

United Nations

A/C.2/68/L.13/Rev.1



### **General Assembly**

Distr.: Limited 25 November 2013

Original: English

Sixty-eighth session Second Committee

Agenda item 21 (b)

Globalization and interdependence: science and technology

for development

International Year of Light and Light-based Technologies, 2015

#### **Contents**

## **Invitation to Laser Florence 2015**



## TRANSLATING RESEARCH FROM THE LABORATORY BENCH TO THE BED SIDE: THE ROLE OF INTERNATIONAL CONFERENCES

Laboratory research is essential for the progress of the science. On the other hand, all the research must be addressed versus the improvement of man health. Principal role of good multidisciplinary conference is to accelerate the translation from the laboratory bench to the bed side. Data must be demonstrated, discussed and accepted, then translated in clinical practice, following guidelines of safety and efficacious.

The guidelines are important in each field of the science. Laser medicine and surgery requires continuously new definition and adjournment of them.

Our Congress would like to offer a window on this topic, putting together experts of different disciplines who only have in common the use of the same technology.

The International Academy of Laser Medicine and Surgery are looking to develop these guidelines and propose their use, especially in the sectors where the laser is widely used: **Biomudulation**, **Surgery**, **Diagnosis**, **Photodynamic effects and more**.

The year 2015 is declared by the UNICEF "Year of the Light" and IALMS World Congress Laser Florence will give his contribution for the development of this concept.

**Scholarships** are introduced in order to sponsor the participation of the most brilliant laser medicine expert under 40 y.o. from the five continents.

The leading international experts should compare their knowledge with the goal of establishing common rules and procedures for their respective specialties, from which sets of guidelines can evolve.

As always, one session will be dedicated to young researchers, in which the latest advances will be presented.

Another session is dedicated to discussion with patients already treated.

The IALMS ensure the high quality of the lectures and posters presented. The accepted abstracts will be published in the official journal of the IALMS, Laser in Medical Science, published by Springer Publisher, London. Selected papers from the Proceedings of the Conference will be published immediately after the event, both in hard copy and on line, in peer-reviewed journal Laser Therapy, and in "Advance in Laserology" book, printed by Medimond publ.

With the backing of the WFSLMS – the World Federation of Societies for Laser Medicine and Surgery, the IALMS continue the proposal of an International Masters Course on Laser Medicine and Surgery, with a duration of 1 year. Laser Florence will represent an annual adjournment for the International Medical Laser Specialists. This year will be organized a brief Laser Safety International Course, one day before Congress, with the assignment of the ILLIS-The International Laser License System.

The Organizers of Laser Florence have one aim in particular: to establish an outstanding interaction between the delegates in a unique location and an unforgettable atmosphere where friendship, intelligence and scientific know-how are blended.

Several **awards** are available for the presenters of the best papers and posters and the recipients will be invited to participate in the next conference of Laser Florence.

Finally, some **grants** will be assigned by the IALMS and other Institutions.

We hope to give a little contribution with our Laser Florence!

See you there... Leonardo Longo, M.D., The I.A.L.M.S. President

#### **LASER FLORENCE 2015 - PROGRAM AT-A-GLANCE**

#### November 5th, 2015

- Course on LASER DENTISTRY
- Course on LASER/LIGHT IN DERMATOLOGY, PLASTIC SURGERY, AESTHETIC MEDICINE
- Course on BASIC SCIENCE AND LASER PHYSICS
- COURSE ON LASER BIOMODULATION

#### November 6<sup>th</sup>, 2015

- GUIDELINES on LASER DENTISTRY
- GUIDELINES on LASER/LIGHT IN DERMATOLOGY, PLASTIC SURGERY, AESTHETIC MEDICINE
- GUIDELINES on BASIC SCIENCE AND LASER PHYSICS
- GUIDELINES on LASER /LIGHT IN WOMAN HEALTH

19:15 - Open Ceremony with Welcome Cocktail and leading lecture

#### November 7th, 2015

- GUIDELINES on LASER BIOMODULATION SCIENTIFIC RESEARCH and CLINICAL PRACTICE
- GUIDELINES on LASER/LIGHT IN SURGERY
- GUIDELINES on PHOTODINAMIC DIAGNOSIS AND THERAPY
- Session for patients
- TALK POSTER SESSION

21:00 - Gala Dinner, Awards Assignation, Music show and Closure Ceremony

#### **ORGANIZED BY**

I.A.L.M.S. - The International Academy for Laser Medicine and Surgery

#### **SPONSORED BY**

UNICEF - UNITED NATIONS 2015, International Year of Light

I.S.L.S.M. - The International Society of Laser Surgery and Medicine

W.F.L.S.M.S. - The World Federation of Laser Surgery and Medicine Societies

W.F.L.D. - The World Federation Laser Dentistry

I. P.T.A. - The International Photo Therapy Association

I.L.M. - Institute Laser Medicine Florence

N.E.S.A. - New European Surgical Academy

S.I.M.E. - The Italian Society Of Aesthetic Medicine

S.P.I.E. - The Photonics Optical Society

HIGH PATRONAGE requested

The President of Italian Republic

Italian Health Office

Florence Medical Associat

# NETWORKS GENERATED BY PREVIOUS LASER FLORENCE CONFERENCES

**1997**: Pulse light for vascular lesions, advantages and limits. Endovascular laser therapy for various veins. Indication and contraindications for Laser resurfacing procedures.

**1998**: mechanism of action, ant inflammatory and anti-edema effects of Laser. Advantages and limits for laser in dentistry. Types of laser recommended for treatment of telangiectases and reticular veins.

**1999**: Prostatectomy laser. Non surgical endovenous laser modulating the immune system. Advantages and limits of Laser and IPL as hair removal techniques.

**2000**: PDD and PDT for the treatment of gastrointestinal and urological cancers. Laser therapy for wound healing and skin ulcers. , stretch marks, scars, keloids. Laser and IPL in skin rejuvenation.

**2001**: Laser treatment for diabetes type 1 and 2 (live demonstration on patients during the congress, probably, for the first time in the world). Advantages and limits of pulsed light in aesthetic medicine and surgery. What kind of laser should be in rheumatology and sport traumas? Role of European Community and World Health Organization in these issues.

2002: Laser Treatment of disk Hernias. Laser and light treatment for Psoriasis and Vitiligo.

**2003**: Laser therapy for nervous cells regeneration, in vitro and experimental. Complications of laser and light therapy and their treatment. Selection of affordable instrumentation. Advantages and limits of laser in ophthalmology. Position of FDA and other International Institution on non surgical laser.

**2004:** laser therapy of spinal cord injuries in clinical practice; first diabetic patients treated with laser in Italy, following Helsinki declaration rules; news on mechanisms of ant inflammatory and regenerative effects of lasers on the human tissues; prostatectomy laser in day surgery; advantages and limits of endoluminal laser surgery of varicose veins; laser coupled with radio frequency scalpel for skin lesion treatment. Laser treatment of progenitor cells.

**2005**: Cesarean incision with laser. Photodyalisis laser for chronic degenerative conditions. Follow-up of laser therapy for diabetes. Laser therapy of traumatic spinal cord injuries. Action mechanism of laser beam on nervous tissue.

**2006**: Photopletismography multi laser in vascular diseases. News substances for PDT of lung cancer. Ant inflammatory and regenerative mechanisms of laser treatment of experimental myocardial infarct. News on Laser therapy in sport traumatology Radio protective effects of non surgical laser.

**2007**: Laser in stem cells therapy: preclinical phase. Laser therapy for traumatic and degenerative spinal cord injuries with live patients presentation. Follow-up of laser therapy in diabetes type 1 e 2. Laser therapy for female infertility. Laser vascular and aesthetic surgery.

State-of-the art on laser dentistry and PDD/PDT.

**2008**: Laser in brain traumatic injuries; Laser therapy for male infertility. Laser and energetic medicine; laser and nervous progenitor cells.

**2009**: Guidelines for the use of non surgical lasers. Laser Diagnosis. Laser therapy for infertility. Laser and stem cells

**2010**: Follow up of positive results on central nervous system traumatic injuries. Laser therapy for peripheral nerve reconstruction. Laser therapy for prevenction of central nervous system post-traumatic damages. Laser diagnosis of early cancer of lung, uterus, breast, urinary bladder, prosthate. Laser and photodynamic therapy of prosthate cancer and lung cancer. Laser therapy of the menopause. Light for improving the follow-up of laser therapy of diabetes. Laser and stem cells for treatment of myocardial lesions.

**2011**: mechanisms of laser effects in quantum medicine; new procedures of percutaneous laser disc decompression of inter-vertebral disks. antimicrobial photodynamic therapy in chronic osteomyelitis. Multispectral visualization of glial brain tumors containing ppix in diffuse and laser-induced fluorescent light. Follow-up of laser treatment of spinal cord traumatic injuries.

**2012**: new treatment of non ablative laser for hypertrophic scars and keloids; new lasers in sport medicine; lasers for differentiation of stem cells; laser doppler myography; laser surgery of pancreas

**2013:** new laser treatment of acnis, vitiligo, psoriasis, melasma, scars, La Peyronie's disease; ablative laser therapy guided by optical coherence tomography; green laser promotes proliferation of neural progenitor cell; laser biomodulation of normal and neoplastic cells; sEMG-biofeedback for the evaluation of laser therapy on traumatic central nervous system injuries; updata on laser and physical therapy applied to traumatic central nervous system injuries; laser for tennis player shoulder; multidiodes laser for dentistry application.

# IALMS ACTIVITY 2014 EVENTS CO-SPONSORED BY THE IALMS

#### THE 4TH CONGRESS "LASER IN MEDICINE AND SURGERY":

The Outpost of the Future.

Milano, Casa di Cura S. Pio X - 11 Aprile 2014

#### Enrico Bernè, M.D. - Program Chairman and Rapporteur

The past April 11th, the 4th edition of the "Laser in Medicine and Surgery Congress" tookplace at St. Pio X Clinic in Milan. For the 4th time, the greatest experts in laser technologies haveshown their daily experience in the use of these device in a wide range of purposes and medicalbranches.

The laser technology has performed giant steps in all directions, in the last few years and we are proud to collect this treasure.

For starters, the new wavelengths of diode laser, armed with optical fiber (1470 nm-2100nm) permit a minimally invasive approach not only in venous pathology, the primary indications to their start, but also in new fields, such as chest and liver surgery, maintaining selectivity and respect of the soft tissue.

The super selective approach permits in this case a quick discharge of the patient and a brief time to cleanse, reducing the health outlay.

The real surprise is always in biological stimulation of damaged tissue, in which diode laser 980 nm CO2 and "low level" endovenous laser re-activate "sleeping" activity, like neo-angiogenesis and modulate the best immune answer to promote re-epithelization of soft tissues in less time compared to traditional medications.

In aesthetical areas and plastic surgery, laser and especially CO<sub>2</sub> laser with fractional device with or without radiofrequency support, represents the last turn from surgical to soft approach, available to all, at ageing, with minimally invasive rejuvenation smart program, showing high quality results with little trouble for the patients.

In more domestic fields, the well known technologies of Q-Switched Laser, QS-532-694-755 and 1064 nm, have shown in different light the removal of tattoos and of benign pigmented lesions. Alone or with CO<sub>2</sub>/fractional device, it remains the best for the best results, with complete skin respect.

The "queens" of this edition are all vascular transdermal lasers, first of all the dye laser 595 nm, then the 577 nm, with their more selective approach to vascular anomalies and in all vascular diseases. Last but not least, all the other 532 nm-1064 lp lasers, that daily support surgeons and dermatologists in their vascular challenges.

The green pulsed light with rhodamine is the new entry, and we are observing the effects.

The great richness of the Event was in fact represented by colleagues that, in a friendly atmosphere have carried out their personal opinions and their experience. The face to face discussions are constructive for our personal use to strengthen the experience of everybody and to build the future generation of young "laser lovers". Bright the light onto the dark: we look forward to seeing you at the 5<sup>th</sup> edition!

#### Comments on ASLMS 2014 Phoenix Congress and Laser Florence 2013

#### Khalil Khatri, MD - Rapporteur

Medical conferences are a very useful tool to learn about new inventions and latest knowledge. The teachers become students at these meeting and learn from each other. We not only learn by watching and listening to the lectures, but we also learn from personal discussion. Being critical of each other brings new challenges to us and forces us to think about new possibilities. At the end of these meeting, when we leave, we are already thinking about our new projects and preparing our next presentations and lectures.

The world of medical lasers is no different. Use of lasers for cosmetic purposes has exploded in past few decades. Almost every week there is a "laser conference" somewhere in the world. Most of these conferences are now run by commercial organizations with a "for profit" motivation. While they still serve a purpose to familiarize laser users with the new technology and how to use it, they lack scientific basics of the technology. They also try to downplay the possible complications as it is not in the best interest of the "sponsors" and manufacturers. Many possible new laser users get scared if they see laser complication photos and shy away from buying these rather expensive machines. Fortunately, there are still a few really "scientific" meetings about lasers that are not fully controlled by commercial interests. I have been going to ASLSM meeting every year for past 20 or so years. The 2014 meeting was held in April 2014 in Phoenix, AZ. There were many presentations that described innovative research and brought new challenges to laser scientists and laser surgeons. The scientific work continues to target fat, sebaceous glands, etc. Different sessions were dedicated to Biomodulation, Surgery, ENT, PDD /PDT, Dentistry.

I have also been lucky enough to attend Laser Florence 2013, IALMS Congress, every year for about last 18 years or so. The LF congress is unique as it is very broad and invites scientists and laser surgeons from all the fields. The LF made me a mature scientist and a better laser surgeon. It brought me out of my box in Boston and provided an opportunity to learn from my colleagues from all over the world. Their perspective and their techniques taught me how to improve my surgical skills and how to think critically and challenge myself to be innovative.

LF has contributed tremendously to the world of medical laser use. All of the organizers have worked very hard every year to bring scientists and laser surgeons from allover the world to learn from each other. The biggest credit for this goes to IALMS, Prof Leonardo Longo and his family for organizing LF every year and contributing to the science and application of lasers.



# IPTA6NICE IPTA6NICE



First announcement of

The International Photo Therapy Association Conference 9<sup>th</sup>-10<sup>th</sup> July 2015, University of Nice, Polo St. Jean d'Angely

Program Chairperson: **J-P Rocca,** MD, DDS, PhD, President Elect of the IPTA Organizing Committee President: **C. Fornaini**, MD, DDS, PhD, IPTA Past-President

Information: www.ipta6congress.international

# 21<sup>st</sup> Congress of the International Society Laser Surgery & Medicine - ISLSM

Venue: Indore, Madhya Pradesh, India Dates: 20<sup>th</sup>, 21<sup>st</sup>, 22<sup>nd</sup> of August, 2015

Program Chairperson: S. Rau, MS, FAGE, FAIS

Information: sharonkrishna@gmail.com

## ATTENTION !!

## CHANGE E.MAIL AND WEB.SITE ADDRESS

Old e.mail: info@laserflorence.org

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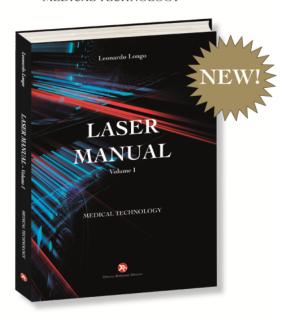
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## LASER MANUAL

**VOLUME I** 

MEDICAL TECHNOLOGY



LASER MANUAL - VOLUME I MEDICAL TECHNOLOGY 294 pages 600 coloured pictures

#### **DISCLOSURE**:

The Authors of this manual don't sell and don't make laser and light lamp!

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Chapter 5. Broadband visible light for therapy and sterilization purposes - R. Lubart

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Cost: Euro 100 Shipping cost for Europe € 20 - Shipping cost for rest of the World € 30

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