



Photobiomodulation Session

April 24, 2015 1:45 pm - 5:30 pm
Room Osceola A

Juanita J. Anders, Ph.D., Co-Director
Raymond J. Lanza fame, M.D., M.B.A., Co-Director
Steve Tumilty, Ph.D., MPhty, Co-Director

Educational Needs

The purpose of this session is to present and discuss the latest findings on basic mechanisms of photobiomodulation, pre-clinical and clinical investigations on the critical parameters, mechanism, and effectiveness of light as a therapy for a broad range of clinical applications. Light and its photonic effects and photo-medicine in general have gained recognition as an area of innovative and novel research with significant clinical implications.

Participants

Scientists, engineers, medical practitioners, individuals in industry and other health care professionals involved in biomedical applications of light are invited to participate in these sessions.

Background Requirements

Participants should have an understanding of light interaction with biological tissues and basic and clinical research.

Instructional Content and/or Expected Learning Outcomes

This session will provide the latest data on basic science and clinical application of light in a wide spectrum of applications. The participants will increase their knowledge in this area and hopefully be stimulated to formulate new ideas to identify the mechanisms involved and the critical parameters needed for successful clinical application of light.

“Hot Topics”

- * Near-Infrared Light Stimulates Bone Repair After Ionizing Radiation
- * Photobiomodulation Increases Endurance During Exercise
- * Near-Infrared Light Combined With Stem Cells Repairs Articular Cartilage Defects
- * Photobiomodulation: A Promising Therapy for Low Back and Neuropathic Pain – Pre-clinical and Clinical Evidence

Friday, April 24, 2015		
1:45 pm – 1:55 pm (ePoster Available)	124	LOW LEVEL LASER THERAPY IN THE REPAIR OF RAT TIBIAE EXPOSED TO IONIZING RADIATION: HISTOLOGICAL EVALUATION <i>Meire Abramoff*, Max Pereira, Maria Teresa Alves, Roberto Segreto, Arnaldo Guilherme, Lydia Ferreira, Universidade Federal de São Paulo, São Paulo, Brazil</i>
1:56 pm – 1:59 pm		Discussion
2:00 pm – 2:10 pm	125	IN VIVO MECHANISMS OF PHOTOPREVENTION IN A PIG MODEL <i>Daniel Barolet*, McGill University, Montreal, Quebec, Canada</i>
2:11 pm – 2:14 pm		Discussion
2:15 pm – 2:25 pm (ePoster Available)	126	CHARACTERIZATION AND MODULATION OF MACROPHAGE/MICROGLIAL ACTIVATION IN AN ANIMAL MODEL OF NEUROPATHIC PAIN <i>Ann Ketz*, Xingjia Wu, Brian Pryor, Juanita Anders, Landstuhl Regional Medical Center, Landstuhl, Germany, Uniformed Services University of the Health Sciences, Bethesda, MD, LiteCure LLC, Newark, DE</i>
2:26 pm – 2:29 pm		Discussion

*Presenter



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2:30 pm – 2:40 pm	LB25	LLLT FOR MELASMA: A PILOT STUDY <i>Daniel Barolet*, Gregory Cormack, McGill University, Montreal, Quebec, Canada</i>
2:41 pm – 2:44 pm		Discussion
2:45 pm – 3:29 pm		Break – Visit the Exhibits/View ePosters – Florida Exhibit Halls E&F
3:30 pm – 3:40 pm	128	EFFECTIVENESS OF LOW-LEVEL LASER THERAPY FOR TREATMENT OF TOENAIL ONYCHOMYCOSIS <i>Steven Shanks*, Erchonia Corporation, McKinney, TX</i>
3:41 pm – 3:44 pm		Discussion
3:45 pm – 3:55 pm	129	EFFECT OF CULTURED MESENCHYMAL STEM CELLS WITH SCAFFOLD AND THERAPEUTIC LASER ON HEALING RATE OF ARTICULAR CARTILAGE DEFECTS IN RABBIT: A HISTOLOGICAL STUDY <i>Reza Fekrazad, Arman Mohammadi Shayan, Mohammadreza Baghban Eslaminejad, Katayoun A.M. Kalhori*, Leila Taghiyar, Mir Sepehr Pedram, Mostafa Sadeghi, AJA University of Medical Sciences, Islamic Azad University, Iranian Medical Laser Association, Royan Institute for Stem Cell Biology and Technology, Tehran University, Tehran, Iran, Gorgan Faculty of Dentistry, Gorgan, Iran</i>
3:56 pm – 3:59 pm		Discussion
4:00 pm – 4:10 pm	130	PHOTOBIO-MODULATION-INDUCED FIRST-ORDER PHASE TRANSITION OF MYOBLAST PROLIFERATION <i>Timon Cheng-Yi Liu*, Fang-Hui Li, De-Feng Wu, Quan-Gang Zhang, Laboratory of Laser Sports Medicine, South China Normal University, Guangzhou, Guangdong, China, Institute of Molecular Medicine and Genetics, Medical College of Georgia at Georgia Regents University, Augusta, GA</i>
4:11 pm – 4:14 pm		Discussion
4:15 pm – 4:25 pm	LB26	EFFECT OF LOW INTENSITY LASER ON THE APOPTOSIS OF SQUAMOUS CARCINOMA CELLS <i>Katia Vale*, Tatiana Schalch, Maria Helena Fernandes, João Miguel Rodrigues, Monica Garcia, Raquel Mesquita-Ferrari, Sandra Bussadori, Kristianne Fernandes, Universidade Nove de Julho- UNINOVE, São Paulo, Brazil, FMD Universidade do Porto, Porto, Portugal</i>
4:26 pm – 4:29 pm		Discussion
4:30 pm – 4:40 pm	LB27	LOW LEVEL LASER THERAPY IMPROVES CARDIOVASCULAR AUTONOMIC ACTIVITY IN SPONTANEOUSLY HYPERTENSIVE RATS <i>Bianca Silva, Suely Tomimura, Iris Sanches, Marina Canal, Nathali Pinto, Otavio Madi, Felipe Conti, Katia De Angelis, Fernanda Colombo, M. Cristina Chavantes*, Universidade Nove de Julho (UNINOVE), Universidade de São Paulo (INCOR-USP), São Paulo, Brazil</i>
4:41 pm – 4:44 pm		Discussion

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4:45 pm – 4:55 pm (ePoster Available)	LB28	THE EFFECT OF LOW-LEVEL LASER THERAPY ON OXIDATIVE STRESS AND FUNCTIONAL FITNESS IN ELDERLY RATS SUBJECTED TO SWIMMING, AN AEROBIC EXERCISE <i>Evela Pereira Silva*, Anna Cristina Marques, Vanessa Cavalcante, Simone Adriana Guaraldo, Kamila Cerrados, Paulo de Tarso Camillo de Carvalho, Universidade Nove de Julho, São Paulo, Brazil</i>
4:56 pm – 4:59 pm		Discussion
5:00 pm – 5:10 pm	LB29	EFFECTS OF LOW LEVEL LASER EXPOSURE ON CALCIUM CHANNELS AND INTRACELLUALR RELEASE IN CULTURED ASTROCYTES <i>Thomas Mang*, Mohammed Maneshi, David Shucard, Susan Hua, Fred Sachs, University at Buffalo, Buffalo, NY</i>
5:11 pm – 5:14 pm		Discussion
5:15 pm – 5:25 pm	LB30	GLUTAMINE ADDICTION AND ITS PHOTOBIMODULATION <i>Timon Cheng-Yi Liu*, Shao-Juan Hu, Yan-Ying Liu, Ya-Jun Yang, Laboratory of Laser Sports Medicine, South China Normal University, Guangzhou, Guangdong, China</i>
5:26 pm – 5:30 pm		Discussion

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