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Bone (Re)-generation

0196 Effect of Neodymium Magnet on Bone Formation around Titanium Implants
R. LEESUNGBOK[1], H.-P. WEBER[2], Y.-T. HWANG[3], and B.-B. CHOI[3], [1]KYUNG HEE UNIVERSITY SCHOOL OF DENTISTRY, Harvard University School of Dental Medicine, Seoul, South Korea, [2]Harvard University -, Boston, MA, USA, [3]KYUNG HEE UNIVERSITY SCHOOL OF DENTISTRY, Seoul, South Korea

0197 IL-1 gene polymorphism and marginal bone loss around dental implants
P. GONG[1], Y. LIN[1], P. HUANG[1], X. LU[1], D. GUAN[2], and Y. MAN[3], [1]sichuan university,China, Cheng du, China, [2]sichuan university,China, Chengdu, China, [3]sichuan university,China, chengdou, China

0198 Treatment of Experimental Peri-Implantitis Using Platelet-Enriched Fibrin Glue
B.-H. CHOI[1], T.-M. YOU[2], S.-J. ZHU[1], J.-H. JUNG[2], S.-H. LEE[3], J.-Y. HUH[2], H.-J. LEE[2], and J.-X. LI[1], [1]Yonsei University Wonju College of Medicine, South Korea, [2]Yonsei University College of Dentistry, Seoul, South Korea, [3]Ewha Womans University, Seoul, South Korea

0199 Bone Regeneration with Self-Setting Alpha-TCP Cement at Implant Placement Sites
M. NAKADATE, N. AMIZUKA, M. LI, and T. MAEDA, Niigata Univ. Grad. Sch. Med. & Dent. Sci, Japan

0200 Periimplant bone level around implants with platform-switched abutments
S.M. FICKL, O. ZUHR, H. WACHTEL, W. BOLZ, and M. HUERZELER, Private Institute for Periodontolgy and Implantology, Munich, Germany

0201 Histological analysis after treatment of peri-implant infection with Er:YAG laser
A.A. TAKASAKI, A. AOKI, K. MIZUTANI, S. KIKUCHI, S. ODA, and I. ISHIKAWA, Tokyo Medical & Dental University, Japan

0202 GBR Combinating With Platelet-rich Plasma on Alveolar Defect Repairing
J. CHEN, Fujian Medical University,P.R.China, Affiliatied Stomatological Hospital, fuzhou, China, J. YANG, Fujian Medical University, Affiliatied Stomatological Hospital, fuzhou, China, and F. YAN, Fujian Medical University,P.R.China, fuzhou, China

0203 WITHDRAWN

0204 Comparison of HA coated and oxidized fixture using PRP grafting
T. YASUHIRO[1], S. KEISUKE[2], K. RYOUSUKE[1], T. MASAYUKI[1], M. KAZUYA[3], N. TETSUNARI[4], T. AKIO[3], and K. KENJI[1], [1]Osaka Dental University, Japan, [2]Osaka Dental University, osaka, Japan, [3]Osaka Dental University, Hirakata, Japan, [4]Osaka dental University, Hirakata, Japan

0205 Evaluation on Bone Growth of βTCP/CM Chitin Complex Material
F. SUWA[1], A. TAKEMURA[1], H. IKE[1], Y. EHARA[1], Y. YOSHIHARA[2], and Y. KOMASA[1], [1]Osaka Dental University, Japan, [2]Japan Medical Materials (JMM), Osaka, Japan

0206 Healing response of cortical and cancellous bone around titanium implants
J.-E. LEE, S.-J. HEO, J.-Y. KOAK, and S.-K. KIM, Seoul National University, South Korea

0207 A Study of the Effects of Anodized Titanium Implants
K.-J. PARK[1], S.-J. HEO[1], J.-Y. KOAK[1], J.-H. LEE[2], and S.-K. KIM[1], [1]Seoul National University, South Korea, [2]Holy Family Hospital and Catholic University of Korea, Bucheon, South Korea

0208 **Meta-Analysis of Three Implant Experiments in the Sheep Mandibular Model**
W.J. DUNCAN, University of Otago, Dunedin, New Zealand

0209 Dentin Autograft into Atrophied Jaw for Tooth Autotransplantation
M. MURATA[1], N. TORIYA[1], S. NAITO[1], J. HINO[1], J. TAZAKI[1], I. MIZOGUCHI[2], and M. ARISUE[1], [1]Health Sciences University of Hokkaido, Japan, [2]Health Sciences University of Hokkaido, School of Dentistry, Japan

0210 Reconstruction of maxilla and mandible with titanium mesh for implants
R. GUTTA, and P.J. LOUIS, University of Alabama, Birmingham, USA

0211 Tailor-made tricalcium phosphate bone implant directly fabricated by ink-jet printer
K. IGAWA[1], M. MOCHIZUKI[2], S. SUZUKI[3], S. OHBA[1], F. KUGIMIYA[4], T. OGASAWARA[1], K. TOMIZUKA[1], N. SASAKI[5], T. TAKATO[1], and U.-I. CHUNG[4], [1]University of Tokyo, AL, Japan, [2]Tokyo University of agriculture and technology, Japan, [3]New X-national Technology K.K, Tokyo, Japan, [4]University of Tokyo Hospital, Division of Tissue Engineering, Japan, [5]University of Tokyo, Japan

0212 Biocompatibility Evaluation of Hydroxyapatite/ Collagen/ Chitosan Composites
M.B. AMARAL, A.M.G. PLEPIS, S.B. GARCIA, V.C.A. MARTINS, and D. TOMA, Universidade de São Paulo, São Carlos, Brazil

0213 WITHDRAWN

0214 Effect of different surface treatments to increase dental implant biocompatibility
H.-J. LEE, **K.-Y. SONG**, T.-H. YOON, S.-G. AHN, J.-M. PARK, and C.-W. PARK, Chonbuk National University, Jeonju, South Korea

0215 BMPs Expression in Bone Induction and in Central-Peripheral Skeleton
A. WOJTOWICZ[1], I. KOCHANOWSKA[2], K. WLODARSKI[1], B. MARCZYÑSKI[1], I. MACIEJEWSKA[3], and K. OSTROWSKI[1], [1]Medical University of Warsaw, Poland, [2]L.Hirszfeld Institute, Polish Academy of Sciences, Wroclaw, Poland, [3]Medical University of Gdañsk, Poland

0216 Bone Ingrowth Evaluation on Ti-13Nb-13Zr Implants Fabricated Via Powder Metallurgy
M.C. BOTTINO[1], P.G. COELHO[2], V.A.R. HENRIQUES[3], M. YOSHIMOTO[1], B. KONIG, Jr.[4], A.H.A. BRESSIANI[1], and J.C. BRESSIANI[1], [1]Institute for Energy & Nuclear Research (IPEN), Sao Paulo, Brazil, [2]New York University, USA, [3]Brazilian Aerospace Technical Center (CTA), Sao Jose dos Campos, Brazil, [4]University of Sao Paulo, Institute of Biomedical Sciences, Brazil

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0216 Bone Ingrowth Evaluation on Ti-13Nb-13Zr Implants Fabricated Via Powder Metallurgy

M.C. BOTTINO[1], P.G. COELHO[2], V.A.R. HENRIQUES[3], M. YOSHIMOTO[1], B. KONIG, Jr.[4], A.H.A. BRESSIANI[1], and J.C. BRESSIANI[1], [1]Institute for Energy & Nuclear Research (IPEN), Sao Paulo, Brazil, [2]New York University, USA, [3]Brazilian Aerospace Technical Center (CTA), Sao Jose dos Campos, Brazil, [4]University of Sao Paulo, Institute of Biomedical Sciences, Brazil

According to the literature, there are mainly two classes of porous materials: solid substrate with a porous surface and integral porous body that permits the ingrowths of new-bone tissues into the implantable device. Objectives: present the processing, physical characterization, and "in vivo" bone ingrowth evaluation into a Ti-13Nb-13Zr (wt.%) alloy obtained with different porosity degrees via powder metallurgy (P/M). Methods: Cylindrical samples were fabricated by mixing metallic powders hydrides TiH_2 NbH, ZrH_2) followed by controlled pressing and sintering parameters: G1- 1000°C/5h, G2- 1300°C/3h, and G3- 1500°C/2h and subsequently characterized by density measurements, crystalline phases (XRD), and microstructure (SEM-EDS). After an 8-week healing period in rabbit tibias, the implants were retrieved and evaluated by backscattered electron images (BSEI-SEM) and Energy Dispersive Spectroscopy (EDS) for new-bone formation inside the pores. Results: Based on SEM micrographs, it was possible to observe the presence of α and β-phases with the Widmanstätten microstructure formation. The (α+β) Ti-13Nb-13Zr alloy formation was confirmed by XRD. The highest porosity levels, approximately 30% was noted for samples sintered at 1000°C, which present an open and interconnected structure with pores measuring 50-100μm, even though sites with non-reacted Nb particles were identified. On the other hand, samples sintered at 1300°C and 1500°C resulted in low porosity degrees (10%) and a better alloy homogenization. According to BSEI-EDS analyses, bone ingrowth occurrence was evidenced only inside G1 samples. It was also noted that newly-formed bone was able to adapt into pore geometry. Mineralized tissue was observed inside pores of diameter as low as 30 μm (Figure). Conclusions: P/M technology demonstrated to be an alternative tool to obtain porous materials for biomedical applications.

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