

Ninth Symposium on Biologic Scaffolds for Regenerative Medicine

*** Final Program ***

Day 1: April 28, 2016 (Thursday)

6:00 – 8:00 pm Registration Silverado East Foyer

Reception Fairway Deck

Day 2: April 29, 2016 (Friday)

7:00 – 8:00 am Breakfast Fairway Deck

Welcome

8:00 – 8:05 am Stephen F. Badylak, DVM, PhD, MD
University of Pittsburgh Silverado East

Keynote Address

8:05 – 8:40 am Robert M. Nerem, PhD
Georgia Institute of Technology Regenerative Medicine: Harnessing the
Intrinsic Power of the Human Body

Session I: Biologic Scaffold for Cardiac Reconstruction
Chair: Karen L. Christman, PhD, FAHA (*University of California, San Diego*)

8:40 – 9:15 am Frederick J. Schoen, MD, PhD
*Brigham and Women's Hospital and
Harvard Medical School* Role of Matrix and Cell Dynamics in Heart
Valve Health and Disease

9:15 – 9:45 am Robert Matheny, MD, FACS
CorMatrix Cardiovascular, Inc. Development of a SIS Regenerative Heart
Valve; From Benchtop to Clinical Trial

9:45 – 10:05 am Dan T. Simionescu, PhD
Clemson University Development of Chemically Stabilized
Acellular Cardiac Valve Scaffolds and in
Vivo Testing in a Sheep Right Ventricular
Outflow Tract Model

10:05 – 10:25 am Lauren D. Black III, PhD
Tufts University Acellular Cardiac Extracellular Matrix-Silk
Patches for Cardiac Repair Post-Myocardial
Infarction

10:25 – 10:45 am Break Fairway Deck

Session II: Biologic Scaffolds for Plastic and Reconstructive Surgery
Chair: George Hussey, PhD (*University of Pittsburgh*)

10:45 – 11:05 am Robert G. Martindale, MD, PhD
Oregon Health & Science University Metabolic End Products of Absorbable
Bioscaffolds in Soft Tissue Repair; Are They
Helping or Hurting Us?

11:05 – 11:25 am Olof Holmquist, MD
Queen Silvias Childrens Hospital Use of Biodesign® after Chest Wall
Resection in Children: Our Experience in
Two Cases

11:25 – 11:45 am D. Adam Young, PhD
ACell, Inc. The Use of Urinary Bladder Matrix for Body
Wall Repair in Multiple Preclinical Models

11:45 – 12:05 pm Nicholas C. Pashos, BS
Tulane University School of Medicine Characterization of a Biologically Derived
Graft for Nipple-Areolar Complex
Reconstruction

12:05 – 12:25 pm Kristen Jones, MD
University of Minnesota Neuroprotective Potential of Biologic
Scaffolds in Acute Stroke and Human
Translational Feasibility: A Neurosurgeon's
Perspective

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| 12:25 – 1:45 pm | Lunch | Fairway Deck |
| Session III: | Mechanisms by Which ECM Scaffolds Influence Cell Behavior and the Associated Clinical Implications | |
| | Chair: Arnold I. Caplan, PhD (<i>Case Western Reserve University</i>) | |
| 1:45 – 2:05 pm | Karen L. Christman, PhD, FAHA <i>University of California, San Diego</i> | Mechanisms of Action of a Myocardial Matrix Hydrogel for Treating Myocardial Infarction |
| 2:05 – 2:25 pm | Inkyung Kang, PhD <i>Benaroya Research Institute at Virginia Mason</i> | A Role for Versican in Engineered Tissues: Modulating Elasticity and Inflammation |
| 2:25 – 2:45 pm | David M. Adelman, MD, PhD, FACS <i>The University of Texas MD Anderson Cancer Center</i> | Defining the Device to Tissue Transition in Fetal Bovine Acellular Dermal Matrix |
| 2:45 – 3:05 pm | George S. Hussey, PhD <i>University of Pittsburgh</i> | A Novel Bioactive Component of Biologic Scaffolds: Implications for Tissue Repair and Regeneration |
| 3:05 – 3:25 pm | Break | Fairway Deck |
| Session IV: | Some Basic Concepts of ECM and ECM Bioscaffolds | |
| | Chair: Laura E Niklason, MD, PhD (<i>Yale University</i>) | |
| 3:25 – 3:45 pm | Robert Mecham, PhD <i>Washington University School of Medicine</i> | Extracellular Matrix Organization and Function |
| 3:45 – 4:05 pm | Cyrus Ghajar, PhD <i>Fred Hutchinson Cancer Research Center</i> | Where the Wild Things Are: Perivascular Regulation of Disseminated Tumor Cell Dormancy and Chemoresistance. |
| 4:05 – 4:25 pm | Matthew T. Wolf, PhD <i>Johns Hopkins University</i> | Urinary Bladder Extracellular Matrix Inhibits Tumor Formation |
| 4:25 – 4:45 pm | Arnold I. Caplan, PhD <i>Case Western Reserve University</i> | MSCs: How They Work and Why (Some Surprises) |
| 4:45 – 5:05 pm | Nikhil Gheewala, PhD <i>ACell, Inc.</i> | Developing a Standard Approach to Evaluating the Decellularization of Biomaterial ECMs |
| 5:05 pm | Adjourn | |
| 6:00 – 7:30 pm | Poster Session & Wine Reception | Fairway Deck |

Day 3: April 30, 2016 (Saturday)

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| 7:00 – 8:00 am | Breakfast | Fairway Deck |
| Welcome | | |
| 8:00 – 8:05 am | Stephen F. Badylak, DVM, PhD, MD <i>University of Pittsburgh</i> | Silverado East |
| Keynote Address | | |
| 8:05 – 8:40 am | Laura E Niklason, MD, PhD <i>Yale University</i> | The Agony and the Ecstasy of Getting into the Clinic |
| Session V: | Cell:Matrix Interactions and Clinical Relevance | |
| | Chair: Robert Mecham, PhD (<i>Washington University School of Medicine</i>) | |
| 8:40 – 9:05 am | Nadia Rosenthal, PhD, FMedSci, FAAHMS <i>The Jackson Laboratory, Bar Harbor</i> <i>Imperial College London, UK</i> | Immune Control of Cardiac Repair |

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| 9:05 – 9:30 am | Jeffrey M. Davidson, PhD <i>Vanderbilt University Medical Center</i> | Multiscale Properties of ECM Scaffolds |
| 9:30 – 9:55 am | C. James Kirkpatrick MD, PhD, DSc, FRCPath <i>Johannes Gutenberg University, Germany & University of Gothenburg, Sweden</i> | Developing in Vitro & in Vivo Models to Study Tissue Reactions to Biologic Scaffolds |
| 9:55 – 10:30 am | Break | Fairway Deck |
| Session VI: | Role of the Macrophage in Bioscaffold Induced Tissue Reconstruction | |
| | Chair: Charles D. Mills, PhD (<i>BioMedical Consultants</i>) | |
| 10:30 – 10:50 am | Charles D. Mills, PhD <i>BioMedical Consultants</i> | Macrophages. The Chicken and the Egg in Immune Responses to Injury or Biologic Scaffolds |
| 10:50 – 11:10 am | Kaitlyn Sadtler, BS <i>Johns Hopkins University</i> | Th2 T Cells are Required for Extracellular Matrix-Mediated Functional Muscle Regeneration |
| 11:10 – 11:30 am | Hui Li, PhD <i>Life Cell Corporation-Acelity</i> | Macrophage Phenotype Profile Regulated by Tissue Matrices for Screening of Biomaterials |
| 11:30 – 11:50 am | Samuel T. LoPresti, BS <i>University of Pittsburgh</i> | Effect of Source Animal Age upon Macrophage Response to ECM Scaffolds |
| 11:50 – 12:10 pm | Wendy F. Liu, PhD <i>University of California, Irvine</i> | Regulation of Macrophage Function by Engineered Biopolymer Scaffolds |
| 12:10 – 1:20 pm | Lunch | Fairway Deck |
| Session VII: | Biologic Scaffolds for CNS, Whole Organ, Skin, and Cartilage Reconstruction | |
| | Chair: Bryan N. Brown, PhD (<i>University of Pittsburgh</i>) | |
| 1:20 – 1:40 pm | Jenna Dziki, BS <i>University of Pittsburgh</i> | Biologic Scaffold Treatment for Volumetric Muscle Loss: Results of a Thirteen Patient Cohort Study |
| 1:40 – 2:00 pm | Hilton Kaplan, MBBCh, FCCSA, PhD <i>Rutgers University</i> | Decellularized Allogeneic Neurovascular Bundles for Reinnervation and Revascularization in Soft and Hard Tissue Reconstruction, the Rehabilitation of Massive Scarring, and Engineered Tissues |
| 2:00 – 2:20 pm | Jeff Ross, PhD <i>Miromatrix Medical Inc.</i> | Engineering a Clinically Relevant Transplantable Liver with Sustained In-Vivo Perfusion |
| 2:20 – 2:40 pm | Karthikeyan Narayanan, PhD <i>Institute of Bioengineering and Nanotechnology, Singapore</i> | Decellularized Organs: Whole Organ Construction with Stem Cells |
| 2:40 – 3:00 pm | Ian L. Valerio, MD, MS, MBA <i>Ohio State University Wexner Medical Center</i> | Application of Bioartificial Dermal Regeneration Templates for Skin Restoration in Combat Casualty Injuries |
| 3:00 – 3:20 pm | Byoung-Hyun Min, MD, PhD <i>Ajou University Hospital</i> | Biomembrane from Porcine Cartilage Extracellular Matrix Contributes Enhancement of Efficacy of Microfracture for Cartilage Repair- Clinical Results Followed up 1 Year Postoperatively |
| 3:20 – 3:45 pm | Break | Fairway Deck |
| Session VIII: | ECM Structure-Function Relationships and Clinical Implications of the Immune Response | |
| | Chair: C. James Kirkpatrick MD, PhD, DSc, FRCPath (<i>Johannes Gutenberg University, Germany & University of Gothenburg, Sweden</i>) | |

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| 3:45 – 4:05 pm | Kenneth Burhop, PhD <i>Integra LifeSciences</i> | Collagen Matrix: Structure & Function - Translating to New Opportunities in Regenerative Medicine |
| 4:05 – 4:25 pm | Inna Kornienko, MS <i>Moscow Institute of Physics and Technology</i> | Low-Immunogenic Matrix Suitable for Transplantation |
| 4:25 – 4:50 pm | Bryan N. Brown, PhD <i>University of Pittsburgh</i> | A Macrophage Centric Approach to the Evaluation of ECM Scaffolds for Tissue Reconstruction |
| 4:50 – 5:00 pm | Stephen F. Badylak, DVM, PhD, MD <i>University of Pittsburgh</i> | Closing Remarks & Adjourn |

PODIUM PRESENTATIONS

| Podium / Poster | Name | Title |
|--------------------|--|---|
| | D. Adam Young, PhD | |
| Podium Accepted | D. Adam Young, PhD Sr. Product Development Engineer ACell, Inc. 6640 Eli Whitney Drive Baltimore, MD 21046 (443) 283-2784 Adamyoun@acell.com | The Use of Urinary Bladder Matrix for Body Wall Repair in Multiple Preclinical Models |
| Podium Accepted | Olof Holmquist, MD MD Olof Holmquist Dept of Pediatrics Rondvagen 10 Gothenburg Sweden 004793002161 olof.holmquist@gmail.com | Use of Biodesign® after chest wall resection in children: - Our experience in two cases |
| Podium Accepted | Bryan N. Brown, PhD Bryan Brown, PhD. Assistant Professor Department of Bioengineering Department of Obstetrics, Gynecology, and Reproductive Sciences McGowan Institute for Regenerative Medicine University of Pittsburgh Pittsburgh, Pennsylvania (412) 624-5273 Brownb@upmc.edu | A Macrophage Centric Approach to the Evaluation of ECM Scaffolds for Tissue Reconstruction |
| Podium Accepted | Byoung-Hyun Min, MD, PhD Byoung-Hyun Min MD, PhD Professor, Department of Orthopedic Surgery Professor, Department of Molecular Science of Technology Ajou University Hospital, 164, Worldcup-ro, Youngtong-gu, Suwon, 443-380 Republic of Korea CP: 82-10-2277-1893 dr.bhmin@gmail.com | Biomembrane from porcine cartilage extracellular matrix contributes enhancement of efficacy of Microfracture for cartilage repair- Clinical results followed up 1 year postoperatively |
| Podium Accepted | Dan T. Simionescu, PhD Dan T. Simionescu, PhD Harriet and Jerry Dempsey Associate Professor of Bioengineering Director, Biocompatibility and Tissue Regeneration Laboratories Department of Bioengineering 304 Rhodes Research Center Clemson University, Clemson, SC, 29634 Office phone: 864-656-5559 Cell phone: 864-650-7404 Email: dsimion@clemson.edu | Development of chemically stabilized acellular cardiac valve scaffolds and in vivo testing in a sheep right ventricular outflow tract model |
| Podium Accepted | David M. Adelman, MD, PhD, FACS | |
| Podium Accepted | Kevin G. Cornwell, Ph.D. Senior Scientist and Head of AWR R&D Orthopedics and Tissue Technologies | Defining the Device to Tissue Transition in Fetal Bovine Acellular Dermal Matrix |

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7 Elkins St, Boston, MA 02127
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Kevin.Cornwell@integralife.com

David M. Adelman, M.D., Ph.D., F.A.C.S. (presenting author)
Associate Professor
Department of Plastic Surgery, Division of Surgery
The University of Texas MD Anderson Cancer Center
1515 Holcombe Blvd.
Houston, TX 77030
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Hilton Kaplan, MBBCh, FCSSA, PhD

Dr. Hilton Kaplan, MBBCh FCSSA PhD
Associate Director, NJ Center for Biomaterials Research
Associate Professor, Rutgers University Program Manager,
NIH T32 Postdoctoral Fellowships
145 Bevier Rd LSB-101, Piscataway, NJ 08854
(848) 445-9646 W, (805) 242-2050 M

Decellularized Allogeneic
Neurovascular Bundles for
Reinnervation and
Revascularization in
Soft and Hard Tissue
Reconstruction, the Rehabilitation
of Massive Scarring, and
Engineered Tissues

Podium
Accepted

hilton.kaplan@rutgers.edu<mailto:hilton.kaplan@rutgers.edu>,
www.njbiomaterials.org<http://www.njbiomaterials.org

Hui Li, PhD

Hui Li, PH.D.
Staff Scientist
Life Cell Corporation-Acelity
95 Corporate Drive
Bridgewater, NJ 08807
Phone: 908-809-7423
Email: huli@acelity.com

Podium
Accepted

Macrophage phenotype profile
regulated by tissue matrices for
Screening of Biomaterials

Ian L. Valerio, MD, MS, MBA

Ian L. Valerio, MD, MS, MBA, FACS
CDR, MC, USNR
Division Chief of Burn, Wound, & Trauma in Plastic Surgery
Associate Professor

Departments of Plastic and Reconstructive, General, and
Orthopedic Surgery
The Ohio State University Wexner Medical Center
915 Olentangy River Road, Suite 2100
Columbus, OH 43212
(P)614-293-8566
(F)614-293-9024
Email: ian.valerio@osumc.edu

Associate Professor, The Uniformed Services University of the
Health Sciences, Bethesda, MD

Adjunct Associate Professor, The University of Pittsburgh
Medical Center, Pittsburgh, PA

Podium
Accepted

cell is 412-728-3377

Inkyung Kang, PhD

Application of bioartificial dermal
regeneration templates for skin
restoration in combat casualty
injuries

Podium
Accepted

Inkyung Kang, PhD
Staff Scientist
Matrix Biology Program
Benaroya Research Institute at Virginia Mason

A Role for Versican in Engineered
Tissues: Modulating Elasticity and
Inflammation

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| | 1201 Ninth Avenue Seattle, WA 98101 p 206-287-5667 f 206-342-6567 ikang@benaroyaresearch.org | |
| | Inna Kornienko, MS | |
| | Kornienko Inna, MS research assistant in the Laboratory of Cellular and Molecular Technologies Moscow Institute of Physics and Technology (State University) 9 Institutskiy per., Dolgoprudny, Moscow Region, 141700, Russian Federation | |
| Podium Accepted | innatrusova@gmail.com +7 916 540 8151 | Low-immunogenic matrix suitable for transplantation |
| | Jeff Ross, PhD | |
| | Jeff Ross, Ph.D. VP of Product Development Miromatrix Medical Inc. 10399 West 70th Street Eden Prairie, MN 55344 952-942-6000 | |
| Podium Accepted | | Engineering a Clinically Relevant Transplantable Liver with Sustained In-Vivo Perfusion |
| | Kaitlyn Sadtler, BS | |
| | Kaitlyn Sadtler, B.S. Graduate Student Johns Hopkins University 400 N Broadway 5001-O Smith Building Baltimore, MD 21231 Phone: (301) 788-1479 Email: ksadtler3@jhmi.edu | |
| Podium Accepted | | Th2 T cells are required for extracellular matrix-mediated functional muscle regeneration |
| | Karen L. Christman, PhD, FAHA | |
| | Karen L. Christman, Ph.D. Associate Professor Department of Bioengineering Sanford Consortium for Regenerative Medicine University of California, San Diego | |
| | 2880 Torrey Pines Scenic Dr. La Jolla, CA 92037 (858) 822-7863 christman@eng.ucsd.edu | |
| Podium Accepted | | Mechanisms of action of a myocardial matrix hydrogel for treating myocardial infarction |
| | Karthikeyan Narayanan, PhD | |
| | Karthikeyan Narayanan, Ph.D. Senior Research Scientist, Institute of Bioengineering and Nanotechnology, 31, Biopolis Way, Singapore 138669. Tel: +65-6824-7155 Email: Karthikeyan@ibn.a-star.edu.sg | |
| Podium Accepted | | Decellularized organs: Whole organ construction with stem cells |
| | Kenneth Burhop, PhD | |
| | Kenneth Burhop, Ph.D. Corporate Vice President / Chief Scientific Officer 609-750-2870 office • 609-357-6306 cell • 609-936-2385 fax Kenneth.burhop@integralife.com Integra • 311 Enterprise Drive, Plainsboro, NJ 08536 Assistant: Irene Conti – 609-936-6907; eMAIL: irene.conti@integralife.com www.integralife.com | |
| Podium Accepted | | Collagen Matrix: Structure & Function - Translating to New Opportunities in Regenerative Medicine |

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| | Lauren D. Black III, PhD | |
| | Lauren D. Black III, Ph.D. Assistant Professor Department of Biomedical Engineering Tufts University 4 Colby Street Medford, MA 02155 Ph: 617-627-4660 Fx: 617-627-3231 lauren.black@tufts.edu | Acellular Cardiac Extracellular Matrix-Silk Patches for Cardiac Repair post-Myocardial Infarction |
| Podium Offered | Matthew T. Wolf | |
| | Matthew Wolf, PhD Postdoctoral fellow Translational Tissue Engineering Center Johns Hopkins University 5031 Smith Building 400 N. Broadway Baltimore, MD 21231 412-370-6796 mwolf23@jhmi.edu | Urinary Bladder Extracellular Matrix Inhibits Tumor Formation |
| Podium Accepted | Nicholas C. Pashos, BS | |
| | Nicholas Pashos, BS PhD Candidate, BioInnovation; NSF IGERT Fellow; Tulane University School of Medicine; Center for Stem Cell Research and Regenerative Medicine; npashos@tulane.edu 603.714.8491 333 South Liberty Street, JBJ 655, New Orleans, LA 70112 | Characterization of a Biologically Derived Graft for Nipple-Areolar Complex Reconstruction |
| Podium Accepted | Nikhil Gheewala, PhD | |
| Podium Accepted | Nikhil Gheewala, PhD Principal Scientist at ACell, Inc. 6640 Eli Whitney Dr Columbia, MD 21046 (443) 283-2750 nikhilgheewala@acell.com | Developing a standard approach to evaluating the decellularization of biomaterial ECMs |
| | Robert Matheny, MD, FACS | |
| | Robert Matheny, MD FACS Chief Scientific Officer CorMatrix Cardiovascular, Inc. 1100 Old Ellis Rd Roswell, Ga 30076 (404) 276-7777 Rgmatheny@aol.com | Development of a SIS Regenerative Heart Valve; From Benchtop to Clinical Trial |
| Podium Accepted | Samuel T. LoPresti, BS | |
| | Samuel T. LoPresti, B.S. Ph.D. Candidate Department of Bioengineering University of Pittsburgh 450 Technology Drive 300 Suite Bridgeside Point II Buiding Pittsburgh, PA 15219 (716) 208-1984 stl40@pitt.edu | Effect of Source Animal Age upon Macrophage Response to ECM Scaffolds |
| Podium Offered | | |

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| | Wendy F. Liu, PhD | |
| | Wendy Liu, Ph.D. Assistant Professor Edwards Lifesciences Center for Advanced Cardiovascular Technology Department of Biomedical Engineering University of California, Irvine 2412 Engineering Hall Irvine, CA 92697-2730 Tel: (949) 824-1682 Fax: (949) 824-9968 wendy.liu@uci.edu | Regulation of macrophage function by engineered biopolymer scaffolds |
| Podium Accepted | George S. Hussey, PhD | |
| | George S. Hussey, Ph.D. Postdoctoral Associate McGowan Institute for Regenerative Medicine University of Pittsburgh School of Medicine, Department of Surgery 450 Technology Drive, Suite 300 Pittsburgh, PA 15219-3130 Tel: (412) 624-5272 husseygs@upmc.edu | A novel bioactive component of biologic scaffolds: Implications for tissue repair and regeneration |
| Podium Accepted | Jenna Dziki, BS | |
| | Jenna Dziki, BS Graduate Student McGowan Institute for Regenerative Medicine Department of Bioengineering University of Pittsburgh, Pittsburgh, PA 450 Technology Drive Suite 300 Bridgeside Point II (BSP2) Pittsburgh, PA 15219 Tel: 412-721-3191 dzikijl@upmc.edu | Biologic Scaffold Treatment for Volumetric Muscle Loss: Results of a Thirteen Patient Cohort Study |
| Podium Accepted | | |
| POSTERS | | |
| | Agneta Simionescu, PhD | |
| | Agneta Simionescu, PhD Assistant professor Clemson University, Department of Bioengineering 501 Rhodes Research Center, Clemson, SC, 29634 864-656-3729 agneta@clemson.edu | Mitral valve tissue engineering – a model for investigating valve degeneration |
| Poster Accepted | Anders Sandin, MD | |
| | MD Anders Sandin Specialist Pediatric Surgery Dept of Pediatrics Queen Silvias Childrens Hospital Rondvagen 11 Gothenburg Sweden 0046736220567 | Epithelial regrowth prevents reconstructive remodeling of the muscle wall in the porcine esophagus after replacement with biomatrix |
| Poster Accepted | Rachelle H Crosbie-Watson, PhD | |
| | Dr. Rachelle Crosbie-Watson, PhD | Effects of Dystrophin Loss on the Biophysical Properties of Skeletal Muscle ECM |
| Poster Accepted | | |

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| | <p>Professor Department of Integrative Biology & Physiology University of California, Los Angeles 610 Charles E Young Drive East, TLSB 1121 Los Angeles, CA 90095 rcrosbie@physci.ucla.edu 310.794.2103</p> | |
| Poster Accepted | <p>Derek Woloszyn BS</p> <p>Derek J. Woloszyn, BS Surgical Research Assistant New Jersey Center for Biomaterials Rutgers, The State University of New Jersey 145 Bevier Road LSB-202 Piscataway, NJ 08854 (848) 445-9618 W, (908) 907-4364 M derek.woloszyn@rutgers.edu</p> | <p>Techniques for Harvesting and Decellularizing Neurovascularized Muscle to Replace Autologous Free Flaps: A Comparison Between Immersion and Perfusion Decellularization</p> |
| Poster Accepted | <p>Gilson Khang, PhD</p> <p>Prof. Chonbuk National University 567 Baekje-daero, deokjin-gu, jeonju-si, jellabuk-do 54896 Republic of Korea 82-10-2410-7579 gskhang@jbnu.ac.kr</p> | <p>Natural/synthetic hybrid scaffolds for tissue-engineered organ</p> |
| Poster Accepted (and Requested) | <p>Rebecca M. Horn, BS</p> <p>Rebecca M. Horn, BS Volunteer Research Assistant University of California, Davis 1 Shields Ave., 273 Vet Med II, Davis, CA 95616 (530)798-0758 becky.horn@berkeley.edu</p> | <p>Effect of urea and thiourea on structure-function properties in xenogeneic scaffold generation</p> |
| Poster Accepted | <p>Ian L. Valerio, MD, MS, MBA, FACS CDR, MC, USNR Division Chief of Burn, Wound, & Trauma in Plastic Surgery Associate Professor</p> <p>Departments of Plastic and Reconstructive, General, and Orthopedic Surgery The Ohio State University Wexner Medical Center 915 Olentangy River Road, Suite 2100 Columbus, OH 43212 (P)614-293-8566 (F)614-293-9024 Email: ian.valerio@osumc.edu</p> <p>Associate Professor, The Uniformed Services University of the Health Sciences, Bethesda, MD</p> <p>Adjunct Associate Professor, The University of Pittsburgh Medical Center, Pittsburgh, PA</p> | <p>Application of Urinary Bladder Matrix (UBM) in the Treatment Algorithms for Traumatic and Combat Casualty Extremity Wound Care</p> |
| Poster Accepted | <p>Jessica L. Ungerleider, BS</p> <p>Jessica L. Ungerleider, B.S. Graduate Student, UC San Diego Department of Bioengineering Sanford Consortium for Regenerative Medicine</p> | <p>Extracellular Matrix Hydrogel Promotes Tissue Remodeling, Arteriogenesis, and Perfusion in a Rat Hindlimb Ischemia Model</p> |

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| | 2880 Torrey Pines Scenic Drive La Jolla, CA 92037 Office Phone: (858) 246-1593 Email address: jlungerl@eng.ucsd.edu | |
| | Jenna Dziki, BS | |
| Poster Accepted | Jenna Dziki, BS Graduate Student McGowan Institute for Regenerative Medicine Department of Bioengineering University of Pittsburgh, Pittsburgh, PA 450 Technology Drive Suite 300 Bridgeside Point II (BSP2) Pittsburgh, PA 15219 Tel: 412-721-3191 dzikijl@upmc.edu | Biologic Scaffold Treatment for Volumetric Muscle Loss: Results of a Thirteen Patient Cohort Study |
| | John C Lantis II, MD, FACS | |
| Poster Accepted | John C. Lantis II, MD, FACS Vice Chairman Department of Surgery Chief of Vascular and Endovascular Surgery Director of Surgical Clinical Research Mt Sinai St Luke's and West Hospitals Professor of Surgery; Icahn School of Medicine New York, NY 212-5234797 Jlantis@chpnet.org | Acellular Fish Skin Graft's Structure and Bioactivity is Better Preserved Compared to Mammalian Derived Scaffolds due to Less Harsh Processing |
| | Kelly Guthrie, MS | |
| Poster Accepted | Kelly Guthrie, MS Scientist, Regenerative Medicine United Therapeutics 55 TW Alexander Dr. RTP, NC 27709 | Automated Porcine Lung Decellularization System for Pulmonary Tissue Engineering |
| | Kimberley C. Sannajust | |
| Poster Accepted (and Requested) | Kimberley C. Sannajust Volunteer Research Assistant University of California, Davis 1 Shields Ave., 273 Vet Med II, Davis, CA 95616 (925)699-3217 kcsannajust@ucdavis.edu | Effect of donor age on extracellular matrix composition in xenogeneic scaffold generation |
| | Kristen M. Stearns-Reider, PhD, PT | |
| Poster Accepted | Kristen Stearns-Reider, PhD, PT Post-Doctoral Scholar Department of Integrative Biology & Physiology University of California, Los Angeles 610 Charles E Young Drive East, TLSB 1128 Los Angeles, CA 90095 Kreider@ucla.edu 310.794.2107 | Electrodiagnostic Evaluation of Individuals Implanted with Extracellular Matrix for the treatment of Volumetric Muscle Injury |
| | Lisa J. White | |
| Poster Accepted | Dr Lisa White Marie Curie Research Fellow Division of Drug Delivery and Tissue Engineering Centre for Biomolecular Sciences University of Nottingham Nottingham NG7 2RD | Detergent Decellularization Methods Affect the Surface Molecular Functionality of Biologic Scaffolds |

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| | Tel: 44 (0) 115 74 86312 lisa.white@nottingham.ac.uk | |
| Poster Accepted | Michael J. Buckenmeyer, BS Mr. Michael J. Buckenmeyer B.S. Mechanical Engineering, Fairfield University and M.S. in Bioengineering, Syracuse University University of Pittsburgh (McGowan Institute for Regenerative Medicine) Bridgeside Point II Building, 450 Technology Drive, Suite 300, Pittsburgh, PA 15219 (315)409-5729 mjb235@pitt.edu | The Effect of ECM Stiffness on Ovarian Follicle Development |
| Poster Accepted | Michael Sikorski, BS Mr. Michael J. Sikorski B.S., Bioengineering, University of Maryland, 2015 Universidad Carlos III de Madrid Escuela Politécnica Superior, Avd. de la Universidad, 30. 28911, Leganés (Madrid), España Department of Bioengineering and Aerospace Engineering Phone: +34 916248207 Email: msikorsk@ing.uc3m.es | Mechanical modulation of a human plasma-based skin scaffold via reactive multi-arm polyethylene glycols |
| Poster Accepted | Ornella Tempo Ornella Tempo Senior (Chemical Engineering) University of Connecticut 554 Silas Deane Hwy Apt B.14 Wethersfield CT 06109 8607190753 ornella.tempo@uconn.edu or ornellatempo16@gmail.com | In Vitro Evaluation of Calcium Peroxide Release from Composite Poly(lactico-glycolic acid) Microsphere Scaffolds |
| Poster Accepted | Pavan M. Hallur, BSc, MSc Mr. Pavan M Hallur, BSc. MSc. Junior Research Fellow, Tissue Engineering and Regenerative Medicine Programme, Mazumdar Shaw Center for Translational Research, #258/A, Narayana Health city, Bommasandra Industrial area, Bengaluru-560099 mobile-+91-9738915916, e-mail- pavan.hallur@ms-mf.org | 3D hydrogel as a model to understand breast cancer metastasis |
| Poster Accepted (and Requested) | Seung-Hyun Kim, BS Seung-Hyun Kim, BS Integrated PhD program, Graduate student Molecular and Cellular Engineering Laboratory Department of Chemical and Biomolecular Engineering Yonsei University GS building 206, Yonsei-Ro 50, Seodaemun-Gu, Seoul, 120-749 (Korea) (Tel) +82-2-2123-7456 (Phone) +82-10-3336-0976 (E-mail) ajckajck@naver.com | Self-assembled and Three-dimensional Multilayered Electrospun Nanofibrous Scaffold for Biomedical Applications |
| Poster Accepted | Slgirim Lee, PhD Slgirim Lee, Ph.D Department of Chemical and Biomolecular Engineering, Yonsei University GS Caltex Research Hall Room 206, Yonsei University, 50 Yonsei-ro, Seodaemun-gu, Seoul 120-749, Korea +82-2-2123-7456 | Electrospun Clay: Three-dimensional, macroscopic, and macroporous electrospun sponges with high moldability and flexibility for stem cell and adeno-associated viral vector delivery |

slgirim@yonsei.ac.kr

Poster
Accepted

Thais Polanco, MD

Thais Polanco, MD
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Tissue Generation with Acellular
Dermal Collagen Matrices: Clinical
Comparison of Human and Fetal
Bovine Matrices

Travis A. Prest, MS

Poster
Accepted
(Presented by
Dr. Brown)

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Peripheral Nerve-Specific
Extracellular Matrix Hydrogel
Supports Repair After Peripheral
Nerve Injury

Simone Liebscher, MSc

Poster
Accepted –
LATE (Katja)

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Omics analyses of Islet-1+ clusters
identify ECM proteins for
biomaterial functionalization

Willeke Daamen, PhD

Poster
Accepted –
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Shrinking collagen scaffolds to
modulate mechanical properties

Mónica Romero-López, MS

Poster
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Human Tumor-Derived
Extracellular Matrix Recapitulates
Tumor Vasculature compared with
Human Normal-Derived Colon
Matrix in a Three-Dimensional
Model

Tim Keane

Poster
Accepted

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Restoring Mucosal Barrier Function
and Mediating Inflammation with an
Extracellular Matrix Hydrogel:
Potential Therapy for Ulcerative
Colitis

Michelle Scarritt, PhD

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Poster
Accepted

Toward Whole Liver Engineering:
Liver Extracellular Matrix Promotes
the Phenotype and Function of
Human Induced Pluripotent Stem
Cell (iPSC)-derived Hepatocytes
and Endothelial Cells

Neill Turner, PhD

Research Assistant Professor
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Poster
Accepted

Emerging Implications of Ineffective
Biologic Scaffold Decellularization
upon the Host Response

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Poster
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Development of Biologic Scaffolds
from Human Glioma Tumors as an
Organotypic Model to Study
Disease Pathogenesis

Luai Huleihel, PhD

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Poster
Accepted

Microvesicles Within ECM
Bioscaffolds as a Modulator of Cell
Behavior

Gabriel Merizalde, BS

Tissue Engineering and Cell Therapy Group
Medicine Faculty
Antioquia University
Medellin Colombia South America

Unsure about
Poster?

To evaluate L-PRF (Platelet Rich
Fibrin) matrix membrane interaction
with autologous and allogenic
human mucosal fibroblasts and
adipose derived mesenchymal stem
cells for dental applications

Posters Declined

Poster Declined Tim Bolle

Dipl.-Ing. Tim Bolle
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Fibrin Gel-Based, Textile-
Reinforced Scaffold for Demal-
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| | | |
|--|------------------------------|---|
| Poster Accepted – not presenting | Juan Diego Naranjo Gutierrez | |
| ? | Modo? | ? |