



PARACELSUS
MEDIZINISCHE PRIVATUNIVERSITÄT



Annual Report 2009

Institute of Anatomy and Muskuloskeletal Research
Director: Univ. Prof. Dr. Felix Eckstein

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PREAMBLE

Dear friends and colleagues,

It has been another very exciting year for us at Paracelsus Medical University and our group has expanded rapidly. In July, Dr. Falk Schrödl joined us as Associate Professor in order to deepen his research association with the Department of Ophthalmology of the University Hospital, and to establish a new system of advanced medical education at our department. Wolfgang Wirth, who has been working with us as a freelancer for more than 5 years now, joined the group as a post-doc, and his activities in improving and software platform for quantitative analysis of musculoskeletal tissues are now supported by Torben Dannhauer, who joined us as Ph.D. student (Dr. scient. med.). Their daily presence in the institute has tremendously helped in intensifying the development and application of new software to exciting research questions in our area.



Together, we were able to publish 25 original papers, 7 review articles and one book chapter in 2009 with a cumulative impact factor of 114 (based on the currently available 2008 impact factors). This is the highest impact we have achieved since the existence of the institute. Further, we received awards from the Osteoarthritis Research Society International for two papers, which are among the top 10 cited publications in the Osteoarthritis and Cartilage journal between 2006 and 2009. Additionally, Sebastian Cotofana received an OARSI Young Investigator Award.

In addition to a previous grant from the Osteoarthritis Initiative coordinating center, we received a large subcontract for quantitative analysis of a large sample of OAI index knees between 2009 and 2010. The OAI is a large epidemiologic and biomarker validation and qualification study performed with the support of the national institute of health and four major industry partners in the United States. This initiative has thus determined our group as the prime image analysis center for quantitative cartilage analysis from this study, and the quantitative data provided by our group will be made public on the OAI webpage for general use by investigators worldwide.

Our pregraduate training courses of Anatomy have been further improved, introducing a new electronic voting system (Digivote) which allows us to receive immediate feedback on the actual learning progress of our students, also allowing us to monitor the quality of their theoretical preparations for the course of topographical anatomy. The new system has been well appreciated by our students as it stimulates the continuous learning process.

Again, we had a very successful year of postgraduate training courses with more than 160 days of surgical courses with our established and some novel clients.

Another major event co-organized by our institution was the "Lange Nacht der Forschung" on November 7th, 2009 under the supervision of Sebastian Cotofana and Falk Schrödl. Together with a group of dedicated 2nd year students they constructed an overdimensional brain, displaying the major cortical areas and presented an amazing display of self-constructed models and self-designed posters, documenting the fascinating world of the sensory organs.

Furthermore, we held a strategy meeting with our staff and freelancers on September 31st, 2009 at PMU and organized the 6th PMU Ski- and Snowboard Race on January 9th, 2010, concluding an exciting year of learning with our second year students.

We would like to thank everyone who has supported us in the past year and we hope to keep up the pace for the future.



Univ. Prof. Dr. Felix Eckstein

A) STAFF



Univ. Prof. Dr. med. Felix Eckstein
Director of the Institute
(since March 1st, 2004)



Helga Leidinger
Assistant to the Director
(since November 1st, 2007)



Heidi Cais, M.A.
Assistant Student Affairs
(since July 1st, 2004)



Dr. med. Martin Hudelmaier
Assistant Professor
(since March 1st, 2004)



Dr. med. Haymo Kurz
Associate Professor & Head of "Tissue Dynamics Lab"
(since March 1st, 2007)



Dr. med. Sebastian Cotofana
Professor Postdoc
(since June 1st, 2008)



Dr. med. Falk Schrödl
Associate Professor
(since July 1st, 2009)



Marion Wiener
Dissector and Technical Assistant
(since December 1st, 2008)

I TEAM



Sandra Höfner
Surgical Course Administrative
(since January 1st, 2007)



Janis Hacek
Surgical Course Administrative
(since January 1st, 2008)



Dipl.-Inf. Univ. Wolfgang Wirth
Post doc
(since September 15th, 2009)



Dipl.-Ing. Torben Dannhauer
PhD (Dr. scient. med.) Student
(since September 15th, 2009)

B) GUEST SCIENTISTS



Dr. med. Richard Frobell
(since December 1st, 2008)
Swedish Research Council, Sweden

C) FREELANCING STAFF QUANTITATIVE ANALYSIS OF CARTILAGE FROM MRI DATA

Dr. Susanne Maschek
Dr. Barbara Wehr
Gudrun Goldman
Linda Jakobi
Sabine Mühsimer
Annette Thebis
Jana Mattis

A) AWARDS

TEACHER OF THE YEAR AWARD CLASS 2008– DR. MED. SEBASTIAN COTOFANA JULY 2nd, 2009

The final ceremony of the academic year for our students was celebrated on July 2nd, 2009. Dr. Sebastian Cotofana received the “Teacher of the Year” award (1st year students) together with Univ. Doz. Dr. Martin Jakab from the Department of Physiology and Pathophysiology (2nd year students) and was honored by Prof. Dr. Klaus Albegger.



OARSI YOUNG INVESTIGATOR TRAVEL AWARD - DR. MED. SEBASTIAN COTOFANA OCTOBER 6th, 2009

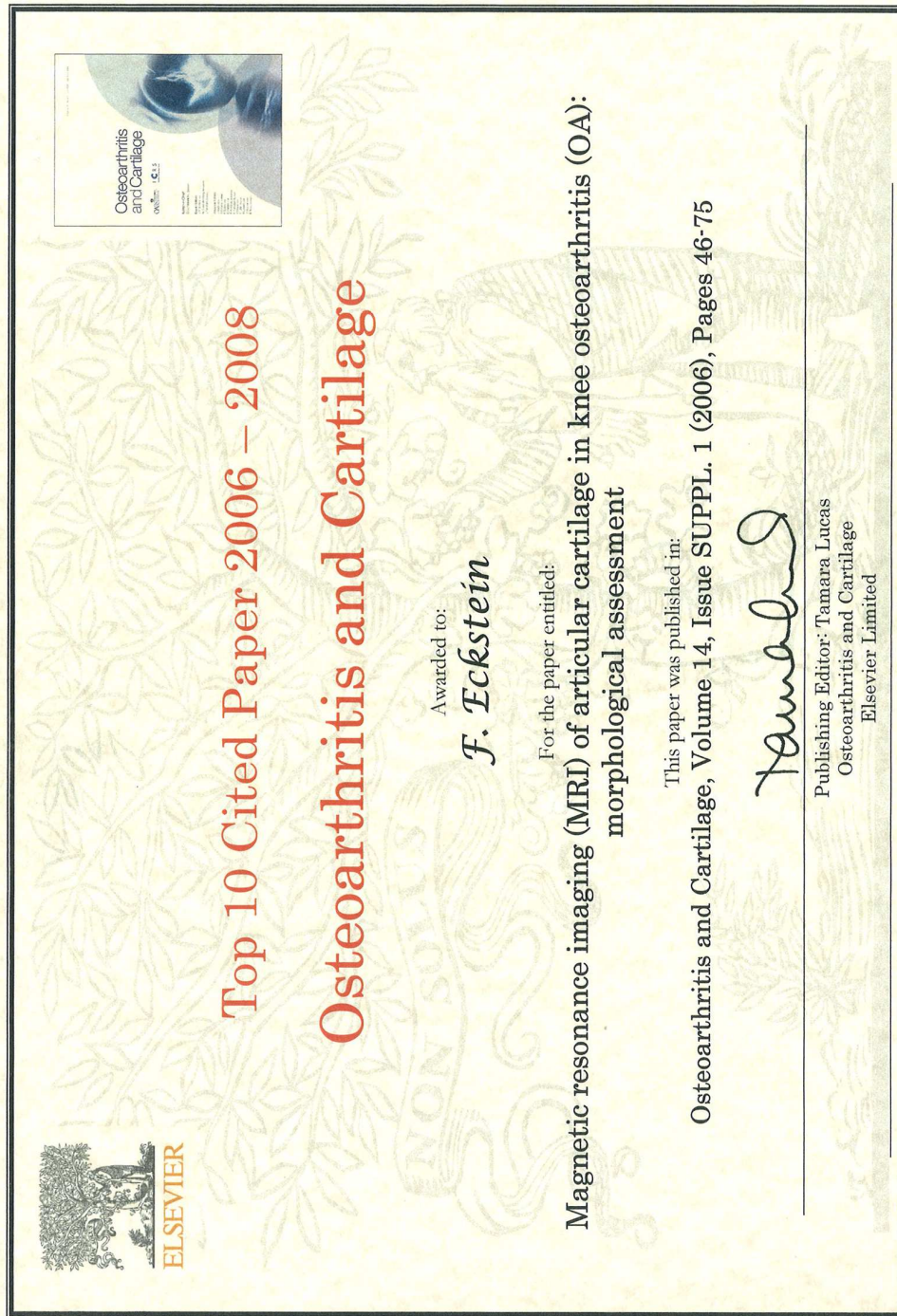
At the recent “World Congress of Osteoarthritis” in Montreal, Canada, the team of the Institute of Anatomy and Musculoskeletal Research presented 6 research papers and co-authored 3 other papers from Leena Sharma’s group at Northwestern University in Chicago, IL.

Sebastian Cotofana, who joined the team only last year, received one of the “Young Investigator Travel Awards” for his presentation titled „Relationship of Weight-Bearing and Non-Weight-Bearing Pain in Knee OA With (Central) Femorotibial Denuded Areas - Data From the OA Initiative“. The paper investigates the relationship between areas in the knee joint denuded of articular cartilage and the pain experienced during weight-bearing and non-weight-bearing activities in more than 500 participants in the Osteoarthritis Initiative study.



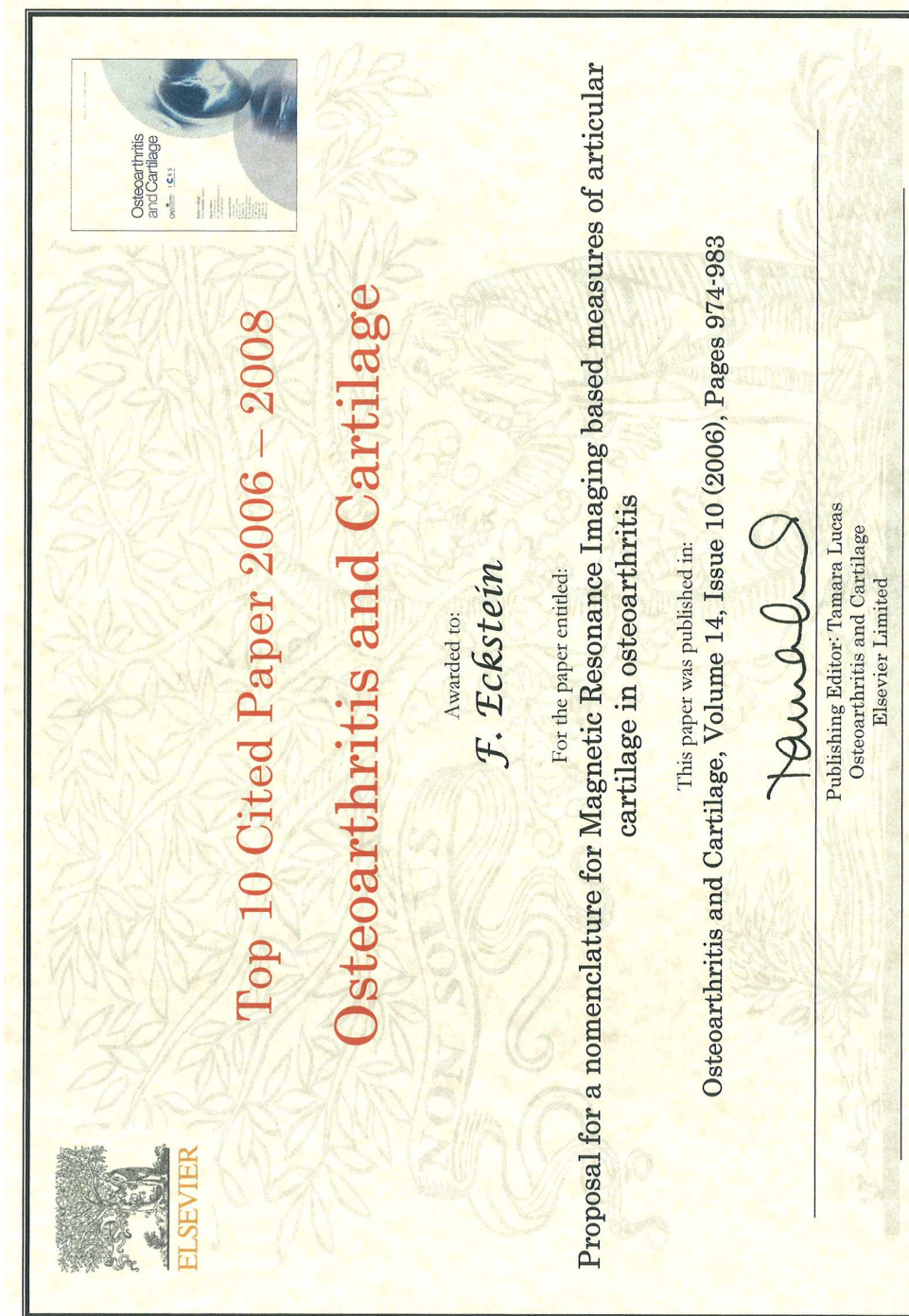
AWARD FOR TOP 10 CITED PAPER 2006-2008

Eckstein F, Cicuttini F, Raynauld J-P, Waterton J C, Peterfy C.
"Magnetic Resonance Imaging (MRI) of articular cartilage in knee osteoarthritis (OA): morphological assessment" in Osteoarthritis and Cartilage 2006



AWARD FOR TOP 10 CITED PAPER 2006-2008

Eckstein F, Ateshian G, Burgkart R, Burstein D, Cicuttini F, Dardzinski B, Gray M, Link TM, Majumdar S, Mosher T, Peterfy C, Totterman S, Waterton J, Winalski C, Felson D.
„Proposal for a nomenclature for Magnetic Resonance Imaging based measures of articular cartilage in osteoarthritis“ in Osteoarthritis and Cartilage 2006



B) PUBLICATIONS (IMPACT FACTOR 2008)

Original articles in 2009

- Moisis K, Eckstein F, Chmiel JS, Guermazi A, Prasad P, Almagor O, Song J, Dunlop D, Hudelmaier M, Kothari A, Sharma L.
Denuded subchondral bone and knee pain in persons with knee osteoarthritis.
Arthritis and Rheumatism 60(12): 3703-10 (2009)
Impact Factor = 6,8

- Szczerba D, Kurz H, Szekely G.
A computational model of intussusceptive microvascular growth and remodeling.
Journal of Theoretical Biology 261(4):570-83 (2009)
Impact Factor = 2,5

- Mueller TL, van Lenthe GH, Stauber M, Gratzke C, Eckstein F, Müller R.
Regional, age and gender differences in architectural measures of bone quality and their correlation to bone mechanical competence in the human radius of an elderly population.
Bone 45(5):882-91 (2009)
Impact Factor 2008 = 4,1

- Beck M, Schlabrakowski A, Schroedl F, Neuhuber W, Brehmer A.
ChAT and NOS in human myenteric neurons: co-existence and co-absence.
Cell and tissue research 338: 37-51 (2009)
Impact Factor 2008 = 2,7

- Messier SP, Legault C, Mihalko S, Miller GD, Loeser RF, DeVita P, Lyles M, Eckstein F, Hunter DJ, Williamson JD, Nicklas BJ.
The intensive diet and exercise for arthritis (IDEA) trial: design and rationale.
BMC Musculoskeletal Disorders 10:93 (2009)
Impact Factor 2008 = 2,0

- Klein S, Zolk O, Fromm MF, Schroedl F, Neuhuber W, Kryschi C.
Functionalized silicon quantum dots tailored for targeted siRNA delivery.
Biochemical and biophysical research communities 387 (1):164-8 (2009)
Impact Factor 2008 = 2,6

- Thevenot J., Pulkkinen P., Koivumäki J., Kuhn V., Eckstein F., Jämsä T.
Discrimination of cervical and trochanteric hip fractures using radiography-based two-dimensional finite element models.
The Open Bone Journal 1:16-22 (2009)

- Eckstein F, Benichou O, Wirth W, Nelson DR, Maschek S, Hudelmaier M, Kwok CK, Guermazi A, Hunter D. Magnetic resonance imaging-based cartilage loss in painful contralateral knees with and without radiographic joint space narrowing: data from the osteoarthritis initiative.
Arthritis and Rheumatism 61(9): 1218-25 (2009)
Impact Factor 2008 = 6,8

II RESEARCH

- Winnik S, Klinkert M, Kurz H, Zoeller C, Heinke J, Wu Y, Bode C, Patterson C, Moser M.
HoxB5 induces endothelial sprouting in vitro and modifies intussusceptive angiogenesis in vivo involving Angiopoietin-2.
Cardiovascular Research 83(3):558-65 (2009)
Impact Factor 2008 = 5,9

- Hunter DJ, Buck R, Vignon E, Eckstein F, Brandt K, Mazzuca SA, Wyman BT, Otterness I, Hellio Le Graverand MP. Relation of regional articular cartilage morphometry and meniscal position by MRI joint space width in knee radiographs.
Osteoarthritis and Cartilage 17(9):1170-6 (2009)
Impact Factor 2008 = 4,1

- Lee T, Choi JB, Schafer BW, Segars WP, Eckstein F, Kuhn V, Beck TJ.
Assessing the susceptibility to local buckling at the femoral neck cortex to age-related bone loss.
Annals of Biomedical Engineering 37(9):1910-20 (2009)
Impact Factor 2008 = 2,6

- Eckstein F, Wirth W, Hudelmaier M, Maschek S, Hitzl W, Wyman BT, Nevitt M, Hellio Le Graverand MP, Hunter D; the OA Initiative Investigator Group.
Relationship of compartment-specific structural knee status at baseline with change in cartilage morphology: a prospective observational study using data from the osteoarthritis initiative.
Arthritis Research and Therapy 11(3):R90 (2009)
Impact Factor 2008 = 4,5

- Buck RJ, Wyman BT, Le Graverand MP, Hudelmaier M, Wirth W, Eckstein F; A9001140 Investigators.
Does the use of ordered values of subregional change in cartilage thickness improve the detection of disease progression in longitudinal studies of osteoarthritis?
Arthritis and Rheumatism 61(7):917-924 (2009)
Impact Factor 2008 = 6,8

- Hellio Le Graverand MP, Buck RJ, Wyman BT, Vignon E, Mazzuca SA, Brandt KD, Piperno M, Charles HC, Hudelmaier M, Hunter DJ, Jackson C, Kraus VB, Link TM, Majumdar S, Prasad PV; Schnitzer TJ, Vaz A, Wirth W, Eckstein F.
Subregional femorotibial cartilage morphology in women – comparison between healthy controls and participants with different grades of radiographic knee osteoarthritis.
Osteoarthritis and Cartilage 17(9):1177-85 (2009)
Impact Factor 2008 = 4,1

- Heindl LM, Hofmann TN, Knorr HL, Rummelt C, Schroedl F, Schloetzer-Schrenhardt U, Holbach LM, Naumann GO, Kruse FE, Cursiefen C.
Intraocular lymphangiogenesis in malignant melanomas of the ciliary body with extraocular extension.
Investigative ophthalmology and visual science (50(5):1988-95 (2009)
Impact Factor 2008 = 3,6

- Andreisek G, White LM, Sussman MS, Kunz M, Hurtig M, Weller I, Essue J, Marks P, Eckstein F.
Quantitative MR imaging evaluation of the cartilage thickness and subchondral bone area in patients with ACL-reconstructions 7 years after surgery.
Osteoarthritis and Cartilage 17(7):871-8 (2009)
Impact Factor 2008 = 4,1

II RESEARCH

- Eckstein F, Maschek S, Wirth W, Hudelmaier M, Hitzl W, Wyman B, Nevitt M, Hellio Le Graverand MP.
One year change of knee cartilage morphology in the first release of participants from the Osteoarthritis Initiative progression subcohort - association with sex, body mass index, symptoms, and radiographic OA status.
Annals of Rheumatic Diseases 68 (5):674-9 (2009)
Impact Factor 2008 = 7,2

- Eckstein F, Wyman BT, Buck RJ, Wirth W, Maschek S, Hudelmaier M, Hellio Le Graverand MP; 9001140 Study Group.
Longitudinal quantitative MR imaging of cartilage morphology in the presence of gadopentetate dimeglumine (Gd-DTPA).
Magnetic Resonance in Medicine 61(4):975-80 (2009)
Impact Factor 2008 = 3,4

- Eckstein F, Hudelmaier M, Cahue S, Marshall M, Sharma L.
Medial-to-Lateral Ratio of Tibiofemoral Subchondral Bone Area is Adapted to Alignment and Mechanical Load.
Calcified Tissue International 84(3): 186-94 (2009)
Impact Factor 2008 = 2,7

- Carballido-Gamio J, Krug R, Huber MB, Hyun B, Eckstein F, Majumdar S, Link TM.
Geodesic topological analysis of trabecular bone microarchitecture from high-spatial resolution magnetic resonance images.
Magnetic Resonance in Medicine 61(2):448-56 (2009)
Impact Factor 2008 = 3,4

- Bauer JS, Monetti R, Krug R, Matsuura M, Mueller D, Eckstein F, Rummeny EJ, Lochmueller EM, Raeth CW, Link TM.
Advances of 3T MR imaging in visualizing trabecular bone structure of the calcaneus are partially SNR-independent: analysis using simulated noise in relation to micro-CT, 1.5T MRI, and biomechanical strength.
Journal of Magnetic Resonance Imaging 29(1):132-40 (2009)
Impact Factor 2008 = 2,7

- Schagemann JC, Erggelet C, Chung HW, Lahm A, Kurz H, Mrosek EH: Cell-laden and cell-free biopolymer hydrogel for the treatment of osteochondral defects in a sheep model.
Tissue Engineering Part A 15: 75-82 (2009)
Impact Factor 2008 = 4,7

- Mueller TL, Stauber M, Kohler T, Eckstein F, Müller R, van Lenthe GH.
Non-invasive bone competence analysis by high-resolution pQCT: An in vitro reproducibility study on structural and mechanical properties at the human radius.
Bone 44(2): 364-71 (2009)
Impact Factor 2008 = 4,1

II RESEARCH

- Wirth W, Hellio Le Graverand MP, Wyman BT, Maschek S, Hudelmaier M, Hitzl W, Nevitt M, Eckstein F, the OAI Investigator Group.
Regional analysis of femorotibial cartilage loss in a subsample from the Osteoarthritis Initiative progression subcohort.
Osteoarthritis and Cartilage 17(3): 291-7 (2009)
Impact Factor 2008 = 4,1
- Lindig TM, Kumar V, Kikinis R, Pieper S, Schroedl F, Neuhuber WL, Brehmer A.
Spiny versus stubby: 3D reconstruction of human myenteric (type I) neurons.
Histochemistry and Cell Biology 131(1):1-12 (2009)
Impact Factor 2008 = 2,3

Review articles in 2009

- Roemer FW, Eckstein F, Guermazi A.
Magnetic resonance imaging-based semiquantitative and quantitative assessment in osteoarthritis.
Rheumatic Diseases Clinics of North America 35(3):521-55 (2009)
Impact Factor = 1,8
- Trattnig S, Domayer S, Welsch GW, Mosher T, Eckstein F.
MR imaging of cartilage and its repair in the knee – a review.
European Radiology 19(7):1582-94 (2009)
Impact Factor 2008 = 3,7
- Eckstein F, Guermazi A, Roemer FW.
Quantitative MR imaging of cartilage and trabecular bone in osteoarthritis
Radiologic Clinics of North America 47(4): 655-73 (2009)
Impact Factor 2008 = 2,3
- Hunter DJ, Le Graverand MP, Eckstein F.
Radiologic markers of osteoarthritis progression
Current Opinion in Rheumatology 21(2):110-7 (2009)
Impact Factor 2008 = 4,7
- Hunter DJ, Eckstein F.
Exercise and osteoarthritis
Journal of Anatomy 214(2):197-207 (2009);
Impact Factor 2008 = 2,1
- Guermazi A, Eckstein F, Hellio Le Graverand-Gastineau MP, Conaghan PG, Burstein D, Keen H, Roemer FW. Osteoarthritis: current role of imaging
The Medical Clinics of North America 93(1):101-26 (2009)
Impact Factor 2008 = 2,2
- Kurz H.
Cell lineages and early patterns of embryonic CNS vascularization
Cell Adhesion & Migration 3(2):205-10 (2009)

Book chapters in 2009

- Schroedl F: Intrinsic choroidal neurons. In: Neuropeptides in the Eye, Eds: Troger J, Kieselbach G, Bechrakis N. Research Signpost, Kerala (2009) 169-197.

CUMULATIVE IMPACT FACTOR IN 2009 (IF 2008):114

C) INVITED LECTURES

- Image-based assessment of cartilage morphology in osteoarthritis
Workshop Musculoskeletal Imaging, International Society of Magnetic Resonance in Medicine (ISMRM)
San Francisco, USA: February 15th, 2009
- Software- and IT-Security in medical products
6. Linzer Forum Medizintechnik
Linz, Austria: April 22nd, 2009
- Image-Based Assessment of Cartilage Morphology in Osteoarthritis
Novartis
Basel, Switzerland: March 17th, 2009
- What have we learnt from recent large OA studies about structural progression? MRI / Cartilage
3rd International Workshop on Osteoarthritis Imaging
York, England: May 13th – 16th, 2009
- Quantitative Imaging of Articular Cartilage using MRI
XIth International Society of Bone and Mineral (ISBM) Congress
Zell am See, Austria: May 29th, 2009
- Quantitative Cartilage Imaging using MRI
Genzyme Inc.
Boston, USA: July 29th, 2009
- Quantitative MRI of Musculoskeletal Tissues as Surrogates of Clinical Outcomes – Cartilage, Meniscus, Muscle
Merck Inc.
Philadelphia, USA: October 20th, 2009
- Quantitative MRI of Articular Cartilage as Surrogate of Clinical Outcome
Centocor Inc.
Radnor, USA: October 21st, 2009
- Quantitative MRI of Musculoskeletal Tissues as Surrogates of Clinical Outcomes – Cartilage, Meniscus, Muscle
Aventis
Frankfurt, Germany: December 1st, 2009

D) EXTERNAL FUNDING

- RISE Project: Forschungsförderungsfond PMU from 8/2009 until 7/2010
Dr. med. Sebastian Cotofana, Paracelsus Medical University, Salzburg, Austria
Subject: Cartilage Thickening in early human osteoarthritis - fact or artifact?
Scope of the contract: 12.370 €
- Osteoarthritis Initiative (OAI) Coordinating Center Vendor Contract from 7/2009 until 12/2010
Prof. Dr. Felix Eckstein, Principal Investigator of the Vendor Contracts with Prof. Dr. Michael Nevitt PhD (Principal Investigator of the project), University of California San Francisco, CA, USA
Subject: Quantitative Cartilage Analysis in a Sample of OAI Index Knees
Scope of the subcontract: 540.000 US\$
- Osteoarthritis Initiative (OAI) Coordinating Center (Subcontract) from 7/2008 until 12/2010 Prof. Dr. Felix Eckstein, Principal Investigator of the Vendor Contracts with Prof. Dr. Michael Nevitt PhD (Principal Investigator of the project) University of California San Francisco, CA, USA
Subject: Quantitative Cartilage Analysis: Cofunding of OAI Consortium Knee Analyses.
Scope of the subcontract: 120.000 US\$
- R01 Grant NIH AR054806 (National Institute of Health) from 4/2008 until 3/2013
Prof. Dr. Felix Eckstein, Principal Investigator of the subcontract with Prof. Dr. Leena Sharma M.D. (Principal Investigator of the project) Northwestern University Chicago, IL, USA
Subject: Relationship of Hip Muscle Group Weakness to Deterioration of the OA Knee by MRI.
Scope of the subcontract: 180.000 US\$
- P60 Grant NIH AR048098 (National Institute of Health) from 8/2007 until 7/2012
Prof. Dr. Felix Eckstein, Principal Investigator of the subcontract, with Prof. Dr. Leena Sharma M.D. (Principal Investigator of the project) and Prof. Dr. Richard Pope (Principal Investigator of the Multidisciplinary Clinical Research Center), Northwestern University Chicago, IL, USA
Subject: Potential Beneficial Role of Hip Muscles in Knee Osteoarthritis.
Scope of the subcontract: 60.000 US\$

E) SUPERVISION OF DISSERTATIONS

Dissertation leading to the degree of Dr. med. at the Ludwig-Maximilian Universität München

Karoline Pöschl (2009):

Ermöglicht die Messung der trabekulären Mikroarchitektur thorakolumbalen Wirbelkörper einer Verbesserung der Vorhersage der mechanischen Kompetenz?

RESEARCH NETWORK „MUSKULOSKELETAL DISEASES, BIOMECHANICS AND SPORTS MEDICINE“

Meetings in 2009

January 21st, 2009

„MRT-Befunde bei Osteoarthritis – Korrelation mit Symptomen und Prädiktion des Verlaufes“
Prof. Frank Roemer, Klinikum Augsburg

February 18th, 2009

Magnetresonanztomographische 2-Jahres-Daten zur randomisierten prospektiven Studie
„Wirksamkeit von operativem Kreuzbandersatz im Vergleich zu konservativer Therapie“
„Treatment And Outcome Of Anterior Cruciate Ligament Injury. Truth Or Consequences.“
Dr. Richard Frobell, Lund University, Sweden; jetzt Institut für Anatomie, PMU

April 1st, 2009

Workshop „optical imaging“, 3-6pm

May 20th, 2009

„Rheumatoide Arthritis 2009 – Moderne Diagnostik und Therapie“
Dr. Andrea Studnicka-Benke, Fachärztin für innere Medizin und Rheumatologie an der Universitätsklinik
Salzburg für Innere Medizin III

June 17th, 2009

„Stem Cell Biology and Regenerative Medicine: brain meets bone“
Prof. Dr. Ludwig Aigner, Stiftungsprofessur des Landes Salzburgs und Vorstand des Institutes für
Molekulare Regenerative Medizin der PMU

July 22nd, 2009

„Distraction als neue Behandlungsmethode bei Osteoarthritis im Spätstadium“
Prof. Floris Lafeber und Anne Karien Marijnissen, University Medical Center Utrecht, Rheumatology &
Clinical Immunology, Niederlande

October 14th, 2009

„Quantitative Analyse von Meniskus und Gelenkknorpel aus der MRT – neue Techniken und Updates
zur Osteoarthritis Initiative“
Dr. Richard Frobell, Lund University, Sweden; jetzt Institut für Anatomie, PMU und Univ.-Prof. Dr. Felix
Eckstein

November 18th, 2009

„D-FE Analyse Sinuslift mit kortikalem Knochenspan“
DDr. Peter Schuller-Götzburg aHCM (MD, DDS), Leiter des Forschungsprogramms Prothetik-,
Biomechanik- und Biomaterialforschung an der Paracelsus Medizinischen Privatuniversität

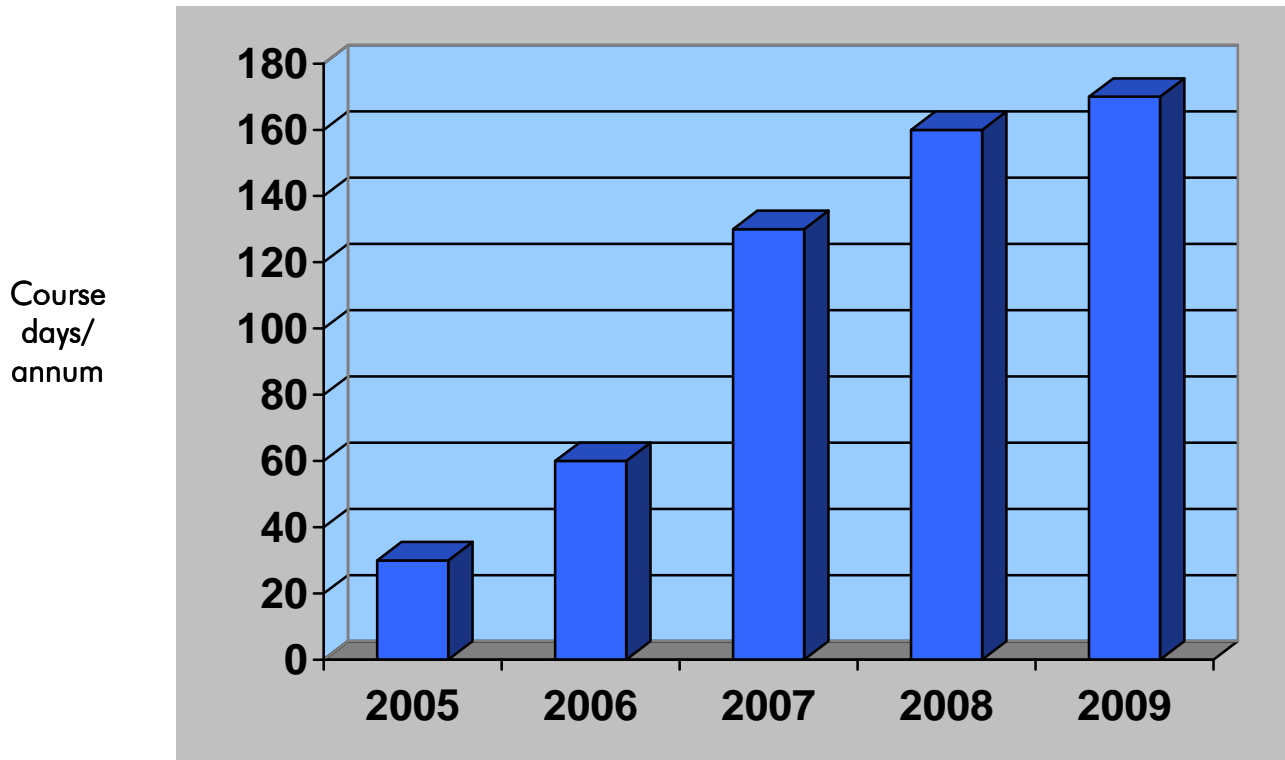
IV TEACHING

Our pregraduate training courses of Anatomy have been further improved, introducing a new electronic voting system (Digivote) which allows us to receive immediate feedback on the actual learning progress of our students and also allows us to monitor the quality of their preparations and their theoretical preparations for the course of topographical anatomy. The new system has been well appreciated by our students as it stimulates the continuous learning process.



V POSTGRADUATE TRAINING

We had a very successful year of postgraduate training courses with more than 160 days of surgical courses with our established and novel clients.



OUR PARTNERS

ARTHREX GmbH., Germany, Karlsfeld, Germany
ARTHREX Ges.mbH., Austria, Wiener Neudorf, Austria
ArthroCare, Stockholm, Sweden
Baxter Innovations GmbH, Vienna, Austria
Benvenue Medical, Inc., California, USA
BOTOX AP, Frankfurt, Germany
DePuy Spine International Johnson & Johnson, Amersfoort, Netherlands
DFine Europe GmbH, Mannheim, Germany
Das EFZ, Bergen, Germany
FHS SALZBURG GmbH, Salzburg University of Applied Sciences, Puch bei Hallein, Austria
Interventional Spine Inc., Tewkesbury, Gloucestershire, United Kingdom
Joimax GmbH, Karlsruhe, Germany
Kenes International, Geneva, Switzerland
Medtronic Spinal and Biologics Europe BVBA / Medtronic/Kyphon Europe Zaventem, Belgium
Österreichische Arbeitsgemeinschaft für Osteosynthesefragen (AOÖ), Salzburg, Austria
Orthopaedic Hospital Vienna – Speising GmbH, Vienna, Austria
Salzburger University Clinics, Salzburg, Austria
Department of Internal Medicine I
Department of Orthopaedics
Smith & Nephew Orthopaedics AG, Rotkreuz, Switzerland
St. Jude Medical, Zaventem, Belgium
Synthes GmbH, Oberdorf, Switzerland
TranS1 GmbH, Holzkirchen, Germany
Weill Cornell Medical College, New York, USA

**CO-ORGANISATION „LANGE NACHT DER FORSCHUNG“ IN SALZBURG, NOVEMBER 7th, 2009
WHAT STIMULATES US?**

A major event co-organized by our institution was the “Lange Nacht der Forschung” on November 7th, 2009. Under the supervision of Sebastian Cotofana and Falk Schrödl, our 2nd year students constructed an overdimensional brain, displaying the major cortical areas. They presented an amazing display of self-constructed models and self-designed posters, documenting the fascinating world of the sensory organs, hereby explicitly displaying structure and functioning of our sensory organs.

Our visitors were able to witness interactively how a stimulus from the eye, the ear and the equilibrium organ, or a stimulus received by our sense of touch, taste or smell reach the brain and how that stimulus is further processed there.

GETTING READY FOR THE BIG DAY...



VI EVENTS ORGANIZED BY THE INSTITUTE

ACTUAL PRESENTATION, NOVEMBER 7th, 2009



VI EVENTS ORGANIZED BY THE INSTITUTE



VI EVENTS ORGANIZED BY THE INSTITUTE



Dr. Falk Schroedl, our Rector Dr. Herbert Resch, and Dr. Sebastian Cotofana



Our Dean of Research Dr. Christoph Stuppaeck
Dr. Falk Schroedl, LH Gabi Burgstaller,
Dr. Sebastian Cotofana



LH Gabi Burgstaller, Dr. Sebastian Cotofana



LH Gabi Burgstaller talking to our youngest visitors

VI EVENTS ORGANIZED BY THE INSTITUTE

STRATEGY MEETING STAFF AND FREELANCERS OCTOBER 2nd – 4th, 2009



6. PMU-ANATOMY SKI- AND SNOWBOARDRACE ON JANUARY 9th, 2010

Zum klassischen Termin nach der Weihnachtspause und nach der mündlichen Abschlussprüfung im Fach Anatomie, lud das Institut für Anatomie und muskuloskelettale Forschung wie in den vorhergehenden Jahren am Samstag, den 9.1.2010 zum 7. PMU Anatomie Ski- und Snowboardtag. Im Gegensatz zum vorhergehenden Jahrgang wünschte sich der JG2008 die Wiederaufnahme des historischen PMU Anatomie Skirennens, was aufgrund der schlechten Schneeverhältnisse am Dürrnberg kurzfristig auf den Monte Popolo nach Eben verlegt wurde.

Ab 7:45 ging es im vollbesetzten Reisebus auf der Tauernautobahn Richtung Berge und dann in 2er Sesseln hinauf in das Skigebiet Eben. Dichter Schneefall und Nebel bot eine hervorragende Entschuldigung, sich schon recht bald in die Reitlehenalm der Familie Urban zurückzuziehen und sich eher mental denn physisch auf den Rennstart um 13:30 Uhr vorzubereiten. Auf dem anspruchsvollen, vom Skiclub Eben ausgeflaggten, Riesentorlauf maßen sich dann knapp 50 angemeldete TeilnehmerInnen. Unter den beiden Snowboarderinnen fuhr Julia Cede (JG2008) souverän auf Rang 1, während bei den Männern Markus Lidicky (JG2008) sein Brett mit deutlichem Vorsprung ins Ziel brachte.



Enger ging es bei den Skidamen zu, bei denen Maria Dechant (JG2008) auf Platz 1, Katharina Wöran (JG2008) auf Platz 2 und Theresa Köberl (JG2006), die Siegerin des letzten PMU Skirennens, auf Platz 3 fuhr. Zu den prominenten Teilnehmerinnen zählten Alexandra Wittworth (Frau des neuen Forschungsdekans, Prof. Christoph Stuppäck), sowie Irmgard Nake (Frau unseres Kanzler, Dr. Nake), die souverän auf die Plätze 9 und 10 fuhren.



Bei den Männern machten die Südtiroler Exrennläufer die Angelegenheit unter sich aus, wobei schlussendlich Moritz Messner mit der Bestzeit von 41,96 Sekunden Alexander Haumer in ca. 1 Sekunde Abstand auf Platz 2 verwies. Fritz Wimbauer (JG2006) konnte dann noch einen Stockerlplatz erreichen und die Senioren (Felix Eckstein sowie Florian Lagler [Leiter des Clinical Research Center der PMU]) auf die Plätze 4 und 5 verweisen. Christoph Stuppäck kam auf Platz 15, Michael Nake auf Platz 18 (Platz 1 der Kanzlerwertung!) und ließen damit immer noch eine handvoll deutlich jüngerer Teilnehmer hinter sich.



Mit beim Rennen waren auch viele Nachwuchshoffnungen der PMU die mit ihren Eltern angereist waren, darunter Valentin Lagler, Paul Stuppäck, Florian Eckstein und Franziska Eckstein, von denen wir auch auf folgenden Wettbewerben noch viel hören dürften



Die vom Rennen deutlich geschwächten TeilnehmerInnen trafen sich anschließend zum Apres Ski im Lounge der Reitlehenalm und genossen etwas später das reichhaltige Bauernbuffet in der neben gelegenen Almwirtschaft. Ab 19 Uhr folgte dann die Siegerehrung im Lounge sowie eine lustige und mitunter wilde Party, die aufgrund

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des mitgeführten Skischuhwerkes den TeilnehmerInnen ganz eigenen Tanztechniken abverlangte. Ab 22h fuhren dann alle mit Fackeln zum Parkplatz des Monte Popolo ab, von wo aus der Bus alle sicher an die PMU nach Salzburg zurückbrachte.

Aus unserer Sicht war es eines der gelungensten und lustigsten Skitage in der Geschichte der PMU und wir freuen uns bereits auf den nächsten Jahrgang und hoffentlich viele TeilnehmerInnen auch im kommenden Jahr.

Ergebnisliste:

Rang	Klasse	Name+Vorname	Zeit
1.	Zwergel M (bis 6 J)	ECKSTEIN Florian	1:04.25
2.		LAGLER Valentin	1:07.87
1.	Kinder W (bis 12 J)	ECKSTEIN Franziska	0:47.39
1.	Kinder M (bis 12 J)	STUPPÄCK Paul	1:04.75
1.	Snowboard W	CEDE Julia	1:05.57
2.		HOLM Anna	1:15.80
1.	Snowboard M	LIDICKY Markus	0:53.90
2.		STADLBAUER Marc	1:00.38
3.		JANSSEN Maximilian	1:05.52
4.		HUEMER Florian	1:07.02
5.		SCHULLER Kyrill	1:14.80
1.	Ski W	DECHANT Maria	0:51.22
2.		WÖRAN Katharina	0:51.73
3.		KOEBERL Theresa	0:52.53
4.		EDER Sarah	0:53.96
5.		HÜTTER Lisa	0:55.18
6.		BRUNS Katharina	0:55.39
7.		MÜHLTALER Eva	0:56.53
8.		BOEKSTEGERS Ann-Madleine	0:58.10
9.		WHITWORTH Alexandra	0:58.86
10.		NAKE Irmgard	1:04.47
11.		NIEBLER Ulrike	1:07.25
12.		KAMMERHOFER Doris	1:08.73
13.		FRICK Kristina	1:18.74
14.		BERINGER Paula	1:56.26
1.	Ski M	MESSNER Moritz	0:41.96
2.		HAUMER Alexander	0:42.89
3.		WIMBAUER Fritz	0:44.84
4.		ECKSTEIN Felix	0:45.44
5.		LAGLER Florian	0:45.47
6.		WAGENHOFER Georg	0:47.05
7.		FROBELL Richard	0:48.68
8.		PALME Christoph	0:48.95

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9.	SCHRÖDL Falk	0:50.95
10.	COTOFANA Sebastian	0:51.15
11.	HABRINGER Stefan	0:52.95
12.	SEIER Thomas	0:53.96
13.	KETTERL Clemens	0:54.78
14.	ALBERT Michael	0:56.16
15.	STUPPÄCK Christoph	0:57.12
16.	REICHENBERGER Seppi	0:57.60
17.	MORRE Patrick	0:58.50
18.	NAKE Michael	0:58.85
19.	FROSCHAUER Lukas	0:59.61
20.	BECKER Thomas	1:00.30
21.	DANNHAUER Torben	1:00.53
22.	KURZ Haymo	1:01.86



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