

## IV<sup>th</sup> Baltic Bone and Cartilage Conference programme

Day	Time	Session	Chairs	Subm.	Abstract	Presenter	
Thursday, Sept 5	9:00-10:30	Instruction course: Transgenic models in bone disorders	Amling, Ohlsson		I1	Amling	
					I2	Ohlsson	
	10:30-11:00	<i>Coffee break</i>					
	11:00-11:25	Plenary session 1: Metabolism at the bone and cartilage interface	Kontinen, Väänänen		I3	Väänänen	
	11:25-11:35			117	O1	Marks	
	11:35-11:45			127	O2	Livshits	
	11:45-12:10				I4	Kontinen	
	12:10-12:20			135	O3	Alatalo	
	12:20-12:30			225	O4	Church	
	13:00			<i>Lunch</i>			
	14:00-14:25	Plenary session 2: Early detection of osteoarthritis and rheumatoid arthritis	Østergaard, Risteli		I5	Risteli	
	14:25-14:35			162	O5	Jaffre	
	14:35-14:45			118	O6	Saarakkala	
	14:45-15:10				I6	Østergaard	
	15:10-15:20			267	O7	Liess	
	15:20-15:30			119	O8	Nieminen	
	15:30-16:00	<i>Coffee break</i>					
	16:00-17:30	Workshop 1: The OPG/RANK system	Hofbauer, Ljunggren		I7	Ljunggren	
					I8	Hofbauer	
				208	O9	Neumann	
16:00-17:30	Workshop 2: Muscle strength and bone	Felsenberg		I9	Felsenberg		
						255	O10
Friday, Sept 6	9:00-9:25	Plenary session 3: Skeletal and articular biomechanics	Cerwinski, Glüer		I10	Cerwinski	
					120	O11	Niedhart
					142	O12	Damborg
						I11	Glüer
					224	O13	Langton
					299	O14	Timm
					242	O15	Gowin
	10:40-11:10	<i>Coffee break</i>					
	11:10-11:35	Plenary session 4: Update on osteoporosis risk assessment	Johnell, Langdahl		I12	Langdahl	
	11:35-11:45			139	O16	Haara	
	11:45-11:55			132	O17	Saarakkala	
11:55-12:20				I13	Johnell		
12:20-12:30	221			O18	Thorpe		
12:30-12:40	204			O19	Ryg		

Title
Transgenic models in osteoporosis and skeletal aging
The physiological role of liver-derived IGF-I
Bone-cartilage interface: a common interest of bone and cartilage researchers or no man's land
Abnormalities at the chondroosseous junction in an osteoporotic rat mutation suggest a role for septoclasts in longitudinal bone growth
Quantitative genetics of biochemical indices of bone and cartilage metabolism
Cytokines and bone
Acid phosphatase and oxygen radical-generating activities of type 5 tartrate-resistant acid phosphatase are functionally independent
Development and evaluation of a stochastic simulation of cartilage bone osteogenesis
Use of biochemical markers in the early detection of RA and OA
High frequency ultrasonic assessment of the effects of anti-inflammatory drugs on cartilage using zymosan-induced arthritis in rats
Sensitive quantitation of cartilage degeneration using novel ultrasound indentation technique
Use of magnetic resonance techniques in the early detection of RA and OA
Magnetic resonance techniques for the early detection of cartilage degeneration in osteoarthritis
Assessment of superficial articular cartilage degeneration with quantitative magnetic resonance imaging
ODF, RANK and osteoprotegerin, regulation of osteoclastic activity
Role of receptor activator of nuclear factor-kappaB ligand and osteoprotegerin in bone biology
Osteoprotegerin inhibits the loss of periarticular bone mass in the rat antigen-induced arthritis
Muscle strength & bone
Idiopathic juvenile osteoporosis - lean body mass and bone mineral content relationship
Skeletal and articular biomechanics
Short term bioactivity of titanium alloys is enhanced by covalent and adsorptive immobilisation of the RGD binding sequences
Bone remodeling 18 months after total hip arthroplasty (THA) with exeter stem
The relevance of structural integrity for bone strength
Prediction of distal forearm fracture by finite element analysis of DXA images (FEXI)
Fracture discrimination by structural parameters is superior to bone density: an in vitro study
Femoral neck fractures: reasons for the most common location of the fractures
Genetics of osteoporosis
Low metacarpal index predicts hip fracture - a population study
Calcaneal DXA and ultrasound: comparison of DXL calscan, Lunar PIXI and Hologic SAHARA instruments
Assessment of fracture risk
Dynamic, quantitative assessment of the propensity to fall - the Hull stabilometer
What do the danish population and patients know about osteoporosis? A cross-sectional questionnaire study

Day	Time	Session	Chairs	Subm.	Abstract	Presenter
	13:00	<i>Lunch</i>				
	14:00-15:30	Poster session 1	Obrant			
	followed by	<i>Afternoon tea splendor</i>				
Saturday, Sept 7	9:00-10:30	Instruction course: Transgenic models in cartilage disorders	Säämänen, Vuorio		I14	Vuorio
				I15	Säämänen	
	10:30-11:00	<i>Coffee break</i>				
	11:00-12:30	Poster session 2	Obrant			
	13:00	<i>Lunch</i>				
	14:00-14:25	Plenary session 5: New developments for osteoporosis treatment	Eriksen, Seibel		I16	Eriksen
	14:25-14:50				I17	Seibel
	14:50-15:00			189	O20	Felsenberg
	15:00-15:10			207	O21	Scharla
	15:10-15:20			209	O22	Skowronska-Jozwiak
	15:30-16:00	<i>Coffee break</i>				
	16:00-17:30	Workshop 3: Statins and bone	Mosekilde, Reijnmark		I18	Mosekilde
					I19	Reijnmark
				166	O23	Oxlund
				172	O24	Skoglund
	16:00-17:30	Workshop 4: Pediatric bone studies	Lorenc		I20	Lorenc
				271	O25	Barkmann
	239			O26	Povoroznjuk	
20:00	<i>Gala evening, dinner &amp; dance</i>					
Sunday, Sept 8	9:00-9:25	Plenary session 6: Male osteoporosis, bone disorders and metabolism	Holmberg, Topping		I21	Holmberg
	9:25-9:50				I22	Topping
	9:50-10:00				-	-
	10:00-10:10			145	O28	Capeller
	10:10-10:20			241	O29	Moosgaard
	10:20-10:30			243	O30	Raun
	10:30-11:00	<i>Coffee break</i>				
11:00-11:10	Plenary session 6 (cont.): Male osteoporosis, bone disorders and metabolism	Holmberg, Topping	155	O31	Hentunen	
11:10-11:20			159	O32	Ivaska	
11:20-11:30			131	O33	Morko	
11:30-11:40			160	O34	Kiviranta	
11:40-11:50			133	O35	Alatalo	
11:50-12:00			138	O36	Gerdhem	
12:00	<i>Conference adjourn</i>					

<b>Title</b>
See pages 8–9.
Designing transgenic mouse models for cartilage disorders
Transgenic Del1 mice as model of cartilage disorders with special emphasis to knee osteoarthritis
See pages 9–10.
New treatment developments: SERMS and PTH
New treatment developments (II)
Mechanisms that contribute to risedronate's rapid anti-fracture efficacy
Risedronate provides sustained vertebral and nonvertebral fracture benefits over 5 years
Alendronate prevents bone loss in men with primary osteoporosis
Statins and bone: evidence of bone anabolic and antiresorptive in-vitro effects of statins
Statins and bone: evidence from clinical studies
Cortical bone formation and strength are increased in OVX rats given simvastatin twice daily
Simvastatin improves fracture healing in mice
Densitometry in children
Quantitative ultrasound for the assessment of juvenile bone
Structural-functional state of bone tissue in ukrainian children and adolescents for results of ultrasound densitometry
Male osteoporosis
Male osteoporosis
–
Active tartrate resistant acid phosphatase (TRAP) 5b as serum marker of bone metastasis in human breast cancer
P-25-hydroxyvitamin D in danish patients wiht primary hyperparathyroidism: effect on clinical presentation
Relations between vitamin D and calcium/creatinine clearence ratio in patients with familial hypocalciuric hypercalcemia (FHH) and primary hyperparathyroidism (PHPT)
Induction of high numbers of resorbing osteoclasts from human peripheral blood mononuclear cells
Analysis of osteocalcin released during osteoclastic bone resorption in vitro
Overexpression of cathepsin K in transgenic mice results in decreased amount of the metaphyseal trabecular bone and in increased amount of the diaphyseal cortical bone
Increased bone mineral density, altered cross-sectional morphology and decreased bone resorption in cathepsin K deficient mice
Comparison of serum tartrate-resistant acid phosphatase 5b with other markers of bone turnover in monitoring alendronate therapy
Seasonal variation in bone mass in postmenopausal women

## Posters

### Session 1, Friday, September 6

#### Arthritis and cartilage metabolism (P01–11)

Poster No.	Subm. No.	Name	Title
P01	141	Fahlgren	Morphological adaptation of the subchondral bone plate in a rabbit knee joint with post-traumatic osteoarthritis
P02	113	Sosin	Posttraumatic arthrosis of the wrist as a complication after distal radius fracture
P03	143	Pfander	Inverse regulation of matrix molecules tenascin and aggrecan by Interleukin-1beta. A possible explanation for changes in synthesis pattern of OA chondrocytes
P04	144	Pfander	Expression of Thrombospondin-1 and its receptor CD 36 in human articular cartilage
P05	194	Gloger	Detection of eNOS in differentiated human chondrocytes
P06	116	Kreutzer	Murine collagen induced arthritis: the pathogenetic influence of Fas, FasL and perforin
P07	126	Salminen	Up-regulation of chondroaderin at the onset of articular cartilage degeneration in mouse model for osteoarthritis
P08	174	Jaffre	Modifications of subchondral bone related to skeletal maturation: a 400 MHz quantitative ultrasound study in rat patella
P09	177	Marjoniemi	Aminoterminal propeptide of type I alfa 1-homotrimer (hot PINP)
P10	178	Saied	Influence of cartilage biochemical components on 50 MHz ultrasound backscatter: a quantitative study in rat patella
P11	230	Povoroznyuk	Differential approach to the therapy of osteoarthritis of the knee joint of the elderly patients

#### Metastatic bone disease (P12–14)

P12	129	Seibel	Markers of bone turnover do not predict bone metastases in breast cancer
P13	199	Neudert	A new histological score for the evaluation of osteolytic tumour burden in nude rats
P14	245	Tuomela	Biomodels for bone metastases of hormone dependent cancer

#### Biomechanics and tissue engineering (P15–25)

P15	112	Sosin	Gait abnormalities after total knee arthroplasty. Non-invasive three-dimensional kinematic analysis
P16	161	Kurata	Characterization of functional responses to fluid shear stress in osteocyte-like cells
P17	218	Ong	Validation of the remodelling parameters used for the simulation of cancellous bone resorption
P18	219	Dobson	The effect of strain adaptation on the anabolic remodelling of depleted cancellous bone structures
P19	220	Dobson	Use of stereolithography models as a validation tool for FEA of cancellous bone structure
P20	222	Langton	Dependence of FEXI (finite element analysis of X-ray images) derived stiffness upon resolution
P21	223	Sisias	Histomorphometry analysis – a novel application to simulation of strain-adaptation in cancellous bone
P22	202	Bock	Physical activity and exercise in adolescent girls influence parameters of quantitative ultrasonometry in weight bearing (tibia) but not in non-weight bearing bones (radius)
P23	121	Niedhart	Hydroxylation of inert oxide ceramics enhances in vitro bioactivity
P24	122	Itala	Molecular biologic comparison of new bone formation and resorption on microrough and smooth bioactive glass microspheres
P25	130	Litvinov	Restoring the bone and cartilaginous tissue with the use of the material "LiAr"

**Bone structure (P26–30)**

P26	136	Wachter	Estimation of microstructural parameters of femoral cortical bone with microcomputed tomography
P27	137	Wachter	Prediction of strength of cortical bone in vitro by microcomputed tomography
P28	140	Andresen	Cortical structure and bone volume as a non-invasive predictor for vertebral fracture risk
P29	246	Giehl	Determination of metric accuracy and uncertainty of micro-CT scans
P30	249	Saparin	Comparison of bone composition at six different skeletal locations by measures of complexity and bone mineral density

**Session 2, Saturday, September 7****Bone: Metabolism and animal models (P31–43)**

Poster No.	Subm. No.	Name	Title
P31	134	Muhonen	Tartrate-resistant acid phosphatase functions as a protein tyrosine phosphatase in mouse lung tissue
P32	156	Peng	Short term neonatal treatment of male rats with diethylstilbestrol induces bone changes in adults
P33	157	Rybczynska	Two independent mechanisms of parathyroid hypotensive effect
P34	163	Puzio	The effects of 1,25 (OH) 2D3 supplementation to the diet without vitamin D3 on mechanical and geometrical parameters of developing skeletal system of chickens
P35	165	Puukka	Mature, fluorescent cross-links in ICTP antigens isolated from human bone, skin and leiomyoma
P36	192	Kowalik	The influence of alpha-ketoglutarate on growth, development and mineralization of the skeletal system during the postnatal life in the pig
P37	193	Sawa-Wojtanowicz	Effect of alpha-ketoglutarate (AKG) and 1-alanyl-1-glutamine (AlaGln) on the development of the skeletal system in the postnatal life in the pig investigated on the model of ribs
P38	195	Tatara	The effects of alpha-ketoglutarate (AKG) on bones mineralization, geometrical and mechanical properties after fracture of ulna bone and denervation of the forearm in turkeys
P39	196	Radzki	The effect of alfa-ketoglutarate (AKG) on mineralization of femur in ovariectomized rats
P40	197	Bienko	The influence of alfa-ketoglutarate (AKG) on mineralization of femur in rats with established osteopenia
P41	211	Rosenbrock	Changes in bone metabolism during the menopausal transition
P42	212	Lind	Estrogen supplementation modulates effects of PCB exposure on trabecular bone in female rats
P43	232	Povoroznyuk	Experimental modelling of osteoporosis related to bilateral oophorectomy in female rats

**Osteoporosis: Diagnosis and risk assessment (P44–59)**

P44	115	Bac	Influence of hot paraffin plaster on bone mineral quantity parameters in healthy population
P45	128	Seibel	Long-term variability of bone turnover markers in patients with non-metastatic malignancies
P46	146	Katra	Bone mass changes in the diabetic food syndrome
P47	158	Krasauskiene	Bone mineral density changes in women without bone metabolic diseases
P48	167	Tamm	What is an appropriate age of the reference group in your area?
P49	175	Fotopoulos	Difference in fracture incidence among attendees and non-attendees in a population based study of aged women
P50	198	Krela-Kazmierczak	Inflammatory bowel diseases and osteoporosis

P51	240	Povoroznjuk	Anthropometric indices and osteoporotic fractures in postmenopausal women
P52	252	Nissen	Geometry of the hip in patients with Turner Syndrome in relation to healthy controls
P53	256	Ksiezopolska-Orlowska	Lumbar spine and proximal femur bone mineral density measurements, in patients with low back pain
P54	258	Kruk	Relationships between polymorphism of the VDR, COLIA1, and ER genes, and bone mineral density in warsaw population
P55	259	Jaworski	Crosscalibration of Achilles apparatuses – in vitro and in vivo study
P56	260	Jaworski	Ultrasound bone measurements in adult polish population – the EPOLOS study
P57	261	Jaworski	Bone mineral density measurements in adult polish population – the EPOLOS study
P58	262	Nowacka	Ultrasound bone measurements in children with chronic asthma treated with inhaled steroids – follow-up study
P59	263	Barkmann	Simulation of ultrasound propagation: a tool for the assessment of association between quantitative ultrasound and bone structure

### Osteoporosis: Treatment (P60–65)

P60	173	Wulff	Compliance with bisphosphonate treatment in post-menopausal osteoporosis – a cross-sectional questionnaire study
P61	201	Schober	Compliance and adherence are related to the effectiveness of bisphosphonate treatment
P62	210	Seibel	Risedronate reduces vertebral fracture risk independent of pre-treatment bone turnover
P63	213	Teesalu	Potential health benefits of phytoestrogens in the case of postmenopausal osteoporosis
P64	229	Povoroznjuk	Tibolon in treatment of osteoporosis related to bilateral oophorectomy (experimental research)
P65	268	Bazarra	Hormone replacement therapy and risedronate in postmenopausal women with bone mass loss