LASER FLORENCE 2005

# RAPPORT

Again this year, LASER FLORENCE, has left its positive imprint on the scientific world ,consistent with new discoveries, new applications for everyday practical use. A good example is, the novel technique for laser assisted caesarian section presented by Gabriel De Pena from Santo Domingo & UCLA ,LA .

De Pena ,uses a diode laser equipped with a unique tip, by him invented, which is capable to produce a bloodless, neat cut ,through the soft tissues, without damaging the adjacent tissues. Hence minimizing the number of stitches needed, promoting fasten wound healing and, reducing the hospital stay.

A month later the scar is barely noticed .The author claims, excellent result based on many patients with a multinational 10 years follow up.

Reza Malek, from the Mayo Clinic (Rochester, MIN – USA) one of the world best known authorities, in laser Urology, has shown laser prostatectomy on a day- care basis.

Kevyan Moghissi (London University) and the team of Sergio Cavaliere (Brescia University) demonstrated the new advances made in the fields of Bronchoscopy and Photodynamic therapy(PDT) for respiratory cancer .

PDT therapy was also discussed during a specific session.

Michail L.Pascu of the COST (European Cooperation in the field of Scientific and Technical Research) showed the results obtained through international cooperation, encouraged and supported by his organization.

During the session dedicated to laser diabetology, a special emphasis was made, upon research concerning the scientific basis, of the well known hypoglemic effect of the non surgical laser. This effect already discovered over twenty years ago, but is still poorly understood ,in view of the new requirements of evidence –based medicine(EBM), Helsinki's declaration , and the EC laws , efforts are made to meet this requirements. Here in Italy, we have succeeded in overcoming Phase II with this treatment, in Type 1 and 2 patients. Unfortunately though, the chronic lack of financial resources, impedes us to continue with the other phases ,probably we will have to continue this research abroad (USA?).

For some months already, a great interest ,is focused on the magnetotherapy, for treatment of neuropathic and diabetic legs,forgetting that laser therapy has already yielded better and quicker results, based on research literature and Italo-Iranian protocol, developed during the last three years. in conjunction with the University ofTeheran.

Kira Samoilova, from the Russian Academy of Sciences of St.Petersburg, had illustrated the antiflammatory and imuno-modulent action, of e endovenously introduced non surgical laser.

John Chiu and Pierpaolo Menchetti , discussed the state of art of percutaneous intervertebral disc decompression with lasers .

This novel technique, already pushes aside the classic, time honored ,old techniques ,although in Italy , is not yet, well accepted and one wonders why .

The mechanism of action of the non surgical laser therapy, regarding the antinflammatory, pain relief and regenerative qualities, has been widely discussed , and new data has been shown.

A good example, of the effect of laser on the peripheral nervous tissue,is the case presented , of a paraplegic patient ,who suffered from spinal trauma ,occurred 5 years ago , at T4 level , and, who, following laser therapy, gained sensitive and motor functions .

Pranotherapy (energy healing)**:** A form of the laying on of hands ,was also discussed with yet, no evidenced -based conclusions.

Neverthless, the human body so it seems , posses capacity to emit special kind of energies e.g. electric, electromagnetic, luminous and other types, yet not completely known. the body interchange these energies with the surrounding ambient which ,also is soaked with energy commonly known as "cosmic" .Mary Dyson , from London University ,has shared and discussed this view with other scientists, during a round table dedicated to the laser effects, on the nervous system .

Jeffrey Basford from Mayo Clinic, (Rochester.Minn.)Compared the value of laser with other means, used in the fields of physiotherapy and rehabilitation. Rachel Lubart from Bar-Ilan University, (Tel-Aviv ) demonstrated the effects of laser, on the production of free radicals ,Eike Vinck from Gent University ,illustrated the conduction of peripheral nerves, Tera Romanczyc, spoke about the migration and differentiation of the neural stem cells .

Another session, was dedicated to the effects of surgical laser on vascularized tissues . Various aspects of the endovascular laser surgery, were examined by Cesare Giannini of Florence University , who also compared the various methods, in use today, for treatment of hemorrhoids ,where laser plays a major role.

Hiroto Kuroda from Tokyo University , reviewed the physical aspects of laser applications in medicine , in his session , new measuring technologies and instruments were demonstrated .

A special session, was coordinated with Tali Zuker from Israel, dedicated to Israeli physicians, graduated from Italy(mostly from Siena) with interest in laser medicine.

Isaac Kaplan (Tel-Aviv University) and Abram Baruchin(Ben-Gurion University ) discussed with them, the various aspects and applications, of laser in modern medicine. Mariano Postiglione, discussed the WHO attitude toward laser technology.

In the session dedicated to esthetic medicine and surgery ,it was tried to portray the indications and effectiveness of laser modalities .in simple words, where is laser treatment really helps?. Patrick Bitter, one of the best known inventors and authorities in the field of nonablative and pulsed light rejuvenation ,presented the state of art, emphasizing also its limits .

Indications, contraindications ,as well as complications of ablative and nonablative modalities, has been discussed ,mentioning also the eventual role of lasers in treating the so-called "Cellulites " .

Antonio Lauto from Perth University, Australia. demonstrated the new advanced obtained, in the field of laser tissue welding. Currently used in microsurgery.

Alberto Sona ,CEI, Milano and Penny Smalley, TCI,Chicago, reiterated sources of hazards in laser medicine , for all kinds of workers, including doctors ,physics, nurses ,technicians etc. , they emphasized on laser safety instructions, indicating personal measures to be taken in order to prevent those hazards.

The session of ophthalmology, can be better defined as an international friendly discussion ,among Agostino LaTorre (Florence University), Elmar Fischer (Munchen University) V.Pustovalov (Kiev University Academy of Sciences of Republic Belarussian).).

Luciana Almeyda-Lopez (Sao Paolo University), G.Lynn-Powell (Salt Lake City University) and T.Dostalova (Prague University) and other participants from China and France, showed new advances made in uses of laser in dentistry.

The talk-poster session, had a great success and provoked much interest.

Least but not last, this year we had participants from more than 30 countries,

CORDIS, the European Community's Research and Development Information system, has mentioned continuously, Laser Florence as a High-level Scientific International Academy, a reference point for laser medicine in Europe and, among firsts in the world.

In 2007 , Laser Florence will observe, a stream of members , coming from all laser societies around the world, in occasion of the World federation of Laser Medicine and Surgery societies congress in conjunction with the biannual congress of the International Society of laser Surgery and Medicine.

Maybe than, we will have to think about changing the title from:" Laser Florence a window of the world of laser medicine" to:" the world of laser medicine".

But rather we should not do it, because, although we are Italians, presumption, is not a part of our nature.

## AWARDS

**PDD/PDT AND SURGERY C*hairmen:* R. Malek, K. Moghissi, A. Vaitkuviene**

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| CESAREUS LASER ASSISTED | **Gabriel De Pena, MD**<br>*Cosmetic Gynaeco-Obstetric Laser*<br>*Santo Domingo – Rep. Dominicana* |

**DIABETOLOGY Chairmen: L. Gasparyan, L. Navratil, K. Samoilova**

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| LOW LEVEL LASER THERAPY IN TREATMENT OF DIABETIC FOOT ULCERS: DOUBLE BLIND CONTROLLED CLINICAL TRIAL | **Gholamreza E Djavid[1], Ahmad Kaviani[1,2], Bagher Larijani[3], Laleh Razavi[3], Leila Ataie-Fashtami[1], Mohsen Fateh[1], Mohammad Javad *Mortazavi*[3], Leonardo Longo[4]**<br>*[1] Iranian Center for Medical Laser (ICML), Academic Center for Education, Culture and Research (ACECR), Tehran, Iran*<br>*[2] Tehran Univ. of Medical Sciences, Tehran, Iran*<br>*[3] Endocrinology & Metabolism Research Centre (EMRC), Tehran Univ. of Medical Sciences (TUMS)*<br>*4 Associate Professor, School of General Surgery, University of Siena - Institute Laser Medicine, Florence, Italy* |

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**LASER REHABILITATION / SPORT MEDICINE Chairmen: M. Dyson, S. Rochkind**

**LASER AND LIGHT BIOMODULATION OF THE NERVOUS SYSTEM – Chairmen J. Anders, J. Basford, R. Lubart**

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| INDIRECT EFFECTS OF LIGHT ON THE MIGRATION OF NORMAL HUMAN NEURAL PROGENITOR CELLS | **T.B. Romanczyk°, L. Longo°°, R.Waynant°°°, I. Ilev°°°, J.J. Anders°**<br>*°USUHS, Bethesda, MD, USA,*<br>*°°University of Siena, Italy,*<br>*°°°FDA, Rockville, MD, USA* |

**VASCULAR LESIONS Chairmen: M. Postiglione, O. Marangoni**

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| A HISTOLOGICAL STUDY ON GREAT SAPHENOUS VEIN WALL SURGICAL SPECIMENS AFTER LASER IRRADIATION | **G. Quarto, C. Borriello***, G. Benassai, G. Nunziata, M. Pastore, A. Iacono**, G. Solimeno, E. Quarto*, F.P. D'Armiento****<br>*University of Naples "Federico II",*<br>*General,Geriatric,Oncological Surg. and Advanced Technolog. Dept.*<br>**Department of Preventive Medical Sciences*<br>***Dept of Biomorphological and Functional Sci, (Section of Pathology)*<br>****Division of General, Plastic, Aesthetic and Reconstructive Surgery , S. Maria La Bruna Clinic – Torre del Greco* |

**OPTOELECTRONIC SENSORS FOR BIOMEDICAL APPLICATIONS Chairmen: H. Kuroda, A. Evangelisti**

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| COMPARISON OF PROSTHETIC MECHANICAL HEART VALVES BY LASER BASED MEASUREMENT TECHNIQUES | **Lorenzo Scalise[1], Umberto Morbiducci[1], Massimiliano Rossi[1]**<br>[1] Dept of Mechanics, Università Politecnica delle Marche, Ancona, Italy |
| NONCONVENTIONAL Er:YAG LASER BLOOD PRELEVATOR | **C. Cotirlan, D. Savastru, E. Ristici, S. Miclos, M. Mustata, T. Brezeanu, M. Rusu, V. Savu, C. Radu**<br>*INOE 2000, Bucharest - Magurele, Romania* |

**LASER, LIGHT AND SKIN Chairmen– K. Khatri, A. Ignaciuk, G. Oskarbski**

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| REMOVAL OF AMATEUR BLUE-BLACK TATTOOS IN ARABIC FEMALES WITH Q-SWITCHED ALEXANDRITE LASER | **Iqbal Bukhari**<br>*Dermatology department, King Fahad Hospital of the University, Alkhobar, Saudi Arabia* |

**LASER RESURFACING AND REJUVENATION Chairmen – A. Baruchin, P. Bitter Jr., N. Mortellaro**

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| SKIN REJUVENATION WITH ABLATIVE METHOD USING A COMBINED DUAL WAVELENGHT LASER | **Edward Richard Battisti, MD**<br>*Centro di Ringiovanimento Cutaneo con Laser Chirurgico*<br>*Surgery Equipment Brescia Italy* |

**LASER DENTISTRY Chairmen – L. Almeyda-Lopez, G. Lynn-Powell, T. Dostalova**

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| 900MM VS. 300MM ND :YAG FIBRES FOR HERPES VIRUS VESCICLES TREATMENT | **A. Baldissarri, C. Fornaini, G.F Semez. , V Lazzarini. , G. Marcato**<br>*C.L.O.D. ( Centri Laser di Odontoiatria e Dermatologia)*<br>*Segreteria C.L.O.D. c/o Lazzarini Dott. Vulzio Via Olmo,1 35042 Este-Padova Italy* |

**TALK POSTER *Chairmen:* T. Jelinkova, M. Postiglione**

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| IN VITRO STUDIES OF THE EFFECTS OF ALKYLPHENYLPYRIDINIUM COMPOUNDS EXPOSED TO OPTICAL RADIATION | **Ruxandra Angela Pascu[1], Letitia Voicu[2], Felicia Ungureanu[2], Doina Gazdaru[3], Jacques Barbe[4]**<br>*[1] Central Military Hosl, Ophthalmology Clinic, Bucharest ,ruxandra_pascu@yahoo.co.uk;:*<br>*[2] National Inst. for Lasers, Plasma and Radiation Physics, Laser Department, Bucharest*<br>*[3] Faculty of Physics, University of Bucharest, P.O.BOX MG-11, Bucharest*<br>[4] Faculté de Pharmacie, Université de la Méditéranée, Marseille |
| *RADIOPROTECTIVE EFFECT OF LLLT BY WHOLE-BODY IRRADIATED MOUSES* | **Leos Navratil[1, 2], Pavla Pouckova[2], Ladislav Beranek[3], Marie Zadinova[2], Pavel Kuna[1], Renata Havrankova[1]**<br>*[1]University of South Bohemia in Ceské Budejovice, Faculty of Health and Social Studies, Department of Radiology and Toxicology, Ceské Budejovice, Czech Republic; [2]Charles University, 1st Medical Faculty in Prague, Institute of Biophysics and Informatics, Czech Republic;[3]University of South Bohemia in Ceské Budejovice, Faculty of Education, Dept. of Computer Science, Ceské Budejovice, Czech Republic* |

***REMARK***

*Vasant Oswal offer a grant of Eurodollars 250 for the best lecture of the years 2005-2006, as Vasant Oswal Foundation.*
*The IALMS propose further Eurodollars 250 for the best lecture of the same years.*
*In addition, special awards were assigned for the best presentations of each Conference session, included free subscription for the next conference.*

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