

12.50-13.20 **Keynote:**

Innervation of the Musculoskeletal System in Physiological and Pathological Conditions: Insights from Organ-on-a-Chip Models, Meriem Lamghari

13.20-14.20 Lunch break

14.20-14.40 Zeta potential titration and Kelvin Probe Force Microscopy as tools for the design of biomaterials, **Silvia Spriano**

14.40-14.55 A 3D in vitro cell culture model based on perfused bone-like scaffolds for healthy and pathological bone research, **Ivana Banićević**

14.55-15.10 The effect of surface ion-doping on the bioactive glass

cytocompatibility and antibacterial performance, **Mari Lalluka**

15.10-15.25 Electrochemical behavior of metallic implants in inflammatory conditions, **Aydin Bordbar Khiabani**

15.30-16.00 Awards and Closing ceremony

Twining and Poster session 1
Wednesday, April 10

P1.10 Dejan Bezbradica Twining for intensified enzymatic processes for production of prebiotic-containing functional food and bioactive cosmetics (TwinPrebioEnz)

P1.11 Vasa Radonic Knowledge and skills transfer for the application of nanotechnology in biosensors for foodborne pathogens

P1.12 Djurdj Hajder Experiences from BiH: H2020 Twining project SMARTWATER

P1.13 Miloš Ćiric Boosting Institute of Chemistry, Technology and Metallurgy in Water Biomonitoring - BIOLAWEB

P1.14 Danijela Drakulic STREAMLINE HUB: a high capacity hub for research of neurodevelopmental disorders in the Western Balkan region

P1.15 Svetlana Jovanovic Twining for Graphene-based COMposites in emi shielding

P1.1 Tamara Matic Multifunctional Sr/Mg doped mesoporous bioactive glass nanoparticles

P1.2 Alessandro C. Scalia Sr/Mg – doped bioceramic scaffolds for biomedical application

P1.3 Milena Stevanovic Innovative Hydroxyapatite-Based Coatings for Bone Implants: A Multifaceted Approach

P1.4 Jovana Zvicer Production technology and characterization of alginate-based impregnated gauze

P1.5 Nina Tomić Composite based on resveratrol and selenium as an antioxidative component in tissue engineering

P1.6 Greta Cocchi Sound based assembly of spatially organized porous constructs

P1.7 Djordje Veljovic Novel hybrid biomimetic macroporous composites with tuned biodegradability, improved osteointegration and anticancer properties for bone tissue regeneration (HyBioComBone)

P1.8 Nikola Busarac Effects of different doped hydroxyapatite-based materials on healing of critical size calvaria bone defects in rats

P1.9 Maja Vukasinovic-Sekulic Bioactivity of gentamicin-loaded hydroxyapatite/poly(vinyl alcohol)/chitosan composite coatings aimed for orthopedic application

Poster session 2
Thursday, April 11

P2.1 Andjela Radisavljevic Electrospun poly(ϵ -caprolactone) nanofiber mats with gallic acid and glucosamine sulfate for cartilage repair

P2.2 Maja Markovic Biocharacterization of hydrogels based on poly(methacrylic acid) prepared by eco-friendly method

P2.3 Jelena Petrovic Adaptable alginate-based microfibers for 3D in vitro cultures of cancer cells: an anticancer drug testing model

P2.4 Vukasin Ugrinovic Citric acid-crosslinked gelatin/hydroxypropyl methylcellulose hydrogels for biomedical applications

P2.5 Marija Milivojevic Extracellular vesicles derived from mesenchymal stem/stromal cells derived from dental pulp of exfoliated teeth induce osteogenic differentiation

P2.6 Predrag Petrovic B-glucan-enriched fraction from mosaic puffball induces inflammation in an in vitro 3D bovine chondrocytes model

P2.7 Jana Petrovic The effect of sulfuric acid treatment on physicochemical properties of g-C₃N₄ and its efficiency for photocatalytic reduction of Cr(VI)

P2.8 Katarina Sokic Novel micro- and nano- composite materials for water purification

P2.9 Srdjan Perisic Hybrid biobased composites with natural pyrophyllite

P2.10 Marija Jovanovic Evaluation of crosslinked gelatin-polyvinylpyrrolidone scaffold for application in drug delivery and tissue engineering

P2.11 Muna Rajab Elferjane Characterization of Vaccinium myrtillus leaf extract-loaded liposomes

P2.12 Aleksandra Jovanovic Stability of Liposomal Particles with Encapsulated Coumarin Derivate

P2.13 Sonja Mojsilovic Activated Charcoal as a Carrier of Probiotics: A New Approach for Pathogen Elimination in Wounds

P2.14 Dušan Milojkov Luminescent fluoroapatite nano-biomaterial for labeling yeast cells as an innovative approach for identification, imaging, and monitoring

P2.15 Tanja Krunic Impact of different concentrations of alginate in alginate-yeast hydrogel biosorbent

P2.16 Zoran Stojanovic GPT4 aided biomaterials research use case: stabilization of selenium nanoparticles with proteins

Poster session 3
Friday, April 12

P3.1 Bojana Obradovic Biomimetic tumor engineering to enhance drug discovery - BioengineeredTumor

P3.2 Luka Bojic Doxorubicin and quercetin combined effect on SAOS-2 cells grown in 2D and 3D model systems

P3.3 Aleksandar Janev Human Amniotic Membrane Homogenate: A Novel Biomaterial-Based Strategy to Impede Migration and Invasion of Bladder Cancer Cells

P3.4 Dijana Mitic Novel enriched hydrogel nano-HAP induced osteogenic differentiation of SCAP

P3.5 Hristina Obradovic Influence of bone substitute PerOssal® on bone marrow mesenchymal stem cells

P3.6 Marija Djosic Characterisation of strontium-substituted hydroxyapatite as potential biomedical material

P3.7 Pasquale Vena End-to-end multidisciplinary optimal design for improved personalized bioactive glass/ceramic bone substitute implants- ReBone: a Marie Skłodowska-Curie

P3.8 Milos Lazarevic Assessing the Biocompatibility of Polyhydroxybutyrate Scaffolds for Dental Stem Cell Applications

P3.9 Rana Zarean Hafdaran Unraveling the Transcriptome Profile of Pulsed Electromagnetic Field Stimulation in Bone Regeneration Using an In Vitro Investigation Platform

P3.10 Lucie Válková Determination of metal ion levels in circulation in patients with joint replacement

P3.11 Polina Navrátilová Two faces of biodegradable molybdenum nanoparticles regarding oxidative stress and biomedical applications

P3.12 Katarina Dj. Bozic Anodization/anaphoretic deposition of composite zein/hydroxyapatite coatings on titanium substrate

P3.13 Sara Bahrapour Corrosion Behavior of PEO coatings with Mn₃O₄ on Mg-Zn-Ca Alloys in Inflammatory Conditions

P3.14 Lada Zivkovic Examination of the effects of X-ray Phase Contrast imaging dose on DNA in mesenchymal stem cells by comet assay

Thank you for joining the conference!



Conference 2024

Innovative biomaterials for novel medical devices

Science and Technology Park Belgrade, Serbia
April, 10-12



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WEDNESDAY, APRIL 10	
09.00-10.00	Registration
10.00-10.30	Opening ceremony
10.30-10.45	The ExcellMater project: Advancing biomaterials engineering towards novel medical devices, Bojana Obradović
10.45-11.15	Keynote: Translational studies of engineered human tissues, Gordana Vunjak-Novaković
11.15-11.40	Coffee break & Group photo

ExcellMater session 1 - Bioreactors and biomaterials for recreation of microenvironments in skeletal tissues
Chairs: Jasmina Stojkovska and Andrea Cochis

11.40-12.00	Cartilage bioreactors: Where we are and where we are going!, Mauro Alini
12.00-12.20	Ex vivo testing of biomaterials for intervertebral disc repair using organ culture bioreactors, Sibylle Grad
12.20-12.35	Bioengineering for creating biomimetic microenvironments: Bioreactors and biomaterials, Jasmina Stojkovska
12.35-12.50	The current trend in innovative bioactive materials for dental and orthopedic applications, Djordje Veljović
12.50-13.05	Rapid fire: Multifunctional Sr,Mg doped mesoporous bioactive glass nanoparticles, Tamara Matić
	Sr/Mg – doped bioceramic scaffolds for biomedical application, Alessandro C. Scalia
13.05-14.00	Lunch break

Twining session - Chair: Dejan Bezbradica

14.00-14.30	Twining poster session + Poster session 1
14.30-15.40	Twining round table: Ivana Gađanski, Bojana Obradović, Lia Rimondini
15.40-16.00	Coffee break
16.00-16.30	Keynote: Engineering of multicellular systems by hydrodynamic waves, Tiziano Serra

16.30-16.45 Development of an in vitro branched vasculature using bioprinting technique in combination with sacrificial materials, **Natalija Stojanović**

ExcellMater session 2 - Functionalization of biomaterials
Chairs: Jasmina Stojkovska and Andrea Cochis

16.45-17.05	Discouraging cellular and bacterial adhesion on surfaces for bone temporary devices through ZrO ₂ -Ag coatings, Andrea Cochis
17.05-17.20	Electrochemically synthesized biomaterials, Ana Janković
17.20-17.40	Rapid fire: Innovative hydroxyapatite-based coatings for bone implants: A multifaceted approach, Milena Stevanović
	Production technology and characterization of alginate-based impregnated gauze, Jovana Zvicer
	Composite based on resveratrol and selenium as an antioxidative component in tissue engineering, Nina Tomić
17.40-19.30	Welcome cocktail

THURSDAY, APRIL 11

09.00-10.00 Poster session 2

Polymer gels and composites for biomedical applications
Chairs: Vesna Radojević and Maja Marković

10.00 – 10.20	Regulatory science for biomaterials: are we doing right things right?, Michael Gasik
10.20-10.40	Whey protein isolate (WPI): a versatile dairy-derived hydrogel for bone and vascular tissue engineering and antimicrobial applications, Timothy E.L. Douglas
10.40-10.50	Development of cornstarch aerogels with high porosity and their impregnation with natural bioactive compounds, Stoja Milovanović

Subsession: ExcellMater session 3

10.50 – 11.05	Environmentally friendly hydrogels for medical and pharmaceutical applications, Melina Kalagasidis Krušić
11.05-11.30	Coffee break
11.30-11.45	Designing biopolymer scaffolds and oral mucoadhesive films for controlled drug delivery, Vesna Radojević

11.45-12.00	Peculiarities of alginate gellation triggered by calcium ions in the presence of hydroxyapatite particles, Katarina Dimić Mišić
12.00-13.00	Rapid Fire: Electrospun poly(ϵ -caprolactone) nanofiber mats with gallic acid and glucosamine sulfate for cartilage repair, Anđela Radisavljević
	Biocharacterization of hydrogels based on poly(methacrylic acid) prepared by eco-friendly method, Maja Marković
	Citric acid-crosslinked gelatin/hydroxypropyl methylcellulose hydrogels for biomedical applications, Vukašin Ugrinović
	Adaptable alginate-based microfibers for 3D in vitro cultures of cancer cells: An anticancer drug testing model, Jelena Petrović
	Extracellular vesicles derived from mesenchymal stem/stromal cells derived from dental pulp of exfoliated teeth induce osteogenic differentiation, Marija Milivojević
	β -glucan-enriched fraction from mosaic puffball induces inflammation in an in vitro 3D bovine chondrocytes model, Predrag Petrović
	The effect of sulfuric acid treatment on physicochemical properties of g-C ₃ N ₄ and its efficiency for photocatalytic reduction of Cr(VI), Jana Petrović
	Novel micro- and nano- composite materials for water purification, Katarina Sokić
13.00-14.00	Lunch break
14.00-14.45	Poster session 2

AlMed session
Chairs: Maja Dutour Sikirić and Ana-Marija Milisav

14.45-14.50	Introduction, Maja Dutour Sikirić
14.50-15.20	Keynote: Antimicrobial coatings for orthopaedic applications, Artemis Stamboulis
15.20-15.40	Keynote: Towards laser – based methods for improving surface properties of materials, Albena Daskalova
15.40-16.00	Nanostructured Ag- and Cu- doped ZnO antibacterial magnetron sputtered coatings for biomedical applications, Maja Dutour Sikirić

16.00-16.15	Polyelectrolyte multilayers with metal/metal oxide nanoparticles as antimicrobial solution for biomedical applications, Ana-Marija Milisav
16.15-16.30	Novel alginate/activated-charcoal platform for local treatment of resistant pathogens in wounds, Andrea Osmokrović
16.30-16.40	A novel thermostable YtnP lactonase inhibits biofilm formation and induces decomposition of preformed Pseudomonas aeruginosa biofilms, Jovana Ćurčić

FRIDAY, APRIL 12

09.00-10.00	Poster session 3
10.00-10.30	Keynote: Regenerative engineering: designing grafts, processes and signals, Ivan Martin
10.30 – 10.50	Chemotherapy and novel proton radiotherapy in spatially advanced multicellular models of pancreatic cancer: On the design of platform for enabling low cost animal free preclinical treatment testing, Eirini Velliou

Bioactive glasses
Chairs: Bojana Obradović and Vera Gudurić

10.50-11.05	3D printing of composites containing copper-incorporated mesoporous bioactive glass induce different cell responses depending on cell type and donor, Vera Gudurić
11.05-11.15	Development of luminescent bioactive glass for multimodal diagnostic imaging, Rauany C. Lopes
11.15-11.30	Coffee break
11.30-12.30	Poster session 3

PREMURORA session
Chairs: Lia Rimondini and Ivana Banićević

12.30-12.50	Precision medicine for musculoskeletal regeneration, prosthetics and active ageing- PREMURORA: a Marie Skłodowska-Curie Innovative Training Network, Lia Rimondini
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