

Basic Science: The Cutting Edge in Optical Diagnostics and Therapeutics of Tissues and Cells - Lecture Hall 207

8:00 am - 12:10 pm

Directors: *Serge R. Mordon, Ph.D., J. Stuart Nelson, M.D., Ph.D.*

MISCELLANEOUS

Moderator: *Christopher G. Rylander, Ph.D.*

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| 8:00 am - 8:09 am | 34 | <p>LASER PRECONDITIONING FOR WOUND HEALING: A RAMAN SPECTROSCOPY ANALYSIS</p> <p><i>Alexander Makowski*</i>, <i>Jeffrey M. Davidson</i>¹, <i>Anita Mahadevan-Jansen</i>², <i>E. Duco Jansen</i>³, Vanderbilt University, Nashville, TN</p> <p>¹Salary from Medical Research Service, TVHS VA Medical Center; research grant from NIH AG06528, AR056138
²Salary from Vanderbilt University
³Salary from Vanderbilt University; research grant from NIH, DOD, HFSP; royalties from Lockheed Martin Aculight</p> |
| 8:10 am - 8:19 am
<i>(ePoster Available)</i> | 35 | <p>EFFECTS OF TEMPERATURE ON FLUORESCENCE IN HUMAN TISSUE</p> <p><i>Daniel B. Masters*</i>, <i>Alex Walsh</i>, <i>A.J. Welch</i>, <i>Anita Mahadevan-Jansen</i>, Vanderbilt University, Nashville, TN, University of Texas at Austin, Austin, TX</p> |
| 8:20 am - 8:29 am | 36 | <p>PLASMA-SPARK ASSISTED TISSUE SURGERY</p> <p><i>Dilip Paithankar</i>¹, <i>Juergen Kolb</i>², <i>Noah Scully</i>², <i>Karl Schoenbach</i>³, Cellutions, Duluth, GA, Old Dominion University, Norfolk, VA</p> <p>¹Salary and intellectual property rights with Cellutions
²Research grant from Cellutions; intellectual property rights with Old Dominion University
³Research grant and royalties from Cellutions; intellectual property rights with Old Dominion University</p> |
| 8:30 am - 8:39 am | 37 | <p>THERMAL INJURY PRODUCES REACTIVE OXYGEN SPECIES EFFECTING SURROUNDING NON-HEATED CELLS</p> <p><i>Martin Purschke*</i>, <i>R. Rox Anderson</i>, <i>Dieter Manstein</i>, Massachusetts General Hospital, Harvard Medical School, Boston, MA</p> |
| 8:40 am - 8:49 am | 38 | <p>FIBER DELIVERY SYSTEM FOR ABLATION OF HARD AND SOFT TISSUES USING NEAR-INFRARED FEMTOSECOND LASER PULSES</p> <p><i>Jinze Qiu</i>, <i>Joseph Neev</i>, <i>Tianyi Wang</i>, <i>David Gamez</i>, <i>Thomas Milner</i>, University of Texas at Austin, Austin, TX, FemtoSec Tech, Aliso Viejo, CA</p> |
| 8:50 am - 8:59 am | 39 | <p>DIFFUSE OPTICAL SPECTROSCOPY FOR NON-INVASIVE DIAGNOSIS OF SKIN CANCER: AN OPTIMIZED LOOKUP TABLE-BASED MODEL FOR DETERMINING TISSUE OPTICAL PROPERTIES</p> <p><i>Narasimhan Rajaram</i>, <i>Brandon Nichols</i>, <i>Jason Reichenberg</i>, <i>Michael Migden</i>, <i>James Tunnell</i>, University of Texas at Austin, University of Texas Medical Branch, Austin, TX, University of Texas/MD Anderson Cancer Center, Houston, TX</p> <p>•Content discusses non-FDA approved device or off-label use</p> |

*Recipient of U.S. Air Force Office of Scientific Research travel grant.

Basic Science Session

Sunday, April 18, 2010

2010 Annual Conference
Pre-Conference Courses: April 14-15, 2010
Annual Conference: April 16-18, 2010
Phoenix Convention Center, Phoenix, AZ

9:00 am - 9:09 am <i>(ePoster Available)</i>	40	<p>THIRD-DEGREE BURN TREATMENT WITH ULTRASHORT PULSE LASER DEBRIDEMENT</p> <p><i>Moisés Santos[*], Denise Zezell, Telma Zorn, Anderson Zanardi, Davi Lacerda, Nilson Vieira, Ricardo Samad, IPEN - CNEN, ICB - USP, HC - USP, São Paulo, Brazil</i></p>
9:10 am - 9:19 am	41	<p>EFFECT OF TEMPERATURE ON FLUORESCENCE: AN ANIMAL STUDY</p> <p><i>Alex Walsh[*], D.B. Masters, A.J. Welch, Anita Mahadevan-Jansen, Vanderbilt University, Nashville, TN, University of Texas at Austin, Austin, TX</i></p>
9:20 am - 9:29 am	42	<p>A NOVEL DIAGNOSTIC ULTRASOUND TOOL FOR OPTIMAL BODY CONTOURING TREATMENT</p> <p><i>Yossi Adanny¹, Avner Rosenberg¹, Dima Dubitsky¹, Boris Vaynberg¹, Ruthie Amir¹, Syneron Medical, Yokneam, Illit, Israel</i></p> <p>¹Salary from Syneron</p>
<u>LATE-BREAKING ABSTRACT</u>		
9:30 am - 9:39 am <i>(ePoster Available)</i>	43	<p>KTP LASER TISSUE ABLATION: DEVELOPMENT AND EXPERIMENTAL VALIDATION OF A NEW NUMERICAL MODEL</p> <p><i>Hossam Elkhali[*]¹, Taner Akkin, John Bischof¹, University of Minnesota, Minneapolis, MN</i></p> <p>¹Financial grant and from American Medical Systems and Institute for Engineering in Medicine •Content discusses non-FDA approved device or off-label use</p>
<u>LATE-BREAKING ABSTRACT</u>		
<u>2007 RESEARCH GRANT RECIPIENT</u>		
9:40 am - 9:49 am	44	<p>COMBINED PULSED DYE LASER AND RAPAMYCIN TREATMENT INHIBITS CUTANEOUS PATHOLOGICAL ANGIOGENESIS</p> <p><i>Thuy Phung, Rafael Rojano, Phyllis Hsieh, Martin Mihm, J. Stuart Nelson, Laura Benjamin, Baylor College of Medicine, Houston, TX, Conrex Pharmaceuticals, Inc., Newtown Square, PA, Massachusetts General Hospital, Beth Israel Deaconess Medical Center, Boston, MA, Beckman Laser Institute and Medical Clinic, University of California, Irvine, CA</i></p> <p>•Content discusses non-FDA approved device or off-label use</p>
<u>LATE-BREAKING ABSTRACT</u>		
9:50 am - 9:59 am <i>(ePoster Available)</i>	45	<p>NOVEL TEMPERATURE MONITORING DURING LASER-ASSISTED LIPOLYSIS</p> <p><i>Robert Weiss¹, Maryland Laser Skin Vein Institute, Baltimore, MD</i></p> <p>¹Equipment, research grant, and honoraria from Palomar •Content discusses non-FDA approved device or off-label use</p>
10:00 am - 10:29 am	BREAK	

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IMAGING

Moderator: *E. Duco Jansen, Ph.D.*

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| 10:30 am - 10:39 am | 46 | <p>RESOLUTION LIMITS OF SPATIAL SPECTRAL VOLUME HOLOGRAPHIC IMAGING SYSTEMS</p> <p><i>Jose Castro, Yuan Luo, Jennifer Harwell, Erich De Leon, Raymond Kostuk, University of Arizona, Tucson, AZ, Massachusetts Institute of Technology, Cambridge, MA</i></p> |
| 10:40 am - 10:49 am | 47 | <p>MEASUREMENT OF BIREFRINGENCE OF THE RETINAL NERVE FIBER LAYER USING SWEEP SOURCE POLARIZATION SENSITIVE OPTICAL COHERENCE TOMOGRAPHY (1μm)</p> <p><i>Badr Elmaanaoui¹*, Jordan Dwelle¹, Austin McElroy, Amit Paranjape¹, Shuang Liu¹, Henry Rylander¹, Thomas Milner¹, University of Texas at Austin, Austin, TX</i></p> <p>¹Research grant from 26-1601-2512</p> |
| 10:50 am - 10:59 am | 49 | <p>REFRACTIVE INDICES OF HUMAN AND MOUSE SKIN CANCERS IN TERAHERTZ WAVELENGTH RANGE</p> <p><i>Cecil Joseph*, Anna Yaroslavsky, Thomas Goyette, Robert Giles, William Nixon, Submillimeter-Wave Technology Laboratory, University of Massachusetts, Lowell, MA, Wellman Center for Photomedicine, Massachusetts General Hospital, Harvard Medical School, Boston, MA, United States Army, National Ground Intelligence Center, Charlottesville, VA</i></p> |
| 11:00 am - 11:09 am | 50 | <p>COMBINED RAMAN SPECTROSCOPY-OPTICAL COHERENCE TOMOGRAPHY FOR THE DETECTION OF SKIN CANCERS</p> <p><i>Chetan Patil*, Harish Krishnamoorthi, Mark Mackanos, Ton van Leeuwen, Darrel Ellis, Anita Mahadevan-Jansen, Vanderbilt University, Nashville, TN, Amsterdam Medical Center, Amsterdam, The Netherlands</i></p> <p>•Content discusses non-FDA approved device or off-label use</p> |
| 11:10 am - 11:19 am
(ePoster Available) | 51 | <p>3-DIMENSIONAL SURFACE IMAGING FOR MEASURING SKIN TIGHTENING AND BODY CIRCUMFERENCE</p> <p><i>Elliot Weiss, Ori Barzilai, Lori Brightman, Sheetal Desai, Anne Chapas, Elizabeth Hale, Julie Karen, Leonard Bernstein, Roy Geronemus, Laser & Skin Surgery Center of New York, New York, NY</i></p> |
| 11:20 am - 11:29 am | 52 | <p>DETERMINATION OF DEATH THRESHOLDS AND IDENTIFICATION OF TERAHERTZ - SPECIFIC GENE EXPRESSION SIGNATURES</p> <p><i>Gerald Wilmink, Benjamin Rivest, Bennett Ibey, William Roach, Air Force Research Laboratory, Brooks City-Base, TX</i></p> |

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| 11:30 am - 11:39 am | 53 | DETERMINATION OF THE OPTICAL PROPERTIES OF SKIN IN THE TERAHERTZ WAVELENGTH RANGE USING TIME-DOMAIN SPECTROSCOPIC TECHNIQUES
<i>Gerald Wilmink, Bennett Ibey, Tongue Thomas, Brian Shulkin, Xomalin Peralta, Benjamin Rivest, William Roach, Air Force Research Laboratory, Brooks City-Base, TX, Zomega Terahertz Corporation, Troy, NY, University of Texas at San Antonio, San Antonio, TX</i> |
| 11:40 am - 11:49 am | 54 | IMAGING BRAIN TUMORS USING WIDE-FIELD HIGH-RESOLUTION OPTICAL SYSTEM
<i>Samir Sheth, William Curry, Christopher Farell, Fred Barker, <u>Anna Yaroslavsky</u>, Massachusetts General Hospital, Boston, MA</i> |
| 11:50 am - 11:59 am | 55 | COMPARATIVE EVALUATION OF SQUAMOUS CELL CARCINOMA MOUSE MODELS USED FOR TESTING MULTIMODAL OPTICAL IMAGER
<i>Anna Yaroslavsky, Pawel Mroz, Jesung Park, Michael Hamblin, Massachusetts General Hospital, Harvard Medical School, Wellman Center for Photomedicine, Boston, MA</i> |
| 12:00 pm - 12:10 pm
(ePoster Available) | 56 | THREE-DIMENSIONAL PHOTOTHERMAL WAVE IMAGING OF NANOROSE IN ATHEROSCLEROTIC PLAQUE AND A TISSUE PHANTOM
<i>Tianyi Wang[♦], Jinze Qiu, Amit Paranjape, Li Ma, Xiankai Li, Seungyup Ryoo, Keith Johnston, Marc Feldman, Thomas Milner, University of Texas at Austin, Austin, TX, University of Texas Health Science Center at San Antonio, San Antonio, TX</i> |

[♦]Recipient of U.S. Air Force Office of Scientific Research travel grant.