



**4<sup>th</sup> INTERNATIONAL  
SYMPOSIUM  
ON BIOMATERIALS**  
May 7, 2021

dedicated to Dr Matevž  
Gorenšek, MD, VMD



Matevž Gorenšek  
(1972-2020)

## 4<sup>th</sup> INTERNATIONAL SYMPOSIUM ON BIOMATERIALS

**Chair:** Drago Dolinar

### **Scientific Committee:**

Drago Dolinar, Orthopaedic Surgery Dept, UMC Ljubljana, Slovenia  
Monika Jenko, MD-RI Institute Materials Research in medicine, IMT Ljubljana, Slovenia  
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Maja Ovsenik, Faculty of Medicine, University of Ljubljana, Slovenia  
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Blaž Mavčič, Orthopaedic Surgery Dept, UMC Ljubljana, Slovenia  
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### **Organizing Committee:**

Drago Dolinar, Orthopaedic Surgery Dept, UMC Ljubljana, Slovenia  
Monika Jenko, Institute of Metals and Technology Ljubljana, Slovenia, MD-RI  
Miro Gorenšek, MD Medicina, Sanatorium, Ljubljana, Slovenia  
Boštjan Kocjančič, Orthopaedic Surgery Dept, UMC Ljubljana, Slovenia  
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Mojca Amon, Fizioterapevtika, Ljubljana, Slovenia  
Barbara Šetina Batič, Institute of Metals and Technology Ljubljana, Slovenia

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## **Chair**

Drago Dolinar

## **Organized by**

MD-RI Institute for Materials Research in Medicine, Ljubljana, Slovenia

## **Co-organized by**

MD Medicina, Sanatorium Ljubljana, Slovenia

Institute of Metals and Technology, IMT, Ljubljana, Slovenia

Faculty of Medicine, University of Ljubljana, Slovenia

Dept. for Orthopaedic Surgery UMC Ljubljana, Slovenia

Visokošolski zavod Fizioterapevtika Ljubljana, Slovenia

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## FRIDAY May 07, 2021

Opening		
<b>8:30</b>	Chair	Drago Dolinar
	Minister of Health of Republic of Slovenia	Janez Poklukar
	President of Medical Chamber of Slovenia	Bojana Beovič
	General director UMC Ljubljana	Jože Golobič
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	Chair of Dental Dentistry FM UNI-LJ	Jana Jan
<b>9:00</b>	<b>In memoriam Matevž Gorenšek</b>	Zdenka Čebašek Travnik, Drago Dolinar
<b>9:30</b>	<b>Plenary</b> <u>Bojana Beovič</u>	COVID 19 in Slovenia
<b>10:00 virtual</b>	<b>Plenary</b> <u>Andrej Trampuž</u>	LOCAL ANTIMICROBIAL DELIVERY SYSTEMS FOR TREATMENT OF BONE AND IMPLANT INFECTION: INNOVATIVE SOLUTIONS IN THE ERA OF MICROBIAL RESISTANCE AND PERSISTENCE
<b>10:30</b>	<b>Invited</b> <u>Aljaž Merčun</u> , Oskar Zupanc, Rok Vengust- Drago Dolinar, Boštjan Kocjančič	THE ORTHOPEDIC SERVICE IN UMC LJUBLJANA DURING COVID-19 PANDEMIC
<b>10:45</b>	<b>Invited</b> <u>Samo Karl Fokter</u>	MODULAR NECK FRACTURES IN T16L4V BI-MODULAR FEMORAL STEMS AFTER PRIMARY TOTAL HIP ARTHROPLASTY
<b>11:00</b>	<b>Invited</b> <u>Drago Dolinar</u> , Miro Gorenšek, Boštjan Kocjančič, Matjaž Godec, Borut Žužek, Monika Jenko	PREMATURE FRACTURE OF A MODULAR FEMORAL NECK AFTER TOTAL HIP ARTHROPLASTY: COMPARISON OF TWO DIFFERENT STEM-NECK ALLOYS
<b>11:15</b>	<b>Invited</b> <u>Oskar Zupanc</u> , Timon Zupanc, Uroš Meglič	ARTHROSCOPIC TREATMENT OF ANTERIOR ELBOW IMPINGEMENT IN PROFESSIONAL ATHLETE
<b>11:30</b>	<b>Invited</b> <u>Rok Vengust</u> , Miha Vodičar, Lovro Suhodolčan, Klemen Bošnjak, Jure Leban, Špela Bračun	INTERVERTEBRATE CAGE NOW AND IN THE FUTURE
<b>11:45</b>	<b>Invited</b> <u>Blaž Mavčič</u> , Luka Kropivšek, Samo Roškar, Lenart Zore, Vane Antolič	IMPLANT SURVIVAL OF 2571 HIP ARTHROPLASTY CASES WITH THE CEMENTED LINK SP-II CoCrMo FEMORAL STEM AND UP TO 30-YEAR FOLLOW-UP
<b>12:00</b>	<b>Invited</b> <u>Rihard Trebše</u> , Peter Brumat, Rene Mihalič	CLINICAL ADVANTAGES OF COMPUTER AIDED PERIACETABULAR OSTEOTOMY
<b>12:15</b>	<b>Invited</b> <u>Samo Zver</u>	CAR-T (CHIMERIC ANTIGEN RECEPTOR THERAPY): NEW TREATMENT T-LYMPHOCYTE MODALITY OF HEMATOLOGICAL AND SOLID TUMOR MALIGNANT DISEASES
<b>12:30</b>	<b>Invited</b> <u>Boštjan Kocjančič</u> , Drago Dolinar	PATIENT BLOOD MANAGEMENT FROM ORTHOPEDIC PERSPECTIVE
<b>12:45 virtual</b>	<b>Invited</b> <u>Matjaž Godec</u> , Irena Paulin, Črtomir Donik, Jaka Burja, Jakob Kraner, Aleksandra Kocijan	PHASE TRANSFORMATIONS IN BIODEGRADABLE FE-MN ALLOYS
<b>13:00 virtual</b>	<b>Invited</b> <u>Veronika Kralj-Iglič</u> , Gabriella Pocsfalvi, Luka Mesarec, Vid Šuštar, Darja Božič, Matej Hočevar, Marko Jeran, Henry Hägerstrand, Aleš Iglič	MECHANISM OF FORMATION OF CELLULAR NANOVESICLES
<b>13:15 virtual</b>	<b>Invited</b> <u>Ekaterina Gongadze</u> , Tomaž Slivnik, Veronika Kralj-Iglič, <u>Aleš Iglič</u>	ELECTROSTATICS OF NANOSTRUCTURED METAL SURFACES IN CONTACT WITH ELECTROLYTE SOLUTION
<b>13:30 virtual</b>	<b>Invited</b> <u>Simon Hawlina</u>	FIRST EXPERIENCE OF ROBOT ASSISTED LAPAROSCOPIC PARTIAL NEPHRECTOMY IN SLOVENIA
<b>13:45</b>	<b>Invited</b> <u>Klemen Steblovnik</u> , Matjaž Bunc	TECHNICAL ASPECTS AND DEVELOPMENT OF TRANSCATHETER AORTIC VALVE IMPLANTATION

14:00	<b>Invited</b> <u>Andreja Marn Pernat</u>	THERALITE MEMBRANE FOR RENAL RECOVERY IN PATIENTS WITH ACUTE DIALYSIS-DEPENDENT MYELOMA CAST NEPHROPATHY
<b>14:15-14:45</b>		<b>LUNCH</b>
14:45	<b>Invited</b> <u>Čedomir Oblak</u>	THE USE OF COMPUTER TECHNOLOGIES IN PROSTHETIC DENTISTRY
15:00	<b>Invited</b> <u>Rok Gašperšič, Barbara Zakošek, Andrej Cör, Peter Veranič, Uroš Kovačič</u>	SPONTANEOUS AND ENHANCED HEALING OF SUBCRITICAL-SIZED CALVARIAL DEFECTS IN AGED RATS
15:15	<b>Invited</b> <u>Uroš Kovačič, Rok Gašperšič, Lucija Kadunc, Duško Lainšček, Boris Turk, Miha Butinar Roman Jerala, Iva Hafner-Bratkovič</u>	CELL DEVICES SECRETING TGF- $\beta$ SIGNIFICANTLY ENHANCE CALVARIAL BONE HEALING IN RATS
15:30	<b>Invited</b> <u>Maja Ovsenik, Rok Ovsenik, Tadeja Kosec, Andraž Legat, Janez Kovač, Monika Jenko, Drago Dolinar</u>	BEHAVIOUR OF ORTHODONTIC ARCHWIRES IN VITRO AND IN VIVO - A CONTEMPORARY TECHNOLOGICAL OVERVIEW
15:45	<b>Invited</b> <u>Nataša Ihan Hren, Zala Skomina</u>	THREE-DIMENSIONAL FACIAL CHARACTERISTICS IN OLDER ADULTS COMPARED TO YOUNG ADULTS
16:00	<b>Invited</b> <u>Boris Gašpirc</u>	THE USE OF BIOMATERIALS IN PERIODONTAL REGENERATION
16:15	<b>Invited</b> <u>Vojka Gorjup, Špela Tadel Kocjančič</u>	THE USE OF BIOCOMPATIBLE MEMBRANES IN INTENSIVE CARE MEDICINE
16:30	<b>Invited</b> <u>Lea Papst</u>	ADVANCES IN ANTIBACTERIAL PROPERTIES OF ORTHOPAEDIC IMPLANTS
16:45	<b>Invited</b> <u>Boris Jerman, Andreja Marn Pernat, Marjana Dolinar, Drago Dolinar</u>	THE INFLUENCE OF BODY POSITION ON THE BLOOD PRESSURE MEASUREMENT RESULTS
17:00	<b>Invited</b> <u>Marjetka Conradi, Klemen Avsec, Monika Jenko, Drago Dolinar</u>	SURFACE PROPERTIES OF Ti6Al7Nb ALLOY FEMORAL STEMS
17:15	<b>Invited</b> <u>Barbara Šetina Batič, Monika Jenko, Drago Dolinar</u>	MICROSTRUCTURAL INVESTIGATION OF ORTHOPAEDIC IMPLANTS USING SCANNING ELECTRON MICROSCOPY AND RELATED TECHNIQUES
17:30	<b>Invited</b> <u>Mojca Amon, Friderika Kresal</u>	TELEPHYSIOTHERAPY: IS VIRTUAL REALITY EFFECTIVE IN ORTHOPAEDIC CLINICAL EXAMINATION?
<b>17:30-18:30</b>		<b>YOUNG RESEARCHER PhD STUDENTS</b>
17:30	<u>Klemen Avsec, Boštjan Kocjančič, Monika Jenko, Drago Dolinar</u>	BIOMATERIALS USED IN ZM CEMENTLESS TOTAL HIP ARTHROPLASTY –RECENT UPDATES
17:40	<u>Niharika Rawat, Metka Benčina, Ita Junkar, Eva Levičnik<sup>2</sup>, Aleš Igljič</u>	SURFACE MODIFICATION OF MEDICAL STAINLESS STEEL
17:50	<u>Matej Zrimšek, Andreja Marn Pernat</u>	CHANGES IN HEMOSTASIS DURING PLASMAPHERESIS TREATMENT ASSESSED WITH ROTATIONAL THROMBELASTOMETRY (ROTEM)
18:00	<u>Rok Ovsenik, Miha Pirc, Rok Schara, Jasmina Primožič, Janez Kovač, Monika Jenko, Boris Gašpirc</u>	LASER TECHNOLOGY IN TREATMENT OF GINGIVAL ENLARGEMENT - A 3D EVALUATION
18:10	<u>Miha Verdenik</u>	THE ERRORS IN THREE DIMENSIONAL (3D) FACIAL SURFACE SCANNING
<b>18:30</b>		<b>CLOSING CEREMONY</b>
<b>POSTER SESSION</b>		
P01	Viktor Angeleski, Jana Jan, Lidija Nemeth	FIRST EXPERIENCES WITH PHOTOBIMODULATION OF SALIVARY GLANDS IN HIGH CARIES RISK PATIENTS WITH CHRONIC GRAFT VERSUS HOST DISEASE
P02	Leja Birk, Luka Birk Ksenija Cankar, Lidija Nemeth	PULSE OXIMETRY AND LASER DOPPLER FLUXMETRY AS NEW DIAGNOSTIC AIDS IN ENDODONTICS: A CLINICAL CROSS-SECTIONAL STUDY ON CARIOUS PERMANENT TEETH WITH DIFFERENT STAGES OF CARIES PROGRESSION



<b>P03</b>	Nina Vovk, Manca Urek , Ksenija Cankar, Lidija Nemeth	THE EFFECT OF CHRONIC GRAFT VERSUS HOST DISEASE AND ITS TREATMENT WITH EXTRACORPOREAL PHOTOPHERESIS OR CYCLOSPORINE ON FACTORS OF ORAL HEALTH AND ORAL HEALTH RELATED QUALITY OF LIFE
<b>P04</b>	Ana Tenyi, Lidija Nemeth· Ksenija Cankar, Aleksandra Milutinović Živin	OVERVIEW OF TECHNOLOGIES USED FOR DECALCINATION OF MINERALIZED TOOTH STRUCTURE FOR HISTOLOGICAL EXAMINATION OF DENTAL PULP TISSUE
<b>P05</b>	Bojana Krneta Đokić, Maja Ovsenik	THE USE OF 3DMD TECHNOLOGY IMAGING SYSTEM IN ORTHODONTICS AND DENTOFACIAL ORTHOPAEDICS - THE EVALUATION OF TREATMENT OUTCOME
<b>P06</b>	Lea Bukovac, Tjaša Simončič, Boštjan Lavriša, Maja Ovsenik, Nataša Ihan Hren, Monika Jenko	BIOCOMPATIBILITY AND CORROSION ANALYSIS OF MINISCREW ANCHORAGE DEVICE
<b>P07</b>	Meta Grilec, Aljaž Golež, Maja Ovsenik	THREE-DIMENSIONAL TECHNOLOGY IN THE ASSESSMENT OF UPPER JAW MORPHOLOGY – THE INTER AND INTRA-RATER RELIABILITY
<b>P08</b>	Sandi Kavčič	METALIC BIOCOMPATIBLE MATERIALS IN MEDICINE
<b>P09</b>	Anamarija Kuchler, Alenka Novšak	BIOCOMPATIBLE MATERIAL IN DENTISTRY
<b>P10</b>	Igor Belič, Beno Klopčič, Andraž Logar, Monika Jenko, Drago Dolinar, Boštjan Kocjančič	SONIC RESONANCE OF FEMORAL PART OF HIP ENDOPROSTHESIS

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