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P001  DECREASED FRACTURE RISK IN PATIENTS TREATED WITH ORAL NITRATES
L. Rejnmark*, P. Vestergaard†, L. Mosekilde†
‡The Osteoporosis Clinic, †Dept of Endocrinology and Metabolism C, University Hospital of Aarhus, Aarhus, Denmark

P002  MECHANISMS OF PYROPHOSPHATE INHIBITION OF MINERALIZATION IN MC3T3-E1 OSTEOBLAST CULTURES
W. N. Addison†, F. Azari†, M. T. Kaartinen†, M. D. McKee*†
†Faculty of Dentistry, McGill University, Montreal, Canada

P003  STRONTIUM RANELATE REDUCES NEW VERTEBRAL FRACTURES IN A SEVERE OSTEOPOROTIC MICE MODEL WITH SPONTANEOUS FRACTURES BY IMPROVING BONE MICROARCHITECTURE
V. Geoffroy*, C. Marty†, A. Lalande‡, M. C. De Vernejoul†
†INSERM U606, Hospital Lariboisiere, Paris, ‡Groupe Servier, Rheumatology Division, Courbevoie, France

P004  INCREMENTAL PROGNOSTIC VALUES OF RISK FACTORS-BASED MODEL FOR THE PREDICTION OF FRACTURE
N. D. Nguyen*, J. A. Eisman†, J. R. Center†, T. V. Nguyen†
†Bone and Mineral Research Program, Garvan Institute of Medical Research, Sydney, Australia

P005  HIGH RESOLUTION GENOTYPING OF THE ESR1 GENE AND ASSOCIATION WITH HEIGHT
L. Stolk*, J. B. J. Van Meurs†, A. Hofman‡, H. A. P. Pols†, A. G. Uitterlinden†
‡Internal Medicine, †Epidemiology and Biostatistics, Erasmus MC, Rotterdam, Netherlands

P006  EVIDENCE THAT A POLYMORPHISM IN THE LACTASE PHLORIZIN HYDROLASE GENE CAUSES DIFFERENCES IN HEIGHT INDEPENDENT OF CURRENT CALCIUM INTAKE
W. N. H. Koek*, J. B. Van Meurs†, B. C. J. Van der Eerden†, A. G. Uitterlinden†, H. A. P. Pols†, J. P. T. M. Van Leeuwen†
†Internal Medicine, Erasmus MC, Rotterdam, Netherlands

P007  A SINGLE DOSE OF ZOLEDRONIC ACID 5 MG ACHIEVES MORE SUSTAINED BIOCHEMICAL REMISSION VERSUS DAILY 30MG RISEDRONATE IN PATIENTS WITH PAGET'S DISEASE
I. Reid*, P. Miller†, J. Brown‡, W. Fraser§, D. Hosking¶, J. P. Devogelaer**, M. Moniz††, M. Hooper‡‡, Y. Saidi‡‡, G. Su†††, J. Pak‡‡‡, J. Davis§§§, T. Fashola¶¶, J. Krasnow*****, K. Zelenakas******, K. Lyles*******
§Faculty of Medicine and Health Sciences, University of Auckland, Auckland, New Zealand, †Colarado Center for Bone Research, Lakewood, CO, United States, ‡Le Centre Hospitalier Universitaire de Quebec, Sainte-Foy, Quebec, Canada, §Royal Liverpool, University Hospital, Liverpool, ¶Nottingham, City Hospital, Nottingham, United Kingdom, *****Cliniques Universitaires, St. Luc, Brussels, Belgium,
P008 ANDROGEN RECEPTOR POLYMORPHISM: ASSOCIATION WITH LEAN MASS AND BONE MASS IN MEN OF AFRICAN HERITAGE
1Epidemiology and Human Genetics, 2Epidemiology, University of Pittsburgh, Pittsburgh, United States, 3Epidemiology, Tobago Health Studies Office, Scarborough, Trinidad and Tobago, 4Human Genetics, University of Pittsburgh, Pittsburgh, United States

P009 CALCITONIN PROTECTS AGAINST EXPERIMENTALLY INDUCED OSTEOARTHRITIS
B. C. Sondergaard*1, K. Henriksen1, H. Wulf1, S. Oestergaard1, L. B. Tanko1, P. Qvist1, C. Christiansen1, M. A. Karsdal1
1Pharmacology, Nordic Bioscience, Herlev, Denmark

P010 EPIGENETICS: A MOLECULAR TARGET IN OSTEOARTHRITIS?
H. I. Roach*1, N. Yamada2, K. S. Cheung1, R. O. Oreffo1, F. Bronner3
1Bone and Joint Research Group, University of Southampton, Southampton, United Kingdom, 2Orthopaedic Dept, Tohoku University, Sendai, Japan, 3Health Center, University of Connecticut, Farmington, United States

ORAL POSTERS 2
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A. Funari*1, B. Sacchetti2, S. Michienzi2, M. Riminucci1, P. Bianco2
1Department of Experimental Medicine, University of L'Aquila, L'Aquila, 2Department of Experimental Medicine and Phatology, University La Sapienza, Rome, Italy

P012 EVIDENCE THAT ACTIVATION OF THE CANONICAL WNT SIGNALLING PATHWAY MAY HAVE DIRECT EFFECTS ON OSTEOCLASTS FROM REGENERATING BONE
T. A. Althnaian*1, M. Muzylak1, J. G. Mount1, H. L. Jessop1, J. S. Price1
1Veterinary Basic Sciences, The Royal Veterinary College, London, United Kingdom

P013 INCREASED BONE FORMATION IN TRANSGENIC MICE EXPRESSING THE TRANSCRIPTION FACTOR FRA-2: IDENTIFICATION OF TARGET GENES USING TRANSCRIPTOME ANALYSIS
A. Bozec*1, A. Hoebertz1, T. Garcia2, A. Jackson2, R. Baron2, A. F. Schilling1, H. Scheuch1, M. Priemel1, M. Amling3, R. Eferl1, E. F. Wagner1
1Institute of Molecular Pathology, Wien, Austria, 2Prostrakan, Romainville, France, 3Department of Trauma, University School of Medicine, Hamburg, Germany

P014 TRABECULAR BONE OF MALE MICE IS NOT RESPONSIVE TO MECHANICAL LOADING
R. L. de Souza*1, M. Matsuura2, F. Eckstein2, L. E. Lanyon1, C. Chenu1, A. A. Pitsillides1
1Veterinary Basic Science, Royal Veterinary College, London, United Kingdom, 2Institute of Anatomy, Ludwig-Maximilians Universitat, Munich, Germany

P015 PTH A MEDIATOR OF BONE ANABOLIC EFFECT OF PAMIDRONATE IN ADULT RATS FED A LOW PROTEIN DIET
P. Ammann*1, R. Dayer1, R. Rizzoli1
1Division of Bone Diseases, Department of Rehabilitation and Geriatrics, Geneva, Switzerland
P016  DELIVERY OF COMMITTED HUMAN OSTEOCLAST PRECURSORS INTO THE BONE MARROW OF NEWBORN MOUSE MODELS OF AUTOSOMAL RECESSIVE OSTEOPETROSIS
A. Cappariello1, A. C. Berardi1, A. Del Fattore2, B. Peruzzi3, M. Longo3, A. Rufo2, N. Rucci2, A. Ugazio1, G. F. Bottazzo1, A. Teti2
1Medicina Pediatria, Ospedale Pediatrico Bambino Gesù, Roma, 2Medicina Sperimentale, Università De L'Aquila, L'Aquila, Italy, 3Istologia e Embriologia Medica, Università di Roma "La Sapienza", Roma

P017  ROLE OF DLK1 (EGF-LIKE HOMEOTIC PROTEIN) IN BONE MARROW MICROENVIRONMENT: THE IMMUNOMODULATORY EFFECT OF DLK1 ON HUMAN MESENCHYMAL STEM CELLS
B. M. Abdallah1, P. Boissy2, Q. Tan3, J. Dahlgaard3, G. A. Traustadottir1, J. Delaisse2, M. Kassem1
1Endocrinology and Metabolism dept, Odense University Hospital, Odense C, 2Clinical Research Unit and Division of Hematology, Vejle Hospital, Vejle, 3Clinical Biochemistry and Genetics, Odense University Hospital, Odense C, Denmark

P018  CHARACTERIZATION OF AGE-DEPENDENT OSTEOPOROSIS IN STEM CELL ANTIGEN-1 NULL MICE
T. S. Khan1, C. Holmes1, M. D. Grynpas2, W. L. Stanford1
1Institute of Biomaterials and Biomedical Engineering, University of Toronto, 2Samuel Lunenfeld Research Institute, Mount Sinai Hospital, Toronto, Canada

P019  THE CYSTEINE-RICH PROTEIN CYR61 IS A NOVEL INHIBITOR OF OSTEOCLAST DIFFERENTIATION
M. J. Rogers1, J. C. Crocket1, D. Tosh1, A. Duthie1, F. Jakob2, N. Schuetze2
1Bone Research Group, Institute of Medical Sciences, Aberdeen, United Kingdom, 2Orthopedic Center for Musculoskeletal Research, University of Wuerzburg, Wuerzburg, Germany

BONE FORMATION, CARTILAGE, AND BONE MATRIX
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A. Rufo1, A. Teti1, N. Rucci1
1Department of Experimental Medicine, University of L'Aquila, L'Aquila, Italy

P021  THE EFFECTS OF OVARIECTOMY AND TAMOXIFEN ON BONE TISSUE IN THE RAT: A HISTOMORPHOMETRIC AND HISTOPATHOLOGICAL STUDY
H. Aktug1, S. Uslu1, C. Terek2, H. Terzi2, O. Bilgin2, S. Ozsener2, M. Turgut3
1Histology and Embryology, 2Obstetrics and Gynecology, Ege University School of Medicine, Izmir, 3Neurosurgery, Adnan Menderes University, Aydýn, Turkey

P022  PREDICTION MODELS FOR EVALUATION OF TOTAL BODY BONE MASS WITH DUAL-ENERGY X RAY ABSORPTIOMETRY AMONG CHILDREN AND ADOLESCENTS
M. Alison1, S. Dorgeret1, D. Marinovic2, C. Alberti3, J. Leger2, P. Czernichow2, G. Sebag1
1Pediatric Imaging, 2Pediatric endocrinology, 3Biostatistic, Hopital Robert Debré, Paris, France

P023  CALCIFICATION OF SHARPEY’S FIBRES AND PERIOSTEUM WITH AGE IN THE PORCINE MANDIBLE
A. I. Al-Qtait1, R. C. Shore2, J. E. Aaron1
1Faculty of Biological Sciences, 2Leeds Dental Institute, University of Leeds, Leeds, United Kingdom

P024  IMPLANTATION OF OCTACALCIUM PHOSPHATE (OCP) ENHANCES LONG BONES REPAIR IN THE RATS
M. R. Arab1, F. Sargolzaei Avval1
1Anatomy, Zahedan University of Medical Sciences, Zahedan, Iran (Islamic Republic of)
P025  VITAMIN K ANALOGUES PROMOTE THE DIFFERENTIATION OF PRIMARY HUMAN OSTEOBLASTS
G. J. Atkins¹, K. J. Welldon¹, C. Vincent¹, D. M. Findlay*¹
¹Department of Orthopaedics and Trauma, University of Adelaide, Adelaide, Australia

P026  NITRIC OXIDE PRODUCTION BY BONE CELLS IN RESPONSE TO TRANSLATIONAL VIBRATION
R. G. Bacabac¹, T. H. Smit², J. J. Van Loon¹, A. Vatsa*¹, J. Klein-Nulend²
¹Oral Cell Biology, ACTA-Vrije Universiteit, ²Physics and Medical Technology, Vrije Universiteit Medical Center, Amsterdam, Netherlands

P027  EFFECTS OF HIGH PHOSPHORUS AND/OR LOW CALCIUM DIETS ON TRAINED RAT BONE TISSUE.
L. Bégot¹*, S. Renaut¹, C. André¹, X. Butigieg¹, E. Zérath¹, X. Holy¹
¹Integrated Physiology, IMASSA, Brétigny-sur-Orge, France

P028  EXPRESSION OF DOMINANT NEGATIVE MUTANT FORM OF RUNX2 INCREASES GSALPHA PROTEIN EXPRESSION AND CAMP ACCUMULATION ON SAOS-2 CELLS
K. Bertaux¹, O. Broux¹, C. Chauveau¹, P. Hardouin¹, J. Jeanfils¹, J. Devedjian*¹
¹Laboratoire de Recherche sur les Biomatiériaux et les Biotechnologies, Université du Littoral Côte d’Opale, Boulogne-sur-mer Cedex, France

P029  TERIPARATIDE NASAL SPRAY: PHARMACOKINETICS AND SAFETY VERSUS SUBCUTANEOUS TERIPARATIDE IN HEALTHY VOLUNTEERS
G. C. Brandt*¹, B. M. Spann¹, A. P. Sileno¹, H. R. Costantino², C. Li², S. C. Quay³
¹Clinical Research, ²Formulation Development, ³Executive Management, Nastech Pharmaceutical Company Inc., Bothell, United States

P030  OSTEOBLAST APOPTOSIS ASSAY IN CELL CULTURE SYSTEM
Y. Chung*¹, E. Yu¹, S. Yun¹, Y. Shen¹, J. Kim², S. Lim³, W. Choi³, H. Choi³
¹Endocrinology and Metabolism, Ajou University School of Medicine, Suwon, ²Obstetrics and Gynecology, Seoul National University School of Medicine, ³Internal Medicine, Yonsei University College of Medicine, ⁴Internal Medicine, Hanyang University College of Medicine, ⁵Obstetrics and Gynecology, Inje University College of Medicine, Seoul, South Korea

P031  HUMAN EMBRYONIC STEM CELL-DERIVED CONNECTIVE TISSUE PROGENITORS FOR TISSUE ENGINEERING
S. Cohen*¹, L. Leshansky¹, E. Zussman¹, J. Itskovitz-Eldor¹
¹Stem Cell Center, Bruce Rappaport Faculty of Medicine, ²Department of Mechanical Engineering, Technion - Israel Institute of Technology, Haifa, Israel

P032  REGULATION OF OSTEOBLAST DIFFERENTIATION BY THE RHO/RHO KINASE SIGNALLING PATHWAY
A. E. Coudert*¹, A. Danikas¹, A. E. Grigoriadis¹
¹Department of Craniofacial Development, King’s College London, London, United Kingdom

P033  DEVELOPMENT OF A BONE GRAFT SUBSTITUTE: OPTIMIZATION OF THE GROWTH OF HUMAN OSTEOBLASTS ON A 3D COLLAGEN SCAFFOLD
F. Tan¹, F. J. O’Brien¹, J. S. Daly*¹
¹Anatomy, Royal College of Surgeons in Ireland, Dublin, Ireland

P034  EFFECTS OF HYALURONAN ON THREE-DIMENSIONAL MICROARCHITECTURE OF SUBCHONDRAL BONE TISSUES IN GUINEA PIG PRIMARY OSTEOARTHRITIS
M. Ding*¹, C. C. Danielsen², I. Hvid³
¹Orthopaedic Research Laboratory, Department of Orthopaedics, Odense and Aarhus University Hospitals, Odense C, ²Department of Connective Tissue Biology, Institute of Anatomy, University of Aarhus, ³Department of Orthopaedics, Aarhus University Hospital, Aarhus C, Denmark
P035 PRECONDITIONING EXERCISE AND ANATOMIC SITE RELATE TO MINERALISATION AND THICKNESS IN EQUINE THIRD METACARPAL ARTICULAR CALCIFIED CARTILAGE
M. Doube*, 1, E. C. Firth2, A. Boyde1
1Dental Institute, Queen Mary, University of London, London, United Kingdom, 2Institute of Veterinary, Animal and Biomedical Sciences, Massey University, Palmerston North, New Zealand

P036 EFFECT OF SILICON ON OSTEOBLAST SURVIVAL AND ADHESION IN VITRO
W. C. Duivenvoorden*1, A. Middleton2, A. TanBeeWan2, C. Prettos, A. Spooner2, S. D. Kinrade2
1Department of Chemistry and Biology, 2Department of Chemistry, Lakehead University, Thunder Bay, Canada

P037 MESENCHYMAL STEM CELLS SEEDED ON BONE GRAFTS FOR FILLING CRITICAL BONE DEFECTS IN MICE
A. Dumas1, M. F. Moreau1, M. F. Basile1, D. Chappard*
1INSERM, EMI 0335, Angers, France

P038 DEVELOPMENTAL REGULATION OF MMP13/COLLAGENASE3 BY TRIIODOTHYRONINE (T3) AND RUNX2/CBFA1 IN MOUSE OSTEOBLASTIC MC3T3-E1 CELLS
E. Durchschlag*, S. Spitzer1, K. Klaushofer1, F. Varga1
1Ludwig Boltzmann Institute of Osteology at Hanusch Hospital of WGKK and AUVA Trauma Centre Meidling, Hanusch Hospital-Vienna, Vienna, Austria

P039 IDENTIFICATION OF REGULATORY GENES INVOLVED IN HUMAN BONE AND ECTOPIC GLUCOCORTICOID-INDUCED MINERALIZATION
M. Eijken*, S. Swagemakers2, M. Koedam1, P. J. Van der Spek2, H. A. P. Pols1, J. P. T. Van Leeuwen1
1Department of Internal Medicine, 2Department of Bioinformatics, ErasmusMC, Rotterdam, Netherlands

P040 ALENDRONATE EFFECT IN OPG/RANKL GENE EXPRESSION. STUDY IN PRIMARY HUMAN OSTEOBLASTS IN CULTURE
A. Enjuanes*, D. Ozalla, M. V. Hernández, L. Álvarez, J. Riba, M. J. Martínez de Osaba1, P. Pers1, A. Monegal1, N. Guañabens1
1Unidad de Patología Metabólica Ósea, 2Servicio de traumatólogia., IDIBAPS-Hospital Clinic, Barcelona, Spain

P041 EFFECTS OF STANDARD HEPARIN AND A LOW-MOLECULAR-WEIGHT HEPARIN ON ACTIVITY OF MOUSE OSTEOBLASTS IN VITRO
J. Folwarczna*, L. Sliwinski1, W. Janiec1, H. I. Trzebiak1, A. Karlinska1, P. Kwiecien1
1Department of Pharmacology, Medical University of Silesia, Sosnowiec, Poland

P042 EXPRESSION OF PERIOSTIN IN OSTEOBLASTS AND OSTEOSARCOMA CELL LINES AND ITS REGULATION BY PTH
D. Fortunati*, Á. K. Fjeldheim1, S. Reppe1, M. Nielsen1, F. P. Reinhold2, K. M. Gautvik1
1Department of Biochemistry, Institute of Basic Medical Sciences, 2Department of Pathology, National University Hospital, Oslo, Norway

P043 TREATMENT OF OSTEOPENIC RHESUS MONKEYS WITH PARATHYROID HORMONE 1-84 FOR 16 MONTHS IMPROVES VERTEBRAL TRABECULAR BONE QUANTITY AND QUALITY
1Nycomed Group, NPS Pharmaceuticals, Salt Lake City, United States, 2Preclinical Services, Charles Rivers Laboratories CTBR, Montreal, Canada, 3Institute of Technology, Georgia Institute of Technology, Atlanta, 4Indiana University, Indiana University, Indianapolis, United States
P044  REGULATION OF ATP RELEASE FROM HUMAN OSTEOBLASTS: A CALCIUM DEPENDANT, EXOCYTOTIC VESICULAR MECHANISM
A. Gartland*1, H. E. Burrell1, J. P. Dillon1, J. A. Gallagher1
1Human Anatomy and Cell Biology, The University of Liverpool, Liverpool, United Kingdom

P045  BONE TISSUE ENGINEERING – WHEN CELLS AND MATERIALS JUST AIN’T ENOUGH
G. Giannicola*1, B. Sacchetti1, A. Corsi1, G. Citro2, S. Michienzi1, A. Funari3, E. Ferrari1, U. Mancini2, F. Postacchini1, G. Cinotti3, M. Riminucci3, P. Bianco1
1Department of Experimental Medicine and Pathology, 2Department of Clinical Orthopedy, University of Rome La Sapienza, Rome, 3Department of Experimental medicine, University of L'Aquila, L'Aquila, 2Department of science of locomotor apparatus, 3Department of clinical science, University of Rome La Sapienza, Rome, Italy

P046  GENE EXPRESSION OF OSTEOBLAST TRANSCRIPTION FACTORS RUNX2 AND OSTERIX IN MODELS OF OSTEOBLAST DIFFERENTIATION AND IMPACT OF RUNX2 KNOCK DOWN
M. Giesen*1, H. Siggelkow1, K. Schüfer2, G. Wulf3, M. Hübner1, V. Ritz1
1Gastroenterology and Endocrinology, 2Cardiology and Pulmonology, 3Hematology, University of Göttingen, Göttingen, Germany

P047  FRIZZLED-RELATED PROTEIN 3 GENE POLYMORPHISM AND RISK OF OSTEOLYSIS AFTER TOTAL HIP ARTHROPLASTY
A. Gordon*1, L. Southam2, J. Loughlin2, I. Stockley2, R. Eastell1, M. Wilkinson3
1Academic Unit of Bone Metabolism, University of Sheffield, Sheffield, 2Institute of Musculoskeletal Sciences, Nuffield Orthopaedic Centre, Oxford, 3Department of Orthopaedics, The Northern General Hospital, Sheffield, United Kingdom

P048  IRON INHIBITS HYDROXYAPATITE CRYSTAL GROWTH IN VITRO
P. Guggenbühl*1, R. Filmon1, D. Chappard1
1INSERM, EMI 0335, LHEA, Angers, France

P049  Evidence for involvement of a factor X in the propagation of the osteoarthritic phenotype
K. Hashimoto*1, N. Yamada1, S. Kokubun1, H. I. Roach2
1Department of Orthopaedics, Tohoku University Graduate School of Medicine, Sendai, Japan, 2Bone and Joint Research Group, University of Southampton, Southampton, United Kingdom

P050  BOTH DIRECT AND COLLAGEN-MEDIATED SIGNALS ARE REQUIRED FOR ACTIVE VITAMIN D3-ELICITED DIFFERENTIATION OF HUMAN OSTEOBLASTIC CELLS
R. Hata*1, Y. Maehata1, S. Takamizawa1, S. Ozawa1, Y. Kato1
1Department of Biochemistry and Molecular Biology, Kanagawa Dental College, Yokosuka, Japan

P051  HIGHLY SPECIFIC TNFSE14 ELISA DESIGNED BY BIOINFORMATICS – A NEW TOOL FOR BONE RESEARCH
N. Brinskelle-Schmal1, G. Hava*1, A. Lukas2, J. Marc3
1Research and Development, Biomedica Gruppe, 2Research and Development, Emergentec Biodvelopment GmbH, Vienna, Austria, 3Faculty of Pharmacy, University of Ljubljana, Ljubljana, Slovenia

P052  APOLIPROTEIN E DEFICIENCY MICE GIVEN HIGH-FAT DIET CAUSE MATURATION ARREST IN OSTEOBLASTS, LOW ENDCORTICAL BONE FORMATION AND OSTEOPENIA
H. Hirasawa*1, S. Tanaka1, A. Sakai1, S. Moriwaki2, S. Niida2, M. Tsutsui3, H. Miyata4, M. Ito5, T. Nakamura1
1Orthopaedic surgery, University of Occupational and Environmental Health, Kitakyushu, 2Bone and Joint Disease, Research Institute, National Center for Geriatrics and Gerontology, Aichi, 3Pharmacology, 4Laboratory Animal Research Center, University of Occupational and Environmental Health, Kitakyushu, 5Radiology, Nagasaki University Hospital, Nagasaki, Japan
P053  GENOME-WIDE ANALYSIS OF SHOCK WAVE–INDUCED GENE EXPRESSION IN HUMAN OSTEOBLAST CULTURES FROM HYPTERTROPHIC FRACTURE NON-UNIONS
A. Hofmann*, U. Ritz, A. Ackermann, M. Kuntz, N. Mladenovic, C. Schmid, A. Meurer, J. Heine, P. Rommens, J. Rompe
1Orthopaedic Surgery, 2Trauma Surgery, Johannes Gutenberg University, Mainz, 3Orthopaedics, Orthotrauma Clinic, Gruenstadt, Germany

P054  REDUCED FAILURE INDEX FROM LOCALIZED BONE LOSS CANNOT BE OVERCOME BY UNIFORM BONE FORMATION
H. Hong, B. Borah, R. J. Phipps, T. E. Dufresne, G. J. Gross
1Image Analysis, 2Drug Development, Procter and Gamble Pharmaceuticals, Mason, United States

P055  POSSIBLE INVOLVEMENT OF CELL DEATH IN PHOSPHATE-INDUCED CRYSTAL FORMATION IN A CELL CULTURE SYSTEM
1Biochemistry and Cell Biology, and Equine Sciences, 2Equine Sciences, 3Biochemistry and Cell Biology, Faculty of Veterinary Medicine, Utrecht University, Utrecht, Netherlands

P056  BMP-2-MEDIATED REGULATION IN OSTEOGENESIS OF HUMAN MESENCHYAL STEM CELLS UNDER DEXAMETHASONE-FREE CONDITION
1Dental Research Institute, College of Dentistry, Seoul National University, 2Dept. of Biomedical Engineering, College of Medicine, BK 21 Program for Biomedical Science, Korea Artificial Organ Center, Korea Univ, 3Department of Chemical Engineering, Seoul National University of Technology, Seoul, South Korea, 4Lab. for Osteology, Dept. of Cranio maxillofacial Surgery, University Hospital Zuerich, Zuerich, Switzerland, 5Department of Oral and Maxillofacial Surgery, College of Dentistry, Seoul National University, Seoul, South Korea

P057  INORGANIC PHOSPHATE STIMULATES TRANSCRIPTION OF MATRIX GLA PROTEIN GENE IN GROWTH PLATE CHONDROCYTES THROUGH THE ERK SIGNALING PATHWAY
M. Julien, D. Magne, A. Clochard, M. Rolli-Derkinderen, O. Chassande, C. Cario-Toumaniantz, Y. Cheref, P. Weiss, J. Guicheux
1Research Center on Osteoarticular and Dental Tissue Engineering, INSERM EM19903, Nantes, 2Université du Littoral, Cote d’Opale, LR2B-Insersm-ERI 002, Boulogne-sur-mer, 3Faculté des Sciences, Institut du Thorax, INSERM U533, Nantes, 4Biomateriaux et Reparation Tissulaire, INSERM U443, Bordeaux, 5Ecole Nationale Veterinaire, Unité d’Anatomie Pathologique, UMR 703 INRA ENVN, 6Research center on Osteoarticular and Dental Tissue, INSERM EM19903, Nantes, France

P058  REGULATION OF MINERALIZATION BY TRANSGLUTAMINASES IN OSTEOBLAST CULTURES
H. F. Al-Jallad, Y. Nakano, M. T. Kaartinen*
1Faculty of Dentistry, McGill University, Montreal, Canada

P059  HARMFUL EFFECT OF FLUORIDE ON FORMATION OF APATITE CRYSTALS
M. Kakei, T. Sakae, M. Yoshikawa
11st. Dept. of Oral Anatomy, Meikai Univ. School of Dentistry, Sakado, 2Dept. of Histology, Embryology, Anatomy, Nihon Univ. School of Dentistry, Matsudo, 3Dept. of Orthodontics, Meikai Univ. School of Dentistry, Sakado, Japan

P060  ANDROGEN RECEPTOR COORDINATES BOTH OSTEOBLASTIC DIFFERENTIATION AND MINERALIZATION
H. Kang, C. Huang, J. Chang, K. Huang
1Center for menopause and reproductive medicine research, Graduate Institute of Clinical Medical Scie, 2Graduate Institute of Clinical Medical Sciences, Chang Gung University, 3Center for menopause and reproductive medicine research, Chang Gung Memorial Hospital, Kaohsiung, Taiwan
P061  BONE ULTRASTRUCTURE BY RAMAN IMAGING
M. Kazanci*1, P. Roschger2, E. P. Paschalis2, K. Klaushofer2, P. Fratzl1
1Biomaterials, Max-Planck Institute of Colloids and Interfaces, Potsdam, Germany, 2Ludwig Boltzmann Institute of Osteology, Hanusch Hospital, Wien, Austria

P062  COMPLEMENTARY INFORMATION ON IN VITRO CONVERSION OF AMORPHOUS CALCIUM PHOSPHATE TO HA FROM RAMAN MICROSPECTROSCOPY AND WIDE ANGLE SCATTERING
M. Kazanci1, E. P. Paschalis2*, K. Klaushofer2, P. Fratzl1
1Biomaterials, Max-Planck Institute of Colloids and Interfaces, Potsdam, Germany, 2Ludwig Boltzmann Institute of Osteology, Hanusch Hospital, Wien, Austria

P063  ISOLATION AND CHARACTERIZATION OF MESENCHYMAL STEM CELLS DERIVED FROM UMBILICAL CORD BLOOD
J. Kim*1, M. KIM1, J. Park1, H. Choi2
1Obstetrics and Gynecology, Seoul National University Hospital, 2Obstetrics and Gynecology, Sanggye Paik Hospital, Seoul, South Korea

P064  OSTEOGENESIS VERSUS CHONDROGENESIS BY BMP-2 AND BMP-7 IN ADIPOSE STEM CELLS
M. Knippenberg1, M. N. Helder2, B. Zandieh Doulabi1, A. Vatsa*1, P. I. J. M. Wuismann2, J. Klein-Nulend1
1Oral Cell Biology, ACTA- Uva and Vrije Universiteit, 2Orthopaedic Surgery, VU University Medical Center, Amsterdam, Netherlands

P065  POLYSACCHARIDES AS NANOCOATINGS OF BONE IMPLANTS
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P067  LONG CHAIN POLYUNSATURATED FATTY ACIDS AFFECT CYTOKINE AND TYROSINE KINASE ACTIVITY IN MC3T3-E1 PRE-OSTEOBLAST CELLS
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P084  GENOME-WIDE EXPRESSION PROFILING REVEALS REDUCED GENE EXPRESSION OF STANNIOCALCIN 1 IN BONE FRACTURE NON-UNIONS AND ITS ACTIVATION AFTER SHOCK WAVE THERAPY
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P086  THE INFLUENCE OF IMPLANT MATERIAL ON EXTRACELLULAR MATRIX ADSORPTION AND CONFORMATION IN VITRO
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P087  THE PERICHONDRAL RING OF LACROIX AS EXPRESSION OF MEMBRANOUS OSSIFICATION IN THE ENDOCHONDRAL BONES
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HIP GEOMETRY, METABOLIC AND TISSUE PROPERTIES ARE ASSOCIATED WITH COLIA SPI GENOTYPES
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WNT SIGNALING PATHWAY PARTICIPATES IN THE REGULATION OF GLUTAMINE SYNTHETASE AND OSTEOCALCIN EXPRESSION IN HUMAN OSTEOBLASTIC CELLS
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EXTRACELLULAR NUCLEOTIDES INHIBIT MINERALISATION OF BONE NODULES FORMED BY RAT OSTEOBLASTS
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P100 EVIDENCE FOR THE PRESENCE OF PURE PRE-OSTEOBLASTIC OR PURE PRE-ADIPOCYTIC CELL POPULATIONS AMONG MOUSE BONE MARROW MESENCHYMAL STEM CELLS
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P101 EVIDENCE FOR IN VITRO OSTEOGENESIS BY HUMAN MESENCHYMAL STEM CELLS IN 3D-CULTURES
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P102 MECHANICAL LOADING INHIBITS BONE ELONGATION THROUGH THE REGULATION OF CHONDROCYTE PROLIFERATION
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P. Roschger1, R. Zoehrer1, E. Durchschlag1, R. L. Van Bezooijen2, R. A. Bank3, P. Fratzl4, E. Paschalis*1, K. Klaushofer1
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P107  TIME EVOLUTION OF THE BONE MINERALIZATION DENSITY DISTRIBUTION DUE TO HIGH-TURNOVER DISEASES AND ANTIRESORPTIVE THERAPY
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P108  QUANTITATIVE ASSESSMENT OF FORMATION AND RESORPTION SURFACES AND OSTEOCYTE 3D DISTRIBUTION IN THE MOUSE FIBULA FROM NANO-CT IMAGING
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P109  IMPLANTATION OF OCTACALCIUM PHOSPHATE (OCP) ENHANCES ALVEOLAR RIDGE IN RAT MANDIBLE
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P110  BONE MINERAL DENSITY IN CHILDREN WITH CHRONIC NON-SPECIFIC LUNG DISEASES
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P111  CLINICAL SIGNIFICANCE OF OSTEODENSITOMETRY IN CHILDREN
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P112  MICROARRAY ANALYSIS OF GENE EXPRESSION IN OSTEOBLAST CULTURES FROM PATIENTS WITH HYPERTROPHIC FRACTURE NON-UNIONS
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P113  MYELOID PROGENITOR CELLS SUPPRESS OSTEOGENIC DIFFERENTIATION OF MESENCHYMAL PROGENITOR CELLS
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P115  DIFFERENTIAL REGULATION OF MMPs IN CHONDROCYTES AND THEIR INVOLVEMENT IN THE DEVELOPMENT OF TIBIAL DYSCONDROPLASIA IN BROILERS AND TURKEYS
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P116  ENDOSTATIN RETARDS THE CARTILAGE PHASE IN THE MODEL OF ECTOPIC OSSIFICATION
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P118  DEXAMETHASONE (DEX) AND ALPHA-KETOGLUTARATE (AKG) INFLUENCE THE BONE DEVELOPMENT DURING BOTH MATERNAL AND NEONATAL ADMINISTRATION IN PIGS
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P120  PRENATAL ADMINISTRATION OF 3-HYDROXY-3-METHYLBUTYRATE (HMB) TO PIGS INCREASES PEAK BONE MASS IN OFFSPRING
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P121  ALPHA-KETOGLUTARATE (AKG) ADMINISTRATION TO PREGNANT SOWS INCREASES MINERALIZATION, GEOMETRICAL AND MECHANICAL ENDURANCE OF SKELETON IN THEIR OFFSPRING
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P122  FUNDECTOMY INDUCES OSTEOPENIA OF AXIAL SKELETON IN PIGS
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P123  POST-GASTRECTOMY OSTEOPENIA OF FEMUR IN PIGS
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P125  THE INFLUENCE OF EXTREMELY LOW FREQUENCY MAGNETIC FIELD ON THE MINERALIZATION PROCESS
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P126  THE EFFECTIVENESS OF COX-2 INHIBITIONS IN THE PREVENTION OF HETEROTOPIC OSSIFICATION, AN EXPERIMENTAL STUDY IN RABBITS
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P127  EVALUATION OF PHOTOPOLYMERS, CAPABLE FOR RAPID PROTOTYPING ON PROLIFERATION AND MORPHOLOGY OF OSTEOBLASTS
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P128  INTERCELLULAR COMMUNICATION IN OSTEOCYTES AFTER MECHANICAL STIMULATION
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P129  BMP-6 INDUCES NEW BONE FORMATION IN OVARIECTOMIZED MICE AND ENHANCES DIFFERENTIATION OF PRIMARY HUMAN OSTEOBLASTS THROUGH ACTIVATION OF IGF-1 AND EGF PATHWAYS
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P130  HOW THE BEHAVIOR OF OSTEOCLASTS AND OSTEOBLASTS INFLUENCES THE ARCHITECTURE OF TRABECULAR BONE
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P131  MODULATION OF VEGF ISOFORM AND RECEPTORS mRNA EXPRESSION DURING OSTEOBLAST DIFFERENTIATION IN A MONO- AND CO-CULTURAL MODEL WITH MICROVASCULAR ENDOTHELIAL CELLS
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P132  SERUM PROTEIN ADSORPTION TO HYDROXYAPATITE-COMPOSITE POLYMER SCAFFOLDS
K. Woo*1, H. Choi1, J. Baek1, H. Ryoo1, G. Kim1, P. X. Ma2
1Craniofacial Cell and Developmental Biology, Seoul National University School of Dentistry, Seoul, South Korea, 2Biologic and Material Sciences, University of Michigan, Ann Arbor, United States
P133  ROLES OF THE INJURY-INDUCED INFLAMMATORY RESPONSE IN THE BONY REPAIR OF THE GROWTH PLATE CARTILAGE  
1Department of Orthopaedic Surgery, Women and Children Hospital, Adelaide, Australia

P134  SIMVASTATIN PROMOTES THE PROLIFERATION AND MINERALIZATION OF OSTEOBLASTS  
Y. Yang*  
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P135  BONE MINERAL AND COLLAGEN QUALITY IN BAPN TREATED RATS  
1Ludwig Boltzmann Institute of Osteology at the Hanusch Hospital of WGKK and AUVA Trauma Centre Meidling, Hanusch Hospital Vienna, Vienna, Austria, 2Max Planck Institute of Colloids and Interfaces, Department of Biomaterials, Berlin, Germany

BONE RESORPTION AND ITS REGULATION  
These posters will be attended on Thursday, 11 May 2006, 13:00 – 14:00

P136  INVOLVEMENT OF ADAM8 IN OSTEOCLASTOGENESIS  
1ORTON Orthopaedic Hospital, Invalid Foundation, 2Department of Orthopaedics and Traumatology, Helsinki University Central Hospital, 3Institute of Biomedicine, University of Helsinki, 4Department of Medicine Invartes medicin, Helsinki University Central Hospital, Helsinki, Finland

P137  RANK EXPRESSION IN PERIPHERAL BLOOD AND BONE MARROW MONONUCLEAR CELLS AND IN GIANT CELL TUMOUR OF BONE: RELEVANCE TO A PRE-OSTEOCLAST PHENOTYPE  
1Department of Orthopaedics and Trauma, University of Adelaide, 2Division of Haematology, Institute of Medical and Veterinary Science, Adelaide, Australia, 3Monoclonal Antibody Production, R and D Systems, Minneapolis, United States

P138  RED DEER BIOLOGY FOR BIOMEDICAL RESEARCH ON HUMAN OSTEOPOROSIS  
1Institute of Genetics, Agricultural Biotechnology Center, Godollo, 2First Department of Internal Medicine, Semmelweis University Medical School, 3Department of Genetics, Eötvös Loránd University, Budapest, 4Department of Fish and Pet Animal Breeding, University of Kaposvár, Kaposvár, Hungary

P139  FACTORS DETERMINING BONE TURNOVER IN AN ELDERLY POPULATION - NOT PREVIOUSLY TREATED WITH BISPHOSPHONATES  
1Medicine for the Elderly, St. James's Hospital, 2Medicine for the Elderly, 3Biochemistry Dept., St. James's Hospital, 4Dept. of Statistics, Trinity College, 5Falls and Osteoporosis Dept., St. James's Hospital, Dublin, Ireland

P140  THE ASSOCIATION BETWEEN SEVERAL FACTORS AFFECTING AORTIC CALCIFICATION AND BMD IN POSTMENOPAUSAL WOMEN  
W. H. Choi*, H. Choi, H. Han  
1Endocrinology, Hanyang University Hospital, 2OBGY, Sangae Bak Hospital, 3Endocrinology, Hanyang University Hospital, Seoul, South Korea
P141  PHOSPHORUS IN BODY FLUIDS OF CHILDREN AGED 5-16 YEARS
S. N. Chramtzova*1, L. A. Scheplyagina1, T. Y. Moissejeva1
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Sciences, Moscow, Russian Federation

P142  VITAMIN D INHIBITS IL-17 PRODUCTION AND STIMULATES IL-4 PRODUCTION
BY PERIPHERAL BLOOD MONONUCLEAR CELLS IN EARLY ARTHRITIS PATIENTS
E. M. Colin*1, P. Asmawidjaja1, H. A. P. Pols2, J. M. W. Hazes1, J. P. T. M. Van Leeuwen1, E.
Lubberts1
1Rheumatology, 2Internal Medicine, Erasmus MC, Rotterdam, Netherlands

P143  INVESTIGATIONS INTO THE KINETIC MECHANISM OF INHIBITION OF
FARNESYL PYROPHOSPHATE SYNTHASE BY NITROGEN CONTAINING
BISPHOSPHONATES
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Centre, University of Oxford, Oxford, United Kingdom, 3New Drug Development, Procter and Gamble
Pharmaceuticals, Mason, OH, United States, 4Bone Research Group, University of Aberdeen,
Aberdeen, United Kingdom

P144  MOLECULAR MODELING COMPARISON OF NITROGEN-CONTAINING
BISPHOSPHONATES OF VARYING POTENCY CO-CRYSTALIZED IN FARNESYL
DIPHOSPHATE SYNTHASE
F. H. Ebetino*1, B. Kashemirov2, C. E. McKenna2, A. G. Evdokimov3, M. E. Pokross3, B. L. Barnett4,
J. Dunford1, K. Kavanagh2, M. J. Rogers2, M. W. Lundy1, U. Oppermann2, R. G. Russell3
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Pharmaceuticals, Mason, OH, 4Chemistry Department, University of Cincinnati, Cincinnati, OH,
United States, 5Botner Research Centre, Oxford University, Oxford, 6Bone Research Group, University of
Aberdeen, Aberdeen, United Kingdom

P145  ANTiresorPTIVE EFFECTS OF CALCITRIOL ARE INDEPENDENT OF
PARATHYROID HORMONE SECRETION IN RATS
R. G. Erben*1, K. Weber2, M. Herber2
1Dept. of Natural Sciences, University of Veterinary Medicine, Vienna, Austria, 2Institute of Animal
Physiology, University of Munich, Munich, Germany

P146  POLYMORPHISMS IN THE INTERLEUKIN-6 GENE PROMOTER AND
OSTEOLYSIS AFTER TOTAL HIP ARTHROPLASTY
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Northern General Hospital, Sheffield, United Kingdom

P147  ELISA FOR SRANKL WITH TYRAMIDE ENHANCEMENT
B. Lindner1, G. Hawa*1
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P148  BACTERIAL TWO-HYBRID SYSTEM TO IDENTIFY PARTNERS OF RAB13 IN
OSTEOCLASTS
M. Heikonen*1, Y. Sun1, K. G. Büki1, K. H. Väinänen1
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P149  IL-6 INHIBITS RANKL-INDUCED OSTEOCLASTOGENESIS
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1University of Nantes EA3822 INSERM ERI 7, Medicine Faculty, Nantes, France
P150  CHARACTERIZATION OF OSTEOPROTEGERIN BINDING TO GLYCOSAMINOGLYCANS BY SURFACE PLASMON RESONANCE: ROLE IN THE INTERACTIONS WITH RECEPTOR ACTIVATOR OF NUCLEAR FACTOR KB LIGAND (RANKL) AND RANK
S. Theoleyre1, S. Kwan Tat1, P. Vusio2, F. Blanchard1, J. Gallagher3, S. Ricard-Blum4, Y. Fortun1, M. Padrines1, F. Redini*1, D. Heymann1
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P151  DETECTION OF CATHEPSIN K IN OSTEOCLASTS BY ELISA AND IMMUNOHISTOCHEMISTRY IN COMMON IN VITRO BONE RESORPTION MODELS
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P152  THE EVALUATION OF OSTEOPOROSIS RISK IN PATIENTS WITH THYROID CANCERS
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P153  VASCULAR CALCIFICATION IN PATIENTS ON HEMODIALYSIS
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P154  Abstract withdrawn

P155  EFFECT OF TOPICAL ADMINISTERED CLODRONATE ON THE BONE MINERAL DENSITY AFTER TOTAL HIP ARTHROPLASTY
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P156  A MOUSE MODEL FOR CRANIOMETAPHYSEAL DYSPLASIA DEMONSTRATES OSTEOBLAST DYSREGULATION AS CAUSE OF HYPEROSTOSIS
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P157  TREATMENT OF YOUNG MALE MONKEYS FOR 12 MONTHS WITH A HIGHLY POTENT INHIBITOR OF CATHEPSIN K INHIBITS BONE RESORPTION, AND INCREASES BONE MINERAL DENSITY AND STRENGTH
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P158  SB-462795 (RELACATIB), A CATHEPSIN INHIBITOR, PREVENTS THE LOSS OF BONE MASS AT SEVERAL SITES IN OVARIECTOMIZED CYMOMOLGUS MONKEYS
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P159  FIBROBLAST GROWTH FACTOR 8E INCREASES OSTEOCLASTGENESIS IN VITRO
M. Mattila1, T. Laitala-Leinonen*1, K. Buki1, K. Väänänen1, P. Härkönen1
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P160  REFINEMENTS IN THE USE OF COLUMN CHROMATOGRAPHY TO EXPOSE DIFFERENCES IN RELATIVE BINDING AFFINITIES OF BISPHOSPHONATES TO HYDROXYAPATITE
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P161  REGULATION OF BONE BALANCE - SEQUENTIAL MICRONUTRITION
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P162  ADAMS IN THE FORMATION OF FOREIGN BODY GIANT CELLS AND OSTEOCLASTS
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P163  STATINS INCREASE OSTEOPROTEGERIN PRODUCTION AND APOPTOSIS IN OSTEOBLASTIC CELLS
H. Smith, J. H. H. Williams, M. J. Marshall
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P164  THE UNIQUE CIRCUMNUCLEAR ORGANIZATION OF MICROTUBULES, THE GOLGI COMPLEX, ER-EXIT SITES AND THE RECYCLING MACHINERY IN OSTEOCLASTS
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P165  THE EFFECT OF DISSOCIATIVE GLUCOCORTICOID RECEPTOR LIGAND ON OSTEOCLAST DIFFERENTIATION AND BONE RESORPTION IN VITRO
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P166  RELEASE OF CALCIUM FROM THE INORGANIC PHASE OF BONE HAMPERs OSTEOCLAST SURVIVAL, AND AFFECTS THE COUPLING OF BONE FORMATION TO BONE RESORPTION
R. H. Nielsen, K. Henriksen, M. G. Sorensen, J. Gram, S. Schaller, J. Bollerslev, M. A. Karsdal
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P167  ISOLATION AND COMPARISON OF THE VACUOLAR PROTON PUMP ISOFORM A3-CONTAINING COMPARTMENTS FROM HUMAN OSTEOCLASTS AND MACROPHAGES
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P168  EFFECTS OF CALCITONIN ON THE EXPERIMENTAL OSTEOARTHRITIS DEVELOPMENT IN DOGS. MICROSCOPIC ANALYSIS OF THE TibIAL SUBCONDRLAL BONE
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P169  THE LENGTH OF PERIOD OF ACTIVE DISEASE AS PREDICTOR OF DECREASING BONE MINERAL DENSITY IN PATIENTS WITH INFLAMMATORY BOWEL DISEASES
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P170  SERUM LEVELS OF RANKL DECREASE WITH AGE IN HEALTHY WOMEN AND MEN
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P171  CD44-hyaluronic acid engagement in osteoclast-like cultures
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P172  HIGH BONE REMODELLING ACCORDING TO VALUES OF C-TELOPEPTIDE IN PATIENTS WITH POSTMENOPAUSAL OSTEOPOROSIS
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P173  OSTEOPROTEGERIN AND IBANDRONATE REDUCE TUMOUR BURDEN VIA EFFECTS ON APOPTOSIS AND PROLIFERATION IN A MURINE MODEL OF BREAST CANCER BONE METASTASIS
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P174  EVIDENCE FOR THE INVOLVEMENT OF ERA AND ERB IN PERIOSTEAL APPPOSITION AND UNCOUPLING OF ENDOCORTICAL RESORPTION AND PERIOSTEAL APPPOSITION IN THE ABSENCE OF ERB
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P175  APOPTOSIS AND WNT SIGNALING DURING UNLOADED CONDITIONS IN HUMAN BONE CELLS
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P176  A NOVEL METHOD FOR EFFICIENTLY TRANSFECTING HUMAN OSTEOCLASTS
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P177  ACTIVE CROSSTALK BETWEEN OSTEOBLASTS AND OSTEOCLASTS IS DEPENDING ON DIFFERENTIATION STATUS
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P178  FIBROBLAST-LIKE CELLS IN INTERFACES OF ASEQETICALLY LOOSENEO ENDOPROSTHSES EXPRESS MMP-13
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P179  GLYCITEIN INHIBITS OSTEOCLAST GENERATION IN MURINE BONE MARROW CULTURES
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P180  DIFFERENTIAL ADSORPTION CHARACTERISTICS OF RISEDRONATE DERIVATIVES ON CERAMIC HYDROXYAPATITE REVEALED BY COLUMN CHROMATOGRAPHY
Z. Xia1, M. A. Lawson1, J. T. Triffitt1, F. H. Ebetino2, C. E. McKenna2, M. Marma3, B. Kashimirov2, R. G. G. Russell1
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P181  EPIDERMAL GROWTH FACTOR RECEPTOR SIGNALING IS INVOLVED IN OSTEOCLAST DIFFERENTIATION AND SURVIVAL
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P182  OVERSUPPRESSION OF BONE TURNOVER BLUNTS RESPONSE OF BONE TO ENDOGENOUS PARATHYROID HORMONE
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