



# Head & Neck Optical Diagnostics, Otolaryngology, Dentistry/O&M (HNODS) Session Friday, April 20, 2012

2012 Annual Conference  
Pre-Conference Courses: April 18-19, 2012  
Annual Conference: April 20-22, 2012  
Gaylord Palms™ Resort and Convention Center  
Kissimmee, FL

## Head and Neck Optical Diagnostics, Otolaryngology, Dentistry/O&M (HNODS) Session - Sun B

12:30 pm - 6:00 pm

Directors: *Brian J.F. Wong, M.D., Ph.D., Waseem Jerjes, B.D.S., M.B.B.S., M.Sc., Ph.D.*



For the first time the 4<sup>th</sup> Scientific Meeting of the Head & Neck Optical Diagnostics Society (HNODS) will be held in conjunction with the American Society for Laser Medicine and Surgery (ASLMS) to enhance the interdisciplinary aspects of optical diagnostics, lasers and other photodynamic applications. The main theme of this Scientific Meeting will discuss the advances in optical diagnostics and lasers in relation to dentistry, oral and maxillofacial surgery, otolaryngology and head and neck surgery as well as photodynamic therapy.

The HNODS aims to: improve the early diagnosis and treatment of patients, facilitate the education of healthcare professionals and the general public, and promote and encourage the study and practice of optical diagnostics techniques in the head and neck. The Society will also aim to promote and encourage the study and practice of other imaging modalities in the head and neck, facilitate communications between clinicians, scientists, physicists, engineers, technicians, radiologists and pathologists, particularly those with interest in the pathology of the head and neck, and conduct educational congresses for the application of optical diagnostics in the head and neck. Also, the Society will conduct Scientific Meetings which will aim to report the advances in the field and build close relations with laser, optical and surgical associations, societies, research groups, industry and patient's organizations.

The scientific program will include the chairman's lecture and other invited lectures covering the recent advances in optical diagnostics in the head and neck. Broad space will be given to short communications and poster discussions. Students and young researchers are especially welcome.

### Educational Needs

This section is a venue for the presentation of cutting edge technology for the treatment of head, neck, and upper airway disorders. The focus is on the specialties of otolaryngology-head and neck surgery, maxillofacial surgery, and dentistry. Both clinical and basic investigations will be presented. Attendees will develop an understanding of cutting edge technologies and state-of-the-art applications of optical methods in the treatment of head and neck disease.

### Participants

This session is meant to be broadly inclusive for physicians and scientists who have an interest in treating head and neck diseases.

### Background Requirements

Participants are expected to have expertise in management of diseases of the head, neck, and upper airway to include the biology of mucosal diseases.

### Instructional Content and/or Expected Learning Outcomes

Attendees will gain knowledge of cutting edge diagnostic and therapeutic technologies for the management of diseases in the head, neck, and upper airway.

### Hot Topics

- Narrow Band Imaging
- Optical Coherence Tomography
- Photodynamic Therapy

**Head and Neck Optical Diagnostics, Otolaryngology, Dentistry/O&M  
(HNODS) Session Continued - Sun B**

**12:30 pm - 6:00 pm**

**DIAGNOSTIC IMAGING OF HEAD AND NECK CANCER AND RELATED DISEASES**

**KEYNOTE SPEAKER**

12:30 pm - 12:44 pm      **OPTICAL COHERENCE TOMOGRAPHY IN THE HEAD AND NECK: AN UPDATE**  
*Colin Hopper, Waseem Jerjes, UCL, UCLH, London, United Kingdom, Leeds Institute of Molecular Medicine, Leeds, United Kingdom*

12:45 pm - 12:54 pm      **QUALITATIVE AND QUANTITATIVE IMAGING CHARACTERISTICS OF BENIGN AND MALIGNANT UPPER AERODIGESTIVE TRACT MUCOSA IMAGED WITH HIGH-RESOLUTION MICROENDOSCOPY**  
*Lauren Levy, Peter Vila, Mary Kate Quinn, Donie Shin, Eric Genden, Vivek Gurudutt, Marita Teng, Brett Miles, Alexandros Polydorides, Rebecca Richards-Kortum, Andrew G. Sikora, Mount Sinai School of Medicine, New York, NY, Rice University, Houston, TX*

12:55 pm - 1:04 pm      69      **MULTIMODAL OPTICAL IMAGING OF TONGUE CARCINOGENESIS IN A MOUSE MODEL**  
*Anne Hellebust, Kelsey Rosbach, Jessica Wu, Jennifer Nguyen, Ann Gillenwater, Rebecca Richards-Kortum, Nadarajah Vigneswaran, Rice University, The University of Texas Dental Branch at Houston, University of Texas MD Anderson Cancer Center, Houston, TX*

**INVITED SPEAKER**

1:05 pm - 1:34 pm      **ADVANCES IN MULTI-MODALITIES ENDOMICROSCOPY**  
*Zhongping Chen, Jim Fujimoto, Brett Bouma, Gary Tearney, Beckman Laser Institute and Medical Clinic, University of California, Irvine, CA*

1:35 pm - 1:44 pm      70      **"OPTICAL BIOPSY" BY NARROW BAND IMAGING AND AUTOFLUORESCENCE OF ORAL AND OROPHARYNGEAL ERYTHRO-LEUKOPLAKIAS**  
*C. Piazza, F. Del Bon, G. Peretti, S. Mangili, A. Bizzoni, P. Nicolai, University of Brescia, Brescia, Italy*

1:45 pm - 1:54 pm      71      **CLINICAL SURVEILLANCE OF ORAL PREMALIGNANT LESIONS USING AUTOFLUORESCENCE IMAGING AND SPECTROSCOPY**  
*Sharon Mondrik, Richard A. Schwarz, Mark C. Pierce, Wen Gao, Mary K. Quinn, Vijayashree Bhattar, Michelle D. Williams, Nadarajah Vigneswaran, Ann M. Gillenwater, Rebecca Richards-Kortum, Rice University, University of Texas/M.D. Anderson Cancer Center, University of Texas Dental Branch at Houston, Houston, TX, Rutgers University, Piscataway, NJ*

1:55 pm - 2:04 pm      72      **EVALUATION OF OCT TO DISCRIMINATE LESIONS OF THE UPPER AERODIGESTIVE TRACT**  
*Christian Stephan Betz, Veronika Volgger, Herbert Stepp, Stephan Ihrler, Marcel Kraft, Andreas Leunig, Colin Hopper, Klinikum der Universitat Munchen, Labor fur Dermatohistologie und Oralpathologie, Munich, Germany, Princess Alexandra Hospital, Woolloongabba, Australia, Kantonsspital Aarau, Aarau, Switzerland, HNO-Zentrum-Starnberg, Starnberg, Germany, UCLH NHS, London, United Kingdom*

**Head and Neck Optical Diagnostics, Otolaryngology, Dentistry/O&M  
(HNODS) Session Continued - Sun B**

**12:30 pm - 6:00 pm**

- 2:05 pm - 2:14 pm                      **THE USE OF OPTICAL TECHNOLOGY IN HARD TISSUE MANAGEMENT: REVIEW**  
*Waseem Jerjes, Colin Hopper, Peter Giannoudis, UCL, UCLH, London, United Kingdom, Leeds Institute of Molecular Medicine, Leeds, United Kingdom*
- 2:15 pm - 2:24 pm              73      **AN OPTICAL APPROACH TO DIFFERENTIATE PERIODONTITIS**  
*Jae Baek, Yeh-Chan Ahn, Jae Kim, Petra Wilder-Smith, We.Smile Orthodontic Clinic, Ulsan, South Korea, Pukyong National University, Busan, South Korea, GIST, Gwnagju, South Korea, Beckman Laser Institute and Medical Clinic, University of California, Irvine, CA*
- 2:25 pm - 2:34 pm                      **CORRELATIONS OF HIGH SPEED DIGITAL IMAGING WITH OTHER CLINICAL VOICE MEASUREMENTS**  
*Mette Fog Pedersen, The Medical Centre Ear-Nose Throat Unit, Copenhagen, Denmark*
- 2:35 pm - 2:44 pm                      **ADVANCED MICRO SCANNING IN LARYNGOLOGY: IMPLICATIONS OF NEW ADVANCED SCANNING IN RELATION TO HIGH SPEED DIGITAL IMAGING ACQUIRED SIGNALS**  
*Morten Friis, Mette Fog Pedersen, Klaus Quorstrup, Panum Institute of Copenhagen, The Medical Centre Ear-Nose Throat Unit, Copenhagen, Denmark*
- 2:45 pm - 3:44 pm                      **Break - Visit the Exhibits/Experts-in-the-Hall/ePosters**

**DIAGNOSTIC IMAGING OF HEAD AND NECK CANCER AND RELATED DISEASES**

- 3:45 pm - 3:54 pm                      **THE USE OF OPTICAL TECHNOLOGY IN WOUND MANAGEMENT: REVIEW**  
*Waseem Jerjes, Colin Hopper, Peter Giannoudis, UCL, UCLH, London, United Kingdom, Leeds Institute of Molecular Medicine, Leeds, United Kingdom*
- 3:55 pm - 4:04 pm              74      **PROBE-BASED CONFOCAL LASER ENDOMICROSCOPY IN UPPER AERODIGESTIVE TRACT LESIONS: FIRST RESULTS**  
*Christian Stephan Betz, Herbert Stepp, Johannes Georg Ledderose, Ulrich Kisser, Andreas Leunig, Klinikum der Universitat Munchen, Munich, Germany, HNO-Zentrum-Starnberg, Starnberg, Germany*
- 4:05 pm - 4:14 pm                      **ELASTIC SCATTERING SPECTROSCOPY IN THE HEAD AND NECK: AN UPDATE**  
*Waseem Jerjes, Colin Hopper, UCL, UCLH, London, United Kingdom, Leeds Institute of Molecular Medicine, Leeds, United Kingdom*
- 4:15 pm - 4:24 pm                      **STRUCTURAL IMAGING OF THE UPPER AIRWAY USING OCT**  
*Amy Y. Yau, Anthony Chin Loy, Alex Wang, Andrew Emon Heidari, OCT Medical Imaging Inc., Joe Jing, Cyrus Manuel, Dimitry E. Protsenko, Brian J. F. Wong, Beckman Laser Institute and Medical Clinic, University of California, Irvine, CA*

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**12:30 pm - 6:00 pm**

4:25 pm - 4:34 pm      **EARLY RESULTS OF AN *IN VIVO* CLINICAL STUDY UTILIZING AN INTEGRATED FNA BIOPSY TOOL WITH ELASTIC LIGHT SCATTERING SPECTROSCOPY FOR THE DIAGNOSIS OF THYROID NODULES**  
*Jennifer E. Rosen, Hyunsuk Suh, Ilona Goukassian, Eladio Rodriguez-Diaz, Ousama A'amar, Irving J. Bigio, Stephanie L. Lee, Boston University, Boston, MA*

**LASER ABLATION, SURGICAL THERAPIES AND EMERGING TECHNIQUES I**

4:35 pm - 4:44 pm      75      **VOICE SURGERY AND CO<sub>2</sub> LASER IN 2012: 30 YEARS OF PRACTICE**  
*Jean Abitbol, Patrick Abitbol, Paris University, Paris, France*

4:45 pm - 4:54 pm      **OPTIMIZING LASER USE IN TRANSORAL ROBOTIC SURGERY (TORS)**  
*Amy Y. Yau, William Armstrong, University of California, Irvine, CA*

4:55 pm - 5:04 pm      77      **LASER ABLATION vs "WAIT AND SEE" IN TREATMENT OF ORAL LEUKOPLAKIA - 10 YEAR STUDY**  
*Roman Smucler, Marek Vlk, Charles University, Prague, Czech Republic*

5:05 pm - 5:14 pm      78      **A SIDE BY SIDE DOUBLE BLIND RANDOMIZED CONTROLLED STUDY OF INTRACAPSULAR LASER TONSILLECTOMY COMPARED WITH BIPOLAR DISSECTION**  
*Mike Dilkes, Sonia Hussein, Furrat Amen, Vyas Prasad, Olga Khorovstova, St. Bartholomews Hospital, London, United Kingdom*

5:15 pm - 5:24 pm      79      **CO<sub>2</sub> LASER PHONOSURGERY FOR LIFTING OF THE VOCAL FOLDS: HOW TO IMPROVE THE VOICE ON 250 FEMALE PATIENTS**  
*Jean Abitbol, Patrick Abitbol, Paris University, Paris, France*

5:25 pm - 5:34 pm      **ELECTROMECHANICAL RESHAPING OF EPIGLOTTIS FOR UPPER AIRWAY PILOT INVESTIGATIONS**  
*Amy Y. Yau, Syed Hussain, Cyris Manuel, Dimitry E. Protsenko, Brian J.F. Wong, Beckman Laser Institute and Medical Clinic, University of California, Irvine, CA*

5:35 pm - 6:00 pm      **Q&A/Discussion**