

Table of Contents

Preface, Committees

Chapter 1: Materials and Technologies in Dentistry and Endodontics

Randomized Clinical Trial of Adhesive Restorations in Non Carious Cervical Lesions S.M. Popescu, M.J. Țuculină, H.O. Manolea, R. Mercuț and M. Scrieciu	3
Comparative Study Regarding Two Obturation Methods with Thermoplasticized Gutta-Percha for the Root Canals M.J. Țuculină, L. Gheorghiiță, O.A. Diaconu, M. Bătăiosu, I.T. Dascălu, S.M. Popescu, H.O. Manolea and M. Scrieciu	12
Determination of Total Length in Human Permanent Teeth - An Anthropometric Study M.G. Popescu, D. Marian, R.A. Popovici and T. tefănescu	20
Considerations Regarding the Influence of Layering Thickness on the Esthetics of a Metal Ceramic Restoration R. Rîcă, A.M. Rîcă, H.O. Manolea, M. Opri and M. Dodocioiu	25
Immediate Loading of Dental Implants - A Case Study C. Ratiu, S. Cavalu, G. Lazarescu and A. Porumb	31
Zirconia Neck Implants vs Bone Augmentation C. Ratiu and S. Cavalu	35
Hyaluronic Acid - Innovative Therapeutic Principle I.C. Știrbu, S.M. Popescu, M.J. Țuculină, R. Mercuț, H.O. Manolea and D. Iorgulescu	41
The Assessment of Ceramic Dental Materials during the Treatment of Severe Adult Cleft Palate: A Case Study A. Porumb, C. Ratiu, S. Cavalu and A. Muntean	46
Comparative Study of Different Materials for Occlusal Matrix Technique in Posterior Teeth A.M. Monea, K.I.A. Csinszka, B. Csilla and G. Bereescu	50
Calcium Hydroxide - A Biomaterial Used in the Infectious Therapy in Dental Medicine R.C. Borza and I.M. Ignat-Romanul	55
Computational Study of Physicochemical Properties of the Monomers Used in Stomatology M. Opri, E. Amzoiu, H.O. Manolea and R. Rîcă	59
Proposal for a Short Patch Test Series of Dental Materials for Patients with Suspected Oral Contact Allergy F.D. Popescu, S.M. Popescu, R. Mercuț and H.O. Manolea	65
In Vitro Chewing Simulation Model Influence on the Adhesive-Tooth Structure Interface A. Caracostea Objelean, A. Labunet, L. Silaghi-Dumitrescu, M. Moldovan, S. Sava and M.E. Badea	77
Toxicity of Dental Amalgams vs Composite Resins I.A. Tig, A.M. Fratila, R.A. Popovici and A. Porumb	83
SEM Evaluation of Denture Base Materials Used in Clinical Practice A.T. Farcaiu, I. Antoniac, A. Antoniac and C. Farcaiu	91

Chapter 2: Materials and Technologies in Orthopedic Surgery

Fibrin Sealants in Orthopaedic Surgery O. Lupescu, M. Nagea, C. Patru, G.I. Popescu and N. Marcov	99
Fixation System Design in Ipsilateral Proximal Femur and Diaphyseal Fractures in Elderly Patients R. Ene, M. Nica, Z. Pantî, M. Pleniceanu, P. Ene, M. Cîrstoiu, V.I. Antoniac and C. Cîrstoiu	106
Pretibial Cyst Formation in ACL Reconstruction - A Case Report R. Marinescu, D. Laptoiu, C. Socoliuc and V.I. Antoniac	111
Mechanical Failure of Angle Locking Plates in Distal Comminuted Tibial Fractures R. Ene, Z. Pantî, M. Nica, M. Pleniceanu, P. Ene, M. Cîrstoiu, V.I. Antoniac and C. Cîrstoiu	118

Influence of Antibiotics Addition in Bone Cements for Hip Arthroplasty on their Mechanical Properties: Clinical Perspective and <i>In Vitro</i> Tests R. Ene, Z. Panti, M. Nica, M. Pleniceanu, P. Ene, M. Cîrstoiu, O. Trante, A.I. Bită, A. Antoniac and C. Cîrstoiu	123
Titanium Implants Used in Traumatology Failed Sometime in Clinical Practice: Case Study M. Niculescu, B. Ghiban, A. Ghiban and G. Dan	128
Treatment of Chronic Bone Infections Using the Collagen Based Haemostatic - Collatamp G O. Lupescu, M. Nagea, C. Patru, A. Dimitriu, N. Ciurea, D. Lupescu, G.I. Popescu and N. Marcov	133
The Outcome of Tricalcium Phosphate Wedges Used in Opening High Tibial Osteotomy I. Cristescu, C. Angheluta, F. Safta, D. Vilcioiu, A. Gjoni, M. Istodorescu and I. Antoniac	139
Wollastonite and Calcium Phosphate Biocoatings with Zn- and Cu-Incorporation Produced by a Microarc Oxidation Method M.B. Sedelnikova, E.G. Komarova and Y.P. Sharkeev	144
Hydrogen Evolution Analyzed on Various Magnesium Alloys A.I. Bită, A. Semenescu, A. Antoniac and I. Antoniac	152
Low Rigidity Ti-Nb-Ta-X (X=Cr, Zr, Ag, In) Alloys with Improved Properties M. Branzei	157
Porous Silk Fibroin/Alpha Tricalcium Phosphate Composite Scaffolds for Bone Tissue Engineering: A Preliminary Study W. Pichaiakrit, W. Juwattanasamran and T. Damrongrungruang	164
Collagen-Niflumic Acid Spongy Matrices for Bone Repairing M.V. Ghica, A.A. Watzlawek, E. Olaret, S.I. Voicu, S. Marin, M.M. Marin, E. Danila, A.G. Simonca, M.G. Albu, C. Chelaru and C.E. Dinu-Pîrvu	170
Metallurgical Failure Analysis of Intramedullary Nail Used for Femoral Fracture Stabilization B. Ghiban, I. Antoniac, G. Dan, A. Ghiban and R. Ene	178

Chapter 3: Materials and Technologies in Neurosurgery

New Concept in Cranioplasty Based on Biomaterials Performance in Various Clinical Cases D. Mohan, D.A. Nica, A. Mohan, B. Feder and A.V. Ciurea	185
Treatment of Degenerative Disc Disease with the ProDisc-C Cervical Disc Prosthesis: Literature Review, Interdisciplinary Aspects and Personal Experience D.A. Nica, M.A. Maranduca, H. Moisa, R. Copaciu and A.V. Ciurea	189
Value of Dural Patches in Obliteration of Cranio-Ethmoidal Traumatic CSF Fistulas A. Mohan, V. Săceleanu, D. Mohan and A.V. Ciurea	196
Role of MIMICS® in Reconstructive Neurosurgery - A Case Study M. Tarcolea, A. Semenescu, M. Mitrica, A.V. Chirtes, S. Stanciu, I.M. Mates and G. Vitioanu	200
Percutaneous Transpedicular Vertebroplasty versus Conservative Management in Osteoporotic Vertebral Fractures I. Popa, P. Matusz, D. Andrei, M. Mardare and D.V. Poenaru	205

Chapter 4: Practice of Preclinical Studies of Materials and Technologies

The Gephi Network Visualisation of the Guided Bone Regeneration Process Induced with Tissue Engineered Grafts O. Lucaciu, M. Băciuț, G. Băciuț, R.S. Câmpian and A. Ionel	215
Evaluation Methods of Bone Graft Materials H.O. Manolea, M. Crăioiu, E. Ciucă, A. Fronie, R. Rîcă and F. Obădan	222
Experimental Evaluation of Biocompatibility in Case of Acrylic Materials by Bio-Testing on Lab Animals M.P. Vasiliu, L. Sachelarie, D.I. Tomita, E. Folescu and C. Stadoleanu	231
Bioactivity of Retrograde Dental Root Filling Materials A. Bor, M. Szekely, C. Molnar-Varlam and V.I. Antoniac	236
Biocompatibility of Calcium Hydroxide - Based Root Canal Sealers: A Histological Study M. Monea, G. Bereescu, A. Stoica and T. tefănescu	243

Tissue Reaction to Subcutaneous Implantation of SuperEBA (Reinforced Zinc Oxide Cement) Used as Root-End Filling Material: A Histological Study in Rats A.A. Iliescu, C.M. Petcu, I.C. Petcu, I.M. Gheorghiu, A. Iliescu, M.G. Stan and S.A. Zurac	247
Structural and Ultrastructural Study, at Ovariectomised Female Rats, and their Reactivity to the Administration of Injectable Oestrogens M.H. Radu Florin, C. Nicolae, C. Craciun, M. Andrei, T. Ioana, C. Razvan and M. Dan	252
Histologic Evaluation of Tertiary Dentine after Indirect Pulp Capping Procedures M. Monea, M. Pop, A. Stoica and T. tefănescu	260

Chapter 5: Materials and Technologies in Pharmacology and Therapy

The Influence of Filler in Composite Cellulose Acetate Membranes for Proteins Recovery S.I. Voicu	267
Chemical Crosslinking of Silk Fibroin, Chitosan and Gelatin Blend Nanofiber Mats P. Siridamrong, P. Phrotjanatharee and N. Thamronganaskul	273
The Potential of NDPs-Loaded Fish Gelatin Fibers as Reinforcing Agent for Fish Gelatin Hydrogels S. Cecoltan, A. Serafim, D.M. Dragusin, A. Lungu, A. Lagazzo, F. Barberis and I.C. Stancu	278
Naturally Derived Matrix for Controlled Selenium Nanoparticles Delivery S. Cavalu, V. Laslo, F. Banica and S.I. Vicas	284
Bioactive Compounds Diffusion from Grapes to Wines under High Frequency Electromagnetic Field Treatments L. Bandici, S.I. Vicas, G.E. Bandici, A.C. Teusdea and S. Cavalu	289
Impact of Electromagnetic Radiation on the Human Organism L. Sachelarie, M.P. Vasiliu, D.M. Farcas, O.M. Daraba and L. Romila	295
Antiplatelet Effect of <i>Allium cepa</i> L. Extracts: A Short Review A. Saplonțai-Pop, M. Moldovan, C. Ionescu, M. Suci-Petrescu, I. Cojocaru and R. Oprean	303
Design and Characterization of Collagen-Sodium Carboxymethylcellulose-Lidocaine 3D Composites for Wound Management M.G. Albu, M.V. Ghica, G.A. Stefanescu, M. Hodorogea, M.M. Marin, S. Marin, E. Danila, S. Voicu, A.G. Simonca and L. Popa	309