WOUND HEALING SOCIETY PROGRAM

DAY 1: WEDNESDAY, APRIL 13, 2016

WHS WELCOME AND INTRODUCTION
8:00 A.M. – 8:15 A.M.  Room B213/214

WHS SESSION A: MICROBIAL-HOST INTERACTIONS
8:15 A.M. – 9:45 A.M.  Room B213/214

Moderators: Harriet Hopf, MD; Kai Leung, PhD
Speakers: Elizabeth Grice, PhD; Katherine Radek, PhD; Phil Stewart, PhD

Understanding microbial-host interactions is important for preventing wound infection. This session will discuss the impact of the microbiome, biofilms and antimicrobial peptides on wound healing.

BREAK
9:45 A.M. – 10:00 A.M.

WHS SESSION B: INFLAMMATORY RESPONSES TO INJURY
10:00 A.M. – 11:30 A.M.  Room B213/214

Moderators: Sashwati Roy, PhD; Traci Wilgus, PhD
Speakers: Aristidis Veves, MD, DSc, MSc; Siu Ling Wong, PhD; Tim Koh, PhD

The inflammatory response to injury begins shortly after injury and is mediated by macrophages and neutrophils. Impaired regulation of the inflammatory response has been implicated in the pathogenesis of chronic wounds and hypertrophic scar formation. This session will discuss new research on the regulation of inflammation during wound repair.

BREAK
11:30 A.M. – 11:45 A.M.

WHS Session C: HUNT LECTURE (non-accredited)
11:45 A.M. – 12:45 P.M.  Room B213/214

Moderators: Laura Parnell, BS, MS, CWS; Andrew Baird, PhD; Marjana Tomic-Canic, PhD
Speaker: Robert Langer, MD, PhD

In the spirit of the pioneering work of its namesake, the speaker of the Thomas K. Hunt Endowed Lecture is chosen by the Wound Healing Society Foundation for his/her major contributions to scientific inquiry that are likely to advance the field of wound healing. This one-hour session will provide an overview of the inspiration for the speaker’s work, discuss how the research might impact the field of wound healing, and conclude with a vision for the future of the speaker’s research.

LUNCH ON OWN
12:45 P.M. – 2:00 P.M.

WHS Session D: NEW CONCEPTS IN WOUND VASCULARIZATION (non-accredited)
2:15 P.M. – 3:45 P.M.  Room B213/214

Moderators: Luisa DiPietro, DDS, PhD; Brian Eliceiri, PhD
Speakers: Peter Carmeliet, MD, PhD; Kara Spiller, PhD

Vascularization is important for supplying nutrients and oxygen to cells in the healing wound. Vascularization in response to injury occurs by both angiogenesis and vasculogenesis, cellular processes that are impaired in chronic wounds. This session will discuss recent advances in our understanding of the regulation of vascularization during wound repair.
BREAK
3:45 P.M. – 4:00 P.M.

**WHS Session E: INNOVATIVE THERAPEUTIC APPROACHES FOR WOUND CARE**
4:00 P.M. – 5:30 P.M.  Room B213/214

**Moderators:** Robert Galiano, MD, FACS; Praveen Arany, PhD

**Speakers:** Ben Almquist, PhD; Evangelos Badiavas, PhD, MD; Michel Maharbiz, PhD

There remains an urgent need for therapies that can accelerate wound healing and promote regeneration instead of scarring. This session will describe emerging innovative therapeutic approaches for wound care. One emerging approach is development of an impedance-sensing device for early detection of pressure ulcers. Another emerging approach is nanotechnology-based strategies for treating chronic wounds. Also innovative is the investigation of the therapeutic potential of mesenchymal stem cell exosomes.

BREAK
5:30 P.M. – 7:00 P.M.

**SOCIAL EVENT FOR WHS MEMBERS**
7:00 P.M. – 10:00 P.M.  Center for Civil and Human Rights

WHS members are invited to the Center for Civil & Human Rights for a Southern Flare dinner & reception, hosted by Wolfgang Puck. This is a WHS Members Only event.

**Tickets are required for entry. Please pick up your tickets at the WHS membership booth**

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**DAY 2: THURSDAY, APRIL 14, 2016**

**WHS COMMITTEE MEETINGS**
7:30 A.M. – 9:00 A.M.  Omni Hotel: Chestnut, Pecan, Walnut, Beechnut & Hazelnut Rooms (North Tower M3)

BREAK
9:00 A.M. – 9:15 A.M.

**SAWC OPENING CEREMONY**
9:15 A.M. – 10:00 A.M.  THOMAS MURPHY BALLROOM 2/3

**SAWC GENERAL SESSION: INNOVATION IN SKIN AND WOUND TREATMENT: FROM LASERS TO LIPOSCULPTURE – APPLYING TECHNOLOGY TO THE WOUNDED**
10:00 A.M. – 11:00 A.M.  THOMAS MURPHY BALLROOM 2/3

**Moderator:** Robert Kirsner, MD, PhD

**Speaker:** R. Rox Anderson, MD

BREAK
11:00 A.M. – 11:15 A.M.

**WHS Session F: SPECIAL SESSION: PATRICIA HEBDA, PHD, WOUND REPAIR AND REGENERATION, OUTGOING EDITOR-IN-CHIEF (non-accredited)**
11:15 A.M. – 12:15 P.M.  Room B213/214

**Moderators:** Jeffrey Davidson, PhD

**Speakers:** Aron Parekh, PhD; Adrian Barbul, MD, Patricia Hebda, PhD

This special session will honor Dr. Patricia Hebda, the outgoing editor-in-chief of the WHS journal, *Wound Repair and Regeneration*.

BREAK
12:15 P.M. – 12:30 P.M.
INDUSTRY-SUPPORTED LUNCH SYMPOSIA
12:30 P.M. – 1:45 P.M.

BREAK
1:45 P.M. – 2:00 P.M.

WHS Session G: YOUNG INVESTIGATORS SYMPOSIUM
2:00 P.M. – 4:15 P.M.  Room B213/214
Moderators: Andrew Baird, PhD; Marjana Tomic-Canic, PhD; Magnus Agren, Dr. Med. Sci

In this session, young investigators involved in cutting-edge research will compete for the WHS Young Investigator Award. The winner will present his/her work at the European Tissue Repair Society's Annual Congress. Oral presentations will feature the top eight abstracts submitted to the WHS by young investigators, as well as the 2015 winner of the ETRS Young Investigator Award.

2:00  G.01 - ETRS WINNER: WOUND FLUID ANALYSIS DEMONSTRATES SIGNIFICANT ALTERATIONS IN PROTEIN ADHESION FINGERPRINTS ON IMPLANT SURFACES
S. Barr¹, E. Hill¹, A. Bayat³
¹Plastic and Reconstructive Surgery Research, University of Manchester, Manchester, United Kingdom; ²Computer Sciences, University of Manchester, Manchester, United Kingdom; ³Institute of Inflammation and Repair, University of Manchester, Manchester, United Kingdom

2:15  G.02 - MICROBIAL CERAMIDASES INDUCED IN BIOFILM INFECTION DISRUPTS SKIN BARRIER FUNCTION
M. Sinha¹, S. Mathew-Steiner¹, S. Khanna¹, N.L. Parinandi², D. S. Wijesinghe³, D.J. Wozniak⁴, G.M. Gordillo⁵, S. Roy¹, C.K. Sen¹
¹Ohio State University, Comprehensive Wound Center, Davis Heart and Lung Research Institute, Center for Regenerative Medicine and Cell-Based Therapies, Columbus, OH, USA ²Ohio State University, Dept. of Internal Medicine and Pharmacology, Davis Heart and Lung Research Institute, Columbus, OH, USA ³Virginia Commonwealth University, Dept. of Pharmacotherapy and Outcomes Science, School of Pharmacy, Richmond, VA, USA ⁴Ohio State University, Dept. of Microbial Infection and Immunity, Columbus, OH, USA

2:30  G.03 - SDF-1A CORRECTS DYSREGULATION OF MICRONRNA-146A IN HUMAN DIABETIC DERMAL FIBROBLASTS
M. M. Hodges¹, C. Zgheib¹, J. Xu¹, J. Hu¹, K.W. Liechty¹
¹University of Colorado-Denver, Anschutz Medical Campus and Children’s Hospital Colorado, Laboratory for Fetal and Regenerative Biology, Department of Surgery, Aurora, CO, USA

2:45  G.04 - THE TOPICAL TREATMENT OF GPNMB PROMOTES THE RECRUITMENT OF MESENCHYMAL STEM CELLS AND HEALING IN DIABETIC WOUNDS OF MICE
B. Yu¹, T. Albosoley¹, F. Safadi², M. Kim¹
¹Kent State University, Biological Sciences, Kent, OH, USA ²Northeast Ohio Medical University, Anatomy and Neurobiology Rootstown, OH, USA

3:00  G.05 - WOUND MACROPHAGE-DERIVED ONCOSTATIN M INDUCES ANTIMICROBIAL S100A9 IN CUTANEOUS WOUND EPITHELIUM
A. Das¹, K. Ganesh¹, S. Khanna¹, C.K. Sen¹, S. Roy¹
¹The Ohio State University Wexner Medical Center, Comprehensive Wound Center, Department of Surgery, DHLRI, Center for Regenerative Medicine and Cell-Based Therapies, Columbus, OH, USA

3:15  G.06 - DEVELOPMENT OF THE FIRST BIOMIMETIC AND MACROPHAGE-SUBSTANTIATED ADIPOSE TISSUE-DERIVED, 3D PHOTOLITHOGRAPHY-TRANSLATED BREAST IMPLANT SURFACE
S. P. Barr¹, E. Hill¹, A. Bayat¹
¹University of Manchester Medical School, Manchester, Greater Manchester, United Kingdom ²University of Manchester, Computer Science, Manchester, Greater Manchester, United Kingdom
3:30 G.07 - TREATMENT OF CHRONIC VENOUS LEG ULCERS WITH A BIOENGINEERED LIVING CELL CONSTRUCT INDUCES METALLOTHIONEINS AND MMP8 TO RESOLVE MATRIX FIBROSIS AND REACTIVATES A HEALTHY REMODELING RESPONSE

R. C. Stone1,2, O. Stojadinovic1, A. P. Sawaya1, A.M. Rosa1, E. Badiavas2, M. Blumenberg4, M. Tomic-Canic1
1University of Miami Miller School of Medicine, Wound Healing and Regenerative Medicine Research Program, Department of Dermatology and Cutaneous Surgery, Miami, FL, USA 2University of Miami Miller School of Medicine, The Research Residency Program, Department of Dermatology and Cutaneous Surgery, Miami, FL, USA 3University of Miami Miller School of Medicine, Interdisciplinary Stem Cell Institute, Miami, FL, USA 4NYU Langone Medical Center, The Ronald O. Perelman Department of Dermatology, New York, NY, USA

3:45 G.08 - IDENTIFICATION OF THE FIBROBLAST LINEAGE RESPONSIBLE FOR THE TRANSITION FROM FETAL SCARLESS TO SCARRING REPAIR

M.S. Hu1,2, G.G. Walmsley1, R. Sinha1, I.L. Weissman1, G.C. Gurtner1, H. P. Lorenz1, M.T. Longaker1
1Stanford University, Surgery, Palo Alto, CA, USA 2University of Hawaii, Surgery, Honolulu, HI, USA

4:00 G.09 - MECHANISTIC DRIVERS AND MOLECULAR INDICATORS OF DELAYED INFLAMMATION RESOLUTION IN TRAUMATIC WOUNDS

S. Nagaraja1, L. Chen2, J. Zhou2, Y. Zhao2, D. Fine2, L.A. DiPietro2, J. Reifman1, A.Y. Mitrophanov1
1DoD Biotechnology High Performance Computing Software Applications Institute, Telemecine and Advanced Technology Research Center, U.S. Army Medical Research and Material Command, Ft. Detrick, Frederick, MD, USA 2University of Illinois at Chicago, Center for Wound Healing and Tissue Regeneration, College of Dentistry, Chicago, IL, USA

BREAK

4:15 P.M. – 4:30 P.M.

WHSE SESSION H: CONCURRENT ORAL ABSTRACTS I (NON-ACCREDITED)

4:30 P.M. - 5:30 P.M.

Oral abstract presentations will feature the highest-scoring abstracts submitted to the WHS.

Fibrosis/Scarring (H1) Room B213/214

Moderators: Boris Hinz, PhD; Anie Philip, PhD

4:30 H1.01 - MAST CELL-MEDIATED FIBROSIS VIA PAR-2 ACTIVATION IN POST-BURN SCARS

J.W. Jay1,2, A. E. Ayadi1,5, D. Mac2, R. P. Clayton3,4,5, C. Sampson3, D.N. Herndon1,5, C.C. Finnerty1,3,4,5
1University of Texas Medical Branch, Department of Surgery, Galveston, TX, USA 2University of Texas Medical Branch, School of Medicine, Galveston, TX, USA 3University of Texas Medical Branch, Graduate School of Biomedical Sciences, Galveston, TX, USA 4University of Texas Medical Branch, Institute for Translational Sciences, Galveston, TX, USA 5Shriners Hospitals for Children, Galveston, TX, USA

4:42 H1.02 - REGULATION OF ECM PRODUCTION AND FIBROSIS BY MRG-201, A MIMIC OF MICRORNA MIR-29

C.L. Gallant-Behm1, J. Piper1, K. Hutnick1, X. Beatty1, R.L. Montgomery1, G. Yu2, N. Kaminski2, E. Van Rooij3, C.M. Dalby1, A.L. Jackson1
1MiRagen Therapeutics Inc., Boulder, CO, USA 2Yale University School of Medicine, New Haven, CT, USA 3Hubrecht Institute, UTRECHT, Netherlands

5:06 H1.03 - CATABOLIC AND ANABOLIC BEHAVIOR OF ALTERNATIVELY ACTIVATED MACROPHAGES IN FETAL AND ADULT RESPONSE TO MI

1Drexel University, School of Biomedical Engineering, Science, and Health Systems, Philadelphia, PA, USA 2University of Colorado Denver, School of Medicine, Department of Surgery, Aurora, CO, USA 3University of Pennsylvania, School of Medicine, Department of Surgery, Philadelphia, PA, USA 4Drexel University College of Medicine, Department of Microbiology and Immunology, Philadelphia, PA, USA

5:06 H1.04 - CD109 DEFICIENCY PROMOTES SKIN FIBROSIS IN A MURINE MODEL

L. Xu1, K. Finnson1, M. Gilardino1, A. Philip1
1McGill University, Plastic and Reconstructive Surgery, Montreal, QC, Canada
5:18  H1.05 - TOPICAL APPLICATION OF STATINS SIGNIFICANTLY REDUCED HYPERTROPHIC SCARRING IN A RABBIT EAR MODEL
S. Jia1, P. Xie1, S. Hong1, R. Galiano1, T. Mustoe1
1Northwestern University, Plastic Surgery, Feinberg School of Medicine, Chicago, IL, USA

Epithelization (H2)  Room B216

Moderators: Ivan Jozic, PhD; Irena Pastar, PhD

4:30  H2.01 - NOVEL ANTIBACTERIAL PROTEIN PERFORIN-2 IN ACUTE WOUND HEALING
I. Pastar1, O. Stojadinovic1, R.M. McCormack2, A. Sawaya1, D. Ajdic1, K.I. Garzon1, V. Chen1, R. Kirsner1, E.R. Podack2, N. Strbo2, M. Tomic-Canic1
1University of Miami, Dermatology and Cutaneous Surgery, Miami, FL, USA 2University of Miami, Microbiology and Immunology, Miami, FL, USA

4:42  H2.02 - ANTI-BIOFILM PEPTIDES AND PEPTIDE-MIMICS STIMULATE WOUND HEALING PROCESSES IN VITRO
M.A. Olekson1, P.B. Savage2, K.P. Leung1
1U.S. Army Institute of Surgical Research, Dental and Craniofacial Trauma Research & Tissue Regeneration, Fort Sam Houston, TX, USA 2Brigham Young University, Department of Chemistry and Biochemistry, Provo, UT, USA

4:54  H2.03 - IMPROVED WOUND HEALING PARAMETERS IN PORCINE FULL-THICKNESS WOUNDS TRANSPLANTED WITH FULL-THICKNESS SKIN MICROGRAFTS
C. L. Rettinger1, J.L. Fletcher1, A.H. Carlsson1, K.P. Leung1, R.K. Chan1
1U.S. Army Institute of Surgical Research, Dental and Trauma Research Directorate, Fort Sam Houston, TX, USA

5:06  H2.04 - ANTIHYPOXAMIR FUNCTIONALIZED GRAMICIDIN LIPID NANOPARTICLE RESCUES AGAINST ISCHEMIC MEMORY AND ACCELERATES WOUND CLOSURE
S. Ghatak1, J. Li1, Y.C. Chan1, S.C. Gnyawal1, E. Steen1, B.C. Yung1, S. Khanna1, S. Roy1, R.J. Lee2, C.K. Sen1
1Ohio State University, Surgery, Columbus, OH, USA 2Ohio State University, Division of Pharmaceutics and Pharmaceutical Chemistry, Columbus, OH, USA

5:18  H2.05 - DERMAL GRAFTS CONTAINING CD34+ CELLS DEMONSTRATE COMPARABLE RE-EPITHELIALIZATION RATE AS SPLIT-THICKNESS SKIN MICROGRAFTS IN THE TREATMENT OF FULL-THICKNESS WOUNDS
M. Singh1, K. Nuutila1, C. Kruse1, E.J. Caterson1, E. Eriksson1
1Brigham and Women’s Hospital, Plastic Surgery, Boston, MA, USA

Innovative Models & Tools (H3)  Room B217

Moderators: Heather Powell, PhD; Mohamed Ibrahim, MD

4:30  H3.01 - HUMANIZED MURINE MODEL FOR EXCISIONAL WOUND HEALING WITH IMPROVED ANALYSIS OF HEALING USING K14 TRANSGENIC MICE
M. S. Hu1, T. Leavitt1, G.G. Walmsley1, E.R. Zielins1, W. Hong1, D. Duscher1, D.C. Wan1, G.C. Gurtner1, H.P. Lorenz1, M.T. Longaker1
1Stanford University, Surgery, Palo Alto, CA, USA

4:42  H3.02 - DESIGN AND ACTIVITY OF POINT-OF-CARE PROTEASE DETECTION WITH AEROGEL SENSORS DERIVED FROM COTTON  ***WITHDRAWN***
K.R. Fontenot1, J.V. Edwards1, N. Pircher2, F. Liebner2
1SRRC U. S. Department of Agriculture, Cotton Chemistry and Utilization, New Orleans, LA, USA 2University of Natural Resources and Life Sciences, Chemistry, Vienna, Donau, Austria

4:54  H3.03 - QUANTITATIVE LABEL-FREE OPTICAL BIOMARKERS OF DIABETIC WOUND HEALING
K.P. Quinn1,2, E.C. Leal1, A. Tellechea1, A. Kafanas1, M.E. Auster3, A. Veves3, I. Georgakoudi2
1University of Arkansas, Biomedical Engineering, Fayetteville, AR, USA 2Tufts University, Biomedical Engineering, Medford, MA, USA 3Beth Israel Deaconess Medical Center, Boston, MA, USA
5:06  H3.04 - NIR SPECTROSCOPY CAN DISTINGUISH THE VIABILITY OF PARTIAL THICKNESS HUMAN BURN WOUNDS USING THE VARIABLE OF METHEMOGLOBIN  
K.M. Cross1,2,3, D.I. Duta1,3, J.S. Fish1,2  
1University of Toronto, Toronto, Ontario, Canada 2Hospital for Sick Children, Toronto, Ontario, Canada 3St. Michael’s Hospital, Toronto, Ontario, Canada

5:18  H3.05 - ABCC6 DEFICIENCY ENHANCES SOFT TISSUE MINERALIZATION IN A MUSCLE INJURY MODEL  
S. Tannouri1, T.Price1, Q. Li2, J. Schoenecker3, J. Uitto2  
1Thomas Jefferson University, Surgery, Philadelphia, PA, USA 2Thomas Jefferson University, Dermatology and Cutaneous Biology, Philadelphia, PA, USA 3Vanderbilt University Medical Center, Orthopedics, Nashville, TN, USA

Inflammation (H4)  Room B218

Moderators: Tim Koh, PhD; Paul Bollyky, MD, D.Phil

4:30  H4.01 - INTRACELLULAR ATP DELIVERY CAUSES VERY EARLY M2 MACROPHAGE POLARIZATION TO ACCELERATE SKIN WOUND HEALING  
H. Sarojini1, C. Yang1, S. Chien1  
1University of Louisville, Surgery, Louisville, KY, USA

4:42  H4.02 - MODULATION OF INFLAMMATION WITH MICRORNIA 146A-COATED NANO PARTICLES ACCELERATES DIABETIC WOUND HEALING  
C. Zgheib1, J. Xu1, M.M. Hodges1, I. Kalashnikova2, S. Das2, J. Hu1, S. Seal2, K. W. Liechty1  
1Laboratory for Fetal and Regenerative Biology, Department of Surgery, School of Medicine, University of Colorado-Denver, Anschutz Medical Campus and Colorado Children’s Hospital, Aurora, CO, USA 2Advanced Materials Processing and Analysis Centre, Nanoscience Technology Center (NSTC), Mechanical Materials Aerospace Engineering, University of Central Florida, Orlando, FL, USA

4:54  H4.03 - THE DOWN-REGULATION OF IncRNA LETHE IS ASSOCIATED WITH PROLONGATION OF THE INFLAMMATORY PHASE IN DIABETIC WOUND HEALING  
M. M. Hodges1, C. Zgheib1, J. Hu1, K.W. Liechty1, J. Xu1  
1University of Colorado-Denver, Laboratory for Fetal and Regenerative Biology, Department of Surgery, Aurora, CO, USA

5:06  H4.04 - NOVEL MECHANISMS OF COLLAGENASE SANTYL® OINTMENT (CSO) IN WOUND MACROPHAGE POLARIZATION AND RESOLUTION OF WOUND INFLAMMATION  
A. Das1, S. Datta1, S. Chaffee1, E. Roche2, L. Shi2, K. Grover2, C.K. Sen1, S. Roy1  
1The Ohio State University Wexner Medical Center, Comprehensive Wound Center, Department of Surgery, DHLRI, Center for Regenerative Medicine and Cell-Based Therapies, Columbus, OH, USA 2Research & Development, Advanced Wound Management, Smith & Nephew, Fort Worth, TX, USA

5:18  H4.05 - MOLECULAR REGULATION OF INNATE IMMUNE RESPONSE TO SKIN PATHOGEN EHRLICHIA DICTATES INFLAMMATORY OUTCOMES  
J. Vorhauer1, M. Alaoui-El-Azher1, A. Huen1, A. Wells1, N. Ismail1  
1University of Pittsburgh, Cellular and Molecular Pathology, Pittsburgh, PA, USA

GRAND OPENING OF EXHIBITS/COCKTAIL RECEPTION  
5:30 P.M. – 8:30 P.M.  EXHIBIT HALL B2

WHS EXHIBIT BOOTH #232
DAY 3: FRIDAY, APRIL 15, 2016

INDUSTRY-SUPPORTED BREAKFAST SYMPOSIA
7:30 A.M. – 9:00 A.M.

WHS SESSION I: MODELS OF WOUND REPAIR
9:00 A.M. – 10:15 A.M.  ROOM B213/214

Moderators: Gayle Gordillo, MD, FACS; Robert Diegelmann, PhD
Speakers: Ardeshir Bayat, MD, PhD; Roslyn Rivkah Isseroff, MD; Chandan Sen, PhD

Modeling wound repair is important for both hypothesis generation and pre-clinical studies evaluating therapeutic efficacy. This session will introduce new three-dimensional human tissue models of chronic wounds. It will also discuss challenges and limitations of current animal models.

BREAK
10:15 A.M. – 10:30 A.M.

WHS SESSION J: LOCAL SCIENTIFIC PROGRAM: IMMUNOMODULATORY BIOMATERIALS (non-accredited)
10:30 A.M. – 11:45 A.M.  Room B213/214

Moderators: Kara Spiller, PhD
Speakers: Edward Botchwey, PhD; Thomas Barker, PhD; Julie Champion, PhD

This session will highlight local speakers from the Atlanta area. Featured speakers will be from Georgia Tech and Emory and will discuss immunoengineering, the application of engineering tools to study the immune system and biomaterial-mediated regenerative medicine.

LUNCH WITH EXHIBITS
11:45 A.M. – 2:15 P.M.  Exhibit Hall B2

WHS Meet the Mentors/Job Fair
12:00 P.M. – 2:00 P.M.  Room B215

Moderators: Traci Wilgus, PhD
Speakers: Andrew Baird, PhD; Michele Anderson, PhD; Deepak Kilpadi, PhD, MBA

After a short presentation and panel discussion, participants break into round tables. Those interested in the WHS topics provided exchange views on issues at the forefront of wound healing research and training such as: how to find a mentor, how to establish collaborations, how to interact with industry, academics and funding agencies, and how to develop a career in wound healing research.

BREAK
2:00 P.M. – 2:15 P.M.

WHS SESSION K: CONCURRENT ORAL ABSTRACTS II (NON-ACCREDITED)
2:15 P.M. – 3:15 P.M.

ORAL PRESENTATIONS WILL FEATURE THE HIGHEST-SCORING ABSTRACTS SUBMITTED TO THE WHS.

Angiogenesis (K1)  Room B216

Moderators: Peter Abadir, MD; Latha Satish, PhD

2:15  K1.01 - CHRONIC SYSTEMIC NICOTINE PROMOTES ANGOGENESIS, VASCULAR REMODELING AND HEALING IN CUTANEOUS WOUNDS
L.E. Buchanan¹, A. Pineres-Fernandez², L.S. Salopek², C.A. Campbell², P.S. Cottler²
¹University of Virginia, School of Medicine, Charlottesville, VA, USA ²University of Virginia, Department of Plastic Surgery, Charlottesville, VA, USA
2:27  **K1.02 - SOLUBLE EPOXIDE HYDROLASE INHIBITION AND TOPICAL EPOXYEICOSATRIENIOIC ACID TREATMENT IMPROVE VASCULARIZATION OF ENGINEERED SKIN SUBSTITUTES AFTER TRANSPLANTATION TO MICE**
D.M. Supp1,2, J.M. Hahn1, K.L. McFarland1, K.A. Combs1, K.S. Lee9, B. Inceoglu1, D. Wan1, S.T. Boyce1,2, B.D. Hammock3
1Shriners Hospitals for Children-Cincinnati, Research, Cincinnati, OH, USA 2University of Cincinnati, Surgery, College of Medicine, Cincinnati, OH, USA 3University of California-Davis, Entomology, Davis, CA, USA

2:39  **K1.03 - HUMAN VIABLE CRYOPRESERVED AMNIOTIC MEMBRANE (HVCAM) INDUCES ANGIOGENESIS IN A NESTIN-DRIVEN GREEN FLUORESCENT PROTEIN (ND-GFP) TRANSGENIC MOUSE MODEL**
T.E. Uveges1, Y. Duan-Arnold1, A. Lerch1, M. Moorman1, A. Danilkovitch1
1Osiris Therapeutics Inc., Columbia, MD, USA

2:51  **K1.04 - WOUNDS OUTCOMPETE TUMORS FOR NEOVASCULARIZATION**
M.S. Hu1,2, Z.N. Maan1, W. Hong1, T. Leavitt1, C.D. Marshall1, R.C. Rennert1, G.G. Walmsley1, G.C. Gurtner1, A.J. Giaccia1, H. P. Lorenz1, M.T. Longaker1
1Stanford University, Palo Alto, CA, USA 2University of Hawaii, Honolulu, HI, USA

3:03  **K1.05 - COLLAGEN SYNTHESIS AND DEPOSITION IN SKIN WOUNDS OF MAC-1 DEFICIENT MICE**
L. Chen1, J. Zhou1, Y. Zhao1, D. Fine1, S. Nagaraja2, A.Y. Mitrophanov2, J. Reifman2, L.A. DiPietro1
1University of Illinois at Chicago, Center for Wound Healing and Tissue Regeneration/Periodontics, Chicago, IL, USA 2U.S. Army Medical Research and Material Command, Department of Defense Biotechnology High-Performance Computing Software Applications Institute (BHSAI), Telemedicine and Advanced Technology Research Center, Ft. Detrick, MD, USA

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**Biomaterials (K2)**  Room B217

*Moderators: Daria Narmoneva, PhD; Ben Almquist, PhD*

2:15  **K2.01 - A NEXT-GENERATION FLOWABLE MICROPOROUS WOUND HEALING SCAFFOLD INCREASES REGENERATION AND ACCELERATES HEALING IN DIABETIC WOUNDS**
W. Weaver1, D. Griffin2, T. Segura2, D. Di Carlo1, P. Scumpia3
1University of California-Los Angeles, Bioengineering, Los Angeles, CA, USA 2University of California-Los Angeles, Chemical and Biomolecular Engineering, Los Angeles, CA, USA 3University of California-Los Angeles, Dermatology, Los Angeles, CA, USA

2:27  **K2.02 - DEVELOPMENT OF A NOVEL PEROXIDE-BASED ANTIMICROBIAL HYDROCOLLOID FOR WOUND DRESSINGS AND FOR OSTOMY APPLICATIONS**
B. Liesenfeld1, W. Toreki1, D.N. Moore1, S. Leander1, G. Schultz1,2, D. Lane1
1Quick-Med Technologies, Inc., Gainesville, FL, USA 2University of Florida, Gainesville, FL, USA

2:39  **K2.03 - APPLICATION OF ENGINEERED SKIN COMPOSITE ACCELERATES WOUND CLOSURE IN A DELAYED SPLINTED WOUND HEALING MODEL**
A. Ghabary1, R. Hartwell1, M. Pakyari1
1University of British Columbia, Vancouver, British Columbia, Canada

3:03  **K2.05 - IN SITU MICROENVIRONMENT FOR DIABETIC MYOCARDIUM REPAIR FOLLOWING INJURY**
E.D. McWhorter1, W. Huang9, E. Stumpf1, A. Tolumdi1, D. Narmoneva1, Y. Wang2
1University of Cincinnati, Biomedical Engineering, Cincinnati, OH, USA 2University of Cincinnati, Department of Pathology, Cincinnati, OH, USA

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**Biofilms & Microbiomes (K3)**  Room B213/214

*Moderators: Elizabeth Grice, PhD; Olivera Stojadinovic, MD*

2:15  **K3.01 - NOVEL CYCLIC LIPOPEPTIDES WITH ENHANCED ANTIBACTERIAL AND ANTIBIOFILM ACTIVITY AGAINST CHRONIC WOUND PATHOGENS**
I. Pastar1, B. Williams1, J. Gil1, J. Valdes1, A. Higa1, M. Solis1, P. Cudic1, S.C. Davis1
1University of Miami Miller School of Medicine, Dermatology and Cutaneous Surgery, Miami, FL, USA 2Torrey Pines Institute for Molecular Studies, Port St. Lucie, FL, USA
2:27  K3.02 - ELECTROCEUTICAL PRINCIPLES DISRUPT POLYMICROBIAL BACTERIAL BIOFILM IN A PORCINE PRE-CLINICAL MODEL
K. Ganesh Barki¹, S. Dixith¹, M. Sinha¹, S.S. Mathew-Steiner¹, Z. Polcyn¹, P.D. Ghatak¹, E. Schwab¹, D.J. Wozniak², S. Roy¹, S. Khanna¹, C.K. Sen¹
¹The Ohio State University, Comprehensive Wound Center/Surgery/Medicine, Columbus, OH, USA ²The Ohio State University, Center for Microbial Interface Biology/Microbiology, Columbus, OH, USA

2:39  K3.03 - TEMPORAL CHARACTERIZATION OF THE MICROBIOME IN DIABETIC FOOT ULCERS
A. Galvis¹, K. Baquerizo¹, V. Kozireva¹, M. Vujanac¹, I. Pastar¹, M. Tomic-Canic¹, R.S. Kirsner¹, D. Ajdic¹
¹University of Miami Miller School of Medicine, Dermatology, Miami, FL, USA

2:51  K3.04 - DEVELOPMENT OF A NOVEL EX VIVO WOUNDED HUMAN SKIN EXPLANT MODEL TO ASSESS EFFICACY AND BIOCOMPATIBILITY OF ANTI-BIOFILM WOUND THERAPIES
M.J. Anderson¹, P.J. Parks¹, M.L. Peterson¹
¹University of Minnesota, Experimental and Clinical Pharmacology, Minneapolis, MN, USA ²3M Company, Chronic and Critical Care Solutions, St. Paul, MN, USA

3:03  K3.05 - THE FUNGAL COMMUNITIES OF DIABETIC FOOT ULCERS
L. Kalan¹, M. Loesche¹, J. Horwinski¹, B. Hodkinson¹, S. Gardner², E. Grice¹
¹University of Pennsylvania, Dermatology, Philadelphia, PA, USA ²University of Iowa, Nursing, Iowa City, IA, USA

Regeneration (K4)  Room B218

Moderators: Swathi Balaji, PhD

2:15  K4.01 - CONFETTI FLUORESCENCE DISPLAYS MUSCLE REGENERATION FROM SATELLITE CELLS IN VIVO: A NOVEL PLATFORM FOR ASSESSING STEM CELL FUNCTION INTRAVITALLY
L. Tucker-Kellogg¹,4, J. Heemskerk³,4, P. So³, P. Matsudaira²,3, B. Nguyen¹,4, K.D. Sacadevan³
¹Duke-NUS Medical School, Cancer & Stem Cell Biology, Singapore, Singapore ²Singapore National University of Singapore, Department of Biological Sciences, Singapore ³National University of Singapore, Centre for Bioimaging Sciences, Singapore ⁴Singapore-MIT Alliance for Research and Technology, BioSystems and Micromechanics (BioSyM) Singapore, Singapore ⁵Massachusetts Institute of Technology, Department of Mechanical Engineering, Cambridge, MA, USA

2:27  K4.02 - CLASS III B-TUBULIN AND FACTOR INDUCED GENE 4 ARE UNIQUE TARGETS IN ENHANCING NEURAL DIFFERENTIATION AND RE-INNERRATION DURING ACUTE WOUND HEALING IN HUMAN SKIN
A. Sebastian¹, P. Halai¹, J. Colthurst², R. Paus¹,³, A. Bayat¹
¹University of Manchester, Inflammation Sciences, Manchester, Lancashire, United Kingdom ²Oxford Bioelectronics, London, United Kingdom ³University of Muenster, Dermatology, Muenster, Germany

2:39  K4.03 - FIBROBLAST RELEASABLE M-CSF PROMOTES BLOOD CELL-DERIVED SSEA POSITIVE STEM CELLS
Y. Li¹, R.B. Jalili¹, A. Ghahary¹
¹University of British Columbia, Surgery, Vancouver, BC, Canada

2:51  K4.04 - TOCOTRIENOL INDUCES ANAGEN HAIR FOLLICLES FACILITATING CUTANEOUS WOUND HEALING WITH REGENERATIVE PHENOTYPE
N.S. Ahmed¹, S. Ghatak¹, S. Khanna¹, S. Roy¹, M. Amer², C.K. Sen¹
¹Ohio State University, Surgery, Columbus, OH, USA ²Zagazig University, Egypt, Department of Dermatology and Venereology, Zagazig, Sharkia, Egypt

3:03  K4.05 - BLOOD DERIVED CD34+ PROGENITOR CELLS CONTRIBUTE TO SKIN REGENERATION AND HAIR FOLLICLE NEOGENESIS IN FULL-THICKNESS WOUNDS
S. Li¹, M. Hu¹, H.P. Lorenz¹
¹Stanford University, Surgery Department, Palo Alto, CA, USA

BREAK
3:15 P.M. – 3:30 P.M.
WHS DAY 3 GENERAL SESSION – EPIDERMAL STEM CELLS IN SKIN HOMEOSTASIS AND REPAIR
3:30 P.M. – 4:30 P.M.  Thomas Murphy Ballroom 2/3
**Moderators:** Matthew Hardman, PhD; Anne Hocking, PhD; Harvey Himel, MD, MPH, FACS
**Speaker:** Fiona Watt, PhD, FRS, FMedSci

This session will highlight research investigating the role of epidermal stem cells in skin homeostasis and repair. It will also discuss recent work demonstrating a new mechanism by which skin damage induces tumor formation.

**BREAK**
4:30 P.M. – 4:45 P.M.

WHS Session L: Wound Healing Society Foundation-3M Award Lecture (Insert WHS logo)
4:45 P.M. – 5:45 P.M.  Room B213/214
**Moderators:** Laura Parnell, BS, MS, CWS; Peter Abadir, MD
**Speakers:** Ivan Jozic, PhD

This session will announce the 2016 WHSF-3M Fellowship winner and will feature a presentation on the research findings of the 2015 WHSF-3M Fellowship recipient, Ivan Jozic, PhD. Dr. Jozic’s fellowship research investigated the interaction between glucocorticoid receptors and caveolins in acute and chronic wounds.

WHS Business Meeting
5:45 P.M. – 6:45 P.M.  Room B213/214

WHS Session M: RAPID FIRE POSTER TALKS
6:45 P.M. – 7:15 P.M.  Room B213/214
**Moderators:** Brian Eliceiri, PhD; Robert Galiano, MD, FACS

This session will highlight the highest-scoring abstracts selected for poster presentations. Presenters will have one slide and two minutes to summarize novel research findings, then one minute to answer questions. This session will immediately precede the poster gala, where all poster presenters will be available to discuss their research.

6:48  **M1.01 - ACETYLCHOLINE MEDIATES AN ANTI-APOPTOTIC EFFECT IN FAS-INDUCED APOPTOTIS OF HUMAN KERATOCYTES THROUGH REGULATION OF INITIATOR CASPASES**
M. U. Sloniecka¹, L.J. Backman¹, P. Danielson¹
¹Umeå University, Integrative Medical Biology, Umeå, Västerbotten, Sweden

6:51  **M1.02 - HOST GENOMIC RESPONSES TO PSEUDOMONAS AERUGINOSA WOUND INFECTIONS**
S.Kama¹, C. Tsute², P. D’Arpa³, Q. Liwu¹, C. Ping⁴, A.B. Fourcaudot¹, Y. Kazuyoshi¹, N. Jeffrey⁵, J.J. Abercrombie⁶, Y. Tao⁶, K.P. Leung⁴¹
¹U.S. Army Institute of Surgical Research, Dental and Craniofacial Trauma Research & Tissue Regeneration JBSA, Fort Sam Houston, TX, USA ²Forsyth Institute, Cambridge, MA, USA ³U.S. Army Center for Environmental Health Research, Systems and Integrative Biology, Frederick, MD, USA

6:54  **M1.03 - EFFECT OF POMEGRANATE PEEL WITH/WITHOUT AUTOLOGOUS BONE MARROW ON HEALING OF ACUTE CUTANEOUS WOUNDS IN ALLOXAN-INDUCED DIABETIC RABBITS**
M.M. Alsupail¹, F.A. Al-sobayil²
¹Qassim University, College of Pharmacy, Buraydah, Qassim, Saudi Arabia ²Qassim University, College of Veterinary, Buraydah, Qassim, Saudi Arabia

6:57  **M1.05 - IN VIVO EVALUATION OF SILVER ION RELEASING SCAFFOLDS FOR TREATMENT OF INFECTED WOUNDS IN A PORCINE MODEL**
M. Mohiti-Asli¹, M. Risselada², M. Jacob², B. Pourdeyhimi², E. Lobo³
¹North Carolina State University, Biomedical Engineering, Raleigh, NC, USA ²North Carolina State University, College of Veterinary Medicine, Raleigh, NC, USA ³University of Missouri, College of Engineering, Columbia, MO, USA ⁴North Carolina State University, College of Textiles, Raleigh, NC, USA
7:00  **M1.06 - CHITOSAN-TRIPOLYPHOSPHATE NANOPARTICLES FOR TAILORED TRANSFECTION RATES IN THE SKIN**
L.J. Born1, F. Lay1, A. Ansari1, Z. Habibabbady1, C. Ng1, G. Marti1, J.W. Harmon1
1Johns Hopkins University School of Medicine, Surgery, Baltimore, MD, USA

7:03  **M1.07 - EFFECTIVE SYMPTOM RESOLUTIONS OF ITCH AND PAIN IN PATIENTS WITH HYPERTROPHIC AND KELOID SCARRING**
S. Ud-Din1, D. Perry1, P. Giddings4, J. Colthurst4, P. Foden2, J. Morris3, A. Bayat1
1University of Manchester, Plastic and Reconstructive Surgery Research, Manchester, Lancashire, United Kingdom 2University Hospital of South Manchester, Medical Statistics, Manchester, Lancashire, United Kingdom 3University Hospital of South Manchester, UHSM, Manchester, Lancashire, United Kingdom 4Oxford BioElectronics Ltd., Newbury, West Berkshire, United Kingdom

7:06  **M1.08 - IN VIVO REMODELING OF EXCESS TISSUE DEFORMITIES FOLLOWING PROLONGED MECHANICAL DEFORMATION**
T. Leavitt1,2, M.S. Hu1, L. A. Barnes1, E. R. Zielins1, C. D. Marshall1, D.C. Wan1, G.C. Gurtner1, H. Lorenz1, M.T. Longaker1
1Stanford University, Department of Surgery, Plastic and Reconstructive Surgery Division, Palo Alto, CA, USA 2Boston University, School of Medicine, Boston, MA, USA

7:09  **M1.09 - THE ACTUAL PREVALENCE OF IDENTIFIABLE BACTERIA**
J.C Lantis, T.O. Polanco, K.C. Yang, S. Goss, S. Alcantara, S. Velazquez

WHS AND SAWC POSTER GALA/AWARDS
7:15 P.M. – 8:30 P.M.  HALL B1

**POSTER PRESENTERS SHOULD ATTEND THIS ENTIRE EVENT**
SEE PAGES C31-C37 FOR A LIST OF WHS POSTER PRESENTATIONS.

**DAY 4: SATURDAY, APRIL 16, 2016**

INDUSTRY-SUPPORTED BREAKFAST SYMPOSIA
7:30 A.M. – 9:00 A.M.

BREAK
9:00 A.M. – 9:15 A.M.

WHS DAY 4 GENERAL SESSION – RECENT ADVANCES IN WOUND HEALING RESEARCH
9:15 A.M. – 10:15 A.M.  THOMAS MURPHY BALLROOM 2/3
Moderators: Andrew Baird, PhD; Lisa Gould, MD, PhD
Speakers: Marjana Tomic-Canic, PhD; Boris Hinz, PhD

This general session will feature research from two distinguished members of the Wound Healing Society. This year’s speakers have active basic science/translational programs focused on understanding the pathophysiology of both chronic wounds and fibrosis.

BREAK
10:15 A.M. – 10:30 A.M.

WHS SESSION N: CONCURRENT ORAL ABSTRACTS III (NON-ACCREDITED)
10:30 A.M. – 11:30 A.M.

ORAL PRESENTATIONS WILL FEATURE THE HIGHEST-SCORING ABSTRACTS SUBMITTED TO THE WHS.

**Molecular/Cellular Therapies (N1)**  Room B216
Moderators: Sandeep Dhall, PhD; Ardy Bayat, MBBS, MRCS, PhD
10:30  **N1.01 – LATE-BREAKING ABSTRACT**
10:42  N1.02 - SKIN SUBSTITUTE WITH ADIPOSE-DERIVED STEM CELLS FOR WOUND HEALING, FROM AN INJECTABLE HYDROGEL SYSTEM
Y. Dong1,2, S. Khong1, M. Rodrigues1, A.Y. Li1, D. Zhou2, Y. Gao2, E.A. Brett1, W. Wang3, G.C. Gurtner1
1Stanford University, Surgery, Palo Alto, CA, USA 2University College Dublin, Charles Institute of Dermatology, Dublin, Ireland

10:54  N1.03 - VIRAL FACTORS AS NOVEL THERAPEUTICS FOR SKIN WOUNDS IN HORSES
C. L. Theoret1, K. Wakelin2, C. Bodaan3, C. Riley1, A. Mercer2, L. Wise2
1Université De Montréal, Département De Biomédecine Vétérinaire St-Hyacinthe, QC, Canada 2University of Otago, Department of Microbiology and Immunology, Dunedin, Otago, New Zealand 3Massey University, Institute of Veterinary, Animal and Biomedical Sciences, Palmerston North, Manawatu, New Zealand

11:06  N1.04 - NITRIC OXIDE-LOADED ZEOLITE TECHNOLOGY TO TREAT INFECTED PORCINE WOUNDS
M. Neidrauer1, A. Bhattacharyya1, T. Pontius1, S. Julius2, R. Hunke3, E. Reimold1, R.Ownbey1, S. Ballal1, M.S. Weingarten3, K. Barbee2, S. Joshi1
1Zeomedix, Inc., Exton, PA, USA 2Drexel University, Biomedical Engineering, Philadelphia, PA, USA 3Drexel University College of Medicine, Philadelphia, PA, USA

11:18  N1.05 - LATE-BREAKING ABSTRACT

Fibroproliferation (N2)  Room B217

Moderators: Livingston Van de Water, PhD; Dorothy Supp, PhD

10:30  N2.01 - THE ROLE OF MYOCARDIN-RELATED TRANSCRIPTION FACTORS IN WOUND HEALING
W.L. Berry1, B. Dai1, J.J. Tomasek1
1University of Oklahoma Health Sciences Center, Cell Biology, Oklahoma City, OK, USA

10:42  N2.02 - INTEGRATIVE ANALYSIS OF MI RNA- AND MRNA-PAIRED EXPRESSION PROFILING REVEALS IMPAIRED CELLULAR FUNCTIONS OF PRIMARY FIBROBLAST DERIVED FROM DIABETIC FOOT ULCERS
L. Liang1, R.C. Stone1, O. Stojadinovic1, A. Maione1, A. Smith2, V. Yanez2, A. Veves1, J. Garlick1, M. Tomic-Canic1
1University of Miami, Dermatology & Cutaneous Surgery, Miami, FL, USA 2Tufts University, Boston, MA, USA 3Beth Israel-Deaconess Medical Center, Boston, MA, USA

10:54  N2.03 - STUDY OF FIBROBLAST-TO-MYOFIBROBLAST DIFFERENTIATION AND TGFβ-SIGNALING PATHWAY IN DIABETIC MOUSE WOUNDS
X. Wang1, P. Vonu1, R.Y. Liu1
1Rhode Island Hospital, Plastic Surgery, Providence, RI, USA

11:06  N2.04 - EPITHELIUM REGULATES CONNECTIVE TISSUE WOUND HEALING MEDIATED BY FOXO1
D.T. Graves1, C. Zhang1,2, J. Lim1
1University of Pennsylvania, Periodontics, Philadelphia, PA, USA 2Peking University - School and Hospital of Stomatology, Department of Preventive Dentistry, Beijing, China

11:18  N2.05 - ROLE OF OXANDROLONE IN ANDROGEN AND GLUCOCORTICOID RECEPTOR SIGNALING IN FIBROBLAST AND MYOBLAST CELL LINES
M. D. Wetzel1, A. El Ayadi1, D.N. Herndon1, C.C. Finnerty1
1University of Texas Medical Branch, Department of Surgery, Galveston, TX, USA

Clinical Outcomes (N3)  Room B218

Moderators: Allen Holloway, MD; Tim King, MD

10:30  N3.01 - PROPRANOLOL MODULATION OF ANGIOGENESIS AND ITS IMPLICATION IN HYPTERTROPHIC SCARING
A. El Ayadi1, Y. Wang1, J. W. Jay1, A. Prasai1, D.N. Herndon1,2, C.C. Finnerty1,3
1University of Texas Medical Branch, Surgery, Galveston, TX, USA 2Shriners Hospitals for Children, Galveston, TX, USA 3University of Texas Medical Branch, Institute for Translational Sciences, Galveston, TX, USA
10:42  **N3.02 - MANIPULATING SIGNALING LIPIDS IN MICROENVIRONMENT OF CHRONIC VENOUS LEG ULCERS WITH ORAL N-3 POLYUNSATURATED FATTY ACID SUPPLEMENT**  
J. McDaniel1, N. Parinandi1  
1The Ohio State University, Columbus, OH, USA

10:54  **N3.03 - PREDICTIVE FACTORS OF DAILY SELF-FOOT INSPECTION IN THE US POPULATION WITH DIABETES MELLITUS**  
T.A. Sando1, S.A. Cohen1  
1Virginia Commonwealth University, Division of Epidemiology, Richmond, VA, USA

11:06  **N3.04 - ASSESSMENT OF STRIAE DISTENSAE THROUGH THE USE OF OBJECTIVE NON-INVASIVE DEVICES ENABLE STRIAE CLASSIFICATION AND THE MONITORING OF RESPONSE TO THERAPY**  
S. Ud-Din1, S. McAnelly4, A. Bowring3, I. Chaudhry3, S. Whiteside2, J. Morris3, A. Bayat1  
1University of Manchester, Plastic and Reconstructive Surgery Research, Manchester, Lancashire, United Kingdom 2University Hospital of South Manchester, Medical Statistics, Manchester, Lancashire, United Kingdom 3Central Manchester NHS Foundation Trust, Department of Pathology, Manchester, Lancashire, United Kingdom 4University Hospital of South Manchester, UHSM, Manchester, Lancashire, United Kingdom

11:18  **N3.05 - DEEP TISSUE INJURY ASSESSMENT USING A NON-INVASIVE OPTICAL MODALITY**  
D. Diaz1, M. Neidrauer1, M.S. Weingarten2, A. Lafontant1, R. DiMaria-Ghalili1,4, G.W. Fried3, P.A. Lewin1, L. Zubkov1  
1Drexel University, School of Biomedical Engineering, Philadelphia, PA, USA 2Drexel University College of Medicine, Surgery, Philadelphia, PA, USA 3Magee Rehabilitation Hospital, Wound Care, Philadelphia, PA, USA 4Drexel University, College of Nursing and Health Professions, Philadelphia, PA, USA

**Chronic Wounds (N4)**  
Room B213/214

**Moderators:** Manuela Martins-Green, PhD; Mat Hardman, PhD

10:30  **N4.01 - NOVEL WHOLE GENOME MICROARRAY EVIDENCE CONFIRMING THE IMPORTANCE OF CHRONIC WOUND DEBRIDEMENT PRIOR TO APPLICATION OF DERMAL SKIN SUBSTITUTES**  
M. Ashrafi1, A. Sebastian1, B. Shih1, N. Greaves1, D. Beiting3, T. Alonso Rasgado4, M. Baguneid2, A. Bayat1  
1University of Manchester, Manchester Institute of Biotechnology, Manchester, Greater Manchester, United Kingdom 2University Hospital of South Manchester, Vascular Surgery Manchester, Greater Manchester, United Kingdom 3University of Pennsylvania, School of Veterinary Medicine, Philadelphia, PA, USA 4University of Manchester, School of Materials, Manchester, Greater Manchester, United Kingdom

10:42  **N4.02 - DIABETIC FOOT ULCERS VERSUS ACUTE WOUNDS: SUB-OPTIMAL INFLAMMATORY RESPONSE REGULATED BY MIR-15B-5P**  
H. A. Ramirez1,2, I. Jozic5, A.M. Rosa2, R. Stone3, I. Pastar3, O. Stojadinovic2, R. Kirsner2, M. Tomic-Canic1,2  
1University of Miami, Department of Human Genomics and Genetics, Miami, FL, USA 2University of Miami, Department of Dermatology and Cutaneous Surgery, Miami, FL, USA

10:54  **N4.03 - OSSABAW SWINE AS A POWERFUL MODEL TO ADDRESS CHRONIC WOUNDS COMPLICATED BY UNDERLYING METABOLIC SYNDROME (METSYN)**  
S.S. Steiner1, S. Roy1, K.G. Barki1, M. Joseph1, E. Schwab1, S. Dixith1, Z. Polcyn1, C.K. Sen1,2  
1Ohio State University, Comprehensive Wound Center, Davis Heart and Lung Research Institute, Columbus, OH, USA 2Ohio State University, Center for Regenerative Medicine and Cell-Based Therapies, Columbus, OH, USA

11:06  **N4.04 - A NOVEL THERAPEUTIC STRATEGY FOR DIABETIC WOUNDS: DRESSINGS DELIVERING MAST CELL STABILIZERS**  
A. Tellechea1, D. Eschuk1, Y. Zheng1, M. Nagai1,2, S. Bai1,2, S. Koerner1,2, T. Shih1,4, S. Panagiotidou6, L. Pradhan-Nabzdyk1, L. Sun1,2, D. Mooney3,4, T. Theoharides5, A. Veves1  
1Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, MA, USA 2Center for Drug Discovery and Translational Research, DoS/BIDMC, Boston, MA, USA 3Wyss Institute for Biologically Inspired Engineering, Harvard University, Boston, MA, USA 4Harvard School of Engineering and Applied Sciences, Harvard University, Cambridge, MA, USA 5Molecular Immunopharmacology and Drug Discovery Laboratory, Department of Integrative Physiology & Pathobiology, Tufts University School of Medicine, Boston, MA, USA

11:18  **N4.05 - IMPROVED DIABETIC WOUND HEALING BY PHARMACOLOGICAL MOBILIZATION OF ENDOGENOUS STEM CELLS IN RATS**  
L. Qi1, Q. Lin1, M. Chen1, H. Kuwabara1, G.M. Williams1, Z. Sun1  
1Johns Hopkins University School of Medicine, Department of Surgery, Baltimore, MD, USA
WHS MEETING ADJOURNS
11:30 A.M.

LUNCH WITH EXHIBITS
11:45 A.M. – 2:15 P.M.

WHS POSTER PRESENTATIONS
POSTER GALA/AWARDS SESSION IS FRIDAY, APRIL 15, 2016 FROM 7:15 P.M. - 8:30 P.M., EXHIBIT HALL B1

BIOENGINEERING & BIOMATERIALS

P.BIO01 - IN VIVO EVALUATION OF SILVER ION-RELEASING SCAFFOLDS FOR TREATMENT OF INFECTED WOUNDS IN A PORCINE MODEL
M. Mohiti-Asli1, M. Risselada2, M. Jacob3, B. Pourdeyhimi4, E. Loboa5
1North Carolina State University, Biomedical Engineering, Raleigh, NC, USA 2North Carolina State University, College of Veterinary Medicine, Raleigh, NC, USA 3University of Missouri, College of Engineering, Columbia, MO, USA 4North Carolina State University, College of Textiles, Raleigh, NC, USA

P.BIO02 - ENGINEERING AN IN SITU FORMING NANOFIBRE REINFORCED DERMAL SUBSTITUTE FOR TREATMENT OF PRESSURE ULCERS
R. B. Jalili1, R. Hartwell1, F. Ko1, A. Ghahary1
1University of British Columbia/International Collaboration On Repair Discoveries (ICORD), Surgery/Plastic Surgery, Vancouver, British Columbia, Canada

P.BIO03 - DELIVERY OF MIR THROUGH BIODEGRADABLE SCAFFOLDS
M. M. Ibrahim1, M. Ogilvie1, J. Lin2, H. Diao2, U. Milbreta2, H. Long2, S. Chew2, H. Levinson1
1Duke University Medical Center, Division of Plastic, Maxillofacial, and Oral Surgery, Durham, NC, USA 2Nanyang Technological University, School of Chemical & Biomedical Engineering, Singapore, Singapore

P.BIO05 - MICROFILM WOUND CONTACT DRESSING WITH METALLIC SILVER THAT CONFORMS TO WOUND-BED, PREVENTS WOUND INFECTION AND ALLOWS NORMAL HEALING
A. Agarwall1, G. Pranami1, T.B. Nelson1, P.R. Kierski2, D. Calderon2, M.J. Schurr3, C.J. Czerwynski2, J.F. McAnulty2
1Imbed Biosciences Inc., Madison, WI, USA 2University of Wisconsin-Madison, Dept. of Surgery, School of Veterinary Medicine, Madison, WI, USA 3Mission Hospitals, Surgery, Asheville, NC, USA

P.BIO06 - A POLYUREA-BASED REVERSE THERMAL GEL SUPPORTING CELLULAR FUNCTIONS: IMPLICATIONS FOR A NOVEL BIOENGINEERING ALTERNATIVE TO OPEN FETAL REPAIR OF SPINA BIFIDA DEFECTS.
A. I. Marwan1,2, S. Williams1, J. Bardill2, M. Abouchaar1, N. Abdul Aziz1, D. Park2, A.I. Marwan1,2
1University of Colorado-Denver - AMC, Surgery, Aurora, CO, USA 2University of Colorado-Denver - AMC, Bioengineering, Aurora, CO, USA

P.BIO07 - EFFICIENT REMOVAL OF DNA AND SDS IN DECELLULARIZED SKELETAL MUSCLE AS A SCAFFOLD FOR IN VIVO SKELETAL MUSCLE REPAIR
E. E. Friedrich1, D. Rajendran2, G. Arenas1, S.T. Lanier1, S. Niknam-Bienia1, S. Jordan1, J. Wertheim2,3, S. Hong1, R.D. Galiano1
1Northwestern University, Feinberg School of Medicine, Department of Surgery, Laboratory for Wound Repair and Regenerative Surgery, Chicago, IL, USA 2Northwestern University, Feinberg School of Medicine, Department of Surgery-Organ Transplantation, Chicago, IL, USA 3Northwestern University, McCormick School of Engineering, Chicago, IL, USA

P.BIO08 - HYDROGEN PEROXIDE PRODUCTION FROM FIBROUS PECTIC CELLULOSE ANALOGS AND EFFECT ON DERMAL FIBROBLASTS
J. Edwards1, N. Prevost2, D. Yager1
1Virginia Commonwealth University, Richmond, VA, USA 2United States Department of Agriculture, Southern Regional Research Center, New Orleans, LA, USA

P.BIO09 - CHITOSAN-TRIPOLYPHOSPHATE NANOPARTICLES FOR TAILORED TRANSFECTION RATES IN THE SKIN
L.J. Born1, F. Lay1, A. Ansari1, Z. Habibabbady1, C. Ng1, G. Marti1, J.W. Harmon1
1Johns Hopkins University School of Medicine, Surgery, Baltimore, MD, USA
P.BIO10 - THE CULTURED SKIN SHEET UTILIZING NOVEL COLLAGEN SCAFFOLD
S. Aoki1, H. Kimura1, T. Takezawa2, M. Yamamoto1, S. Toda1
1Saga University, Pathology & Microbiology, Saga, Japan 2National Institute of Agrobiological Sciences, Transgenic Animal Research Center, Tsukuba, Ibaraki, Japan

P.BIO12 - AUTOLOGOUS BLOOD CLOTS AS BIOSCAFFOLDS & THERAPEUTIC DELIVERY SYSTEMS
B. L. Brown1, A. Doodlesack2, J. Pierce3, D. M. Ciombor1
1Brown University School of Medicine, Plastic and Reconstructive Surgery, Providence, RI, USA 2University of Massachusetts Medical School, Worcester, MA, USA 3Pierce Surgical Consolidated, Inc., Waterbury, VT, USA

P.BIO13 - PORE-SIZE IMPACTS HYPERTROPHIC SCARRING-RELATED OUTCOMES IN 3D-PRINTED POLYURETHANE SCAFFOLDS
E. Lorden1, T. Ramchal1, P. Chandra2, L. Bashirov1, M.M. Ibrahim1, E. Hammett2, B. Klitzman1, J. Yoo3, H. Levinson1, S. Lee3, K. Leong4
1Duke University Medical Center, Division of Plastic, Maxillofacial, and Oral Surgery, Durham, NC, USA 2Duke University Medical Center, Department of Biomedical Engineering, Durham, NC, USA 3Wake Forest University School of Medicine, Winston-Salem, NC, USA 4Columbia University College of Physicians and Surgeons, Department of Biomedical Engineering, New York, NY, USA

BURN WOUNDS

P.BW01 - ELEVATED METHEMOGLOBIN LEVELS AS A NEW VARIABLE TO DISTINGUISH BURN DEPTH IN A PORCINE BURN MODEL
K. M. Cross1,2,3, D.I. Dutta2,3, J.S. Fish1
1Hospital for Sick Children, Toronto, Ontario, Canada 2University of Toronto, Toronto, Ontario, Canada 3St. Michael's Hospital, Toronto, Ontario, Canada

P.BW02 - SCALD MODEL OF PARTIAL THICKNESS BURNS IN C57BL/6 MICE
J.L. Medina1, A.H. Carlsson1,2, A.B. Fourcaudot1, K.P. Leung1
1U.S. Army Institute of Surgical Research, Dental and Craniofacial Trauma Research and Tissue Regeneration, Fort Sam Houston, TX, USA 2U.S. Army Institute of Surgical Research, Quality Skin Collaborative for Advanced Reconstruction and Regeneration, Fort Sam Houston, TX, USA

P.BW03 - LATE APPLICATION OF FRACTIONAL CO2 LASER THERAPY REDUCES SCAR WRINKLING
D. M. Dunham1, B.N. Blackstone1, M.E. Baumann1, M.M. Malara1, J.K. Bailey1,4, H.M. Powell1,2,4
1Ohio State University, Materials Science and Engineering, Columbus, OH, USA 2Ohio State University, Biomedical Engineering, Columbus, OH, USA 3Ohio State University, Critical Care, Burns and Trauma, Columbus, OH, USA 4Shriners Hospitals for Children, Research, Cincinnati, OH, USA

P.BW04 - STANDARDIZED AND PRECISE PORCINE BURN MODEL USING STANDARDIZED HEAT TRANSFER AND HISTOLOGIC ANALYSIS OF BURN DEPTHS
M. Singh1, K. Nuutila1, C. Kruse1, R. Minasian1, E. Eriksson1
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P.BW05 - HYPERTROPHIC-LIKE SCAR FORMATION FOLLOWING PARTIAL THICKNESS BURN OR SKIN LOSS: A PORCINE MODEL
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P.BW06 - ASSESSMENT OF A NOVEL HYDROCONDUCTIVE DRESSING COMPARED TO A SILVER CONTAINING PRODUCT IN AN INFECTED BURN WOUND MODEL
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CLINICAL CARE

P.CC01 - NUTRITIONAL PROFILE OF PATIENTS WITH CHRONIC/ACUTE WOUNDS IN A TERTIARY HOSPITAL
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P.CC03 - BMI AND NUTRITIONAL PROFILE IN PATIENTS WITH CHRONIC/ACUTE WOUNDS IN A TERTIARY HOSPITAL
C.M. Ueno1, H. Larue1, J.K. Shreve1
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P.CC04 - NEGATIVE PRESSURE WOUND THERAPY FOR A GIANT WOUND SECONDARY TO MALIGNANCY-INDUCED NECROTIZING FASCITIS: CASE REPORT AND REVIEW OF THE LITERATURE
J. Hu1, S. Goekjian1, M.J. Cooper1
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P.CC05 - CHALLENGES WITH THE DEVELOPMENT OF PRESSURE ULCER PREVENTION GUIDELINES IN A TERTIARY HOSPITAL
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P.CC06 - EFFECTIVE SYMPTOM RESOLUTIONS OF ITCH AND PAIN IN PATIENTS WITH HYPERTROPHIC AND KELOID SCARRING
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P.CC08 - THE POSTOPERATIVE EFFECTS OF HYPOCHLOROUS ACID VERSUS SALINE IRRIGATION USING ULTRASOUND DEBRIDEMENT ON TISSUE BACTERIAL WOUND COUNTS IN CHRONIC OPEN WOUNDS PATIENTS
J. M. Hiebert1
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P.CC09 - PYODERMA GANGRENOsum INVOLVING ALL FOUR EXTREMITIES
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P.CC11 - BIOMEMBRANE OF HEMICELLULOSE DRESSING VERSUS COLLAGENASE IN THE TREATMENT OF CHRONIC VENOUS ULCERS: RANDOMIZED CLINICAL TRIAL, OPEN AND CONTROLLED STUDY
R. Colenci1, J.S. Jacinto1, H.A. Miot2, M.E. Marques1, J.V. Schmitt2, L.P. Abbade2
1Botucatu Medical School-UNESP, Nursing Department, Botucatu, SP, Brazil 2Botucatu Medical School-UNESP, Dermatology Department, Botucatu, SP, Brazil

P.CC12 - THE ACTUAL PREVALENCE OF IDENTIFIABLE BACTERIA - PLANKTONIC AND BIOFILM IN CHRONIC LOWER EXTREMITY WOUNDS; AND THE EFFECTS OF CURRENT TREATMENT
J.C. Lantis1, T.O. Polanco1, K.C. Yang1, S. Goss1, S. Alcantara1, S. Velazquez1
1Mount Sinai St. Luke's and Mount Sinai West Hospitals, Surgery, New York, NY, USA

CHRONIC WOUNDS

P.CW01 - HUMAN CHRONIC WOUNDS DERMAL FIBROBLASTS SHOW UNEXPECTEDLY HIGH MIGRATORY AND PROLIFERATIVE ACTIVITY IN VITRO
M. Otero-Vinas1,2, N. Khemani1, A. Grada1, X. Lin1, P. Carson1, T. Yufit1, V. Falanga1,2
1Boston University School of Medicine, Dermatology, Boston, MA, USA 2University of Vic-Central University of Catalonia, The Tissue Repair and Regeneration Laboratory, Vic, Barcelona, Spain

P.CW02 - NRF2 AND OTHER GENE EXPRESSION PROFILES OF RESPONDERS VS. NON-RESPONDERS TO HYPERBARIC OXYGEN THERAPY
B.A. Brea1, B. Johnston1, A. Ha1, D. Ciombor2, P. Liu1
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P.CW03 - LOW-INTENSITY LOW-FREQUENCY ULTRASOUND MODULATES MACROPHAGE PHENOTYPE-RELATED GENE EXPRESSION IN HUMAN DIABETIC ULCERS
A. Bajpai1, S.G. Nadkarni2, M.S. Weingarten2, P.A. Lewin1, K.L. Spiller1
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P.CW04 - KERATIN 17 IS EXPRESSED IN THE MIGRATING EPIDERMIS OF BOTH ACUTE AND CHRONIC HUMAN WOUNDS
V. Falanga\textsuperscript{1,2}, D. Fiore\textsuperscript{3}, P. Carson\textsuperscript{1}, X. Lin\textsuperscript{1}, T. Yufit\textsuperscript{1}, M. Otero-Vinas\textsuperscript{1}
\textsuperscript{1}Boston University, Dermatology, Boston, MA, USA \textsuperscript{2}Boston University, Biochemistry, Boston, MA, USA

P.CW05 - LOCAL HYPERGLYCEMIA IMPAIRS PRIMARY FIBROBLAST AND KERATINOCYTE MIGRATION IN VITRO AND WOUND HEALING IN EUGLYCEMIC RATS
C.R. Kruse\textsuperscript{1,2}, M. Singh\textsuperscript{1}, J. Soerenson\textsuperscript{2}, E. Eriksson\textsuperscript{1}, K. Nuutila\textsuperscript{1}
\textsuperscript{1}Brigham and Women’s Hospital, Plastic Surgery, Boston, MA, USA \textsuperscript{2}Odense University Hospital, Plastic Surgery, Odense, Denmark

P.CW07 - EXPRESSION AND INFLUENCE OF MATRIX METALLOPROTEINASE-9 (MMP-9)/TISSUE INHIBITOR OF METALLOPROTEINASES-1 (TIMP-1) AND VASCULAR ENDOTHELIAL GROWTH FACTOR (VEGF) IN DIABETIC FOOT ULCERS (DFUS)
G. Li\textsuperscript{1}, X. Zou\textsuperscript{1}, J. Zhang\textsuperscript{1}, Y. Zhu\textsuperscript{1}, S. Jin\textsuperscript{1}, B. Li\textsuperscript{1}
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P.CW08 - COMBINATION OF MSC PRE-CONDITIONED WITH HYPOXIA AND TIMOLOL EMBEDDED IN A DERMAL REPLACEMENT MATRIX IMPROVES HEALING IN DIABETIC MICE
M. So\textsuperscript{1}, H. Yang\textsuperscript{1}, S. Ramirez\textsuperscript{1}, M.R. Dasu\textsuperscript{1}, H. Stewart\textsuperscript{1}, J. Beegle\textsuperscript{2}, F. Fierro\textsuperscript{3}, J. Nolta\textsuperscript{4}, R. Isseroff\textsuperscript{1}
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ECM, FIBROSIS & SCARRING

P.EFS01 - GASTRIN-RELEASING PEPTIDE (GRP) AND SCLERODERMA: A POTENTIAL NOVEL MECHANISM OF TISSUE FIBROSIS
M.M. Ibrahim\textsuperscript{1}, E. McKinnon\textsuperscript{2}, J. Parra\textsuperscript{1}, M. Mohammed\textsuperscript{1}, M. Sunday\textsuperscript{3}, H. Levinson\textsuperscript{1,2}
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P.EFS02 - IN VIVO REMODELING OF EXCESS TISSUE DEFORMITIES FOLLOWING PROLONGED MECHANICAL DEFORMATION
T. Leavitt\textsuperscript{1,2}, M.S. Hu\textsuperscript{1}, L.A. Barnes\textsuperscript{1}, E.R. Zielins\textsuperscript{1}, C.D. Marshall\textsuperscript{1}, D.C. Wan\textsuperscript{1}, G.C. Gurtner\textsuperscript{1}, H. Lorenz\textsuperscript{1}, M.T. Longaker\textsuperscript{1}
\textsuperscript{1}Stanford University, Department of Surgery, Plastic and Reconstructive Surgery Division, Palo Alto, CA, USA \textsuperscript{2}Boston University, School of Medicine, Boston, MA, USA

P.EFS03 - INDUCTION OF CD34+/PRO-COLLAGEN I+ FIBROCYTES IN GRANULATION TISSUES FOLLOWING BFGF INJECTION INTO RAT SKIN ULCER
Y. Akasaka\textsuperscript{1}, M. Nakamichi\textsuperscript{1}, Y. Akishima-Fukasawa\textsuperscript{1}, T. Kinoshita\textsuperscript{1}, K. Ohnishi\textsuperscript{2}, T. Mikami\textsuperscript{1}
\textsuperscript{1}School of Medicine, Toho University, Department of Pathology, Ohta, Tokyo, Japan \textsuperscript{2}School of Medicine, Toho University, Department of Plastic Surgery, Ohta, Tokyo, Japan

P.EFS04 - ALTERED MECHANOSENSING BY FETAL FIBROBLASTS VIA REDUCED ADHESION FORMATION AND FORCE PRODUCTION IN RESPONSE TO MATRIX RIGIDITY
A. Parekh\textsuperscript{1}, R. Jerrell\textsuperscript{1}
\textsuperscript{1}Vanderbilt University Medical Center, Otolaryngology, Nashville, TN, USA

P.EFS05 - APPLICATION OF PERICYTES TO HEALING WOUNDS REDUCES INFLAMMATION AND FIBROSIS
L. Satish\textsuperscript{1}, T. Yang\textsuperscript{1}, F. Liu\textsuperscript{1}, L. Rigatti\textsuperscript{1}, R.J. Bodnar\textsuperscript{1}, S. Kathju\textsuperscript{1}
\textsuperscript{1}University of Pittsburgh, Plastic Surgery, Pittsburgh, PA, USA

P.EFS06 - PIRFENIDONE MODULATES THE TGF-\textbeta1-INDUCED PROFIBROTIC PHENOTYPE IN HUMAN DERMAL FIBROBLASTS
C.L. Hall\textsuperscript{1}, A.R. Wells\textsuperscript{1}, K.P. Leung\textsuperscript{1}
\textsuperscript{1}U.S. Army Institute of Surgical Research, Dental and Craniofacial Trauma Research and Tissue Regeneration, San Antonio, TX, USA

P.EFS07 - ROLE OF SEROTONIN THROUGH 5HT1A AND 2A RECEPTORS DURING SKIN HEALING IN POST THERMAL INJURY
A. Sadiq\textsuperscript{1}
\textsuperscript{1}University of Toronto, Toronto, Ontario, Canada
P.EFS08 - ACCELERATED ANGIOGENESIS AND DIABETIC WOUND HEALING STIMULATED BY PCL/COLLAGEN/BIOACTIVE GLASS NANOfibERS
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P.EFS09 - ACETYLCHOLINE MEDIATES AN ANTI-APOPTOTIC EFFECT IN FAS-INDUCED APOPTOTIS OF HUMAN KERATOCyTES THROUGH REGULATION OF INITIATOR CASPASES
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INFECTION & BIOFILMS
P.IB01 - HOST GENOMIC RESPONSES TO PSEUDOMONAS AERUGINOSA WOUND INFECTIONS
S. Karna¹, C. Tsute², P. D'Arpa³, Q. Liwu¹, C. Ping¹, A.B. Fourcaudot¹, Y. Kazuyoshi¹, N. Jeffre², J.J. Abercrombie³, Y. Tao¹, K.P. Leung¹
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P.IB02 - ELECTRICAL STIMULATION DECREASES BIOFILM VIABILITY AND INCREASES DEGENERATION IN NOVEL BACTERIAL BIOFILM MODELS
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¹University of Manchester, Inflammation Sciences, Manchester, Lancashire, United Kingdom ²University of South Manchester, Inflammation and Repair, Manchester, Lancashire, United Kingdom

P.IB03 - REDUCTION OF BIOFILM BACTERIA GROWN ON PIG SKIN EXPLANTS BY A TOPICAL FORMULATION CONTAINING COMPONENTS GENERALLY RECOGNIZED AS SAFE
G. Schultz¹, R. Stockel², Q. Yang¹
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P.IB04 - IN VITRO CELL ACTIVITY ASSESSMENT OF METHICILLIN-RESISTANT STAPHYLOCOCCUS AUREUS FOLLOWING TREATMENT WITH BACTERIA ELIMINATING DRESSINGS
J. Zhang¹, A. Alkhalil¹, A. Day¹, K. Monger¹, L. Moffatt¹, J. Shupp¹,²
¹MedStar Health Research Institute, Burn and Surgical Research, Washington, DC, USA ²MedStar Washington Hospital Center, The Burn Center, Dept. of Surgery, Washington, DC, USA

P.IB05 - AN IN VITRO ASSESSMENT OF PATHOGEN MITIGATION BY A NOVEL HYDROCONDUCTIVE DRESSING COMPARED TO A SILVER CONTAINING DRESSING
K. Monger¹, L. Moffatt¹, A. Day¹, J. Zhang¹, A. Alkhalil¹, J. Shupp¹,²
¹MedStar Health Research Institute, Burn and Surgical Research, Washington, DC, USA ²MedStar Washington Hospital Center, The Burn Center, Dept. of Surgery, Washington, DC, USA

P.IB06 - IN VITRO DISRUPTION OF PSEUDOMONAS AERUGINOSA BIOFILMS WITH COMMONLY USED SKIN CLEANSING AGENTS
A. Day¹, J. Zhang¹, B. Carney¹, K. Monger¹, A. Alkhalil¹, L. Moffatt¹, J. Shupp¹,²
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P.IB07 - EXAMINING THE EFFECTS OF INDUCIBLE NITRIC OXIDE SYNTHASE ON ACINETOBACTER SOFT TISSUE INJURIES WITH AN AGENT-BASED MODEL
A. J. Benjamin¹, G. An¹
¹University of Chicago, Surgery, Chicago, IL, USA

P.IB08 - OPTIMIZATION OF ANTIBIOTIC TREATMENT OF ACUTE INFECTED FULL THICKNESS WOUNDS
R. A. Minasian¹, K. Nuutila¹, M. Singh¹, C. Kruse¹, S. Lince¹, E. Eriksson¹
¹Brigham and Women’s Hospital, Plastic Surgery, Boston, MA, USA
P.IB10 - POLYMER DEBRIDEMENT FOR THE REMOVAL OF BIOFILM IN A PORCINE WOUND MODEL
H.N. Wilkinson1, A.J. McBain2, C. Stephenson3, M.J. Hardman1
1University of Manchester, The Healing Foundation Centre, Manchester, United Kingdom 2University of Manchester, School of Pharmacy, Manchester, United Kingdom 3Crawford Healthcare, Knutsford, Cheshire, United Kingdom

P.IB11 - UP-REGULATION OF ANTI-INFLAMMATORY AND ANTI-MICROBIAL ACTIVITY IN HUMAN CRYOPRESERVED VIABLE PLACENTAL MEMBRANE IN THE PRESENCE OF BACTERIAL ANTIGENS
A. Lerch1, M. Sathyamoorthy1, Y. Mao2, Y. Duan-Arnold2, A. Danilkovitch1
1Osiris Therapeutics Inc., Columbia, MD, USA 2Rutgers University, New Jersey Center for Biomaterials, Piscataway, NJ, USA

INFLAMMATION & IMMUNITY

P.II01 - POLARIZATION OF M1- AND M2-MACROPHAGES FROM RABBIT PERIPHERAL BLOOD MONONUCLEAR CELLS
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1Institute of Surgical Research, Dental and Craniofacial Trauma Research and Tissue Regeneration, Fort Sam Houston, TX, USA 2Osaka Dental University, Department of Bacteriology, Hirakata, Osaka, Japan

P.II02 - ENDOTOXIN-INDUCED INFLAMMATION IN A RODENT MODEL INCREASES THE RATE OF RE-EPITHELIALIZATION AND WOUND CLOSURE THROUGH MODULATION OF IL-1A AND MACROPHAGE RECRUITMENT
K. Nuutila1, M. Singh1, J. Hellman2, C. Kruse1, M. Spite1, E. Eriksson1
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P.II03 - EXPRESSION OF PRO-INFLAMMATORY MEDIATORS IL-6, IL-8 AND MCP-1 BY DIABETIC FIBROBLASTS TREATED WITH LIPOPOLYSACCHARIDE
S. Grant1, C. Brooker1, W.J. Lindblad1
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P.II04 - FOREIGN BODY REACTION (FBR) TO COMMONLY USED SURGICAL BIOMATERIALS
M.M. Ibrahim1, M.A. Medina1, J. Bond1, L. Chen1, C. Quiles1, G. Kokos1, L. Bashirov1, A. Selim2, B. Kitzman1,2, H. Levinson1
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P.II05 - EFFECT OF HUMAN CRYOPRESERVED VIABLE PLACENTAL MEMBRANE (HCVPM)* ON M1 MACROPHAGES IN VITRO
C.E. Witherel1, T. Yu1, M. Concannon1, M. Moorman2, Y. Arnold2, K.L. Spiller1
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NOVEL THERAPEUTIC APPROACHES

P.NTA01 - ACTIVATION OF HIF BY SMALL MOLECULE INHIBITORS OF PHD2 IMPROVES HEALING OF CUTANEOUS WOUNDS AND CALVARIAL DEFECTS
M.S. Hu1,2, L.A. Barnes1, W. Hong1, M. Xie3, S. Tang1, R.C. Rennert1, G.C. Gurtner1, A.J. Giaccia1, H.P. Lorenz1, S. Ding3, M.T. Longaker1
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P.NTA02 - SANATIVO WORSENS MURINE SKIN WOUND HEALING
C.D. Marshall1, M.S. Hu1, T. Leavitt1, L.A. Barnes1, M.T. Longaker1
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P.NTA03 - AN EQUINE PERICARDIAL COLLAGEN MATRIX (ePCM) DRESSING STRENGTHENS ANTI-MICROBIAL DEFENSES IN HUMAN KERATINOCYTES
S.S. Steiner1, P.D. Ghatak1, A. Das1, S. Roy1, C.K. Sen1,2
1Ohio State University, Comprehensive Wound Center, Davis Heart and Lung Research Institute, Columbus, OH, USA 2Ohio State University, Center for Regenerative Medicine and Cell-Based Therapies, Columbus, OH, USA
P.NTA04 - NOVEL IMPLANTABLE OPTICAL OXYGEN MONITOR TO DETECT FLAP VIABILITY
M.M. Ibrahim¹, Z. Wu¹, J. Chien¹, B. Klitzman¹²
¹Duke University Medical Center, Division of Plastic, Maxillofacial, and Oral Surgery, Durham, NC, USA ²Duke University Medical Center, Department of Biomedical Engineering, Durham, NC, USA

P.NTA05 - TOPICAL VASODILATOR INDUCES PHARMACOLOGICAL DELAY ON CUTANEOUS FLAP VIABILITY AND VASCULAR REMODELING
M.M. Ibrahim¹, Z. Wu³, R. Schwellert², B. Phillips¹, B. Klitzman¹²
¹Duke University Medical Center, Plastic, Maxillofacial, and Oral Surgery, Durham, NC, USA ²Duke University Medical Center, Department of Biomedical Engineering, Durham, NC, USA

P.NTA06 - EFFECT OF POMEGRANATE PEEL WITH/WITHOUT AUTOLOGOUS BONE MARROW ON HEALING OF ACUTE CUTANEOUS WOUNDS IN ALLOXAN-INDUCED DIABETIC RABBITS
M.M. Alsupail¹, F.A. Al-Sobayil²
¹Qassim University, College of Pharmacy, Buraydah, Qassim, Saudi Arabia ²Qassim University, College of Veterinary, Buraydah, Qassim, Saudi Arabia

P.NTA07 - A NOVEL TOPICAL SOLUTION FOR NEGATIVE PRESSURE WOUND THERAPY WITH INSTILLATION: COMPARISON TO NPWT AND CELL PROLIFERATION ASSESSMENT IN VITRO.
C. Carroll¹, C. Lessing¹, S. Osborne¹, M. Schmidt¹, S. Ingram¹
¹Acelity, Inc., San Antonio, TX, USA

P.NTA08 - ANTIMIR-92A ACCELERATES DIABETIC WOUND HEALING
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¹MiRagen Therapeutics Inc., Boulder, CO, USA

P.NTA09 - SINGLE-LAYER VIABLE PLACENTAL ALLOGRAFTS SHOW A SUPERIOR DYNAMIC RESPONSE OVER MULTI-LAYER NON-VIABLE ALLOGRAFTS TO AN IN VITRO WOUND MICROENVIRONMENT
A. Johnson¹, Y. Duan-Arnold¹, A. Gyurdieva¹², A. Danilkovitch¹
¹Osiris Therapeutics, Inc., Columbia, MD, USA ²Amgen, Thousand Oaks, CA, USA

P.NTA10 - NON-INVASIVE HIGH-RESOLUTION VISUALIZATION AND QUANTIFICATION OF DYNAMIC BLOOD FLOW IN GATED HUMAN SKIN MICROVESSELS
D. Pal¹, S. C. Gnyawali¹, K. Blum¹, S. Ghatak¹, S. Khanna¹, S. Roy¹, C.K. Sen¹
¹Ohio State University, Comprehensive Wound Center, Davis Heart and Lung Research Institute, Center for Regenerative Medicine and Cell-Based Therapies, Department of Surgery, Columbus, OH, USA

P.NTA11 - INVESTIGATION OF MACHANISM IN INCREASED HEALING TENDON STRENGTH AFTER VEGF GENE THERAPY VIA AAV2 VECTORS
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P.NTA13 - INTRACELLULAR ATP DELIVERY-INDUCED RAPID TISSUE REGENERATION IS ACCOMPANIED BY UPREGULATION OF NUCLEAR TRANSCRIPTION FACTORS PPARα, PPARβ, PGC1α AND PROLIDASE
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