3rd International Conference on

Medical Physics & Biomedical Engineering

November 07-08, 2016  Barcelona, Spain
Day 1  November 07, 2016

LLOBREGAT

09:00-09:30  Registrations

09:30-10:00  Opening Ceremony

Keynote Forum

10:00-10:50  Title: Therapeutic and Diagnostic Uses of Electromagnetic Energy and Emerging Medical Technologies from an Engineering Perspective  
D. V. Giri, University of New Mexico, Mexico

Panel Discussion

Networking & Refreshments break 10:50-11:10 @ Colon

11:10-12:00  Title: The Particle Therapy Experience and Recent Developments  
Susan B. Klein, Indiana University Bloomington, USA

12:00-12:50  Title: Monolein-based nanocarriers for medical applications  
Maria Elisabete C. D. Real Oliveira, Minho University, Portugal

Panel Discussion

Photo Session 12:50-12:55

Lunch Break  12:55-13:55 @ La Terraza

Sessions:


Session Chair: Susan B. Klein, Indiana University Bloomington, USA  
Session Co-chair: Peter Ertl, Vienna University of Technology, Austria

Session Introduction 13:55-14:00

14:00-14:25  Title: Evaluation of Different Knee Joint Kinematic Models  
Marta Dróżkowska, Poznan University of Technology, Poland

14:25-14:50  Title: Potential use of fluoride nanoparticles and rare earth doped fluoride nanoparticles in biomedicine (photodynamic therapy): cytotoxicity and photoinduced toxicity  
Maksim Pudovkin, Kazan Federal University, Russia

Richard L. Morin, Mayo Clinic Jacksonville, USA

15:15-15:40  Title: Evaluation of Mental Stress by Measuring Four Physiological Signals Simultaneously  
Rabah Al abdi, Jordan University of Science and Technology, Jordan

15:40-16:05  Title: Galvanic skin response and serum orexin A levels in humans increase during aerobic exercise  
Giovannai Messina, University of Foggia, Italy

Networking and Refreshments Break: 16:05-16:25 @ Colon

16:25-16:50  Title: Extensibility of the supraspinatus muscle is affected by intramuscular fat  
Hugo Giambini, Mayo Clinic, USA

16:50-17:15  Title: 1H NMR based metabolomic approach to monitoring of the head and neck cancer treatment toxicity  
Lukasz Boguszewicz, Maria Sklodowska-Curie Memorial Cancer Center and Institute of Oncology, Poland

17:15-17:40  Title: Radiation induced Polymerisation of N-(Hydroxymethyl) Acrylamide Polymer Gel Dosimeters for Radiation Therapy  
Khalid Rabah, Hashemite University, Jordan

17:40-18:05  Title: Regional Assessment of Ventricular Hypokinesia by Magnetic Resonance Imaging (MRI)  
Narjes Benameur, University of Tunis El Manar, Tunisia

Panel Discussion
### LLOBREGAT

#### Day 2  |  November 08, 2016

## Keynote Forum

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| 10:00-10:50 | Title: Monitoring onset of bone healing kinetics and early transplant rejection using implantable titanium dioxide-coated bioimpedance sensors  
Peter Ertl, Vienna University of Technology, Austria |

**Networking and Refreshments Break: 10:50-11:10 @ Colon**

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| 11:10-12:00 | Title: Metrological approach in medical measurements  
Baki karaboce, National Metrology Institute of Turkey, Turkey |

### Sessions:

- **BioMedical Device Engineering**
- **Biomaterials and Artificial organs**
- **Biomedical Engineering and Cancer**
- **Clinical Physics and Patient Safety**
- **Radiology**

**Session Chair:** D. V. Giri, University of New Mexico, Mexico  
**Session Co-chair:** Baki karaboce, National Metrology Institute of Turkey, Turkey

#### Session Introduction 12:00-12:05

- **12:05-12:30**  
  **Title:** Radiation therapy in a world of alternative treatments  
  **Susan B. Klein**, Indiana University Bloomington, USA

- **12:30-12:55**  
  **Title:** Device-free generation of hydrogen peroxide for promoting angiogenesis by coupling Mg and Ti alloy  
  **Myoung-Ryul Ok**, Korea Institute of Science & Technology, S. Korea

#### Lunch Break 12:55-13:55 @ La Terraza

- **13:55-14:20**  
  **Title:** Tissue engineering solutions to enhance osseointegration process of the dental implants  
  **Aseel Al Jaboori**, Leeds university, UK

- **14:20-14:45**  
  **Title:** Analysis of dosimetric properties of alanine/epr system for low dose radiations used in radiotherapy  
  **Abdoul Karim Mamadou Saidou**, Hassan I University, Morocco

- **14:45-15:10**  
  **Title:** Analysis of the Spectroscopic Aspects of the Cationic Dye Basic Orange 21 in bulk, and particularly in leukocytes  
  **Zehavit Eizig**, Bar Ilan University, Israel

- **15:10-15:35**  
  **Title:** Tamoxifen’s antiproliferative effects on estrogen positive and triple negative Breast cancer  
  **Reza zohdi Aghdam**, Urmia University of Medical Sciences, Iran

- **15:35-16:00**  
  **Title:** Analysis of the Spectroscopic Aspects of the Cationic Dye Basic Orange 21 in bulk, and particularly in leukocytes  
  **Moein Zarei**, Islamic Azad University, Iran

#### Networking and Refreshments Break: 16:00-16:20 @ Colon

- **16:20-16:45**  
  **Title:** Voxel-based finite element model of a reconstructed bone: simulating a bone tumor surgery  
  **Azadeh Ghouchani**, Amir Kabir University of Technology, Iran

#### Poster presentations 16:50-17:50

**BMMP 01**  
**Title:** Sub-Micron Surface Plasmon Biosensors for Glucose Concentration Assessment  
**Susan B. Klein**, Indiana University Bloomington, USA

**BMMP 02**  
**Title:** The ‘nanotherapy’ revolution: three different applications of lipid nanosystems in therapeutics  
**Maria Elisabete C. D. Real Oliveira**, Minho University, Portugal

**BMMP 03**  
**Title:** Service agreements, economic value perceived by biomedical engineers and health administrators in the adoption of service agreements for small capital medical equipment  
**Susanne Battaglia**, Medtronic International Trading Sàrl, Switzerland

**BMMP 04**  
**Title:** DNA as a Catalyst in Redox, Photoinduced Processes and Nanoscale Energy Transfer  
**Tamar Giorgadze**, Javakhishvili Tbilisi State University, Georgia

**BMMP 05**  
**Title:** The determination of plasmatic activity of butyrylcholinesterase using screen printed voltammetric sensors  
**Miroslav Pohanka**, Universit of Defence, Czech Republic

**BMMP 06**  
**Title:** Biochemical and physicochemical study of a virgin oil of Pistacia lentiscus fruits and determination of its effects on blood parameters  
**Merzougui Imene**, Badji Mokhtar University, Algeria

#### Panel Discussions

#### Awards & Closing Ceremony