



Plastic Surgery  
Research Council

# 60<sup>th</sup> Annual Meeting

May 14 – 16, 2015  
The Westin Seattle, Seattle, Washington



## Thursday, May 14, 2015

- 7:00 am – 5:00 pm**      **Registration**  
*Cascade Ballroom Foyer*
- 7:00 am – 5:00 pm**      **Speaker Ready Room**  
*Cascade Ballroom Foyer*
- 7:00 am – 6:00 pm**      **Poster Set-Up**  
*Puget Sound Room*
- 7:00 – 8:00 am**          **Continental Breakfast**  
*Cascade Ballroom Foyer*
- 8:00 am – 12:00 pm**      **Local Programming**  
*University of Washington, Harborview Medical Center*
- 12:00 – 12:15 pm**      **Members Photograph**  
*University of Washington, Harborview Medical Center*
- 12:30 – 2:00 pm**        **Lunch; Non-Members**  
*Pine*
- 12:30 – 2:00 pm**        **Lunch & Business Meeting; Members only**  
*Pike*
- 1:45 – 7:00 pm**        **Exhibits**  
*Cascade Ballroom Foyer*
- 2:00 – 2:30 pm**        **Coffee with Exhibitors**  
*Cascade Ballroom Foyer*
- 2:30 – 4:00 pm**        **Session 1 Best Papers**  
*Cascade Ballroom*
- 2:30 pm                    **1. N-Acetylcysteine Improves Autologous Fat Graft Survival in a Mouse Model**  
Joshua A. Gillis, MD; Simon Gebremeskel, BSc; Kyle D. Phipps, PhD; Lori A. MacNeil, PhD; Christopher J. Sinal, PhD; Brent Johnston, PhD; Paul Hong, MD; Michael Bezuhly, MD  
*Dalhousie University, Halifax, NS, Canada*
- 2:39 pm                    **2. Clinical Outcomes after a Modified End-to-Side Nerve Transfer Using the Phrenic Nerve as a Donor for Treatment of Brachial Plexus Injury**  
Jacques A. Machol, IV, MD<sup>1</sup>; Ji-Geng Yan, MD, PhD<sup>1</sup>; Robert Robert Fang, MD<sup>2</sup>; Lin-Ling Zhang, MD<sup>1</sup>; James Sanger, MD<sup>1</sup>; Hani Matloub, MD<sup>1</sup>  
*<sup>1</sup>Medical College of Wisconsin, Milwaukee, WI, <sup>2</sup>Emory University, Atlanta, GA*

- 2:48 pm **3. Regenerative Peripheral Nerve Interfaces: Impact of Decellularized Small Intestinal Submucosa on Regeneration, Reinnervation, and Revascularization**  
Frances M. Walocko, MSE; Elizabeth A. Mays, BSE; Zachary P. French, HS; Cheryl A. Hassett, BS; Jana D. Moon, BS; Nicholas B. Langhals, PhD; Paul S. Cederna, MD; Melanie G. Urbanchek, PhD  
*University of Michigan, Ann Arbor, MI*
- 2:57 pm **4. Mammary Adipose Derived Stem Cells in BRCA-Related Breast Cancers**  
Irene J. Pien, BS<sup>1</sup>; Jared A. Blau, BS, MEd<sup>1</sup>; Michelle L. Bowie, MS<sup>2</sup>; Siya Lem, BS<sup>2</sup>; Victoria L. Seewaldt, MD<sup>2</sup>; Scott T. Hollenbeck, MD<sup>3</sup>  
*<sup>1</sup>Duke University School of Medicine, Durham, NC, <sup>2</sup>Duke University Department of Medicine, Division of Medical Oncology, Durham, NC, <sup>3</sup>Duke University Department of Surgery, Division of Plastic, Maxillofacial, and Oral Surgery, Durham, NC*
- 3:06 pm **5. The Suture Provides a Niche for Mesenchymal Stem Cells of Craniofacial Bones**  
Hu Zhao, DDS, PhD; Jifan Feng, DDS, PhD; Mark Urata, DDS, MD; Yang Chai, DDS, PhD  
*University of Southern California, Los Angeles, CA*
- 3:15 pm **6. Missense Variant in MAPK Inactivator PTPN5 is Associated with Decreased Severity of Post-Burn Hypertrophic Scarring**  
Ravi F. Sood, MD; Anne M. Hocking, PhD; Lara A. Muffley, BS; Maricar Ga, BS; Shari Honari, RN, BSN; Reiner P. Alexander, MD, MSc; Nicole S. Gibran, MD  
*UW Medicine Regional Burn Center, Seattle, WA*
- 3:24 pm **7. Predicting Venous Congestion Before DIEP Breast Reconstruction**  
Christopher R. Davis, BSc, MB ChB, MRCS<sup>1</sup>; Lyn Jones, FRCS, FRCR<sup>2</sup>; Rachel Tillett, MSc, FRCS (Plast)<sup>3</sup>; Helen Richards, MRCS<sup>2</sup>, Sherif Wilson, FRCS (Plast)<sup>2</sup>  
*<sup>1</sup>Stanford University, Stanford University, CA, <sup>2</sup>Southmead Hospital, Bristol, United Kingdom, <sup>3</sup>Royal Devon and Exeter NHS Trust, Exeter, United Kingdom*
- 3:00 pm **8. Understanding the Recovery Phase of Breast Reconstruction: Patient Reported Outcomes Correlated to Type and Timing of Reconstruction**  
Katie Weichman, MD<sup>1</sup>; Jennifer B. Hamill, MPH<sup>2</sup>; Hyungjin Myra Kim, ScD<sup>2</sup>; Xiaoxue Chen, BS<sup>2</sup>; Edwin G. Wilkins, MD, MS<sup>2</sup>; Andrea L. Pusic, MD, MHS<sup>3</sup>  
*<sup>1</sup>Montefiore Medical Center/Albert Einstein School of Medicine, Bronx, NY, <sup>2</sup>University of Michigan, Ann Arbor, MI, <sup>3</sup>Memorial Sloan Kettering Cancer Center, New York, NY*
- 3:42 pm **9. Pullulan-Collagen Hydrogels Seeded with Adipose-Derived Mesenchymal Stem Cells Enhance Progenitor Cell Recruitment and Functionality**  
Revanth Kosaraju, BS Candidate; Robert C. Rennert, MD; Zeshaan N. Maan, MBBS, MRCS; Dominik Duscher, MD; Janos Barrera, BS; Alexander J. Whittam, BA; Melanie Rodrigues, PhD; Michael Januszzyk,

MD; Jayakumar Rajadas, PhD; Geoffrey C. Gurtner, MD, FACS  
*Stanford University, Stanford, CA*

3:51 pm

**10. The Role of Skin-Specific Immunobiology and Major Histocompatibility Complex Sharing in Vascularized Composite Allograft Tolerance**

David A. Leonard, MBChB, Kumaran Shanmugarajah, MBBS, Harrison Powell, BS, Alexander Albritton, BS, Christopher Mallard, BS, David H. Sachs, MD, Curtis L. Cetrulo, Jr., MD, Josef M. Kurtz, PhD  
*Massachusetts General Hospital, Boston, MA*

4:00 – 5:30 pm

**Session 2 Best Papers**

*Cascade Ballroom*

4:00 pm

**11. Cell-based Muscle Regeneration by utilizing Epigenetic Drug and Hydrogel**

ShihJye Tan, MS, Zhi Yang, MD; Josephine Fang, MS; Yichen Wu, MS; Marcel Nimni, PhD; Mark Urata, MD, DDS; Bo Han, PhD  
*USC, Los Angeles, CA*

4:09 pm

**12. Ex Vivo Free Flap Transfection with Minicircle DNA for Targeted Localized Gene Therapy**

Peter A. Than, MD; Robert R. Rennert, MD; Christopher R. Davis, BSc MB, ChB, MRCS; Shane Morrison, MD; Tai Le, Michael W. Findlay, MBBS, PhD, FRACS, FACS; Geoffrey C. Gurtner, MD, FACS  
*Stanford University School of Medicine, Stanford, CA*

4:18 pm

**13. Is there a Safe Lipoaspirate Volume? A Risk Assessment Model of Liposuction Volume as a Function of Body Mass Index Based on TOPS Data**

Ian Chow, BA<sup>1</sup>; Mohammed S. Alghoul, MD<sup>1</sup>; Nima Khavanin, BS<sup>1</sup>; Philip J. Hanwright, BA<sup>1</sup>; Kristen E. Mayer, BS<sup>1</sup>; Keith M. Hume, MA<sup>3</sup>; Robert X Murphy Jr., MD, MA<sup>4</sup>; Karol A. Gutowski, MD<sup>2</sup>; John YS Kim, MD<sup>1</sup>  
<sup>1</sup>*Northwestern University, Chicago, IL*, <sup>2</sup>*University of Illinois, Chicago, IL*, <sup>3</sup>*American Society of Plastic Surgery, Chicago, IL*, <sup>4</sup>*Lehigh Valley Health Network, Allentown, PA*

4:27 pm

**14. Is More Better? The Number of Lymph Nodes in the Vascularized Lymph Node Transfer Influences its Lymphaticovenous Drainage**

Grzegorz Kwiecien, MD; Bahar Bassiri Gharb, MD, PhD; Kashyap Tadisina, BA; Maria Madajka, PhD; James E. Zins, MD; Graham S. Schwarz, MD  
*Cleveland Clinic, Cleveland, OH*

4:36 pm

**15. Dermal-Based Peripheral Nerve Interface for Transduction of Sensory Feedback from Upper Extremity Prostheses**

Ian C. Sando, MD<sup>1</sup>; Gregory J. Gerling, PhD<sup>2</sup>; Daniel C. Ursu, MS<sup>1</sup>; Kristoffer B. Sugg, MD<sup>1</sup>; Yaxi Hu, BS<sup>1</sup>; Steven C. Haase, MD<sup>1</sup>; Nicholas B. Langhals, PhD<sup>1</sup>; Paul S. Cederna, MD<sup>1</sup>; Melanie G. Urbanek, PhD<sup>1</sup>  
<sup>1</sup>*University of Michigan, Ann Arbor, MI*, <sup>2</sup>*University of Virginia, Charlottesville, VA*

- 4:45 pm **16. Adjacent Antagonistic RPNs Produce Independent Signaling for Prosthesis Control**  
 Andrej Nedic, MSE; Daniel Ursu, MS; Ian Sando, MD; Jana Moon, BS; Cheryl Hassett, BS; R Brent Gillespie, PhD; Nick Langhals, PhD; Paul Cederna, MD; Melanie Urbanek, PhD  
*University of Michigan, Ann Arbor, MI*
- 4:54 pm **17. In utero Transplantation of Gene Modified Human Adipose Stem Cells for Sustained Factor VIII Transgene Expression**  
 Maricel G. Miguelino, MD; Christopher D. Pivetti, MS; David E. Sahar, MD; Jerry S. Powell, MD  
*University of California, Davis, Sacramento, CA*
- 5:03 pm **18. Post Transplantation Cyclophosphamide Promotes Robust Immune Tolerance after Reconstructive Transplantation**  
 Georg J. Furtmüller, MD; Madeline L. Fryer, BA; Byoungchol Oh, DVM; PhD; Sudipto Ganguly, PD; Jessica Izzi, DVM; Jeffrey Dodd-o, MD, PhD; Giorgio Raimondi, PhD; Damon S. Cooney, MD, PhD; WP Andrew Lee, MD, Leo Luznik, MD; Gerald Brandacher, MD  
*Johns Hopkins University, Baltimore, MD*
- 5:12 pm **19. SDF-1 Mediates Pre-adipocyte Neovascular Potential and Slows Progression of Type 2 Diabetes**  
 Janos Barrera, BS; Zeshaan Maan, MBBS, MSc, MRCS; Alexander J. Whittam, BA; Robert Rennert, MD; Dominik Duscher, MD; Kevin Paik, BA; Michael Hu, MD, MS, MPH; Graham Walmsley, BA; Michael T. Longaker, MD, MBA; Geoffrey C. Gurtner, MD, FACS  
*Stanford School of Medicine, Palo Alto, CA*
- 5:21 pm **20. Defining the Role of the Vasculogenic Niche in Trauma-induced Heterotopic Ossification using Novel Imaging and Lineage-tracing Mice**  
 Shailesh Agarwal, MD<sup>1</sup>; Shawn Loder, BS<sup>1</sup>; Cameron Brownley, BS<sup>1</sup>; Joathan Peterson, BS<sup>1</sup>; Eboda Oluwatobi, BS<sup>1</sup>; Ronald Tompkins, MD<sup>2</sup>; David Herndon, MD<sup>3</sup>; Hsiao Sung, DDs, MD<sup>1</sup>; Wenzhao Zeng, PhD<sup>4</sup>; Dolrudee Jumlongras, PhD<sup>5</sup>; Bjorn Olsen, PhD<sup>5</sup>; Paul S. Cederna, MD<sup>1</sup>; Steven R. Buchman, MD<sup>1</sup>; Benjamin Levi, MD<sup>1</sup>  
<sup>1</sup>University of Michigan, Ann Arbor, MI, <sup>2</sup>Massachusetts General Hospital, Boston, MA, <sup>3</sup>University of Texas Medical Branch, Galveston, TX, <sup>4</sup>Stanford University, Stanford, CA, <sup>5</sup>Harvard Dental School, Boston, MA.
- 5:30 – 7:00 pm **Welcome Reception**  
*The Space Needle*

## **Friday, May 15, 2015**

- 7:00 am – 5:30 pm **Registration**  
*Cascade Ballroom Foyer*
- 7:00 am – 5:30 pm **Speaker Ready Room**  
*Cascade Ballroom Foyer*
- 7:00 am – 5:30 pm **Exhibits**  
*Cascade Ballroom Foyer*

- 7:00 – 8:00 am**      **Continental Breakfast with Exhibitors**  
*Cascade Ballroom Foyer*
- 8:00 – 9:30 am**      **Session 3 Best Papers**  
*Cascade Ballroom*
- 8:00 am      **21. Therapeutic Modulation of an Embryonic Fibroblast Lineage**  
Graham G. Walmsley, BA; Michael S. Hu, MD; Zeshaan N. Maan, MD; Yuval Rinkevich, PhD; Michael Januszyk, MD; Dominic Duscher, MD; Alexander Whittam, BA; David Atashroo, MD; Ruth Tevlin, MD; Elizabeth Zielins, MD; Peter H. Lorenz, MD; Irving L. Weissman, MD; Geoffrey C. Gurtner, MD; Michael T. Longaker, MD  
*Stanford University, Stanford, CA*
- 8:09 am      **22. Cd4+ Cells Home to and Initiate Pathological Changes of Lymphedema after Lymphatic Injury**  
Gabriela D. Garcia Nores, MD<sup>1</sup>; Daniel A. Cuzzzone, MD<sup>2</sup>; Jason C. Gardenier, MD<sup>1</sup>; Ira L. Savetsky, MD<sup>1</sup>; Jeremy S. Torrisi, BA<sup>1</sup>; Matthew D. Nitti, BA<sup>1</sup>; Geoffrey E. Hespe, BS<sup>1</sup>; Raghu P. Kataru, PhD<sup>1</sup>; Babak J. Mehrara, MD<sup>1</sup>  
*<sup>1</sup>Memorial Sloan Kettering Cancer Center, New York, NY, <sup>2</sup>New York University Hospital Center, New York, NY*
- 8:18 am      **23. WITHDRAWN**
- 8:18 am      **24. Effects of Obesity and Diabetes Mellitus on Adipose Tissue Derived Stromal Cells- Implications for Health, Massive Weight Loss and Therapeutics**  
Michael W. Findlay, MBBS, PhD, FRACS, FACS; Robert C. Rennert, MD; Michael Sorkin, MD; Michael Januszyk, MD; Peter A. Than, MD; Christopher Davis, MBBCh, MRCS; H. Peter Lorenz, MD, FACS; Homero Rivas, MD, MBA, FACS; John M. Morton, MD, FACS; Geoffrey C. Gurtner, MD, FACS  
*Stanford University, Stanford, CA*
- 8:27 am      **25. Enhancement of Nerve Regeneration after Delayed Repair with Controlled Release of Neurotrophic Factors**  
Kasra Tajdaran, MASc<sup>1</sup>; M. Cecilia Alvarez-Veronesi, MASc<sup>1</sup>; Matthew D. Wood, PhD<sup>2</sup>; Molly S. Shoichet, PhD<sup>1</sup>; Tessa Gordon, PhD<sup>1</sup>; Gregory H. Borschel, MD, FACS, FAPP<sup>1</sup>  
*<sup>1</sup>University of Toronto, Toronto, ON, Canada, <sup>2</sup>Washington University, St. Louis, MO*
- 8:36 am      **26. Added Risk in Patients Undergoing Matching Procedures at Time of Immediate Breast Reconstruction: An ACS-NSQIP Study of 24,191 Patients**  
Mohamad Sebai, MBBS; Carisa Cooney, MPH; Buchi Ogbuagu, MD; MPH; Pablo Baltodano, MD; Chris Devulapalli, MD; Michele Manahan, MD; Gedge Rosson, MD  
*Johns Hopkins Hospital, Baltimore, MD*
- 8:45 am      **27. Tissue-Engineered, Vascularized Skin Flaps Containing Dermal Appendages**  
Rachel C. Hooper, MD; Adam M. Jacoby, BA; Ope A. Asanbe, MD; Wilmina N. Landford, BA; Peipei Zhang, PhD; Hector L. Osoria, BS; Alice

Harper, BA; Jason A. Spector, MD, FACS  
*Weill Cornell Medical College, New York, NY*

- 8:54 am **28. Propranolol Alters IH Development Via Beta2-adrenergic Receptor Blockade**  
Ryan W. England, BS; Naikhoba C.O. Munabi, BA; Jan K. Kitajewski, PhD; Carrie J. Shawber, PhD; June K. Wu, MD  
*Columbia University, New York, NY*
- 9:03 am **29. Endothelial CXCL12 Recruits a Novel Circulating Progenitor Cell in Response to Tissue Injury**  
Zeshaan N. Maan, MBBS, MSc, MRCS; Dominik Duscher, MD; Alexander J. Whittam, BA; I N. Vial, MD; Michael Januszyk, MD, PhD, Lauren Fischer, MD; Robert C. Rennert, MD; Melanie Rodrigues, PhD; Michael S. Hu, MD, MS, MPH; Graham G. Walmsley, BA; Michael T. Longaker, MD, MBA; Geoffrey C. Gurtner, MD, FACS  
*Stanford University School of Medicine, Stanford, CA*
- 9:12 am **30. A Nonsurgical, Lifelong Animal Model Lymphedema through Toxin-mediated Lymphatic Ablation**  
Jason C. Gardenier, MD; Gina T. Farias-Eisner, MD; Raghu P. Kataru, PhD; Ira L. Savetsky, MD; Jeremy S. Torrisi, BA; Gabriela D. Garcia Nores, MD; Matthew D. Nitti, BA; Geoffrey E. Hespe, BS; Babak J. Mehrara, MD  
*Memorial Sloan Kettering Cancer Center, New York, NY*
- 9:30 – 10:30 am Panel Session**  
*Cascade Ballroom*
- 10:30 – 11:00 am Coffee with Exhibitors**  
*Cascade Ballroom Foyer*
- 11:00 – 11:40 am Session 4 Best EPSRC Papers**  
*Cascade Ballroom*
- 11:00 am **31. Malignant Melanoma Thickness and Risk of Future Malignancies**  
Katie Young<sup>1,2</sup>; Alexander Ives<sup>3</sup>; Tim Jones<sup>3</sup>; J. Verne<sup>3</sup>; Alex Varey<sup>2</sup>; Yoav Ben-Shlomo<sup>1</sup>  
*<sup>1</sup>University of Bristol, School of Social and Community Medicine, Bristol, United Kingdom, <sup>2</sup>North Bristol NHS Trust, Department of Plastic Surgery, Bristol, United Kingdom, <sup>3</sup>Public Health England South West, Bristol, United Kingdom*
- 11:10 am **32. Impaired Regenerative Ability of Aged and Diabetic Adipose Derived Stem Cells is Caused by Depletion of Cell Subpopulations**  
Dominik Duscher<sup>1</sup>; Robert. C. Rennert<sup>1</sup>; Michael Januszyk<sup>1</sup>; Zeshaan N. Maan<sup>1</sup>; Alexander J. Whittam<sup>1</sup>; Graham G. Walmsley<sup>1,2</sup>; Michael S. Hu<sup>1</sup>; Geoffrey C. Gurtner<sup>1</sup>  
*<sup>1</sup>Stanford University, Division of Plastic Surgery, Stanford, CA, <sup>2</sup>Stanford University, Institute for Stem Cell Biology and Regenerative Medicine, Stanford, CA*
- 11:20 am **33. Reliability and Validity of RPNI Signaling of Gait Phases during Voluntary Walking**  
Andrej Nedic<sup>1</sup>; Daniel Ursu<sup>2</sup>; Jana Moon<sup>1</sup>; Cheryl Hassett<sup>1</sup>; R. Brent Gillespie<sup>2</sup>; Nicholas B. Langhals<sup>1</sup>; Paul Cederna<sup>1</sup>; Melanie Urbanek<sup>1</sup>

<sup>1</sup>University of Michigan, Plastic and Reconstructive Surgery, Ann Arbor, MI, <sup>2</sup>University of Michigan, Mechanical Engineering, Ann Arbor, MI

- 11:30 am **34. In-Vivo Changes in Nipple-Areolar Complex Perfusion after Breast Augmentation with Implants**  
Niclas P. Broer; E. Teng; Katie Weichman; S. Voigt; A. Forte; S. Kwei  
*Klinikum Bogenhausen, Plastische Chirurgie, München, Germany*
- 11:40 am – 1:00 pm **Lunch**  
*Cascade Ballroom Foyer*
- 1:00 – 2:00 pm **Guest Speaker**  
*Cascade Ballroom*
- 2:00 – 3:30 pm **Session 5 Group A**  
*Cascade Ballroom I*
- 2:00 pm **35. The Use of Co<sup>2</sup> Fractional Photothermolysis for the Treatment of Burn Scars**  
Benjamin Levi, MD; Amir Ibrahim, MD; Katie Mathews, BA; Brandon Wojcik, MD; Jason Gomez, BS; Shawn Fagan, MD, FACS; William Gerald Austen, Jr., MD, FACS; Jeremy Goverman, MD, FACS  
*Massachusetts General Hospital, Boston, MA*
- 2:07 pm **36. Comparing the Sartorius versus the Rectus Femoris Flap in the Treatment of the Infected Vascular Graft Groin Wound: A Cost-Utility Analysis**  
Abhishek Chatterjee, MD, MBA<sup>1</sup>; Tomasz Kosowski, MD, MBA<sup>2</sup>; Bryan Pyfer, BS<sup>3</sup>; Julia Tchou, MD, PhD<sup>1</sup>; Carla Fisher, MD<sup>1</sup>; Sirish Maddali, MD<sup>4</sup>  
*<sup>1</sup>University of Pennsylvania, Philadelphia, PA, <sup>2</sup>Miami Breast Center, Miami, FL, <sup>3</sup>Dartmouth Medical School, Lebanon, NH, <sup>4</sup>Plastic and Hand, Portland, ME*
- 2:14 pm **37. A Qualitative Study of Breast Reconstruction Decision-making Among Asians**  
Michelle M. Chang, BS; Rose Fu, MD; Margaret Chen, MD; Christine Rohde, MD, MPH  
*New York Presbyterian Hospital/Cornell-Columbia, New York City, NY*
- 2:21:00 pm **38. Short-term Adverse Outcome Comparison in Autologous Breast Reconstruction: Latissimus, Free, and TRam Flaps**  
Benjamin B. Massenburg, BA; Paymon Sanati-Mehrizy, BA; Michael J. Ingargiola, MD; Jonatan Hernandez Rosa, MD; Peter Taub, MD  
*Icahn School of Medicine at Mount Sinai, New York, NY*
- 2:28 pm **39. A Qualitative Study of Breast Reconstruction Decision-Making Among Asians**  
Michelle M. Chang, BS; Rose Fu, MD; Margaret Chen, MD; Christine Rohde, MD, MPH  
*Columbia University Medical Center, New York, NY*
- 2:35 pm **40. Comparison of Complication Rates between Freeze-Dried and Ready-to-Use Human Acellular Dermal Matrices in Women Undergoing Implant-Based Breast Reconstruction: A Meta-Analysis**

David Macarios, MBA<sup>1</sup>; Leah Griffin, MS<sup>2</sup>; Abhishek Chatterjee, MD; MBA<sup>3</sup>; Lauren J. Lee, PharmD, MS<sup>1</sup>; Cheryl Milburn, MS, MLIS<sup>1</sup>; Maurice Y. Nahabedian, MD<sup>4</sup>

<sup>1</sup>LifeCell an Acelity company, Bridgewater, NJ, <sup>2</sup>Acelity, San Antonio, TX, <sup>3</sup>University of Pennsylvania Hospital, Philadelphia, PA, <sup>4</sup>Georgetown University Department of Plastic Surgery, Washington, DC

2:42 pm

**41. Perioperative Anticoagulation Increases the Risk of Complications after Cranioplasty**

Eric W. Sankey, BS<sup>1</sup>; Joseph Lopez, MD, MBA<sup>2</sup>; Shuting Zhong, BS<sup>3</sup>; Ignacio Jusue-Torres, MD<sup>2</sup>; Jason Liauw, MD<sup>2</sup>; Judy Huang, MD<sup>2</sup>; Henry Brem, MD<sup>2</sup>; Chad Gordon, DO<sup>2</sup>

<sup>1</sup>Johns Hopkins University School of Medicine, Baltimore, MD, <sup>2</sup>Johns Hopkins Hospital, Baltimore, MD, <sup>3</sup>University of Illinois College of Medicine, Rockford, IL

2:49 pm

**42. Volumetric Changes of the Pedicled Tram Flap and the Contralateral Native Breast in the Long Term Follow Up**

Eun Key Kim, MD, PhD; Jin Sup Eom, MD, PhD; Taik Jong Lee, MD; PhD; Hee Jong Lee, MD; Young Chul Seo, MD; Ji Young Yun, MD; Sang Shin Lee, MD

Asan Medical Center, Seoul, Korea, Republic of

2:56 pm

**43. Risk Analysis for Post-Operative Complications after Immediate Tissue Expander Breast Reconstruction (TE-IBR)**

Gabriel Klein, MD<sup>1</sup>; Bret T Phillips, MD, MBA<sup>2</sup>; Wilmena Landford, BS<sup>1</sup>; A. Laurie Shroyer, PhD<sup>1</sup>; Duc Bui, MD<sup>1</sup>; Alex Dagum, MD<sup>1</sup>; Sami Khan, MD<sup>1</sup>

<sup>1</sup>Stony Brook University Hospital, Stony Brook, NY, <sup>2</sup>Duke University, Division of Plastic, Maxillofacial and Oral Surgery, Durham, NC

3:03 pm

**44. Outcomes and Safety of Combined Abdominoplasty-Hysterectomy versus the Individual Procedures**

Benjamin B. Massenburg, BA; Paymon Sanati-Mehrziy, BA; Michael J. Ingargiola, MD; Jonatan Hernandez Rosa, MD; Peter J. Taub, MD; FACS, FAAP

Icahn School of Medicine at Mount Sinai, New York, NY

3:10 pm

**45. Maintenance of Certification: Do Current Practice Patterns in Craniomaxillofacial Surgery Follow Evidence-Based Medicine?**

Michael S. Gart, MD<sup>1</sup>; Arun K. Gosain, MD<sup>2</sup>

<sup>1</sup>Northwestern University, Chicago, IL, <sup>2</sup>Ann & Robert H. Lurie Children's Hospital of Chicago, Chicago, IL

3:17 pm

**46. Body Image and Quality of Life: Changes with Gastric Bypass Surgery and Body Contouring**

Nirav B. Patel, MD, MS, JD<sup>1</sup>; Sven Gunther, AS, BS<sup>2</sup>; Ping Song, BA<sup>3</sup>; Chin-Shang Li, PhD<sup>4</sup>; Nathan A. Kludt, MD<sup>5</sup>; Carolyn Y.G. Lee, RN, MSN, ANP-C, PSN<sup>1</sup>; Shannon M. Hearney, BS Candidate<sup>6</sup>; Kamlesh B. Patel, MD<sup>7</sup>; Mohamed R. Ali, MD<sup>8</sup>; Michael S. Wong, MD<sup>1</sup>

<sup>1</sup>UC Davis Medical Center, Division of Plastic Surgery, Sacramento, CA,

<sup>2</sup>UC Davis School of Medicine, Sacramento, CA, <sup>3</sup>Virginia

Commonwealth University School of Medicine, Richmond, VA, <sup>4</sup>UC Davis School of Medicine, Division of Biostatistics, Sacramento, CA,

<sup>5</sup>Joseph R. Burlin, MD, Inc., Stockton, CA, <sup>6</sup>University of California, Davis, Davis, CA, <sup>7</sup>Washington University School of Medicine, St. Louis,



MO, <sup>8</sup>UC Davis Medical Center, Division of Bariatric Surgery,  
Sacramento, CA

2:00 pm

**47. Outcomes of a Hand Surgery Mission to Honduras**

Carolyn Chuang, BS<sup>1</sup>; Jacob Azurdia, MD<sup>2</sup>; David Asuzu, PhD<sup>1</sup>; Kyle Ragins, BA<sup>1</sup>; Grant Thomson, MD<sup>1</sup>

<sup>1</sup>Yale School of Medicine, New Haven, CT, <sup>2</sup>University of Toledo College of Medicine and Life Sciences, Toledo, OH

2:00 – 3:30 pm

**Session 5 Group B**

*Cascade Ballroom II*

2:07 pm

**48. Characterization of Factors Leading to Heterotopic Ossification in Adult Burn Injury Using a Large Multi-Institutional Burn Database**

Aviram M. Giladi, MD, MS<sup>1</sup>; Prakash Jayakumar, MBBS<sup>2</sup>; Lewis Kazis, SD<sup>3</sup>; Katie Mathews, BA<sup>4</sup>; Karen Kowalske, MD<sup>5</sup>; Dagmar Amtmann, PhD<sup>6</sup>; Jeffrey C. Schneider, MD<sup>7</sup>; Paul S. Cederna, MD<sup>1</sup>; Colleen M. Ryan, MD, FACS<sup>8</sup>; Benjamin Levi, MD<sup>1</sup>

<sup>1</sup>University of Michigan, Ann Arbor, MI, <sup>2</sup>Massachusetts General Hospital, Boston, MA, <sup>3</sup>Boston University, Boston, MA, <sup>4</sup>Harvard University Medical School, Boston, MA, <sup>5</sup>University of Texas Southwestern, Dallas, TX, <sup>6</sup>University of Washington, Seattle, WA, <sup>7</sup>Harvard University Medical School/Spaulding Rehabilitation Hospital, Boston, MA, <sup>8</sup>Massachusetts General Hospital/Shriners Hospital for Children-Boston, Boston, MA

2:14 pm

**49. PEMF Modulates Cytokines in the Wound Milieu to Reduce Post-Operative Inflammation: Application to Autologous Breast Reconstruction**

Naikhoba C. O. Munabi, BA, June K. Wu, MD, Erin M. Taylor, MD, Jeffrey A. Ascherman, MD, Arthur A. Pilla, PhD, Christine H. Rohde, MD, MPH

*Columbia University, New York, NY*

2:21 pm

**50. Optimizing Satisfaction with Care in Breast Reconstruction**

Wess A. Cohen, MD<sup>1</sup>; Tiffany N.S. Ballard, MD<sup>2</sup>; Jennifer B. Hamill, MPH<sup>2</sup>; Hyungjin M. Kim, ScD<sup>3</sup>; Xiaoxue Chen, BS<sup>3</sup>; Stefan J. Cano, PhD<sup>4</sup>; Edwin G. Wilkins, MD, MS<sup>2</sup>; Andrea L. Pusic, MD, MHS<sup>1</sup>

<sup>1</sup>Memorial Sloan Kettering Cancer Center, New York, NY, <sup>2</sup>University of Michigan Health System, Ann Arbor, MI, <sup>3</sup>University of Michigan, Ann Arbor, MI, <sup>4</sup>Plymouth University Peninsula Schools of Medicine and Dentistry, Plymouth, United Kingdom

2:28 pm

**51. Immediate versus Delayed Reconstruction after Mastectomy -- An Analysis of 30 Day Post-Operative Outcomes**

Paymon Sanati-Mehrziy, BA; Benjamin B. Massenburg, BA; John M. Rozehnal, BA; Michael J. Ingargiola, MD; Jonatan Hernandez-Rosa, MD; Peter J. Taub, MD

*Icahn School of Medicine at Mount Sinai, New York, NY*

2:35 pm

**52. Outcomes of Craniofacial Microsomia Treatment: Microtia Reconstruction**

Rachel S. Mandelbaum, BA<sup>1</sup>; Deborah B. Martins, BS<sup>1</sup>; Sarah Park, BS<sup>1</sup>; Emily Dubina, MD<sup>1</sup>; Akira Ishiyama, MD<sup>2</sup>; James P. Bradley, MD<sup>1</sup>; Justine C. Lee, MD, PhD<sup>1</sup>

<sup>1</sup>*UCLA Division of Plastic and Reconstructive Surgery, Los Angeles, CA,*

<sup>2</sup>*UCLA Department of Head and Neck Surgery, Los Angeles, CA*

2:42 pm

**53. Are Patients with Low Body Mass Index Candidates for Deep Inferior Epigastric Perforator Flaps for Unilateral Breast Reconstruction?**

Pieter G. Koolen, MD; Neel A. Kantak, MD; Colette Martin, BS; Adam M. Tobias, MD; Bernard T. Lee, MD, MBA; Samuel J. Lin, MD  
*Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, MA*

2:49 pm

**54. Polysomnogram Parameters of Children with and without Robin Sequence Undergoing Cleft Surgery are Not Significantly Different**

Justine M. McGauley, BA; Jeremy Goss, BA; Eric Adjei Boakye, MA; Margie S. Hunter, BS; Paula Buchanan, MPH, PhD; Shalini Paruthi, MD; Alexander Y. Lin, MD  
*Saint Louis University, St. Louis, MO*

2:56 pm

**55. Patients with Clefts Who Undergo Sleep Studies after Surgery do not Show Significantly Improved Sleep Parameters after Adenotonsillectomy**

Justine M. McGauley, BA; Jeremy Goss, BA; Eric Adjei Boakye, MA; Margie S. Hunter, BS; Paula Buchanan, MPH, PhD; Shalini Paruthi, MD; Alexander Y. Lin, MD  
*Saint Louis University, St. Louis, MO*

3:03 pm

**56. Long Term Outcomes of Total Knee Arthroplasty Following Soft Tissue Defect Reconstruction with Flaps**

Grzegorz Kwiecien, MD; Grigorios Lamarin, MD, PhD; Bahar Bassiri Gharb, MD, PhD; Trevor Murray, MD; Mark F. Hendrickson, MD; James E. Zins, MD; Raymond Isakov, MD  
*Cleveland Clinic, Cleveland, OH*

3:10 pm

**57. Does Time affect Patient Satisfaction?**

Wess A. Cohen, MD, Nima P. Patel, MD  
*Maimonides Medical Center, Brooklyn, NY*

3:17 pm

**58. Patient Perceived Benefit in Facial Aesthetic Procedures: The FACE-Q as a Tool to Study Botulinum Toxin Injection Outcomes**

Anthony J. Taglienti, MD<sup>1</sup>; Anthony Wilson, MD<sup>1</sup>; Brian Chang, BA<sup>2</sup>; Nancy Folsom, RN<sup>1</sup>; Catherine Chang, MD<sup>1</sup>; Bianca Chin, MD<sup>1</sup>; Ivona Percec, MD, PhD<sup>1</sup>

<sup>1</sup>*Hospital of the University of Pennsylvania, Philadelphia, PA,* <sup>2</sup>*Perelman School of Medicine at the University of Pennsylvania, Philadelphia, PA*

**2:00 – 3:30 pm**

**Session 5 Group C**

*Elliott Bay*

2:00 pm

**59. Quantification of Operative Time and the Factors that Prolong Microsurgical Breast Free Flap Procedures**

Nelson Rodriguez-Unda, MD; Jose M. Flores, MPH; Carisa M. Cooney, MPH; Gedge D. Rosson, MD  
*Johns Hopkins School of Medicine, Baltimore, MD*

- 2:07pm **60. The Impact of Hormonal Therapy on Outcomes of Total Skin-Sparing Mastectomy and Immediate Tissue Expander-Based Breast Reconstruction**  
Frederick Wang, MD; Anne Warren Peled, MD; Barbara Fowble, MD; Michael Alvarado, MD; Cheryl Ewing, MD; Laura Esserman, MD, MBA; Robert Foster, MD; Hani Sbitany, MD  
*University of California, San Francisco, San Francisco, CA*
- 2:14 pm **61. Effect Modifiers of Radiation Risks in Total Skin-Sparing Mastectomy with Immediate Tissue Expander-Implant Reconstruction**  
Frederick Wang, MD; Anne Warren Peled, MD; Barbara Fowble, MD; Michael Alvarado, MD; Cheryl Ewing, MD; Laura Esserman, MD, MBA; Robert Foster, MD; Hani Sbitany, MD  
*University of California, San Francisco, San Francisco, CA*
- 2:21 pm **62. The Bipedicule-Conjoined Deep Inferior Epigastric Perforator Flap for Unilateral and Bilateral Breast Reconstruction: A Concept in Evolution**  
Pieter G. Koolen, MD<sup>1</sup>; Bernard T. Lee, MD, MBA<sup>1</sup>; Samuel J. Lin, MD<sup>1</sup>; Heather Erhard, MD<sup>2</sup>; David T. Greenspun, MD, MSc<sup>3</sup>  
*<sup>1</sup>Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, MA, <sup>2</sup>Albert Einstein College of Medicine, Bronx, NY, <sup>3</sup>Greenwich Hospital, Greenwich, CT*
- 2:28 pm **63. A Quantitative Analysis of Different Botulinum Toxin Formulations: A Randomized Double Blind Prospective Clinical Trial of Comparative Dynamic Strain Reduction**  
Anthony J. Wilson, MD; Brian Chang, BS; Bianca C. Chin, MD; Anthony J. Taglinenti, MD; Nancy Folsom, RN; Ivona Percec, MD, PhD  
*University of Pennsylvania, Philadelphia, PA*
- 2:35 pm **64. Assessing Recurrence Rates Following Wide Local Excision of Head and Neck Malignant Melanoma: Immediate versus Delayed Reconstruction**  
Tiago R. Matos, MD MSc.<sup>2</sup>, Pieter G. Koolen, MD<sup>1</sup>, Ahmed M. S. Ibrahim, MD<sup>1</sup>, Jie Sun, BA<sup>3</sup>, Bernard T. Lee, MD, MBA<sup>1</sup>, Robert A. Frankenthaler, MD<sup>1</sup>, Samuel J. Lin, MD<sup>1</sup>  
*<sup>1</sup>Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, MA, <sup>2</sup>Brigham and Women's Hospital, Harvard Medical School, Boston, MA, <sup>3</sup>Harvard School of Dental Medicine, Boston, MA*
- 2:42 pm **65. Free Flap Take-backs Following Microvascular Thrombosis: Evidence-based Strategies to Improve Outcomes and Expedite Salvage**  
Michael N. Mirzabeigi, MD; David L. Colen, MD; Jonas A. Nelson, MD; Suhail Kanchwala, MD; Stephen J. Kovach, MD; Joseph M. Serletti, MD; Liza C. Wu, MD  
*University of Pennsylvania, Philadelphia, PA*
- 2:49 pm **66. Is Vicryl Mesh Really a Safe Alternative to Acellular Dermis in Tissue Expander-based Breast Reconstruction?**  
Stacy Henderson, MD; Brett Michelotti, MD; Susie Sun, MD; Cathy Henry, MD; Dino Ravnic, MD; T. Shane Johnson, MD; Donald Mackay, MD; John Potochny, MD  
*Penn State Milton S. Hershey Medical Center, Hershey, PA*

- 2:56 pm **67. The Clinical Efficacy and Financial Impact of Laser-assisted Indocyanine Green Angiography on Implant-based Breast Reconstruction at a Large Academic Medical Center**  
Christin A. Harless, MD; Sue Visscher, PHD; Steven R. Jacobson, MD  
*Mayo Clinic, Rochester, Rochester, MN*
- 3:03 pm **68. Comparative Study of Liposomal Bupivacaine versus Paravertebral Block for Pain Control Following Mastectomy with Immediate Tissue Expander Reconstruction**  
Jad M. Abdelsattar, MBBS; Judy C. Boughey, MD; Anita T. Mohan, MBBS; Prakriti Gaba, BS; Bill Tran, MD; Scott Harmsen, MD; Christopher J. Jankowski, MD; James W. Jakub, MD; Tina J. Hieken, MD; Amy C. Degnim, MD; David R. Farley, MD; Karim Bakri, MBBS; Steven R. Jacobson, MD; Valerie Lemaine, MD; Renata L. Maricevich, MD; Michel Saint-Cyr, MD  
*Mayo Clinic, Rochester, MN*
- 3:10 pm **69. Intrathoracic Muscle Flaps: Comparison of Outcomes for Infection versus Prophylactic Airway Coverage**  
Ziyad S. Hammoudeh, MD; Amelia C. Van Handel, BS; Akhavan A. Arya, BS; Francis C. Nichols, III, MD; Brian T. Carlsen, MD; Steven L. Moran, MD  
*Mayo Clinic, Rochester, MN*
- 3:17 pm **70. Immediate Implant Exchange During Acute Infection in the Setting of Breast Reconstruction**  
Russell E. Ettinger, MD; Shailesh Agarwal, MD; Theodore A. Kung, MD; David L. Brown, MD University of Michigan, Ann Arbor, MI.
- 3:24 pm **71. T-regulatory Cell Proliferation after Lymphatic Injury Regulates Immune Function in Lymphedema**  
Ira L. Savetsky, MD; Swapna Ghanta, MD; Nicholas J. Albano, BS; Jason C. Gardenier, MD; Jeremy S. Torrasi, BA; Gabriela D. Garcia Nores, MD; Matthew D. Nitti, BA; Geoffrey E. Hesper, BS; Raghu P. Kataru, PhD; Babak J. Mehrara, MD, FACS  
*Memorial Sloan Kettering Cancer Center, New York, NY*
- 3:30 – 4:00 pm** **Coffee with Exhibitors and Poster Presentations**  
*Cascade Ballroom Foyer & Puget Sound Room*
- 4:00 – 5:30 pm** **Session 6 Group A**  
*Cascade Ballroom I*
- 4:00 pm **72. Endothelial Cells from Capillary Malformations are Enriched for Somatic GNAQ Mutations and Aberrantly Express PDGFR $\beta$**   
Javier A. Couto, BS; Lan Huang, PhD; Matthew P. Vivero, BA; Nolan Kamitaki, BA; Reid A. Maclellan, MD, MMSc; John B. Mulliken, MD; Joyce Bischoff, PhD; Matthew L. Warman, MD; Arin K. Greene, MDC; MMSc  
*Boston Children's Hospital, Harvard Medical School, Boston, MA*
- 4:07 pm **73. A Somatic MAP3K3 Mutation is Associated with Verrucous Venous Malformation**  
Javier A. Couto, BS; Matthew P. Vivero, BA; Harry P.W. Kozakewich, MD; Amir H. Taghinia, MD; John B. Mulliken, MD; Matthew L. Warman,

MD; Arin K. Greene, MD, MMSc  
*Boston Children's Hospital, Harvard Medical School, Boston, MA*

4:14 pm

**74. Palate and Mandibular Form are Regulated by Actin Capping Protein CAPZB Function**

Kusumika Mukherjee, PhD<sup>1</sup>, Kanaa Ishii, MD<sup>1</sup>, Michael J. Grimaldi, B.A.<sup>1</sup>, Christina Nguyen, BS<sup>1</sup>, Michael Talkowski, PhD<sup>1</sup>, James Gusella, PhD<sup>1</sup>, Richard Maas, MD, PhD<sup>2</sup>, Cynthia C. Morton, PhD<sup>2</sup>, Eric C. Liao, MD, PhD<sup>1</sup>

<sup>1</sup>*Massachusetts General Hospital, Boston, MA*, <sup>2</sup>*Brigham and Women's Hospital, Boston, MA*

4:21 pm

**75. Identification of Mandibular Growth Center via Clonal Cell Analysis**

Irving TC Ling, MBBS, MRCSEd; Lucie Rochard, PhD; Eric C. Liao, MD; PhD

*Massachusetts General Hospital, Harvard Medical School, Boston, MA*

4:28 pm

**76. Hair Follicle Specific ALK2/ACVR1 Critically Regulates Stem Cell Maintenance and Skin Development**

Michael Sorkin, MD; Shailesh Agarwal, MD; Shawn Loder, BS; Cameron Brownley, BS; Kavitha Ranganathan, MD; Jon Li, MD; Shuli Li, PhD; Paul Cederna, MD; Benjamin Levi, MD

*University of Michigan, Ann Arbor, MI*

4:35 pm

**77. Modeling Pfeiffer Syndrome in Zebrafish by CRISPR-targeted Homologous Recombination**

Joanna P. Tomaszewski, MS; Arun K. Gosain, MD; Jolanta M. Topczewska, PhD

*Ann & Robert H. Lurie Children's Hospital of Chicago, Chicago, IL*

4:42 pm

**78. Generating an irf6 Mutant Model for Rapid Analysis of Human Genetic Variants, Elucidate Gene Regulatory Network, and Drug Discovery to Mitigate Cleft Lip and Palate**

Christina A. Nguyen, BS; Edward B. Li, BA; Kusumika Mukherjee, PhD; Lisa Gfrerer, MD; Eric C. Liao, MD, PhD

*Massachusetts General Hospital, Boston, MA*

4:49 pm

**79. Whole-Proteome Analysis of Craniosynostotic Tissue Suggests a Link Between Inflammatory Signaling and Premature Suture Fusion**

Sarah Lyon, BS<sup>1</sup>; Michael Januszyk, MD<sup>2</sup>; Anoop Mayampurath, PhD<sup>1</sup>; Darrel J. Waggoner, MD<sup>1</sup>; David M. Frim, MD<sup>1</sup>; Tong-Chuan He, MD, PhD<sup>1</sup>; Russell R. Reid, MD PhD<sup>1</sup>

<sup>1</sup>*University of Chicago, Chicago, IL*, <sup>2</sup>*Stanford University, Stanford, CA*

4:56 pm

**80. TWIST1 Silencing Enhances in vitro and in vivo Osteogenic Differentiation of Human Adipose Derived Stem Cells by Triggering Activation of BMP-ERK/FGF Signaling and TAZ Upregulation**

Kshemendra Senarath-Yapa, MA, MBBChir, MRCS<sup>1</sup>, Natalina Quarto, PhD<sup>1</sup>, Andrea Renda, PhD<sup>2</sup>, Michael Longaker, MD MBA<sup>1</sup>

<sup>1</sup>*The Hagey Laboratory for Pediatric Regenerative Medicine, Stanford University, Stanford, CA*, <sup>2</sup>*Dipartimento di Scienze Biomediche Avanzate, Universita' degli Studi di Napoli, Napoli, Italy*

- 5:03 pm **81. Impact of koliber Mutation on Patency of Cranial Suture in Zebrafish**  
 Jolanta M. Topczewska, PhD; Rupa Mirmira, BS; Joanna P. Tomaszewski, MS; Rebecca Anderson, PhD candidate; Jacek Topczewski, PhD; Arun Gosain, MD  
*Northwestern Feinberg School of Medicine, Chicagp, IL*
- 5:10 pm **82. BMP-2 Use in Alveolar Cleft Repair is Associated with an Increased Incidence of Postoperative Nasal Stenosis**  
 Jeremy A. Goss, BA; Margie S. Hunter, BS; Alexander Y. Lin, MD  
*Saint Louis University School of Medicine, St. Louis, MO*
- 5:17 pm **83. Connective Tissue Growth Factor (CTGF/CCN2) is Essential for Secondary Palatogenesis**  
 Alex G. Lambi, BA<sup>1</sup>; Joseph T. Tarr, BA<sup>1</sup>; David I. Hindin, MD<sup>2</sup>; Christina Mundy, PhD<sup>1</sup>; Honey Hendsi, PhD<sup>1</sup>; Steven N. Popoff, PhD<sup>1</sup>; James P. Bradley, MD<sup>2</sup>  
<sup>1</sup>Temple University School of Medicine, Philadelphia, PA, <sup>2</sup>Temple University Hospital, Philadelphia, PA
- 4:00 – 5:30 pm** **Session 6 Group B**  
*Cascade Ballroom II*
- 4:00 pm **84. Surgical Correction for Metopic Craniosynostosis: A 3D Photogrammetric Analysis of Cranial Vault Outcomes**  
 Olivia E. Linden, BA; Vanessa M. Baratta, BA; Margaret M. Byrne, RN; Petra M. Klinge, MD, PhD; Stephen R. Sullivan, MD, MPH; Helena OB Taylor, MD, PhD  
*Warren Alpert Medical School of Brown University, Rhode Island Hospital, Hasbro Children's Hospital, Providence, RI*
- 4:07 pm **85. Brain Electrophysiology in Craniosynostosis and Deformational Plagiocephaly**  
 Jenny F. Yang, BS; Eric D. Brooks, BS; Peter W. Hashim, MD; Roberto Travieso, MD; Jordan Turner, MD; Hannah Reuman, BA; Karen Law, BA; Emily Levy, BA; Linda C. Mayes, PhD; James C. McPartland, PhD; John A. Persing, MD  
*Yale University School of Medicine, New Haven, CT*
- 4:14 pm **86. Biomechanical Comparison of Lag Versus Bicortical Screw Fixation in Metacarpal Fractures**  
 Priya Lewis, BA; Benjamin Gerke, BS; Zachary Filip, MD; Serkan Inceoglu, PhD; Jane Dhillon, MD; Mark Martin, MD, DMD  
*Loma Linda University, Loma Linda, CA*
- 4:21 pm **87. An Automated Cleft Speech Evaluator Using Speech Recognition Software**  
 James R. Seaward, FRCS(Plast.)<sup>1</sup>; Julie Cook, MS, CCC-SLP<sup>2</sup>; Cortney Van'T Slot, MS, CCC-SLP<sup>2</sup>; Rami Hallac, PhD<sup>2</sup>; Megan Vucovich, MD<sup>1</sup>; Alex A. Kane, MD<sup>1</sup>  
<sup>1</sup>University of Texas Southwestern Medical Center, Dallas, TX, <sup>2</sup>Children's Medical Center, Dallas, TX
- 4:28 pm **88. Spontaneous Forehead Remodeling after Posterior Vault Reconstruction in Sagittal Synostosis**

Jose A. Gonzalez, BS; Olivia E. Linden, BA; Margaret E. Byrne, RN; Petra M. Klinge, MD, PhD; Stephen R. Sullivan, MD, MPH; Helena O. Taylor, MD, PhD  
*Brown University - Alpert Medical School, Providence, RI*

4:35 pm

**89. Optimization of Pathologic Fracture Healing after Radiotherapy Utilizing Amifostine in Combination with Deferoxamine**

Hannah C. Ratliff, BS candidate; Alexis Donneys, MD, MS; Yekaterina Polyatskaya, MD; Noah S. Nelson, BS; Cheyenne A. Vasseli, BS; Sagar S. Deshpande, BS; Jose J. Rodriguez, MD; Joshua P. Spiegel, BS; Erin E. Page, BS; Tulsi Patel, BS; Steven R. Buchman, MD  
*University of Michigan, Ann Arbor, MI*

4:42 pm

**90. Craniofacial Anomalies Result from Morphogenetic Defects in Cellular Positional Cues as Revealed by Genetic Analysis of Wnt Signaling**

Lucie J. Rochard, PhD; Stefanie Monica, BS; Yawei Kong, PhD; Michael Grimaldi, BS; Eric C. Liao, MD, PhD  
*Massachusetts General Hospital, Boston, MA*

4:49 pm

**91. Autophagy Mediates Environment-Gene Interactions in Orofacial Cleft Pathogenesis**

Lucie J. Rochard, PhD<sup>1</sup>; Edward Li, BS<sup>1</sup>; Christina Nguyen, BS<sup>1</sup>; James F. Gusella, PhD<sup>1</sup>; Richard Maas, MD, PhD<sup>2</sup>; Cynthia Morton, PhD<sup>2</sup>; Michael Talkowski, PhD<sup>1</sup>; Eric C. Liao, MD, PhD<sup>1</sup>  
*<sup>1</sup>Massachusetts General Hospital, Boston, MA, <sup>2</sup>Brigham and Women's Hospital, Boston, MA*

4:56 pm

**92. Using a Novel Transgenic Mouse to Identify Endochondral Ossification Precursor Cells and to Induce Bone Growth**

Shawn Loder, BS; Shailesh Agarwal, MD; Cameron Brownley, BS; John Li, MD; Michael Sorkin, MD; Shuli Li, PhD; Jonathan Peterson, BA; Yuji Mishina, PhD; Benjamin Levi, MD  
*University of Michigan, Ann Arbor, MI*

5:03 pm

**93. A Novel Analogue of Oxysterol Promotes in vitro and in vivo Bone Regeneration**

Kameron S. Rezzadeh, BA; Andres Segovia, MD; Akishige Hokugo, DDS, PhD; Reza Jarrahy, MD  
*UCLA Ronald Reagan Medical center, Los Angeles, CA*

5:10 pm

**94. Patient-Specific Tissue Engineered Constructs for Ear Reconstruction: Long Term (6 month) Results**

Benjamin P. Cohen, BS<sup>1</sup>; Rachel C. Hooper, MD<sup>2</sup>; Jennifer Puetzer, PhD<sup>1</sup>; Rachel Nordberg, MEng<sup>1</sup>; Ope A. Asanbe, MD<sup>2</sup>; Peipei Zhang, PhD<sup>2</sup>; Lawrence J. Bonassar, PhD<sup>1</sup>; Jason A. Spector, MD, FACS<sup>2</sup>  
*<sup>1</sup>Cornell University, Ithaca, NY, <sup>2</sup>Weill Cornell Medical College, New York, NY*

5:17 pm

**95. Combined Amifostine and Deferoxamine Therapy Preserves Biomechanics and Improves Union Rate in a Model of Distraction Osteogenesis Following Radiotherapy**

Noah S. Nelson, BS; Yekaterina Polyatskaya, MD; Alexander R. Zheutlin, BS; Joseph E. Perosky, MS; Alexis Donneys, MD, MS; Jose J. Rodriguez, MD; Sagar S. Deshpande, BS; Kenneth M. Kozloff, PhD;

Steven R. Buchman, MD  
*University of Michigan, Ann Arbor, MI*

5:24 pm

**96. Lymphatic Dysfunction Amplifies the Pathological Effects of Obesity in Skin Inflammation**

Ira L. Savetsky, MD; Nicholas J. Albano, BS; Jason C. Gardenier, MD; Jeremy S. Torrisi, BA; Gabriela D. Garcia Nores, MD; Matthew D. Nitti, BA; Geoffrey E. Hespe, BS; Raghu P. Kataru, PhD; Babak J. Mehrara, MD, FACS  
*Memorial Sloan Kettering Cancer Center, New York, NY*

4:00 – 5:30 pm

**Session 6 Group C**

*Elliott Bay*

4:00 pm

**97. Prevention of Vein Intimal Hyperplasia with Photochemical Tissue Passivation in a Porcine Model**

Saiqa I. Khan, MD; Harry M. Salinas, MD; Amanda Meppelink, BS; Michael C. McCormack, MBA; Mark A. Randolph, MAS; Robert W. Redmond, PhD; William G. Austen, Jr., MD  
*Massachusetts General Hospital - Harvard Medical School, Boston, MA*

4:07 pm

**98. Alternatively Activated M2 Macrophages Improve Autologous Fat Graft Survival via Induction of Angiogenesis in a Preclinical Model.**

Simon Gebremeskel, BScH; Kyle Phipps, PhD; Joshua Gillis, MD; Paul Hong, MD, FRCSC; Brent Johnston, PhD; Michael Bezuhyly, MD, FRCSC  
*Dalhousie University, Halifax, NS, Canada*

4:14 pm

**99. Understanding Melanoma Pathogenesis By Elucidating the Gene Regulatory Network Of Melanocyte Progenitors.**

Stefanie Monica, BS<sup>1</sup>, Richard Harland, PhD<sup>2</sup>, Eric Liao, MD, PhD<sup>1</sup>  
*<sup>1</sup>Massachusetts General Hospital, Boston, MA, <sup>2</sup>University of California, Berkeley, Berkeley, CA*

4:21 pm

**100. Creation and Validation of a Condition-Specific VTE Risk Assessment Tool for Open Ventral Hernia Repair Patients**

Christopher J. Pannucci, MD MS<sup>1</sup>, Marten N. Basta, BA<sup>2</sup>, John P. Fischer, MD<sup>2</sup>, Stephen J. Kovach, MD<sup>2</sup>  
*<sup>1</sup>University of Utah, Salt Lake City, UT, <sup>2</sup>University of Pennsylvania, Philadelphia, PA*

4:28 pm

**101. Amifostine Prophylaxis Ameliorates Radiation-induced Injury in A Murine Model of Expander-based Breast Reconstruction**

Yekaterina Polyatskaya, MD; Noah S. Nelson, BS; Jose J. Rodriguez, MD; Alexander R. Zheutlin, BS; Sagar S. Deshpande, BS; Peter A. Felice, MD; Alexis Donneys, MD, MS; Steven R. Buchman, MD  
*University of Michigan, Ann Arbor, MI*

4:35 pm

**102. Developing a Noninvasive High-efficacy Technique for the Treatment of Infantile Hemangioma using a Nanoparticle-Conjugated Delivery System**

Hakan Orbay, MD, PhD; Lindsey Harrison, BS; Kamaljit Devi, BS; Yuanpei Li, PhD; Wenwu Xiao, PhD; Kit Lam, MD, PhD; David E. Sahar, MD  
*UCDavis, Sacramento, CA*



- 4:42 pm **103. PUMA Regulates Radiation Induced Fibrosis by Activating Epithelial to Mesenchymal Transition through Snail1 Expression**  
Nicholas Brownstone, BA; William Hambley, BA; Karan Mehta, BS; Nakul Rao, MD; Chin Park, MD; Rohini Kadle, BS; Anna Zhou, BA; Camille Kim, BS; Abigail Sartor, BA; Piul Rabbani, PhD; Pierre Saadeh, MD; Daniel Ceradini, MD  
*NYU Langone Medical Center, New York, NY*
- 4:49 pm **104. Co-Implantation of Auricular Chondrocytes and Mesenchymal Stem Cells for the Generation of Auricular Elastic Neocartilage: Strategy Towards the Translation of Tissue Engineered Ears**  
Ope A. Asanbe, MD<sup>1</sup>; Benjamin P. Cohen, BS<sup>2</sup>; Peipei Zhang, PhD<sup>1</sup>; Wilmina N. Landford, BA<sup>1</sup>; Adam M. Jacoby, BA<sup>1</sup>; Lawrence J. Bonassar, PhD<sup>2</sup>; Jason A. Spector, MD, FACS<sup>1</sup>  
<sup>1</sup>Weill Cornell Medical College, New York, NY, <sup>2</sup>Cornell University, Ithaca, NY
- 4:56 pm **105. Efficacy and Economic Advantage of Exparel Intercostal Nerve Blocks for Pain Management in 1st Stage Implant Based Breast Reconstruction Patients**  
Suzette G. Miranda, MD; Thomas Gallagher, BA; Hakim K. Said, MD  
*University of Washington, Seattle, WA*
- 5:03 pm **106. 9-Cis-Retinoic Acid Ameliorates Surgically Induced Lymphedema In The Mouse Hindlimb Model**  
Athanasios Bramos, MD; Young-Kwon Hong, PhD; Alex K. Wong, MD  
*Keck School of Medicine of USC, Los Angeles, CA*
- 5:10 pm **107. Efficient Topical Gene Silencing via Self-Assembling Engineered Lipoproteoplex**  
Anna T. Zhou, BA<sup>1</sup>; William Rifkin, BS<sup>1</sup>; Haresh More, MTech<sup>2</sup>; Nikita Srivastava, BS<sup>2</sup>; Muhammad H. Junejo, BS<sup>1</sup>; Rohini L. Kadle, BS<sup>1</sup>; Camille Kim, BS<sup>1</sup>; Rita A. Sartor, BA<sup>1</sup>; Nicholas D. Brownstone, BA<sup>1</sup>; Jin K. Montclare, PhD<sup>2</sup>; Pierre B. Saadeh, MD<sup>1</sup>; Piul S. Rabbani, PhD<sup>1</sup>; Daniel J. Ceradini, MD<sup>1</sup>  
<sup>1</sup>New York University, New York, NY, <sup>2</sup>Polytechnic Institute of New York University, New York, NY
- 5:17 pm **108. Vascular Endothelial Growth Factor Signaling is affected by Changes in the  $\beta$ -Adrenergic Receptor Pathways in Hemangioma Stem Cells**  
Alex Kitajewski, BA; Justin Kung, BA; Andrew K. Edwards, PhD; Carrie J. Shawber, PhD; Jan K. Kitajewski, PhD; June K. Wu, MD  
*Columbia University, New York, NY*
- 5:30 – 6:30 pm **Poster Viewing Reception**  
*Puget Sound*
- 7:00 – 9:00 pm **Members Dinner**  
*The Flight Museum*

## **Saturday, May 16, 2015**

- 7:30 am – 12:30 pm **Registration**  
*Cascade Ballroom Foyer*

- 7:30 am – 12:00 pm**     **Speaker Ready Room**  
*Cascade Ballroom Foyer*
- 7:30 – 10:00 am**     **Exhibits**  
*Cascade Ballroom Foyer*
- 7:30 – 8:30 am**     **Continental Breakfast with Exhibitors**  
*Cascade Ballroom Foyer*
- 8:30 – 10:00 am**     **Session 7 Group A**  
*Cascade Ballroom I*
- 8:30 am     **109. Reconstruction of Abdominal Wall Defects Using Neurotized Vascularized Composite Allografts**  
Justin M. Broyles, MD; Karim A. Sarane, MD; Sami H. Tuffaha, MD; Damon S. Cooney, MD, PhD; W.P. Andrew Lee, MD; Gerald Brandacher, MD; Justin M. Sacks, MD  
*The Johns Hopkins University School of Medicine, Baltimore, MD*
- 8:37 am     **110. Cellular Senescence Onset Coincides with Axonal Regenerative Arrest in Long Acellular Nerve Grafts**  
Louis H. Poppler, MD; Xueping Ee, MD; Lauren Prange, BS; Gwendolyn Hoben, MD; Daniel A. Hunter, RA; Ying Yan, MD, PhD; Sheila Stewart, PhD; Susan E. Mackinnon, MD; Matthew D. Wood, PhD  
*Washington University in St. Louis School of Medicine, St. Louis, MO*
- 8:44 am     **111. Notch Signaling In Senescent Schwann Cells: A Target For Improving Nerve Regeneration**  
Gwendolyn M. Hoben, MD, PhD; Xueping Ee, MD; Lauren Prange, BS; Daniel Hunter, RA; Amy M. Moore, MD; Sheila Stewart, PhD; Susan E. Mackinnon, MD; Matthew D. Wood, PhD  
*Washington University School of Medicine, St. Louis, MO*
- 8:51 am     **112. Evaluation of Viability, Structural Integrity and Functional Outcome after Whole Eye Transplantation**  
Yang Li, MD, PhD<sup>1</sup>; Chiaki Komatsu, MD<sup>1</sup>; Bo Wang, BS<sup>1</sup>; Maxine R. Miller, MD<sup>1</sup>; Hongkun Wang, MD<sup>1</sup>; Yolandi van der Merwe, BEng<sup>1</sup>; Leon C. Ho, BEng<sup>1</sup>; Nataliya Kostereva, PhD<sup>1</sup>; Wensheng Zhang, MD, PhD<sup>1</sup>; Bo Xiao, MD, PhD<sup>1</sup>; Edward H. Davidson, MA, MBBS<sup>1</sup>; Mario G. Solari, MD<sup>1</sup>; Michael B. Steketee, PhD<sup>1</sup>; Shuzhong Guo, MD, PhD<sup>2</sup>; Lawrence Kagemann, MD<sup>1</sup>; Gadi Wollstein, MD<sup>1</sup>; Joel S. Schuman, MD<sup>1</sup>; Kevin C. Chan, PhD<sup>1</sup>; Vijay S. Gorantla, MD, PhD<sup>1</sup>; Kia M. Washington, MD<sup>1</sup>  
*<sup>1</sup>University of Pittsburgh, Pittsburgh, PA, <sup>2</sup>Fourth Military Medical University, Xi'an, China*
- 8:58 am     **113. Vascularized Bone Marrow Transplantation As A New Approach For Bone Marrow Transplantation**  
Yingjun Su, MD, PhD; Jianwu Chen, MD; Shuzhong Guo, MD, PhD  
*Department of Plastic and Reconstructive Surgery, Xijing Hospital, Fourth Military Medical University, Xi'an, China*
- 9:05 am     **114. Defining The Role Of Skin And Mucosal Biopsy In Facial Allotransplantation.**  
Arif Chaudhry, MD<sup>1</sup>; Michael Sosin, MD<sup>2</sup>; Branko Bojovic, MD<sup>2</sup>; Michael R. Christy, MD<sup>2</sup>; Cinthia B. Drachenberg, MD<sup>3</sup>; Eduardo D. Rodriguez,

DDS, MD<sup>1</sup>

<sup>1</sup>New York University Langone Medical Center, New York, NY, <sup>2</sup>R Adams Cowley Shock Trauma Center, Baltimore, MD, <sup>3</sup>Univeristy of Maryland Medical Center, Baltimore, MD

9:12 am

**115. Development of a Brain Body Interface for Upper Limb Reanimation: Selective Muscle Activation with a Chronically Implanted Nerve Cuff Electrode on the Sciatic Nerve**

Neil Fairbairn, MD<sup>1</sup>; Wasim Q. Malik, PhD<sup>2</sup>; Neelakantan Sunder, MD<sup>1</sup>; Robert Ajemian, PhD<sup>2</sup>; Ashley Turza, PhD<sup>2</sup>; Victoria Vega, PhD<sup>2</sup>; Jeena Easow, MD<sup>1</sup>; Emilio Bizzi, MD, PhD<sup>2</sup>; Emory Brown, MD, PhD<sup>2</sup>; Jonathan M. Winograd, MD<sup>1</sup>

<sup>1</sup>Massachusetts General Hospital, Boston, MA, <sup>2</sup>Massachusetts Institute of Technology, Cambridge, MA

9:19 am

**116. The Impact and Mechanisms of Antibody-Mediated Rejection in Vascularized Composite Allotransplantation**

Devin T. Miller, BS; Denver Lough, MD, PhD; Barbara Kern, MD; Georg J. Furtmüller, MD; Giorgio Raimondi, PhD; W.P. Andrew Lee, MD; Zhaoli Sun, MD, PhD; Gerald Brandacher, MD

*The Johns Hopkins School of Medicine, Baltimore, MD*

9:26 am

**117. Microenvironmental Cues Enhance Indoleamine 2,3-dioxygenase Expression to Facilitate Mesenchymal Stem Cell-Mediated Immunosuppression**

Rohini L. Kadle, BS; Marc A. Soares, MD; Nakul Rao, MD; April Duckworth, MD; Chin Park, MD; Joshua David, BS; Christopher D. Lopez, BA; Anna Zhou, BA; Nicholas Brownstone, BA; Rita Abigail Sartor, BS; Camille Kim, BS; Piul S. Rabbani, PhD; Daniel J. Ceradini, MD

*NYU, New York, NY*

9:33 am

**118. Monoclonal Antibody (Herceptin) Mediated Enhancement of Peripheral Motor and Sensory Neuron Regeneration Operates through a Potential New Pathway Involving ErbB2 and the Epidermal Growth Factor Receptor (ErbB1)**

Mike Hendry, MD, MSc<sup>1</sup>; Eva Placheta, MD<sup>2</sup>; Cecilia Alvarez-Veronesi, MASC<sup>1</sup>; Tessa Gordon, PhD<sup>1</sup>; Gregory Borschel, MD<sup>1</sup>

<sup>1</sup>University of Toronto, Toronto, ON, Canada, <sup>2</sup>Medical University of Vienna, Vienna, Austria, Austria

9:40 am

**119. Development of a Non-invasive Diagnostic and Predictive Tool for Acute Rejection in Vca Using Differential Cytokine Profiling**

Nakul Rao, MD; Piul Rabbani, PhD; Chin Park, MD; Daniel Ceradini, MD

*NYU, New York, NY*

9:47 am

**120. A Critical Analysis of Peripheral Nerve Regeneration in a Chronic Denervation Rat Model Using a Sustained Biomaterial-Based Delivery of GDNF, Chondroitinase, and GDNF+Chondroitinase Growth Factors**

Karim A. Sarhane, MD, MSc; Sami H. Tuffaha, MD; Kellin Krick, PhD candidate; Chris Cashman, MD/PhD candidate; Joshua D. Budiardjo, B.Sc; Justin M. Broyles, MD; Russel Martin, PhD candidate; James Abraham, MA; Zuhaib Ibrahim, MD; Ruifa Mi, MD, PhD; Damon S. Cooney, MD, PhD; Ahmet Hoke, MD, PhD; WP Andrew Lee, MD; Hai-

Quan Mao, PhD; Gerald Brandacher, MD  
Johns Hopkins University, Baltimore, MD

8:30 – 10:00 am

**Session 7 Group B**  
*Cascade Ballroom II*

8:30 am

**121. Human Adipose-Derived Stem Cells and Wound Healing: Enhanced Cell Delivery and Wound Healing by Gelatin Microcryogels in a Nude Mice Model**

Lin Zhu, MD<sup>1</sup>; Yang Zeng, PhD<sup>2</sup>; Qin Han, PhD<sup>3</sup>; Wei Liu, PhD<sup>2</sup>; Xiaojing Mao, MD<sup>3</sup>; Yaqian Li, MD<sup>2,4</sup>; Nanze Yu, MD<sup>1</sup>; Siyu Feng, PhD<sup>4</sup>; Qinyouen Fu, PhD<sup>4</sup>; Xiaojun Wang, MD<sup>1</sup>; Yanan Du, PhD<sup>2</sup>; Robert Chunhua Zhao, PhD<sup>3</sup>

<sup>1</sup>Department of Surgery, Division of Plastic Surgery, Peking Union Medical College Hospital, Beijing, China, <sup>2</sup>Department of Biomedical Engineering, School of Medicine, Tsinghua University, Beijing, China, <sup>3</sup>Center of Excellence in Tissue Engineering, Institute of Basic Medical Sciences and School of Basic Medicine, Chinese Academy of Medical Sciences & Peking Union Medical College, Beijing, China, <sup>4</sup>School of Biological Science and Medical Engineering, Beihang University, Beijing, China

8:37 am

**122. RNA Sequencing for Identification of Differentially Expressed Non-Coding Transcripts During Adipogenic Differentiation of Adipose-Derived Stromal Cells**

Anna Luan, MS; Kevin J. Paik, AB; Jiang Li, MS; Elizabeth R. Zielins, MD; David A. Atashroo, MD; Andrew Spencley, BS; Arash Momeni, MD; Michael T. Longaker, MD, MBA; Kevin C. Wang, MD, PhD; Derrick C. Wan, MD

*Stanford University School of Medicine, Stanford, CA*

8:44 am

**123. Enhancing Outcomes Following Neonatal Nerve Injury with N-acetyl Cysteine**

Daniel Demsey, MD; Joseph Catapano, MD; David Scholl, BSc; Cameron Chiang, BSc; Tessa Gordon, PhD; Gregory Borschel, MD  
*The Hospital for Sick Children, Toronto, ON, Canada*

8:51 am

**124. Mitigation Of Hypertrophic Scar Contraction And Stiffening Via An Elastomeric Biodegradable Scaffold**

Mohamed M. Ibrahim, MD<sup>1</sup>; Elizabeth R. Lorden, BS<sup>2</sup>; Kyle J. Miller, BA<sup>1</sup>; Latif Bashirov, MD<sup>1</sup>; Ellen Hammett, BS<sup>2</sup>; Manuel Medina, MD<sup>1</sup>; Youngmee Jung, BS<sup>3</sup>; Ali Rastegarpou, MD<sup>1</sup>; Angelica M. Selim, MD<sup>4</sup>; Kam W. Leong, PhD<sup>5</sup>; Howard Levinson, MD<sup>1</sup>

<sup>1</sup>The Division of Plastic and Reconstructive Surgery, Department of Surgery, Duke University School of Medicine, Durham, NC, <sup>2</sup>Department of Biomedical Engineering, Duke University, Durham, NC, <sup>3</sup>Korea Institute of Science and Technology Biomaterials Research Center, Korea, Korea, Republic of, <sup>4</sup>Duke University Medical Center, Department of Pathology, Durham, NC, <sup>5</sup>Columbia University, Department of Biomedical Engineering, New York, NY

8:58 am

**125. Development of a Medical Device for Clinical Translation of a Novel PEG Fusion Method for Immediate Physiological Recovery after Peripheral Nerve Injury**

David C. Riley, BS<sup>1</sup>; Curt A. Deister, PhD<sup>2</sup>; Richard B. Boyer, BS<sup>1</sup>; Charlie L. Rodriguez-Feo, BS<sup>1</sup>; Tu-Anh N. Ha, BS<sup>1</sup>; Bruce R. Shack,

MD<sup>1</sup>; Wesley P. Thayer, MD/PhD<sup>1</sup>

<sup>1</sup>Vanderbilt University Medical Center, Nashville, TN, <sup>2</sup>Axogen, Gainesville, FL

9:05 am

**126. An Electrospun Fiber-Hydrogel Composite with Interfacial Bonding for Soft Tissue Regeneration in vivo**

Georgia C. Yalanis, MSc<sup>1</sup>; Sashank Reddy, MD<sup>1</sup>; Russ Martin, BS<sup>2</sup>; Jisuk Choi, PhD<sup>2</sup>; Gerald Brandacher, MD<sup>1</sup>; Hai-Quan Mao, PhD<sup>2</sup>; Justin M. Sacks, MD<sup>1</sup>

<sup>1</sup>Johns Hopkins University School of Medicine, Baltimore, MD, <sup>2</sup>Johns Hopkins University Whiting School of Engineering, Baltimore, MD

9:12 am

**127. Sustained Release of FK506 from a Polymeric Drug Delivery System for the Treatment of Peripheral Nerve Injury**

Kasra Tajdaran, MASc<sup>1</sup>; Matthew D. Wood, PhD<sup>2</sup>; Molly S. Shoichet, PhD<sup>1</sup>; Tessa Gordon, PhD<sup>1</sup>; Gregory H. Borschel, MD, FACS, FAPP<sup>1</sup>

<sup>1</sup>University of Toronto, Toronto, ON, Canada, <sup>2</sup>Washington University, St. Louis, MO

9:19 am

**128. Biopatterned Recombinant Human Bone Morphogenetic Protein 2 Does Not Induce Pansynostosis or Growth Restriction in the Immature Craniofacial Skeleton**

Sameer Shakir, BS<sup>1</sup>; Osama Basri, DMD<sup>1</sup>; James J. Cray, PhD<sup>2</sup>; Sanjay Naran, MD<sup>1</sup>; Darren M. Smith, MD<sup>3</sup>; Zoe M. MacIsaac, MD<sup>1</sup>; Evan B. Katzel, MD<sup>1</sup>; Weinberg M. Seth, PhD<sup>1</sup>; Mark P. Mooney, PhD<sup>1</sup>; Joseph E. Losee, MD<sup>1</sup>; Cooper M. Greg, PhD<sup>1</sup>

<sup>1</sup>University of Pittsburgh, Pittsburgh, PA, <sup>2</sup>Medical University of South Carolina, Charleston, SC, <sup>3</sup>Hospital for Sick Children, Toronto, ON, Canada

9:26 am

**129. Effects of Growth Hormone Therapy on Axonal Regeneration, Muscle Atrophy, Schwann Cell Proliferation and End-Organ Reinnervation Following Nerve Injury and Repair**

Sami Tuffaha, MD; Joshua Budihardjo, BSc; Karim Sarhane, MD; Mohammed Khosheim, MD; Diana Song, MD; Justin Broyles, MD; Roberto Salvatori, MD; Kenneth Means, MD; James Higgins, MD; Jaimie Shores, MD; Ahmet Hoke, MD; Damon Cooney, MD PhD; W.P. Andrew Lee, MD; Gerald Brandacher, MD

Johns Hopkins Medical Institutions, Baltimore, MD

9:33 am

**130. Tissue Engineered, 3D Collagen Microsphere Scaffold (MSS) Expedites Cellular Invasion and Neovascularization**

Peipei Zhang, MD, PhD; Ope Asanbe, MD; Wilmina Landford, MD; Adam Jacoby, BA; Rachel Hooper, MD; Abraham Stroock, PhD; Jason Spector, MD, FACS

Weill Cornell Medical College, New York, NY

9:40 am

**131. Muscle-Specific ECM Derived Hydrogel for 3D Printing Facilitates Differentiation of Adipose Derived Stem Cells into Muscle Cells**

Solmaz N. Leilabadi, MD, MHA; Alexandra L. Rutz, MS; Sumanas W. Jordan, MD, PhD; Ian Chow, BS; Thomas A. Mustoe, MD; Ramille N. Shah, PhD; Seok Jong Hong, PhD; Robert D. Galiano, MD

Northwestern University, Chicago, IL

- 9:47 am **132. A Multifactorial Histologic Analysis of the Foreign Body Response to Intradermal and Subcutaneous Implants**  
Eugenia H. Cho, BS<sup>1</sup>; Alina Boico, BS<sup>1</sup>; Lin Liao<sup>1</sup>; Janna K. Register, PhD<sup>1</sup>; Natalie A. Wisniewski, PhD<sup>2</sup>; Kristen Helton, PhD<sup>2</sup>; Tuan Vo-Dinh, PhD<sup>1</sup>; Gregory Palmer, PhD<sup>1</sup>; Bruce Klitzman, PhD<sup>1</sup>  
*<sup>1</sup>Duke University, Durham, NC, <sup>2</sup>PROFUSA Corp, San Francisco, CA*
- 8:30 – 10:00 am** **Session 7 Group C**  
*Elliott Bay*
- 8:30 am **133. Natural Killer Cells Promote Differentiation of Human Adipose-Derived Stem Cells in vitro**  
Kameron S. Rezzadeh, BA; Akishige Hokugo, DDS, PhD; Anahid Jewett, PhD, MPH; Anna Kozłowska, PhD; Andres Segovia, MD; Patricia Zuk, PhD; Zheyu Zhang, BA; Reza Jarrahy, MD  
*UCLA Ronald Reagan Medical center, Los Angeles, CA*
- 8:37 am **134. Adipose-derived Stem Cells after Paclitaxel Treatment Demonstrate Decreased Function and Suppression of Breast Cancer Cell Viability**  
William M. Harris, MD; Michael A. Plastini, MD; Telisha Ortiz, MD; Nikolas Kappy, MD; Jefferson Benites, BS; Shaohua Chang, PhD; A. Lelani Fahey, MD; Martha S. Matthews, MD; Jeffrey P. Carpeneter, MD; Spencer Brown, PhD; Ping Zhang, PhD  
*Department of Surgery- Cooper University Hospital and Cooper Medical School of Rowan University, Camden, NJ*
- 8:44 am **135. Human Adipose Tissue-Derived Stromal/Stem Cells Promote Migration and Early Metastasis of Head & Neck Cancer Xenografts**  
Walter J. Joseph, III, BS<sup>1</sup>; Eduardo A. Lacayo, MD<sup>2</sup>; Mei Sheng, MD/PhD<sup>2</sup>; Muralidharan Anbalagan, PhD<sup>2</sup>; Jeffrey M. Gimble, MD/PhD<sup>3</sup>; Ryan K. Jones, MA<sup>2</sup>; Paul L. Friedlander, MD<sup>2</sup>; Brian G. Rowan, PhD<sup>2</sup>; Ernest S. Chiu, MD<sup>1</sup>  
*<sup>1</sup>NYU Langone Medical Center, New York, NY, <sup>2</sup>Tulane University School of Medicine, New Orleans, LA, <sup>3</sup>Louisiana State University, Baton Rouge, LA*
- 8:51 am **136. Simple, Non-invasive and Effective New Generation Vascular and Tissue Regenerative Endothelial Progenitor Cell Therapy for Non-healing Diabetic Wounds**  
Rica Tanaka, MD, PhD<sup>1</sup>; Kayo Arita, PhD<sup>1</sup>; Satoshi Fujimura, PhD<sup>1</sup>; Kayoko Okada, PhD<sup>1</sup>; Makiko Kado, MD<sup>1</sup>; Takayuki Asahara, MD, PhD<sup>2</sup>; Hiroshi Mizuno, MD, PhD<sup>1</sup>  
*<sup>1</sup>Juntendo University School of Medicine, Tokyo, Japan, <sup>2</sup>Tokai University School of Medicine, Isehara, Japan*
- 8:58 am **137. Fibromodulin Reprogrammed Cells-based Bone Regeneration**  
Zhong Zheng, PhD<sup>1</sup>; Tara Aghaloo, DDS, MD, PhD<sup>1</sup>; Chen-shuang Li, DDS<sup>1</sup>; Pu Yang, DDS, MD, PhD<sup>1</sup>; Soonchul Lee, MD, PhD<sup>2</sup>; Jin-Hee Kwak, DDS, MS<sup>1</sup>; Ali Zarringhalam, BS<sup>1</sup>; Maxwell Murphy, MS<sup>1</sup>; Kang Ting, DMD, DMedSci<sup>1</sup>; Chia Soo, MD<sup>1</sup>  
*<sup>1</sup>UCLA, Los Angeles, CA, <sup>2</sup>CHA Univeristy, Gyeongghi-do, Korea, Republic of*
- 9:05 am **138. External Volume Expansion and Fat Grafting after Post Mastectomy Radiation Therapy: Increased Skin Angiogenesis and**

**Proliferation May Improve Fat Graft Based Soft Tissue Reconstruction**

Jorge Lujan-Hernandez, MD<sup>1</sup>, Michael S. Chin, MD<sup>1</sup>, Dylan J. Perry, B.A.<sup>1</sup>, Ava G. Chappell, BA<sup>1</sup>, Oksana O. Babchenko, BS<sup>1</sup>, Elizabeth Bannon, MS<sup>1</sup>, Luca Lancerotto, MD<sup>2</sup>, Yuan Chyuan Lo, PhD<sup>1</sup>, Thomas J. Fitzgerald, MD<sup>1</sup>, Janice F. Lalikos, MD<sup>1</sup>

<sup>1</sup>University of Massachusetts Medical School, Worcester, MA, <sup>2</sup>University of Padova, Padova, Italy

9:12 am

**139. Novel Preparation Method for The Therapeutic Micro-spheroids Of Adipose-derived Stromal Cells (ASCs): Three-dimensional Floating Culture In Non-cross-linked Hyaluronic Acid (HA) Gel**

Jingwei Feng, MD; Kazuhide Mineda, MD; Kentaro Doi, MD; Shinichiro Kuno, MD; Kahori Kinoshita, MD; Koji Kanayama, MD; Kotaro Yoshimura, MD

University of Tokyo, Tokyo, Japan

9:19 am

**140. Ultrasound Assisted Liposuction Does not Compromise The Regenerative Potential of Ascs**

Dominik Duscher, MD<sup>1,2</sup>; Anna Luan, MS<sup>2</sup>; David Atashroo, MD<sup>2</sup>; Zeshaan N. Maan, MBBS, MS<sup>2</sup>; Elizabeth R. Zielins, MD<sup>2</sup>; Kevin Paik, BA<sup>2</sup>; Alexander J. Whittam, BS<sup>2</sup>; Michelle Lin, BS<sup>2</sup>; Graham G. Walmsley, BA<sup>2</sup>; Michael S. Hu, MD, MPH, MS<sup>2</sup>; Manfred Schmidt, MD<sup>1</sup>; Georg M. Huemer, MD, MBA, MS<sup>1</sup>; Derrick C. Wan, MD<sup>2</sup>; Michael T. Longaker, MD, MBA<sup>2</sup>; Geoffrey C. Gurtner, MD, FACS<sup>2</sup>

<sup>1</sup>Johannes Keppeler University, Division of Plastic Surgery, Linz, Austria,

<sup>2</sup>Stanford University, Division of Plastic Surgery, Stanford, CA

9:26 am

**141. Malar 3D Lipotopography: Relating Fat Grafting to the Cheek and Topographical Surface Changes**

Carrie Stern, MD<sup>1</sup>, Jillian E. Schreiber, BA<sup>1</sup>, Matthew E. Doscher, MD<sup>1</sup>, Jeremy S. Nikfarjam, MD<sup>1</sup>, Evan S. Garfein, MD<sup>1</sup>, Elizabeth B. Jelks, MD<sup>2</sup>, Glenn W. Jelks, MD<sup>2</sup>, Oren M. Tepper, MD<sup>1</sup>

<sup>1</sup>Montefiore Medical Center/Albert Einstein College of Medicine, Bronx, NY, <sup>2</sup>NYU Langone Medical Center, New York, NY

9:33 am

**142. A Microbiologic Comparison of Acellular Dermal Matrices as an Aseptic Reconstructive Material and a Scaffold for Stem Cell In-growth**

Shaun D. Mendenhall, MD<sup>1</sup>; Tim H.F. Daugherty, MS<sup>1</sup>; Nicole M. Cosenza, MS<sup>1</sup>; Katherine E. McKenna, MD<sup>1</sup>; Ryan W. Schmucker, MD<sup>1</sup>; Joel D. Reichensperger, BS<sup>1</sup>; Ashim Gupta, PhD<sup>1</sup>; Janak Koirala, MD; MPH<sup>1</sup>; Paul S. Cederna, MD<sup>2</sup>; Michael W. Neumeister, MD<sup>1</sup>

<sup>1</sup>Southern Illinois University School of Medicine, Springfield, IL,

<sup>2</sup>University of Michigan School of Medicine, Ann Arbor, MI

9:40 am

**143. Characterization And Transplantation Of Human Muscle Stem Cells For Reconstructive Applications.**

Xiaoti Xu, MD<sup>1</sup>; Karlijn Wilschut, PhD<sup>1</sup>; Gayle Kouklis, BS<sup>1</sup>; Hua Tian, PhD<sup>1</sup>; Robert Hesse, BS<sup>1</sup>; Jason H. Pomerantz, MD<sup>2</sup>

<sup>1</sup>Department of Surgery, Division of Plastic and Reconstructive Surgery, University of California San Francisco, San Francisco, CA, <sup>2</sup>Departments of Surgery and Orofacial Sciences, Division of Plastic and Reconstructive Surgery, Craniofacial and Mesenchymal Biology Program, Eli and Edythe Broad Center of Regeneration Medicine, University of California San Francisco, San Francisco, CA

- 9:47 am **144. Differential Oxygen Tension and Environmental Inflammatory Conditions Optimize Mesenchymal Stem Cell Fate and Immunosuppressive Potential**  
Rohini L. Kadle, BS; Marc A. Soares, MD; Nakul Rao, MD; April Duckworth, MD; Chin Park, MD; Joshua David, BS; Christopher D. Lopez, BA; Anna Zhou, BA; Nicholas Brownstone, BA; Rita Abigail Sartor, BS; Camille Kim, BS; Piul S. Rabbani, PhD; Daniel J. Ceradini, MD  
*NYU, New York, NY*
- 10:00 – 10:30 am** **Coffee with Exhibitors**  
*Cascade Ballroom Foyer*
- 10:30 am – 11:40 am** **Session 8 Group A**  
*Cascade Ballroom I*
- 10:30 am **145. Lymph Node Transfer Restores Immune Responses in a Mouse Model of Lymphedema**  
Walter J. Joseph, III, BS; Seth Z. Aschen, BS; Daniel A. Cuzzone, MD; Jason C. Gardenier, MD; Swapna Ghanta, MD; Nicholas J. Albano, BS; Ira L. Savetsky, MD; Jeremy S. Torrisi, BA; Babak J. Mehrara, MD  
*MSKCC, New York, NY*
- 10:37 am **146. Short Hairpin RNA Silencing of PHD-2 Improves Neovascularization and Functional Outcomes in Diabetic Wounds and Ischemic Limbs**  
Kevin J. Paik, AB<sup>1</sup>; Zeshaan Maan, MD<sup>1</sup>; Shane D. Morrison, MS<sup>1</sup>; Hsin-Han Chen, MD<sup>1</sup>; Robert Rennert, BS<sup>1</sup>; Michael Sorkin, MD<sup>1</sup>; Dominik Duscher, MD<sup>1</sup>; Michael T. Chung, BS<sup>1</sup>; David Atashroo, MD<sup>1</sup>; Michael S. Hu, MD<sup>1</sup>; Shuli Li, MD, PhD<sup>1</sup>; Kshemendra Senarath-Yapa, MD<sup>1</sup>; Adrian McArdle, MD<sup>1</sup>; Elizabeth A. Brett, MS<sup>1</sup>; Anna Luan, MS<sup>1</sup>; Ruth Tevlin, MD<sup>1</sup>; Elizabeth R. Zielins, MD<sup>1</sup>; Wan Xing Hong, MS<sup>1</sup>; Graham Walmsley, BS<sup>1</sup>; Christopher Duldulao, BS<sup>1</sup>; Taylor Wearda, BS<sup>1</sup>; Owen Marecic, BS<sup>1</sup>; Joseph C. Wu, MD PhD<sup>2,3</sup>; Geoffrey C. Gurtner, MD<sup>1</sup>; Michael T. Longaker, MD, MBA<sup>1,4</sup>; Derrick C. Wan, MD<sup>1</sup>  
*<sup>1</sup>Hagey Laboratory for Pediatric Regenerative Medicine, Department of Surgery, Plastic and Reconstructive Surgery Division, Stanford University School of Medicine, Stanford, CA, <sup>2</sup>Department of Medicine, Division of Cardiology, Stanford University School of Medicine, Stanford, CA, <sup>3</sup>Department of Radiology, Stanford University School of Medicine, Stanford, CA, <sup>4</sup>Institute for Stem Cell Biology and Regenerative Medicine, Stanford University School of Medicine, Stanford, CA*
- 10:44 am **147. A Transdermal Drug Delivery System for Deferoxamine for the Prevention and Treatment of Diabetic Wounds**  
Dominik Duscher, MD<sup>1,2</sup>; Alexander J. Whittam, BS<sup>1</sup>; Zeshaan N. Maan, MBBS, MS<sup>1</sup>; Mohammed Inayatullah, PhD<sup>1</sup>; Janos Barrera, BS<sup>1</sup>; Arnetha J. Whitmore, BA<sup>1</sup>; Yixiao Dong, PhD<sup>1</sup>; Jayakumar Rajadas, PhD<sup>1</sup>; Geoffrey C. Gurtner, MD, FACS<sup>1</sup>  
*<sup>1</sup>Stanford University, Division of Plastic Surgery, Stanford, CA, <sup>2</sup>Johannes Kepler University, Division of Plastic Surgery, Linz, Austria*
- 10:51 am **148. Obesity But Not High Fat Diet Impairs Lymphatic Function**  
Gabriela D. Garcia Nores, MD<sup>1</sup>; Daniel A. Cuzzone, MD<sup>2</sup>; Jason C. Gardenier, MD<sup>1</sup>; Ira L. Savetsky, MD<sup>1</sup>; Jeremy S. Torrisi, B.A.<sup>1</sup>; Matthew



D. Nitti, BA<sup>1</sup>; Geoffrey E. Hespe, BS<sup>1</sup>; Raghu P. Kataru, PhD<sup>1</sup>; Babak J. Mehrara, MD<sup>1</sup>

<sup>1</sup>Memorial Sloan Kettering Cancer Center, New York, NY, <sup>2</sup>New York University Hospital Center, New York, NY

10:58 am

**149. Perilymphatic Inflammation and iNOS Production Play a Key Role in the Regulation of Lymphatic Dysfunction in Obesity**

Jeremy S. Torrisi, BA; Daniel A. Cuzzzone, MD; Geoffrey E. Hespe, BS; Matthew D. Nitti, BA; Jason C. Gardenier, MD; Ira L. Savetsky, MD; Gabriela Garcia Nores, MD; Raghu Kataru, PhD; Babak J. Mehrara, MD, FACS

*Memorial Sloan Kettering Cancer Center, New York, NY*

11:05 am

**150. Phosphodiesterase 5 Inhibition Mitigates I-r Injury in a Model of Vascularized Composite Allotransplantation**

Marc A. Soares, MD; Nakul Rao, MD; Chin Park, MD; Piul S. Rabbani, PhD; Abby Sartor, BA; Pierre B. Saadeh, MD; Daniel J. Ceradini, MD  
*NYU, New York, NY*

11:12 am

**151. Tlr3 Activation Links Damage Sensing to Epimorphic Regeneration in the Skin**

Sashank K. Reddy, MD, PhD<sup>1</sup>; Amanda Nelson, PhD<sup>2</sup>; Emily Chang, BA<sup>1</sup>; Tabetha Ratliff, MA<sup>1</sup>; Adiya Katseff, BA<sup>1</sup>; Sydney Resnik, BA<sup>1</sup>; Lloyd S. Miller, MD, PhD<sup>1</sup>; Luis A. Garza, MD, PhD<sup>1</sup>

<sup>1</sup>Johns Hopkins University, Baltimore, MD, <sup>2</sup>Pennsylvania State University, Hershey, PA

11:19 am

**152. Attenuation of Autophagy via local SGK-1 Inhibition in SCC of the Head and Neck May Sensitize to Cisplatin Therapy**

Henrik O. Berdel, MD<sup>1</sup>; Jun Liu, BS<sup>2</sup>; Mahmood Mozaffari, PhD<sup>2</sup>; Jack C. Yu, MD<sup>2</sup>; Babak Baban, PhD<sup>2</sup>

<sup>1</sup>Palmetto Health / University of South Carolina, Columbia, SC, <sup>2</sup>Georgia Regents University, Augusta, GA

11:26 am

**153. The Investigation of Transendothelial Migration and Breast Cancer Metastasis Utilizing A Tissue Engineered, Ex Vivo Three Dimensional Vascularized Platform**

Rachel C. Hooper, MD<sup>1</sup>; Ope A. Asanbe, MD<sup>1</sup>; Wilmina N. Landford, BA<sup>1</sup>; Adam M. Jacoby, BA<sup>1</sup>; Peipei Zhang, PhD<sup>1</sup>; Hector L. Osoria, BS<sup>1</sup>; Claudia Fischbach, PhD<sup>2</sup>; Jason A. Spector, MD, FACS<sup>1</sup>

<sup>1</sup>Weill Cornell Medical College, New York, NY, <sup>2</sup>Cornell University, Ithaca, NY

11:33 am

**154. Chronic Wounds have Surrounding Regions of Lymphatic Dysfunction**

Jeremy S. Torrisi, BA; Ira L. Savetsky, MD; Jason C. Gardenier, MD; Gabriela Garcia Nores, MD; Matthew D. Nitti, BA; Geoffrey E. Hespe, BS; Raghu Kataru, PhD; Babak J. Mehrara, MD, FACS

*Memorial Sloan Kettering Cancer Center, New York, NY*

10:30 am – 12:00 pm

**Session 8 Group B**

*Cascade Ballroom II*

10:30 am

**155. Hypoxia Preconditioned Plasma (HPP) and its Role in promoting Angiogenesis-supported Wound Regeneration**

P.Niclas Broer, MD; Ektoras Hadjipanayi, MD, PhD; Anna T. Bauer, MD; Philipp Moog, MS; Sarah von Isenburg, MD; Milomir Ninkovic, MD, PhD; Hans-Günther Machens, MD, PhD; Arndt F. Schilling, MD, PhD  
*Klinikum rechts der Isar , Technische Universität München, München, Germany*

10:37 am

**156. Optimizing Timing and Targeting of Bone Morphogenetic Protein Receptor One to Treat Heterotopic Ossification with Novel Kinase Inhibitors and Ligand Traps**

John Li, MD<sup>1</sup>; Shailesh Agarwal, MD<sup>1</sup>; Shawn Loder, BS<sup>1</sup>; Cameron Brownley, BS<sup>1</sup>; Jonathan Peterson, BS<sup>1</sup>; Kavitha Ranganathan, MD<sup>1</sup>; Paul S. Cederna, MD<sup>1</sup>; Eboda Oluwatobi, BS<sup>1</sup>; Agustin Mohedas, PhD<sup>2</sup>; Paul Yu, MD<sup>2</sup>; Benjamin Levi, MD<sup>1</sup>

<sup>1</sup>*University of Michigan, Ann Arbor, MI,* <sup>2</sup>*Brigham and Womens Hospital, Boston, MA*

**157. WITHDRAWN**

10:44 am

**158. Novel Implantable Optical Oxygen Monitor to Detect Flap Viability**

Mohamed M. Ibrahim, MD; Bruce Klitzman, PhD

*The Division of Plastic and Reconstructive Surgery, Department of Surgery, Duke University School of Medicine, Durham, NC*

10:51 am

**159. Combining Preoperative CTA Mapping of the Peroneal Artery and Its Perforators with Computer-Generated Patient-Specific Surgical Guides for Free Fibula Flap Reconstruction of Complex Head and Neck Defects**

Noopur Gangopadhyay, MD; Mark W. Villa, MD; Edward I. Chang, MD; Jesse C. Selber, MD; Elizabeth S. Craig, MD; Jessie Liu, PhD; Patrick B. Garvey, MD

*UT MD Anderson Cancer Center, Houston, TX*

10:58 am

**160. Muscle-Sparing Latissimus Dorsi Myocutaneous Pedicled Flaps with Extended Transversely Oriented Skin Paddles are a Reliable Alternative to Thoracodorsal Artery Perforator Flaps**

Yin Kan Hwee, MD; Pedro Vieira, ME; Christopher Brooks, MD; Yoav Barnavon, MD

*Cleveland Clinic Florida, Weston, FL*

11:05 am

**161. Outcomes and Cost Analysis of CT-Guided Virtual Surgical Modeling for Mandibular Reconstruction with Osteocutaneous Free Fibula Flaps**

Eric I. Chang, MD; Neal S. Topham, MD

*Fox Chase Cancer Center, Rockledge, PA*

11:12 am

**162. Changes in Skin Vascularity in a Murine Model for Post-Mastectomy Radiation**

Jose J. Rodriguez, MD, Theodore A. Kung, MD, Yekaterina Polyatskaya, MD, Noah S. Nelson, BS, Yao Wang, MD, Sagar S. Deshpande, BS, Alexander R. Zheutlin, BS, Alexis Donneys, MD, Steven R. Buchman, MD, Adeyiza O. Momoh, MD *University of Michigan, Ann Arbor, MI.*

11:19 am

**163. Topical Deferoxamine Penetrates the Dermis and Increases Cutaneous Vascularity: The Development of a Topical Therapy for Radiation Soft Tissue Injury**

Kasandra R. Hanna, MD; Alexander F. Mericli, MD; Patrick S. Cottler, PhD; Lisa S. Salopek, LVT, Yalin Wang, PhD; Jessica S. Wang, BS; Madeline M. Stovall, BA; George T. Rodeheaver, PhD; Kant Y. Lin, MD  
*University of Virginia, Charlottesville, VA.*

- 11:26 am **164. The Impact of the Adaptive Immune System On Ectopic Bone Formation**  
Kavitha Ranganathan, MD; Shuli Li, PhD; Shawn Loder, BS; Cameron Brownley, BS; Shailesh Agarwal, MD; Casey Kraft, BS; Oluwatobi Eboda, BS; Jonathan Peterson, BS; Paul S. Cederna, MD; Steven R. Buchman, MD; Benjamin Levi, MD  
*University of Michigan, Ann Arbor, MI*
- 11:33 am **165. Profunda Artery Perforator Flap Perforasome Territories: Implications of Vascular Anatomy for Optimal Flap Design in Reconstructive Microsurgery**  
Anita T. Mohan, MRCS, MBBS, BSc<sup>1</sup>; Lin Zhu, MD<sup>2</sup>; Charalambos Rammos, MD<sup>2</sup>; Gregory Michalak, PhD<sup>2</sup>; Nirusha Lachman, PhD<sup>2</sup>; Steve Moran, MD<sup>2</sup>; Michel Saint-Cyr, MD<sup>2</sup>  
*<sup>1</sup>Mayo Clinic, Rochester, MN, <sup>2</sup>Mayo Clinic, Rochester, MN*
- 11:40 am **166. Appraisal Of Perforasomes And Venosomes Of Perforators In Bilateral Diep Breast Reconstruction Using Updated SpyQ Analysis**  
Anita T. Mohan, MRCS, MBBS, BSc; Lin Zhu, MD; Samir Mardini, MD; Steven Moran, MD; Michel Saint-Cyr, MD  
*Mayo Clinic, Rochester, MN*
- 10:30 am – 12:00 pm **Session 8 Group C**  
*Elliott Bay*
- 10:30 am **167. Tissue Inhibitor Of Metalloproteinase-2 Suppresses Collagen Synthesis Within Keloids**  
Teruyuki Dohi, MD; Koichi Miyake, MD, PhD; Masayo Aoki, MD, PhD; Rei Ogawa, MD, PhD; Satoshi Akaishi, MD, PhD; Takashi Okada, MD, PhD; Hiko Hyakusoku, MD, PhD  
*Nippon Medical School, Tokyo, Japan*
- 10:37 am **168. Thrombospondin-1 And CD47 Signaling Regulate Healing Of Thermal Injury In Mice**  
Justin B. Maxhimer, MD<sup>1</sup>; Hubert Shih, MD<sup>2</sup>; David Soto-Pantoja, PhD<sup>3</sup>; David Roberts, PhD<sup>3</sup>  
*<sup>1</sup>UCLA Medical Center, Los Angeles, CA, <sup>2</sup>Stanford School of Medicine, Palo Alto, CA, <sup>3</sup>National Institutes of Health, Bethesda, MD*
- 10:44 am **169. Calcium Entry Via TRPC3 Channels Transduce Mechanical Force And Accerelate Wound Contraction**  
Kenichiro Kawai, MD, PhD<sup>1</sup>; Hisako Ishise, MD<sup>1</sup>; Barrett Larson, MD<sup>2</sup>; Soh Nishimoto, MD, PhD<sup>1</sup>; Toshihiro Fujiwara, MD, PhD<sup>1</sup>; Masao Kakibuchi, MD, PhD<sup>1</sup>  
*<sup>1</sup>Hyogo College of Medicine, Nishinomiya, Japan, <sup>2</sup>Stanford University, Stanford, CA*
- 10:51 am **170. The Effect Of Bone Marrow Derived Stem Cell Induced By amD-3100 On Expanded Flap**  
Hii-Sun Jeong, MD, PhD<sup>1</sup>; Hye-Kyung Lee, MD, PhD<sup>2</sup>; Kwan-Chul Tark, MD, PhD<sup>3</sup>; Dae-Hyun Lew, MD, PhD<sup>3</sup>; In Suck Suh, MD, PhD<sup>1</sup>

<sup>1</sup>Kangnam Sacred Heart Hospital, Hallym University Medical Center, Hallym University College of Medicine, Seoul, Korea, Republic of,  
<sup>2</sup>Department of Plastic and Reconstructive Surgery, Eulji General Hospital, Eulji University School of Medicine, Seoul, Korea, Republic of,  
<sup>3</sup>Department of Plastic and Reconstructive Surgery, Yonsei University College of Medicine, Seoul, Korea, Republic of

- 10:58 am **171. Rational Identification of Novel Surface Markers to Enhance Cell Therapies**  
Michael Januszyk, MD; Robbert C. Rennert, MD; Michael Sorkin, MD; Melanie Rodrigues, PhD; Dominik Duscher, MD; Michael T. Chung, MD; Kevin Paik, BS; Revanth Kosaraju, BS; Michael Findlay, MD, PhD; Jason P. Glotzbach, MD, PhD; Zeshaan N. Maan, MBBS, MRCS; Atul J. Butte, MD, PhD; Geoffrey C. Gurtner, MD, PhD  
*Stanford University, Stanford, CA*
- 11:05 am **172. Detection of Novel Cancer Subpopulations Through Integration of Public Microarray Data with Single Cell Gene Expression Profiling**  
Michael Januszyk, MD; Nadine Jahchan, PhD; Purvesh Khatri, PhD; Robbert C. Rennert, MD; Michael Sorkin, MD; Julien Sage, PhD; Michael T. Longaker, MD; Atul J. Butte, MD, PhD; Geoffrey C. Gurtner, MD  
*Stanford University, Stanford, CA*
- 11:12 am **173. The Cellular and Molecular Dynamics of Burn Injury Progression Following Partial Thickness Burns: The Effect of Early and Late Debridement**  
Ian Chow, BA, Wei Xu, PhD; Solmaz N. Leilabadi, MD; Shengxian Jia, MD; Ping Xie, MD, PhD; Sumanas W. Jordan, MD, PhD; Seok J. Hong, PhD; Thomas A. Mustoe, MD; Robert D. Galiano, MD  
*Northwestern University, Chicago, IL*
- 11:19 am **174. TRPC3 Channels Regulate Expression of Fibronectin Via NFκB Signaling in Response to Cyclic Strain And Contribute to Hypertrophic Scar Formation**  
Kenichiro Kawai, MD, PhD<sup>1</sup>; Hisako Ishise, MD<sup>1</sup>; Barrett Larson, MD<sup>2</sup>; Soh Nishimoto, MD, PhD<sup>1</sup>; Toshihiro Fujiwara, MD, PhD<sup>1</sup>; Masao Kakibuchi, MD, PhD<sup>1</sup>  
*<sup>1</sup>Hyogo College of Medicine, Nishinomiya, Japan, <sup>2</sup>Stanford University, Stanford, CA*
- 11:26 am **175. The Role of Fibronectin on Spatial Organization in 3D Culture: a Model for Wound Healing after Breast Reconstruction and Post-Mastectomy Radiation Therapy**  
Henry C. Hsia, MD; Sibio Tian, BA; Sharad Goyal, MD; Bruce G. Haffty, MD; Ting Chen, PhD; Ramsey A. Foty, PhD  
*Rutgers-Robert Wood Johnson Medical School, New Brunswick, NJ*
- 11:33 am **176. Single Cell Transcriptomic Analysis of Human Fetal Bone Marrow-Derived Mesenchymal Stem Cells in Wound Healing**  
Sacha M.L. Khong, PhD; Dominik Duscher, MD; Michael Januszyk, MD; Peter A. Than, MD; Zeshaan Maan, MD; Geoffrey C. Gurtner, MD  
*Stanford University, Stanford, CA*
- 11:40 am **177. Angiotensin Receptor Blockade is Associated with Decreased Cutaneous Scar Formation in a Rat Model: A Preclinical Study**

Amanda M. Murphy, MD; Michael Bezuhly, MD, MSc, SM, FRCSC;  
Simon Gebremeskel, BSc; Terry LeVatte, BA; Paul Gratzner, PhD  
*Dalhousie University, Halifax, NS, Canada*

11:47 am

**178. Activation of Hif by Small Molecule Inhibitors of Phd2  
Accelerates Wound Healing In Vivo**

Michael Hu, MD, MPH, MS<sup>1</sup>; Wan Xing Hong, MS<sup>1</sup>; Min Xie, PhD<sup>2</sup>;  
Shibing Tang, PhD<sup>2</sup>; Robert Rennert, MD<sup>1</sup>; Graham Walmsley, BS<sup>1</sup>;  
Zeshaan Maan, MD<sup>1</sup>; Andrew Zimmermann, BS<sup>1</sup>; Geoffrey Gurtner,  
MD<sup>1</sup>; Amato Giaccia, PhD<sup>1</sup>; Peter Lorenz, MD<sup>1</sup>; Sheng Ding, PhD<sup>1</sup>;  
Michael Longaker, MD, MBA<sup>1</sup>

<sup>1</sup>Stanford, Stanford, CA, <sup>2</sup>UCSF, San Francisco, CA

12:00 – 12:30 pm

**Awards Announcements & Adjourn**

*Cascade Ballroom*