986;13(3):165-73.
- [342] Badylak SF, Van Vleet JF, Herman EH, Ferrans VJ, Myers CE. Poikilocytosis in dogs with chronic doxorubicin toxicosis. *Am J Vet Res.* 1985;46(2):505-8.
- [343] Badylak SF, Babbs CF, Skojac TM, Voorhees WD, Richardson RC. Hyperthermia-induced vascular injury in normal and neoplastic tissue. *Cancer.* 1985;56(5):991-1000.
- [344] Winterfield RW, Thacker HL, Badylak SF. Effects of subtype variations in the Holland strain of infectious bronchitis virus when applied as a vaccine. *Poult Sci.* 1984;63(2):246-50.
- [345] Badylak SF, Ash SR, Thornhill JA, Carr DJ. Doppler ultrasonic detection of particulate release during hemodialysis with cellulose hollow-fiber and sorbent suspension reciprocating dialyzers. *Artif Organs.* 1984;8(2):220-3.
- [346] Badylak SF, Dodds WJ, Van Vleet JF. Plasma coagulation factor abnormalities in dogs with naturally occurring hepatic disease. *Am J Vet Res.* 1983;44(12):2336-40.
- [347] Badylak SF. Congenital multifocal hemangiosarcoma in a stillborn calf. *Veterinary pathology.* 1983;20(2):245-7.
- [348] Van Vleet JF, Ferrans VJ, Badylak SF. Effect of thyroid hormone supplementation on chronic doxorubicin (adriamycin)-induced cardiotoxicity and serum concentrations of T3 and T4 in dogs. *Am J Vet Res.* 1982;43(12):2173-82.
- [349] Badylak SF, Van Vleet JF. Tissue gamma-glutamyl transpeptidase activity and hepatic ultrastructural alterations in dogs with experimentally induced glucocorticoid hepatopathy. *Am J Vet Res.* 1982;43(4):649-55.

- [350] Badylak SF. Coagulopathies associated with hepatic disease. California Veterinarian. 1982;2:14-7.
- [351] Badylak SF, Van Vleet JF. Sequential morphologic and clinicopathologic alterations in dogs with experimentally induced glucocorticoid hepatopathy. Am J Vet Res. 1981;42(8):1310-8.
- [352] Badylak SF, Van Vleet JF. Alterations of prothrombin time and activated partial thromboplastin time in dogs with hepatic disease. Am J Vet Res. 1981;42(12):2053-6.
- [353] Badylak SF. A pathophysiologic approach to the diagnosis of hemolytic anemia in the dog. Compendium for Continuing Education. 1981;3(827-833).
- [354] Badylak SF. Hemolytic anemia in the dog. Compendium for Continuing Education. 1980;2:685-92.