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[1]Yale Univ., New Haven, CT, [2]Univ. of Colorado Hlth.Sci. Ctr., Denver, CO.

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[1]Univ. of Virginia, Charlottesville, VA, [2]Pennsylvania State Univ., University Park, PA, [3]Univ. of Connecticut, Farmington, CT.

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[1]North Carolina State Univ., Raleigh, NC, [2]Ohio State Univ., Columbus, OH, [3]Univ. of North Carolina, Chapel Hill, NC.

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[1]Bone & Joint Res. Lab, DVASLC Hlth.Care System, Salt Lake City, UT, [2]Frontier BioMed., Logan, UT,[3]Dept. of Orthopaedics, Univ. of Utah Sch. of Med., Salt Lake City, UT.

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[1]Louisiana Tech Univ., Ruston, LA, [2]Rice Univ., Houston, TX, [3]Louisiana State Univ. Hlth.Sci. Ctr., New Orleans, LA.

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M. Ramalingam[1], M. F. Young[2], V. Thomas[3], **C. G. Simon, Jr.**[1];

[1]NIST, Gaithersburg, MD, [2]NIDCR/NIH, Bethesda, MD, [3]Univ. of Alabama at Birmingham, Birmingham, LA.

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[1]Zimmer, Inc., Austin, TX, [2]MDS Pharma Services, Bothall, WA, [3]Washington State Univ., Pullman, WA.

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[1]Univ. of Illinois at Urbana-Champaign, Urbana, IL, [2]Orthomimetics, Ltd., Cambridge, UNITED KINGDOM,[3]MIT, Cambridge, MA, [4]Cambridge Univ., Cambridge, UNITED KINGDOM.

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[1]Rice Univ., Houston, TX, [2]Rice Unveristy, Houston, TX.

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[1]Univ. of Ottawa Heart Inst., Ottawa, ON, CANADA, [2]Univ. of Toronto, Toronto, ON, CANADA.

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[1]Georgia Inst. of Technology, Atlanta, GA, [2]Univ. Natl. Autonoma de Mexico, Mexico City, MEXICO,[3]Inst. Straumann, Basel, SWITZERLAND.

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[1]Rensselaer Polytechnic Inst., Troy, NY, [2]Univ. of Michigan, Ann Arbor, MI.

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[1]Univ. of Maryland - Coll. Park, College Park, MD, [2]Ctr. for Tissue Regeneration and Repair, Univ. of California Davis Med. Ctr., Sacramento, CA, [3]Univ. of Maryland - Fischell Dept. of Bioengineering, College Park, MD.

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[1] Abbott Lab., Santa Clara, CA, [2] Chemistry Dept., Univ. of New York, Stony Brook, NY, [3] Chemistry Dept., Univ. of New York, Stony Brook, CA.

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[1] Abbott Vascular, Santa Clara, CA, [2] CVPath Inst., Inc., Gaithersburg, MD.

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[1] Rice Univ., Houston, TX, [2] Baylor Coll. of Med., Houston, TX.

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[1] Columbia Univ., New York, NY, [2] Hosp. for Special Surgery, New York, NY.

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[1] US Army Inst. of Surgical Res., Fort Sam Houston, TX, [2] Univ. of Texas at San Antonio, San Antonio, TX.

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M. Deng [1], L. Nair [2], S. Nukavarapu[2], N. Krogman[3], H. Allcock[3], C. Laurencin[2];
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[1] Emory Univ. Div. of Plastic and Reconstructive Surgery, Atlanta, GA, [2] Georgia Inst. of Technology, Atlanta, GA, [3] Childrens Hlth.Care of Atlanta, Atlanta, GA.

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[1] Georgia Inst. of Technology, Atlanta, GA, [2] Inst. Straumann, Basel, SWITZERLAND.

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[1] Clemson Univ., Charleston, SC, [2] Academic Magnet High Sch., Charleston, SC, [3] Univ. of Utah, Salt Lake City, UT.

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[1] Northwestern Univ. Feinberg Sch. of Med., Chicago, IL, [2] Children's Mem. Hosp., Chicago, IL.

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[1]Wake Forest Inst. for Regenerative Med., Winston-Salem, NC, [1]Wake Forest Univ. Sch. of Med., Winston-Salem, NC.

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[1]The Pennsylvania State Univ., University Park, PA, [1]AorTech Biomaterials, Scoresby, AUSTRALIA.

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[1]Wake Forest Inst. for Regenerative Med., Winston-Salem, NC, [1]Southwest Res. Inst., San Antonio, TX.

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[1]Univ. of Colorado, Boulder, CO, [1]Sch. of Dental Med., Univ. of Colorado, Aurora, CO, [1]Univ. of Colorado, Denver, CO.

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[1]Univ. of Texas at San Antonio, San Antonio, TX, [1]LASAK Ltd, Prague, CZECH REPUBLIC.

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[1]Univ. of Kansas, Lawrence, KS, [1]Univ. of Missouri-Kansas City, Kansas City, MO.

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[1]Dept. of Polymer Sci., Univ. of Akron, Akron, OH, [1]Div. of Surgicial Res., Akron City Hosp., Akron, OH.

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[1]Innovia LLC, Miami, FL, [1]Univ. of Miami, Miami, FL.

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[1]Dept. of Polymer Sci., Univ. of Akron, Akron, OH, [1]Div. of Surgicial Res., Akron City Hosp., Akron, OH.

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[1]Colorado Sch. of Mines, Golden, CO, [1]Covidien, North Haven, CT, [1]Univ. of Colorado Hlth.Sci. Ctr. Dept. of Orthopedics, Denver, CO.

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[1]Exactech, Gainesville, FL, [1]Taiwan Scientific Corp., Taipei, TAIWAN, [1]Univ. of Florida, Gainesville, FL.

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[1]zhejiang Univ., Hangzhou, CHINA, [1]Zhejiang Univ., Hangzhou, CHINA.

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[1]Georgia Inst. of Technology, Atlanta, GA, [2]Univ. of Trento, Trento, ITALY.

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[1]Brigham Young Univ., Provo, UT, [2]American Univ. of Sharjah, Sharjah, UNITED ARAB EMIRATES.

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[1]Saint Louis Univ., St. Louis, MO, [2]Missouri Bone & Joint Res. Fndn., St. Louis, MO, [3]Signal Med. Corp., St. Louis, MO.

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[1]Stryker Orthopaedics, Mahwah, NJ, [2]New England Musculoskeletal Inst., Farmington, CT, [3]Rose-Hulman Inst. of Technology, Terre Haute, IN, [4]Los Alamos Natl. Lab., Los Alamos, NM.

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[1]Children's Hosp. of Philadelphia, Philadelphia, PA, [2]Univ. of Pennsylvania, Philadelphia, PA.

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[1]Sch. of Optometry, UC Berkeley, Berkeley, CA, [2]Materials Sci. & Engineering and Bioengineering, UC Berkeley, Berkeley, CA.

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[1]Politecnico di Milano, MILANO, ITALY, [2]Universitá degli Studi di Trieste, TRIESTE, ITALY.

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N. Tran, R. Pareta, T. J. Webster;
Brown Univ., Providence, RI.

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J. Coffer[1], D. Fan[1], K. A. Williams[2], K. Marshall[2], N. Voelcker[2], S. Klebe[2], A. Loni[3], L. Canham[3];
[1]Texas Christian Univ., Fort Worth, TX, [2]Flinders Univ., Adelaide, AUSTRALIA, [3]PSi Medica Ltd, Malvern, UNITED KINGDOM.

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Univ. of Texas Southwestern Med. Ctr., Dallas, TX.

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[1]Cleveland Clinic, Cleveland, OH, [2]Case Western Reserve Univ., Cleveland, OH.

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L. Zhang[1], U. Hemraz[2], H. Fenniri[2], T. J. Webster[1];
[1]Brown Univ., Providence, RI, [2]Natl. Inst. for Nanotechnology and Dept. of Chemistry, Univ. of Alberta, Edmonton, AB, CANADA.

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323 **Microcarrier-Based Assay for in vitro 3d Quantification of Angiogenesis in Fibrin Gels**

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G. L. Thompson, III[1], M. Nikiforov[2], V. V. Reukov[1], S. Jesse[2], S. V. Kalinin[2], A. A. Vertegel[1];[1]Clemson Univ., Clemson, SC, [2]Oak Ridge Natl. Lab., Oak Ridge, TN.

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S. A. Woods[1], V. Brighenti[2], D. M. Devine[2], D. Arens[2], R. Harten[1], L. P. Boure[2]; [1]Synthes, West Chester, PA, [2]AO Res. Inst., Davos Platz, SWITZERLAND.

329 Novel Matlab® based image analysis algorithm for automated structural characterization of nanofibers

S. G. Pandya,A. Pal, D. S. Katti; Indian Inst. of Technology Kanpur, INDIA.

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Micromantled Drug-Eluting Stent and A Study of A Model Therefor

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Measuring of Electromechanical Properties of Bacteria Using Band-Excitation Piezoresponse Force Microscopy.

V. Reukov[1], G. Thompson[1], M. Nikiforov[2], S. Jesse[2], S. Kalinin[2], A. Vertegel[1]; [1]Clemson Univ., Clemson, SC, [2]Oak Ridge Natl. Lab., Ctr. for Nanophase Materials Sci., Oak Ridge, TN.

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In Vitro and In Vivo Performance of an Absorbable/Disintegratable Radio-Opaque, Gamma-Sterilized Uriprene Endoureteral Stent

K. W. Clinkscales[1], B. A. Hadaschik[2], R. F. Patterson[2], L. Fazli[2], B. H. Chew[2], S. W. Shalaby[1]; [1]Poly-Med, Inc., Anderson, SC, [2]Univ. of British Columbia, Vancouver, BC, CANADA.

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A. Kraitzer, Y. Kloog, M. Zilberman; Tel Aviv Univ., Tel Aviv, ISRAEL.

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Effect of rG3 Protein/PGA Ionic Conjugate on Breast Cancer Tumors

T. R. Scott[1], S. D. Nagatomi[2], K. A. Nichter[2], M. Owens[1], B. Turner[1], C. Jones-McCall[1], S. W. Shalaby[2]; [1]Clemson Univ., Clemson, SC, [2]Poly-Med, Inc., Anderson, SC.

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L. R. Burnett[1], J. G. Rouse[1], C. Orebaugh[1], J. A. Steen[1], J. L. Berry[2], R. R. Hantgan[1], M. E. Van Dyke[1]; [1]Wake Forest Univ. Sch. of Med., Winston-Salem, NC, [2]Wake Forest Univ., Winston-Salem, NC.

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Polyethylenimine (PEI)-Polyethylene glycol (PEG)-Mannose Tri-Component Vehicles for siRNA Delivery

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A Three-drug, Bilayer Controlled Release Solid, Oral Formulation Containing Acetaminophen for Combination Therapy, Theraprene-I

J. T. Corbett[1], **M. Shalaby**2, K. D. Gray[1], S. W. Shalaby[1]; [1]Poly-Med, Inc., Anderson, SC, [2]LeHigh Valley Hosp., Allentown, PA.

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A Two-drug Controlled Release Solid, Oral Formulation for Combination Pain Relief and Anti-platelet Therapy

J. T. Corbett[1], M. Shalaby[2], K. D. Gray[1], S. W. Shalaby[1]; [1]Poly-Med, Inc., Anderson, SC, [2]LeHigh Valley Hosp., Allentown, PA.

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Pharmacokinetic and Pharmacodynamic Response to a 6-Month Hydron® Octreotide Implant in Patients with Acromegaly

P. Kuzma[1], H. Quandt[1], C. Childs[2], M. Harnett[2], M. Ryan[2]; [1]Indevus Pharmaceuticals, Cranbury, NJ**,** [2]Indevus Pharmaceuticals, Lexington, MA.

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L. H. Koole, Sr.; Maastricht Univ., Maastricht, NETHERLANDS.

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Biodegradable Polymer-Sol Gel Composite Controlled Release Wound Dressings For Chronic Pain Treatment

M. Costache[1], H. Qu[2], D. Devore[1], P. Ducheyne[2]; [1]Rutgers, The State Univ. of New Jersey, New Brunswick, NJ, [2]Univ. of Pennsylvania, Philadelphia, PA.

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Novel Antioxidant Drug Delivery Vehicles based on Click Chemistry

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Multi-Solution Bone Cements Containing Nanospherical Poly (Methyl Methacrylate) Brushes

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S. Kann, R. Chiu, T. Ma, S. Goodman; Stanford Univ. Sch. of Med., Stanford, CA.

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367 The Rheological Properties of Lubricants Containing Bovine Calf Serum (BCS) for Testing the Wear Behavior of the Micro-Textured Carbide-CoCrMo Alloy Surface

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N. J. Hallab[1], K. McAllister[1], A. Skipor[1], P. Campbell[2], H. Amstutz[3], J. J. Jacobs[1]; [1]Rush Univ. Med. Ctr., Chicago, IL, [2]Rush Univ. Med. Ctr., Orthopaedic Hospital, CA, [3]St Vincent Med Cntr, Los Angeles, CA.

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P. Hume, C. Cheung, K. Anseth; Univ. of Colorado, Boulder, CO.

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383 Bioactive Hydrogel Microspheres as an Injectable Surrogate Niche for Neural Stem Cell-Based Therapies

C. L. Franco[1], Z. Hassani[2], N. A. Gorenkova[2], J. L. West[1], M. Modo[2]; [1]Rice Univeristy, Houston, TX,[2]King's Coll. London, London, UNITED KINGDOM.

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Y. Cho[1], S. Park[2], H. Kim[2], S. Jeong[2], H. Yoo[2]; [1]Kyung Hee Univ., Seoul, Republic Of Korea, [2]Kangwon Natl. Univ., Chuncheon, Republic Of Korea.

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A. S. Ribeiro[1], E. Vos[1], E. M. Powell[2], J. B. Leach[1]; [1]Univ. of Maryland Baltimore County, Baltimore, MD, [2]Univ. of Maryland Sch. of Med., Baltimore, MD.

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390 Neural Cell and Protein Interactions with Zinc Oxide Nanoparticle Polyurethane Composites

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Teaching the Role of Natural Selection in Biocompatibility

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J. Lee[1], V. Guarino[2], A. Gloria[2], L. Ambrosio[2], G. Tae[1], Y. Kim[1], Y. Jung[3], S-H. Kim[3], S. Kim[3]; [1]Gwangju Inst. of Sci. and Technology, Gwangju, REPUBLIC OF KOREA, [2]Inst. of Composite and BioMed. Materials-Natl. Res. Council, Naples, ITALY, [3]Korea Inst. of Sci. and Technology, Seoul, REPUBLIC OF KOREA.

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Effect of Growth Factors in Combination with Injectable Silicone Elastomer Particles on The Biological Activity of Dermal Fibroblasts:An In Vitro Study

R. M. Crews; Univ. of Memphis, Memphis, TN.

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Hybrid Coating of Silica Xerogel/Chitosan for Controlled Release of Biomolecules

S-H. Jun[1], E-J. Lee[1], J-H. Jang[2], H-W. Kim[3], H-E. Kim[1]; [1]Seoul Natl. Univ., Seoul, REPUBLIC OF KOREA, [2]Inha Univ., Incheon, REPUBLIC OF KOREA, [3]Dankook Univ., Cheonan, REPUBLIC OF KOREA.

397 Enhanced Bone Ingrowth into Porous Titanium using a Calcium Sulfate, Calcium Phosphate Composite

N. D. Webb[1], O. H. Schulz[1], S. Bible[1], J. P. Moseley[1], D. K. DeBoer[2]; [1]Wright Med. Technology, Arlington, TN, [2]Saint Thomas Hosp., Nashville, TN.

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Thermo-Responsive Hydrogels as Novel Viscosupplements for Orthopedic Tissue Engineering

J. Mendenhall; Georgia Inst. of Technology, Atlanta, GA.

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Unique Bioreactor Conditions Generate Novel Surface Coating for Medical Devices

A. D. Schenone, M. Zimber, E. Pinney, G. Naughton, R. Kellar; Histogen, San Diego, CA.

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Nanocrystalline Hydroxyapatite Coating with Improved Mechanical and Biological Properties for Dental/Orthopedic Implants

H. Liu[1], W. Jiang[1], C. M. Stanford[2], J. Cheng[3], D. Agrawal[3], A. Malshe[1]; [1]NanoMech, Fayetteville, AR**,**[2]Univ. of Iowa, Iowa City, IA, [3]Penn State Univ., University Park, PA.

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Plasma Enabled Surface Modification to Promote Neuronal Cell Growth

D. Bhattacharyya, S. Banda, R. B. Timmons, Y-T. Kim; Univ. of Texas at Arlington, Arlington, TX.

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Synthesis, Characterization and Comparative Evaluation of Nanostructured Hydroxyapatite Prepared Via Sol - Gel and Bacterial Synthesis Routs

M. Fathi, A. Hanifi, B. Mostaghaci; Isfahan Univ. of Technology, Isfahn, IRAN, ISLAMIC REPUBLIC OF.

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Molding Parameters Affect Bending Strength of Spinal Bone Cement

O. Vesnovsky[1], H. W. Demian[1], T. O. Woods[1], L. D. T. Topoleski[2]; [1]US Food and Drug Admin., Ctr. for Devices and Radiological Hlth., Silver Spring, MD, [2]Univ. of Maryland Baltimore County (UMBC), Baltimore, MD.

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Multiwall Carbon Nanotubes Alter the Thermal Profile of Antibiotic Laden Bone Cement

A. C. Tickle, B. H. Marrs, M. Giordani, R. Andrews, D. Pienkowski; Univ. of Kentucky, Lexington, KY.

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The Effects of Freezing on the Circumferential Tensile Properties of Meniscus

C. P. Skurla[1], D. S. Morgan[1], C. T. Towe[2]; [1]Baylor Univ., Waco, TX, [2]St Louis Children's Hosp., St Louis, MO.

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Pseudopolysaccharides for the treatment of Osteoarthritis: in-vitro degradation and in-vivo residence time

M. C. Wathier[1], S. S. Stoddart[1], P. Bansal[2], N. Madani[2], B. Snyder[2], M. W. Grinstaff[1]; [1]Boston Univ., Boston, MA, [2]Harvard Med. Sch., Boston, MA.

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Hyaluronic Acid-Binding Joint Coating for the Treatment of Osteoarthritis

S. A. Unterman, L. A. Capriotti, E. Yang, J. H. Elisseeff; Johns Hopkins Univ., Baltimore, MD.

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Optimizing Trabecular Calcium Phosphate Scaffolds for Mechanical Strength

A. Tan, T. Guda, J. Son, S. Oh, M. Appleford, J. L. Ong; Univ. of Texas at San Antonio, San Antonio, TX.

412 Novel Reentrant Composite Structure: A Potential Material for Orthopaedic Applications

N. V. Jaumard[1], L. A. Frii[1], J. Sma[2], J. Xu[2]; [1]Univ. of Kansas, Lawrence, KS, [2]Oklahoma State Univ., Stillwater, OK.

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Property-Modulation of Absorbable Polyaxial Polymers and Monofilament Sutures Therefrom

K. A. Carpenter[1], M. S. Taylor[1], J. T. Corbett[1], W. S. W. Shalaby[2], S. W. Shalaby[1]; [1]Poly-Med, Inc., Anderson, SC, [2]St. Francis Hosp., Wilmington, DE.

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A New Composite Mesh of Silk and Absorbable Multifilament Yarns

S. J. Peniston, M. P. Jaeggli, K. A. Carpenter, S. W. Shalaby; Poly-Med, Inc., Anderson, SC.

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S. J. Peniston[1], M. S. Taylor[1], W. S. W. Shalaby[2], J. T. Corbett[1], S. W. Shalaby[1]; [1]Poly-Med, Inc., Anderson, SC, [2]St. Francis Hosp., Wilmington, DE.

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Epidermal Growth Factor Encapsulating Pluronic/Chitosan Hydrogels with Wound-Adhesive Properties

J. Choi, H. Kim, H. Jung, **H. Yoo**; Kangwon Natl. Univ., Chuncheon, REPUBLIC OF KOREA.

417

Gelatin/Chitosan Blended Sponge with Cross-linked by Genipin for Wound Healing

I. Kwon, **M. Bae**, S. Joung, S. Kim; Sch. of Dentistry, Kyung Hee Univ., Seoul, REPUBLIC OF KOREA.

418

The Effect of Gelatin/PU Blended Nanofibers for Wound Dressings

I. Kwon, **D. Heo**, S. Joung, S. Kim; Sch. of Dentistry, Kyung Hee Univ., Seoul, REPUBLIC OF KOREA.

419 Bandages Coated With Organo-Selenium Inhibit Bacterial Attachment

T. W. Reid[1], P. Tran[1], T. Mosley[2], J. Cortez[1], M. Shashtri[3], J. Spallholz[4], A. Hamood[1]; [1]Texas Tech Univ. Hlth.Sci. Ctr., Lubbock, TX, [2]Selenium Ltd., Lubbock, TX, [3]Eburon Organics, Lubbock, TX, [4]TTU, Lubbock, TX.

420

Platelet-Rich Plasma Application Does Not Influence Heterotopic Bone Formation Following Total Hip Arthroplasty

W. S. Pietrzak; Biomet, Inc., Warsaw, IN.

421

Self-Rollable Type I Collagen Membrane for Reducing Adhesion in Tendon Surgery

D. Yuen[1], J. Jensen[1], P. Hansen[1], S-T. Li[1], F. Zhang[2], S. Jacob[2], W. Lineaweaver[2]; [1]Collagen Matrix, Inc., Franklin Lakes, NJ, [2]Univ. of Mississippi Med. Ctr., Jackson, MS.

422

Oxygen Generating Gel for Tissue Salvage

C. L. Ward, H-J. Wang, A. Atala, J. J. Yoo, B. S. Harrison; Wake Forest Univ., Winston Salem, NC.

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Surface Chemistry and Topography of Lotus Leaf-Like Pluronic®-Polyurethane: Effect on Protein Adsorption

H. Chen, W. Song; Wuhan Univerisity of Technology, Wuhan, CHINA.

424

Reinforcing Effect of an Adhesive Agent on Surgical Suture's Knots

G. Samson, M. W. King, B. S. Gupta; North Carolina State Univ., Raleigh, NC.

Biomimetic Materials

425

Synthesis and Folding Characteristics of Polydepsipeptides

M. M. Nguyen, M. Abdelmelek, P. Ren, L. Suggs; Univ. of Texas, Austin, TX.

426

A Novel Silicon-Based Biomimetic Treatment to Enhance the Osteointegration of Titanium

C. Della Valle, **R. Chiesa**, M. Moscatelli, M. Tunesi, A. Cigada; Politecnico di Milano, Milan, ITALY.

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Biomimetic Incorporation of Fibronectin with Thin Calcium Phosphate Film on CP Titanium

C. Chen[1], I-S. Lee[1], S-M. Zhang[2], H-C. Yang[3], S-H. Choi[4], S-M. Chung[5]; [1]Atomic-scale Surface Sci. Res. Ctr., Yonsei Univ., Seoul, REPUBLIC OF KOREA, [2]Advanced Biomaterials and Tissue Engineering Ctr., HUST, Wuhan, CHINA, [3]Dept. of Dental Biomaterials Sci., Seoul Natl. Univ., Seoul, REPUBLIC OF KOREA, [4]Dept. of Periodontology, Yonsei Univ., Seoul, REPUBLIC OF KOREA, [5]Implatium Implant Inst., Seoul, REPUBLIC OF KOREA.

428

Biological Characterization of a Novel Silicon-Based Biomimetic Treatment to Improve the Osteointegration of Titanium

C. Della Valle, **R. Chiesa**, G. Candiani, D. Pezzoli, C. Giordano, A. Cigada; Politecnico di Milano, Milan, ITALY.

429

Protein Recognitive Hydrogel Systems for Biosensor/Biodiagnostic Applications

D. R. Kryscio, N. A. Peppas; Univ. of Texas at Austin, Austin, TX.

430

Endothelial Cell Attachment and Growth on Fluorosurfactant Polymers with Varying Densities of EC Selective Peptide

L. Dudash[1], F. Kligman[2], K. Kottke-Marchant[2], R. Marchant[1]; [1]Case Western Reserve Univ., Cleveland, OH, [2]Cleveland Clinic, Cleveland, OH.

431

Preparation of Polycaprolactone Film Reinforced With CaP Whisker

W. Choi[1], H. Kim[1], Y. Koh[2]; [1]Seoul Natl. Univ., Seoul, REPUBLIC OF KOREA, [2]Korea Univ., Seoul, REPUBLIC OF KOREA.

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Withdrawn

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Armored Microbes - Controllable Assembly Ofnanoparticles/Polyelectrolyte Shells

G. Johnson[1], S. Balkundi[2], M. Eby[1], Y. Lvov[2]; [1]Air Force Res. Lab. / RXQL, Tyndall, FL, [2]Louisiana Tech Univ., Ruston, LA.

Biosensors

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Fabrication, AFM Imaging and Applications of Si-Nanowire FET Aptamer Biosensors

K. Kim, H-S. Lee, J-A. Yang, M-H. Jo, S. Hahn; Pohang Univ. of Sci. and Technology (POSTECH), Pohang, REPUBLIC OF KOREA.

435

Vaginally Implantable Pressure Sensor for Monitoring Loadings on the Female Pelvic Floor

P. Johnson[1], E. Rosenbluth[2], I. Nygaard[2], R. Hitchcock[2]; [1]Univ. of Utah, Bountiful, UT, [2]Univ. of Utah, Salt Lake City, UT.

Blood/Material Interactions

437

Studies of the Self-Assembled Monolayer Prepared with Lipid-Like Zwitterionic Phosphorylethanolamine Functionality

Y-T. Sun, C-Y. Yu, **J-C. Lin**; Natl. Cheng Kung Univ., Tainan, TAIWAN.

438

Improvement of Antithrombogenicity of Biomaterials by Physical Adsorption of Human Thrombomodulin.

M. Omichi[1], M. Matsusaki[1], T. Funaki[2], S. Kato[2], I. Maruyama[3], M. Akashi[1]; [1]Osaka Univ., Suita, JAPAN, [2]BMT hybrid, Sakuragaoka, JAPAN, [3]Kagoshima Univ., Sakuragaoka, JAPAN.

439

Surface Modification of Model Gold Substrates with an Antithrombin-Heparin Anticoagulant Complex

K. N. Sask, J. L. Brash, A. K. C. Chan, L. R. Berry, I. Zhitomirsky; McMaster Univ., Hamilton, ON, CANADA.

440

Interactions of Proteins with Chemically Modified Alginate-Based Capsules for Cellular Gene Therapy

R. M. Cornelius, F. Shen, M. Potter, M. A. Mazumder, N. Burke, H. Stover, J. L. Brash; McMaster Univ., Hamilton, ON, CANADA.

441 Assessment of Hemocompatibility of Biomedical Materials via In Vitro Human Blood-Loop

Z. Zhou, S. Eam, S. Board; St. Jude Med. Inc., St. Paul, MN.

442

Immobilization of PEGylated Proteins on Gold Surface for Blood Compatibility

S. Alibeik, J. L. Brash, S. Zhu; McMaster Univ., Hamilton, ON, CANADA.

443

Protein-Resistant Polyurethane by Sequentially-Grafted Poly(HEMA) and Poly(Oligo(Ethylene Glycol) Methacrylate (OEGMA)) via Surface-Initiated ATRP

Z. Jin, W. Feng, S. Zhu, J. L. Brash; McMaster Univ., Hamilton, ON, CANADA.

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Hemocompatible Polymeric Coatings with Sulfonated Polyurethanes as Matrix for Sustained Nitric Oxide Release

B. Wu[1], D. Studzinski[2], C. J. Shanley[2], M. E. Meyerhoff[1]; [1]Univ. of Michigan, Ann Arbor, MI, [2]William Beaumont Hosp., Royal Oak, MI.

445

Effect of Competitive Protein Adsorption on Functional Activity of Adsorbed Fibrinogen Measured by AFM

P. Soman, C. Siedlecki; Penn State Univ., Hershey, PA.

446

Regulation of Material Endothelialization and Hemocompatibility via Hyaluronic Acid Grafting

A. Ruiz, T-W. Chuang, K. Masters; Univ. of Wisconsin Madison, Madison, WI.

447

Utilization of Thiol-Modified Surfaces to Investigate Contact Activation of Plasma Coagulation

J. W. Bauer[1], E. A. Vogler[2], C. A. Siedlecki[3]; [1]Pennsylvania State Univ. Coll. of Med., Hershey, PA**,** [2]Pennsylvania State Univ., University Park, PA, [3]Pennsylvania State Univ. Coll. of Med., Hershey, PA.

448

PEGylated Terpolymers with Non-Fouling Properties

D. E. Heath[1], A. N. Velev[2], S. L. Cooper[1]; [1]The Ohio State Univ., Columbus, OH, [2]North Carolina State Univ., Raleigh, NC.

449

Synthesis and Characterization of Albumin Binding Surfaces for Implantable Surfaces

A. Subramanian, S. Guha Thakurta; Univ. of Nebraska, Lincoln, NE.

450

Interaction of Lipid-Conjugated Poly(ethylene glycol) Micelles with Bovine Serum Albumin

M. Kastantin, D. Missirlis, M. Black, M. Tirrell; Univ. of California, Santa Barbara, CA.

Cell/Organ Therapies

451

Stress Preconditioning on Preosteoblastic Cells for Bone Tissue Engineering

E. Chung, M. N. Rylander; Virginia Tech, Blacksburg, VA.

Cellular Responses to Their Microenvironments

452

Frictional Property Measurement of Individual Vascular Smooth Muscle Cells

J.D. Hemmer, D. Dean, A. Vertegel, M. LaBerge; Clemson Univ., Clemson, SC.

453 (Student Award for Outstanding Research)

Fibroblasts Regulate Monocyte Response to ECM-derived Matrix: The Effects on Monocyte Adhesion and the Production of Inflammatory, Matrix Remodeling and Growth Factor Proteins

A. S. Chung, W. J. Kao; Univ. of Wisconsin-Madison, Madison, WI.

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Endothelial Cell/Osteoblast Coculture Ratios for Angiogenesis and Bone Formation

A. R. Shah[1], J. C. Wenke[2], C. M. Agrawal[1]; [1]Univ. of Texas at San Antonio, San Antonio, TX, [2]United States Army Inst. of Surgical Res., San Antonio, TX.

455

Neurite Outgrowth on Nanofiber Scaffolds with Different Structures, Orders, and Surface Coatings

J. Xie, M. R. Macewan, X. Li, Y. Xia; Washington Univ. in St. Louis, Saint Louis, MO.

456

Evaluation of the Biomechanical Environment on Rheumatoid Arthritis Pathogenesis Using Multiplex Cytokine Analysis

K. L. Wagoner, R. A. Bader; Syracuse Univ., Syracuse, NY.

457

Treatment of MG63 Cells With UHMWPE Particles After Fractionation by Vacuum Filtration Into Three Different Size Ranges, Including a Nanometer Size Fraction

M. K. Musib[1], A. D. Marshall[1], J. Oxley[2], V. L. Sylvia[1], C. M. Agrawal[3], D. D. Dean[1]; [1]Univ. of Texas Hlth.Sci. Ctr. at San Antonio, San Antonio, TX, [2]Southwest Res. Inst., San Antonio, TX, [3]Univ. of Texas at San Antonio, San Antonio, TX.

458

A Titanium Surface Enhances Mineralization From Bone Marrow Stromal Cells Earlier Than Cobalt Chrome

E. Hippensteel, V. Grammer; DePuy Orthopaedics, Warsaw, IN.

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Withdrawn

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Attachment of Osteoblasts on Absorbable Adhesive Composite Bone Cements/ Fillers

S. D. Nagatomi, S. W. Shalaby, K. A. Nichter, M. A. Vaughn; Poly-Med, Inc., Anderson, SC.

461

Impact of Reaction Conditions on PEGylated Fibrin Gelation and Cell Behavior

L. Geuss, G. Zhang, C. Drinnan, L. Suggs; Univ. of Texas at Austin, Austin, TX.

462

Micropatterned Agarose and Polyacrylamide Scaffolds for Canine Hepatocyte Culture

A. Y. Au[1], J. M. Hasenwinkel[2], C. G. Frondoza[1]; [1]Nutramax Lab., Inc., Edgewood, MD, [2]Syracuse Univ., Syracuse, NY.

463

Effect of Surface Modulus and Extracellular Matrix (ECM) Adhesion Proteins on PC12 Cell Proliferation and Neurite Outgrowth

S. H. Jariwala[1], E. Bevilacqua[2], J. Hasenwinkel[1]; [1]Syracuse Univ., Syracuse, NY, [2]State Univ. of New York, Coll. of Environmental Sci. and Forestry, Syracuse, NY.

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Engineering Notch Signaling in Stem Cells: Towards Directed Generation of T Cells

E. R. Dawson, K. Roy; Univ. of Texas at Austin, Austin, TX.

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Hyaluronic Acid Hydrogels with Tunable Material Properties for the Culture of Ventral Midbrain Progenitors

S. K. Seidlits, Z. Z. Khaing, R. R. Rosenberger, J. E. Vanscoy, C. E. Schmidt; Univ. of Texas at Austin, Austin, TX.

466

Effects of Surface Conditioning and Ionic Products of a Novel Bioactive Glass-Ceramic on In Vitro Osteogenic Events

L. M. Spinola de Castro, Sr.[1], L. Novaes Teixeira, Sr.[1], R. R. Fernandes, Sr.[1], O. Peitl, Sr.[2], E. D. Zanotto, Sr.[2], M. M. Beloti, Sr.[1], A. L. Rosa, Sr.[1], P. Tambasco de Oliveira, Sr.[1]; [1]Univ. of São Paulo, Ribeirão Preto, BRAZIL, [2]Federal Univ. of São Carlos, São Carlos, BRAZIL.

467

Endothelial Progenitor Cell Attachment to Biomaterials is Mechanistically due to CD47-Cholesterol-Integrin Complex Formation

M. Ueda, S. J. Stachelek, I. Alferiev, R. J. Levy; The Children's Hosp. of Philadelphia, Philadelphia, PA.

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Endothelial Cell Migration Response to Angiogenic and Osteogenic Growth Factors

J. Carter, C. M. Agrawal; Univ. of Texas San Antonio, San Antonio, TX.

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Cellular Response to the Structure of Semi-degradable Hydrogels Based on Poly(vinyl alcohol)

K. L. Spiller, A. M. Lowman; Drexel Univ., Philadelphia, PA.

470

Programmed Sub-cellular Release for Studying the Dynamics of Cell Detachment

B. E. Wildt; Johns Hopkins Univ., Baltimore, MD.

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The use of Skeletal Muscle Extracellular Matrix Extract to Study the Influence of an Aging Environment on the Regenerative Capacity of Skeletal Muscle Progenitor Cells

M. M. Stern, R. L. Myers, S. Soker, S. B. Kritchevsky, M. Van Dyke; Wake Forest Univ. Baptist Med. Ctr., Winston-Salem, NC.

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Extracellular Matrix Properties regulate Osteolytic Potential of Human Breast Cancer Cells

N. S. Ruppender, J. A. Sterling, G. R. Mundy, S. A. Guelcher; Vanderbilt Univ., Nashville, TN.

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Translating Extracellular Matrix to Intracellular Signaling to Proliferation

B. G. Kelso, M. M. Shah, M. R. Caplan; Arizona State Univ., Tempe, AZ.

474

Do Lanthanides Induce A Similar Response To Periprosthetic Cells In Vitro?

P. H. Pennekamp[1], M. S. Caicedo[1], I. Catelas[2], J. Kunze[3], M. P. Laurent[1], N. J. Hallab[1], M. A. Wimmer[1]; [1]Rush Univ. Med. Ctr., Chicago, IL, [2]Univ. of Ottawa, Ottawa, ON, CANADA, [3]Hamburg Univ. of Technology, Hamburg, GERMANY.

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Influence of ECM Surface-Modified Substrates on Pancreatic Islet Functionality and Preservation In Vitro

J. Daoud, L. Rosenberg, M. Tabrizian; McGill Univ., Montreal, QC, CANADA.

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High Resolution Spatio-Temporal Dosing of Subcellular Targets

S. Moorjani, X. A. Chang, R. Nielson, J. Rice, E. Ritschdorff, J. B. Shear; Univ. of Texas, Austin, TX.

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Effects of Macrophage Cells Stimulated to Release Reactive Oxygen Species on Corrosion of Titanium

D. Mueller; Univ. of Memphis, Memphis, TN.

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Polymeric Composite Tissue Test System Development for Breast Cancer Research

C-C. Yang, K. J. L. Burg; Clemson Univ., Clemson, SC.

Clinical Performance and Long Term Success of Implants

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CoCr and Ti-6Al-4V Modular Neck Fatigue Testing

P. K. Aldinger; Smith & Nephew, Memphis, TN.

480

Enhancing Corrosion Resistance of Mg Implant via Surface Anodization for Biomedical Applications

J. Hong, J. Jo, H-E. Kim; Seoul Natl. Univ., Seoul, REPUBLIC OF KOREA.

481

Analysis of the Healing Process in Sinus Bone Grafting Using the Various Grafting Materials

S. Kim, Sr.[1], Y-K. Kim, Sr.[2], S-C. Lim[1]; [1]Chosun Univ., GwangJu City, REPUBLIC OF KOREA, [2]Seoul Natl. Univ. Bundang Hosp., Seoul, REPUBLIC OF KOREA.

Computational Modeling

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Factors Influencing the Success of Patient Matched Cutting Blocks

A. B. Salehi, D. Mehl, A. Snider, M. Nadzadi, A. Agnihotri, C. Manchester; Smith and Nephew Orthopaedics, Inc., Memphis, TN.

483

Modeling Simultaneous Crystallization and Degradation of Bioabsorbable Polymers

X. Han, J. Pan; Univ. of Leicester, Leicester, UNITED KINGDOM.

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Strain Energy and Molecular Potential Energy in Self-Assembled Collagen in Response to Water Solvation

A. L. Kwansa, J. W. Freeman; Virginia Polytechnic Inst. and State Univ., Blacksburg, VA.

485

Finite Element Analysis Study of Cell Mechanics on Different Substrates

K. Katkuri, P. Sit; Louisiana Tech Univ., Ruston, LA.

486

3D Porous Scaffold Structure Design for Optimum Fluid Shear Stimulation of Osteoblastic Cells Cultured In a Perfusion Bioreactor

R. Voronov, S. van Gordon, V. Sikavitsas, D. Papavassiliou; Univ. of Oklahoma, Norman, OK.

Dental/Craniofacial Materials

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Pore Diameter Size Affects Osteoblastic Cell Responses to Porous Titanium Surfaces

M. M. Beloti[1], L. N. Teixeira[1], G. E. Cripp[1], M. U. Shirozaki[1], A. C. Trabuco[1], L-P. Lefebvre[2], P. T. de Oliveira[1], A. L. Rosa[1]; [1]Univ. of Sao Paulo, Ribeirao Preto, BRAZIL, [2]Natl. Reserach Council Canada, Boucherville, QC, CANADA.

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The Mechanical Advantages of a Bilayer Ceramic Scaffold for Bone Tissue Engineering

T. Guda, M. Appleford, S. Oh, J. L. Ong; Univ. of Texas at San Antonio, San Antonio, TX.

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Dentin Surface Treatment by Atmospheric Plasma Brush for Enhanced Adhesive/Dentin Interfacial Bonding

Q. Yu; Univ. of Missouri, Columbia, MO.

490

Effects of Titanium Nanotubes and HA Sol-Gel Coatings on Osteoblast Response

J. Kim[1], K. Lee[2], M. R. Appleford[3], J. L. Ong[3], S. Oh[3]; [1]Univ. of Texas Hlth.Sci. Ctr. at San Antonio, San Antonio, TX, [2]Chonnam Natl. Univ., Kwangju, REPUBLIC OF KOREA, [3]Univ. of Texas at San Antonio, San Antonio, TX.

491

In Vitro Osteoblast Responses to Silver-doped Hydroxyapatite Sol-gel Coatings

A. Ong, J. Hernandez, S. Oh, M. Appleford; Univ. of Texas at San Antonio, San Antonio, TX.

492

Effect of Silica Nanofiber Reinforcement on Viscosity and Modulus of Dental Composite.

A. Swarn, J. O. Burgess, D. R. Dean; The Univ. of Alabama at Birmingham, Birmingham, AL.

493

Mechanical Properties of Human Teeth Subjected to Common Clinical Whitening Agents and Etchants

L. Datko[1], B. Zimmerman[1], S. Alapati[2], M. Kennedy[1], D. Dean[1]; [1]Clemson Univ., Clemson, SC, [2]Med. Univ. of South Carolina, Charleston, SC.

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Ca++ release behavior and biological responses to sol-gel coated calcium polyphosphate surfaces

S. Oh[1], M. Han[2], J. L. Ong[1], M. Appleford[1]; [1]Univ. of Texas at San Antonio, San Antonio, TX, [2]Kyungil Univ., Gyeongbuk, REPUBLIC OF KOREA.

Drug Delivery

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Novel Absorbable Polymers from Functionalized Diglycolic Acid

R. S. Bezwada; Bezwada BioMed., LLC, Hillsborough, NJ.

496

In Vivo Evaluation of Dentin-Pulp Pomplex Response After Direct Capping-Pulp with Bioceramic/Poly(Glycolic)-Poly(Lactic Acid) Composite.

A. Gala-Garcia, Jr.; UFMG, Belo Horizonte, BRAZIL.

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Simultaneous Release of Two Antibiotics from a Complexation Polymer System

Y. Zou; Univ. of Kentucky, Lexington, KY.

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Hydrogel Nanocomposites for Remote Controlled Drug Delivery Applications

N. S. Satarkar, W. Zhang, R. Eitel, J. Hilt; Univ. of Kentucky, Lexington, KY.

Drug Delivery in Tissue Engineering and Regenerative Medicine

499

Elution of Antibiotics from Chitosan/Carbon Nanotube Composite Scaffolds: A Preliminary Study

J. A. Jennings, S. P. Noel, J. D. Bumgardner, W. O. Haggard; Univ. of Memphis, Memphis, TN.

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Comparison of Chitosan-Coated Titanium via Two Coating Methods: Evaluation of Protein Release Profiles

M. R. Leedy; Univ. of Memphis, Memphis, TN.

501

Chitosan-Silica Xerogel Hybrid Membrane with BMP for Guided Bone Regeneration

E-J. Lee[1], S-H. Jun[1], D-S. Shin[1], H-E. Kim[1], H-W. Kim[2], J-H. Jang[3]; [1]Seoul Natl. Univ., Seoul, REPUBLIC OF KOREA, [2]Dankook Univ., Cheonan, REPUBLIC OF KOREA, [3]Inha Univ., Incheon, REPUBLIC OF KOREA.

502

Efficacy of Pluronic/Hyaluronan Composite Hydrogel in Chondrogenesis of Human Adipose-Derived Mesenchymal Stromal Cells

K. Park, H. Jung, J-J. Kim, D. Han; Korea Inst. of Sci. and Technology, Seoul, REPUBLIC OF KOREA.

503

Self-Assembled Immuno-Polymeric Nanoparticles for Targeted Drug Delivery

J. Lu, M. Shi, K. Ho, M. S. Shoichet; Univ. of Toronto, Toronto, ON, CANADA.

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Highly Porous Bioresorbable Scaffolds with Protein Controlled Release for Tissue Regeneration Applications

O. Grinberg, I. Binderman, J. J. Elsner, **M. Zilberman**; Tel-Aviv Univ., Tel-Aviv, ISRAEL.

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IGF-I Releasing Scaffolds for Growth Plate Regeneration

S. C. Sundararaj, T. A. Milbrandt, D. A. Puleo; Univ. of Kentucky, Lexington, KY.

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Mechanical and Physical Properties Effects through Material Selection for a Surgically Adaptable Chitosan Implant

K. Smith; Univ. of Memphis, Memphis, TN.

507

Apatone Treatment Enhances Cell Proliferation and Reduces Inflammation Following Cobalt-Chrome Exposure

M. W. Kovacik[1], R. A. Mostardi[1], D. R. Neal[1], P. N. Sha[2], J. M. Jamison[1], T. F. Bear[1]; [1]Summa Hlth.System, Akron, OH, [2]The Univ. of Akron, Akron, OH.

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Controlled Mineral Coatings on PCL Films

D. Suarez-Gonzalez, A. Bagadia, R. Vanderby, Jr., W. L. Murphy; Universtity of Wisconsin- Madison, Madison, WI.

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Preparation of PEI-PEG-BP Coated Albumin Nanoparticles as Delivery System for BMP-2

S. Zhang, G. Wang, X. Lin, C. Kucharski, H. Uludag; Univ. of Alberta, Edmonton, AB, CANADA.

510

Influence of a Growth Factor-Protein Mixture on the Development of the Osteogenic Phenotype on Titanium

M. A. de Oliva, Sr.[1], L. M. S. de Castro, Sr.[1], W. M. A. Maximiano, Sr.[1], R. R. Fernandes, Sr.[1], P. Ciancaglini, Sr.[1], M. M. Beloti, Sr.[1], A. Nanci, Sr.[2], A. L. Rosa, Sr.[1], **P. Tambasco de Oliveira, Sr.**[1]; [1]Univ. of São Paulo, Ribeirão Preto, BRAZIL, [2]Université de Montréal, Montréal, QC, CANADA.

511

Tamoxifen Loaded Beads for Concurrent Breast Cancer Therapy and Tissue Engineering

C. T. Gomillion, F. Xu, K. J. L. Burg; Clemson Univ., Clemson, SC.

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Calcium Sulfate Coating on Chitosan-Calcium Phosphate Beads for Controlled Drug Delivery

H. Doty, B. Reves, S. Noel, W. Haggard, J. D. Bumgardner; Univ. of Memphis, Memphis, TN.

Engineering Bone

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Physical Properties and in Vitro Bioactivity of Biphasic Calcium Silicate Bone Cements

S-J. Ding; Chung-Shan Med. Univ., Taichung city, TAIWAN.

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Effect of Incorporating Calcium Silicate on the Properties of Absorbable, Adhesive Composite Adhesive Bone Cement/Filler

S. D. Nagatomi[1], M. A. Vaughn[1], M. Shalaby[2], T. L. Moore[1], S. W. Shalaby[1]; [1]Poly-Med, Inc., Anderson, SC, [2]LeHigh Valley Hosp., Allentown, PA.

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Hydroxyapatite/Poly(L-Lactide) Co-Electrospun Scaffold with Dual-Scale Alignments for Bone Regeneration

F. Peng[1], M. Shaw[1], J. R. Olson[2], M. Wei[1]; [1]Univ. of Connecticut, Storrs, CT, [2]Teleflex Med., Coventry, CT.

516 (Student Award for Outstanding Research)

Composite Chitosan-Calcium Phosphate Scaffolds for Local BMP-2 Delivery and Enhanced Bone Regeneration

B. T. Reves[1], J. D. Bumgardner[1], J. A. Cole[1], Y. Yang[2], W. O. Haggard[1]; [1]Univ. of Memphis, Memphis, TN, [2]Univ. of Tennessee Hlth.Sci. Ctr., Memphis, TN.

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Protein and Gene Profiles of Osteoprogenitor Cells on Allograft Bone

K. E. Smith, Z. Huang, T. Ma, R. L. Smith, S. B. Goodman; Stanford Univ., Stanford, CA.

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Characterization of a Novel Hyaluronan-Polyethylene Graft Copolymer for the Delivery of Bioactive Materials

M. L. Godek, C. N. Cranson, D. Prawel, R. A. Oldinski, S. P. James; Colorado State Univ., Fort Collins, CO.

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Absorbable Self-Setting Composite Adhesive Bone Cement/Filler

S. W. Shalaby[1], M. A. Vaughn[1], S. D. Nagatomi[1], M. Shalaby[2]; [1]Poly-Med, Inc., Anderson, SC,[2]LeHigh Valley Hosp., Allentown, PA.

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High Strength, Bioactive, Bioresorbable Medial Opening-Wedge for High Tibial Osteotomy

Y. Shikinami, S. Sumimoto, N. Koshimizu, H. Morii; Takiron Co., Ltd., Kobe, JAPAN.

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The Elution Profile of a Cancellous Bone Allograft (OsteoSponge) Impregnated with Vancomycin and Tobramycin

B. P. Luchsinger[1], G. A. Judd[1], S. Scott[2]; [1]Bacterin Intl., Belgrade, MT, [2]Salt Lake Orthopaedic Clinic, Salt Lake City, UT.

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Fiber-reinforced Absorbable, Self-setting, Composite Bone Filler: A Preliminary Report

M. A. Vaughn, S. J. Peniston, K. A. Carpenter, M. S. Taylor, S. W. Shalaby; Poly-Med, Inc., Anderson, SC.

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Animal Study of Various Types of Porous Calcium Phosphate Substitutes

K-S. Lee, D-H. Lee, J-H. Kim, J-I. Yu; ASAN Med. center, Seoul, REPUBLIC OF KOREA.

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Rapid Conversion to Hydroxyapatite in Brushite Cements Prepared with Hydroxyapatite-based Formulations

D. L. Alge[1], T-M. G. Chu[2]; [1]Purdue Univ., West Lafayette, IN, [2]Indiana Univ. Sch. of Dentistry, Indianapolis, IN.

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In Vitro Activity of Gentamicin Released from Macroporous Injectable Calcium Phosphate Cement

A. J. McNally, K. Sly, S. Lin; Exactech Inc., Gainesville, FL.

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Rapid Mineralization of Poly (D, L -lactide) Electrospun Scaffolds

T. Andric, L. D. Wright, J. W. Freeman; Virginia Polytechnic Inst. and State Univ., Blacksburg, VA.

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H. Fan, C. Zhao, X. Zhu, X. Zhang; Natl. Engineering Res. Ctr. for Biomaterials, Sichuan Univ., Chengdu, CHINA.

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J. Kim[1], C. Knabe[2], W. Chen[1], V. Meausoone[1], S. Radin[1], P. Ducheyne[1]; [1]Univ. of Pennsylvania, Philadelphia, PA, [2]Charite Univ. Med. Ctr., Berlin, GERMANY.

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R. M. Urban, T. M. Turner, D. J. Hall, E. L. Dahlmeier, N. Inoue; Rush Univ. Med. Ctr., Chicago, IL.

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N. V. Jaumard, A. Kelley, **L. A. Friis**; Univ. of Kansas, Lawrence, KS.

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D. R. Ingram[1], M. S. Taylor[1], J. T. Corbett[1], W. S. W. Shalaby[2], S. W. Shalaby[1]; [1]Poly-Med, Inc., Anderson, SC, [2]St. Francis Hosp., Wilmington, DE.

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E. Saito; Univ. of Michigan, Ann Arbor, MI.

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P. McFetridge[1], S. Goktas[1], J. Dmytryk[2]; [1]Univ. of Oklahoma, Norman, OK, [2]Univ. of Oklahoma Hlth.Sci. Ctr., Oklahoma City, OK.

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P. Nichter[1], J. L. Turner[1], M. Henson[1], C. Wu[2], J. Liu[3]; [1]Medtronic, Memphis, TN, [2]Fndn. for the Advancement of Spinal Knowledge, Minneapolis, MN, [3]Northwestern Univ., Chicago, IL.

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S. Yang, C. Khemtong, J. Setti Guthi, J. Gao; UTSouthwestern Med. Ctr., Dallas, TX.

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P. A. Tran, L. Sarin, R. H. Hurt, T. J. Webster; Brown Univ., Providence, RI.

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J. Park, K. Lee, J. F. Galloway, P. C. Searson; Johns Hopkins Univ., Baltimore, MD.

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Q. Zhao, B. Li; West Virginia Univ., Morgantown, WV.

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R. M. Mahida, R. Vasita, D. S. Katti; Indian Inst. of Technology Kanpur, INDIA.

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Q. Xing, Y. M. Lvov; Inst. for Micromanufacturing, Ruston, LA.

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K. Lee[1], S. Park[1], G. Oh[1], H. Han[1], J. Choi[2]; [1]Chonnam Natl. Univ., Gwangju, REPUBLIC OF KOREA,[2]Hanlyo Univ., Kwangyang, REPUBLIC OF KOREA.

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F. Wang, Z. Li**, J. Guan**; Ohio State Univ., Columbus, OH.

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G. Huang; UT Southwestern Med. Ctr., Dallas, TX.

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Biocompatible Halloysite Clay Nanotubes, a Potential Self-Responsive Container for the Delivery of Bioactive Agents

E. Abdullayev[1], Y. J. Suh[2], Y. M. Lvov[1]; [1]Inst. for Micromanufacturing, Louisiana Tech Univ., Ruston, LA, [2]Nano-Materials Group, Korea Inst. for GeoSci. and Mineral Resources, Daejeon, REPUBLIC OF KOREA.

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J. Lee, B. Chu, F. Ren, T. Lele; Univ. of Florida, Gainesville, FL.

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J. Jo, D. Shin, H. Kim; Seoul Natl. Univ., Seoul, REPUBLIC OF KOREA.

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H. Minouei, M. Fathi, M. Meratian; Isfahan Univ. of Technology, Isfahan, IRAN, ISLAMIC REPUBLIC OF.

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Y. Kim, H. Choo, E. Hwang; INJE Univ., Kimhae City, REPUBLIC OF KOREA.

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C-M. Han, H-E. Kim; Seoul Natl. Univ., Seoul, REPUBLIC OF KOREA.

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J. Lee, B. Suh; Bisco, Inc., Schaumburg, IL.

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D. Sun[1], S. Lin[2], W. Petty[2], C. Chen[3]; [1]Taiwan Scientific Corp., Taipei, TAIWAN, [2]Exactech, Inc., Gainesville, FL, [3]Inst. of Nuclear Energy Res., Atomic Energy Council, Taoyuan, TAIWAN.

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S. Kim; Yeungnam Univ., Gyeongsan, REPUBLIC OF KOREA.

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The Use of Combustion Synthesis to Produce Porous Intermetallic Biomaterials

M. Karsh, R. Ayers; Colorado Sch. of Mines, Golden, CO.

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Recovery of Oxidative Damage in Irradiated UHMWPE

D. Sun[1], S. Lin[2], W. Petty[2], R. Tsay[3], G. Chou[3]; [1]Taiwan Scientific Corp., Taipei, TAIWAN, [2]Exactech, Inc., Gainesville, FL, [3]Inst. of BioMed. Engineering, Natl. Yang-Ming Univ., Taipei, TAIWAN.

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UHMWPE Particles Stimulates Increased Release of MCP-1 in Traditional Cell Cultures without Coating Materials

T. Ma[1], Z. Huang[1], P. Ren[1], Y. A. Chien[2], R. L. Smith[1], S. B. Goodman[1]; [1]Stanford Univ., Stanford, CA, [2]Univ. of Pennsylvania, Philadelphia, CA.

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Improved Adhesion of Nanostructured Diamond Films on CoCrMo Alloy

S. A. Catledge, V. Rishi, P. Diggins, IV, Y. Vohra; Univ. of Alabama at Birmingham, Birmingham, AL.

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Wear Pattern of Hybrid Ceramic-on-Metal Bearings in Hip Simulator

T. Ishida[1], H. Shirasu[1], M. Manaka[1], T. Shishido[1], K. Yamamoto[1], I. C. Clarke[2]; [1]Tokyo Med. Univ., Shinjukuku, JAPAN, [2]Loma Linda Univ., Loma Linda, CA.

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Vertical Forces of an Ambulating Ovine Amputation Model of Percutaneous, Osseointegrated Implants

T. J. Shelton[1], K. N. Bachus[1], R. D. Bloebaum[2]; [1]Univ. of Utah, Salt Lake City, UT, DVA SLC Hlth. Care System, Salt Lake City, UT.

N/A

Polyethylene Wear In Total Hip Replacements: Effects of Crosslinking & Head Size

S. Nambu, J. Moseley, M. Carroll; Wright Med. Technology, Arlington, TN.

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Material and Mechanical Characterization of the Micro-textured Carbide-CoCrMo Alloy Surface

G. A. Ettienne-Modeste; Univ. of Maryland, Baltimore County, Catonsville, MD.

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Changing the Mechanical Properties of PMMA Bone Cement with Nano and Micro Particles

R. F. Pinto, B. J. Johnson, L. D. T. Topoleski; Univ. of Maryland Baltimore County, Baltimore, MD.

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Tribology of a Pitch Carbon Fiber PEEK against CoCrMo Unicondylar Knee Bearing

J. N. Devine[1], S. C. Scholes[2], A. Unsworth[3]; [1]Invibio Ltd, Thornton Cleveleys, UNITED KINGDOM,[2]Univ. of Durham, Thornton Cleveleys, UNITED KINGDOM, [3]Univ. of Durham, Durham, UNITED KINGDOM.

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High Adhesion Plasma-Sprayed HA Coating on PEEK and Other Polymers

M. N. Bureau, A. Spring, J-G. Legoux; Industrial Materials Inst., Boucherville, QC, CANADA.

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Hydroxyapatite Whisker Reinforced Polyaryletherketone for Orthopaedic and Spinal Implants

G. L. Converse[1], T. Conrad[1], N. Yanchack[1], S. M. Smith[2], **R. K. Roeder**1; [1]Univ. of Notre Dame, Notre Dame, IN, [2]Northwest Neurosurgery, South Bend, IN.

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C-M. Han, H-E. Kim; Seoul Natl. Univ., Seoul, REPUBLIC OF KOREA.

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Coatings Generated by Surface Initiated Polymerisation for the Control of Cell-Surface Interactions

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Fatigue Life of Hydroxyapatite Whisker Reinforced Polyetherketoneketone

G. L. Converse, **T. L. Conrad**, R. K. Roeder; Univ. of Notre Dame, Notre Dame, IN.

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Dose Dependent Effect of Surface-Associated Arg-Gly-Asp on the Osteogenic Differentiation of Mesenchymal Stem Cells under Flow Perfusion

J. Alvarez-Barreto[1], P. deAngelis[2], V. Sikavitsas[1]; [1]Univ. of Oklahoma, Norman, OK, [2]Univ. of Oklahoma Hlth. Sci. Ctr., Oklahoma City, OK.

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RGD-Containing Hydrogels Support Re-expression of Markers of Contractile Vascular Smooth Cell Phenotype

J. A. Beamish[1], A. Choi[1], R. E. Marchant[1], K. Kottke-Marchant[2]; [1]Case Western Reserve Univ., Cleveland, OH, [2]Cleveland Clinic, Cleveland, OH.

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Antibacterial, Non-hormonal Contraceptive Intravaginal Ring

G. T. Hilas[1], J. T. Corbett[1], S. D. Nagatomi[1], E. F. Powell[1], M. Shalaby[2], S. J. Penisto[1], S. W. Shalaby[1]; [1]Poly-Med, Inc., Anderson, SC, [2]LeHigh Valley Hosp., Allentown, PA.

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Surface Display using Self-assembly for Screening Cell-adhesive Peptides

B. Ananthanarayanan, D. Missirlis, M. Black, M. Kastantin, M. Tirrell; Univ. of California, Santa Barbara, Santa Barbara, CA.

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Antimicrobial Absorbable Uriprene Ureteral Stent

W. S. W. Shalaby[1], S. D. Nagatomi[2], K. W. Clinkscales[2], S. W. Shalaby[2]; [1]St. Francis Hosp., Wilmington, DE, [2]Poly-Med, Inc., Anderson, SC.

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An Antifungal Intravaginal Ring

G. T. Hilas[1], S. D. Nagatomi[1], E. F. Powell[1], M. Shalaby[2], S. W. Shalaby[1]; [1]Poly-Med, Inc., Anderson, SC, [2]LeHigh Valley Hosp., Allentown, PA.

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Exogenous IL-12 Activates Macrophages and Prevents Infection in an Open Fracture

B. Li, B. Jiang, Q. Zhao, B. Lindsey, B. Boyce, M. Dietz, D. Hubbard; West Virginia Univ. Sch. of Med., Morgantown, WV.

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A Comparative Study of Compressive Properties of Bone Cement with Added Antibiotic

Y. A. Korshunov, S. Saha; SUNY Downstate Med. Ctr., Brooklyn, NY.

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Y. Wei, R. A. Latour; Clemson Univ., Clemson, SC.

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J. R. McClanahan[1], R. Peyyala[1], K. F. Novak[1], D. A. Puleo[1], T. A. Mietzner[2]; [1]Univ. of Kentucky, Lexington, KY, [2]Univ. of Pittsburgh Sch. of Med., Pittsburg, PA.

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N. T. Jawrani, J. L. Gilbert; Syracuse Univ., Syracuse, NY.

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T. R. Meyer, M. Kelsey; Bacterin Intl., Inc., Belgrade, MT.

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L. A. Duncan; The Univ. of Surrey, Surrey, UNITED KINGDOM.

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Conformation of Adsorbed Plasma Proteins is a Critical Determinant of the Thrombogenicity of Biomaterial Surfaces

B. Sivaraman, R. Latour; Clemson Univ., Clemson, SC.

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G. Collier[1], S. J. Stuart[1], B. R. Brooks[2], R. A. Latour[1]; [1]Clemson Univ., Clemson, SC, [2]NIH, Bethesda, MD.

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Effects of Polymer Surface Chemistry on Endothelial Cell Attachment

S. R. Shah[1], A. R. Shah[1], G. Mani[1], J. C. Wenke[2], C. M. Agrawal[1]; [1]Univ. of Texas at San Antonio, San Antonio, TX, [2]United States Army Inst. of Surgical Res., San Antonio, TX.

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J. R. Porter, **K. C. Popat**; Colorado State Univ., Fort Collins, CO.

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Layer-by-Layer Nanoshell Build-Up Onto Non-Fixed Human Red Blood Cells for their Immunocamouflage

S. Mansouri[1], Y. Merhi[2], F. M. Winnik[3], M. Tabrizian[1]; [1]McGill Univ., Montreal, QC, CANADA, [2]Montreal heart Inst., Montreal, QC, CANADA, [3]Univ. de Montreal, Montreal, QC, CANADA.

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1 Loaded Functional Nanoparticle-Hydrogel-PLCL Complex□Chondrogenic Differentiation of Human Adipose Tissue Derived Stromal Cells using TGF-

S. Kim[1], Y. Jung[1], S. Kim[1], Y-I. Chung[2], G. Tae[2], Y. Kim[2], J. Lee[3], S-H. Kim[1]; [1]Korea Inst. of Sci. and Technology, Seoul, REPUBLIC OF KOREA, [2]Gwangju Inst. of Sci. and Technology, Gwangju, REPUBLIC OF KOREA, [3]Catholic Univ. of Korea, Seoul, REPUBLIC OF KOREA.

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N. A. Vellore, S. J. Stuart, R. A. Latour, Jr.; Clemson Univ., Clemson, SC.

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Effect of Electrospinning Process Parameters on Mechanical Properties of Scaffolds made of Polycaprolactone

J. J. Massey[1], S. R. Bailey[2], C. M. Agrawal[1]; [1]Univ. of Texas at San Antonio, San Antonio, TX, [2]Univ. of Texas Hlth. Sci. Ctr. at San Antonio, San Antonio, TX.

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Design for a Cell Conditioning Platform with Nondamaging Cell Detachment Capability

E. L. Lee, H. A. von Recum; Case Western Reserve Univ., Cleveland, OH.

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Building Up Layered Tissues by Layer-by-Layer Cell Assembly

M. Matsusaki, K. Kadowaki, M. Akashi; Osaka Univ., Osaka, JAPAN.

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In Vitro Culture of Chondrocyte in a Heparin-Based Hydrogel

M. Kim, Y. Shin, J-S. Chun, Y. Kim, G. Tae; Gwangju Inst. of Sci. and Technology, Gwangju, REPUBLIC OF KOREA.

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H. Bodugoz Senturk, M. Kosztowski, C. E. Macias, O. K. Muratoglu; Massachusetts Gen. Hosp./Harvard Med. Sch., Boston, MA.

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In vitro Biocompatibility of a Novel Composite Vascular Scaffold based on Protein/Poliglecaprone/Polycaprolactone Using Primary Human Aortic Endothelial Cells

X. Zhang, V. Thomas, Y. Ma, S. Bellis, Y. Vohra; Univ. of Alabamat at Birmingham, Birmingham, AL.

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Biomimetic Hydroxyapatite/Collagen Scaffold for Bone Repair

F. Peng[1], L. Wang[2], X. Yu[1], J. Huang[2], X. Jiang[2], D. Rowe[2], M. Wei[1]; Univ of Connecticut Storrs, CT, Univ. of Connecticut Hlth. Ctr., Farmington, CT.

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An Instrumented Bioreactor for Cartilage Tissue Engineering

T. P. Quinn[1], C. M. Flannery[1], D. Lauria[1], D. V. Gallagher[1], K. S. Anseth[2]; [1]Natl. Inst. of Standards and Technology, Boulder, CO, [2]Univ. of Colorado, Boulder, CO.

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Heat Shock Protein Expression and Cell Membrane Damage Induced by Thermal Inkjet Printing of Chinese Hamster Ovary Cells

X. Cui; Clemson Univ., Clemson, SC.

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Growth and Function of MLO-A5 Cells on 13-93 Glass Trabecular Scaffolds

V. C. Modglin, R. F. Brown, Q. Fu, M. N. Rahaman; Missouri Univ. of Sci. and Technology, Rolla, MO.

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Effect of Material Surface on Monocyte and Smooth Muscle Cell Co-cultures

J. E. McBane[1], S. Sharifpoor[1], R. S. Labow[2], J. P. Santerre[1]; [1]Univ. of Toronto, Toronto, ON, CANADA, [2]Univ. of Ottawa Heart Inst., Ottawa, ON, CANADA.

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Bioresorbable Polyurethanes with Degradable Hard Segments

J. P. Parakka[1]; A. Iyer[1], W. Chau[1], Y. Tian[1], K. A. White[1], R. S. Ward[1], and R. Bezwada[2]; [1]DSM PTG, Berkeley, CA; [2] Bezwada Biomedical LLC, Hillsborough, NJ.

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Bacterial Cellulose as a Potential Scaffold for an in vitro Cancer Tumor Model

C. Szot, C. Buchanan, P. Gatenholm, J. W. Freeman, M. N. Rylander; Virginia Polytechnic Inst. and State Univ., Blacksburg, VA.

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Synthesis and Characterization of Novel Thermosensitive and Biocompatible RGD-grafted Pluronic F127 Derivative Hydrogels for Cartilage Tissue Engineering

D. Han[1], B. Choi[1], K. Park[1], B. Jeong[2]; [1]Korea Inst. of Sci. and Technology, Seoul, REPUBLIC OF KOREA, [2]Ewha Womans Univ., Seoul, REPUBLIC OF KOREA.

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L. Leung, E. Turner, H. Naguib; Dept. of Mechanical and Industrial Engineering, Toronto, ON, CANADA.

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Electrowetting-based Multi-microfluidics Array Printing of High Resolution Tissue Construct with Embedded Cells and Growth Factors

C. G. Geisler[1], J. Zhou[1], D. M. Wootton[2], P. I. Lelkes[1], R. Fair[3]; [1]Drexel Univ., Philadelphia, PA**,**[2]Cooper Union, New York, NY, [3]Duke Univ., Durham, NC.

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A Soft Biodegradable Elastomer Featuring a Dual Crosslinking Mechanism

R. T. Tran, D. Gyawali, J-C. Chiao, J. Yang; The Univ. of Texas at Arlington, Arlington, TX.

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Porous Titanium (Ti) Scaffolds with Various Pore Size Controlled by Camphene-Based Freeze Casting for Bone Tissue Engineering

S-W. Yook[1], H-E. Kim[1], Y-H. Koh[2]; [1]Seoul Natl. Univ., Seoul, REPUBLIC OF KOREA, [2]Korea Univ., Seoul, REPUBLIC OF KOREA.

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Fibrinogen and Thrombin Concentrations Modulate the Diffusion and Flow Rates of Fibrin Matrices

C. Chiu; Ucla, Los Angeles, CA.

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Increasing Porosity of Electrospun Scaffolds with NaCl

L. D. Wright, T. Andric, J. W. Freeman; Virginia Polytechnic Inst. and State Univ., Blacksburg, VA.

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Reinforced 3D Calcium Phosphate Cement Scaffolds via In Situ Polymerization

D. L. Alge[1], T-M. G. ChU[2]; [1]Purdue Univ., West Lafayette, IN, [2]Indiana Univ. Sch. of Dentistry, Indianapolis, IN.

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K. D. McKeon, A. Lewis, J. W. Freeman; Virginia Polytechnic Inst. and State Univ., Blacksburg, VA.

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Matrix Modulus and Ligand Density Alter Cellular Morphogenesis in 2-D and 3-D Cultures

A. Yosef, D. Seliktar, J. Mizrahi; Technion, Haifa, ISRAEL.

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Multiphoton Crosslinked Biopolymer Matrices as Scaffold Material for Neuronal Cell Networks

E. Spivey, S. Seidlits, C. E. Schmidt, J. B. Shear; The Univ. of Texas at Austin, Austin, TX.

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Effect of Pore Size on In Vitro Biocompatibility of Porous Poly(Lactide-co-Glycolide)/Calcium Phosphate Scaffolds for Bone Tissue Engineering

A. L. Rosa, L. G. Sicchieri, G. E. Crippa, P. T. De Oliveira, M. M. Beloti; Univ. of Sao Paulo, Ribeirao Preto, BRAZIL.

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Performance of 13-93 Glass Fiber Scaffolds with Osteogenic Cells

V. C. Modglin, **R. F. Brown**, S. B. Jung, D. E. Day; Missouri Univ. of Sci. and Technology, Rolla, MO.

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Biodegradation and Biocompatibility of Photocrosslinkable Oligo(polyethylene glycol) fumarate Hydrogels: In vitro and In vivo Studies

M. Dadsetan, C. Vallejo, S. Ameenudin, A. J. Windebank, M. J. Yaszemski; Mayo Clinic, Rochester, MN.

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Micro CT Based Prediction of Bilayer Hydroxyapatite Scaffold Permeability

B. Singleton, T. Guda, M. R. Appleford, S. Oh, J. L. Ong; Univ. of Texas at San Antonio, San Antonio, TX.

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Mechanically Enhanced Precipitation Increases Stiffness of Phase-Inversion Sprayed Polyurethane Scaffold

J. P. Kennedy, R. W. Hitchcock; Univ. of Utah, Salt Lake City, UT.

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Synthesis and Characterization of Injectable Hydrogel for Soft Tissue Repair

H. Tan, Sr., J. Rubin, Sr., K. Marra; Univ. of Pittsvurgh, Pittsburgh, PA.

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Characteristics of Porous Hydroxyapatite/Bone-Like Apatite-Coated PLA Composite Scaffold for Bone Regeneration

J. Son, T. Guda, M. R. Appleford, J. L. Ong, S. Oh; Univ. of Texas at San Antonio, San Antonio, TX.

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Synthesis and Characterization of in Situ Crosslinkable Polyester Elastomer

D. Gyawali, R. Tran, J. Yang; Univ. of Texas at Arlington, Arlington, TX.

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Polyelectrolyte Coatings on Hydroxyapatite for Protein Delivery

S. M. Crumlett, S. Oh, M. Appleford, J. L. Ong; Univ. of Texas at San Antonio, San Antonio, TX.

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S. P. Zustiak[1], J. Leach[1], H. Boukari[2]; [1]Univ. of Maryland Baltimore County, Baltimore, MD, [2]NIH, Bethesda, MD.

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A. Patlolla; New Jersey Inst. of Technology, Newark, NJ.

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L. Witek[1], E. Clark[1], C. Cretiu-Vasiliu[2], J. Smay[2], M. PineS[1], J. Ricci[1]; [1]NYU Coll. of Dentistry, New York, NY, [2]Oklahoma State Univ., Stillwater, OK.

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S. Sharifpoor[1], C. A. Simmon[1], I. Pereiraï[1], R. S. LaboW[2], J. P. Santerre[1]; [1]Univ. of Toronto, Toronto, ON, CANADA, [2]Univ. of Ottawa Heart Inst., Ottawa, ON, CANADA.

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S. Chung[1], S-H. Kim[2], M. W. King[1]; [1]North Carolina State Univ., Raleigh, NC, [2]Korea Inst. of Sci. and Technology, Seoul, REPUBLIC OF KOREA.

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G. Candiani[1], S. Ristorì[2], D. Pezzolì[1], L. Cianì[2], R. Chiesà[1]; [1]Politecnico di Milano, Milan, ITALY, [2]Univ. of Florence, Florence, ITALY.

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Y. P. Kong[1], C. Tu[2], P. Donovan[2], A. F. Yee[1]; [1]Univ. of California Irvine, Irvine, CA, [2]Sue and Bill Gross Stem Cell Res. Ctr., Irvine, CA.

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S. Shanmugasundaram; New Jersey Inst. of Technology, Lincoln Park, NJ.

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M. E. Roy[1], L. A. Whiteside[1], A. Salehi[2]; [1]Missouri Bone & Joint Res. Fndn., St. Louis, MO, [2]Smith & Nephew Orthopaedics, Inc., Memphis, TN.

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B. Zhu[1], S. R. Bailey[2], C. M. Agrawal[1]; [1]The Univ. of Texas at San Antonio, San Antonio, TX, [2]The Univ. of Texas Hlth.Sci. Ctr. at San Antonio, San Antonio, TX.

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L. P. Gaviria[1], K. Kim[2], V. Castillo[3], M. Appleford[3], J. L. Ong[3], S. Oh[3]; [1]Escuela de Ingenieria de Antioquia, Medellin, COLOMBIA, [2]Kyungpook Natl. Univ., Daegu, REPUBLIC OF KOREA, [3]Univ. of Texas at San Antonio, San Antonio, TX.

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S. Chaterji, A. Panitch, K. Park; Purdue Univ., West Lafayette, IN.

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V. N. Vernekar, M. C. LaPlaca; Georgia Inst. of Technology, Atlanta, GA.

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T. E. C. Marriott[1], D. M. Grant[1], C. Scotchford[1], G. Walker[1], D. Teer[2], S. Field[2]; [1]The Univ. of Nottingham, Nottingham, UNITED KINGDOM, [2]Teer Coatings Ltd, Droitwich, UNITED KINGDOM.