

3rd International Conference on Biomaterials and Medical Devices BIOMMEDD'2008



CONFERENCE PROGRAM



Bucharest, Romania, 13-16 November

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Welcome to the BIOMMEDD 2008 conference

Dear Colleagues,

It is a great pleasure to welcome you to the 3rd International Conference on Biomaterials and Medical Devices (BiomMedD'2008) in Bucharest, Romania.

Our conference brings together scientists representing medicine and materials science, physics, chemistry, mechanics and biology from universities, research institutions, hospitals and companies involved in biomaterials, tissue engineering and medical devices.

We hope that you will enjoy the scientific content of the program.

Prestigious scientist: Luigi Ambrosio (Italy); Etienne Schacht (Belgium); David Watts (U.K.); Matteo Santin (U.K.); Georg Duda (Germany); Stergios Logothetides (Greece); Karina Wright (U.K.); Damien Lacroix (Spain); Lucien Reclaru (Switzerland); Faik Oktar (Turkey); Peter Dubrueel (Belgium) will participate at this event as keynote and invited speakers

The 10 Sessions comprising 17 keynotes lectures, 14 invited lectures, 68 oral presentations and 131 posters show the important activity in the field of biomaterials, tissue engineering and medical devices of the research groups from 16 countries worldwide which are represented at this conference.

The conference will also host on Friday 14th November the 7th General Assembly of the Romanian Society for Biomaterials.

The BiomMedD'2008 Conference venue will be University Politehnica of Bucharest, Romania. The participants represent medicine and materials science, physics, chemistry, mechanics and biology from universities, research institutions, hospitals and companies involved in the fields of biomaterials, tissue engineering and medical devices.

Many thanks for the other societies, partners of this conference:

- SOROT [Romanian Society of Orthopedics and Traumatology]
- UNAS [National Union of Stomatological Association]
- SRCCV [Romanian Society of Cardiovascular Surgery]
- RoSNeRa [Romanian Society for Neurorehabilitation]
- SRN [Romanian Society of Neurosurgery]
- RoSCoS [Romanian Society for Vertebro-medullar Pathology, Therapy and Recuperation]

The SRB awards for 2008, respectively "**Daniel Bunea Award**" - to recognize the scientist with the best contribution to the knowledge in the field of biomaterials; "**SRB Scholarship**" - to encourage and stimulate research contribution to the field of biomaterials by young scientist; *BiomMedD'2008 – best oral presentations*; *BiomMedD2008 – best poster presentation*) will be distributed during the Award Ceremony.

Finally, we hope that the participants will have the opportunity to enjoy the city of Bucharest, its atmosphere and entertainment, as well as its surroundings.

Many thanks for all those that helped to make possible this conference: firstly to all participants, the committees, the sponsors and exhibitors, the national and local authorities.

Wishing you a very attractive conference, on behalf of the Organizing Committee,

Andronescu Ecaterina

Iovu Horia

Antoniac Iulian

Organizers

Romanian Society for Biomaterials
University “Politehnica” of Bucharest

Co-organizers

- SOROT [Romanian Society of Orthopedics and Traumatology]
- UNAS [National Union of Stomatological Association]
- SRCCV [Romanian Society of Cardiovascular Surgery]
- RoSNeRa [Romanian Society for Neurorehabilitation]
- SRN [Romanian Society of Neurosurgery]
- RoSCoS [Romanian Society for Vertebromedullar Pathology, Therapy and Recuperation]

Endorsed by

- Romanian Ministry of Education, National Authority for Scientific Research
- European Society for Biomaterials
- Biomaterials Network
- European Cells & Materials

Committees

Conference Staff

Chairman: Ecaterina Andronescu

Vice-chairman: Horia Iovu

Staff Members:

Dumitru Stanculescu

Teodor Traistaru

Vasile Candea

Vlad A. Ciurea

Bogdan C. Simionescu

Iulian Antoniac

Scientific Committee

President of the Scientific Committee: Acad. Bogdan Simionescu (Romania)

- Acad. Maya Simionescu (Romania)
- Vlad Alexandru Ciurea (Romania)
- Mario Barbosa (Portugal)
- Maria Sajin (Romania)
- Ecaterina Andronescu (Romania)
- Iulian Antoniac (Romania)
- Abhay Pandit (Ireland)
- Gelu Onose (Romania)
- Ionel Droc (Romania)
- Irinel Popescu (Romania)
- Anton Hadar (Romania)
- Josep Planell (Spain)
- Dumitru Stanculescu (Romania)
- Viorica Simon (Romania)
- Ion Patrascu (Romania)
- Geoff Richards (Switzerland)
- David Williams (U.K.)
- Zhang Xingdong (China)
- Luigi Ambrosio (Italy)
- Teodor Traistaru (Romania)
- Horia Iovu (Romania)
- James Kirkpatrick (Germany)
- Dan Poenaru (Romania)
- Codruta Nicola (Romania)
- Rui Reis (Portugal)
- Jacques Lemaitre (Switzerland)
- Aurelia Meghea (Romania)
- Antonio Merolli (Italy)
- Etienne Schacht (Belgium)
- Norina Forna (Romania)
- Buddy Ratner (U.S.A.)
- Lucien Reclaru (Switzerland)
- Alexandru Morega (Romania)
- Andrei Tudor (Romania)
- Constantin Cotrutzu (Romania)
- Alex Dommann (Switzerland)

Organizing Committee

Conference Manager: Iulian Antoniac

Members: Carmen Elena Cotrut
Paul Botez
Codruta Nicola
Mihai Rominu
Georgeta Cosmeleata
Gelu Onose
Ionel Droc

Viorel Melnig
Viorica Simon
Marioara Moldovan
Alexandru Morega
Catalin Cirstoiu
Ion Patrascu
Corneliu Trisca-Rusu

Conference Secretariat

Laptoiu Dan
Adriana Lungu
Tudor Petreus
Alina Ivanov
Izabela Stancu

Miculescu Marian
Monica Haras
Ionela Sebe
Robert Bololoi
Cosmin Cotrut

General Information

Conference Venue

November, 13 - 16th, 2008

University POLITEHNICA of Bucharest

Splaiul Independentei Street, no. 313, sector 6, Bucharest, Romania [www.pub.ro]

Badges

All participants and accompanying persons must wear the name badges in a visible place.

Entrance to meeting halls, poster and exhibition areas will not be permitted to any person without badge.

The code of the name badges colors:

Blue	– Conference Participant
Green	– Keynote & Invited Speaker
Yellow	– Organizing Committee
Gray	– Conference Secretariat

Certificate of attendance

Certificate of attendance will be distributed during the Award Ceremony.

Technical exhibition

The technical exhibition will run in parallel with BiomMedD'2008 from Thursday 13th November to Saturday 16th November in the AN Foyer of University POLITEHNICA of Bucharest. The technical exhibition will provide an opportunity to see the products and/or services offered by the companies from the fields of biomaterials, medical devices, in vitro diagnostics, dentistry and pharmaceuticals.

Language

The official language of the BIOMMEDD 2008 Conference will be English.

Simultaneous translation will not be provided.

Internet services

Internet access is provided on the conference site.

Messages

Delegates can use the message board in the registration area. Also, a lost and found service is available at the registration desk.

Scientific Sessions Information

Oral sessions will take place in AN010 Hall, and Senat Hall from Rectorat Building, University POLITEHNICA of Bucharest. Please refer to the detailed program for the allocated conference room for each session. Only PowerPoint presentation will be accepted. All meeting halls will be equipped with overhead and data projectors as well as PC for speakers needs. Speakers are kindly requested to check and deliver their presentation to visual reception at least one hour before scheduled presentation. Due to changes in computer configuration, laptops will not be accommodated. Posters session will take place in AN Foyer, in electronic form.

Program

Program overview

Thursday, 13th November

Time

12.00 – 16.00 *Registration & Poster Mounting*
(AN Foyer, Politehnica University)

16.00 – 17.00 *Opening Ceremony*
(Hall AN010 , Politehnica University)

17.00 – 19.30 *Plenary Keynote Lecture I*
(Hall AN010 , Politehnica University)

Moderators:
Horia Iovu (Romania); Luigi Ambrosio (Italy); Ecaterina Andronescu (Romania)

17.00-17.30 **Luigi Ambrosio (Italy):** Functional polymer based biomaterials for tissue reconstruction

17.30-18.00 **Matteo Santin (U.K.):** Phenotypic Changes in Monocytes/Macrophages: a New Paradigm to Explain the Occurrence of *In-Stent* Restenosis

18.00-18.30 **Etienne Schacht (Belgium):** Biodegradable polymers for biomedical applications

18.30-19.00 **Reclaru Lucien (Switzerland)** Cobalt-Chromium dental alloys doped with precious metals

19.00-19.30 **Vasile Candea; Ionel Droc (Romania):** The use of homografts in cardiovascular surgery

19.30 *Welcome Cocktail*
(AN Foyer, Politehnica University)

*Friday 14th November***Time**

08.30 – 12.00 *Registration & Poster Mounting*
(AN Foyer, Politehnica University)

09.00 – 12.00 *Plenary Keynote Lecture II*
(Hall AN010 , Politehnica University)

Moderators:

David Watts (U.K.); Georg Duda (Germany); Carmen Elena Cotrutz (Romania)

09.00-09.30 Georg Duda (Germany): Timely fracture-healing requires optimization of axial fixation stability

09.30-10.00 Traistaru Teodor (Romania): The role of dental prosthesis design in clinical control of biofilm formation

10.00-10.30 David Watts (U.K.): Composite Oral Biomaterials of the Future

10.30-11.00 Iulian Antoniac (Romania): Retrieval analysis of hip joint prosthesis

11.00-11.30 Karina Wright (U.K.): In vitro studies examining potential mechanisms by which autologous bone marrow stromal cell transplantation repairs the injured spinal cord

11.30-12.00 Carmen-Elena Cotrutz (Romania): Remodelling of periimplant tissue following experimental metallic biomaterial implantation

12.00 – 12.30 *Poster Session & Coffee Break*
(AN Foyer, Politehnica University)

	Hall AN010	Hall SENAT
12.30 - 14.00	Session 1 Biomaterials I	Session 2 Biomaterials in Neurosurgery & Neurorehabilitation

14.00 - 15.30 *Lunch*
(Restaurant LEU)

	Hall AN010	Hall SENAT	Room JI 204/Build J
15.30 - 17.00	Session 3 Biomaterials in Orthopaedics	Session 4 Biomaterials II	<i>Satellite Workshop</i> VEECO

17.00 – 17.15 *Poster Session & Coffee Break*
(AN Foyer, Politehnica University)

	Hall AN010	Hall SENAT
17.15 - 18.45	Session 5 Biomaterials III	Session 6 Biomechanics & Biotribology

**“AFM
in Life Science”**

18.45 – 19.00 *Poster Session & Coffee Break*
(AN Foyer, Politehnica University)

19.00 - 20.00 *Romanian Society for Biomaterials*
General Assembly
(Hall AN010 , Politehnica University)

20.30 *Gala Dinner*
(Romanian Traditional Dinner « Restaurant YDA – Floreasca Lake»)

Saturday 15th November

Time	
08.30 – 11.30	<i>Registration</i> (AN Foyer, Politehnica University)
08.30 – 11.30	<i>Plenary Keynote Lecture III</i> (Hall AN010 , Politehnica University) Moderators: Etienne Schacht (Belgium); Viorica Simon (Romania); Damien Lacroix (Spain)
08.30-09.00	Norina Forna (Romania): Clinical applications of the biomaterials involved in the reconstruction of the oro-maxilo-facial substances losses
09.00-09.30	Stergios Logothetidis (Greece): Carbon-based materials for cardiovascular applications: Investigation of haemocompatibility with nanoscale precision techniques
09.30-10.00	Paul Botez (Romania): New biphasic macroporous ceramic bone substitute (CERAFORM®) – Clinical and histological behaviour
10.00-10.30	Damien Lacroix (Spain): Computational modeling of biomaterial scaffolds for bone tissue engineering
10.30-11.00	Geta David (Romania): Functional polymers toward Nano-world
11.00-11.30	Vlad Alexandru Ciurea (Romania): Biomaterials vital elements to improve the global outcome in intracranial aneurysm
11.30 – 12.00	<i>Poster Session & Coffee Break</i> (AN Foyer, Politehnica University)
	Hall AN010 Hall SENAT
12.00 - 13.30	Session 7 Biomaterials in Dentistry I Session 8 Biomaterials in Cardiovascular Surgery
13.30 - 15.00	<i>Lunch</i> (Restaurant LEU)
	Hall AN010 Hall SENAT
15.00 - 16.30	Session 9 Biomaterials in Dentistry II Session 10 Biomaterials IV
16.30 - 17.30	<i>Young Scientist Forum YSF-RO</i>
17.30 – 17.45	<i>Coffee Break</i> (Rectorat Foyer, Politehnica University)
17.45 - 19.45	<i>Research activities & company involvement in the area of biomaterials and medical devices</i> (Hall SENAT, Politehnica University) Moderators: Horia Iovu (Romania); Iulian Antoniac (Romania)
17.45-18.05	Aurelia Meghea (Romania): Freedom of knowledge – A European partnership for researcher better careers and mobility – Opportunities for FP 7 research projects
18.05-18.25	Alexandru Morega (Romania): COST Action MP 0701 – Composites with novell functional and structural properties by nanoscale materials [Nanocomposite

Bucharest
Tour*

	Materials NCM]
18.25-18.45	Mircea Istodorescu [Medical Ortovit Ltd., Romania] Oxinium – Technology and Inovation
18.45-19.05	Marto Hoary [Embricon Ltd., Ireland] EMBRICON and varicose vein treatments in the 21 st century
19.05-19.35	Stergios Logothetides (Greece): NANONET Network presentation
19.35-19.45	Discussion & Conclusions
19.45 - 20.00	<i>Award Ceremony</i> (Hall SENAT, Politehnica University)

20.30	<i>Conference Banquet</i> (Classic Dinner « Restaurant YDA – Floreasca Lake»)
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Sunday 16th September

Time	Hall SENAT	
09.00 - 12.00	<p>Seminar: <i>Human Resource Formation and Education in the Field of Biomaterials and Medical Devices</i> (Hall SENAT, Politehnica University)</p> <p>Moderators: <i>Horia Iovu (Romania); Viorica Simon (Romania)</i></p> <p>Alexandru Morega: Bioengineering & Biotechnology Department in UPB</p> <p>Mirela Toth-Tascau: Biomaterials & Bioengineering Education in University Politehnica of Timisoara</p> <p>Radu Ciorap: Bioengineering Education in University Gr.T.Popa Iasi</p> <p>Iulian Antoniac: Medical Engineering Section from Materials Science and Engineering Faculty of University Politehnica of Bucharest</p> <p>Viorica Simon: Biomaterials & Bioengineering Education in University Babes-Bolyai Cluj-Napoca</p> <p>Discussion & Conclusions</p>	Short Trip to Prahova Valley*

12.00 - 13.00	<i>Closing Ceremony</i>
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Program Details

Opening Ceremony

Thursday 13th November, 16.00-17.00

You are cordially invited to attend at the Opening Ceremony. Welcome speech will be addressed by the representants of the Politehnica University of Bucharest, Romanian Society for Biomaterials, European Society for Biomaterials, other society's partners of this conference [SOROT; UNAS; SRCCV; RoSNeRa; RoSCoS].

Welcome Cocktail

Thursday 13th November, 19.30

Meet your colleagues at the Welcome Cocktail. Drinks and buffet style food will be served in the AN Foyer of Politehnica University of Bucharest.

Price: included in the registration free.

Gala Dinner

Friday 14th November, 20.30

You are invited to participate and enjoy the Romanian food specialities and drinks together with traditional music and dance, during the Romanian Traditional Dinner «Restaurant YDA – Floreasca Lake».

Price: 70 Euro

Conference Banquet

Saturday 15th November, 20.30

You are invited to enjoy a classic dinner in a fine place «Restaurant YDA – Floreasca Lake».

Price: 50 Euro

General Assembly of Romanian Society of Biomaterials

Friday 14th November, 19.00-20.00

The members of Romanian Society for Biomaterials are invited to participate at the Annual General Assembly, in the Hall AN010, Rectorat building, University Politehnica of Bucharest.

Agenda: Activity Report presented by the President; Election of the Executive Committee (2 year term); Future meetings [ESB 2009 in Lausanne]; Varia.

Satellite Workshop

Friday 14th November, 15.30-17.15

You are cordially invited to attend at the Satellite Workshop VEECO “AFM in Life Science” organized by VEECO in the room JI 204, build J. During the workshop, Mr. Peter Schoen (Germany) will present a lecture „*Atomic Force Microscopy in Life Science Research*” and will make some practical demonstration.

Price: included in the registration free.

Young Scientist Forum [YSF-RO]

Saturday 15th November, 16.30-17.30

The main aim is the official launching of the Romanian National Initiative of YSF. You are kindly invited to participate and to encourage our initiative. We are glad to announce the presence of Mr. Peter Dubruel, the representative of the YSF-ESB.

Tour of Bucharest

Saturday 15th November, 13.30-17.45

History, architecture and cultural tour. During this bus tour you are invited to see some major attraction of Bucharest, including the Parliament Palace. We will show you the main attraction in the center of Bucharest. Next we drive to the amazing Peasant Museum where you can have a contact with the beautiful old traditional lifestyle from Romanian villages. Next we go for a visit to the famous People House, the biggest building in Europe and the second one in the World. It is an impression tour; you will discover different styles of interior design and beautifully big interior halls with a different architecture. The tour will end with a visit to the Cotroceni Palace the place where from the Romanian President rules the country. Meeting point is at the Politehnica University of Bucharest.

Price: 30 Euro

Touristic Circuit

Sunday 16th November, 09.00-12.00

Departure by Bus. During the morning we will drive to the Sinaia resort, a beautiful mountain resort with great landscapes view and an amazing castle to discover. The mountains around are higher than 2000 meters high and the castle position reminds you about great landscapes in Swiss. Small Pelisor Castle will be visited followed by the tour of the main Peles castle. It is a very beautiful German style castle built at the end of XIX century by Romanian King Ferdinand de Hohenzolern. Great interior to discover, many many rooms made in such a different style (Asian influence interiors, Italian Renaissance garden, etc). During the next step we visit the Sinaia church. Contact with Romanian religious life but you will find also where from the name of this city comes. Transfer back to Bucharest.

Price: 100 Euro

Closing Ceremony

Sunday 16th November, 12.00-13.00

Scientific Sessions

Plenary Keynote Lectures I

The Plenary Keynote Lectures I will take place in Hall AN010, Rectorat Building, during Thursday, 13th November, 17.00-19.30, following the program:

Moderators: Horia Iovu (Romania); Luigi Ambrosio (Italy); Ecaterina Andronescu (Romania)

17.00-17.30

Luigi Ambrosio (Italy): Functional polymer based biomaterials for tissue reconstruction

17.30-18.00

Matteo Santin (U.K.): Phenotypic Changes in Monocytes/Macrophages: a New Paradigm to Explain the Occurrence of *In-Stent* Restenosis

18.00-18.30

Etienne Schacht (Belgium): Biodegradable polymers for biomedical applications

18.30-19.00

Reclaru Lucien (Switzerland) Cobalt-Chromium dental alloys doped with precious metals

19.00-19.30

Vasile Candea; Ionel Droc (Romania): The use of homografts in cardiovascular surgery

Plenary Keynote Lectures II

The Plenary Keynote Lectures II will take place in Hall AN010, Rectorat Building, during Friday, 14th November, 09.00-12.00, following the program:

Moderators: David Watts (U.K.); Georg Duda (Germany); Carmen Elena Cotrutz (Romania)

09.00-09.30:

Georg Duda (Germany): Timely fracture-healing requires optimization of axial fixation stability

09.30-10.00:

Traistaru Teodor (Romania): The role of dental prosthesis design in clinical control of biofilm formation

10.00-10.30:

David Watts (U.K.): Composite Oral Biomaterials of the Future

10.30-11.00:

Iulian Antoniac (Romania): Retrieval analysis of hip joint prosthesis

11.00-11.30:

Karina Wright (U.K.): In vitro studies examining potential mechanisms by which autologous bone marrow stromal cell transplantation repairs the injured spinal cord

11.30-12.00:

Carmen-Elena Cotrutz (Romania): Remodelling of periimplant tissue following experimental metallic biomaterial implantation

Plenary Keynote Lectures III

The Plenary Keynote Lectures III will take place in Hall AN010, Rectorat Building, during Saturday, 15th November, 08.30-11.30, following the program:

Moderators: Etienne Schacht (Belgium); Viorica Simon (Romania); Damien Lacroix (Spain)

08.30-09.00:

Norina Fornă (Romania): Clinical applications of the biomaterials involved in the reconstruction of the oro-maxilo-facial substances losses

09.00-09.30:

Stergios Logothetidis (Greece): Carbon-based materials for cardiovascular applications: Investigation of haemocompatibility with nanoscale precision techniques

09.30-10.00:

Paul Botez (Romania): New biphasic macroporous ceramic bone substitute (CERAFORM®) – Clinical and histological behaviour

10.00-10.30:

Damien Lacroix (Spain): Computational modeling of biomaterial scaffolds for bone tissue engineering

10.30-11.00:

Geta David (Romania): Functional polymers toward Nano-world

11.00-11.30:

Vlad Alexandru Ciurea (Romania): Biomaterials vital elements to improve the global outcome in intracranial aneurysm

Scientific Sessions

The Scientific Sessions will take place in Hall AN010 and Hall SENAT, Rectorat Building, during Friday, 14th November and Saturday, 15th November, following the program:

Friday, 14th November

Hall AN010

12.30-14.00 Scientific Session 1: BIOMATERIALS I

15.30-17.00 Scientific Session 3: BIOMATERIALS IN ORTHOPAEDICS

17.15-18.45 Scientific Session 5: BIOMATERIALS III

Hall SENAT

12.30-14.00 Scientific Session 2: BIOMATERIALS IN NEUROSURGERY & NEUROREHABILITATION

15.30-17.00 Scientific Session 4: BIOMATERIALS II

17.15-18.45 Scientific Session 6: BIOMECHANICS & BIOTRIBOLOGY

Saturday, 15th November

Hall AN010

12.00-13.30 Scientific Session 7: BIOMATERIALS IN DENTISTRY I

15.00-17.30 Scientific Session 9: BIOMATERIALS IN DENTISTRY II

Hall SENAT

12.00-13.30 Scientific Session 8: BIOMATERIALS IN CARDIOVASCULAR SURGERY

15.00-16.30 Scientific Session 10: BIOMATERIALS IV

Invited Lectures

The Invited Lectures will be sustained during specific scientific sessions, following the program:

Friday, 14th November

12.30-12.50

Peter Dubruel (Belgium): Development and evaluation of non-viral gene delivery systems based on Poly-L-glutamic acid & Poly-L-arginine derivatives

Scientific Session BIOMATERIALS I [Hall AN010]

12.30-12.50

Florin C. Popescu (Germany): Latest advances in non-invasive BCI: evaluating SCI patient needs and current capabilities

Scientific Session BIOMATERIALS IN NEUROSURGERY & NEUROREHABILITATION [Hall Senat]

12.50-13.10

Gelu Onose (Romania): Extracorporeal shock wave therapy-a new "wave" (also) in Physiatry?

Scientific Session BIOMATERIALS IN NEUROSURGERY & NEUROREHABILITATION [Hall Senat]

15.30-15.50

Catalin Carstoiu (Romania): Biocompatibility Aspects in Hip Artroplasty: Metal-Metal vs. Metal-Polyethylene Prosthesis

Scientific Session BIOMATERIALS IN ORTHOPAEDICS [Hall AN010]

15.30-15.50

Aurelia Meghea (Romania): Silica Polymeric Networks Templated with D-Fructose - as Host Matrices for Natural Extracts Immobilization

Scientific Session BIOMATERIALS II [Hall Senat]

17.15-17.35

Faik Oktar (Turkey): New Natural Materials

Scientific Session BIOMATERIALS III [Hall AN010]

17.15-17.35

Andrei Tudor (Romania): Tribology loading capacity of UHMWPE from total joint replacements

Scientific Session BIOMECHANICS & BIOTRIBOLOGY [Hall Senat]

Saturday, 15th November

12.00-12.20

Vasile Burlui (Romania): Biocompatibility Mechanisms at the Bone-Implant Interface

Scientific Session BIOMATERIALS IN DENTISTRY I [Hall AN010]

12.20-12.40

Codruta Nicola (Romania): Microleakage study around three types of fissure sealants

Scientific Session BIOMATERIALS IN DENTISTRY I [Hall AN010]

12.00-12.20

Ionel Droc (Romania): Silver impregnated prosthesis are resistant to vascular infections?

Scientific Session BIOMATERIALS IN CARDIOVASCULAR SURGERY [Hall Senat]

12.20-12.40

Marina Pacescu (Romania): Extra-anatomic prosthetic reconstructions in patients with infrarenal aortic pathology

Scientific Session BIOMATERIALS IN CARDIOVASCULAR SURGERY [Hall Senat]

15.00-15.20

Ion Patrascu (Romania): Comparative microscopy studies for alloyed titanium biointegration

Scientific Session BIOMATERIALS IN DENTISTRY II [Hall AN010]

15.20-15.40

Meda Negrutiu (Romania): Optical coherence tomography a non-invasive high resolution investigation method: a dentistry approach

Scientific Session BIOMATERIALS IN DENTISTRY II [Hall AN010]

15.00-15.20

Viorica Simon (Romania): In vitro behaviour of composite biomaterials for simultaneous radiotherapy and hyperthermia

Scientific Session BIOMATERIALS IV [Hall Senat]

Oral Presentations

Scientific Session 1: BIOMATERIALS I

Friday, 14th November; 12.30-14.00; Hall AN010

Chairmans:

Horia Iovu (Romania); Luigi Ambrosio (Italy); Iulian Antoniac (Romania)

12.30-12.50

Peter Dubruel (Belgium): Development and evaluation of non-viral gene delivery systems based on Poly-L-glutamic acid & Poly-L-arginine derivatives [*Invited lecture*]

12.50-13.00

Structural details of LCAT interaction site on HDL reveled by H/D-MS/MS and molecular modeling

Valentin Gogonea^{1,2}, Z.Wu², MA.Wagner², SL.Hazen^{1,3}

¹Department of Cell Biology, Lerner Research Institute, Cleveland Clinic Foundation, Cleveland, USA.

²Department of Chemistry, Cleveland State University, 2121 Euclid Avenue, Cleveland, OH 44115, USA.

³Center for Cardiovascular Diagnostics and Prevention, Cleveland Clinic, Cleveland, OH 44195, USA.

13.00-13.10

The importance and essentiality of real-time intelligent interactive monitoring and control in medical, pharmaceutical and clinical fields with PAT

Jacobus van Staden, R.I. Stefan-van Staden, I. Balcu

Process Analytical Technology Laboratory, National Institute of Research for Electrochemistry and Condensed Matter, Bucharest, Romania.

13.10-13.20

Hydrogels based on P(HEMA) with application in tissue engineering of articular cartilage

Luciana Bostan¹, I.M.Popa¹, C.Ibanescu¹, M.Danu¹, G.Lisa¹, L.Verestiuc²

¹'Gh.Asachi' Technical University, Faculty of Chemical Engineering and Environmental

Protection, Bd.Mangeron, 71A, 700100, Iassy, Romania, ²'Gr.T.Popa' University of Medicine and Pharmacy, Faculty of Medical Bioengineering, 16 Universitatii Street, 700115, Iassy, Romania

13.20-13.30

A new β -Ti based alloys class with copious RT deformability, for medical devices

Mihai Branzei, M.Calin, M.Miculescu, F.Miculescu

University Politehnica from Bucharest, Romania

13.30-13.40

Deposition and characterization of TiO_xNy/ZrO_xNy multilayered coatings for biomedical uses

Alina Vladescu, M.Braic, M.Balaceanu, V.Braic, C.N.Zoita, A.Kiss, C.Besleaga, L.Braic, T.Mitran

National Institute for Optoelectronics, Bucharest, Romania

13.40-13.50

New method for implant biocompatibility evaluation

Tudor Petreus, P.D.Sirbu, A.Indrei, C.Cotrutz, C.E.Cotrutz

University of Medicine and Pharmacy "Gr.T.Popa" Iasi

13.50-14.00

Discussion & Conclusions.

Scientific Session 2: BIOMATERIALS IN NEUROSURGERY & NEUROREHABILITATION

Friday, 14th November; 12.30-14.00; Hall Senat

Chairmans:

Gelu Onose (Romania); Karina Wright (U.K.); Florin Popescu (Germany)

12.30-12.50

Florin C. Popescu (Germany): Latest advances in non-invasive BCI: evaluating SCI patient needs and current capabilities [*Invited lecture*]

12.50-13.10

Gelu Onose (Romania): Extracorporeal shock wave therapy-a new "wave" (also) in Physiatry? [*Invited lecture*]

13.10-13.16

Integrated solution for vital parameters monitoring at the patients with chronically disease

Radu Ciorap

University of Medicine and Pharmacy "Gr.T.Popa" Iasi

13.16-13.22

Textiles and medicine: invasive and noninvasive textile biomaterials

G.Onose¹, E.Visileanu², Eftalea Carpus², A.Dorogan², C.Sinescu¹, Alexandra Ene², Carmen Mihai², Claudia Niculescu², **Monica Haras**¹, C.Chendreanu¹, L.Onose³, D.Nanu⁴, Ioana Carpus⁴, R.Rizea¹

¹ *The Clinical Emergency Hospital „Bagdasar-Arseni“, Bucharest, Romania;* ² *The National Institute for Textiles and Leather Research & Development, Bucharest, Romania;* ³ *Metrorex Medical Service, Bucharest, Romania;* ⁴ *University of Medicine and Pharmacy „Carol Davila“, Bucharest, Romania.*

13.22-13.28

Achievement of an experimental mechanic orthotic device to assist/rehabilitate orthostatism and walk in patients with complete paraplegia

G.Onose¹, V.Cardei², A.V.Ciurea¹, J.Ciurea¹, L.Onose³, A.Anghelescu¹, I. St.Craciunoiu², V.Avramescu², **Ioana Andone**¹, R.Grajdencescu², L.Paun², C.Dogariu², G.Epureanu², V.Racicovschi², T.Ursu², M.Modreanu², E.Visileanu⁴, E.Carpus⁴, A.Dorogan⁴, A.Moldovanu², G.Huian², O.Surdu⁵

¹ *The Clinical Emergency Hospital "Bagdasar-Arseni", Bucharest, Romani;* ² *The Mechanical Engineering & Technological Design Research Institute, Bucharest, Romania;* ³ *Metrorex Medical Service, Bucharest, Romania;* ⁴ *The National Institute for Textiles and Leather Research & Development, Bucharest, Romania;* ⁵ *The University of Medicine and Pharmacy, Constanta, Romania.*

13.28-13.36

Our Experience Concerning the Interferential Medium Frequency Electrostimulation in the Treatment of Post SCI Neurogenic Bladder

Cristina Chendreanu¹, G.Onose¹, C.Popescu², M.Popescu³, A.Anghelescu¹, C.Mihailescu¹, M.Lepadat¹, L.Onose⁴, M.Neculaie¹

¹ *The P&MR Division of the Clinical Emergency Hospital "Bagdasar-Arseni", Bucharest, Romania;* ² *The National Institute of Gerontology & Geriatrics "Ana Aslan", Bucharest, Romania;* ³ *The National Research & Development Institute "Urbanproiect", Bucharest, Romania;* ⁴ *Metrorex Medical Service, Bucharest, Romania.*

13.36-13.42

Inition of a national informatic network for the dynamic clustering of the patients with spinal cord injury

A.Anghelescu¹, G.Onose¹, F.Georgescu¹, C.Chendreanu¹, A.V.Ciurea¹, F.Exergian¹, **Andrada Mirea**¹, G.Epureanu², A.Ionescu², C.Baluta², L.Onose³, R.Ioanid², C.Nicolau², A.S.Mihaescu¹, D.C.Mardare¹, P.Armean⁴, C.Mihaescu⁴

¹ The Clinical Emergency Hospital "Bagdasar-Arseni", Bucharest, Romania; ² The Mechanical Engineering & Technological Design Research Institute Bucharest, Romania; ³ Metrorex Medical Service, Bucharest, Romania; ⁴ The National School of Public Health & Medical Management

13.42-13.48

Our experience regarding HILT and MLS laser method's application in degenerative enthezis/articulation pathology

G.Onose¹, C.Chendreanu¹, C.Popescu², M.Popescu³, A.Anghelescu¹, C.Mihailescu¹, M.Lepadat¹, C.Chiparus¹, **Cristina Popescu¹**, I.Andone¹, A.Spinu¹, M.Neculaie¹

¹ The Clinical Emergency Hospital "Bagdasar-Arseni", Bucharest, Romania; ² The National Institute of Gerontology & Geriatrics "Ana Aslan", Bucharest, Romania; ³ The National Research & Development Institute "Urbanproiect", Bucharest, Romania.

13.48-13.54

"Smart" textiles for non-invasive monitoring of physiological signals-biomedical applications

G.Onose¹, C.Sinescu¹, E.Carpus², E.Visileanu², M.Ignat³, D.C.Nanu⁴, C.Chendreanu¹, G.Aron¹, A.Anghelescu¹, V.Rotarescu¹, **Aura Spinu¹**, I.Andone¹, L.Onose⁵, M.Haras¹, M.Artino⁴, C.Ciornei¹

¹ Clinical Emergency Hospital „Bagdasar-Arseni“, Bucharest, Romania; ² National Institute for Textiles and Leather Research & Development, Bucharest, Romania; ³ National Research & Development Institute for Electronical Engineering, Bucharest, Romania; ⁴ University of Medicine and Pharmacy „Carol Davila“, Bucharest, Romania; ⁵ Metrorex Medical Service, Bucharest, Romania.

13.54-14.00

Discussion & Conclusions.

Scientific Session 3: BIOMATERIALS IN ORTHOPAEDICS

Friday, 14th November; 15.30-17.00; Hall AN010

Chairmans:

Dumitru Stanculescu (Romania); Paul Botez (Romania); Catalin Cirstoiu (Romania)

15.30-15.50

Catalin Cirstoiu (Romania): Biocompatibility Aspects in Hip Arthroplasty: Metal-Metal vs. Metal-Polyethylene Prosthesis [*Invited lecture*]

15.50-16.00

Scaffolds applications in spine surgery: short term results of the lumbar spine posterior fusion with osteoconductive scaffolds

M.Niculescu¹, A.Firica¹, M.Negrusoiu¹, **Mihai Magurean¹**, I.Antoniac²

¹ Colentina Clinical Emergency Hospital Bucharest, ²University Politehnica of Bucharest

16.00-16.10

A thorough physicochemical characterisation of 14 calcium phosphate based bone substitution materials in comparison with natural bone

Drazen Tadic¹, I.Popa²

¹AAP Biomaterials GmbH, Dieburg Germany; ²County Emergency Hospital Timisoara Romania

16.10-16.20

Biomechanical study on composite on composite bones regarding the behavior of dynamic condylar screw (DCS) versus condylar blade plate (CBP) in supracondylar femoral fractures

Paul D.Sirbu¹, E.Carata², C.E.Cotrutz¹, T.Petreus¹, R.Asaftei¹, P.Botez¹

¹ University of Medicine and Pharmacy Iasi; ² Polytechnic University Iasi

16.20-16.30

2D FEM model of scapulo-humeral joint stability

N.Gogulescu¹, **Bogdan A.Gogulescu¹**, D.Boazu¹

¹University „Dunarea de Jos“ of Galati, Romania

16.30-16.40

The tree dimensional model of gleno-humeral joint stability

Nicolae Gogulescu¹, B.A.Gogulescu¹, D.Boazu¹

¹University „Dunarea de Jos“ of Galati, Romania

16.40-16.50

Our experience in posttraumatic bone defect treatment with bone substitutes

Iulian Popa, B.Anglitoiu, S.Florescu

^{2nd} Orthopaedic Traumatology Department; County Emergency Hospital Timisoara

16.50-17.00

Comparative performance of four osteoconductive graft substitutes

Paul D. Sirbu, R.Asaftei, D.Radulescu, L.Simion, C.E.Cotrutz, T.Petreus, G.Berea, P.Botez

University of Medicine and Pharmacy Iasi

Scientific Session 4: BIOMATERIALS II

Friday, 14th November; 15.30-17.00; Hall Senat

Chairmans:

Aurelia Meghea (Romania); Matteo Santin (U.K.); Geta David (Romania)

15.30-15.50

Aurelia Meghea (Romania): Silica Polymeric Networks Templated with D-Fructose - as Host Matrices for Natural Extracts Immobilization [*Invited lectures*]

15.50-16.00

Spectroscopic studies on unconventional bone regenerating biomaterials

Viorica Simon¹, M.Baciu², G.Baciu², R.V.T.Turcu¹, S.Simon¹, P.Prodan², St.I.Florian², M.Neumann³

¹Babes-Bolyai University, Cluj-Napoca, Romania; ²University of Medicine and Pharmacy, Cluj-Napoca, Romania; ³University of Osnabrück, Osnabrück, Germany.

16.00-16.10

Lipid microstructure as controlled delivery systems for bioactive molecules: a novel approach to rheumatic disorders therapy

Mihaela Trif¹, M Moisei¹, A.Roseanu¹, O.Craciunescu², O. Zarnescu³, L.Moldovan²

¹Institute of Biochemistry, Romanian Academy, Bucharest Romania; ²National Institute for C-D in Biological Sciences, Bucharest, Romania; ³Faculty of Biology, University of Bucharest, Bucharest Romania

16.10-16.20

New nanostructured materials based on porphyrins for the design of stochastic sensors

Raluca I. Stefan-van Staden¹, E.Fagadar-Cosma², J.F. van Staden¹, O.Radacina¹, S.Balasoiu¹, I.Balcu¹, M.Iorga¹

¹Laboratory of Electrochemistry, National Institute of Research for Electrochemistry and Condensed Matter, Bucharest, Romania; ²Institute of Chemistry Timisoara of Romanian Academy, Romania.

16.20-16.30

Stochastic modelling of the role of cisplatin in altered fractionation schedules for heat and neck cancer

Loredana Marcu^{1,2}, E.Bezak^{1,3}

¹University of Adelaide, Australia; ²University of Oradea, Romania; ³Royal Adelaide Hospital, Australia.

16.30-16.40

Tissue engineering bone versus alloplastic commercial biomaterials

Ondine Lucaciu¹, G.Baciu¹, O.Soritau², M.Baciu¹, D.Lucaciu¹, R.Campian¹, B.Crisan¹, E.Pall³

¹University of Medicine and Pharmacy "Iuliu Hatieganu"; ²Oncological Institute Cluj-Napoca;

³University of Agriculture Sciences and Veterinary Medicine, Cluj-Napoca, Romania

16.40-16.50

Molecular modeling simulations of the pegylated liposomes stability as drug carriers

Andrei Neamtu, M.Neamtu, T.Petreus, C.E.Cotrutz

University of Medicine and Pharmacy "Gr.T.Popa" Iasi

16.50-17.00

Discussion & Conclusions.

Scientific Session 5: BIOMATERIALS III

Friday, 14th November; 17.15-18.45; Hall AN010

Chairmans:

Ecaterina Andronescu (Romania); Etienne Schacht (Belgium); Stergios Logothetides (Greece)

17.15-17.35

Faik Oktar (Turkey): New Natural Materials [*Invited lectures*]

17.35-17.45

Approaches and achievements in the multifunctional (di)methacrylates field for use in dental composites. Effect of the structural and compositional factors on some properties

Tinca Buruiana¹, V.Melinte¹, E.C.Buruiana¹, H.Aldea², M.Moldovan³, C.Prejmerean³

¹Romanian Academy, Petru Poni Institute of Macromolecular Chemistry, Iasi; ²Gr. T. Popa, University of Medicine and Pharmacy, Iasi; ³Raluca Ripan Institute of Researches in Chemistry, Cluj-Napoca, Romania

17.45-17.55

Use of deer antler in bone engineering

Mihaela Baciut¹, G.Baciut¹, S.Bran¹, B.Crisan¹, R.Campian¹, H.Rotaru¹, C.Dinu¹, O.Lucaciu¹, P.Prodan¹, M.Tomescu¹, L.Hurubeanu¹, I.Moldovan¹, H.Almasan¹, V.Simon², V.Coman³, I.Groza⁴

¹University of Medicine and Pharmacy "Iuliu Hatieganu", Department of Cranio-Maxillofacial Surgery, Cluj-Napoca; ²University "Babes Bolyai", Faculty of Physics, Cluj-Napoca; ³"Raluca Ripan" Institute of Research in Chemistry, Cluj-Napoca; ⁴University of Agriculture Sciences and Veterinary Medicine, Cluj-Napoca, Romania

17.55-18.05

Silver nanoparticles-biomolymer composites obtained via microwaves assisted synthesis

M.Florea Spiroiu¹, **Bogdan Copil**¹, R.Ianchis², L.O.Cinteza¹

¹University of Bucharest; ²ICECHIM Bucharest, Romania

18.05-18.15

Integrated of soft chemical methods in the development of hybrid biomaterials for dental implants

Roxana M.Piticescu¹, G.Negroiu², I.Mihailescu³, I.Patrascu⁴, F.Miculescu⁵, L.M.Popescu¹

¹National R&D Institute for Nonferrous and Rare Metals, Pantelimon, Ilfov; ²Biochemistry Institute of Romanian Academy, Bucharest, ³National Institute for Laser, Plasma and Radiation Physics; ⁴„Carol Davila“ University of Medicine and Pharmacy, Bucharest; ⁵University Politehnica Bucharest – BIOMAT, Bucharest, Romania

18.15-18.25

Composite biocompatible hydroxyapatite-silk fibroin coatings for medical implants obtained by matrix assisted pulsed laser evaporation

Marimona F. Miroiu¹, G.Socol¹, A.Visan¹, N.Stefan¹, G.Dorcioman¹, A.Andronie², I.Stamatin², L.E.Sima³, S.M.Petrescu³, E.Apostol⁴, S.Moga⁵, C.Ducu⁵, I.N.Mihailescu¹

¹National Institute for Lasers, Plasma, and Radiation Physics, Bucharest; ²Nano-SAE Alternative Energy Sources-University of Bucharest, Faculty of Physics, Magurele; ³Institute of Biochemistry, Romanian Academy of Sciences, Bucharest; ⁴National Institute of Materials Physics, Bucharest-Magurele; ⁵University of Pitesti, Pitesti, Romania

18.25-18.35

Collagen based membrane material and evaluation of their effects on immune system in rats

Magda Badescu¹, C.E.Lupusoru², C.M.Ghiciuc², M.Ciocoiu¹, Tudor Petreus³, L.Badescu³, M.Boanca², R.V.Lupusoru¹, C.Cotrutz³, Carmen Cotrutz³,

¹Physiopathology Department; ²Pharmacology Department; ³Cellular and Molecular Biology Department, Faculty of Medicine, University of Medicine and Pharmacy "Gr. T. Popa" Iasi, Romania

18.35-18.45

Discussion & Conclusions.

Scientific Session 6: BIOMECHANICS & BIOTRIBOLOGY

Friday, 14th November; 17.15-18.45; Hall Senat

Chairmans:

Damien Lacroix (Spain); Georg Duda (Germany); Andrei Tudor (Romania)

17.15-17.35

Andrei Tudor (Romania): Tribology loading capacity of UHMWPE from total joint replacements
[Invited lectures]

17.35-17.45

Improvement of hip prostheses using nanostructured coating

Liliana-Laura Badita^{1,2}, L.Capitanu¹

¹Romanian Academy, Institute of Solid Mechanics, Romania; ²INCDMF Bucharest, Romania.

17.45-17.55

Biomechanical Behavior of a Cervical Fixation Screw

D.I.Stoia, M.Toth-Tascau, **Lucian Rusu**

Politehnica University of Timisoara, Faculty of Mechanical Engineering, Timisoara, Romania.

17.55-18.05

Mechanical Testing of healthy canine bones

M.Toth-Tascau¹, M.Dreucean¹, **Lucian Rusu**¹, D.I.Stoia¹, G.Tanasie², C.Igna³, R.Dascalu³, M.Sabau³

¹Politehnica University of Timisoara, Timisoara; ²University of Medicine and Pharmacy "Victor Babes", Timisoara; ³Banat University of Agricultural Sciences and Veterinary Medicine, Timisoara, Romania.

18.05-18.15

Mechanical and rheological characteristics of biological cell aggregates

A.Mgharbel¹, **Tomita-Vasilica Stirbat**², Y.Berthier², M.H.Meurisse², J.P.Rieu¹

¹Laboratoire de Physique de la Matière Condensée et Nanostructures, UCB Lyon, France; ²Laboratoire de Mécanique des Contacts et des Structures, INSA Lyon, France

18.15-18.25

Analysis of the tribological role of molecular assemblies of synovial fluid in the healthy joints operation

A.M.Trunfio¹, **Iuliana Borta**¹, M.C.Corneci¹, Y.Berthier¹, M.H.Meurisse¹, J.P.Rieu²

Université de Lyon, CNRS : ¹INSA-Lyon, LaMCoS, France, ²UCB-Lyon, LPMCEN, France

18.25-18.35

Lipodomic analysis of synovial fluid lubricant in pathological articular joints

Magdalena Corneci¹, A.-M. Trunfio-Sfarghiu¹, Y.Berthier¹, M.-H.Meurisse¹, J.-P.Rieu²,

M.Guichardant³, M.Lagarde³

¹LaMCoS, INSA-Lyon; ²LPMCEN, UCB-Lyon 1; ³IMBL, INSERM / INSA de Lyon, Villeurbanne, France

18.35-18.45

SLS/SLM and CAD/Cam procedures implies in manufacturing of frameworks for fixed partial dentures

Sinziana-Nadina Popa, Claudiu Haiduc, Cosmin Sinescu, Meda Negrutiu, Mihai Rominu

University of Medicine and Pharmacy "Victor Babes" Timisoara, Faculty of Dentistry

Scientific Session 7: BIOMATERIALS IN DENTISTRY I

Saturday, 15th November; 12.00-13.30; Hall AN010

Chairmans:

David Watts (U.K.); Teodor Traistaru (Romania); Norina Forna (Romania)

12.00-12.20

Vasile Burlui (Romania): Biocompatibility mechanisms at the bone-implant interface
[Invited lectures]

12.20-12.40

Codruta Nicola (Romania): Microleakage study around three types of fissure sealants
[Invited lectures]

12.40-12.50

Clinical aspects of the bioactive implants medical usage

N.Forna¹, Gh.T. Pop¹, L.Verestiuc¹, M.Antohe¹, G.Ciobanu², P.Cazacu³

¹University of Medicine and Pharmacy Iasi; ²Technical Univerity "Gh. Asachi" Iasi;

³Agronomycal Institute of Iasi, Romania

12.50-13.00

In vivo evaluation of metal allergy in oral rehabilitation

Florin Dan Popescu, Teodor Traistaru, Sanda Mihaela Popescu

U.M.F. "Carol Davila" Bucharest, Faculty of Dental Medicine, Bucharest, Romania

13.00-13.10

Retrieval analysis of dental implant – bone interface

Lucian Toma Ciocan¹, F.Miculescu², I.Antoniac², M.Miculescu², I.Patrascu¹

¹U.M.F. "Carol Davila" Bucharest, Faculty of Dental Medicine, Prosthetic Technology and Dental Materials Department; ²University Politehnica from Bucharest, Material Sciences and Engineering Faculty, Bucharest, Romania

13.10-13.20

Interdisciplinary studies on cobalt-base dental alloys

I.Roman¹, E.Alexandrescu¹, D.Daisa¹, **L.Soare¹**, T.Traistaru², A.Petre², M.Moldovan³

¹METAV Cercetare & Dezvoltare S.A. Bucuresti; ²UMF „Carol Davila”, Facultatea de Medicina Dentara Bucuresti; ³Universitatea „Babes-Bolyai“-I.C.C. „Raluca Ripan” Cluj, Romania

13.20-13.30

Applications of magnets in prosthetic therapy with overdenture. Terminology. Biocompatibility.

Suciu Mircea¹, Janosi Kinga², Suciu Nicoleta³, Kovacs Alpar⁴

¹Assoc.Prof., M.D., Ph.D., Prosthetic Dentistry Department, University of Medicine and Pharmacy, Tg. Mures; ²Junior Assist., Prosthetic Dentistry Department, University of Medicine and Pharmacy, Tg. Mures; ³Specialist in Dental Medicine, SC. Dentaltop SRL.; ⁴Dentist, SC. Dentaltop SRL.

Scientific Session 8: BIOMATERIALS IN CARDIOVASCULAR SURGERY*Saturday, 15th November; 12.00-13.30; Hall Senat***Chairmans:***Vasile Candea (Romania); Ionel Droc (Romania); Marina Pacescu (Romania)**12.00-12.20***Ionel Droc (Romania):** Silver impregnated prosthesis are resistant to vascular infections? [*Invited lecture*]*12.20-12.40***Marina Pacescu (Romania):** Extra-anatomic prosthetic reconstructions in patients with infrarenal aortic pathology [*Invited lecture*]*12.40-12.50***Trends in varicose vein treatments in the 21st century****Marto Hoary***Embricon Ltd., Galway, Ireland**12.50-13.00***Carotid endarterectomy – a safe method of treatment for carotid stenosis****Sorin L.Baila**, M.Pacescu, N.J.TesoIU, D.Mitcov, M.Croitoru, R.Halpern, I.Oprea, V.Candea*Cardiovascular Diseases Institute, Bucharest, Romania.**13.00-13.10***Comparison between a PTFE graft with preformed cuff and the venous cuff for femuro- popliteal reconstructions****Ionel Droc**, Gh.Dumitrascu, St.Deaconu, R.Finichi, C.Tulitu, L.Dumitru*Army's Center for Cardiovascular Diseases, Bucharest, Romania**13.10-13.20***Extra-anatomic axillo-axillary bypass graft in subclavian steal syndrome****Nicolae J.TesoIU**, M.Pacescu, SL.Baila, M.Gavanescu, C.Boros, P.Platon, A.Stoica, V.Candea*Cardiovascular Diseases Institute, Bucharest, Romania**13.20-13.30***Endoprostheses for endovascular repair of subrenal aortic aneurisms**I.Droc, V.Goleanu, **Gheorghe Dumitrascu**, F.Pinte, St.Deaconu, T.B.Candea, A.Popovici, V.Murgu*Army,s Center for Cardiovascular Diseases, Bucharest, Romania*

Scientific Session 9: BIOMATERIALS IN DENTISTRY II

Saturday, 15th November; 15.00-17.30; Hall AN010

Chairmans:

Ion Patrascu (Romania); Codruta Nicola (Romania); Meda Negrutiu (Romania)

15.00-15.20

Ion Patrascu (Romania): Comparative microscopy studies for alloyed titanium biointegration [*Invited lectures*]

15.20-15.40

Meda Negrutiu (Romania): Optical coherence tomography a non-invasive high resolution investigation method: a dentistry approach [*Invited lectures*]

15.40-15.50

Bio-aesthetic” alternatives for non-noble dental alloys

Bogdan M. Iordache¹, Bogdan Galbinas¹, Ion Patrascu¹, Eduard Gatin²

¹Dental Materials and Prosthodontics Tehnology Department, University of Medicine and Pharmacy „Carol Davila”, Bucharest; ²Faculty of Physics, Bucharest University, Romania

15.50-16.00

Influence of adhesive systems on dual-cured resin cements

C.Nicola, **Adriana Caracostea**, S.Sava, C.I.Bondor, C.Gheorghiu, D.Dudea

University of Medicine and Pharmacy „Iuliu Hatieganu“, Cluj-Napoca, Romania.

16.00-16.10

Optical-electronic investigations methods in dentistry

Cosmin Sinescu¹, Meda Negrutiu¹, Emanuela Petrescu¹, George Dobre², Adrian Bradu², Mihai Rominu¹, Adrian Podoleanu²

¹UMF Victor Babes Timisoara, Faculty of Dentistry, Romania; ² University of Kent, Canterbury, UK

16.10-16.20

Biological and biomechanical aspects regarding the silionic biomaterials used in maxilo-facial substance loss

M. Antohe, D.Forna, D.Visan, R.Stamate, N.Forna

University of Medicine and Pharmacy Iasi, Romania, Faculty of Dental Medecine

16.20-16.30

A microleakage comparative study for indirect composite restorations on posterior teeth

A.Popovici¹, C.Nicola¹, **Catrinel Gheorghiu**¹, M.Moldovan², C.I.Bondor¹, Ovidiu Fodor³, Cecile Badet⁴, Dominique Oriez⁴

¹Iuliu Hatieganu” University of Medicine and Pharmacy, Cluj-Napoca, Romania; ²Babes-Bolyai University-”Raluca Ripan” Institute for Research in Chemistry, Cluj-Napoca, Romania; ³ University of Oradea, Faculty of Medicine and Pharmacy, Oradea, Romania; ⁴ Universite “Victor Segalen”, U.F.R. d’Odontologie Bordeaux, France

16.30-16.40

Thensiometric analysis of biomechanical behaviour of different types of dental prostheses

Cosmin Sinescu¹, Meda Negrutiu¹, Radu Negru², Sergiu Antonie¹, Mihai Hluscu², Laurentiu Culea², Mihai Rominu¹, Liviu Marsavina², Nicolae Faur²

¹UMF Victor Babes Timisoara, Faculty of Dentistry; ²Politehnica University Timisoara, Romania

16.40-16.50

Influence of BIS-GMA analogue monomers of composite resins on the cuspal deformation of restored teeth

Roxana R.Cara¹, C.Nicola¹, C.Prejmerean², CI.Bondor¹, D.Prodan², S.Sava¹, M.Moldovan², T.Buruiana³, A.C.Patrascu⁴

¹University of Medicine and Pharmacy "Iuliu Hatieganu", Cluj-Napoca, Romania; ²"Raluca Ripan" Institute of Research in Chemistry, Cluj-Napoca, Romania; ³"Petru Poni" Institute of Macromolecular Chemistry, Iasi, Romania; ⁴ Private Dental Office, Bucharest, Romania.

16.50-17.00

Tensile strength investigation of pressed ceramic systems

Emanuela Petrescu¹, Meda Negrutiu¹, Cosmin Sinescu¹, Gheorghe Draganescu², Mihai Rominu¹, Daniela Pop¹, Cristian Petrea¹

¹UMF Victor Babes Timisoara, Faculty of Dentistry, ² Politehnica University

17.00-17.10

Phonetic parameters in dental prostheses materials characterization

Emanuela Petrescu¹, Cosmin Sinescu¹, Meda Negrutiu¹, Gheorghe Draganescu², Dorin Dodenciu¹, Mihai Rominu¹

¹UMF Victor Babes Timisoara, Faculty of Dentistry; ² Politehnica University Timisoara, Romania

17.10-17.20

Radiopacity of dental composites

Gabriel Furtos¹, B.Baldea², D.Bratu²

¹Dep. of Dental Materials, "Raluca Ripan" Institute of Research in Chemistry, Cluj-Napoca, Romania, ²Dep. of Prosthodontics, Faculty of Dental Medicine, Timisoara, Romania.

17.20-17.30

Radiopacity of flowable resin composites

Gabriel Furtos¹, B.Baldea², D.Bratu², C.Prejmerean¹, L.Silaghi-Dumitrescu¹

¹Dep. of Dental Materials, "Raluca Ripan" Institute of Research in Chemistry, Cluj-Napoca, Romania, ²Dep. of Prosthodontics, Faculty of Dental Medicine, Timisoara, Romania.

Scientific Session 10: BIOMATERIALS IV

Saturday, 15th November; 15.00-16.30; Hall Senat

Chairmans:

Viorica Simon (Romania); Viorel Melnig (Romania); Carmen-Elena Cotrutz (Romania)

15.00-15.20

Viorica Simon (Romania): In vitro behaviour of composite biomaterials for simultaneous radiotherapy and hyperthermia [*Invited lectures*]

15.20-15.30

Bovine hydroxyapatite (BHA) matrix composites reinforced with machineable fluorapatite glass

O.Gunduz¹⁻², U.Karacayli³, S.Salman^{1,2}, L.S.Ozyegin^{4,3}, S.Agathopoulos⁵, V.Simon⁶, **F.N.OKTAR**^{7,3}

¹Marmara University, School of Education, Metal Education Department, Istanbul, Turkey; ²Marmara University, Nanotechnology and Biomaterials Application and Research Center, Istanbul, Turkey; ³Gulhane School of Oral Medicine, Oral Surgery Department, Ankara, Turkey; ⁴Marmara University, School of Health Related Professions, Dental Technology Department, Istanbul, Turkey; ⁵Ioannina University, Ioannina, Greece; ⁶Babes-Bolyai University, Physics Department, Cluj-Napoca, Romania; ⁷Marmara University, School of Health Related Professions, Radiology Department, Istanbul, Turkey

15.30-15.40

Reinforcement of bovine hydroxyapatite (BHA) matrix with machineable cordierite and potassium mica

U.Karacayli¹, O.Gunduz²⁻³, **L.S.Ozyegin**², S.Agathopoulos⁴, V.Simon⁵, F.N. Oktar²

¹Gulhane School of Oral Medicine, Ankara, Turkey; ²Marmara University, Istanbul, Turkey; ³University College of London, London, UK; ⁴Ioannina University, Ioannina, Greece; ⁵Babes-Bolyai University, Cluj-Napoca, Romania.

15.40-15.50

Translucence study through new experimental hybrid composite

Marcela Trif¹, M.Moldovan¹, D.Prodan¹, V.Popescu², C.Prejmerean¹, O.Musat³, L.Silaghi Dumitrescu¹

¹UBB, "Raluca Ripan" Chemistry Research Institute, Cluj-Napoca, Romania; ²UTCluj-Napoca, Romania, ³S.C.REMED Bucharest, Romania.

15.50-16.00

Bioengineering aspects of bioreactor application in tissues culture

Lenuta Kloetzer¹, A.I.Galaction², R.Ciorap², D.Zaharia², D.Cascaval¹

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16.00-16.10

New Combinations of Radial Impellers - Alternative for Bioreactors with Mobile Beds of Immobilized Cells

Roxana Baltaru¹, A.I.Galaction², D.Zaharia², R.Ciorap², D.Cascaval¹

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16.10-16.20

Subcutaneous titanium implants and their effects on rats immune system

Catalina Elena Lupusoru, Carmen Cotrutz, C.Cotrutz, T.Petreus, L.Badescu, Mihaela Boanca, R.V.Lupusoru, Magda Badescu, Manuela Ciocoiu, Cristina Mihaela Ghiciuc

Faculty of Medicine, University of Medicine and Pharmacy "Gr. T. Popa" Iasi, Romania

16.20-16.30

Discussion & Conclusions.

Poster Presentations

P1. PREPARATION AND CHARACTERISATION OF CONTROLLED RELEASE ACID TANNIC-POLYMER MICROPARTICLES

N.Aelenei, G.Lisa, O.Novac, M.I.Popa

Technical University of Iasi, Chemical Engineering and Environment Protection Faculty, Chemical Engineering Department, Iasi, Romania

P2. NANOSTRUCTURE AND BIOLOGICAL TESTS FOR A NEW EXPERIMENTAL NANOCOMPOSITES

A.Antoniac¹, M.Moldovan¹, C.Sarosi¹, M.Trif¹, C.Prejmerean¹, D.Prodan¹, G.Furtos¹, I.Oprean¹, S.Sava²

¹Babes Bolyai University, Raluca Ripan Chemistry Research Institute, Cluj-Napoca, Romania; ²Iuliu Hatieganu University of Medicine and Pharmacy, Cluj-Napoca, Romania

P3. COMPARATIVE ANALYSIS OF DIFFERENT BIOMATERIALS USED FOR HERNIARY MESH

P.Antoniac¹, M.Sajin², I.Antoniac¹, C.Vodislav³, Ciurea⁴

¹University Politehnica of Bucharest, Romania; ²Emergency University Hospital Bucharest, Romania; ³Vodimedcor S.R.L., Tg.Jiu, Romania, ⁴University of Medicine and Pharmacy "C.Davila" Bucharest, Romania.

P4. DETECTION OF ALLERGIC REACTIONS TO CO-CR-MO ALLOYS WITH MORA SUPER

L.Ardelean¹, C.Bortun¹, L.C.Rusu¹, B.Petcov²

¹"V.Babes" University of Medicine and Pharmacy, Timisoara, Romania; ²Teslamed Private Practice Timisoara, Romania.

P5. THE WEAR BEHAVIOUR OF SOME CERAMICS USED FOR DENTAL RESTORATION

A.O.Armencia¹, T.Laurian², M.Ursache¹, F.Munteanu¹, D.Fratila¹

¹UMF "GR. T.POPA" Iasi, Romania; ²Polytechnic University Bucharest, Romania

P6. SURFACE QUALITY EVALUATION OF SOME CERAMICS USED FOR DENTAL RESTORATION

A.O. Armencia¹, T.Laurian², M.Ursache¹, F.Munteanu¹, D.Fratila¹

¹UMF "GR. T.POPA" Iasi, Romania; ²Polytechnic University Bucharest, Romania

P7. RECENT DEVELOPMENTS IN KERATOPROSTHESES

M.Badescu, L.Mares, M.Ciocoiu

Faculty of Medicine, University of Medicine and Pharmacy "Gr. T. Popa" Iasi, Romania

P8. POLYANILINE – BIOPOLYMERS HYBRID NANOMATERIALS FOR BIOSENSING APPLICATIONS

D.Bala¹, C.Petcu², A.G.Olaru¹, L.O.Cinteza^{1,3}

¹University of Bucharest; ²R&D National Research Institute for Chemistry and Petrochemistry ICECHIM Bucharest; ³Research Center for Surface Chemistry and Advanced Materials CHEMAV Bucharest.

P9. CRITICAL ANALYSIS OF THE Ti-Fe PHASE DIAGRAMS

A.Aloman, D.Batalu, G.Cosmeleata, R.Bololoi

Politehnica University of Bucharest, Romania

P10. BIOCOMPATIBLE ZrO₂/DL(PLG) PROTECTIVE COATINGS. CHARACTERIZATION AND IN VIVO TESTING

D.Batalu¹, G.Cosmeleata¹, I.Ciuca¹, R. Bololoi¹, A.Aloman¹, I.Bruckner², R.Siliste², C.Nastase³, A.Morozan³, A.Dumitru³, T.Soare⁴, E.Ciobotaru⁴, M.Militaru⁴

¹Politehnica University of Bucharest, Romania; ²Coltea Hospital, Bucharest, Romania; ³University of Bucharest, Romania;

⁴University of Agronomical Science and Veterinary Medicine Bucharest, Romania

P11. LASER WELDING METHODS IN REMOVABLE PARTIAL DENTURES TECHNOLOGY- A FINITE ELEMENTS METHOD ANALYSE

C.Bortun¹, N.Faur², A.Cernescu³, L.Sandu⁴, B.Ghiban⁵

^{1,4} „V.Babes” University of Medicine, Timisoara, Romania; ^{2,3} Polytechnics University of Timisoara, Romania, ⁵ Polytechnics University of Bucharest, Romania

P12. EXPERIMENTS BASED ON FRACTURE TOUGHNESS AND CRACKS SPREADING SPEED OF DENTAL RESINS

C.Bortun¹, N.Faur², A.Cernescu³, L.Sandu⁴, B.Ghiban⁵

^{1,4} „V.Babes” University of Medicine, Timisoara, Romania; ^{2,3} Polytechnics University of Timisoara, Romania; ⁵ Polytechnics University of Bucharest, Romania

P13. TRIBOLOGICAL ANALYSIS OF HYDROGELS BASED ON POLY(HEMA). POSSIBILITY OF USING AS ARTICULAR SURFACES IN HIP PROSTHESYS

L.Bostan¹, F.Munteanu², M.I.Popa¹, L.Verestiuc²

¹Gh.Asachi Technical University, Faculty of Chemical Engineering and Environmental Protection, Iasi, Romania, ²Gr.T.Popa University of Medicine and Pharmacy, Faculty of Medical Bioengineering Iasi, Romania

P14. FLOW CYTOMETRIC ANALYSIS OF CELL DEATH AND VIABILITY OF OSTEOARTHRITIC CHONDROCYTES CULTURED IN PRESENCE OF APOPTOSIS INHIBITORS FOR TISSUE ENGINEERING**L.Buia**¹, D.Bratosin¹, A-M.Gheorghie¹, C.Iordachel¹, N.Efimov², M.Caloianu³, J.Montreuil⁴¹National Institute of Biological Science Research and Development (INSB), Romania; ²Hospital CFR 2, Bucharest, Romania;³University of Bucharest, Faculty of Biology, Romania; ⁴Université de Lille 1, Laboratoire de Chimie Biologique, Villeneuve d'Ascq, France**P15. POLYMERIC COATINGS BASED ON POLYURETHANE IONOMERS WITH DIPEPTIDE SEQUENCES. RELATIONSHIP BETWEEN FILM STRUCTURE AND PROPERTIES****E.C.Buruiana**, T.Buruiana, V.Melinte

Romanian Academy, Petru Poni Institute of Macromolecular Chemistry, Iasi, Romania

P16. SYNTHESIS OF POLYALKENOATES BY MICROWAVES ASSISTED COPOLYMERIZATION AND THEIR MODIFICATION WITH PHOTOPOLYMERIZABLE GROUPS FOR APPLICATIONS IN DENTISTRY**E.C.Buruiana**¹, V.Melinte¹, T.Buruiana¹, M.Zamfir¹, C.Prejmerean², M.Moldovan²¹Romanian Academy, Petru Poni Institute of Macromolecular Chemistry, Iasi, Romania; ²Raluca Ripan Institute of Researches in Chemistry, Cluj-Napoca, Romania**P17. IN VITRO BIOCOMPATIBILITY EVALUATION OF NOVEL IRON-ALUMINOSILICATES WITH YTTRIUM/DYSPROSIUM****S.Cavalu**¹, V.Simon²¹University of Oradea, Faculty of Medicine and Pharmacy, Oradea, Romania; ²Babes-Bolyai University, Cluj-Napoca, Romania.**P18. COLLOIDAL SILVER – DOPED POLYURETHANE GEL FOR SKIN TREATMENTS****C.Ciobanu**¹, S.Gavriliu², M.Lungu², L.Gavriliu³¹"Petru Poni" Institute of Macromolecular Chemistry, Iasi, Romania; ²National Institute for Research and Development in Electrical Engineering ICPE-CA, Bucharest, Romania; ³"Carol Davila" University of Medicine and Pharmacy, Bucharest, Romania**P19. UREASE THIN FILMS DEPOSITED BY MATRIX ASSISTED PULSED LASER EVAPORATION****S.Ciucu**¹, E.Gyorgy², A.Anicai¹, F.Miculescu¹, B.Ghiban¹, M.Tarcolea¹, I.Gherghescu¹, R.Paunescu¹¹Polytechnic University of Bucharest, Romania; ²National Institute for Laser, Plasma and Radiation Physics of Bucharest, Romania**P20. NEW EXPERIMENTAL DENTAL ADHESIVE SYSTEMS. EFFECT ON ADHESION TO TOOTH STRUCTURE****L.Colceriu**¹, S.Cimpean¹, C.Nicola¹, S.Sava¹, M.Trif², T.Buruiana³, M.Moldovan², L.Silaghi-Dumitrescu², C.Prejmerean²¹"Iuliu Hatieganu" University of Medicine and Pharmacy, Faculty of Dentistry, Cluj-Napoca, RO; ²"Babes-Bolyai" University, "Raluca Ripan" Chemistry Research Institute, Cluj-Napoca, RO; ³"Petru Poni", Institute of Macromolecular Chemistry, Iasi, RO**P21. BIOCOMPATIBLE NANOFERRITES INCORPORATED IN INORGANIC COATINGS FOR BIOMEDICINE****C.Covaliu**¹, G.Georgescu², J.Neamtu², I.Jitaru¹, T.Malaeru²¹UPB, Romania; ²INCDIE ICPE – CA, Bucharest, Romania**P22. MAGNETIC NANOCOMPOSITE FOR BIOMEDICINE****C.Covaliu**¹, E.Andronescu¹, G.Georgescu², J.Neamtu², I.Jitaru¹, T.Malaeru²¹UPB, Romania; ²INCDIE ICPE – CA, Bucharest, Romania**P23. STUDY ON THE ROOT HARD TISSUES SUBMITTED TO STRAINS BY THE PREFABRICATED ENDODONTIC POSTS, WITH THE HELP OF TENSOMETRY****V.Covrig**¹, C.Bortun², C.Leucuta¹¹„Vasile Goldis University” Arad, Romania; ²„Victor Babes” University, Timisoara, Romania**P24. STUDY ON THE STRAINS GENERATED BY PREFABRICATED ENDODONTIC POSTS UPON THE ROOT HARD TISSUES, WITH THE HELP OF PHOTOELASTICIMETRY****V.Covrig**¹, C.Leucuta¹, C.Bortun²¹„Vasile Goldis University” Arad, Romania; ²„Victor Babes” University Timisoara, Romania.**P25. LUMBAR FRACTURE PLATES****D.Craciu**, V.Merticaru

Tehcnical University „Ghe Asachi”, Iasi, Romania

P26. STRUCTURE OF NANO-BETA-TRICALCIUM PHOSPHATE/COLLAGEN SCAFFOLDS AND THEIR IN VITRO BIOACTIVITY**O.Craciunescu**¹, L.Moldovan¹, E.I.Oprita¹, Ch.Tardei², S.Ali³, A.V.Tanase³¹National Institute R&D for Biological Sciences, Bucharest, Romania; ²INCDIE ICPE-CA, Bucharest, Romania; ³University Politehnica, Bucharest, Romania.

P27. ELECTROMYOGRAPHY – A METHOD TO EVALUATE THE MUSCULAR STRENGTH IN THE KNEE JOINTN.Crisan¹, Y.Berthier², S.Ciucu¹, M.Corneci², G.Stoica¹¹Politehnica University of Bucharest, Romania; ²LaMCoS, INSA-Lyon, CNRS UMR5259, F69621, Villeurbanne, France.**P28. RECONSTRUCTION OF THE INTESTINE USING TISSUE ENGINEERING AND BIOTECHNOLOGIES - A MULTIDISCIPLINARY APPROACH**G.Dindelegan¹, V.Simon², C.Popa³, I.Brie⁴, M.Ionac⁵, P.Vadgama⁶¹Iuliu Hatieganu University of Medicine and Pharmacy Cluj-Napoca, Romania; ²Babes Bolyai University Cluj-Napoca, Romania; ³Technical University, Cluj-Napoca, Romania; ⁴Ion Chiricuta Oncological Institute, Cluj-Napoca, Romania; ⁵Victor Babes University of Medicine Timisoara, Romania; ⁶IRC in Biomedical Materials, Queen Mary, University of London, UK.**P29. TETRACYCLINE RELEASE FROM TRANSDERMAL PATCHES WITH BIOCELLULOSE AS CONTROLLING MEMBRANE**

A.Stoica, L.Dragne, M.Stroescu, T.Dobre

Politehnica University of Bucharest, Chemical Engineering Department, Romania

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S.C.Faur, M.Morega, A.M.Morega

Department of Electrical Engineering, University POLITEHNICA of Bucharest, Romania

P32. SELF ASSEMBLED, HIGHLY ORIENTED COLLAGEN / HYDROXYAPATITE COMPOSITE MATERIALS A FICAI¹, E.Andronescu¹, G.Voicu¹, C.Ghitulica¹, V.Trandafir², S.Pall¹¹Department of Science and Engineering of Oxidic Materials and Nanomaterials, POLITEHNICA University of Bucharest; ²Collagen Department, National Research & Development Institute for Textiles and Leather (INCDTP) – division: Leather and Footwear Research Institute, Bucharest, Romania**P33. IMMUNOHISTOCHEMISTRY STUDIES OF THE MIOFIBROBLATS IN FIBRO-INFLAMATORY EPULIS**

A.M.Filioreanu, C.Cotrutz, T.Petreus, C.E.Cotrutz

University of Medicine and Pharmacy Iasi

P34. MODIFIED MONTMORILLONITE WITH BUFORMIN HYDROCHLORIDE

S.A.Garea, F.Constantin, C.Petrea, H.Iovu

Polytechnic University of Bucharest, Faculty of Applied Chemistry and Materials Science, Department of Polymer Science and Engineering, Bucharest, Romania

P35. OPTIMIZATION OF CHITOSAN-POLYPHENOLS NANOSTRUCTURED MATRICES AS DRUG DELIVERY SYSTEMSA.Garlea¹, V.Melnig¹, M.I.Popa², G.Lisa²¹Faculty of Physics, "Al. I. Cuza" University, Iasi, Romania; ²Faculty of Chemistry, "Gh. Asachi" University, Iasi, Romania.**P36. THE INFLUENCE OF CHEMICAL COLLOIDAL SILVER SOLUTIONS UPON BACTERIAL CELL RESPIRATION AND MULTIPLICATION**S.Gavriliu¹, I.Ardelean², M.Lungu¹, C.Moisescu², L.Gavriliu³¹National Institute for Research and Development in Electrical Engineering ICPE-CA, Bucharest, Romania; ²Institute of Biology, Bucharest, Romania; ³"Carol Davila" University of Medicine and Pharmacy, Bucharest, Romania**P37. ANTIMICROBIAL COLLOIDAL SUSPENSIONS OF SILVER-TITANIA**S.Gavriliu¹, M.Lungu¹, F.Grigore¹, N.Buruntia¹, C.Groza¹, C.Panzaru²¹National Institute for Research and Development in Electrical Engineering ICPE-CA, Bucharest, Romania; ²"Gr. T. Popa" University of Medicine and Pharmacy, Iasi, Romania.**P38. QUANTITATIVE CHARACTERIZATION OF A NEW CLASS OF β -Ti BASED ALLOY**

D.Gheorghe, M.Branzei, M.Miculescu, F.Miculescu, M.Calin

University Politehnica from Bucharest, Romania

P39. THE INFLUENCE OF GLUTARALDEHYDE CROSS-LINKING ON RHEOLOGICAL BEHAVIOUR AND IN VITRO KINETICS RELEASE OF DOXYCYCLINE FROM COLLAGEN/DOXYCYCLINE HYDROGELSM.V.Ghica¹, L.Popa¹, M.G.Albu², M.Leca³, V.Trandafir², I.Predescu¹¹Faculty of Pharmacy, "Carol Davila" University of Medicine and Pharmacy, Bucharest, Romania; ²Collagen Department, Leather and Footwear Research Institute, Bucharest, Romania;³Faculty of Chemistry, University of Bucharest, Romania

P40. INVESTIGATION OF THE HAP NANOPOWDERS BY XRD AND FT-IR SPECTROSCOPY

F.Grigore¹, E.Andronesco², C.Seitan¹, G.Velciu¹, B.Sbarcea¹, Ch.Tardei¹, S.Gavriliu¹, M.Lungu¹, A.Melinescu²
¹INCDIE ICPE-CA, Bucharest, Romania; ²University Politehnica of Bucharest, Romania.

P41. SILVER NANOPARTICLES – DOPED BIOCERAMICS FOR TISSUE ENGINEERING

F.Grigore, S.Gavriliu, M.Lungu
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P42. COMPARATIVE STUDY OF CORROSION BEHAVIOUR FOR NI ALLOYS IN ARTIFICIAL SALIVA CONTAINING YEAST AND STREPTOCOCCUS MUTANS BACTERIA

B.Iordache¹, P.Prioteasa², N.Ibris³, T.Visan³
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P43. Failure analysis of different retrieved hip prosthesis

A.Ivanov¹, I.Antoniac¹, C.Cotrut¹, F.Miculescu¹, D.Laptoiu², R.Istrate³
¹University Politehnica of Bucharest, Faculty of Materials Science and Engineering, Romania; ²Colentina Clinical Hospital, Department of Orthopedic Surgery and Traumatology, Bucharest, Romania; ³Med4Med Group Ltd, Bucharest, Romania

P44. THE CORRELATION BETWEEN POLYETHYLENE ACETABULAR CUP ORIENTATION, HEAD DIAMETER AND WEAR IN TOTAL HIP ARTHROPLASTIES

T.Laurian¹, I.Antoniac¹, N.Mihailide²
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P45. THE INFLUENCE OF TRIPLE OSTEOTOMY ON THE HIP JOINT PRESSURE DISTRIBUTION

T.Laurian¹, I.Antoniac¹, L.Marinca²
¹Polytechnic University Bucharest, Romania; ²Clinical Hospital of Ortopaedics-Traumatology and Osteoarticular TBC "Foisor", Romania

P46. TITANIUM VERSUS BIODEGRADABLE INTERFERENCE SCREW FIXATION: SURFACE ANALYSIS AND LITERATURE REVIEW

D.Laptoiu¹, R.Marinescu¹, R.Istrate³, I.Antoniac²
¹Colentina Clinical Hospital Bucharest, Romania; ²University Politehnica of Bucharest, Romania, ³Med4med Group SRL, Romania

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D.Laptoiu¹, D.Popescu², R.Marinescu¹, I.Antoniac², R.Istrate³
¹Colentina Clinical Hospital Bucharest, Romania; ²University Politehnica of Bucharest, Romania, ³Med4med Group SRL, Romania

P48. SHAPE MEMORY ALLOYS BASED ON NiTi MADE BY POWDER METALLURGY TECHNIQUES

M.Lucaci¹, R.L.Orban^{1,2}, M.Valeanu³, V.Tsakiris¹, D.Cirstea¹, L.Leonat¹
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P49. SILVER DOPED - ZINC OXIDE NANOCOMPOSITE POWDERS WITH SYNERGISTIC ANTIMICROBIAL ACTION

M.Lungu¹, S.Gavriliu¹, F.Grigore¹, C.Groza¹, C.Panzaru², C.R.Ionescu²
¹National Institute for Research and Development in Electrical Engineering ICPE-CA, Bucharest, Romania; ²"Gr. T. Popa" University of Medicine and Pharmacy, Iasi, Romania

P50. A PROMISING ALTERNATIVE TO CONVENTIONAL DIMETHACRYLATE RESINS IN DENTAL COMPOSITES

A.Lungu, N.M.Sulca, S.A.Garea, H.Iovu
 Faculty of Applied Chemistry and Materials Science, University Politehnica of Bucharest, Romania

P51. NANOSTRUCTURED HYDROGELS BASED ON GELATIN FOR BIOMIMETIC SCAFFOLDS

A.Lungu¹, I.Titorencu², T.Zecheru¹, I.C.Stancu¹
¹Faculty of Applied Chemistry and Materials Science, University Politehnica of Bucharest; ²Institute of Cellular Biology and Pathology N. Simionescu, Bucharest, Romania

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K.Magyari, V.Simon
 Babes-Bolyai University, Faculty of Physics & Institute for Interdisciplinary Experimental Research, Cluj-Napoca, Romania

P53. STRUCTURAL ANALYSIS OF MESOPOROUS ALUMINA DOPED WITH SILVER OXIDE

M.Maier¹, V.Parvulescu³, M.Tamasan², M.Vasilescu¹, R.F.V. Turcu¹, H.Mocuta², S.Simon^{1,2}

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P54. BIOMIMETIC MINERALIZED ATELOCOLLAGEN MICROFIBRILS

S.S.Maier¹, I.Pelin², V.Maier¹

¹„Gheorghe Asachi“ Technical University of Iasi, Romania; ²„Petru Poni” Institute of Macromolecular Chemistry, Iasi, Romania

P55. DENSE ATELOCOLLAGEN HYDROGEL OBTAINED BY CROSS-LINKING WITH TRANSGLUTAMINASE

S.S.Maier¹, P.Ruth², C.Alupe², V.Maier¹

¹„Gheorghe Asachi“ Technical University of Iasi, Romania; ²Lohman & Rauscher GmbH & Co. KG, Neuwied, Germany.

P56. GOLD FIDUCIAL MARKERS IN PROSTATE CANCER BRACHYTHERAPY

L.Marcu^{1,2}, K.Quach^{1,3}, S.Filip²

¹University of Adelaide, Australia; ²University of Oradea, Romania; ³Royal Adelaide Hospital, Australia.

P57. COMBINED METHODS OF CONDITIONING IN ORDER TO OBTAIN CONTROLLED MICRO-RETENTIONS ON THE SURFACES OF IMPLANTS

D.A.Maris¹, M.Maris², Marius Maris³, F.Stoicu⁴, E.Vasile⁵

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P58. THE USEFUL OF THE HIGH VISCOSITY CALCIUM SULPHATE IN THE INITIAL PHASE OF THE AVN OF THE FEMORAL HEAD. PRELIMINARY CLINICAL STUDY.

M.Magurean¹, A.Firica¹, M.Niculescu¹, M.Negrusoiu¹, D.Laptoiu, C.Parsu¹, I.Antoniac²

¹Colentina Clinical Hospital Bucharest, Romania; ²University Politehnica of Bucharest, Romania

P59. PERIACETABULAR BONE DEFECTS AND BONE SUBSTITUTE. COMPARTIVE ANALYSIS OF DIFFERENT OSTEOCONDUCTIVE SCAFFOLDS USED FOR BONE AUGMENTATION IN HIP RTHROPLASTY

M.Magurean¹, A.Firica¹, M.Niculescu¹, M.Negrusoiu¹, D.Laptoiu, C.Parsu¹, I.Antoniac²

¹Colentina Clinical Hospital Bucharest, Romania; ²University Politehnica of Bucharest, Romania

P60. SIZE-CONTROLLED SYNTHESIS OF MONODISPERSE PLATINUM NANOPARTICLES BY SONOELECTROCHEMICAL METHODS

V.Melnig¹, N.Foca², L.Obreja¹, D.Pricop¹

¹Faculty of Physics, "Al. I. Cuza" University, Iasi, Romania; ²Faculty of Chemistry, "Gh. Asachi" University, Iasi, Romania.

P61. DIMENSIONAL AND MORPHOLOGICAL ANALYSIS OF P(HEMA-CO-DDMA-CO-AA) MICROBEADS

F.Miculescu, T.Zecheru, M.Tarcolea, M.Miculescu

University POLITEHNICA of Bucharest, Materials Science and Engineering Faculty, Bucharest, Romania.

P62. MARAGING STEEL - A POTENTIAL MATERIAL FOR SUTURE NEEDLES AND SURGICAL BLADES

M.Miculescu, M.Branzei, F.Miculescu

University Politehnica from Bucharest, Romania

P639. THE COMPARATIVE EVALUATION OF THE EXPERIMENTAL AND COMMERCIAL ADHESIVE USE IN DENTISTRY

M.Moldovan¹, C.Prejmerean¹, O.Fodor², C.Sarosi¹, M.Musat³, G.Furtos¹, A.Antoniac¹, F.Alb⁴, S.Boboia¹

¹Babes Bolyai University, Raluca Ripan Chemistry Research Institute, Cluj-Napoca, Romania; ²University of Oradea, Romania; ³S.C.Remed Prodimpex S.R.L. Bucharest, Romania; ⁴Iuliu Hatieganu University of Medicine and Pharmacy, Cluj-Napoca, Romania

P64. NEW METHOD FOR SURFACE MODIFICATION OF METALLIC BIOMATERIALS BASED ON INTENSE PULSED ELECTRON BEAM IRRADIATION

G.Mueller, A.Jianu, A.Weisenburger, W.An, A.Heinzel, F.Zimmerman, F.Lang

Institute for Pulsed Power and Microwave Technology, Research Centre Karlsruhe; Hermann von Helmholtz-Platz 1, D-76344 Eggenstein-Leopoldshafen, Germany

P65. THERMAL EFFECT IN DENTAL BRIDGE FIXATION

Fl.Munteanu, D.Popovici

University of Medicine and Pharmacy Gr. T. Popa Iasi, Romania

P66. IMMUNOHISTOCHEMICAL ASPECTS OF PERIIMPLANTAR INFLAMMATORY MARKERS FOR METALLIC IMPLANTS BICOMPATIBILITY

M.Neamtu, A.M.Filioreanu, T.Petreus, L.Frincu, L.Badescu, C.E.Cotrutz

University of Medicine and Pharmacy "Gr.T.Popa" Iasi

P67. BIOETHANOL PERVAPOARATION THROUGH POLYANILINE/POLYSULFONE COMPOSITE MEMBRANES

A.C.Nechifor, F.Aldea, S.I.Voicu, M.Miculescu, G.Nechifor
University Politehnica of Bucharest, Romania

P68. MICROBIOLOGIC ANALYSIS FOR MICROORGANISMS CULTURE MODIFICATIONS AFTER OZONE CLEANING IN DENTISTRY

M.Negrutiu¹, C.Sinescu¹, D.Dodenciu², L.Dragomirescu³, R.Rominu¹, E.Petrescu¹

¹*Department of Prosthesis Technology and Dental Materials, Faculty of Dental Medicine, University of Medicine and Pharmacy "Victor Babes", Timisoara, Romania;* ²*Department of Biophysics, University of Medicine and Pharmacy "Victor Babes", Timisoara, Romania;* ³*Department of Microbiology, University of Medicine and Pharmacy "Victor Babes", Timisoara, Romania*

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