DEAR COLLEAGUES,

We are pleased to welcome you to the 2019 Osteoarthritis Research Society International (OARSI) World Congress in Toronto, Canada.

The annual OARSI Congress is the pre-eminent multidisciplinary global forum for all those interested in cutting edge OA research from academia and industry around the world, including basic and clinical research scientists, rheumatologists, orthopedic surgeons, radiologists, physiatrists, physical therapists and other allied health professionals, methodologists, and policy makers.

Highlights of the 2019 program include inter-disciplinary plenary sessions on Machine Learning, Mechanotransduction Pathways, and the Transition from Acute to Chronic Pain. Dr. Clifford Rosen will deliver the opening night Keynote Lecture on Pathogenic Mechanisms of Obesity-Induced Osteoarthritis: New Clues from Old Joints. OA of joints other than the knee and hip will be highlighted in a Concurrent session on the foot and ankle, as well as a Pre-Congress Workshop on the spine. Another Pre-Congress workshop will highlight prevention of post-traumatic OA in sport and the military. Interact with experts in specific areas of basic and clinical science through ticketed breakfast workshops. Topics include “Joint-on-a-chip” technologies, Patient preferences, Imaging, Gait Analysis, Network Meta-Analysis, and OA Pathogenesis for Beginners. We will also present highlights from the upcoming OARSI Treatment Guidelines. As in previous years, there will be sessions featuring the highest rated young investigator abstracts, the great debate, and the year-in-review, as well as poster tours led by experts in the field. The Young Investigator Committee will again host the popular Mentorship Session.

NEW! New this year, we are adding to our existing Congress awards programs that include travel scholarships, Young Investigator highest rated abstracts, Clinical Science Award, Basic Science Award, and Lifetime Achievement Award. We are launching a new awards program to recognize the highest rated abstracts in 12 broad categories, regardless of stage of career.

By attending this meeting, you will join a global network of individuals from a broad range of disciplines, all working toward a better understanding of OA with the goals of preventing, managing and curing the disease through state-of-the-art research to improve the lives of the >300 million worldwide with OA! We hope you enjoy your experience at the 2019 OARSI World Congress!

JEFFREY KATZ, MD, MS  
OARSI PRESIDENT

TUHINA NEOGI, MD, PHD, FRCPC  
2019 CONGRESS CHAIR

INGRID MEULEN BELT, PHD  
2019 ABSTRACT CHAIR
MEMBERS AT LARGE

Aileen Davis, PhD
Krembil Research Institute
Toronto, Canada

Changhui Ding, MD, PhD
Southern Medical University
Guangzhou, China

Jerome Guicheux, PhD
INSERM UMR 1229-RMES
Regenerative Medicine & Skeleton Lab
Nantes, France

Gun-Il Im, MD, PhD
Dongguk University
Goyang, Korea

Muneaki Ishijima, MD, PhD
Juntendo University
Tokyo, Japan

Rita Kandel, MD
Mt. Sinai Hospital
Toronto, Canada

Margreet G. Kloppenburg, MD, PhD
Leiden University Medical Center
Leiden, Netherlands

Christopher Little, PhD
Kolling Institute
St. Leonards, Australia

Anne-Marie Malfait, MD, PhD
Rush University Medical School
Chicago, Illinois

Eeva Moilanen, MD
University of Tampere Med Center
Tampere, Finland

Tuhina Neogi, MD, PhD, FRCP
Boston University School of Medicine
Boston, Massachusetts

Rachel Miller, PhD
University Hospital Muenster
Muenster, Germany

Joanna Sherwood, PhD
University Hospital of North Staffordshire
Staffordshire, United Kingdom

Peter van der Kraan, PhD
Radboud University Nijmegen, Netherlands

Tonia Vincent, MD, PhD
Kennedy Institute of Rheumatology
Oxford, United Kingdom

Ex-Officio Members

EDITOR-IN-CHIEF, OSTEOARTHRITIS AND CARTILAGE
Joel A. Block, MD
Rush Medical College
Chicago, Illinois

EDITOR-IN-CHIEF, OSTEOARTHRITIS AND CARTILAGE OPEN
Henning Madry, MD, PhD
Universität des Saarlandes
Homburg, Germany

2019 OARSI WORLD CONGRESS PROGRAM PLANNING COMMITTEE

Tuhina Neogi, MD, PhD, FRCP
Boston University School of Medicine
Boston, Massachusetts

Robin Christensen, BSc, MSc, PhD
Denmark

Cosimo DeBarì, MD, PhD, FRCP, MRC
United Kingdom

Carolyn Emery, PhD, MSc, BCsPT
Canada

Morgan Jones, MD
United States of America

Jin Hong Kim, PhD
Korea

Deepak Kumar, PT, PhD, OCS
United States of America

Thomas Link, MD, PhD
United States of America

Rachel Miller, PhD
United States of America

Ali Mobasheri, BSc ARCS (Hons), MSc, DPhil (Oxon)
United Kingdom

Regis O’Keefe, MD, PhD
United States of America

Simo Saarkkala, PhD
Finland

Martin van der Esch, PhD
Netherlands

Frank Zaucke, PhD
Germany

EXECUTIVE DIRECTOR
Diann Stern, MS, CAE
dstern@oarsi.org

DIRECTOR OF MEETINGS AND EXHIBITS
Anthony Celenza, CMP
acelenza@oarsi.org

MEETING COORDINATOR
Janine Salabritas
jsalabritas@oarsi.org

MEMBERSHIP COORDINATOR
Priscilla Lugo
plugo@oarsi.org

INDUSTRY RELATIONS MANAGER
Dana Groves
dgroves@oarsi.org

OARSI HEADQUARTERS
1120 ROUTE 73, SUITE 200
MT. LAUREL, NJ 08054
PHONE: 856-439-0500
FAX: 856-439-0525
info@oarsi.org

OARSI 2019 FINAL PROGRAM • WWW.OARSI.ORG
GENERAL INFORMATION

All events will take place at the Sheraton Toronto City Centre, in Toronto, Canada from May 2–5th, 2019.

REGISTRATION HOURS
The registration desk will be open during the following hours:

Hours are subject to change

› Thursday, May 2nd .................... 7:00 AM – 7:00 PM
› Friday, May 3rd ..................... 7:00 AM – 6:00 PM
› Saturday, May 4th ................... 7:00 AM – 6:00 PM
› Sunday, May 5th ..................... 7:00 AM – 12:00 PM

TICKETED EVENTS

BREAKFAST WORKSHOPS
Two concurrent breakfast workshops will take place Friday, Saturday and Sunday morning. These workshops are ticketed events and there is an additional registration fee to attend these workshops, and space is limited. Please see the registration desk for more information and availability.

BREAKFAST POSTER TOURS
Four concurrent breakfast poster tours will take place Friday and Saturday morning. These tours are ticketed events and there is an additional fee to attend the tour. Each tour only accommodates 20 people. Please see the registration desk for more information and availability.

CME ACCREDITATION

Accreditation Statement
This activity has been planned and implemented in accordance with the accreditation requirements and policies of the Accreditation Council for Continuing Medical Education (ACCME) through the joint providership of Amedco and the Osteoarthritis Research Society International. Amedco is accredited by the ACCME to provide continuing medical education for physicians.

Satisfactory Completion
Learners must complete an evaluation form to receive a certificate of completion. Your chosen sessions must be attended in their entirety. Partial credit of individual sessions is not available. If you are seeking continuing education credit for a specialty not listed below, it is your responsibility to contact your licensing/certification board to determine course eligibility for your licensing/certification requirement.

Physicians
In support of improving patient care, this activity has been planned and implemented by Amedco LLC and Osteoarthritis Research Society International. Amedco LLC is jointly accredited by the Accreditation Council for Continuing Medical Education (ACCME), the Accreditation Council for Pharmacy Education (ACPE), and the American Nurses Credentialing Center (ANCC), to provide continuing education for the healthcare team.

Credit Designation Statement—Amedco LLC designates this live activity for a maximum of 30.75 AMA PRA Category 1 Credits™ (4.75 for the Clinical Trial Symposium and 26 for the Congress). Physicians should claim only the credit commensurate with the extent of their participation in the activity.

European Union Credit
ACCME carries reciprocity with EACCME which is for the European Union and covers most European countries, along with most international ones.

EVALUATION & REGISTERING FOR CREDITS ONLINE
Upon completion of the congress, physicians that wish to apply for CME credits can do so online. An e-mail will be sent to all registrants after the congress with a link to the site.
USE OF OARSI SCIENTIFIC PROGRAM CONTENT

Information presented during the 2019 World Congress is the property of OARSI and the presenter. Information may not be recorded, photographed, copied, photocopied, transferred to electronic format, reproduced, or distributed without the written permission of OARSI and the presenter. Any use of the program content, which includes, but is not limited to oral presentations, audiovisual materials used by speakers, and program handouts, without the written consent of OARSI is prohibited.

ABSTRACT EMBARGO POLICY

Accepted abstracts are made available to the public on the OARSI website and are published in a special supplement of Osteoarthritis and Cartilage.

SPEAKER READY ROOM

SPEAKER READY ROOM HOURS:

- Thursday, May 2nd .................. 7:00 AM–6:30 PM
- Friday, May 3rd ..................... 7:00 AM–5:30 PM
- Saturday, May 4th .................. 7:00 AM–5:30 PM
- Sunday, May 5th .................... 7:00 AM–11:00 AM

The Speaker Ready Room is located in Planner Office on the Concourse Level. The Speaker Ready Room is provided for presenters to prepare for their presentations and to ensure a seamless integration of a wide variety of audiovisual technologies in the various meeting rooms. By checking in at the Speaker Ready Room and following these simple guidelines, speakers will greatly contribute to the success of the meeting.

OARSI requests all presenters to use PowerPoint™ Presentations. All meeting rooms will have presentation computers and will be networked from a central computer located in the Speaker Ready Room. Presentations will be downloaded from the Speaker Ready Room and sent to the respective meeting room on a secured intranet circuit approximately 45 minutes prior to the start of each session.

Speakers are encouraged and expected to bring their presentation to the Speaker Ready Room where they will have the opportunity to review their presentations or make any last minute changes. All speakers must check into the Speaker Ready Room.

ABSTRACTS ON USB

Each registrant will receive a USB with their registration packet that contains all of the abstracts presented at the congress.

EXHIBITS

The exhibits are an integral part of the complete education experience and will feature the latest in research products in the field of osteoarthritis. Please make time during the meeting to visit the exhibits during their open hours. They are located in Sheraton Hall/Osgoode and Foyers.

EXHIBIT HOURS

- Thursday, May 2nd .................. 7:30 PM–9:00 PM
- Friday, May 3rd ..................... 10:15 AM–5:00 PM
- Saturday, May 4th .................. 10:15 AM–5:00 PM
- Sunday, May 5th .................... 7:00 AM–11:00 AM

POSTER SESSIONS

The Posters Sessions are an important educational part of this meeting. We hope you support and attend these scientific presentations.

Posters may be viewed during the following times:

POSTER SESSION 1

Friday, May 3, 2019 • 3:30 PM to 5:00 PM

- Odd Posters ......................... 3:30 PM–4:15 PM
- Even Posters ....................... 4:15 PM–5:00 PM

POSTER SESSION 2

Saturday, May 4, 2019 • 3:30 PM to 5:00 PM

- Odd Posters ......................... 3:30 PM–4:15 PM
- Even Posters ....................... 4:15 PM–5:00 PM

Any posters left on the boards after 5:00 PM on Saturday, May 4th will be removed and discarded.
The **Osteoarthritis Research Society International** would like to thank the corporate supporters of OARSI Initiatives, Meetings and Congress. It is with the support of industry that OARSI can continue its mission to prevent and treat osteoarthritis through the promotion and presentation of research, education and the world-wide dissemination of new knowledge.

**OARSI CORPORATE MEMBERS**

[Logos of corporate members]

**OARSI SPONSORS**

[Logos of sponsors]
## Exhibitor Directory

- Avanos Medical ........................... Booth 1
- Biomomentum ............................. Booth 2
- Bioseb ....................................... Booths 15 & 16
- Biosolution Co., Ltd ..................... Booth 7
- Bolder BioPath ............................. Booth 5
- EMD Serono ................................. Booth 11
- Flexion Therapeutics ...................... Booths 3 & 4
- InterVivo Solutions ........................ Booth 9
- Pfizer and Lilly ............................. Booth 14
- Samumed, LLC ............................. Booths 12 & 13
- The Journal of Rheumatology ............ Booth 10
- Thuasne ...................................... Booth 8
- TLC Taiwan Lipsome Co. .................. Booth 6

## Discussion Group Meetings

### THURSDAY, MAY 2

<table>
<thead>
<tr>
<th>TIME</th>
<th>ROOM</th>
</tr>
</thead>
<tbody>
<tr>
<td>11:30 AM-1:00 PM</td>
<td>Birchwood Room</td>
</tr>
</tbody>
</table>

**Sport, Exercise, Physical Activity and Osteoarthritis Prevention Discussion Group**

### SATURDAY, MAY 4

<table>
<thead>
<tr>
<th>TIME</th>
<th>ROOM</th>
</tr>
</thead>
<tbody>
<tr>
<td>6:30 PM-8:00 PM</td>
<td>Willow Centre</td>
</tr>
</tbody>
</table>

**Pain Mechanisms in OA: Basic and Clinical Research**

<table>
<thead>
<tr>
<th>TIME</th>
<th>ROOM</th>
</tr>
</thead>
<tbody>
<tr>
<td>6:30 PM-8:00 PM</td>
<td>Chestnut West</td>
</tr>
</tbody>
</table>

**Imaging Discussion Group**

<table>
<thead>
<tr>
<th>TIME</th>
<th>ROOM</th>
</tr>
</thead>
<tbody>
<tr>
<td>6:30 PM-8:00 PM</td>
<td>Willow West</td>
</tr>
</tbody>
</table>

**OA Phenotype Research Discussion Group**

<table>
<thead>
<tr>
<th>TIME</th>
<th>ROOM</th>
</tr>
</thead>
<tbody>
<tr>
<td>6:30 PM-8:00 PM</td>
<td>Chestnut East</td>
</tr>
</tbody>
</table>

**International Foot & Ankle Consortium Discussion Group**

<table>
<thead>
<tr>
<th>TIME</th>
<th>ROOM</th>
</tr>
</thead>
<tbody>
<tr>
<td>6:30 PM-8:00 PM</td>
<td>Pine Room</td>
</tr>
</tbody>
</table>

**Rehabilitation Discussion Group**

### SUNDAY, MAY 5

<table>
<thead>
<tr>
<th>TIME</th>
<th>ROOM</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:30 AM-8:30 AM</td>
<td>Kenora Room</td>
</tr>
</tbody>
</table>

**Bridging Disciplines: A Pathway to Finding Solutions for Osteoarthritis Discussion Group**

<table>
<thead>
<tr>
<th>TIME</th>
<th>ROOM</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:30 AM-8:30 AM</td>
<td>Chestnut Room</td>
</tr>
</tbody>
</table>

**International Osteoarthritis Management Programs a.k.a. “Joint Effort” Discussion Group**

### OARSI Board & Committee Meetings

**All committee meetings will take place within the Sheraton Toronto City Centre.**

#### WEDNESDAY, MAY 1

<table>
<thead>
<tr>
<th>TIME</th>
<th>ROOM</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:00 AM – 6:00 PM</td>
<td>Willow Centre</td>
</tr>
</tbody>
</table>

**OARSI Board Meeting**

#### FRIDAY, MAY 3

<table>
<thead>
<tr>
<th>TIME</th>
<th>ROOM</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:30 AM-8:30 AM</td>
<td>Elgin Room</td>
</tr>
</tbody>
</table>

**Publications Committee Meeting**

<table>
<thead>
<tr>
<th>TIME</th>
<th>ROOM</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:30 AM-8:30 AM</td>
<td>Kenora Room</td>
</tr>
</tbody>
</table>

**Research & Training Committee Meeting**

<table>
<thead>
<tr>
<th>TIME</th>
<th>ROOM</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:30 AM-8:30 AM</td>
<td>Wentworth Room</td>
</tr>
</tbody>
</table>

**Young Investigator Committee Meeting**

<table>
<thead>
<tr>
<th>TIME</th>
<th>ROOM</th>
</tr>
</thead>
<tbody>
<tr>
<td>12:30 PM-2:00 PM</td>
<td>Provincial North</td>
</tr>
</tbody>
</table>

**O & C Editorial Board Meeting**

<table>
<thead>
<tr>
<th>TIME</th>
<th>ROOM</th>
</tr>
</thead>
<tbody>
<tr>
<td>12:30 PM-2:00 PM</td>
<td>Provincial South</td>
</tr>
</tbody>
</table>

**FNHI BC Progress OA F2F Meeting**

<table>
<thead>
<tr>
<th>TIME</th>
<th>ROOM</th>
</tr>
</thead>
<tbody>
<tr>
<td>3:30 PM-5:00 PM</td>
<td>Elgin Room</td>
</tr>
</tbody>
</table>

**Early OA Task Force Meeting**

<table>
<thead>
<tr>
<th>TIME</th>
<th>ROOM</th>
</tr>
</thead>
<tbody>
<tr>
<td>4:00 PM-5:00 PM</td>
<td>Provincial South</td>
</tr>
</tbody>
</table>

**Corporate Council Meeting**

#### SATURDAY, MAY 4

<table>
<thead>
<tr>
<th>TIME</th>
<th>ROOM</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:30 AM-8:30 AM</td>
<td>Wentworth Room</td>
</tr>
</tbody>
</table>

**Asian Alliances Committee**

<table>
<thead>
<tr>
<th>TIME</th>
<th>ROOM</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:30 AM-8:30 AM</td>
<td>Kenora Room</td>
</tr>
</tbody>
</table>

**O & C Associated Editors Meeting**

<table>
<thead>
<tr>
<th>TIME</th>
<th>ROOM</th>
</tr>
</thead>
<tbody>
<tr>
<td>12:30 PM-2:00 PM</td>
<td>Elgin Room</td>
</tr>
</tbody>
</table>

**2020 Program Planning Meeting**

<table>
<thead>
<tr>
<th>TIME</th>
<th>ROOM</th>
</tr>
</thead>
<tbody>
<tr>
<td>12:30 PM-2:00 PM</td>
<td>Kenora Room</td>
</tr>
</tbody>
</table>

**Finance Committee Meeting**

<table>
<thead>
<tr>
<th>TIME</th>
<th>ROOM</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:30 AM-8:30 AM</td>
<td>Wentworth Room</td>
</tr>
</tbody>
</table>

**Ethics Committee Meeting**

<table>
<thead>
<tr>
<th>TIME</th>
<th>ROOM</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:30 AM-8:30 AM</td>
<td>Elgin Room</td>
</tr>
</tbody>
</table>
ΔVANOS
Booth 1
Avanos Medical is committed to creating the next generation of innovative healthcare solutions which will address our most important healthcare needs, such as reducing the use of opioids while helping patients move from surgery to recovery.

BIOMOMENTUM
Booth 2
Biomomentum provides GLP-compliant mechanical testing services and manufactures mechanical testers for biomaterials and cartilage. The Mach-1™ multiaxial mechanical tester is the only all-in-one device designed for compression, tension, shear, friction, torsion and 3D indentation mapping. Our tester is used in multiple research labs and is deemed an excellent educational tool for students.

BIOSEB
Booths 15 & 16
With more than 20 years of experience, Bioseb is designing equipment for Pre-Clinical Research, with a focus on Pain. With facilities in Europe & USA, our expertise is renown internationally: our innovative developments have been successfully engineered into reliable instruments. Our proven systems are used by the most advanced teams in prestigious Universities and laboratories all over the world.

Biosolution Co., Ltd.
Booth 7
Biosolution Co., Ltd is manufacturing cell-based therapeutics with their background in somatic, and stem cell technology. We have received product approval for KeraHeal and KeraHeal-Allo, which are autologous and allogenic keratinocyte medications. We have also completed clinical trials for CartiLife, autologous chondrocyte therapy product used to cure osteoarthritis, and preparing for conditional marketing authorization in 2018.

Bolder BioPATH
Booth 5
Bolder BioPATH, Inc. is an AALAC accredited preclinical CRO specializing in In Vivo models of Rheumatoid Arthritis, Osteoarthritis, Inflammatory Bowel Disease, and many other models of Inflammation and autoimmunity. Our goal is to provide preclinical efficacy and toxicity data that advances novel compounds to the IND/NDA stage.

EMD Serono
Booth 11
EMD Serono is part of the biopharmaceutical business of Merck KGaA, Darmstadt, Germany, in the United States and Canada. EMD Serono has proven expertise in neurology, fertility and endocrinology, as well as a strong pipeline in oncology, immuno-oncology and neurology/immunology.

Flexion
Booths 3 & 4
Flexion Therapeutics is a biopharmaceutical company focused on the development and commercialization of novel, local therapies for the treatment of patients with musculoskeletal conditions, beginning with osteoarthritis (OA), a type of degenerative arthritis.
InterVivo Solutions

Booth 9

InterVivo Solutions is a preclinical in vivo CRO providing research services to the pharmaceutical and animal health industries using translational animal models for efficacy, pharmacokinetics, safety and toxicology. InterVivo’s natural Aged Beagle model of osteoarthritis provides a uniquely translational tool for pre-clinical testing of therapeutics. Studies evaluating the efficacy of therapeutics in Aged Beagles are able to provide clinically relevant readouts of both symptomatic and disease-modifying effects of therapeutic agents. As a progressive disease model, the Aged Beagle also allows longitudinal studies across various stages of disease. InterVivo specializes in neuroscience drug discovery and is unique in its offering of translational models and multi-domain services to improve the clinical success of NCEs.

Pfizer and Lilly

Booth 14

Pfizer and Lilly: Working together to advance the understanding of chronic pain. The collaboration between Pfizer and Lilly reflects the commitment of both organizations to scientific innovation in pain. Pfizer and Lilly colleagues around the world are devoting their passion and scientific expertise to advancing the understanding of chronic pain with the goal of improving patient treatment, care, and outcomes.

Samumed

Booths 12 & 13

Samumed is a leader in medical research and development for tissue-level regeneration. With our platform’s origins in small molecule-based Wnt pathway modulation, we develop therapeutics to address a range of degenerative diseases, regenerative medicine and oncology.

The Journal of Rheumatology

Booth 10

The Journal of Rheumatology is an independent, international medical journal founded by Dr. Metro Ogryzlo in 1974. The Journal publishes timely, original, peer-reviewed research articles on clinical subjects in rheumatology and related fields. Accessible in print and online, The Journal of Rheumatology is dedicated to impacting practicing physicians worldwide.

THUASNE

Booth 8

Founded in France in 1847, The Thuasne Group is one of Europe’s oldest, largest and most respected orthopaedic companies, specialising in wearable medical devices. Thuasne has over 1,800, employees and subsidiary companies throughout Europe. The Action Reliever osteoarthritis knee brace is the latest in a long line of premium, innovative new products which Thuasne are famed for.

TLC

Booth 6

TLC is a clinical-stage specialty pharmaceutical company dedicated to the development and commercialization of novel nanomedicines designed to target areas of unmet medical need. TLC’s lead program, TLC599, is a proprietary BioSeizer™ sustained release formulation of dexamethasone sodium phosphate intended for the treatment of osteoarthritis (OA) pain. Current intraarticular sustained release anti-inflammatory treatments for OA have potentially toxic side effects and may lead to the destruction of cartilage filler proteins. An in vivo toxicity study by staining of the cartilage showed TLC599 to be cartilage sparing compared to current treatments. In its Phase II clinical trial, TLC599 was well-tolerated and demonstrated statistically significant improvements over placebo, both through 12, 16, 20, and 24 weeks and at every scheduled visit on week 1 4, 8, 12, 16, 20, and 24. Over half of the patients treated with TLC599 maintained at least a 30% reduction in pain – over twice as many as placebo – throughout the study.
Wednesday, May 1, 2019

10:30 AM – 3:30 PM  Clinical Trial Symposium*

**SPONSORED BY**

* Additional ticketed fee required

**Birchwood Ballroom**

**Speakers:**

**Review of the Updated FDA Guidelines and Discussion of their Implications**
Jeymi Tambiah, MD

**The Patient Perspective**
Angie Botto-van Bemden

**Clinical Trial Design in the Era Subpart H and the FDA-OARSI Initiative**
- Accelerated Approval Accepted
  - Virginia Byers Kraus, MD, PhD
- Accelerated Approval Rejected
  - Jeffrey Kraines, MD

**Imaging in OA**
Felix Eckstein, MD

**Endotypes in OA that may Help Guide Clinical Trial Design – APPROACH**
Chris Ladel, PhD
Anne-Christine Bay-Jensen, MSc, PhD

**FINH Sage 2: An Initiative to Support Clinical Trial Design**
David Hunter, MBBS, PhD, MSc, FRACP

**The Aggrecanase OA Research Transitioning into Clinical Data – Where are We and What May We Expect?**
Ellen van der Aar, PhD

Thursday, May 2, 2019

**PRE-CONGRESS WORKSHOPS**

8:00 AM – 11:30 AM  Harnessing the OA White Paper to Accelerate Development and Translation of New OA Therapies

**Grand Ballroom West**

**Overview of FDA/EMA Regulatory Requirements**
Lee Simon, MD

**Understanding the Accelerated Approval Pathway**
Virginia Byers Kraus, MD, PhD and Morten Karsdal, MSc, PhD

**Building a Translational Team**
Tim McAlindon, MD, MPH
Chris Ladel, PhD
David Hunter, MBBS, PhD, MSc, FRACP

**Partnering with Other Disease Communities to Accelerate Translation**
Gillian Hawker, MD, MSc
### Approaches to Preventing Post-Traumatic OA in Sport and the Military

**8:00 AM–11:30 AM**

**Grand Ballroom East**

**Primary Prevention of Joint Injury in Sport**
Kati Pasanen, PT, PhD

**Primary and Secondary Prevention of Joint Injury in the Military**
Dan Rhon, DSc

**Structural Targets for Prevention of PTOA**
David Hunter, MBBS, PhD, MSc, FRACP

**Physical Targets for Prevention of PTOA (Secondary Prevention)**
May Arna Risberg, Professor

**Biological Targets for Prevention of PTOA**
Fiona Watt B.Med.Sci, MBBS, PhD

---

### Update on Spinal OA and Its Phenotyping

**8:30 AM – 11:30 AM**

**Grand Ballroom Centre**

**Burden and Management of Spinal OA Phenotypes**
Manuela Ferreira, PhD

**Identifying Symptomatic Spinal OA and its Trajectories—Main Similarities and Differences with OA in Other Joints**
Sita Bierma-Zeinstra, PhD

**Impact of Coexisting Spinal, Knee and/or Hip OA on Symptoms and Management**
Jan Hartvigsen, PhD

**What Do We Know About the Spinal OA Phenotypes**
Chris Little, PhD

---

### Discussion Group Meeting

**11:30 AM – 1:00 PM**

**Birchwood Room**

**Sport, Exercise, Physical Activity and Osteoarthritis Prevention Discussion Group**

**Considerations in the Chronic Management of Osteoarthritis**

**Satellite Lunchtime Symposia**

**SPONSORED BY**

---

### OARSI Treatment Guidelines Update

**1:00 PM–1:30 PM**

**Grand Ballroom West/Centre**

**SPONSORED BY**

**Moderated by Ingrid Meulenbelt, PhD and Tuhina Neogi, MD, PhD**

**Moving Towards Patient-Centered Treatment Guidelines for Knee and Hip OA**

**Tim McAlindon, MD, MPH**

---

### Plenary Session 1: Machine Learning Approaches in Medicine and Applications to OA

**1:30 PM–3:00 PM**

**Grand Ballroom West/Centre**

**Moderated by: Valentina Pdeoia, PhD and Simo Saarakkala, PhD, Professor**

---

### Harnessing Artificial Intelligence in Patient Care

**1:30 PM – 2:00 PM**

**Wei Fan, PhD**

---

### An “APPROACH” to Machine Learning in OA

**2:00 PM – 2:30 PM**

**Paweł Widera, PhD**
DETECTION OF ENZYMATICALLY AND MECHANICALLY INDUCED DEGRADATION OF BOVINE ARTICULAR CARTILAGE TISSUE WITH MID-INFRARED SPECTROSCOPY

V. K. Virtanen1, E. Nippolainen2, R. Shaikh2, I. Afara2, J. Töyräs2,3, S. Saarakkala1, L. Rieppo1 • 1Univ. of Oulu, Oulu, Finland, 2Univ. of Eastern Finland, Kuopio, Finland, 3Univ. of Queensland, Brisbane, Australia

HIGHEST RATED ABSTRACT AWARD WINNER

CAN AI PREDICT PAIN PROGRESSION IN KNEE OSTEOARTHRITIS SUBJECTS FROM STRUCTURAL MRI

J. J. Lee, F. Liu, S. Majumdar, V. Pedoia • Univ. of California, San Fransisco, San Fransisco, CA

DEEPKNEE: TOWARDS OPEN SOURCE FULLY-AUTOMATIC KELLGREN-LAWRENCE GRADING

Tiulpin1, E. Panfilov1, E. Vaattovaara2, J. Niinimäki2, M. Nevalainen2, S. Saarakkala1,2 • 1Res. Unit of Med. Imaging, Physics and Technology, Univ. of Oulu, Oulu, Finland, 2Dept. of Radiology, Oulu Univ. Hosp., Oulu, Finland

A CRUCIAL ROLE OF ARGINASE-2 IN OSTEOARTHRITIS PATHOGENESIS

W-S. Choi, J-I. Yang, W. Kim, H-E. Kim, Y. Shin, J. Yang, W. Choi, J-S. Park, J-S. Chun • GIST, Gwangju, Korea, Republic of

SEVERITY OF STRUCTURAL AND INFLAMMATORY FEATURES ARE ASSOCIATED WITH LOWER PRESSURE PAIN THRESHOLDS IN HAND OSTEOARTHRITIS

P. Steen Pettersen1, T. Neogi2, K. Magnusson1,3, H. B. Hammer1, T. K. Kvien1, T. Uhlig1, I. K. Haugen1 • 1Diakonhjemmet Hosp., Dept. of Rheumatology, Oslo, Norway, 2Clinical Epidemiology Res. and Training Unit, Boston Univ. Sch. of Med., Boston, MA, 3Lund Univ., Dept. of Clinical Sci. Lund, Orthopaedics, Clinical Epidemiology Unit, Lund, Sweden

GUT MICROBIOME COMPOSITION AND ITS RELATION TO JOINT PAIN AND INFLAMMATION

C. G. Boer1, D. Radjabzadeh1, C. Medina-Gomez1, S. Garmaeva2, D. Schiphof1, P. Arp1, T. Koet1, A. Kurilshikov1, J. Fu2, A. M. Ikram1, S. Bierma-Zeinstra1, A. G. Uitterlinden1, R. Kraaij1, A. Zhernakova2, J. B. van Meurs1 • 1Erasmus Med. Ctr., Rotterdam, Netherlands, 2Univ. of Groningen, Groningen, Netherlands
IMPLEMENTING INTERNATIONAL OSTEOARTHRITIS GUIDELINES IN PRIMARY CARE: RESULTS ON SYMPTOM-RELATED OUTCOMES IN SECONDARY ANALYSES FROM A RANDOMIZED CONTROLLED STUDY

T. Moseng1, H. Dagfinrud1, Ø. Andreassen1, K. Dziedzic2, K. Hagen3, J. Hansen4, I. Mdala4, B. Natvig5, J. Røtterud6, U. Schjervheim5, L. van Bodegom-Vos7, T. Vliet Vlieland6, N. Østerås1 • 1Diakonhjemmet Hosp., Oslo, Norway, 2Keele Univ., Keele, United Kingdom, 3Univ. of Oslo, Oslo, Norway, 4Akershus Univ. Hosp., Lørenskog, Norway, 5Nes Municipality, Nes, Norway, 6Leiden Univ., Leiden, Netherlands

PROFILING HUMAN CHONDROCYTES AND SYNOVIOCYTES USING SINGLE CELL RNA SEQUENCING IDENTIFIES CELL DIVERSITY IN THE PATHOGENESIS OF OSTEOARTHRITIS IN THE JOINT ORGAN

C-H. Chou1, J. Gibson1, D. E. Attarian1, C. Haraden1, C. B. Yohn2, R-M. Laberge2, S. Gregory1, V. B. Kraus1 • 1Duke Univ., Durham, NC, 2Unity Biotechnology, Brisbane, CA

SIX WEEKS OF PERSONALIZED GAIT RETRAINING TO OFFLOAD THE MEDIAL COMPARTMENT OF THE KNEE REDUCES PAIN MORE THAN SHAM GAIT RETRAINING

S. D. Uhlrich1,2, J. A. Kolesar1,2, A. Silder1, M. Z. Berkson1,2, B. Presten1, H. A. Montague-Alamin1, N. Eduoard1, D. Willoughby1, A. K. Finlay2, G. E. Gold1, S. L. Delp1, G. S. Beaupre1,2 • 1Stanford University, Stanford, CA, 2VA Palo Alto Hlth.care System, Palo Alto, CA

ELUCIDATING THE FUNCTIONAL ROLE OF MIR-34A IN OSTEOARTHRITIS PATHOGENESIS – INVOLVEMENT IN OBESITY AND OSTEOARTHRITIS

H. Endisha1,2, P. Datta1, A. Sharma1, S. Nakamura1, E. Rossomacha1, C. Younai1, G. Tavallaee1,2, R. Gandhi3, M. Kapoor1,2 • 1Krembil Res. Inst., Toronto, ON, Canada, 2Univ. of Toronto, Toronto, ON, Canada, 3Toronto Western Hosp., Toronto, ON, Canada

THE EFFECT OF WEIGHT LOSS ON THE PROGRESSION OF MENISCAL EXTRUSION AND SIZE IN KNEE OSTEOARTHRITIS: A POST-HOC ANALYSIS OF THE INTENSIVE DIET AND EXERCISE FOR ARTHRITIS (IDEA) TRIAL


BIOMARKERS OF BONE AND CARTILAGE TURNOVER CTX-I AND CTX-II PREDICT TOTAL JOINT REPLACEMENTS IN OSTEOARTHRITIS

**Friday, May 3**

**5:15 PM–5:45 PM**  
Break  
*Grand Ballroom Foyer*

**5:45 PM–6:35 PM**  
Opening Ceremony & Awards Presentations  
*Grand Ballroom*  
West/Centre

- Recognition of Lifetime Achievement Award Winner  
  Virginia Byers Kraus, MD, PhD
- Recognition of Basic Science Award Winner  
  Frank Beier, PhD
- Recognition of Clinical Science Award Winner  
  David Hunter, MBBS, PhD, MSc, FRACP

**6:35 PM–7:20 PM**  
Keynote Address  
*Grand Ballroom*  
West/Centre

Moderated by: Jeff Katz, MD, MSc and Ali Mobasheri, DPhil(Oxon)  
**I-2**  
Pathogenic Mechanisms of Obesity-Induced Osteoarthritis: New Clues from Old Joints  
Clifford Rosen, MD

**7:30 PM–9:00 PM**  
Opening Reception With Exhibitors

---

**Breakfast Poster Tours***  
*Sheraton Hall/Osgoode & Foyers*

- **Tour 1:** Osteoarthritis Therapies — Guide: Margreet Kloppenburg
- **Tour 2:** Bone and Cartilage — Guide: Frank Beier
- **Tour 3:** Imaging and Biomarkers — Guide: Flavia Cicuttini
- **Tour 4:** Biomechanics — Guide: Katherine Boyer

*Additional ticketed fee required

**Breakfast Workshops***  
*Province North*

- Breakfast Workshop A  
  **I-3**  
  Human OA Model Technologies: “Joint-on-a-Chip” • Marcel Karperien, PhD

*Province South*

- Breakfast Workshop B  
  **I-4**  
  What Are Patient Preferences, How Do You Measure Patient Preferences and How Do I Use Them? • Deborah Marshall, PhD

*Additional ticketed fee required

**8:45 AM–10:15 AM**  
Concurrent Session 1: Rehabilitation  
*Grand Ballroom*  
West/Centre

Moderated by: Martin Van der Esch, PhD and Jackie Whittaker, BScPT, PhD

- **I-5**  
  Optimizing Adherence in OA Rehabilitation Trials  
  Rana Hinman, PhD
CORTICOSTEROID INJECTION VERSUS A PHYSICAL THERAPY APPROACH FOR THE MANAGEMENT OF KNEE OSTEOARTHRITIS: A RANDOMIZED CLINICAL TRIAL

D. I. Rhon\(^1\), C. S. Allen\(^1\), N. W. Gill, III\(^1\), B. R. Hando\(^1\), E. Petersen\(^2\), G. Deyle\(^1\) • \(^1\)Brooke Army Med. Ctr., San Antonio, TX, \(^2\)Office of the Army Surgeon Gen., Falls Church, VA, \(^3\)Wilford Hall Ambulatory Surgical Ctr., San Antonio, TX, \(^4\)Univ. of Incarnate Word, San Antonio, TX

EFFECT OF COMBINED CONSERVATIVE THERAPIES ON CLINICAL OUTCOMES IN PATIENTS WITH THUMB BASE OSTEOARTHRITIS (COMBO): A RANDOMISED CONTROLLED TRIAL

S. R. Robbins\(^1\), V. Duong\(^1\), L. Deveza\(^1\), K. Fu\(^1\), W. Oo\(^1\), E. A. Riordan\(^2\), A. Wajor\(^3\), R. Jongis\(^3\), K. L. Bennell\(^4\), B. Vicenzino\(^5\), P. Hodges\(^6\), J. P. Eyles\(^6\), D. J. Hunter\(^6\) • \(^1\)Rheumatology Dept., Royal North Shore Hosp. and Inst. of Bone and Joint Res., Kolling Inst., The Univ. of Sydney, Sydney, Australia, \(^2\)Physiotherapy Dept., Royal North Shore Hosp., Sydney, Australia, \(^3\)Dept. of Physiotherapy, Ctr. for Hlth., Exercise and Sports Med., Sch. of Hlth.Sci., The Univ. of Melbourne, Melbourne, Australia, \(^4\)Sch. of Hlth.and Rehabilitation Sci.: Physiotherapy, The Univ. of Queensland, Brisbane, Australia, \(^5\)Natl. Hlth.and Med. Res. Council (NHMRC) Clinical Trial Ctr., The Univ. of Sydney, Sydney, Australia

EFFECTS OF CANE USE ON BONE MARROW LESION VOLUMES IN MEDIAL TIBIOFEMORAL KNEE OSTEOARTHRITIS: RANDOMIZED CLINICAL TRIAL

A. Van Ginckel\(^1\), R. Hinman\(^2\), T. Wrigley\(^2\), D. Hunter\(^3\), C. Marshall\(^2\), J. Duryea\(^4\), L. Melo\(^5\), M. Simic\(^6\), J. Kasza\(^1\), S. Robbins\(^1\), J. Wallis\(^6\), K. Bennell\(^6\) • Ghent Univ., Ghent, Belgium, \(^2\)The Univ. of Melbourne, Melbourne, Australia, \(^3\)The Univ. of Sydney, Sydney, Australia, \(^4\)Harvard Med. Sch., Boston, MA, \(^5\)Monash Univ., Melbourne, Australia, \(^6\)La Trobe Univ., Eastern Hlth., Melbourne, Australia

UNPLANNED READMISSIONS AND EMERGENCY DEPARTMENT VISITS FOLLOWING ORTHOPEDIC SURGERY FOR OSTEOARTHRITIS FROM 2004 TO 2016 IN ONTARIO, CANADA: THE IMPACT OF THE CHANGING PROFILES OF PATIENTS AND CLINICAL CARE


IMPACT OF A PERSONALIZED HOME EXERCISE PROGRAM FOR KNEE OSTEOARTHRITIS PATIENTS ON 3D KINEMATICS: A CLUSTER RANDOMIZED CONTROLLED TRIAL

A. Cagnin\(^1\), M. Choinière\(^1\), N. J Bureau\(^1\), M. Durand\(^1\), N. Mezghani\(^1\), N. Gaudreault\(^1\), N. Hagemeister\(^2\) • Res. Ctr. of the Ctr. Hosp.iер de l’Université de Montréal, Montreal, QC, Canada, \(^2\)Laboratoire imagerie et orthopédie de l’École de technologie supérieure, Montreal, QC, Canada, \(^3\)Faculty of Med., Université de Montréal, Montreal, QC, Canada, \(^4\)Res. Ctr. of the Ctr. Hosp.iер universitaire de Sherbrooke, Sherbrooke, QC, Canada, \(^5\)Faculty of Med., Université de Sherbrooke, Sherbrooke, QC, Canada

LONG-TERM COST-EFFECTIVENESS OF EXERCISE THERAPY AND/OR MANUAL THERAPY FOR HIP OR KNEE OSTEOARTHRITIS: RANDOMIZED CONTROLLED TRIAL AND COMPUTER SIMULATION MODELLING

J. H. Abbott\(^1\), R. Wilson\(^2\), D. Pinto\(^2\), The MOA Trial Team • \(^1\)Univ. of Otago, Dunedin, New Zealand, \(^2\)Marquette Univ., Milwaukee, WI
<table>
<thead>
<tr>
<th>Time</th>
<th>Concurrent Session 2: Cell and Gene Therapy</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:45 AM-9:15 AM</td>
<td>Moderated by: Danny Chan, PhD and April Craft, PhD</td>
</tr>
<tr>
<td>8:45 AM-9:15 AM</td>
<td><strong>I-6</strong> Fail-safe Cell and Gene Therapy Combination: Are We There Yet (in OA)? Andras Nagy, PhD, HonD, FRSC</td>
</tr>
<tr>
<td>9:35 AM-9:45 AM</td>
<td><strong>21</strong> EXPRESSION OF MICRORNA-892B IN HUMAN MESENCHYMAL STEM CELLS PROMOTES CARTILAGE REGENERATION IN ATHYMIC NUDE RAT OSTEOCHONDRAL DEFECT MODEL J. Lee, J-y. Ko, E. Lee, G-i. Im &amp; Dept. of Orthopedics, Dongguk Univ., Goyang, Gyeonggi-do Province, Republic of Korea</td>
</tr>
<tr>
<td>9:45 AM-9:55 AM</td>
<td><strong>22</strong> DONOR-MATCHED COMPARISON OF CHONDROGENIC PROGENITORS RESIDENT IN HUMAN INFRAPATELLAR FAT PAD, SYNOVIUM AND PERIOSTEUM-IMPLICATIONS FOR CARTILAGE REPAIR V. R. Mantripragada, N. Piuzzi, W. Bova, C. Boehm, N. Obuchowski, N. Obuchowski, V. Lefebvre, R. Midura, G. Muschler &amp; Cleveland Clinic, Cleveland, OH</td>
</tr>
<tr>
<td>9:55 AM-10:05 AM</td>
<td><strong>23</strong> EXPRESSION OF ENDOGLIN, A TGFβ CO-RECEPTOR, NOT ALK5 CORRELATES WITH THE ABILITY OF PASSAGED HUMAN ARTICULAR CHONDROCYTES TO FORM CARTILAGE TISSUE IN VITRO. V. J. Bianchi, M. Parsons, D. Backstein, R. Kandel &amp; Lunenfeld-Tanenbaum Res. Inst., Mount Sinai Hosp., Toronto, ON, Canada, Div. of Orthopaedics, Mount Sinai Hosp., Toronto, ON, Canada</td>
</tr>
<tr>
<td>10:05 AM-10:15 AM</td>
<td><strong>24</strong> DEVELOPMENT AND CHARACTERIZATION OF A HUMANIZED MOUSE MODEL OF OSTEOARTHRITIS B. Métayer, Jr., M. Masson, C. Vignes, J. Lesoeur, J. Veziers, B. Bodic, Y. Maugars, J. Guicheux, C. Vinatier &amp; Un Departement de Recherche, Université de Nantes, ONIRIS, Nantes, F-44042, France, Nantes, France, CHU Nantes, Service rhumatologie, PHU4 OTONN, Nantes, F-44093, France, Nantes, France, Université de Nantes, UFR Odontologie, Nantes, F-44042, France, Nantes, France</td>
</tr>
</tbody>
</table>
10:15 AM–10:45 AM  Break
Sheraton Hall/ Osgoode & Foyers

10:45 AM–12:15 PM  Plenary Session 3: Mechanobiology
Grand Ballroom
West / Centre
Moderated by: Katherine Boyer, PhD

10:45 AM–11:15 AM  I-7
Mechanotransduction Pathways and Relevance to Human OA
Kate Poole, PhD

11:15 AM–11:25 AM  HIGHEST RATED ABSTRACT AWARD WINNER
EFFECT OF VARUS ANGEL ON PROGRESSION OF OSTEOARTHRITIS AND CHANG OF SUBCHONDRAL BONE MICROSTRUCTURE
X. Han, L. Wang, Z. He, L. Chu, K. Xie, X. Jiang, Q. Sun, S. Ai, H. Wu, T. Tang, Z. Yu, M. Yan • Shanghai Ninth People’s Hosp., Shanghai Jiao Tong Univ. Sch. of Med., Shanghai, China

11:25 AM–11:35 AM  26
IDENTIFICATION OF SIGNALING PATHWAYS MEDIATING HUMAN CHONDROCYTE DEGENERATION INDUCED BY THE CHEMOKINE CCL-2
H. H. Willcockson, A. Esterellas, C. Jowdy, H. Ozkan, R. F. Loeser, L. Longobardi • Univ. of North carolina at Chapel Hill, Chapel Hill, NC

11:35 AM–11:45 AM  27
LONG TERM INTERMITTENT COMPRESSION OF ARTICULAR CARTILAGE ATTENUATES CARTILAGE DEGRADATION
A. Engstrøm1,2, A-C. Bay-Jensen1, M. Karsdal1, C. Thudium1 • 1Nordic BioSci., Herlev, Denmark, 2Univ. of Copenhagen, Copenhagen, Denmark

11:45 AM–11:55 AM  HIGHEST RATED ABSTRACT AWARD WINNER
FOXO TRANSCRIPTION FACTORS IN MENISCUS DEVELOPMENT, AGING AND OSTEOARTHRITIS
K-i. Lee1, S. Choi2, T. Matsuzaki1, O. Alvarez-Garcia1, M. Olmer1, S. P. Grogan1, D. D. D’Lima1, M. K. Lotz1 • 1The Scripps Res. Inst., La Jolla, CA, 2Jeju Natl. Univ., Jeju, Korea, Republic of

11:55 AM–12:05 PM  29
DYNAMIC MEDIAL KNEE OVERLOADING INFLUENCES INFLAMMATION AND BONE REMODELING IN THE DEGENERATIVE KNEE
N. Khatib1, P. Biggs1, C. Wilson2, R. Williams2, D. J. Mason1, C. A. Holt1 • 1Cardiff Univ., Cardiff, United Kingdom, 2Cardiff and Vale Orthopaedic Ctr., Cardiff, United Kingdom

12:05 PM–12:15 PM  30
SENSORY NERVOUS SYSTEM IMPACT ON SUBCHONDRAL BONE PATHOLOGY IN A MURINE OA MODEL

12:30 PM–2:00 PM  Lunch on Own

12:30 PM–2:00 PM  Satellite Luncheontime Symposia
Satellite Luncheontime Symposia
SM04690 and Knee Osteoarthritis: Novel Targets, New Data, and Late-Phase Plans
SPONSORED BY samumed
2:00 PM–3:30 PM  Concurrent Session 3: Update on OA Beyond the Knee

Grand Ballroom  West

2:00 PM–2:30 PM  I-8  OA of the Foot and Ankle
Michelle Marshall, PhD

2:30 PM–2:40 PM  31  ASSOCIATIONS BETWEEN METACARPAL Cortical Thickness AND erosive hand Osteoarthritis
A. Mathiessen¹, J. Duryea¹, J. B. Driban², M. B. Roberts³, C. B. Eaton³, I. K. Haugen⁴, T. E. McAlindon⁷ • ¹Brigham and Women’s Hosp., Harvard Med. Sch., Boston, MA, ²Tufts Med. Ctr., Boston, MA, ³Care New England Med. Group/Primary Care and Specialty Services, Pawtucket, RI, ⁴Diakonhjemmet Hosp., Oslo, Norway

2:40 PM–2:50 PM  32  THE ASSOCIATION OF BMI AND PHYSICAL ACTIVITY WITH ACETABULAR DYSPLASIA IN CHILDREN.
W. K. Chung, S. de Vos-Jakobs, F. Rivadeneira, S. M. Bierma-Zeinstra, J. H. Waarsing • Erasmus MC, Rotterdam, Netherlands

2:50 PM–3:00 PM  33  THE MATERNAL AND PATERNAL EFFECTS ON CLINICAL AND SURGICAL DEFINITIONS OF OSTEOARTHRITIS
E. Weldingh¹, M. Bakke Johnsen¹,², K. Hagen¹, N. Østerås³, B. Slatkowsky-Christensen³, L. Nordsletten¹, K. Magnusson¹,² • ¹Oslo Univ. Hosp., Oslo, Norway, ²Inst. of Clinical Med., Univ. of Oslo, Oslo, Norway, ³Diakonhjemmet Hosp., Dept. of Rheumatology, the Natl. Advisory Unit on Rehabilitation in Rheumatology, Oslo, Norway, ⁴Diakonhjemmet Hosp., Dept. of Rheumatology, Oslo, Norway, ⁵Lund Univ., Faculty of Med., Dept. of Clinical Sci. Lund, Orthopaedics, Clinical Epidemiology Unit, Lund, Sweden

3:00 PM–3:10 PM  34  HIGHEST RATED ABSTRACT AWARD WINNER
RADIOGRAPHIC JOINT SPACE WIDTH IN A CASE-CONTROL HAND OSTEOARTHRITIS STUDY: ARE HEALTHY JOINTS REALLY HEALTHY?
I. Onuoha¹, R. Lu¹, A. Mathiessen¹, J. B. Driban², M. B. Roberts³, C. Eaton⁴, L. Schaefer⁵, T. McAlindon⁷, J. Duryea¹ • ¹Brigham and Women’s Hosp., Boston, MA, ²Tufts Med. Ctr., Boston, MA, ³Care New England Med./Primary Care & Specialty Services, Pawtucket, RI, ⁴Warren Alpert Med. Sch. of Brown Univ., Providence, RI

3:10 PM–3:20 PM  35  THE ODDS OF HAND PAIN AND OSTEOARTHRITIS IN INDIVIDUALS WITH A HISTORY OF CRICKET-RELATED HANDB INJURY
3:20 PM–3:30 PM
HIGH INAPPROPRIATE USE OF PRESCRIBED OPIOIDS IN PATIENTS WITH INCIDENT KNEE OR HIP OSTEOARTHRITIS
J. B. Thorlund1,2, A. Turkiewicz2, D. Prieto-Alhambra3,4, M. Englund2 • 1Dept. of Sports Sci. and Clinical Biomechanics, Univ. of Southern Denmark, Odense M, Denmark, 2Lund Univ., Faculty of Med., Dept. of Clinical Sci. Lund, Orthopedics, Clinical Epidemiology Unit, Lund, Sweden, 3GREMPAL (Grup de Recerca en Epidemiologia de les Malalties Prevalents de l’Aparell Locomotor), Idiap Jordi Gol Primary Care Res. Inst. and CIBERFes, Univ.t Autònoma de Barcelona and Inst. de Salud Carlos III, Barcelona, Spain, 4Pharmaco- and Device Epidemiology, Ctr. for Statistics in Med.–Nuffield Dept. of Orthopaedics, Rheumatology, and Musculoskeletal Sci., Univ. of Oxford, Oxford, United Kingdom

2:00 PM–3:30 PM
Concurrent Session 4: Joint Biology
Grand Ballroom Centre

2:00 PM–2:30 PM
Development of the Articular Joint: A Still Evolving Model and Implications for OA
April Craft, PhD

2:30 PM–2:40 PM
OSTEOARTHRITIS INDUCED BY MENISCAL/LIGAMENTOUS INJURY IS AGGRAVATED AFTER METABOLIC SYNDROME FECAL SAMPLE TRANSPLANTATION IN GERM-FREE MICE
Z. Huang1, J. Chen2, B. Li2, J. Xie1, L. Cheng2, F. Pei1 • 1West China Hosp., SiChuan Univ., ChengDu, China, 2State Key Lab. of Oral Diseases & Natl. Clinical Res. Ctr. for Oral Diseases, SiChuan Univ., ChengDu, China

2:40 PM–2:50 PM
RETRO-INVERSO TAT-BECLIN-1 INDUCES SYNOVIAL FIBROSIS AND DOES NOT PROTECT CARTILAGE FROM DEGENERATION IN A MOUSE MODEL OF OA
J. S. Rockel1, B. Wu1, S. Nakamura1, E. Rossomacha1, M. Kapoor1,2 • 1Univ. Hlth.Network, Toronto, ON, Canada, 2Univ. of Toronto, Toronto, ON, Canada

2:50 PM–3:00 PM
SIRTUIN 6 (SIRT6) OVEREXPRESSION REGULATES ANTIOXIDANT STATUS AND REDOX SIGNALING IN HUMAN CHONDROCYTES
J. A. Collins1, J. F. Pike1,2, W. Leonard1, S. Chubinskaya3, R. F. Loeser1 • 1Univ. of North Carolina at Chapel Hill, Chapel Hill, NC, 2Univ. of South Carolina Greenvile, Greenvile, SC, 3Rush Univ. Med. Ctr., Chicago, IL

3:00 PM–3:10 PM
INTERCELLULAR MITOCHONDRIAL TRANSFER FROM MESENCHYMAL STEM CELLS TO STRESSED CHONDROCYTES

3:10 PM–3:20 PM
ROLE OF SYNOVIAL PERLECAN IN OSTEOPHYTE FORMATION IN EARLY STAGE KNEE OSTEOARTHRITIS
H. Arita1, H. Kaneko1, M. Kinoshita1, S. Hada1, R. Sadatsuki1, I. Futami1, Y. Negishi1, M. Momoeda1, L. Liu1,2, T. Aoki2, E. Arikawa-Hirasawa3, K. Kaneko1,2, M. Ishijima1,2 • 1Dept. of Med. for Orthopaedics and Motor Organ, Juntendo Univ. Graduate Sch. of Med., Tokyo, Japan, 2Sportology Ctr., Juntendo Univ. Graduate Sch. of Med., Tokyo, Japan, 3Res. Inst. for Disease of Old Age, Juntendo Univ. Graduate Sch. of Med., Tokyo, Japan
Concurrent Session 4: Joint Biology (cont’d.)
Grand Ballroom Centre

3:20 PM–3:30 PM  42  TGFβ SIGNALING MAINTAINS ARTICULAR CHONDROCYTE HOMEOSTASIS BY REPROGRAMMING GLUCOSE METABOLISM
C. Wang, J. Shen, R. O’Keefe • Washington Univ. in St Louis, St Louis, MO

3:30 PM–5:00 PM  Poster Session 1
Sheraton Hall/ Osgoode & Foyers

5:00 PM–6:30 PM  Concurrent Session 5: Imaging
Grand Ballroom West
5:00 PM–5:30 PM  I-10  Imaging the Synovium in OA
Ali Guermazi, MD, PhD

5:30 PM–5:40 PM  43  PROGRESSOR RATES OF FEMOROTIBIAL CARTILAGE LOSS STRATIFIED BY RADIOGRAPHIC DISEASE STAGE, 1 TO 4-YEAR OBSERVATION INTERVALS, AND MRI PROTOCOLS—DATA FROM THE OSTEOARTHRITIS INITIATIVE
W. Wirth1,2, S. Maschek1,2, C. Ladel3, H. Guehring3, M. Michaelis3, F. Eckstein1,2 • 1Paracelsus Med. Univ., Salzburg, Austria, 2Chondrometrics GmbH, Ainring, Germany, 3Merck KGaA, Darmstadt, Germany

5:40 PM–5:50 PM  44  CAN WE USE SYNOVITIS-RELATED CLINICAL QUESTIONS INSTEAD OF SYNOVITIS ON MRI TO PREDICT INCIDENT KNEE OA?

5:50 PM–6:00 PM  45  SPATIAL DISTRIBUTION OF LONGITUDINAL CARTILAGE THICKNESS CHANGE IN ANTERIOR AND POSTERIOR CRUCIATE LIGAMENT INJURY COMPARED TO HEALTHY ATHLETIC CONTROLS
A. Culvenor1,2, W. Wirth1,3, R. Frobell4, S. Lohmander4, G. Duda5, H. Boeth5, F. Eckstein1,3 • 1Paracelsus Med. Univ., Salzburg, Austria, 2La Trobe Univ., Melbourne, Australia, 3Chondrometrics GmbH, Ainring, Germany, 4Lund Univ., Lund, Sweden, 5Charité-Univ. medizin, Berlin, Germany

6:00 PM–6:10 PM  46  THE RELATIONSHIP BETWEEN MRI FEATURES AND KNEE PAIN OVER 6 YEARS IN EARLY KNEE OSTEOARTHRITIS
K. Magnusson1,2, A. Turkiewicz1, J. Kumm3, F. Zhang1, M. Englund1,4 • 1Lund Univ., Faculty of Med., Dept. of Clinical Sci. Lund, Orthopaedics, Clinical Epidemiology Unit, Lund, Sweden, 2Diakonhjemmet Hosp., Dept. of Rheumatology, Oslo, Norway, 3Dept. of Radiology, Univ. of Tartu, Tartu, Estonia, 4Clinical Epidemiology Res. and Training Unit, Boston Univ. Sch. of Med., Boston, MA
FEMOROACETABULAR IMPINGEMENT SYNDROME IS ASSOCIATED WITH DEVELOPMENT OF HIP OSTEOARTHRITIS WITHIN 10-YEARS FOLLOW-UP: DATA FROM THE CHECK COHORT

R. Agricola, J. Kemp, J. Waarsing, H. Weinans, J. Verhaar, J. Runhaar, S. M. Bierma-Zeinstra


LONGITUDINAL ASSOCIATIONS BETWEEN MRI-DEFINED INFLAMMATION AND PAIN IN THUMB BASE OSTEOARTHRITIS

S. van Beest, H. M. Kroon, M. Reijnierse, W. Damman, R. Liu, F. R. Rosendaal, M. Kloppenburg, F. P. Kroon

Leiden Univ. Med. Ctr., Leiden, Netherlands

GENOME-WIDE ANALYSES USING UK BIOBANK DATA PROVIDE NEW THERAPEUTIC TARGETS FOR OSTEOARTHRITIS


1Inst. of Translational Genomics, Helmholtz Zentrum München–German Res. Ctr. for Environmental Hlth., Neuherberg, Munich, Germany, 2Human Genetics, Wellcome Sanger Inst., Wellcome Genome Campus, Hinxton, CB10 1SA, United Kingdom, 3Target Sci.–R&D, GSK Med.s Res. Ctr., Gunnels Wood Road, Stevenage, Hertfordshire, SG1 2NY, United Kingdom, 4Wellcome Ctr. for Human Genetics, Univ. of Oxford, Oxford, OX3 7BN, United Kingdom, 5MRC Integrative Epidemiology Unit, Bristol Med. Sch., Univ. of Bristol, Oakfield Grove Clifton, Bristol, BS8 2BN, United Kingdom, 6Dept. of Med. Genetics, Univ. of Cambridge, Cambridge BioMed. Campus, Cambridge, CB2 0QQ, United Kingdom, 7Dept. of Oncology and Metabolism, Univ. of Sheffield, Western Bank, Sheffield, S10 2TN, United Kingdom, 85th Psychiatric Dept., Dromokaiteio Psychiatric Hosp., Haidari, Athens, TK 12461, Greece, 9Cancer Res. Div., Cancer Council NSW, Woolloomooloo, New South Wales, Australia, 10Dept. of Epidemiology, Biostatistics and Occupational Hlth., McGill Univ., Montreal, QC H3A 1A2, QC, Canada, 11Target Sci.–R&D, GSK, 709 Swedeland Road, King of Prussia, PA 19406, PA, 12 European Molecular Biology Lab., European Bioinformatics Inst., Wellcome Genome Campus, Hinxton, Cambridge, CB10 1SD, United Kingdom

MICRORNAS AND CARTILAGE MATRIX PROTEIN TURNOVER RESPONDED COLLECTIVELY TO THE STRESS OF OSTEOARTHRITIS

M.-F. Hsueh, P. Onnerfjord, M. P. Bolognesi, M. E. Easley, V. B. Kraus

5:50 PM–6:00 PM

51 IDENTIFICATION AND ANALYSIS OF NOVEL METHYLATION QUANTITATIVE TRAIT LOCI (mQTLs) IN OSTEOARTHRITIS
S. J. Rice, K. Cheung, L. N. Reynard, J. Loughlin • Newcastle Univ., Newcastle upon Tyne, United Kingdom

6:00 PM–6:10 PM

52 OSTEOARTHRITIC MESENCHYMAL STEM CELLS UNDERGOING CHONDROGENESIS HAVE ALTERED THE GLUCURONIC ACID SYNTHESIS PATHWAY
B. Rocha¹, B. Cillero-Pastor², G. Eijkel², V. Calamia¹, P. Fernández-Puente¹, M. Paine², C. Ruiz-Romero¹, R. Heeren², F. Blanco¹,⁴ • ¹Proteomics Group-ProteoRed/iSCIII, Grupo de Investigación de Reumatología (GIR), INIBIC-Hosp. Univ. de A Coruña, A Coruña, Spain, A Coruña, Spain, ²The Maastricht Multimodal Molecular Imaging Inst. (M4I), Div. of Imaging Mass Spectrometry, Maastricht Univ., The Netherlands, Maastricht, Netherlands, ³CIBER-BBN Inst. de Salud Carlos III, INIBIC-CHUAC, A Coruña, Spain, ⁴RIER-RED de Inflamación y Enfermedades Reumáticas, INIBIC-CHUAC, A Coruña, Spain, A Coruña, Spain

6:10 PM–6:20 PM

53 GENETIC CORRELATIONS IN RECOMBINANT INBRED MOUSE STRAINS SUGGEST THAT CARTILAGE REPAIR IS POSITIVELY CORRELATED WITH PROTECTION FROM OSTEOARTHRITIS
M. F. Rai¹, N. Chinzei², S. Hashimoto², K. Takebe³, J. M. Cheverud⁴, L. J. Sandell¹ • ¹Washington Univ., St. Louis, MO, ²Kobe Univ., Kobe, Japan, ³Konan Kakogawa Hosp., Kakagowa, Japan, ⁴Univ. of Thessaly, Faculty of Med., Lab. of Cytogenetics and Molecular Genetics, Larissa, Greece

6:20 PM–6:30 PM

54 DNA METHYLATION REGULATES MIR-140 EXPRESSION IN PRIMARY OSTEOARTHRITIC CHONDROCYTES BY ALTERING SMAD-3 BINDING AFFINITY
I. Papathanasiou¹, E. Mourmoura¹, K. Malizos², A. Tsezou¹ • ¹Univ. of Thessaly, Faculty of Med., Lab. of Cytogenetics and Molecular Genetics, Larissa, Greece, ²Univ. of Thessaly, Faculty of Med., Dept. of Orthopaedics, Larissa, Greece

Saturday, May 4

7:30 AM–8:30 AM

Breakfast Poster Tours*

Tour 5: Osteoarthritis Therapies – Guide: Phillip Conaghan
Tour 6: Bone and Cartilage – Guide: Peter van der Kraan
Tour 7: Imaging and Biomarkers – Guide: Thomas Link
Tour 8: Biomechanics – Guide: Kim Bennell
*Additional ticketed fee required

7:30 AM–8:30 AM

Breakfast Workshops*

Breakfast Workshop C
I-12 OA Pathogenesis for Beginners: Lineage Tracing in Skeletal Pathophysiology • Kathy Cheah, PhD

Breakfast Workshop D
I-13 ABCs of Gait and Running Gait Analysis • Rich Souza, PhD
*Additional ticketed fee required
### Concurrent Session 7: Biomechanics

#### Grand Ballroom

**Moderated by:** Kerry Costello, PhD, MSc, BSE and Deepak Kumar, PT, PhD

<table>
<thead>
<tr>
<th>Time</th>
<th>Abstract I-14</th>
<th>Title</th>
<th>Presenter(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:45 AM–9:15 AM</td>
<td>Biomechanical Factors Related to Clinical vs. Structural Progression of Knee OA</td>
<td>Cheryl Hubley-Kozey, PhD</td>
<td></td>
</tr>
<tr>
<td>9:15 AM–9:25 AM</td>
<td>55</td>
<td>INDIVIDUALS WITH MILD-TO-MODERATE HIP OSTEOARTHRITIS WALK WITH LOWER HIP JOINT CONTACT FORCES DESPITE HIGHER LEVELS OF MUSCLE CO-CONTRACTION COMPARED TO HEALTHY CONTROLS</td>
<td>L. E. Diamond¹, H. X. Hoang¹², C. Pizzolato¹, A. Loureiro², M. Constantinou⁴, R. S. Barrett¹, D. G. Lloyd¹</td>
</tr>
<tr>
<td>9:35 AM–9:45 AM</td>
<td>57</td>
<td>PRELIMINARY TEST OF A SMART SHOE FOR TRAINING FOOT PROGRESSION ANGLE DURING WALKING</td>
<td>H. Xia¹, J. M. Charlton², M. A. Hunt³, P. B. Shull⁴</td>
</tr>
<tr>
<td>9:45 AM–9:55 AM</td>
<td>58</td>
<td>DETERMINING MULTI-JOINT BIOMECHANICS SIGNATURES FOR YOUTH WITH AN INTRA-ARTICULAR KNEE INJURY: TOWARDS EARLY MARKERS OF POST-TRAUMATIC OSTEOARTHRITIS</td>
<td>G. Kuntze¹, K. Lorenzen¹, J. Ronsky¹, J. Whittaker², C. Emery¹</td>
</tr>
<tr>
<td>9:55 AM–10:05 AM</td>
<td>59</td>
<td>HIGHEST RATED ABSTRACT AWARD WINNER</td>
<td>T-C. Liao¹, A. G. Morales Martinez¹, V. Pedroia¹, B. C. Ma¹, X. Li², S. Majumdar¹, R. B. Souza¹</td>
</tr>
</tbody>
</table>

### Concurrent Session 8: Biomarkers

#### Grand Ballroom Centre

**Moderated by:** Yolande Ramos, PhD and Tim Welting, PhD

<table>
<thead>
<tr>
<th>Time</th>
<th>Abstract I-15</th>
<th>Title</th>
<th>Presenter(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:45 AM–9:15 AM</td>
<td>Personalized Therapies for OA: Can Biomarkers Get Us There?</td>
<td>Anne-Christine Bay-Jensen, mMBA, MSc, PhD</td>
<td></td>
</tr>
</tbody>
</table>
9:15 AM–9:25 AM
IDENTIFICATION OF SUPERIOR RESPONDERS TO A BONE AND CARTILAGE CENTRIC TREATMENT IN OSTEOARTHRITIS: LOW LEVELS OF CARTILAGE FORMATION MAY PROVIDE AN OPPORTUNITY TO STIMULATE FORMATION
Y. Luo, N. Higgins, Y. He, I. Byrjalsen, J. R. Andersen, A. Bihlet, M. Karsdal, A. Bay-Jensen • Nordic BioSci. A/S, Herlev, Denmark

9:25 AM–9:35 AM
HSP90AA1, A CHAPERONE-MEDIATED AUTOPHAGY MEDIATOR, IS A BIOMARKER OF JOINT DAMAGE IN OA
I. Lorenzo-Gomez¹, J. Pinto-Tasende², N. Oreiro², F. J. Blanco¹,², B. Carames¹ • Cartilage Biology Group, Rheumatology Div., INIBIC-Complejo Hosp.ario A Coruña, Spain, A Coruña, Spain, Clinical Rheumatology Div., Complejo Hosp.ario A Coruña, Spain, A Coruña, Spain

9:35 AM–9:45 AM
CIRCULATING MICRO RNAS REFLECTING ONGOING OSTEOARTHRITIS PATHOPHYSIOLOGY IN CARTILAGE AS APPLICABLE BIOMARKERS.
Y. F. Ramos¹, R. Coutinho-de Almeida¹, A. Mahfouz²,³, W. den Hollander¹, N. Lakenberg¹, E. Houtman¹, M. van Hoolwerff¹, E. Suchiman¹, A. Rodríguez-Ruíz², P. Slagboom¹, H. Mei⁴, S. M. Kielbasas⁴, R. G. Nelissen⁵, M. Reinders¹,⁶, I. Meulenbelt¹ • Leiden Univ. Med. Ctr.; Dept. BioMed. Data Sci., Leiden, Netherlands, Computational Biology Ctr., Leiden, Netherlands, Dept. Orthopaedics, Leiden, Netherlands, Computational Biology Ctr., Leiden, Netherlands

9:45 AM–9:55 AM
ITIH1 (INTER-ALPHA TRYPSIN INHIBITOR HEAVY CHAIN 1) IS A POTENTIAL PROTEOMIC BIOMARKER TO PREDICT EARLY KNEE OSTEOARTHRITIS. A QUALIFICATION PHASE STUDY USING DATA FROM THE OSTEOARTHRITIS INITIATIVE (OAI)
L. Lourido¹,², C. Ruiz-Romero¹,², M. Camacho³, I. Rego-Pérez¹, N. Oreiro¹, C. Fernández-López¹, P. Nilsson⁴, F. Blanco¹,² • Rheumatology Div., ProteoRed/ISCIII Proteomics Group, INIBIC-Hosp. Univയоо A Coruña, Spain, A Coruña, Spain, CIBER-BBN Inst. de Salud Carlos III, INIBIC-CHUAC, A Coruña, Spain, Affinity Proteomics, SciLifeLab, Sch. of Biotechnology, KTH-Royal Inst. of Technology, Stockholm, Sweden

9:55 AM–10:05 AM
NO ASSOCIATION BETWEEN LOCAL LEVELS OF MOLECULAR BIOMARKERS AND KNEE CARTILAGE VOLUMES EARLY AFTER ANTERIOR CRUCIATE LIGAMENT INJURY
A. Struglics¹, S. Larsson¹, F. Eckstein², W. Wirth², L. S. Lohmander¹, R. Frobell² • Lund Univ., Faculty of Med., Dept. of Clinical Sci. Lund, Orthopaedics, Lund, Sweden, Inst. of Anatomy, Paracelsus Med. Univ. Salzburg and Nuremberg, Salzburg, Austria

10:05 AM–10:15 AM
INTRA-ARTICULAR LEVELS OF FIVE BIOMARKERS ASSESSED VIA MAGNETIC CAPTURE IN A RAT KNEE MODEL OF OSTEOARTHRITIS
E. Yarmola, B. D. Partain, Y. Y. Shah, J. Figueras, J. Dobson, K. Allen • Univ. of Florida, Gainesville, FL
<table>
<thead>
<tr>
<th>Time</th>
<th>Session/Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:15 AM</td>
<td>Break</td>
</tr>
<tr>
<td>10:45 AM</td>
<td>Plenary Session 4: Pain</td>
</tr>
<tr>
<td>10:45 AM</td>
<td>The Point of No Return—Mechanisms Driving the Transition from Acute to Chronic Pain</td>
</tr>
<tr>
<td>11:15 AM</td>
<td>IS THERE OBJECTIVE EVIDENCE OF NEUROPATHY IN KNEE OSTEOARTHRITIS IN NATIVE OR REPLACED KNEES BASED ON CLINICAL EVALUATION? THE MULTICENTER OSTEOARTHRITIS STUDY</td>
</tr>
<tr>
<td>11:25 AM</td>
<td>CONTRIBUTION OF SENSORY NERVES WITHIN OSTEOCHONDRAEAL CHANNELS TO PAIN IN HUMAN AND RAT KNEE OSTEOARTHRITIS</td>
</tr>
<tr>
<td>11:35 AM</td>
<td>GUT MICROBIOME ASSOCIATIONS WITH CHRONIC MUSCULOSKELETAL PAIN IN OLDER MEN</td>
</tr>
<tr>
<td>11:45 AM</td>
<td>THE ION CHANNEL PIEZO2 PLAYS A ROLE IN EARLY PAIN BEHAVIORS FOLLOWING DMM SURGERY IN MICE</td>
</tr>
<tr>
<td>12:05 PM</td>
<td>S100A9 INDUCES NOCICEPTIVE PAIN BUT IS NOT INVOLVED IN ALLODYNA IN ACUTE EXPERIMENTAL SYNOVITIS</td>
</tr>
</tbody>
</table>
12:30 PM–2:00 PM
**Lunch on Own**

12:30 PM–2:00 PM
**Chronic Pain Management: Marking The Path Toward Meeting Patient Goals**
Satellite Lunchtime Symposia

12:30 PM–2:00 PM
**Young Investigator Luncheon Workshop**

So You Want to be a Reviewer? Tips for Writing an Effective Review for Peer-Reviewed Journals

› Overview of the Editorial Process • Joel Block, MD, OaC Editor-in-Chief
› How to Write an Effective Review • Rik Lories, MD, PhD, OaC Associate Editor
› Real-Life Examples • Aileen Davis, PhD, OaC Associate Editor
› Addressing Area-Specific Concerns
  - Clinical Research • Ewa Roos, PT, PhD, OaC Deputy Editor
  - Statistics • Aleksandra Turkiewicz, PhD, OaC Associate Editor
  - Basic and Translational Research • Frank Beier, PhD, OaC Deputy Editor

2:00 PM–3:30 PM
**Concurrent Session 9: OA Outcomes**

Grand Ballroom

Moderated by: Margreet Kloppenburg, MD, PhD and Martin Thomas, PhD

2:00 PM–2:30 PM
**I-17**

Early OA Outcomes: What Should the Targets Be?
Sita Bierma-Zeinstra, PhD

2:30 PM–2:40 PM
**73**

CHARACTERISTICS ASSOCIATED WITH INCIDENCE OF HIP OSTEOARTHRITIS WITHIN 10 YEARS IN PEOPLE WITH EARLY HIP COMPLAINTS IN THE CHECK STUDY

A. C. Berkel van D. Schiphof, J. Waarsing, J. Runhaar, J. van Ochten, P. Bindels, S. Bierma-Zeinstra • Erasmus Med. Ctr., Rotterdam, Netherlands

2:40 PM–2:50 PM
**74**

IS OBESITY RELATED TO INCIDENCE OF PATELLOFEMORAL AND TIBIOFEMORAL OSTEOARTHRITIS? THE COHORT HIP AND COHORT KNEE STUDY

H. F. Hart1, M. van Middelkoop2, J. J. Stefanik3, K. M. Crossley4, S. M. Bierma-Zeinstra2 • 1The Univ. of Western Ontario, London, ON, Canada, 2Erasmus MC, Rotterdam, Netherlands, 3Northeastern Univ., Boston, MA, 4La Trobe Univ., Melbourne, Australia

2:50 PM–3:00 PM
**75**

MAGNETIC RESONANCE IMAGING MARKERS IMPROVE THE PREDICTION MODEL FOR TOTAL KNEE REPLACEMENT OVER 3 YEARS IN OLDER ADULTS

3:00 PM–3:10 PM 76 PREDICTION MODELS FOR INCIDENT SLOW GAIT SPEED OVER ‘10 YEARS IN PERSONS AT HIGH RISK FOR KNEE OSTEOARTHRITIS

L. Sharma1, K. Kwoh2, J. Lee3, A. H. Chang4, M. C. Nevitt5, M. C. Hochberg6, J. Song1, O. Almagor1, J. A. Cauley5, C. B. Eaton6, R. D. Jackson7, J. Szymbas8, J. S. Chmiel1 • 1Northwestern Univ., Chicago, IL, 2Univ. of Arizona, Tucson, AZ, 3Univ. of California, San Francisco, San Francisco, CA, 4Univ. of Maryland, Baltimore, MD, 5Univ. of Pittsburgh, Pittsburgh, PA, 6Brown Univ., Providence, RI, 7Ohio State Univ., Columbus, OH

3:10 PM–3:20 PM 77 STATIN USE AND RISK OF JOINT REPLACEMENT: A PROPENSITY SCORE MATCHED COHORT STUDY

A. Sarmanova1,2, M. Doherty2, C. Kuo3, J. Wei4, A. Abhishek2, C. Mallen4, C. Zeng4,5, Y. Wang6, G. Lei7,8, W. Zhang7 • 1MRC Integrative Epidemiology Unit, Bristol Med. Sch. (PHS), Univ. of Bristol, Bristol, United Kingdom, 2Academic Rheumatology Dept., Div. of Rheumatology, Orthopaedics and Dermatology, Sch. of Med., Univ. of Nottingham, Nottingham, United Kingdom, 3Div. of Rheumatology, Allergy and Immunology, Chang Gung Mem. Hosp., Taoyuan, Taiwan, 4Div. of Rheumatology, Allergy, and Immunology, Dept. of Med., Massachusetts Gen. Hosp., Harvard Med. Sch., Boston, MA, 5Hlth.Management Ctr., Xiangya Hosp., Changsha, China, 6Arthritis Res. UK Primary Care Ctr., Res. Inst. for Primary Care and Hlth.Sci., Keele Univ., Keele, United Kingdom, 7Dept. of Orthopaedics, Xiangya Hosp., Central South Univ., Changsha, China, 8Hunan Key Lab. of Joint Degeneration and Injury, Changsha, China

3:20 PM–3:30 PM 78 PREDICTORS OF TOTAL HIP REPLACEMENT IN COMMUNITY BASED OLDER ADULTS: A COHORT STUDY


2:00 PM–3:30 PM Concurrent Session 10: Cartilage Repair & Regenerative Medicine

Grand Ballroom Centre

2:00 PM–2:30 PM 79 INTRA-ARTICULAR DRUG DELIVERY IN OA

Laura Creemers, PhD

2:30 PM–2:40 PM 80 THE EFFECT OF IN VIVO CHONDROCYTE DEPLETION ON THE STRUCTURAL AND FUNCTIONAL PROPERTIES OF MURINE ARTICULAR CARTILAGE

A. O. Masson, J. M. Corpuz, W. B. Edwards, R. J. Krawetz • Univ. of Calgary, Calgary, AB, Canada

2:40 PM–3:00 PM 81 SETTING UP A PRE-CLINICAL HUMAN MODEL FOR MECHANICAL INDUCED OSTEOARTHRITIS TO INVESTIGATE POTENTIAL PHARMACOLOGICAL AGENTS


2:00 PM–3:30 PM Concurrent Session 10: Cartilage Repair & Regenerative Medicine

Grand Ballroom Centre

2:00 PM–2:30 PM 79 INTRA-ARTICULAR DRUG DELIVERY IN OA

Laura Creemers, PhD

2:30 PM–2:40 PM 80 THE EFFECT OF IN VIVO CHONDROCYTE DEPLETION ON THE STRUCTURAL AND FUNCTIONAL PROPERTIES OF MURINE ARTICULAR CARTILAGE

A. O. Masson, J. M. Corpuz, W. B. Edwards, R. J. Krawetz • Univ. of Calgary, Calgary, AB, Canada

2:40 PM–3:00 PM 81 SETTING UP A PRE-CLINICAL HUMAN MODEL FOR MECHANICAL INDUCED OSTEOARTHRITIS TO INVESTIGATE POTENTIAL PHARMACOLOGICAL AGENTS

Concurrent Session 10: Cartilage Repair & Regenerative Medicine (cont’d.)
Grand Ballroom Centre

2:50 PM–3:00 PM  MANGANESE DIOXIDE NANOPARTICLES MODULATE OXIDATIVE STRESS AND PROTECT CARTILAGE FROM INTERLEUKIN-1β INDUCED DEGRADATION
S. Kumar, I. M. Adjei, S. Brown, O. Liseth, B. Sharma • Univ. of Florida, Gainesville, FL

3:00 PM–3:10 PM  INJECTABLE NANOHYDROXYAPATITE-CHITOSAN-GELATIN MICROSCAFFOLDS INDUCE REGENERATION OF KNEE SUBCHONDRAL BONE CYST-LIKE LESIONS
B. Wang, Sr.1, W. Liu2, D. Xing3, Y. Du4, J. Lin5 • 1Shanxi Med. Univ. Second Affiliated Hosp., TAIYUAN, China, 2Tsinghua Univ., BEIJING, China, 3Peking Univ. People’s Hosp., BEIJING, China

3:10 PM–3:20 PM  ROLE OF STEM CELLS AND BIOACTIVE SCAFFOLD IN CHRONIC JOINT INJURY: WORKING TOWARDS A REGENERATIVE MEDICINE APPROACH TO STOP OSTEOARTHRITIS PROGRESSION
J. Li, C. Little • Kolling Inst., Univ. of Sydney, Sydney, Australia

3:20 PM–3:30 PM  THE MURINE EAR WOUND CARTILAGE SUPERHEALER TRAIT IS ASSOCIATED WITH GUT MICROBIOTA CHANGES AND IS TRANSFERRABLE TO NON-HEALER MICE BY GUT MICROBIOME TRANSPLANT.
C. Dunn1, J. McNaughton1, A. Rivas2, C. Velasco1, M. A. Jeffries1,3 • 1Univ. of Oklahoma, Oklahoma City, OK, 2Univ. of Arkansas for the Hlth.Sci., Little Rock, AR, 3Oklahoma Med. Res. Fndn., Oklahoma City, OK

3:30 PM–5:00 PM  Poster Session 2

5:00 PM–6:00 PM  Plenary Session – DEBATE
Moderated by: Richard Loeser, MD and Carla Scanzello, MD, PhD

Lumping vs. Splitting: In this Age of Diversity, is OA a Singular Disease?
Tonia Vincent, MD, PhD
Frank Beier, PhD

6:30 PM–7:30 PM  Statistics in Basic Science
Introduction from OACs Editor-in-Chief • Joel A. Block, PhD
Perspective of the Deputy Editor for Basic Science • Frank Beier, PhD
Statistical Reviewer’s Standpoint
“What does the Statistical Reviewer Look For” • Aleksandra Turkiewicz, PhD

6:30 PM–8:00 PM  Discussion Group Meeting
Rehabilitation

6:30 PM–8:00 PM  Discussion Group Meeting
Imaging
<table>
<thead>
<tr>
<th>Time</th>
<th>Event Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>6:30 PM–8:00 PM</td>
<td>Discussion Group Meeting</td>
</tr>
<tr>
<td>Willow West</td>
<td>OA Phenotype Research</td>
</tr>
<tr>
<td>6:30 PM–8:00 PM</td>
<td>Discussion Group Meeting</td>
</tr>
<tr>
<td>Willow Centre</td>
<td>Pain Mechanisms in OA: Basic and Clinical Research</td>
</tr>
<tr>
<td>6:30 PM–8:00 PM</td>
<td>Discussion Group Meeting</td>
</tr>
<tr>
<td>Chestnut East</td>
<td>International Foot and Ankle OA Consortium</td>
</tr>
<tr>
<td>6:45 PM–8:00 PM</td>
<td>Chinese Abstract Session Conducted in Chinese</td>
</tr>
<tr>
<td>Provincial North</td>
<td></td>
</tr>
</tbody>
</table>

**Sunday, May 5**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:00 AM–8:30 AM</td>
<td>Discussion Group Meeting</td>
</tr>
<tr>
<td>Chestnut Room</td>
<td>International Osteoarthritis Management Programs a.k.a. “Joint Effort”</td>
</tr>
<tr>
<td>7:30 AM–8:30 AM</td>
<td>Discussion Group Meeting</td>
</tr>
<tr>
<td>Kenora Room</td>
<td>Bridging Disciplines: A Pathway to Finding Solutions for Osteoarthritis</td>
</tr>
<tr>
<td>7:30 AM–8:30 AM</td>
<td>Breakfast Workshops*</td>
</tr>
<tr>
<td>Provincial North</td>
<td></td>
</tr>
<tr>
<td>I-19</td>
<td>Human Imaging • Xiaojuan Li, PhD</td>
</tr>
<tr>
<td>I-20</td>
<td>Animal Imaging • Matt Koff, PhD</td>
</tr>
<tr>
<td>Provincial South</td>
<td></td>
</tr>
<tr>
<td>I-21</td>
<td>Nuts And Bolts of Meta-Analysis, Systematic Literature Reviews, Network Meta-Analysis</td>
</tr>
<tr>
<td>Peter Jüni, PhD</td>
<td></td>
</tr>
<tr>
<td>* Additional ticketed fee required</td>
<td></td>
</tr>
<tr>
<td>8:45 AM–10:15 AM</td>
<td>Concurrent Session 11: Clinical Trials</td>
</tr>
<tr>
<td>Grand Ballroom West</td>
<td></td>
</tr>
<tr>
<td>I-22</td>
<td>2020 OA Vision: Emerging Therapeutics on the OA Landscape</td>
</tr>
<tr>
<td>Phil Conaghan, MD</td>
<td></td>
</tr>
<tr>
<td>Time</td>
<td>Session</td>
</tr>
<tr>
<td>-----------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
10:05 AM–10:15 AM 90
SINGLE INTRA-ARTICULAR INJECTION OF TLC599 PROVIDED SUSTAINED PAIN RELIEF THROUGH 24 WEEKS IN PARTICIPANTS WITH SYMPTOMATIC KNEE OSTEOARTHRITIS
D. Hunter1,2, C-C. Chang3, J-C. Wei4, H-Y. Lin3,4, C. Brown5, S-F. Shih7 • 1Univ. of Sydney, Sydney, Australia, 2Royal North Shore Hosp., Sydney, Australia, 3Div. of Allergy, Immunology and Rheumatology, Dept. of Internal Med., Sch. of Med., Coll. of Med., Taipei Med. Univ., Taipei, Taiwan, 4Div. of Allergy, Immunology and Rheumatology, Chung Shan Med. Univ. Hosp., Taipei, Taiwan, 6Dept. of Internal Med., Cheng Hsin Gen. Hosp., Taipei, Taiwan, 7Taiwan Liposome Company, Taipei, Taiwan

8:45 AM–10:15 AM Concurrent Session 12: Inflammation and Immunity

8:45 AM–9:15 AM 90
NF-kB Mediates Inflammation-Induced Metabolic and Senescence Changes in OA
Yousef Abu-Amer, PhD

9:15 AM–9:25 AM 91
THE RELATION BETWEEN THE INFLAMMATORY STATUS OF HUMAN END STAGE OA SYNOVIUM AND LEVELS OF LOW DENSITY LIPOPROTEIN
N. Kruisbergen, M. van den Bosch, A. Blom, P. van Lent • Radboudumc, Nijmegen, Netherlands

9:25 AM–9:35 AM 92
THE ANTI-ADAMTS-5 NANOBODY®, M6495, INHIBITS THE ACTIVATION OF TLR BY ADAMTS-5-MEDIATED DEGRADATION FRAGMENTS IN CARTILAGE EXPLANTS
N. Sharma1,2, P. Drobinski1,2, M. Karsdal1, A-C. Bay-Jensen2, C. Thudium2, M. Michaelis3, C. Ladel2, S. Lindemann3 • 1Univ. of Copenhagen, Copenhagen, Denmark, 2Nordic BioSci. A/S, Herlev, Denmark, 3Merck KGaA, Darmstadt, Germany

9:35 AM–9:45 AM 93
TIME-DEPENDENT CHANGES IN MACROPHAGE AND T CELL PROFILES IN A MURINE MODEL OF OSTEOARTHRITIS
C. Zhou1,2, V. Nguyen1,2, G. R. Dodge1,2, H. R. De’Broski1, C. R. Scanzello1,2 • 1The Univ. of Pennsylvania, Philadelphia, PA, 2Corporal Michael J. Crescenz VA Med. Ctr., Philadelphia, PA

9:45 AM–9:55 AM 94
IRON nanoparticle-labeled mesenchymal stromal cells persist and demonstrate anti-inflammatory mechanism of action in an osteoarthritis mouse model
W-Y. Cheung1, A. Gómez-Aristizábal1, A. Hamilton2, S. Nakamura1, A. Chaboureau1, S. Bhatt1, A. Sharma1, M. Kapoor1,2, P. Foster2,4, S. Viswanathan1,3 • 1Univ. Hlth.Network, Toronto, ON, Canada, 2Robarts Res. Inst., London, ON, Canada, 3Univ. of Toronto, Toronto, ON, Canada, 4Univ. of Western Ontario, London, ON, Canada
Concurrent Session 12: Inflammation and Immunity (cont’d.)
Grand Ballroom Centre

9:55 AM-10:05 AM 95
α10\textsuperscript{th}MSCs DECREASE SYNOVIAL MEMBRANE LONG TERM EXPRESSION OF TIMP-2 AND NFκB FOLLOWING ARTICULAR INJURY


10:05 AM-10:15 AM 96
CONNEXIN43-POSITIVE EXOSOMES FROM OSTEOARTHRITIC CHONDROCYTES SPREAD SENESCENCE AND INFLAMMATORY MEDIATORS TO NEARBY SYNOVIAL AND BONE CELLS

M. Varela-Eirín\textsuperscript{1}, A. Varela-Vázquez\textsuperscript{1}, A. Guitián-Caamaño\textsuperscript{1}, S. B. Bravo-López\textsuperscript{2}, C. Páinó\textsuperscript{2}, E. Fonseca\textsuperscript{1}, M. Kandouz\textsuperscript{2}, T. Aasen\textsuperscript{3}, A. Tabernero\textsuperscript{4}, A. Blanco\textsuperscript{2}, J. R. Caeiro\textsuperscript{4}, M. Mayán\textsuperscript{1} • \textsuperscript{1}CellCOM Res. Group. INIBIC. SERGAS. UDC, A Coruña, Spain, \textsuperscript{2}Proteomics laboratory. IDIS. CHUS-USC., Santiago de Compostela, Spain, \textsuperscript{3}Unit of Experimental Neurology-Neurobiology. “Ramón y Cajal” Hosp. (IRYCIS), Madrid, Spain, \textsuperscript{4}Dept. of Pathology, Sch. of Med., Wayne State Univ., Detroit, MI, \textsuperscript{5}Translational Molecular Pathology Res. Group. Vall d’Hebron Res. Inst. U. Autònoma de Barcelona. CIBERONC, Barcelona, Spain, \textsuperscript{6}Departamento de Bioquímica y Biología Molecular, INCYL, U. de Salamanca, Salamanca, Spain, \textsuperscript{7}Flow Cytometry Core Technologies, UCD Conway Inst., U. Coll. Dublin, Dublin, Ireland, \textsuperscript{8}Dept. of Orthopaedic Surgery and Traumatology. CHUS. USC, Santiago de Compostela, Spain

10:15 AM-10:45 AM Break

10:45 AM-12:15 PM Plenary Session—YEAR IN REVIEW

Moderated by: Danny Chan, PhD and Ingrid Meulenbelt, PhD

- **OA Clinical: Epidemiology and Therapy** • Margreet Kloppenburg, MD, PhD
- **I-24 Imaging** • Rick Kijowski, MD
- **I-25 Rehabilitation & Outcomes** • Monica Maly, PhD
- **I-26 Mechanics (animal and human)** • Michael Hunt, PhD, PT
- **I-27 Biomarkers** • Erwin van Spil, MD, PhD
- **I-28 Genetics, Genomics, Epigenetics** • Louise Reynard, PhD
- **OA Biology** • Carla Scanzello, MD, PhD
AGING

97
SOD ACTIVITY IN THE END STAGE KNEE AND HIP OSTEARTHRITIC CARTILAGE SIGNIFICANTLY LOWER THAN NON OSTEARTHRITIC CARTILAGE INDEPENDENT OF AGE-RELATED CHANGE

M. Koike¹, H. Nojiri², H. Kanazawa¹, H. Yamaguchi¹, K. Miyagawa¹, N. Nagura¹, S. Banno¹, Y. Iwase¹, H. Kurosawa¹, K. Kaneko²
¹Dept. of Orthopaedic Surgery, Juntendo Tokyo Koto Geriatric Med. Ctr., Tokyo, Japan, ²Dept. of Orthopaedic Surgery, Juntendo Univ. Graduate Sch. of Med., Tokyo, Japan

98
FENOFIBRATE, A PEROXISOME PROLIFERATOR-ACTIVATED RECEPTOR ALPHA, IS A NOVEL MOLECULE WITH SENOLYTIC AND AUTOPHAGY ACTIVITY FOR CARTILAGE DEGENERATION AND OSTEARTHRITIS

U. Nogueira-Recalde¹, I. Lorenzo-Gomez¹, F. J. Blanco¹, M. I. Loza³, D. Grass³, M. Lotz³, P. D. Robbins³, E. Dominguez³, B. Carames¹
¹Instituto de BioMed. Res. of A Coruña (INIBIC), A Coruña, Spain, ²Biofarma Res. Group, Ctr. for Res. in Molecular Med. and Chronic Diseases (CIMUS), Univ. of Santiago de Compostela, Santiago de Compostela, Spain, ³Coll. of Biological Sci., Univ. of Minnesota, Mineapolis, MN, ⁴Dept. of Molecular Med.. Scripps Res., La Jolla, CA

99
OVEREXPRESSION OF MIG-6 IN CARTILAGE INDUCES AN OSTEARTHRITIS-LIKE PHENOTYPE IN MICE.

M. R. Bellini, M. A. Pest, F. Beier
Univ. of Western Ontario, London, ON, Canada

100
SENESCENCE IN OSTEARTHRITIS

Y.-H. Chen¹,², C.-H. Chou¹, C. Haraden³, D. Attarian³, V. B. Kraus¹

101
HISTOLOGICAL ANALYSIS OF MURINE KNEES REVEALS THE Impact of THE MITOCHONDRIAL DNA VARIATION on THE JOINT DEGENERATION IN A CONPLASTIC MOUSE MODEL of AGING AND FORCED EXERCISE

M. Scotece¹, I. Rego-Pérez¹, A. Lechuga-Vieco², P. Filgueira-Fernández¹, J. Enríquez², F. Blanco¹
¹Servicio de Reumatología. Inst. de Investigación Biomédica de A Coruña (INIBIC). Complejo Hosp.ario Univ.rio de A Coruña (CHUAC), Sergas. Univ.e da Coruña (UDC), A Coruña, Spain, ²Grupo de Genética funcional del sistema de fosforilación oxidativa. Centro Natl. de Investigaciones Cardiovasculares (CNIC), Madrid, Spain

102
INVESTIGATING THE ROLE of NUCLEAR RECEPTOR PROLIFERATOR-ACTIVATED RECEPTOR DELTA (PPARΔ) IN AGING and METABOLIC MODELS of OSTEARTHRITIS

B. C. To¹, A. Ratneswaran², G. Kerr³, F. Beier¹
¹Western Univ., London, ON, Canada, ²Univ. of Toronto, London, ON, Canada

103
MULTIPARAMETRIC ANALYSIS of HUMAN PLASMA EXOSOME PHENOTYPE by CONVENTIONAL FLOW CYTOMETRY

X. Zhang, V. B. Kraus
Duke Univ., Durham, NC

104
AGING INDUCES ENDOPLASMIC RETICULUM (ER) STRESS and APOPTOSIS in NON-HUMAN PRIMATE KNEE ARTICULAR CARTILAGE

R. R. Yammani, L. Tan
Wake Forest Sch. of Med., Winston Salem, NC

105
CONTROLLED INDUCTION and TARGETED ELIMINATION of P16INK4A-HIGH CHONDROCYTES TO INVESTIGATE SENESCENCE-MEDIATED CARTILAGE DYSFUNCTION

G. A. Sessions¹, M. A. Sinkler²,³, M. E. Copp¹, B. O. Diekman¹,²
¹Univ. of North Carolina Chapel Hill, Chapel Hill, NC, ²Med. Coll. of Georgia at Augusta Univ., Augusta, GA, ³North Carolina State Univ., Raleigh, NC
106 KNOCKDOWN OF SIRTUIN3 IN CARTILAGE PROTECTS MALE MICE AGAINST HIGH-FAT DIET-INDUCED OSTEOARTHRITIS
S. Zhu1, E. L. Donovan1,2, E. B. Lopes1, M. Kinter1, A. Simmons1, D. Makosa1, D. Cortassa1, M. West1, T. M. Griffin1,4 • 1Oklahoma Med. Res. Fndn., Oklahoma City, OK, 2Oregon Inst. of Technology, Klamath Falls, OR, 3Univ. of Wisconsin, Madison, WI, 4Univ. of Oklahoma Hlth.Sci. Ctr., Oklahoma City, OK

107 NOVEL MODEL FOR AGE-RELATED OA: ER STRESS IN ARTICULAR CARTILAGE INDUCES JOINT DEGENERATION IN MICE.
K. L. Posey1, J. L. Alcorn1, A. C. Veerisetty1, M. G. Hossain1, J. T. Hecht1,2 • 1McGovern Med. Sch. at UTHlth., Houston, TX, 2UTHlth.Sch. of Dentistry, Houston, TX

108 AGE INCREASES THE SEVERITY OF OSTEOARTHRITIS PROGRESSION AFTER MEDIAL MENISCUS TRANSECTION IN RATS

109 MORE THAN PAIN: PRE-OPERATIVE INDICATORS OF PATIENTS WHO PROGRESS FROM UNILATERAL TO BILATERAL TOTAL KNEE ARTHROPLASTY WITHIN 10 YEARS
J. A. McClelland1, K. E. Webster2, H. Klemm2, S. Wicks1, J. A. Fellar2 • 1La Trobe Univ., Bundoora, Australia, 2OrthoSport Victoria, Melbourne, Australia

BIOMARKERS
110 MICRORNA-1915-3P IN SERUM EXOSOME IS ASSOCIATED WITH DISEASE ACTIVITY OF RHEUMATOID ARTHRITIS IN KOREA
J. Yoo, M-K. Lim, D-H. Sheen • EULJI Univ. Hosp., DAEJEON, Korea, Republic of

111 MULTIPLE JOINT OSTEOARTHRITIS IN THE OSTEOARTHRITIS INITIATIVE

112 SERUM LEVELS OF COLL2-1, A SPECIFIC BIOMARKER OF CARTILAGE DEGRADATION, ARE NOT AFFECTED BY SAMPLING CONDITIONS, CIRCADIAN RHYTHM, SEASONALITY AND PHYSICAL ACTIVITY.
Y. Henrotin1,2, M. Fonck3, B. Costes1, B. Cordier3, A. Labasse3, S. Vander Poelen3, A-C. Hick2 • 1Univ. of Liege, Liege, Belgium, 2Artialis SA, Liège, Belgium, 3Artialis SA, Liege, Belgium

113 IDENTIFICATION AND CHARACTERIZATION OF NEW BIOCHEMICAL MARKERS FOR SARCOPENIA.
Y. Henrotin1,2, B. Cordier3, A. Labasse3, S. Vander Poelen3, C. Boileau3, B. Costes3, C. L’hôte3 • 1Univ. of Liege, Liege, Belgium, 2Artialis SA, Liège, Belgium, 3Artialis SA, Liege, Belgium

114 WEIGHT BEARING CT 3D JOINT SPACE WIDTH MEASURES SHOW EARLY JOINT CHANGES FOLLOWING INTRA-ARTICULAR FRACTURES
M. Ho1, K. Dibbern1, M. Willey1, C. P. Klewenko2, J. Age1, J. L. Marsh1, D. D. Anderson • 1The Univ. of Iowa, Iowa City, IA, 2Univ. of Washington, Seattle, WA

115 SIRT1 CLEAVAGE: FROM CARTILAGE DEGENERATION TO OSTEOARTHRITIC BIOMARKER
G. Batshon, O. Qiq, E. Reich, A. Kumar, M. Dvir-Ginzberg • Hebrew Univ. Of Jerusalem, Jerusalem, Israel

116 SYNOVIAL FLUID IL-1RA LEVELS ARE CORRELATED WITH SYNOVIAL FLUID IL-6 AND SERUM IL-1RA LEVELS IN PATIENTS WITH KNEE OSTEOARTHRITIS
Y. Shimura, H. Kurosawa, M. Tsuchiya, H. Kaneko, Y. Iwase, K. Kaneko, M. Ishijima • Juntendo Univ., Bunky, Tokyo, Japan
117
SERUM MEASURES OF METABOLISM AND INFLAMMATION AMONG ADULTS PRIOR TO INCIDENT ACCELERATED HAND OSTEOARTHRITIS: DATA FROM THE OSTEOARTHRITIS INITIATIVE

118
HIGHER AGGREGAN 1-F21 EPITOPE CONCENTRATIONS IN SYNOVIAL FLUID EARLY AFTER KNEE INJURY ARE ASSOCIATED WITH WORSE CARTILAGE QUALITY 20 YEARS LATER
S. Larsson1, P. Neuman2, A. Struglics2 • Lund Univ., Faculty of Med., Dept. of Clinical Sci. Lund, Orthopaedics, Lund, Sweden, Lund Univ., Faculty of Med., Dept. of Clinical Sci. Malmö, Orthopaedics, Lund, Sweden

119
PHENYLALANINE IS A POTENTIAL NOVEL MARKER FOR RADIOGRAPHIC KNEE OSTEOARTHRITIS PROGRESSION: THE MOST STUDY
G. Zhai1, X. Sun2, J. J. Bjerre-Bastos3, I. Karsdal3,4, X. Zhang5, C. E. Lewis3, E. Randell1, M. Liu1, N. Wang1, N. Wang6,7, I. Tolstykh1, P. Rahman1, J. Torner4, C. E. Lewis5, M. C. Nevitt1, A. Guermazi2, F. Roemer4, D. T. Felson2 • Univ. of California, San Francisco, CA, Univ. of Iowa, Iowa, IA, Univ. of Alabama, Birmingham, Birmingham, AL, Univ. of California, San Francisco, CA

120
ELEVATED SERUM BIOMARKERS OF INFLAMMATORY TURNOVER OF COLLAGEN TYPES III AND VI PREDICT RAPID CARTILAGE LOSS

121
CORRELATION BETWEEN URINE CTX-II AND SYNOVIAL PATHOLOGY IN TOTAL KNEE ARTHROPLASTY PATIENTS
P. Arunrukthavon1, S. KhuangSirikul, D. Heebthamai, T. Chotanaphuti • Phramongkutklao Hosp., Bangkok, Thailand

122
OSTEOARTHRITIS DISEASE PROGRESSION IN BIOMARKER-BASED PATIENT ENDOTYPES.

123
INCREASED LEVELS OF THE ALARMIN HIGH MOBILITY GROUP BOX 1 IS DETECTED IN SYNOVIAL FLUID AFTER ACUTE KNEE INJURY
C. Aulin1, H. E. Harris1, S. Larsson2, A. Struglics2 • Karolinska Inst., Stockholm, Sweden, Lund Univ., Lund, Sweden

124
LUBRICIN AND HYALURONAN ARE ALTERED IN MULTIPLE EQUINE MODELS OF TRAUMATIC JOINT INJURY
B. Peal, R. Gagliardi, J. Su, L. Fortier, M. Delco, A. Nixon, H. Reesink • Cornell Univ., Ithaca, NY

125
POST TRAUMATIC OSTEOARTHRITIS: BASELINE SYNOVIAL FLUID BIOMARKERS ARE ASSOCIATED WITH CARTILAGE BIOCHEMISTRY MEASURED USING MRI ONE YEAR AFTER ACL RECONSTRUCTION
J. J. Lee1, V. Pedoia1, J. Heubner2, X. Zhang2, C. McCulloch3, B. Ma1, X. Li3, M. Koff1, H. Potter1, K. Amrami5, A. Krych5, S. Rodeo4, V. Kraus2, S. Majumdar1 • Univ. of California, San Francisco, San Francisco, CA, Univ. of Iowa, Iowa, IA, Univ. of Alabama, Birmingham, Birmingham, AL, Hosp. for Special Surgery, New York, NY, Mayo Clinic, Rochester, MN

126
A HIGHLY SENSITIVE MULTIPLEX BIOMARKER ASSAY FOR THE EARLY DIAGNOSIS OF OSTEOARTHRITIS
J. Hendriks1, M. Shariff, D. B. Saris2, M. Karperien1 • Univ. of Twente, Enschede, Netherlands, Univ. of Bristol, Bristol, United Kingdom, Mayo Clinic, Rochester, MN
127 DECONSTRUCTING BIOMARKER ANALYSIS IN OA: ACTIVITY, BURDEN OF DISEASE AND PROGRESSION
A-C. Bay-Jensen, A. Biulet, C. Thudium, J. R. Andersen, M. A. Karsdal • Nordic BioSci. A/S, Herlev, Denmark

128 REESTABLISHMENT OF THE ARGS PHARMACODYNAMIC, SERUM BIOMARKER. DEVELOPMENT OF A HIGH SENSITIVE CHEMILUMINESCENCE IMMUNOASSAY FOR DETECTION OF AGGREGANASE-GENERATED AGGREGAN FRAGMENTS
Y. He1, H. Rønberg1, M. Karsdal1, A. Siebuhr1, J. Larkin2, A-C. Bay-Jensen1 • 1Nordic BioSci., Herlev, Denmark, 2Biopharm R&D, GlaxoSmithKline, Upper Merion, PA

129 THE BIOLOGICAL EFFECT OF AN ANGULAR TILT PARADIGM ON THE KNEE JOINT
P. Jayabalan1, R. Bergman2, H. Kim1, Y. Daher1 • 1Shirley Ryan AbilityLab, Chicago, IL, 2Univ. of Michigan, Ann Arbor, MI

130 ON THE ROAD TO BIOMARKERS: DEVELOPING A ROBUST SYSTEM FOR MIRNA EVALUATION IN EQUINE BLOOD AND SYNOVIAL FLUID
J. Antunes, T. G. Koch, J. Koenig, N. Cote, M-S. Dubois • Ontario Vet. Coll., Guelph, ON, Canada

131 BIOCHEMICAL PROFILING OF BONE MARROW LESIONS IN KNEE OSTEOARTHRITIS PATIENTS: ALTERED MINERALIZATION OF THE SUBCHONDRAL BONE MATRIX
J. S. Kuliwaba, Y-R. Lee, D. Muratovic, T. K. Gill, D. M. Findlay • The Univ. of Adelaide, Adelaide, Australia

BIOMECHANICS & GAIT

132 CHANGES IN KNEE ADDUCTION MOMENT WITH A VARIABLE-STIFFNESS SHOE ARE RELATED TO CHANGES IN PAIN AND FUNCTION
J. Erhart-Hledik1,2, G. Mahtani1,2, J. Asay1,2, T. Andriacchi1,2, C. Chu1,2 • 1Stanford Univ., Stanford, CA, 2Palo Alto Veterans Hosp., Palo Alto, CA

133 DOES DYNAMIC KNEE ADDUCTION ANGLE IMPACT CLINICAL RESPONSE TO A TOE-OUT GAIT MODIFICATION INTERVENTION?
J. M. Charlton, D. Kobsar, M. A. Hunt • Univ. of British Columbia, Vancouver, BC, Canada

134 DOES THE PRESENCE OF SELF-REPORTED KNEE INSTABILITY IMPACT THE RESPONSE TO WALKING SURFACE TRANSLATIONS IN THOSE WITH KNEE OSTEOARTHRITIS?
M. Baker, N. Urquhart, W. Stanish, D. Rutherford • Dalhousie Univ., Halifax, NS, Canada

135 GAIT KINEMATICS FOR PATIENTS WITH EARLY STAGE KNEE OSTEOARTHRITIS IN THE APPROACH PROJECT

136 CLINICAL ANALYTICAL VIBROARTHROGRAPHY METHOD FOR CLASSIFYING PATIENTS WITH KNEE OSTEOARTHRITIS
S. Ota1, R. Fujita1, N. Segawa1, R. Tanaka1, S. Inagawa1, T. Saka12 • 1Seijoh Univ., Tokai, Japan, 2Saitama Univ., Saitama, Japan

137 COULD INCREASED TRUNK FLEXION UNDERLIE ALTERATIONS IN KNEE MUSCLE ACTIVITY IN PEOPLE WITH KNEE OA?
S. J. Preece, W. Alghamdi, R. Jones • Univ. of Salford, Manchester, United Kingdom
138 Sex Differences in Knee Extension Rate of Torque Development and Patient-Reported Function Among Individuals with Anterior Cruciate Ligament Reconstruction.
C. Kuenze, C. Lisee, T. Birchmeier, A. Triplett, L. Wilcox, A. Schorfaar, M. Shingles • Michigan State Univ., East Lansing, MI

139 The Influence of Acute Fracture Severity on OA Risk Following Intra-Articular Fractures
K. Dibbern, T. O. McKinley, J. L. Marsh, D. D. Anderson • The Univ. of Iowa, Iowa City, IA, Indiana Univ., Indianapolis, IN

140 The Relationship Between Muscle Activation During Gait and Cartilage Volume Loss in Patients with Non-Traumatic and Post-Traumatic Knee Osteoarthritis
S. Robbins, A. Teoli, F. Abram, J-P. Pelletier, J. Martel-Pelletier • McGill Univ., Montreal, QC, Canada, Constance Lethbridge Rehabilitation Ctr., Montreal, QC, Canada, Arthrolab Inc., Montreal, QC, Canada, Univ. de Montreal, Montreal, QC, Canada

141 Knee-Specific Gait Deviation Index for Assessing Healthy and Osteoarthritis Gait.
D. Kobsar, J. M. Charlton, N. M. Krowchuk, D. Thatcher, M. A. Hunt • Univ. of British Columbia, Vancouver, BC, Canada

142 Factors Associated with Articular Cartilage T2 Relaxation Time in Uninjured Individuals
J. Emory, M. Manzer, B. Sajja, E. Wellsandt • Univ. of Nebraska Med. Ctr., Omaha, NE

143 Relationship Between Static Foot Posture, In-Shoe Plantar Forces and Knee Pain in People with Medial Knee Osteoarthritis
B. Metcalf, K. L. Paterson, P. K. Campbell, T. V. Wrigley, J. Kasza, K. L. Bennell, R. S. Hinman • Univ. of Melbourne, Carlton, Australia, Monash Univ., Melbourne, Australia

144 Preoperative Gait Biomechanics and Its Relationship to Functional Outcome Following Total Hip Arthroplasty.
P. R. Biggs, C. A. Holt, J. E. Naili • Cardiff Univ., Cardiff, United Kingdom, Karolinska Inst.t, Stockholm, Sweden

145 Pain Response on Neuromuscular Function After 30 Minutes of Physical Activity in Individuals with Knee Osteoarthritis

146 Wide Stance Gait Style Compliments High Tibial Osteotomy in Reducing Knee Joint Loading
J. Bowd, P. Biggs, C. Holt, G. Whatling • Cardiff Univ., Cardiff, United Kingdom

147 Assessment of Clinically-Meaningful Age and Knee Osteoarthritis Gait Measures Using Inertial Measurement Units
J. F. Hafer, K. L. Kern, S. G. Provenzano, C. E. Agresta, R. F. Zernicke • Univ. of Michigan, Ann Arbor, MI

148 Foot Symptoms, Plantar Pressures, Radiographic Alignment and Progression in People with Midfoot Osteoarthritides: An Exploratory 5-Year Follow-Up of Offload Trial Participants
149 LOWER EXTREMITY KINEMATIC AND KINETIC SEX DIFFERENCE IN LANDING AMONG INDIVIDUALS A HISTORY OF ANTERIOR CRUCIATE LIGAMENT RECONSTRUCTION  
C. Lisee, E. Ballard, J. Polin, C. Kuenze • Michigan State Univ., East Lansing, MI

150 STATIC AND DYNAMIC BALANCE OF PATIENTS AT 1 YEAR AFTER TOTAL KNEE ARTHROPLASTY  
A. Y. Wong1, C. Lo1, M. Brodie2, W. Tsang1, C. Yan3, S. Lord4 • 1The Hong Kong Polytechnic Univ., Hong Kong, Hong Kong, 2NeuroSci. Res. Australia, Sydney, Australia, 3The Univ. of Hong Kong, Hong Kong, Hong Kong

151 DIFFERENCES EXIST IN QUADRICEPS AND HAMSTRING MUSCLE ACTIVATION DURING GAIT IN PATIENTS WITH NON-TRAUMATIC AND POST-TRAUMATIC KNEE OSTEOARTHRITIS  
S. Robbins1,2, L. Fedorowich1,2 • 1McGill Univ., Montreal, QC, Canada, 2Constance Lethbridge Rehabilitation Ctr., Montreal, QC, Canada

152 DETERIORATING SUBCHONDRAL BONE MICROSTRUCTURE ACCELERATES OSTEOARTHRITIS PROGRESSION IN DEVELOPMENTAL DYSPLASIA OF THE HIP THAN IN PRIMARY OSTEOARTHRITIS  
L. Chu, Z. Yu • Shanghai Ninth People’s Hosp., Shanghai Jiao Tong Univ. Sch. of Med., Shanghai, China

153 KNEE JOINT INSTABILITY IN KNEE OSTEOARTHRITIS: EFFECT ON GAIT BIOMECHANICS AND MOTOR CONTROL  
J. Schrijvers1, J. van den Noort1,2, M. van der Esch3,4, J. Harlaar1,5 • 1Amsterdam UMC, Vrije Univ., Amsterdam, Dept. of Rehabilitation Med., Amsterdam Movement Sci., Amsterdam, Netherlands, 2Amsterdam UMC, Univ. of Amsterdam, Musculoskeletal Imaging Quantification Ctr. (MIQC), Dept. of Radiology and Nuclear Med., Amsterdam Movement Sci., Amsterdam, Netherlands, 3Amsterdam Rehabilitation Res. Ctr., Reade, Amsterdam, Netherlands, 4Ctr. of Applied Res., Faculty of Hlth., Amsterdam Univ. of Applied Sci., Amsterdam, Netherlands, 5Delft Univ. of Technology, Dept. of Biomechanical Engineering, Delft, Netherlands

154 INCREASES IN ACTIVITY DO NOT RESULT IN INCREASES IN CUMULATIVE MEDIAL KNEE LOADING WITH LATERAL WEDGE INSOLES  
R. K. Jones1,2, A. Liu1, S. C. Carter1,2, M. J. Parkes1,2, D. T. Felson3,4 • 1Univ. of Salford, Manchester, United Kingdom, 2Manchester Academic Hlth. Sci. Ctr., Manchester, United Kingdom, 3Univ. of Manchester, Manchester, United Kingdom, 4Boston Univ., Boston, MA

155 DOES THE AMOUNT OF EFFUSION IN THE SYMPTOMATIC KNEE EXPLAIN ALTERED FUNCTION WHEN COMPARED TO THE CONTRALATERAL KNEE DURING WALKING IN INDIVIDUALS WITH OSTEOARTHRITIS?  
D. J. Rutherford1, C. Gillis1, C. Hubley-Kozeny1, I. Wong2, W. Stanish3, M. Mitchell3,4 • 1Dalhousie Univ., Halifax, NS, Canada, 2Nova Scotia Hlth. Authority, Halifax, NS, Canada

156 CHARACTERISTICS OF THE DISTANCE BETWEEN THE CENTER OF PRESSURE AND THE CENTER OF MASS DURING QUIET STANDING IN PATIENTS WITH KNEE OSTEOARTHRITIS  
K. SABASHI1,2, M. YAMANAKA3, T. CHIBA1,2, T. ISHIDA1, H. TOHYAMA1 • 1Hokkaido Univ., Sapporo, Japan, 2Hokkaido Univ. Hosp., Sapporo, Japan, 3Hokkaido Chitose Rehabilitation Univ., Chitose, Japan

157 KNEE COACTIVATION AND TRUNK FLEXION STRATEGIES DURING SIT TO STAND MOVEMENT PERFORMED BY INDIVIDUALS WITH MILD AND MODERATE KNEE OSTEOARTHRITIS  
M. Petrella, P. Regina Mendes da Silva Serrão, L. Approbato Selistre, G. Helena Gonçalves, S. Márcia Mattiello • Federal Univ. of São Carlos., São Carlos, Brazil

158 COMPARISON OF THE INTERNAL HIP ABDUCTION MOMENT AND THE PELVIC KINEMATICS DURING SINGLE-LEG STANDING BETWEEN PEOPLE WITH KNEE OSTEOARTHRITIS AND HEALTHY ELDERLY PEOPLE  
T. Chiba1,2, M. Yamanka3, K. Sabashi1,2, T. Kobayashi3, H. Tohyama1 • 1Dept. of Rehabilitation, Hokkaido Univ. Hosp., Sapporo, Japan, 2Faculty of Hlth.Sci., Hokkaido Univ. Sapporo, Japan, 3Faculty of Hlth.Sci., Hokkaido Chitose Coll. of Rehabilitation, Chitose, Japan
159
LOW PHYSICAL ACTIVITY LEVELS IN KNEE OSTEOARTHRITIS ASSOCIATED WITH “AT RISK” GAIT PATTERNS
K. E. Costello, J. L. Astephen Wilson, C. L. Hubley-Kozey • Dalhousie Univ., Halifax, NS, Canada

160
DOES THE PRESENCE OF SELF-REPORTED WALKING DIFFICULTY INFLUENCE GAIT MECHANICS AND MUSCULAR ACTIVATIONS IN INDIVIDUALS WITH KNEE OSTEOARTHRITIS?
J. Lohnes, W. Stanish, N. Urquhart, D. Rutherford • Dalhousie Univ., Halifax, NS, Canada

161
ASSOCIATION BETWEEN CHANGES IN THE KNEE ADDUCTION MOMENT AND CHANGES IN KNEE PAIN AND FUNCTION IN RESPONSE TO BIOMECHANICAL INTERVENTIONS FOR MEDIAL KNEE OSTEOARTHRITIS • A SYSTEMATIC REVIEW
L. C. Pereira¹, J. Runhaar², J. Favre¹, B. M. Jolles², S. Bierma-Zeinstra² • ¹Univ. Hosp. of Lausanne, Lausanne, Switzerland, ²Erasmus MC Univ. Med. Ctr. Rotterdam, Rotterdam, Netherlands

162
ASSOCIATION BETWEEN GROUND REACTION FORCE CHARACTERISTICS DURING GAIT AND KNEE INJURY AND OSTEOARTHRITIS OUTCOME SCORES IN YOUNG ADULTS WITH OBESITY
D. N. Pamukoff¹, S. A. Garcia¹, S. C. Holmes¹, B. K. Post¹ • ¹California State Univ., Fullerton, Fullerton, CA, ²Univ. of Michigan, Ann Arbor, MI

163
QUANTIFYING HIGH KNEE FLEXION EXPOSURES IN OCCUPATIONAL CHILDCARE TO ASSESS THE POTENTIAL FOR INCREASED RISK OF KNEE OSTEOARTHRITIS
A. F. Laudanski, J. Buchman-Pearle, S. M. Acker • Univ. of Waterloo, Waterloo, ON, Canada

164
IMPACT OF NEUROMUSCULAR FUNCTION ON PAIN DURING WALKING IN INDIVIDUALS WITH KNEE OSTEOARTHRITIS
E. M. Casto¹, K. A. Boyer¹,² • ¹Univ. of Massachusetts Amherst, Amherst, MA, ²Univ. of Massachusetts Med. Sch., Worcester, MA

165
ACUTE EFFECTS OF CYCLIC AND SUSTAINED SQUAT EXPOSURES ON KNEE POWER IN HEALTHY YOUNG SUBJECTS
N. K. Ivanochko, S. M. Acker • Univ. of Waterloo, Kitchener, ON, Canada

166
ASSOCIATIONS BETWEEN LATERAL COMPARTMENT T1RHO MRI INTER-LIMB RATIOS AND CHANGES IN WALKING GAIT KINEMATICS FOLLOWING ANTERIOR CRUCIATE LIGAMENT RECONSTRUCTION
S. J. Pfeiffer¹, J. T. Spang¹, D. Nissman¹, D. Lalush¹,², K. Wallace¹, M. S. Harkey², L. Pietrosimone³, R. J. Schmitz⁴, T. Blackburn¹, B. Pietrosimone¹ • ¹Univ. of North Carolina at Chapel Hill, Chapel Hill, NC, ²North Carolina State Univ., Raleigh, NC, ³Tufts Med. Ctr., Boston, MA, ⁴Duke Univ., Durham, NC, ⁵Univ. of North Carolina at Greensboro, Greensboro, NC

167
VIBRATORY STIMULI IMPROVE GAIT BIOMECHANICS LINKED TO POST-TRAUMATIC OSTEOARTHRITIS IN INDIVIDUALS WITH ANTERIOR CRUCIATE LIGAMENT RECONSTRUCTION
T. Blackburn¹, B. Pietrosimone¹, D. Dewig¹, J. Goodwin², C. Johnston¹ • ¹Univ. of North Carolina at Chapel Hill, Chapel Hill, NC, ²Elon Univ., Elon, NC

168
THE KNEE EXTENSION MOMENT DURING GAIT IS MORE THAN TWO TIMES LOWER AFTER A TOTAL KNEE ARTHROPLASTY. A COMPARISON TO ASYMPTOMATIC CONTROLS AT MATCHED WALKING SPEEDS
E. Meinders¹, M. J. Booij¹, J. C. van der Noort², J. Harlaar¹,²,³ • ¹Amsterdam UMC, location VUmc, Amsterdam, Netherlands, ²Amsterdam UMC, location AMC, Amsterdam, Netherlands, ³Delft Univ. of Technology, Delft, Netherlands

169
JOINT STIFFNESS DURING WALKING IN SEDENTARY YOUNG ADULTS
J. Freedman Silvernail, B. Borgia, K. Wiegand • Univ. of Nevada, Las Vegas, Las Vegas, NV
170
LONGITUDINAL CHANGES IN GAIT WAVEFORMS WITH ACL RECONSTRUCTION
D. Kumar1, K. E. Costello1, D. Chan1, M. Tanaka2, R. B. Souza3, C. Ma3, X. Li2 • 1Boston Univ., Boston, MA, 2Cleveland Clinic, Cleveland, OH, 3Univ. of California, San Francisco, San Francisco, CA

171
SEX AND RACE RELATED DIFFERENCES IN GROUND REACTION FORCES DURING WALKING AND INTERACTIONS WITH KNEE PAIN AND OSTEOARTHRITIS IN A LARGE COHORT
D. Kumar1, K. E. Costello1, T. Neogi2, C. E. Lewis3, N. Segal4, D. Gross4, M. Nevitt5, C. L. Lewis1, D. T. Felson6 • 1Boston Univ., Boston, MA, 2Boston Univ. Sch. of Med., Boston, MA, 3Univ. of Alabama and Birmingham, Birmingham, AL, 4Univ. of Kansas, Kansas City, KS, 5MGH Inst. of Hlth.Professions, Boston, MA, 6Univ. of California, San Francisco, San Francisco, CA

172
RELATIONSHIP OF KNEE ADDUCTION AND FLEXION MOMENTS DURING GAIT WITH MEDIAL COMPARTMENT CARTILAGE THICKNESS 9 YEARS FOLLOWING POSTERIOR CRUCIATE LIGAMENT RECONSTRUCTION
N. M. Brisson1, A. N. Agres1, T. Jung2, A. G. Culvenor3,4, W. Wirth1,5, F. Eckstein1,5, G. N. Duda1 • 1Julius Wolff Inst., Charité – Univ.smedizin, Berlin, Germany, 2Ctr. for Musculoskeletal Surgery, Charité – Univ.smedizin, Berlin, Germany, 3Paracelsus Med. Univ., Salzburg, Austria, 4La Trobe Univ., Melbourne, Australia, 5Chondrometrics GmbH, Ainring, Germany

173
GROUND REACTION FORCE PATTERNS IN KNEES WITH AND WITHOUT PAIN AND RADIOGRAPHIC OSTEOARTHRITIS: DESCRIPTIVE ANALYSES FROM A LARGE COHORT STUDY
K. E. Costello1, D. T. Felson6, T. Neogi2, N. Segal3, C. E. Lewis4, K. D. Gross5, M. Nevitt6, C. L. Lewis1, D. Kumar1 • 1Boston Univ., Boston, MA, 2Boston Univ. Sch. of Med., Boston, MA, 3Univ. of Kansas Med. Ctr., Kansas City, KS, 4Univ. of Alabama at Birmingham, Birmingham, AL, 5MGH Inst. of Hlth.Professions, Boston, MA, 6Univ. of California at San Francisco, San Francisco, CA

174
MEDIAL MENISCUS EXTRUSION IS ASSOCIATED WITH THE GAIT SPEED AMONG THE MRI-DETECTED PATHOPHYSIOLOGIES OF THE KNEE JOINT IN PATIENTS WITH KNEE OSTEOARTHRITIS
H. Arita1, M. Ishijima1,2, H. Kaneko1, M. Ishibashi2, M. Kinoshita1, S. Hada1, L. Liu1,3, R. Sadatsuki1, Y. Negishi1, M. Momoeda1, T. Aoki1, M. Nagao1,4, M. Nagayama1, Y. Saita1, Y. Takazawa1, H. Ikeda1, K. Kaneko1,2 • 1Dept. of Med. for Orthopaedics and Motor Organ, Juntendo Univ. Graduate Sch. of Med., Tokyo, Japan, 2Ctr. Of Innovation (COI) program, Juntendo Univ. Graduate Sch. of Med., Tokyo, Japan, 3Sportology Ctr., Juntendo Univ. Graduate Sch. of Med., Tokyo, Japan, 4Med. Technology Innovation Ctr., Juntendo Univ. Graduate Sch. of Med., Tokyo, Japan, 5Hlth. and Sports Sci., Juntendo Univ. Graduate Sch. of Med., Tokyo, Japan

175
ASSOCIATIONS BETWEEN MULTI-JOINT DATA DRIVEN BIOMECHANICAL FEATURES EXTRACTED DURING WALKING AND HIP CARTILAGE DEGENERATION CHANGES FROM QUANTITATIVE MAGNETIC RESONANCE IMAGING
K. E. Roach, V. Pedoia, C. Iriondo, S. Majumdar, R. B. Souza • UCSF, San Francisco, CA

176
CAN INDIVIDUALS WITH KNEE OSTEOARTHRITIS LEARN A GAIT MODIFICATION AFTER 3 WEEKS OF UNSUPERVISED GAIT RETRAINING
J. He, M. A. Wimmer, N. Shakoor, C. Ferrigno • Rush Univ., Chicago, IL

CARTILAGE, BONE, MECHANO-BIOLOGY & MATRIX BIOCHEMISTRY

177
DEGRADING PRODUCTS OF CHONDROITIN SULFATE CAN INDUCE THE HYPTERTROPHY-LIKE CHANGES AND MMP-13/ADAMTS5 PRODUCTION IN CHONDROCYTES AS DAMAGE ASSOCIATED MOLECULAR PATTERNS
S. Han1,2, Y-K. Jung2, H-R. Park2, H-J. Cho1, J-A. Jang2, E-J. Lee2, M-S. Han2, G-W. Kim2,3 • 1Rheumatology, Daegu, Korea, Republic of, 2Lab. for arthritis and bone biology, Fatima Res. Inst., Daegu, Korea, Republic of, 3Rheumatology, Daegu Fatima Hosp., Daegu, Korea, Republic of
178

[18F]-SODIUM FLUORIDE PET-MR IMAGING REVEALS BONE-CARTILAGE INTERACTIONS IN HIP OSTEOARTHRITIS

R. Tibrewala, E. Bahroos, H. Mehrebian, S. C. Foreman, T. M. Link, V. Pedoia, S. Majumdar • Univ. of California San Francisco, San Francisco, CA

179

IMPACT OF DIFFERENT FUCOIDANS ON PATHOLOGICAL PATHWAYS ACTIVATED IN OSTEOARTHRITIC ARTICULAR CELLS

C. Vaamonde Garcia1,2, M. Lamas-Vazquez1, F. Blanco2, H. Dominguez2, R. Mejide-Failde1 • 1Tissue Engineering and Regenerative Med. Group. Univ. of A Coruña (UDC), A Coruña, Spain, 2Rheumatology Div.. CIBER-BBN/ISCIII, INIBIC-Hosp.ario Univ.rio de A Coruña, A Coruña, Spain, 3Faculty of Sci., Campus of Ourense (Univ. of Vigo), A Coruña, Spain

180

EFFECT OF NICOTINAMIDE RIBOSIDE ON CARTILAGE MATRIX HOMEOSTASIS

L-Y. Chen, R. Liu-Bryan • UCSD/VASDHS, San Diego, CA

181

PATIENTS WITH TYPE 2 DIABETES EXHIBIT A MORE CALCIFIED DEEP CARTILAGE LAYER COMPARED TO NONDIABETIC CONTROLS: A PILOT STUDY


182

DIAMETER OF COLLAGEN FIBRILS IN THE SUPERFICIAL LAYER OF OSTEOARTHRITIC ARTICULAR CARTILAGE FROM DIFFERENT SPECIES

S. Maniwa1,2, N. Maeki1,2, H. Ishihara1,2, Y. Takami1,2, T. Tadenuma1,2, Y. Sakai1,2 • 1Shimane Univ., Izumo, Japan, 2Dept. of Rehabilitation Med., Shimane Univ., Izumo, Japan

183

OVEREXPRESSION OF RAASV- SOX9 AND TGF-B IN HUMAN BONE MARROW ASPRITASES UPON VECTOR DELIVERY VIA PNASS-COATED POLY(E-CAPROLACTONE) SCAFFOLDS

J. K. Venkatesan1, C. Falentin-Daudré2, A. Leroux2, J-S. Baumann3, V. Mignon2, M. Cucchiarini4 • 1Saarland Univ., Homburg, Germany, 2Cell Therapy and Regenerative Med. Unit. Centro de Investigaciones Científicas Avanzadas (CICA), Univ.e da Coruña, Campus de A Coruña, A Coruña, Spain

184

THE OSTEOGENIC DIFFERENTIATION ABILITY OF HUMAN MIGRATORY ADIPOSE-DERIVED STEM CELLS ATTRACTION BY TGF-B3 (TRANSFORMING GROWTH FACTOR-BETA3) IS HIGHER THAN THAT OF STATIC CELLS

J-W. Park1, J. Han1, Y. Noh1, G-I. Im2 • 1Res. Inst. for Integrative Regenerative BioMed. Engineering, Dongguk Univ., Goyang, Gyeonggi-do Province, Korea, Republic of, 2Univ. Dept. of Orthopaedics, Dongguk Univ. Ilsan Hosp., Goyang, Gyeonggi-do Province, Korea, Republic of

185

INHIBITION OF SDC4-LOX MEDIATED EXTRACELLULAR MATRIX STIFFENING PREVENTS CHONDROCYTE DIFFERENTIATION IN OA CARTILAGE VIA INCREASED YAP/ TAZ SIGNALING

A. Held1, M. Bollmann1, U. Hansen2, T. Pap2, F. Dell’Accio1, C. Prein1, A. Aszodi5, H. Clausen-Schaumann6, J. Bertrand1 • 1Otto-von-Guericke Univ. Magdeburg, Magdeburg, Germany, 2Inst. of Experimental Musculoskeletal Med., Münster, Germany, 3Ctr. for Experimental Med. and Rheumatology, London, United Kingdom, 4The Univ. of Western Ontario, Toronto, ON, Canada, 5Experimental Surgery and Regenerative Med., München, Germany, 6Hochschule für angewandte Wissenschaften München FAKULTÄT FÜR ANGEWANDTE NATURWISSENSCHAFTEN UND MECHATRONIK, München, Germany

186

CHONDROGENIC DIFFERENTIATION PROCESSES IN HUMAN BONE MARROW-DERIVED MESENCHYMAL STEM CELLS UPON RAAV MEDIATED CO-OVEREXPRESSION OF TGF-B AND IGF-1

S. Morscheid1, A. Rey-Rico1,2, G. Schmitt1, H. Madry1, M. Cucchiarini1, J. K. Venkatesan1 • 1Saarland Univ., Homburg, Germany, 2Cell Therapy and Regenerative Med. Unit. Centro de Investigaciones Científicas Avanzadas (CICA), Univ.e da Coruña, Campus de A Coruña, A Coruña, Spain
POSTER PRESENTATIONS

187
RAAV MEDIATED COMBINED GENE TRANSFER AND OVEREXPRESSION OF TGF-BETA AND IGF-I IN HUMAN BONE MARROW-DERIVED MESENCHYMAL STEM CELLS UPON IMPLANTATION IN A HUMAN OSTEOCHONDRAL DEFECT MODEL
S. Morscheid1, J. K. Venkatesan1, A. Rey-Rico2, G. Schmitt1, H. Madry1, M. Cucchiarini1 • 1Saarland Univ., Homburg, Germany, 2Cell Therapy and Regenerative Med. Unit. Centro de Investigaciones Científicas Avanzadas (CICA), Univ.e da Coruña, Campus de A Coruña, A Coruña, Spain

188
EFFECTIVE GENETIC MODIFICATION OF HUMAN BONE MARROW-DERIVED MESENCHYMAL STEM CELLS UPON CONTROL DELIVERY OF RAAV VECTORS VIA CARBON DOT NANOCARRIERS
A. Rey-Rico1,2, J. K. Venkatesan1, G. Schmitt1, F. Pons3, L. Lebeau1, M. Cucchiarini1 • 1Saarland Univ., Homburg, Germany, 2Cell Therapy and Regenerative Med. Unit. Centro de Investigaciones Científicas Avanzadas (CICA), Univ.e da Coruña, Campus de A Coruña, A Coruña, Spain, 3Université de Strasbourg, Strasbourg, France

189
CARBON DOTS NANOCARRIERS FOR THE EFFECTIVE RAAV MEDIATED TRANSDUCTION OF HUMAN OSTEOARTHRITIC CHONDROCYTES IN VITRO
A. Rey-Rico1,2, J. K. Venkatesan1, G. Schmitt1, F. Pons3, L. Lebeau1, M. Cucchiarini1 • 1Saarland Univ., Homburg, Germany, 2Cell Therapy and Regenerative Med. Unit. Centro de Investigaciones Científicas Avanzadas (CICA), Univ.e da Coruña, Campus de A Coruña, A Coruña, Spain, 3Université de Strasbourg, Strasbourg, France

190
MODERATE EXERCISE PREVENTS CARTILAGE SOFTENING AND MUSCLE STRUCTURAL CHANGES IN A RAT MODEL OF OBESITY
J. L. Rios1, J. W. Mather1, J. Michael1, S. M. Mattiello2, W. Herzog1 • 1The Univ. of Calgary, Calgary, AB, Canada, 2The Federal Univ. of São Carlos, São Carlos, Brazil

191
THE LACK OF FIBRONECTIN-A5B1 INTEGRIN INTERACTION, AGGRAVATES THE SEVERITY OF OSTEOARTHRITIS-INDUCED IN MICE
M. ALMONTE BECERRIL1, I. Gimeno-Lluch2, O. Villarroya3, M. Benito-Jardón2, J. B. Kourí3, M. Costell2 • 1Univ. Intercultural del ESTado de Puebla, Puebla, México, Mexico, 2Univ. de València, Burjassot, Spain, Spain, 3Centro de Investigación y de Estudios avanzados del IPN, México DF, Mexico

192
EFFECTS OF THREE POTENTIAL ANABOLIC DISEASE-MODIFYING OSTEOARTHRITIS DRUGS – SPRIFERMIN, IGF1 AND BMP7 – ON MATRIX PRODUCTION AND THE PHENOTYPE OF ARTICULAR CHONDROCYTES
S. Mueller, M. Michaelis, S. Lindemann, A. Gigout • Merck KGaA, Darmstadt, Germany

193
CEMIP (KIAA1199) INDUCES A FIBROSIS-LIKE PROCESS IN OSTEOARTHRITIC CHONDROCYTES
C. Deroyer, E. Charlier, S. Neuville, O. Malaise, M. Malaise, D. de Seny • CHU de Liège, Liège, Belgium

194
CONTRIBUTION OF ZINC FINGER PROTEIN 440 TO FACET AND KNEE CARTILAGE DEGENERATION
A. Nakamura • Krembil Res. Inst., Univ. Hlth.Network, Toronto, ON, Canada

195
EXPRESSION OF AVB5, AVB3 AND B6 INTEGRINS BY OSTEOARTHRITIC CHONDROCYTES AND VERTEBRAL OSTEOPHYES
E. Charlier1, S. Neuville1, Z. Plener1, C. Deroyer1, B. Relic1, O. Malaise1, G. Reuter2, P. Gillet3, M. Salvé4, N. Withofs5, R. HustinX, D. de Seny1, M. Malaise1 • 1Lab. of Rheumatology, GIGA-13, CHU of Liège, Liège, Belgium, 2Service of Neurochirurgy, CHU of Liège, Belgium, Liège, Belgium, 3Service of Orthopedic Surgery, CHU of Liège, Belgium, Liège, Belgium, 4Cyclotron Res. Ctr., Liège, Belgium, Liège, Belgium, 5Service of Nuclear Medecine, CHU of Liège, Belgium, Liège, Belgium
<table>
<thead>
<tr>
<th>Posters</th>
<th>Title</th>
<th>Authors</th>
<th>Abstract</th>
</tr>
</thead>
<tbody>
<tr>
<td>196</td>
<td>The Role of Foxa2 Transcription Factor as Potential Regulator of Articular Cartilage Hypertrophy and Oa Progression</td>
<td>K. Ho1, R. Fuente Perez2, R. Kim2, L. Xu1, D. Astari Teguh1, L. Gamer1, E. Kozhemyakina1, A. Lassar1, Y. Li2, K. Kaestner1, M. Whitman1, V. Rosen3, A. Ionescu4, M. Whitman1, V. Rosen3, A. Ionescu4</td>
<td>The role of Foxa2 transcription factor as potential regulator of articular cartilage hypertrophy and OA progression. K. Ho1, R. Fuente Perez2, R. Kim2, L. Xu1, D. Astari Teguh1, L. Gamer1, E. Kozhemyakina1, A. Lassar1, Y. Li2, K. Kaestner1, M. Whitman1, V. Rosen3, A. Ionescu4, M. Whitman1, V. Rosen3, A. Ionescu4.</td>
</tr>
<tr>
<td>197</td>
<td>Parkin Deficiency Impairs the Clearance of Dysfunctional Mitochondria and Augments IL-1B Induced Inflammation in Human Articular Chondrocytes</td>
<td>M. Y. Ansari, K. Novak, T. M. Haqqi</td>
<td>Parkin deficiency impairs the clearance of dysfunctional mitochondria and augments IL-1B induced inflammation in human articular chondrocytes. M. Y. Ansari, K. Novak, T. M. Haqqi.</td>
</tr>
<tr>
<td>199</td>
<td>Stat3 Activated by Tgf-Beta1 Is Involved in Endochondral Ossification in Mice</td>
<td>M-S. Han1, Y-K. Jung2, E-J. Lee3, J-A. Jang1, H-R. Park1, S. Han1, G. Kim1</td>
<td>Stat3 activated by TGF-beta1 is involved in endochondral ossification in mice. M-S. Han1, Y-K. Jung2, E-J. Lee3, J-A. Jang1, H-R. Park1, S. Han1, G. Kim1.</td>
</tr>
<tr>
<td>200</td>
<td>Calcium-ToneBP1 Signaling Regulates the Expression of Matrix Metalloproteinases in 29-Kda Fn-f-Treated Chondrocytes</td>
<td>M. Lee1, H. Hwang, H. Kim</td>
<td>Calcium-ToneBP1 signaling regulates the expression of matrix metalloproteinases in 29-KDA FN-F-treated chondrocytes. M. Lee1, H. Hwang, H. Kim.</td>
</tr>
</tbody>
</table>

OARSI 2019 Final Program • www.oarsi.org
206
TGFA EFFECTS ON CARTILAGE IS MECHANICAL STRESS-DEPENDENT
H. Zhang1, R. Zhang1, G. Huang1, L. Huang2, I. Welch3, C. Norley4, D. W. Holdsworth4, F. Beier5, D. Cai1, H. Fang1
1The Third Affiliated Hosp. of Southern Med. Univ., Guangzhou, China, 2Dept. of Clinical Lab., Sun Yat-sen Mem. Hosp. of Sun Yat-sen Univ., Guangzhou, 510120, P.R. China, Guangzhou, China, 3Dept. of Physiology and Pharmacology, Schulich Sch. of Med. & Dentistry, Western Univ., 1151 Richard Street, London, ON N6A 5C1, Canada, London, ON, Canada, 4Imaging Res. Lab., Robarts Res. Inst., P.O. Box 5015, 100 Perth Drive, London, ON N6A 5K8, Canada, Guangzhou, ON, Canada, 5Imaging Res. Lab., Robarts Res. Inst., P.O. Box 5015, 100 Perth Drive, London, ON N6A 5K8, Canada, London, ON, Canada

207
MURINE CHONDROCYTES WITHIN INTACT MEDIAL FEMORAL CONDyles HAVE DYSREGULATED CALCIUM RESPONSES TO MECHANICAL LOADING AFTER DMM SURGERY
S. Fullam, M. A. Wimmer, R. E. Miller • Rush Univ. Med. Ctr., Chicago, IL

208
THE SHEAR MECHANICS OF ENZYMATICALLY DEGRADED ARTICULAR CARTILAGE ARE PREDICTED BY A RIGIDITY PERCOLATION MODEL
T. Wyse Jackson1, L. R. Bartell1, M. Das2, L. J. Bonassar1, I. Cohen • 1Cornell Univ., Ithaca, NY, 2Rochester Inst. of Technology, Rochester, NY

209
IN VITRO FORMED DEEP ZONE CARTILAGE TISSUES: A MODEL TO STUDY FORMATION OF THE ZONE OF CALCIFIED CARTILAGE
A. A. Zelinka1, R. A. Kandel1 • 1Univ. of Toronto, Toronto, ON, Canada, 2Sinai Hlth.System, Toronto, ON, Canada

210
MATURATION OF THE MEDIAL FEMORAL CONDyle EPiphseAL GROWTH PLATE AND OSTEOCHONDral JUNCTiON
T. Lemirre1, E. Santschi2, C. Girard1, U. Fogarty3, L. Chapuis1, H. Richard1, S. Laverty • 1Univ. of Montréal, Saint Hyacinthe, QC, Canada, 2Kansas State Univ., Manhattan, KS, 3Irish Equine Ctr., Johnstown, Ireland

211
DISTINCT TRIBOLOGICAL PHENOTYPES OF ARTHRITic SYNOVIAL FLUID REVEAL DIFFERENCES IN VISCOSUPPLEMENTATION EFFICACY
R. M. Irwin1, E. Feeney1, D. Galesso2, C. Secchier1, R. Ramonda1, I. Cohen1, L. Bonassar1 • 1Cornell Univ., Ithaca, NY, 2Fidia Farmaceutici S.p.A., Padova, Italy, 3Univ. of Padova, Padova, Italy

212
A NOVEL OSTEOARTHRITIC MODEL IN MICE
N. M. Parra-Torres1, J. Kouri2, M. Almonte-Becerril1 • 1Univ. Intercultural del Estado de Puebla, Huehuetla, Puebla, México, Mexico, 2Centro de Investigación y de Estudios Avanzados del IPN, Ciudad de México, Mexico

213
HUMAN CARTILAGE-BONE-SYNoviUM MICROPHYSIOLOGICAL SYSTEM TO STUDY PTOA PATHOGENESIS AND TREATMENT ON EARTH AND IN SPACE
G. Dwivedi1, L. Flaman1, E. Frank1, E. Geishecker1, V. Rosen2, S. Chubinskaya3, J. Fite4, C. Scherzer4, S. Trippel5, M. Cirit1, A. Grodzinsky1 • 1Massachusetts Inst. of Technology, Cambridge, MA, 2Harvard Sch. of Dental Med., Boston, MA, 3Rush Univ. Med. Ctr., Chicago, IL, 4Techshot, Greenville, IN, 5Indiana Univ., Indianapolis, IN

214
MIR-146B ACCELERATES OSTEOARTHRITIS PROGRESSION BY TARGETING ALPHA-2-MACROGLOBULIN
X. Liu, H. Fang, R. Zhang, G. Huang, C. Zeng, D. Cai • The Third Affiliated Hosp. of Southern Med. Univ., Guangzhou, China

215
INHIBITION OF MIR-449A ENHANCES CARTILAGE REGENERATION AND INHIBITS OSTEOARTHRITIS PROGRESSION VIA SIRT1 AND LEFT1NRAT OSTEOARTHRITIS MODEL
S. Kim, D. Baek, K-M. Lee, K. Park, J. Lee • Yonsei Univ. Coll. of Med., Seoul, Korea, Republic of
216  
OSTEOPOROSIS ACCELERATES OSTEOARTHRITIS PROGRESSION BY ABERRANT SUBCHONDRAL BONE REMODELING IN OSTEOPOOROTIC OSTEOARTHRITIS PATIENTS  
L. Chu, Z. Yu • Shanghai Ninth People's Hosp., Shanghai Jiao Tong Univ. Sch. of Med., Shanghai, China

217  
FID-134: A HYALURONAN-BISPHOSPHONATE MACROMOLECULAR DRUG DELIVERY SYSTEM FOR INTRA-ARTICULAR TREATMENT OF OSTEOARTHRITIS WITH POTENTIAL COMBINED CARTILAGE AND SUBCHONDRAL BONE TARGETING  
M. Pavan, C. Barbera, D. Galesso, C. Secchieri, S. Pluda • Fidia Farmaceutici S.p.A., Abano Terme, Italy

218  
THE EFFECT OF MICRO- AND HYPERGRAVITY ON SERUM COMP LEVELS IN HEALTHY ADULTS  
A. Niehoff1,2, M. Dreiner1, A. Mündermann3,4, F. Zaucke5, A-M. Liphardt1,4 • 1Inst. of Biomechanics and Orthopaedics, German Sport Univ. Cologne, Köln, Germany, 2Cologne Ctr. for Musculoskeletal Biomechanics, Med. Faculty, Univ. of Cologne, Köln, Germany, 3Dept. of Orthopaedics and Traumatology, Univ. Hosp. Basel, Basel, Switzerland, 4Dept. of BioMed. Engineering, Univ. of Basel, Basel, Switzerland, 5Dr. Rolf M. Schwiete Res. Unit for Osteoarthritis, Orthopaedic Univ. Hosp. Friedrichsheim, Frankfurt/Main, Germany

219  
DEVELOPING A SYSTEM TO MEASURE CHONDROCYTE MECHANOBIOLOGY DURING DYNAMIC LOADING  
B. S. Otoo, W. Herzog • Univ. of Calgary, Calgary, AB, Canada

220  
REPURPOSING GLUTAMATE RECEPTOR ANTAGONISTS TO PREVENT POST-TRAUMATIC OSTEOARTHRITIS  
C. Bonnet, S. Gilbert, D. Mason • Cardiff Univ., Cardiff, United Kingdom

221  
OSTEOARTHRITIC SUBCHONDRAL BONE MARROW HISTOLOGY. LESSONS FROM CHANGES IN ALKAPTONURIA.  
A. Boyde1, L. A. Ranganath2, J. A. Gallagher3,4 • 1Queen Mary Univ. of London, London, United Kingdom, 2Univ. of Liverpool, Liverpool, United Kingdom

222  
THE PRIMARY CILIA PROTEIN IFT88, EXERTS A PROFOUND AND EVOLVING INFLUENCE IN THE POST-NATAL JOINT, THROUGH JOINT MATURATION, ADULT LIFE AND IN DISEASE  
C. R. Coveney, J. Miotia-Zarebska, B. Stott, I. Parisi, M. Curthina, C. Duarte, A. Chanalaris, T. L. Vincent, A. K. Wann • The Kennedy Inst. of Rheumatology, Univ. of Oxford, Oxford, United Kingdom

223  
INFLAMMATORY AND NON-INFLAMMATORY SYNOVIAL FLUIDS EXHIBIT NEW & DISTINCT TRIBOLOGICAL PHENOTYPES  
E. Feeney1, D. Galesso2, C. Secchieri2, R. Ramonda3, L. Bonassar1 • 1Cornell Univ., Ithaca, NY, 2Fidia Pharma, Padua, Italy, 3Univ. of Padua, Padua, Italy

224  
EXOSTOSIN-1 ACTIVITY ENHANCES THE STRENGTH OF WNT SIGNALING DURING CHONDROGENIC DIFFERENTIATION  
X. Wang, R. Lories, S. Monteagudo • KU Leuven, Leuven, Belgium

225  
A2A ADENOSINE RECEPTOR STIMULATION REGENERATES CARTILAGE IN OSTEOARTHRITIS ANIMAL MODEL  
C. Corciulo1, C. Castro1, T. Coughlin1, S. Jacob1, D. Fenyo1, D. Rifkin1, O. D. Kennedy1,2, S. Angle1, B. N. Cronstein1 • 1NYU Langone Med. Ctr., New York, NY, 2The Royal Coll. of Surgeons in Ireland, Dublin, Ireland

226  
PEG-B-PLA-ADENOSINE PREVENTS OSTEOARTHRITIS PROGRESSION  
227 A HOMEOSTATIC ROLE FOR TRANSIENT RECEPTOR POTENTIAL CATION CHANNEL (TRPC1) IN ARTICULAR CARTILAGE.
M. Sambale, J. Intemann, T. Pap, J. Sherwood • Univ. Hosp. Muenster, Muenster, Germany

228 EVIDENCE FOR ALTERNATIVE POLYADENYLATION OF THE ADAMTS5 MRNA CREATING A HETEROGENOUS POOL OF TRANSCRIPTS THAT DIFFER IN THEIR RESPONSE TO POST-TRANSCRIPTIONAL CUES
B. T. McDermott, O. Chinaemerem, S. R. Tew • Univ. of Liverpool, Liverpool, United Kingdom

229 OMIC INVESTIGATION OF THE CHONDROCYTE RESPONSE TO VARYING MECHANICAL LOAD: ASSESSMENT OF IMPACT STRESS
S. M. Higgins, R. Jones, K. Lawrence, S. Richardson, P. Townsend • Univ. of Manchester, Manchester, United Kingdom

230 DOSE-DEPENDENT CHONDROPROTECTIVE EFFECTS OF TRIAMCINOLONE ACETONIDE ON INFLAMED AND INJURED CARTILAGE USING AN IN VITRO MODEL
E. Frank1, H.-H. Hung1, Y. Krishnan1, B. Senter2, N. Bodick2, A. Grodzinsky1 • 1Massachusetts Inst. of Technology, Cambridge, MA, 2Flexion Therapeutics Inc., Burlington, MA

231 BSE-SEM STUDIES OF ARTICULAR CARTILAGE AND SUBCHONDRAL BONE IN NATURALLY OCCURRING POST-TRAUMATIC EQUINE CARPAL OSTEOARTHRITIS.
A. Boyde1, M. Lacourt2, H. Richard2, S. Laverty2 • 1Queen Mary Univ. of London, London, United Kingdom, 2Université de Montréal, St-Hyacinthe, QC, Canada

232 INVESTIGATING THE ROLE OF RETINOID X RECEPTOR IN CARTILAGE DEVELOPMENT AND HOMEOSTASIS
M-G. Sun, H. Dupuis, M. Miranda Rodrigues, L. Vi, F. Beier • Univ. of Western Ontario, London, ON, Canada

233 AGGREGAN IS CRITICAL IN MAINTAINING THE CARTILAGE MATRIX BIOMECHANICS WHICH IN TURN INFLUENCES THE CORRECT DEVELOPMENT OF THE GROWTH PLATE
P. Aliberton1, Z. Farkas1, C. Prein2,3, J. Schwarz1, P. Li1, H. Clausen-Schaumann2, T. Oohashi4, A. Aszodi1 • 1Ludwig-Maximilians-Univ., Munich, Germany, 2Univ. of Western Ontario, London, ON, Canada, 3Munich Univ. of Applied Sci., Munich, Germany, 4Okayama Univ., Okayama, Japan

234 EFFECT OF NFAT1 GENE DOSAGE ON THE PROGRESSION OF POSTTRAUMATIC OSTEOARTHRITIS
J. Wang, Y. Feng, C. W. Grote, Q. Lu, A. A. Haleem • Univ. of Kansas Med. Ctr., Kansas City, KS

235 DIASTOLIC BLOOD PRESSURE IS ASSOCIATED WITH DIFFERENCES IN KNEE CARTILAGE TEXTURE AND STRUCTURAL KNEE ABNORMALITIES: DATA FROM THE OSTEOARTHRITIS INITIATIVE
W. Ashmeik1, G. B. Joseph1, M. C. Nevitt1, N. E. Lane2, C. E. McCulloch1, T. Link1 • 1Univ. of California San Francisco, San Francisco, CA, 2Univ. of California Davis, Davis, CA

236 COMPARISON OF POST TRAUMATIC OSTEOARTHRITIS INJURY INITIATION METHODS IN AN OVINE MODEL
T. A. Burkhart1, A. El-Warrak1, O. Turk1, K. Huebner1, R. Longstaffe1, P. Roessler1, A. Blokker1, M. Hurtig2, A. Getgood1 • 1Western Univ., London, ON, Canada, 2Univ. of Guelph, Guelph, ON, Canada

237 MEDIAL FEMORAL CONDYLE CYSTIC LESIONS IN JUVENILE HORSES ARISE FROM FOCAL TRAUMA TO THE OSTEOCHONDRAL JUNCTION IN FIRST 2 MONTHS OF LIFE
T. Lemirre1, E. Santschi2, C. Girard1, U. Fogarty4, J. Janes4, H. Richard1, S. Laverty1 • 1Univ. of Montréal, Saint Hyacinthe, QC, Canada, 2Canadian State Univ., Manhattan, KS, 3Irish Equine Ctr., Johnstown, Ireland, 4Univ. of Kentucky, Lexington, KY
238 MINERAL CRYSTAL THICKNESS IN CALCIFIED CARTILAGE AND SUBCHONDRAL BONE IN HUMAN END-STAGE KNEE OSTEOARTHRITIS AND CONTROLS
1 Univ. of Oulu, Oulu, Finland, 2 Univ. of Eastern Finland, Kuopio, Finland, 3 Lund Univ., Lund, Sweden, 4 Oulu Univ. Hosp., Oulu, Finland

239 EXTRACELLULAR CHEMICAL PROFILING BY LC-QTOF-MS IDENTIFIES NOVEL BONE RESORPTION MARKERS FOR MONITORING PROGRESSION OF OSTEOARTROPATHY IN THE RARE DISEASE ALKAPTONURIA
1 Univ. of Liverpool, Liverpool, United Kingdom, 2 Royal Liverpool & Broadgreen Univ. Hosp. Trust, Liverpool, United Kingdom, 3 Agilent Technologies UK Ltd., Cheadle, United Kingdom

240 QUASI-STATIC LOADING REVEALS INTERACTION BETWEEN MECHANICS AND MTOR AND NF-κB PATHWAYS IN THE CONTROL OF ENDOCHONDRAL OSSIFICATION IN MOUSE METATARSALS
S. Caetano-Silva, A. Pitsillides
The Royal Vet. Coll., London, United Kingdom

241 ASSOCIATION BETWEEN VITAMIN D STATUS AND MINERALIZATION DISORDER OF OSTEOPHYTE IN MIDDLE AGED AND ELDERLY POPULATION WITH KELLGREN-LAWRENCE GRADE 2 OF KNEE OSTEOARTHRITIS: A SPORTOLOGY CORE STUDY 2
1 Dept. of Med. for Motor Organ, Juntendo Univ. Graduate Sch. of Med., Tokyo, Japan, 2 Dept. of Pathophysiology for Locomotive and Neoplastic Diseases, Juntendo Univ. Graduate Sch. of Med., Tokyo, Japan, 3 Sportology Ctr., Juntendo Univ. Graduate Sch. of Med., Tokyo, Japan, 4 Tama Southern Regional Hosp., Tokyo, Japan

242 COMBINING IN VITRO SIMULATION AND IN SILICO MODELLING TOWARDS A SOPHISTICATED HUMAN OSTEOARTHRITIS MODEL
A. Lang, L. Fischer, M-C. Weber, T. Gaber, R. Ehrig, S. Röblitz, F. Buttgeriet, 1 Dept. of Rheumatology and Clinical Immunology, Charité-Universmedizin Berlin, Berlin, Germany, 2 German Rheumatism Res. Ctr. Berlin, Berlin, Germany, 3 Zuse Inst. Berlin, Berlin, Germany, 4 Dept. of Informatics, Univ. of Bergen, Bergen, Norway

243 SUPPRESSION OF CIRCADIAN CLOCK PROTEIN CRYPTOCHROME2 PROMOTES OSTEOARTHRITIS
The Scripps Res. Inst., La Jolla, CA

244 INVESTIGATING THE ASSOCIATION OF SERUM LIPID BIOMARKERS WITH BIOCHEMICAL CARTILAGE COMPOSITION USING QUANTITATIVE MRI - A PILOT STUDY
Univ. of California San Francisco, San Francisco, CA

245 DELINEATING THE CHONDROCYTE TRANSCRIPTOME THROUGH ANALYSING MULTIPLE KNEE SEGMENTS
V. Sunkara, A. Lang, 1 Zuse Inst. Berlin, Berlin, Germany, 2 Dept. of Mathematics and Computer Sci., Freie Univ. Berlin, Berlin, Germany, 3 Dept. of Rheumatology and Clinical Immunology, Charité-Universmedizin Berlin, Berlin, Germany, 4 German Rheumatism Res. Ctr. Berlin, Berlin, Germany

246 THE SUPERFICIAL ZONE IN CARTILAGE ADAPTS WITH STIFFENING WHEN CHALLENGED TRIBOLOGICALLY
C. Yuh, T. Shoabi, S. Chubinskaya, R. M. Espinosa-Marzal, M. A. Wimmer
1 Rush Univ., Chicago, IL, 2 Univ. of Illinois, Urbana-Champaign, IL
EVALUATING PHARMACOLOGICAL INHIBITION OF PPARDELTA IN A RAT MODEL OF POST-TRAUMATIC OSTEOARTHRITIS
A. Ratneswaran1, M. Pest1, H. Dupuis1, C. Hamilton2, V. Petelka1, F. Beier1,3
1Western Univ., London, ON, Canada, 2Univ. of British Columbia, Vancouver, BC, Canada, 3Children’s Hlth.Res. Inst., London, ON, Canada

OSTEOCHONDRAL PATHOLOGY IN MURINE MODELS OF ANTERIOR CRUCIATE LIGAMENT INJURY: IMPLICATIONS FOR THE PATHOGENESIS OF OSTEOARTHRITIS
C. Blaker1,2, M. Ebbeck1,3, C. Shu1, E. Clarke2, C. Little1
1Raymond Purves Bone and Joint Res. Lab., Inst. of Bone and Joint Res., Kolling Inst., Northern Clinical Sch., Faculty of Med. and Hlth., Northern Sydney Local Hlth. District, Univ. of Sydney, St. Leonards, Australia, 2Murray Maxwell Biomechanics Lab., Inst. of Bone and Joint Res., Kolling Inst., Northern Clinical Sch., Faculty of Med. and Hlth., Northern Sydney Local Hlth. District, Univ. of Sydney, St. Leonards, Australia, 3Sch. of Life Sci., Univ. of Technology, Sydney, Australia

TRANSLATIONAL CONTROL MAINTAINS CARTILAGE HOMEOSTASIS AND REGULATES OSTEOARTHRITIS PROGRESSION
V. Kolupaeva1, O. Katsara2, M. Attur3
1NYU Coll. of Dentistry, New York, NY, 2NYU Langone Med. Ctr., New York, NY

ARC (APOPTOSIS REPRESSOR WITH CASPASE RECRUITMENT DOMAIN) DEFICIENT MICE DEVELOPS SEVERE KNEE JOINT HISTOPATHOLOGY BUT DEMONSTRATES REDUCED MECHANICAL ALLODYNIA AFTER SURGICALLY-INDUCED OSTEOARTHRITIS
C. C. SHU1,2, Y. Liu1,2, S. P. Stoner1,2, S. M. Smith1,2, A. W. Ashton1,2, C. B. Little1,2
1Kolling Inst. of Med. Res., St Leonards, Australia, 2Univ. of Sydney, Sydney, Australia

MOLECULAR AND CELLULAR MECHANISMS OF OSTEOARTHRITIS IN EXPERIMENTAL ARTERIAL HYPERTENSION AND HYPERLIPIDEMIA
M. A. Kabalyk1, V. A. Nezvorova2, T. S. Kovalenko1

HSA_CIRC_0000077 ACTS AS A COMPETING ENDOGENOUS RNA TO REGULATE THE FUNCTION OF CHONDROCYTES
S-C. Tao, S-C. Guo
Shanghai Jiao Tong Univ. Affiliated Sixth People’s Hosp., Shanghai, China

ESTROGEN-RELATED RECEPTOR Γ (ERRΓ) IS A CATABOLIC REGULATOR OF OSTEOARTHRITIS PATHOGENESIS
Y-O. Son, S-K. Park, J-S. Kwak, Y. Won, W-S. Choi, J-S. Chun
GIST, Buk-gu, Korea, Republic of

ZFP36L1 REGULATES OSTEOARTHRITIS BY MODULATING HSPA1A
Y-O. Son, H-E. Kim, W-S. Choi, J-S. Chun
GIST, Buk-gu, Korea, Republic of

APPa, A POTENTIAL NEW THERAPY FOR OSTEOARTHRITIS, INHIBITS NEUTROPHIL PRO-INFLAMMATORY FUNCTIONS WITHOUT IMPAIRING HOST DEFENCE
A. CROSS1, J. HAWKES1, H. WRIGHT1, N. LARKINS2, S. EDWARDS1, R. MOOTS1
1LIVERPOOL Univ., LIVERPOOL, United Kingdom, 2AKL RESEARCH & DEVELOPMENT, STEVENAGE, United Kingdom

INDUCIBLE DICKKOPF 1-MEDIATED INHIBITION OF CANONICAL WNT SIGNALING AMELIORATES CARTILAGE DESTRUCTION DURING EXPERIMENTAL OSTEOARTHRITIS
M. H. van den Bosch, A. B. Blom, F. A. van de Loo, M. I. Koenders, W. B. van den Berg, P. L. van Lent, P. M. van der Kraan
Radboud Univ. Med. center, Oss, Netherlands

CHANGES IN SOX9 AND RUNX2 PROTEIN ACTIVITY CORRELATE TO THE HEALTH STATE OF HUMAN PRIMARY CHONDROCYTES
K. Govindaraj, M. Karperien, J. Post
Univ. of Twente, Enschede, Netherlands
258  INHIBITION OF NADPH OXIDASES ABROGATES FIBRONECTIN FRAGMENT INDUCED INTEGRIN SIGNALING AND MATRIX METALLOPROTEINASE 13 RELEASE IN HUMAN CHONDROCYTES
  M. Z. Miao, J. A. Collins, M. Kapustina, B. O. Diekman, R. F. Loeser, Jr. • Univ. of North Carolina at Chapel Hill, Chapel Hill, NC

259  TRANSFORMING GROWTH FACTOR-B DAMPENS INTERLEUKIN-6 SIGNALING IN CHONDROCYTES BY DECREASING THE INTERLEUKIN-6 RECEPTOR
  R. Wiegertjes, A. van Caam, H. van Beuningen, P. van der Kraan, F. van de Loo, E. Blaney Davidson • Radboudumc, Nijmegen, Netherlands

260  DIFFERENTIAL EFFECTS OF EXOSOMES DERIVED FROM SEPARATE OSTEOARTHRITIS SYNOVIAL COMPARTMENTS: IMPLICATIONS FOR EROSIVE CARTILAGE DISEASE
  S. Asghar1, G. Litherland1, D. Meek2, J. Cole3, J. Lockhart1, C. S. Goodyear3, A. Crilly1 • 1Univ. of the West of Scotland, Paisley, United Kingdom, 2Queen Elizabeth Univ. Hosp., Glasgow, United Kingdom, 3Univ. of Glasgow, Glasgow, United Kingdom

261  MITOCHONDRIAL DNA IS RELEASED BY VIABLE CHONDROCYTES AFTER INDUCTION OF MITOCHONDRIAL DYSFUNCTION
  L. E. Keller, J. Casey, M. L. Delco • Cornell Univ., Ithaca, NY

262  IN SILICO VALIDATION OF A CARTILAGE SPECIFIC CIRCADIAN CLOCK: MUTATION OF BMAL1 INCREASED MMP EXPRESSION
  S. Khurana, A. Bokkers, D. J. Geijs, S. Schivo, M. Karperien, J. N. Post • Univ. of Twente, Enschede, Netherlands

263  IRISIN ATTENUATES OSTEOARTHRITIS BY INHIBITING APOPTOSIS OF OSTEOCYTES THROUGH ACTIVATING ERK SIGNALING PATHWAY
  Z. He, H. Li, F. Zhou, X. Han, L. Chu, S. Zhang, T. Tang, Z. Yu • Shanghai Key Lab. of Orthopaedic Implants, Dept. of Orthopaedic Surgery, Shanghai Ninth People’s Hosp., Shanghai Jiao Tong Univ. Sch. of Med., Shanghai, China

264  OXIDATIVE STRESS INDUCES NUCLEAR RECEPTOR 4A2 IN HUMAN ARTICULAR CHONDROCYTES
  K. Mix1, L. Marrero2, Y. Davis1, V. Dasa2, D. Phanstiel3, R. Loeser1 • 1Loyola Univ. New Orleans, New Orleans, LA, 2Louisiana State Univ. Hlth.Sci. Ctr., New Orleans, LA, 3Univ. of North Carolina at Chapel Hill, Chapel Hill, NC

265  BARX1 REGULATES CHONDROCYTE SURVIVAL BY MODULATING NKX3.2-MEDIATED NF-KB ACTIVATION
  S-W. Choi1, H-J. Choi1, D-W. Kim2,3 • 1ICM Co., Ltd., Seoul, Korea, Republic of, 2Department of biochemistry, Yonsei Univ., Seoul, Korea, Republic of

266  DETECTION OF BETA1 INTEGRIN ACTIVATION IN CHONDROCYTES
  A. Schaefer, T. Pap, J. Sherwood • Univ. Hosp. Muenster, Muenster, Germany

267  THE EXPRESSION OF ADAMTS4, A MAJOR AGGREGANASE IN OSTEOARTHRITIC SYNOVİUM, IS SYNERGISTICALLY UP-REGULATED BY IL-1ALPHA, TNF-ALPHA AND TGF-BETA
  M. Z. Cilek1,2, Y. Miyamae3, S. Mochizuki3, M. Ito3, S. de Vega2, J. Shiozawa4, H. Kaneko4, M. Ishijima4, K. Kaneko1,4, Y. Okada3,2 • 1Sportology Ctr., Juntendo Univ., Tokyo, Japan, 2Dept. of Pathophysiology for Locomotive and Neoplastic Diseases, Juntendo Univ. Graduate Sch. of Med., Tokyo, Japan, 3Dept. of Pathology, Keio Univ. Sch. of Med., Tokyo, Japan, 4Dept. of Med. for Orthopedics and Motor Organ, Juntendo Univ. Graduate Sch. of Med., Tokyo, Japan

268  THE GATE TO CONTROLLING CHONDROGENIC DIFFERENTIATION: TRANSCRIPTIONAL REGULATION BY SOX9 IN ATDC5 CELLS
  M. M. Caron1, K. Derks1, L. Sanderink1, L. van Rhijn1, M. Peffers2, T. Welting1 • 1Maastricht Univ. Med. Ctr., Maastricht, Netherlands, 2Inst. of Ageing and Chronic Disease, Univ. of Liverpool, Liverpool, United Kingdom
269
MATRIX METALLOPROTEINASE MEDIATED SHEDDING OF SYNDECAN-4 UNDER OSTEOARTHRITIS CONDITIONS
M. Bollmann¹, T. Pap², C. H. Lohmann¹, J. Bertrand¹ • ¹Dept. of Orthopaedic Surgery, Otto-von-Guericke Univ., Magdeburg, Germany, ²Inst. of Musculoskeletal Med., Univ. Hosp. Münster, Münster, Germany

270
COMBINED ACTIVITY OF GALECTIN-1, -3, AND -8 DRIVES FUNCTIONAL DISEASE MARKERS IN OSTEOARTHRITIC CHONDROCYTES VIA NF-KB
K. Kinslechner¹, M. Kenn¹, D. Weinmann¹, S. M. Walzer¹, R. Windhager¹, W. Schreiner¹, H-J. Gabius², S. Toegel¹ • ¹Med. Univ. of Vienna, Vienna, Austria, ²Ludwig Maximilians Univ., Munich, Germany

271
OSTEOARTHRITIS-RELATED INFLAMMATORY MEDIATORS NEGATE THE PROTECTIVE ANTI-HYPERTROPHIC ROLE OF TRANSFORMING GROWTH FACTOR-B IN CHONDROCYTES
N. Thielen, A. van Caam, J. Moonen, E. Blaney Davidson, P. van der Kraan • Radboud umc, Nijmegen, Netherlands

272
OLEATE PREVENTS PALMITATE-INDUCED MITOCHONDRIAL DYSFUNCTION IN CHONDROCYTES: A POTENTIAL THERAPEUTIC TARGET IN METABOLIC OSTEOARTHRITIS
M. VAZQUEZ MOSQUERA, M. FERNANDEZ MORENO, S. RELANO FERNANDEZ, A. DALMAO FERNANDEZ, P. RAMOS LOURO, A. DURAN SOTUELA, N. OREIRO VILLAR, I. REGO PEREZ, F. BLANCO GARCA • Inst. de Investigación Biomédica de A Coruña (INIBIC), CHUAC. UDC, A Coruña, Spain

273
HEMARTHROSIS ALTERS MITOCHONDRIAL DYNAMICS IN SITU AFTER TRAUMATIC INJURY
M. Coleman, A. Wilson, L. Yang, J. Goetz, R. Westermann • Univ. of Iowa, Iowa City, IA

274
DEVELOPMENT OF A HIGH CONTENT SCREENING ASSAY FOR THE SCREENING OF PROTEINS AND PEPTIDES IN A MODEL OF OSTEOARTHRITIS
M. P. Alvarez-Flores, G. S. Pazelli, C. DeOcseano-Pereira, J. G. Souza, A. M. Chudzinski-Tavassi • Inst. Butantan, Sao Paulo, Brazil

275
ROLE FOR PROTEIN KINASE R IN BONE CELL SIGNALLING
S. Gilbert, T. Russel, C. Elford, B. Evans, E. Blain, D. Mason • Cardiff Univ., Cardiff, United Kingdom

276
UNRAVELING THE ROLE OF WWP2 IN OSTEOARTHRITIS PATHOPHYSIOLOGY

277
LARGE NUMBER TRACKING OF DEPTH AND MECHANICS DEPENDENT CALCIUM SIGNALING IN CHONDROCYTES OF ARTICULAR CARTILAGE

278
THE ROLE OF VOLTAGE-OPERATED CALCIUM CHANNELS IN CHONDROGENIC PROPERTIES OF HUMAN MESENCHYMAL STEM CELLS AND CHONDROCYTES

279
DETECTION OF PROTEINASE ACTIVATED RECEPTOR STIMULATING ENZYMES IN HUMAN ARTHRITIC KNEE JOINT FLUIDS
A. Chandrabalan, A. Getgood, R. Ramachandran • Univ. of Western Ontario, London, ON, Canada
280
Mesorachyimal Stromal Cells Tracking and Cytokines Kinetics Following Intra-Articular and IntraVenous Transplantation
F. B. Dias de Oliveira¹, I. Antonioii³, J. G. Souza², O. F. Metropolo Dias¹, M. Ferretti¹ • I Hosp. Isrelita Albert Einstein, Sao Paulo, Brazil, ²Inst. Butantan, Sao Paulo, Brazil

281
IL-1β Regulates Cell Shape and Expression of PRG4 Independent of Actin Polymerization in Superficial Zone Chondrocytes
E. Delve, R. Kandel • The Lunenfeld-Tanenbaum Res. Inst., Toronto, ON, Canada

282
Gene Mir-193A-3p Influence Osteoblast Differentiation Through Up-Regulation of Lgr4/atf4 Signaling Pathway

283
Effects of Nifedipine on the Metabolism of Mesenchymal Stem Cells and Chondrocytes
I. Uzieliene, Jr.¹, J. Denkovskij, Jr.¹, E. Bernotiene, Sr.¹, N. Povaneckas, Sr.², E. Budd, Sr.³, A. Mobaseri, Sr.¹ • ¹State Res. Inst. Ctr. for Innovative Med., Vilnius, Lithuania, ²Vilnius Univ., Faculty of Med., Vilnius, Lithuania, ³Univ. of Surrey, Sch. of Vet. Med., Guildford, United Kingdom

Clinical Aspects & Outcomes in OA

284
Discrimination of Future Knee Replacement: Imaging Biomarkers Are as Strong as Patient-Reported Outcomes and Functional Performance Tests
F. Eckstein¹², M. Hannon¹, W. Wirth¹², S. Maschek¹², A. Guermazi¹², F. Roemer¹², D. J. Hunter², K. C. Kwoh² • ¹Paracelsus Med. Univ., Salzburg, Austria, ²Chondrometrics GmbH, Ainring, Germany, ³Univ. of Pittsburgh Sch. of Med. Sch. of Med., Pittsburgh, PA, ⁴Boston Univ. Sch. of Med., Boston, MA, ⁵Boston Imaging Core Lab, Boston, MA, ⁶Univ. Erlangen, Erlangen, Germany, ⁷Univ. of Sydney, Sydney, Australia, ⁸Univ. of Arizona Coll. of Med., Tuscon, AZ

285
Factors That Determine Functional Performance Measures in Asymptomatic Adults Without Knee Osteoarthritis - Data from the Osteoarthritis Initiative
S. Petersohn¹, A. Wisser¹², A. Culvenori³, W. Wirth¹², F. Eckstein¹² • ¹Paracelsus Med. Univ., Salzburg, Austria, ²Chondrometrics GmbH, Ainring, Germany, ³La Trobe Univ., Sch. of Allied Hlth., Melbourne, Australia

286
The Experiences and Non Surgical Management of People Living With Ankle Osteoarthritis
G. Yeowell¹, R. Samarij², M. Callaghan¹ • ¹Manchester Metropolitan Univ., Manchester, United Kingdom, ²Manchester Univ. NHS Fndn. Trust, Manchester, United Kingdom

287
Clinical Screening for Sarcopenic Obesity in Patients With End-Stage Knee Osteoarthritis
K. Godziuk, L. J. Woodhouse, C. M. Prado, M. Forhan • Univ. of Alberta, Edmonton, AB, Canada

288
Walking Speed Tests Identify a Significant Interaction Between Sex and Radiographic Knee Osteoarthritis Severity: Data from the Osteoarthritis Initiative
M. Harkey¹², L. Price¹, K. F. Reid¹, G. H. Lo³, S-H. Liu², K. L. Lapane², T. E. McAlindon¹, J. B. Driban¹ • ¹Tufts Med. Ctr., Boston, MA, ²Univ. of Massachusetts Med. Sch., Worcester, MA, ³Michael E. DeBakey VA Med. Ctr., Houston, TX, ⁴Baylor Coll. of Med., Houston, TX

289
Association of Periodontitis with Radiographic Knee Osteoarthritis
J-W. Kim¹, M. Chung², M. Kim¹, H. Min¹, J. Lee¹, S-K. Kwok¹, W-U. Kim¹, S-H. Park¹, J. Ju¹ • ¹Catholic Univ. of Korea, Seoul, Korea, Republic of, ²Ewha Womans Univ. Coll. of Med., Seoul, Korea, Republic of

290
Higher Risk of Total Knee Arthroplasty for Patellofemoral Osteoarthritis Compared to Tibiofemoral Osteoarthritis: The Check Cohort
E. M. Macri, M. van Middelkoop, J. Damen, S. M. Bierma-Zeinstra • Erasmus MC, Rotterdam, Netherlands
### Joint Collapse Is Associated with Increased Pain But Not Reduced Function in Persons With Thumb Base Osteoarthritis

V. Duong¹, L. A. Deveza¹, K. Fu¹, R. Jongs², W. Oo¹, S. R. Robbins¹, A. Wajon³, D. J. Hunter¹ • ¹Univ. of Sydney, Sydney, Australia, ²Physiotherapy Dept., Royal North Shore Hosp., Sydney, Australia, ³Macquarie Hand Therapy, Macquarie Univ. Clinic, Sydney, Australia

### Dietary Intake in Youth with a Sport-Related Knee Injury: Implications for Secondary Prevention of Post-Traumatic Osteoarthritis

K. Mori, C. M. Prado, C. Y. Le, J. L. Whittaker • Univ. of Alberta, Edmonton, AB, Canada

### Relationship of Patellofemoral Joint Osteoarthritis to Trajectories of Physical Function over 7 Years: The Most Study

H. F. Hart¹, T. Neogi², M. P. LaValley², D. K. White³, Y. Zhang⁴, M. Nevitt⁴, J. Torner⁴, C. Lewis⁴, J. J. Stefanik⁷ • ¹The Univ. of Western Ontario, London, ON, Canada, ²Boston Univ., Boston, MA, ³Univ. of Delaware, Newark, DE, ⁴Univ. of California, San Francisco, San Francisco, CA, ⁵Univ. of Iowa, Iowa City, IA, ⁶Univ. of Alabama, Birmingham, AL, ⁷Northeastern Univ., Boston, MA

### Is Preoperative Frailty a Risk Factor for Poor Outcomes After Total Joint Replacements for Osteoarthritis?

L. A. Mandl¹,², C. N. Cornell¹,², M. B. Cross¹,², A. Gonzalez Della Valle¹,², M. P. Figgie¹,², S. A. Jerabek¹,², J. T. Do¹, M. Sasaki¹, N. Hupert¹, J. Finik¹, S. K. Magid¹,² • ¹Hosp. for Special Surgery, New York, NY, ²Weill Cornell Med., New York, NY

### Long-Term Follow-Up Assessment of the Safety and Efficacy of Invossa-K Inj., a Novel Cell Mediated Gene Therapy for Treatment of Osteoarthritis.

S. Lew¹, J. Cho¹, T. Kim¹, M. Lee² • ¹Kolon LifeSci., Inc, Seoul, Korea, Republic of, ²Seoul Natl. Univ. Hosp., Seoul, Korea, Republic of

### Exercise versus Intra-Articular Saline for Knee Osteoarthritis Pain: A Meta-Epidemiological Study with Focus on Comparative Effectiveness

E. Bandak¹, R. Christensen¹, M. Boesen², H. Bliddal¹, R. D. Altman³, D. Hunter⁴, M. Henriksen⁵ • ¹The Parker Inst., Copenhagen Univ. Hosp., Bispebjerg and Frederiksberg, Copenhagen F, Denmark, ²Dept. of Radiology, Copenhagen Univ. Hosp., Bispebjerg and Frederiksberg, Copenhagen F, Denmark, ³Dept. of Med., David Geffen Sch. of Med., Univ. of California, Los Angeles, CA, ⁴Rheumatology Dept., Royal North Shore Hosp., Inst. of Bone and Joint Res., Univ. of Sydney, Sydney, Australia, ⁵Leiden Univ. Med. Ctr., Leiden, Netherlands

### The Impact of Hand and Knee Osteoarthritis on Quality of Life: A Comparison Between the General Population and the Rheumatology Outpatient Clinic


### Knee Osteoarthritis Anticipates Reductions in Muscle Mass Attenuation and Muscle Strength Since the Early Ages

J. Aily¹, A. Castilho de Almeida¹, M. Pedroso¹, M. Amaral de Noronha², J. Gomes Maciel³, S. Ota², A. Kataoka¹, R. Fujita², H. Sugiura³, M. Kato³, H. Warashina³, S. Kitamura³ • ¹Dept. of Rehabilitation, Nagoya Orthopaedic and Joint Replacement Clinic, Aichi, Japan, ²Dept. of Rehabilitation and Care, Seijoh Univ., Aichi, Japan, ³Dept. of Physical Therapy, Nagoya Univ. Graduate Sch. of Med., Aichi, Japan, ⁴Dept. of Orthopaedic Surgery, Nagoya Orthopaedic and Joint Replacement Clinic, Aichi, Japan

### Influence of Spinal Alignment on Physical Function in Patients with Severe Knee Osteoarthritis

Y. Yamamoto¹, S. Ota¹, A. Kataoka¹, R. Fujita², H. Sugiura³, M. Kato³, H. Warashina³, S. Kitamura³ • ¹Dept. of Rehabilitation, Nagoya Orthopaedic and Joint Replacement Clinic, Aichi, Japan, ²Dept. of Rehabilitation and Care, Seijoh Univ., Aichi, Japan, ³Dept. of Physical Therapy, Nagoya Univ. Graduate Sch. of Med., Aichi, Japan, ⁴Dept. of Orthopaedic Surgery, Nagoya Orthopaedic and Joint Replacement Clinic, Aichi, Japan
300
OFFSPRING STUDY DESIGN OFFERS AN OPPORTUNITY TO STUDY EARLY KNEE OSTEOARTHRITIS RISK FACTORS
G. H. Lo1,2, J. Cauley3, J. B. Driban4, M. T. Strayhorn1, M. S. Harkey5,6, T. E. McAlindon4, M. Jansen3, S. Green3, M. J. Hannon2, D. L. White1,3, C. K. Kwoh1,6 • 1Baylor Coll. of Med., Houston, TX, 2Michael E DeBakey VA Med. Ctr., Houston, TX, 3Univ. of Pittsburgh, Pittsburgh, PA, 4Tufts Med. Ctr., Boston, MA, 5Univ. of Massachusetts Med. Sch., Worcester, MA, 6Univ. of Arizona, Tucson, AZ

301
FUNCTIONAL LIMITATIONS, SEDENTARY TIME AND LIGHT PHYSICAL ACTIVITY ON 24-MONTH CLINICAL OUTCOMES IN PATIENTS WITH KNEE OSTEOARTHRITIS
C. J. Halliwell, R. Moyer • Dalhousie Univ., Halifax, NS, Canada

302
DIFFERENCES BETWEEN AN EXCLUSIVE EDUCATIONAL AND THE ADDING OF MULTIMODAL AND MULTIPROFESSIONAL PROGRAM IN THE TREATMENT OF OA.
M. U. Rezende, G. P. Ocampos, N. L. Brito, O. P. Camargo • Faculdade Med. USP, Sao Paulo, Brazil

303
RELATIONSHIPS BETWEEN SYSTEMIC INFLAMMATORY MARKERS AND OSTEOARTHRITIS KNEE PAIN DIFFER BY SEX

304
NUTRITION, PHYSICAL ACTIVITY AND SELF-REPORTED HEALTH: AN ANALYSIS OF THE CANADIAN LONGITUDINAL STUDY ON AGING
J. N. Chopp-Hurley1, E. G. Wiebenga2, H. H. Keller2, M. R. Maly2,3 • 1McMaster Univ., Hamilton, ON, Canada, 2Univ. of Waterloo, Waterloo, ON, Canada

305
OUTCOMES FOLLOWING LUMBAR SPINE SURGERY FOR OSTEOARTHRITIS: THERE IS MORE THAN JUST THE BACK TO CONSIDER

306
PHYSICAL ACTIVITY AS A NOVEL OUTCOME OF TOTAL KNEE REPLACEMENT: COMPARING SELF-REPORT AND OBJECTIVE PA ASSESSMENTS
E. Losina, H. Y. Yang, E. E. Stanley, J. N. Katz, J. E. Collins • Brigham and Women’s Hosp., Boston, MA

307
CONCORDANCE AND DISCORDANCE BETWEEN SELF-REPORTED AND PERFORMANCE-BASED FUNCTION AMONG INDIVIDUALS WITH KNEE OSTEOARTHRITIS

308
CLINICAL STUDY ON THE TREATMENT OF KNEE OSTEOARTHRITIS WITH TRADITIONAL CHINESE MEDICINE FUMIGATION AND WASHING COMBINED WITH HYALURONIC ACID INJECTION
T. Zhu, Y. Hao, Y. Guo, D. Chen, Y. Liu, G. Zhang, X. Yuan • Shaanxi Univ. of Chinese Med., Xianyang City, Shaanxi Province, China

309
YOUNG TO MIDDLE-AGED ADULTS WITH PERSISTENT PATELLOFEMORAL PAIN DEMONSTRATE SIMILAR PAIN, DISABILITY AND KNEE-RELATED QUALITY OF LIFE AS OLDER ADULTS WITH PATELLOFEMORAL OSTEOARTHRITIS
N. J. Collins1, K. M. Crossley2 • 1The Univ. of Queensland, St Lucia, Australia, 2La Trobe Univ., Melbourne, Australia

310
CLINICAL STUDY ON THE TREATMENT OF KNEE OSTEOARTHRITIS WITH MASSAGE COMBINED WITH WARM ACUPUNCTURE
H. Zhang, Q. Dou, T. Zhu • Shaanxi Univ. of Chinese Med., Xianyang City, China
311 TREATMENT OF 34 CASES OF SENILE LUMBAR DEGENERATIVE OSTEOARTHRITIS WITH INTERNAL AND EXTERNAL TREATMENT OF TRADITIONAL CHINESE MEDICINE
T. Zhu, Q. Dou, Y. Guo, Y. Hao, Y. Liu, D. Chen • Shaanxi Univ. of Chinese Med., Xianyang City, Shaanxi Province, China

312 HAND OSTEOARTHRITIS IS ASSOCIATED WITH A BETTER BONE MICROARCHITECTURE IN POSTMENOPAUSAL WOMEN: THE OFELY STUDY
E. Sornay-Rendu, F. Duboeuf, R. Chapurlat • INSERM UMR 1033, Lyon, France

313 CLINICAL STUDY ON THE TREATMENT OF KNEE OSTEOARTHRITIS WITH TRADITIONAL ACUPUNCTURE COMBINED WITH INTRA-ARTICULAR INJECTION OF SODIUM HYALURONATE
K. Xiao1, J. Ma1, T. Zhu1, R. Zhang1, K. Xiao2 • 1Xi’an Honghu Hosp. affiliated to Xi’an Jiaotong Univ., Xi’an, China, 2Shaanxi Univ. of Traditional Chinese Med., Xianyang, China, 3Huadu District People’s Hosp., Guangzhou, China

314 NATURAL COURSE OF EARLY HIP OSTEOARTHRITIS SIGNS IN MIDDLE-AGED SUBJECTS 10-YEAR FOLLOW-UP IN THE CHECK-STUDY
A. C. Berkel van, D. Schiphol, J. Waarsing, J. Runhaar, J. van Ochten, P. Bindels, S. Bierma-Zeinstra • Erasmus Med. Ctr., Rotterdam, Netherlands

315 PAIN CATASTROPHISM SCORE HAS AN IMPACT ON THE DECISION TO UNDERGO KNEE ARTHROPLASTY IN OA. FIRST RESULTS FROM HOLOA PROJECT
L. Tio1, F. Castro1, R. Torres1, S. Martinez1, L. Polino1, J. Lorente1, R. Arredondo1, J. Monllau1, J. Monfort1, 1IMIM (Hosp. del Mar Res. Hosp.), Barcelona, Spain, 2Rheumatology Service, Hosp. del Mar, Barcelona, Spain, 3Orthopedic Surgery and Traumatology Service, Hosp. del Mar, Barcelona, Spain

316 IMPACT OF COMORBIDITIES ON THE PROGRESSION OF KNEE OSTEOARTHRITIS AND HIP OSTEOARTHRITIS: RESULTS OF THE KHOALA COHORT
c. Roubille1, J. Coste2, J. Sellam3, A-c. Rat4, f. Guillemin5, c. roux, Sr.6 • 1Univ. of montpellier, Montpellier, France, 2CHU hotel dieu, Paris, Paris, France, 3CHU saint Antoine, PARIS, PARIS, France, 4CHU Nancy, nancy, France, 5CHU de Nancy, nancy, France, 6universitetu Cote d’Azur, nice, France

317 THE EFFECT OF LATERAL COMPARTMENT CARTILAGE LESION ON OUTCOME OF MEDIAL OPEN WEDGE HIGH TIBIAL OSTEOTOMY
H-S. Moon1, M. Jung1, S. Jeon1, J-H. Jeong2, D. Lee3, C-H. Choi1, S. Kim1 • 1Yonsei Univ. Coll. of Med., Seoul, Korea, Republic of, 2Asan Ace Hosp., Gyeongido, Korea, Republic of, 3Saegil Hosp., Seoul, Korea, Republic of

318 INFLUENCE OF METABOLIC SYNDROME ON THIGH INTERMUSCULAR FAT IN OLDER ADULTS WITH KNEE OSTEOARTHRITIS
A. C. Almeida1, J. B. Aily1, M. Pedroso1, J. d. Felinto1, R. J. Ferrari1, M. de Noronha2, S. M. Mattiello1 • 1Federal Univ. of São Carlos (UFSCar), São Carlos, Brazil, 2La Trobe Univ., Bendigo, Australia

319 PHYSICAL ACTIVITY, QUALITY OF LIFE AND SPORT-RELATED CONCERNS IN RELATION TO RADIOGRAPHIC KNEE OSTEOARTHRITIS AND KNEE SYMPTOMS 32-37 YEARS AFTER ANTERIOR CRUCIATE LIGAMENT INJURY
S. R. Filbay1, C. Andersson2, C. Arden3, H. Gauffin2, J. Kvist4 • 1Univ. of Oxford, Oxford, United Kingdom, 2Linköping Hosp., Linköping, Sweden, 3Linköping Univ., Linköping, Sweden, 4Karolinska Inst., Stockholm, Sweden

320 PHYSICAL ACTIVITY AND HEALTH-RELATED QUALITY OF LIFE IN FORMER CRICKETERS WITH PERSISTENT UPPER-LIMB OR LOWER-LIMB JOINT PAIN
G. S. Bullock, G. S. Collins, N. K. Arden, S. R. Filbay • Univ. of Oxford, Oxford, United Kingdom
321 THE GLOBAL OSTEOARTHRITIS PATIENT PERCEPTION SURVEY (GOAPPS): A PILOT STUDY
A. Botto-van Bemden¹, L. Trela-Larsen², C. Bartz-Johannessen³, A. Sayers², P. Aram⁴, E. McCloskey⁵, V. Kadirkamanathan⁶, A. Blom⁶, S. Lie⁶, O. Furnes⁶ • ¹Univ. of Sheffield, Sheffield, United Kingdom, ²Univ. of Bristol, Bristol, United Kingdom, ³Haukeland Univ. Hosp., Bergen, Norway, ⁴Univ. of Bergen, Bergen, Norway

322 ESTIMATING PATIENT-SPECIFIC MORTALITY AFTER JOIN Replacement: Algorithm Development and Validation Using National Audit Datasets
J. M. Wilkinson¹, T. L. L. Trela-Larsen², C. Bartz-Johannessen³, A. Sayers², P. Aram⁴, E. McCloskey⁵, V. Kadirkamanathan⁶, A. Blom⁶, S. Lie⁶, O. Furnes⁶ • ¹Univ. of Sheffield, Sheffield, United Kingdom, ²Univ. of Bristol, Bristol, United Kingdom, ³Haukeland Univ. Hosp., Bergen, Norway, ⁴Univ. of Bergen, Bergen, Norway

323 GLOBAL OA MANAGEMENT BEGINS WITH QUALITY OF LIFE ASSESSMENT IN KNEE OA PATIENTS: A SYSTEMATIC REVIEW
J. Verges¹, M. Vitaloni¹, M. Bibas¹, R. Sciortino², M. Quintero², J. Monfort³, X. Carné⁴, F. de Abajo⁵, E. Oswald⁵, M. Matucci⁶, P. du Souich⁷, I. Müller⁷, G. Eakin⁸, A. Botto-van Bemden⁸ • ¹Osteoarthritis Fndn. Int., Barcelona, Spain, ²De los Andes Univ., Caracas, Venezuela, Bolivarian Republic of, ³Del Mar Hosp., Barcelona, Spain, ⁴De los Andes Univ., Caracas, Venezuela, Bolivarian Republic of, ⁵Del Mar Hosp., Barcelona, Spain, ⁶Arthritis Fndn., Atlanta, GA, ⁷Univeristy of Bergen, Bergen, Norway, ⁸Amsterdam UMC, location AMC, Amsterdam, Netherlands

324 RADIOGRAPHIC OSTEOARTHRITIS AND KNEE SYMPTOMS 32-37 YEARS FOLLOWING ACUTE ANTERIOR CRUCIATE LIGAMENT INJURY
H. Gauffin¹, S. R. Filbay², C. Andersson³, C. Ardern³, J. Kvist⁴ • ¹Orthopedic Dept., Linköping, Sweden, ²Univ. of Oxford, Oxford, United Kingdom, ³Linköping Univ., Linköping, Sweden, ⁴Karolinska Inst., Stockholm, Sweden

325 KNEE ARTHROSCOPIC SURGERY IN MIDDLE-AGED PATIENTS WITH MENISCAL SYMPTOMS: A 5-YEAR FOLLOW-UP OF A PROSPECTIVE, RANDOMIZED STUDY
H. Gauffin¹, J. Kvist², H. Hedevik³, S. Sonesson³ • ¹Orthopedic Dept., Linköping, Sweden, ²Karolinska Inst., Stockholm, Sweden, ³Linköping Univ., Linköping, Sweden

326 FUNCTIONING OF PATIENTS WITH A PRIMARY TOTAL KNEE REPLACEMENT EXPLORED IN THE LIGHT OF ASYMPTOMATIC PEERS
M. J. Booji¹, J. Harlaar², B. J. van Royen³, J. C. van den Noort¹ • ¹Amsterdam UMC, location VUMc, Amsterdam, Netherlands, ²Delft Univ. of Technology, Delft, Netherlands, ³Amsterdam UMC, location AMC, Amsterdam, Netherlands

327 RELATIONSHIPS BETWEEN QUADRICEPS CORTICOMOTOR AND NEUROMECHANICAL FUNCTION AFTER ANTERIOR CRUCIATE LIGAMENT RECONSTRUCTION
D. A. Sherman, S. A. Scheurer, N. R. Glaviano, C. D. Ingersoll, G. E. Norte • Univ. of Toledo, Toledo, OH

328 LIPID METABOLISM AND BONE TISSUE METABOLISM IN PATIENTS WITH OSTEOARTHRITIS AND TYPE 2 DIABETES MELLITUS. IS THERE A CONNECTION?
M. Oliinyk, L. Zhuravlyova • Kharkov Natl. Med. Univ., Kharkov, Ukraine

329 INFLUENCE OF PATIENT DEMOGRAPHICS AND SURGICAL CHARACTERISTICS ON RETURN-TO-ACTIVITY PASS RATES FOLLOWING ANTERIOR CRUCIATE LIGAMENT RECONSTRUCTION
G. E. Norte¹, J. W. Goetschius², L. V. Slater³, J. M. Hart⁴ • ¹Univ. of Toledo, Toledo, OH, ²Adrian Coll., Adrian, MI, ³Shirley Ryan AbilityLab, Chicago, IL, ⁴Univ. of Virginia, Charlottesville, VA
330
THE CLINICAL TRAJECTORY OF PEOPLE WITH KNEE OSTEOARTHRITIS: SECONDARY ANALYSIS OF A FOLLOW-UP ASSESSMENT FOLLOWING A TWO-YEAR SUPPLEMENTAL INTERVENTION
S. Kobayashi1, M. Agaliotis2, E. Pappas1, M. Fransen1, K. Refshauge1, M. Simic1 • 1Univ. of Sydney, Sydney, Australia, 2Univ. of New South Wales, Sydney, Australia

331
OSTEOARTHRITIS KNEE AND QUALITY OF LIFE: CORRELATION OF ARTICULAR CARTILAGE VOLUME WITH INDIVIDUAL DOMAIN OF RAND 36 ITEM SHORT FORM HEALTH SURVEY QUESTIONNAIRE
R. N. Srivastava1, S. R. SrIVASTAVA2, A. C. SHARMA2, S. RAJ2 • 1KG Med. Univ., Lucknow, India, 2KG Med. Univ., LUCKNOW, India

332
EARLY AND INTERMEDIATE CLINICAL EFFECTS OF CRUCIATE-RETAIN AND CRUCIATE-SUBSTITUTE MEDIAL PIVOT KNEE PROSTHESIS
W. Wang1, P. Yuan2, K. Wang1 • 1Dept. of Orthopedic Surgery, The Second Affiliated Hosp., Xi’an Jiaotong Univ., Xi’an, China, 2Dept. of Orthopedic Surgery, The Second Affiliated Hosp., Xi’an Jiaotong Univ. 2Dept. of Orthopedics, The First Clinical Med. Coll., Shaanxi Univ. of Chinese Med., Xi’an, China

333
CLINICAL RESEARCH METHODS

334
TO EXPLORE THE MOLECULAR MECHANISM OF KIDNEY-TONIFYING AND BLOOD-ACTIVATING METHOD IN THE PREVENTION AND TREATMENT OF POSTMENOPAUSAL OSTEOPOROSIS BASED ON CAMP-PKA-CREB SIGNALING PATHWAY
R. Chen1, B. Dong2, J. Yao2, G. Ou1, M. Li2, Q. Fang1 • 1Shaanxi Univ. of Chinese Med., xianyang, China, 2Dept. of orthopedic, Affiliated Hosp. of Shaanxi Univ. of Chinese Med., xianyang, China, 3Dept. of Nursing, Shaanxi Univ. of Chinese Med., xianyang, China, 4The secondg Affiliated Hosp. of Shaanxi Univ. of Chinese Med., xianyang, China

335
CMC1 OSTEOARTHRITIS AND EROSI VE OSTEOARTHRITIS IN THE HAND ARE ASSOCIATED WITH HYPERMOBILITY, IN CONTRAST TO TYPE 1 AND TYPE 2 POLYARTICULAR OSTEOARTHRITIS PHENOTYPES AND RHEUMATOID ARTHRITIS.
G. Carroll, S. Coleman • Univ. of Notre Dame, Fremantle, Australia

336
A SYSTEMATIC REVIEW OF ESTIMATES OF THE MINIMALLY CLINICALLY IMPORTANT DIFFERENCE AND PATIENT ACCEPTABLE SYMPTOM STATE OF THE WESTERN ONTARIO AND MCMASTER UNIVERSITIES OSTEOARTHRITIS INDEX IN PATIENTS WHO UNDERWENT TOTAL HIP AND TOTAL KNEE REPLACEMENT
C. MacKay1,2, N. Clements3,4, R. Wong2, A. M. Davis3,5 • 1West Park Hlth.care Ctr., Toronto, ON, Canada, 2Toronto Rehabilitation Inst., Univ. Hlth.Network, Toronto, ON, Canada, 3Krembri Res. Inst., Univ. Hlth. Network, Toronto, ON, Canada, 4The Natl. Univ. of Ireland, Galway, Ireland, 5Univ. of Toronto, Toronto, ON, Canada

337
CROSS-CULTURAL TRANSLATION, ADAPTATION AND VALIDATION OF A JAPANESE VERSION OF THE FUNCTIONAL INDEX FOR HAND OSTEOARTHRITIS (J-FIHOA)
Y. Nakagawa, H. Hirata, S. Kurimoto, M. Tatebe, M. Yamamoto, K. Iwatsuki • Nagoya Univ. Hosp., Nagoya, Japan
POSTER PRESENTATIONS

338
CLINICAL STUDY ON LONGYUAN DECOCTION COMBINED WITH CORE DECOMPRESSION FOR EARLY FEMORAL HEAD NECROSIS
D. Chen1, Y. Hao2, T. Zhu1, W. Wu3  •  1Shaanxi Univ. of Traditional Chinese Med., shanxi Xianyang, China, 2Xi’an Honghui Hosp., shanxi X’ian, China, 3Xi’an Honghui Hosp., shanxi Xi’an, China

339
ULTRASONIC DRUG DELIVERY INTO ARTICULAR CARTILAGE USING AN ULTRASONICALLY ACTUATED NEEDLE
M. Arif1, E. Perra1, K. P. Pritzker2, H. J. Nieminen1  •  1Dept. of NeuroSci. & BioMed. Engineering, Sch. of Sci., Aalto Univ., Espoo, Finland, 2Dept. of Lab. Med. and Pathobiology, Univ. of Toronto, Toronto, ON, Canada

340
COMPARISON OF INTRA-ARTICULAR SHAM AND VEHICLE INJECTION FROM A PHASE 2B TRIAL OF SM04690, A SMALL-MOLECULE WNT INHIBITOR, FOR KNEE OSTEOARTHRITIS
Y. Yazici1, J. Tambah1, C. Swearingen1, S. Kennedy1, V. Strand2, B. Cole3, M. Hochberg4, R. Bannuru5, T. McAlindon6  •  1Samumed, San Diego, CA, 2Stanford Univ. Sch. of Med., Stanford, CA, 3Midwest Orthopaedics at Rush Univ., Chicago, IL, 4Univ. of Maryland, Baltimore, MD, 5Tufts Univ. Med. Ctr., Boston, MA

341
OSTEOARTHRITIS (OA) PATIENTS WITH LOW BASELINE PAIN, PATIENT GLOBAL AND LITTLE MORNING STIFFNESS ARE SIGNIFICANTLY MORE LIKELY TO IMPROVE OVER THE NEXT 6 MONTHS
I. Castrejon1, M. Riad, J. A. Block, T. Pincus  •  Rush Univ. Med. Ctr., Chicago, IL

342
PREDICTORS AFFECTING BALANCE PERFORMANCES IN PATIENTS WITH KNEE OSTEOARTHRITIS USING DECISION TREE ANALYSIS
T. Kobayashi1, T. Kannari2, H. Horiiuchi3, N. Matsui2, T. Ito4, K. Nojin5, K. Kakuse2, M. Okawa6, M. Yamanaka1  •  1Hokkaido Chitose Coll. of Rehabilitation, Chitose, Japan, 2Hokkaido Orthopaedic Mem. Hosp., Sapporo, Japan, 3NTT East Corp. Sapporo Hosp., Sapporo, Japan, 4Sapporo Central Hosp., Sapporo, Japan, 5No Affiliation, Sapporo, Japan, 6Sinsapporo Nagai Orthopedics Clinic, Sapporo, Japan

343
PLACEBO EFFECTS OF LOCAL (INTRA-ARTICULAR) THERAPY IN OSTEOARTHRITIS - AN INDIVIDUAL PATIENT DATA META-ANALYSIS PROTOCOL
S. P. Yu12, M. L. Ferreira2, M. van Middelkoop3, S. Bierma-Zeinstra1, W. Zhang4, L. A. Deveza12, D. J. Hunter12  •  1Royal North Shore Hosp., Sydney, Australia, 2Inst. of Bone and Joint Res., Kolling Inst., Univ. of Sydney, Sydney, Australia, 3Erasmus MC, Univ. Med. Ctr. Rotterdam, Rotterdam, Netherlands, 4Arthritis Res. UK Pain Ctr., Academic Rheumatology, Univ. of Nottingham, Nottingham, United Kingdom

344
CARTILAGE IMAGING FOR EXPERIMENTAL MEDICINE STUDIES: 6-MONTH CHANGES IN MORPHOLOGY AND COMPOSITION CAN BE DETECTED BY 3D CARTILAGE SURFACE MAPPING OF KNEE MAGNETIC RESONANCE IMAGING DATA
J. W. MacKay1, T. D. Turmezei2, J. D. Kaggie1, A. R. Morgan-Roberts1, R. L. Janiczek4, W. Khan1, S. M. McDonnell1, M. J. Graves1, G. M. Treece1, A. W. McCaskie1, F. J. Gilbert1  •  1Univ. of Cambridge, Cambridge, United Kingdom, 2Norfolk & Norwich Univ. Hosp., Norwich, United Kingdom, 3Independent Clinical Imaging Consultant, Ulm, Germany, 4GlaxoSmithKline, Stevenage, United Kingdom

345
CLUES TO RECOGNITION OF SECONDARY FIBROMYALGIA IN PATIENTS WITH OSTEOARTHRITIS ACCORDING TO A FIBROMYALGIA ASSESSMENT SCREENING TOOL OF SCALES ON A MULTIDIMENSIONAL HEALTH ASSESSMENT QUESTIONNAIRE (MDHAQ/FAST3)
M. Riad, I. Castrejon, J. R. Chua, J. A. Block, T. Pincus  •  Rush Univ. Med. Ctr., Chicago, IL

346
INCIDENCE, RELATED RISK FACTORS, IMAGING CHARACTERISTICS ANALYSIS AND PREDICTION MODEL OF RADIOGRAPHIC PATELLOFEMORAL OSTEOARTHRITIS IN A CHINESE SUBURBAN AREA: SHUNYI OSTEOARTHRITIS STUDY
Y. Qiu1, Z. Li1, C. Lin1, Q. Liu1, J. Lin1, Y. Zhang2  •  1Inst. of Arthritis, Peking Univ. People’s Hosp., Beijing, China, 2Massachusetts Gen. Hosp., BOSTON, MA
347 THE ASSOCIATION OF PHYSICAL ACTIVITY AND DEPRESSION IN PATIENTS WITH OR AT RISK OF OSTEOARTHRITIS IS CAPTURED EQUALLY WELL BY PATIENT REPORTED OUTCOMES AND ACCELEROMETERS
A. van der Zee-Neuen¹, W. Wirth¹, J. Osterbrink¹, K. Hösl², F. Eckstein³ • ¹Paracelsus Private Med. Univ., Salzburg, Austria, ²Paracelsus Private Med. Univ., Nuremberg, Germany

348 LONGITUDINAL STUDY OF THE BIDIRECTIONAL RELATIONSHIP BETWEEN PHYSICAL ACTIVITY AND KNEE PAIN AND FUNCTIONAL LIMITATION IN COMMUNITY-DWELLING OLDER ADULTS.
S. A. Balogun¹, D. Scott¹-², G. Jones¹, D. Aitken¹ • ¹Menzies Inst. for Med. Res., Hobart, Australia, ²Dept. of Med., Sch. of Clinical Sci. at Monash Hlth., Faculty of Med., Nursing and Hlth.Sci., Monash Univ., Clayton, Victoria, Australia, ³Melbourne Med. Sch. (Western Campus) and Australian Inst. for Musculoskeletal Sci., The Univ. of Melbourne and Western Hlth., St Albans, Victoria, Australia

349 THE BURDEN OF OSTEOARTHRITIS PAIN FROM PATIENT’S PERSPECTIVE IN THE UNITED STATES
J. Jackson¹, R. Iyer², P. Hubanova¹, N. Williams¹, J. Mellor¹, W. Wei¹ • ¹Adelphi Real World, Cheshire, United Kingdom, ²Regeneron Pharmaceuticals, Tarrytown, NY

350 ASSOCIATION OF WEATHER TO THE RISK OF HIP OSTEOARTHRITIS PAIN EXACERBATIONS
K. Fu¹, B. Metcalfe², K. L. Bennell¹, Y. Zhang¹, L. A. Deveza¹, S. R. Robbins¹, M. L. Ferreira¹, D. J. Hunter¹ • ¹Univ. of Sydney, St Leonards, Australia, ²Univ. of Melbourne, Melbourne, Australia, ³Harvard Sch. of Med., Boston, MA

351 IMPACT OF DIFFERENT CLASSIFICATION CRITERIA ON THE PREVALENCE OF RADIOGRAPHIC FOOT OSTEOARTHRITIS: DATA FROM THE CHINGFORD 1000 WOMEN STUDY
J. B. Arnold¹,², L. Gates³, A. C. Redmond³, C. Bowen³, N. Arden⁴ • ¹Sch. of Hlth.Sci., Univ. of South Australia, Adelaide, Australia, ²Inst. of Rheumatic and Musculoskeletal Med., Univ. of Leeds & NIHR Leeds Biomed. Res. Ctr., Leeds, United Kingdom, ³Arthritis Res. UK Ctr. for Sport, Exercise and Osteoarthritis, Univ. of Oxford, Oxford, United Kingdom, ⁴Faculty of Hlth.Sci., Univ. of Southampton, Southampton, United Kingdom, ⁵Nuffield Dept. of Orthopaedics, Rheumatology and Musculoskeletal Sci., Univ. of Oxford, Oxford, United Kingdom

352 ONE IN SEVEN CASES OF INCIDENT KNEE OSTEOARTHRITIS IS ACCELERATED KNEE OSTEOARTHRITIS: DATA FROM THE CHINGFORD COHORT

353 THE ASSOCIATION OF DIETARY PATTERNS WITH KNEE SYMPTOMS AND MRI DETECTED STRUCTURE IN PATIENTS WITH KNEE OSTEOARTHRITIS
S. Zheng¹, F. Wu¹, T. Winzenberg¹-², A. Wluka³, F. Cicuttini³, D. Aitken¹, L. Blizzard¹, G. Jones¹, C. Ding¹,⁴ • ¹Menzies Inst. for Med. Res., Univ. of Tasmania, Hobart, Australia, ²Faculty of Hlth., Univ. of Tasmania, Hobart, Australia, ³Dept. of Epidemiology and Preventive Med., Monash Univ., Melbourne, Australia, ⁴Clinical Res. Ctr., Zhujiang Hosp., Southern Med. Univ., Guangzhou, China
ASSOCIATION OF BODY COMPOSITION, PHYSICAL ACTIVITY AND PHYSICAL PERFORMANCE WITH KNEE CARTILAGE THICKNESS AND SUBCHONDRAL BONE AREA IN YOUNG ADULTS

ASSOCIATION OF GLUCOSE HOMEOSTASIS MEASURES AND METABOLIC SYNDROME WITH KNEE CARTILAGE DEFECTS AND CARTILAGE VOLUME IN YOUNG ADULTS
T. Meng¹, A. Venn¹, F. Cicuttini², L. March³, T. Dwyer⁴,⁵, M. Cross¹, L. L. Laslett¹, G. Jones¹, B. Antony¹, C. Ding¹,¹⁰ • ¹Menzies Inst. for Med. Res., Univ. of Tasmania, Hobart, Australia, ²Dept. of Epidemiology and Preventive Med., Monash Univ., Melbourne, Australia, ³Inst. of Bone and Joint Res., Univ. of Sydney, Sydney, Australia, ⁴The George Inst. for Global Hlth., Nuffield Dept. of Obstetrics & Gynaecology, Univ. of Oxford, Oxford, United Kingdom, ⁵Clinical Res. Ctr., Zhujiang Hosp., Southern Med. Univ., Guangzhou, China

CHRONIC PAIN TREATMENT SATISFACTION IN MUSCULOSKELETAL DISEASE: DIFFERENCES BETWEEN OSTEOARTHRITIS AND CHRONIC LOW BACK PAIN IN MEDICATION SWITCHING, OPIOID USE, AND UTILIZATION OF NON-PHARMACOLOGIC TREATMENTS
J. Mali¹, J. Nascimento², J. Atkinson³, R. Robinson⁴, J. Bobula⁵, M. Port⁶, V. Bruehmer⁷ • ¹Emerge Ortho, Durham, NC, ²Vanguard Strategy, London, United Kingdom, ³Pfizer Inc., Walton Oaks, United Kingdom, ⁴Eli Lilly and Company, Indianapolis, IL, ⁵Pfizer Inc., New York, NY

KNEE OSTEOARTHRITIS 10 YEARS AFTER ANTERIOR CRUCIATE LIGAMENT INJURY. AN UPDATED SYSTEMATIC REVIEW
M. Lie • Oslo Metropolitan Univ., Oslo, Norway

IS THE ASSOCIATION OF BODY MASS INDEX WITH OPIOID USE MEDIATED BY NUMBER OF PAINFUL JOINTS OR DEPRESSIVE SYMPTOMS: THE MULTICENTER OSTEOARTHRITIS STUDY
L. C. Carlesso¹, R. Jafarzadeh², A. Stokes³, D. Felson⁴, N. Wang⁵, N. A. Segal⁶, L. Frey-Law⁶, C. E. Lewis⁷, M. Nevitt⁸, T. Neogi⁰ • ¹Université de Montréal, Montréal, QC, Canada, ²Boston Univ., Boston, MA, ³Univ. of Kansas, Kansas City, KS, ⁴Univ. of Iowa, Iowa City, IA, ⁵Univ. of Alabama at Birmingham, Birmingham, AL, ⁶Univ. of California at San Francisco, San Francisco, CA

PROSPECTIVE ASSOCIATION OF PHYSICAL ACTIVITY TO FOLLOW-UP FATIGUE IN KNEE OSTEOARTHRITIS: THE MOST STUDY
H. O. Fawole¹,², J. L. Riskowski¹, A. Dell’Isola³, M. P. Steultjens¹, S. F. Chastin¹, M. C. Nevitt⁴, J. Torner⁵, C. E. Lewis⁶, D. T. Felson⁷ • ¹Glasgow Caledonian Univ., Glasgow, United Kingdom, ²Univ. of Benin, Benin-City, Nigeria, ³Lund Univ., Lund, Sweden, ⁴Univ. of San Francisco Univ., San Francisco, CA, ⁵Univ. of Iowa, Iowa City, IA, ⁶Univ. of Alabama, Alabama, AL, ⁷Boston Univ. Sch. of Med., Boston, MA

EDUCATIONAL INEQUALITIES IN ALL-CAUSE AND CAUSE-SPECIFIC MORTALITY AMONG PATIENTS WITH OSTEOARTHRITIS IN SOUTHERN SWEDEN
M. Lindéus, A. A. Kiadaliri • Lund Univ., Faculty of Med., Dept. of Clinical Sci. Lund, Orthopaedics, Clinical Epidemiology Unit, Lund, Sweden

INCIDENCE AND PROGRESSION OF HAND OSTEOARTHRITIS IN THE JOHNSTON COUNTY OSTEOARTHRITIS PROJECT
E. A. Snyder, C. Alvarez, Y. M. Golightly, J. B. Renner, J. M. Jordan, A. E. Nelson • Univ. of North Carolina at Chapel Hill, Chapel Hill, NC
362 PREVALENCE AND IMPACT OF KNEE OSTEOARTHRITIS IN RUNNERS

363 HIGH GENETIC CONTRIBUTION TO ANTERIOR CRUCIATE LIGAMENT INJURY IN 88 000 SWEDISH TWINS
K. Magnusson1,2, A. Turkiewicz1, M. Englund1,3 • 1Lund Univ., Faculty of Med., Dept. of Clinical Sci. Lund, Orthopaedics, Clinical Epidemiology Unit, Lund, Sweden, 2Diakonhjemmet Hosp., Dept. of Rheumatology, Oslo, Norway, 3Clinical Epidemiology Res. and Training Unit, Boston Univ. Sch. of Med., Boston MA

364 DESCRIPTIVE EPIDEMIOLOGY OF MUSCULOSKELETAL DISORDERS IN CANADA: DATA FROM THE GLOBAL BURDEN OF DISEASE STUDY
J. A. Kopec1, J. Cibere1, E. C. Sayre1, L. C. Li1, D. Lacaille1, J. M. Esdaile1 • 1Univ. of British Columbia, Vancouver, BC, Canada, 2Arthritis Res. Canada, Richmond, BC, Canada

365 WOMEN WITH KNEE OSTEOARTHRITIS HAVE MORE IMAT AND POOR MUSCLE QUALITY IN TRUNK MUSCLES THAN HEALTHY WOMEN
M. Pedroso1, A. C. de Almeida1, J. Aily1, G. Gonçalves1, J. d. Felinto1, R. J. Ferrari1, M. de Noronha2, S. Mattiello1 • 1Federal Univ. of São Carlos, São Carlos, Brazil, 2La Trobe Univ., Bendigo, Australia

366 DOES SLOW WALKING SPEED PREDICT ALL-CAUSE MORTALITY AND KNEE REPLACEMENT IN ADULTS WITH KNEE OSTEOARTHRITIS?
H. Master1, L. M. Thoma1, T. Neogi2, M. LaValley2, M. Christiansen1, D. Mathews1, L. Neely1, D. K. White1 • 1Univ. of Delaware, Newark, DE, 2Boston Univ., Boston, MA

367 INCIDENCE AND PROGRESSION OF FIRST METATARS0-PHALANGEAL JOINT OSTEOARTHRITIS OVER A 19-YEAR PERIOD IN THE CHINGFORD 1000 WOMEN COHORT
L. Gates1,2, P. McQueen1, M. Daniels1, A. Delmestri1, W. Drechsler3, D. Stephensen4, M. Doherty4, N. Arden5,6, C. Bowen1,2 • 1Faculty of Hlth.and Life Sci., Univ. of Southampton, Southampton, United Kingdom, 2Arthritis Res. UK Ctr. for Sport, Exercise and Osteoarthritis, Univ. of Oxford, Oxford, United Kingdom, 3Barts Hlth.NHS Trust, London, United Kingdom, 4Nuffield Dept. of Orthopaedics, Rheumatology and Musculoskeletal Sci., Univ. of Oxford, Oxford, United Kingdom, 5Sch. of Population Hlth.& Environmental Sci., King’s Coll. London, London, United Kingdom, 6Sch. of Med., Univ. of Nottingham, Nottingham, United Kingdom

368 THE APPLICABILITY OF CRITERIA FOR EARLY OSTEOARTHRITIS IN ‘AT-RISK’ POST-TRAUMATIC KNEE INJURED AND UNINJURED YOUTH
J. L. Whittaker1, J. L. Jaremko1, C. A. Emery2 • 1Univ. of Alberta, Edmonton, AB, Canada, 2Univ. of Calgary, Edmonton, AB, Canada

369 DEFINING THRESHOLDS FOR THE KELLGREN-LAWRENCE GRADING BETWEEN 2 AND 3 FOR THE JAPANESE KNEE OSTEOARTHRITIS MEASURE QUESTIONNAIRE FOR URBAN INHABITANTS MORE THAN 65-YEAR OLD
H. Huang1,2, M. Ishijima1,2, H. Kaneko1, L. Liu1,2, T. Aoki2, H. Arita1, Y. Negishi1, M. Momoeda1, M. Nagao1, K. Kaneko1,2 • 1Dept. of Orthopaedic Surgery, Juntendo Univ. Sch. of Med., Tokyo, Japan, 2Sportology Ctr., Juntendo Univ., Tokyo, Japan

370 WHAT IS THE RISK OF KNEE OSTEOARTHRITIS AFTER A HISTORY OF KNEE INJURY IN YOUNG ADULTS? A POPULATION-BASED COHORT STUDY
B. Snoeker1, A. Turkiewicz1, K. Magnusson1, R. Frobell1, D. Yu2, G. Peat2, M. Englund1 • 1Lund Univ., Lund, Sweden, 2Keele Univ., Newcastle, United Kingdom
371
THE ASSOCIATION OF PLASMA FATTY ACIDS LEVELS WITH HAND AND KNEE OSTEOARTHRITIS

372
DIETARY PATTERNS AND SYMPTOMATIC PROGRESSION OF KNEE OSTEOARTHRITIS: DATA FROM THE OSTEOARTHRITIS INITIATIVE
C. Xu¹, M. Roberts², J. Driban³, T. McAlindon³, C. Eaton²; B. Lu⁴ • ¹Brigham and Women’s Hosp. and Harvard Med. Sch., Boston, MA, ²Ctr. for Primary Care and Prevention, Alpert Med. Sch. of Brown Univ., Pawtucket, RI, ³Div. of Rheumatology, Tufts Med. Ctr., Boston, MA

373
ASSOCIATION OF SLEEP DURATION AND SELF-REPORTED HEALTH STATUS AMONG US ADULTS WITH OSTEOARTHRITIS
S-H. Liu¹, D. Shridharmurthy¹, M. S. Harkey¹, J. B. Driban³, T. E. McAlindon², C. E. Dubé¹ • ¹Univ. of Massachusetts Med. Sch., Worcester, MA, ²Tufts Med. Ctr., Boston, MA

374
ASSOCIATIONS BETWEEN PHYSICAL ACTIVITY AND CAM AND PINCER MORPHOLOGY.
H. Ahedi¹, T. Winzenberg¹, S. Bierma-Zeinstra², L. Blizzard¹, M. Van Middelkoop³, R. Agricola¹, J. Waarsing², F. Cicuttini¹, G. Jones¹ • ¹Menzies Res. Inst., Univ. of Tasmania, Hobart, Tasmania, Australia, ²Dept. of Gen. Practice, Erasmus MC, Rotterdam, Netherlands, ³Dept. of Orthopaedics, Erasmus MC, Rotterdam, Netherlands, ⁴DEPM Monash Univ., Melbourne, Australia

375
A BIOPSYCHOSOCIAL APPROACH TO UNDERSTANDING THE IMPACT OF OSTEOARTHRITIS ON SOCIAL PARTICIPATION: A POPULATION-BASED STUDY
A. V. Perruccio¹, C. Yip¹, M. Canizares¹, J. D. Power¹, M. A. Gignac², E. M. Badley¹ • ¹Arthritis Program, Krembil Res. Inst., Univ. Hlth.Netw., Toronto, ON, Canada, ²Inst. for Work and Hlth., Toronto, ON, Canada

376
HOW SEDENTARY TIME RELATES TO RISK OF WORSENING KNEE CARTILAGE DAMAGE OVER TWO YEARS: THE MULTICENTER OSTEOARTHRITIS STUDY (MOST)
D. R. Mathews¹, T. Neogi², J. J. Stefaniak³, A. Guermazi⁴, F. W. Roemer², L. M. Thoma¹, H. Master¹, M. B. Christiansen¹, M. C. Nevitt⁴, J. Torner², D. K. White¹ • ¹Univ. of Delaware, Newark, DE, ²Boston Univ. Sch. of Med., Boston, MA, ³Northeastern Univ., Boston, MA, ⁴Univ. of California San Francisco, San Francisco, CA

377
DEPRESSION IN POST-SURGICAL OSTEOARTHRITIS: A DESCRIPTIVE STUDY
J. D. Power, P. Kudesia, A. Nadeem, A. V. Perruccio, N. N. Mahomed, Y. R. Rampersaud, R. Gandhi • Arthritis Program, Univ. Hlth.Network, Toronto, ON, Canada

378
HOW DOES PREVALENCE OF OSTEONECROSIS OF THE KNEE IN THE COMMUNITY COMPARE WITH FINDINGS FROM ANTI-NERVE GROWTH FACTOR TRIALS?: ESTIMATES FROM TWO POPULATION-BASED DATA SOURCES
T. Neogi¹, D. Felson¹, C. Peloquin¹, Y. Jin², J. Lii², S. Kim² • ¹Boston Univ. Sch. of Med., Boston, MA, ²Brigham and Women’s Hosp., Boston, MA

379
ARE THERE SEX DIFFERENCES IN THE ASSOCIATION BETWEEN THE INCIDENCE OF KNEE OSTEOARTHRITIS AND ITS KNOWN RISK FACTORS? THE ROTTERDAM STUDY
I. A. Szilagyi, J. H. Waarsing, J. B. van Meurs, S. M. Bierma-Zeinstra, Departments of General Practice, Orthopedics and Internal Medicine • Erasmus MC, Rotterdam, Netherlands

380
OSTEOARTHRITIS, MOBILITY-RELATED COMORBIDITIES AND MORTALITY: AN OVERVIEW OF SYSTEMATIC REVIEWS
C. Whittington¹, G. Campos², R. Mundi³, B. Sheehan⁴, M-J. Toutounji³, Y. Xu¹, W. Ngai⁴ • ¹Doctor Evidence, Santa Monica, CA, ²Univ.e Estadual de Campinas, Campinas, Brazil, ³Univ. of Toronto, Toronto, ON, Canada, ⁴Dalhousie Univ., Saint John, NB, Canada, ⁵Sanofi Canada, Laval, QC, Canada, ⁶Sanofi, Bridgewater, NJ
381 METABOLIC SYNDROME, DIABETES AND OSTEOARTHRITIS PROGRESSION: THE ROTTERDAM STUDY
L. N. Nguyen, I. A. Szilagyi, C. G. Boer, S. M. Bierma-Zeinstra, J. B. van Meurs, Departments of General Practice, Internal Medicine • Erasmus MC, Rotterdam, Netherlands

382 ASSOCIATION BETWEEN BODY MASS INDEX- AND WAIST CIRCUMFERENCE-DEFINED OBESITY WITH THE RISK OF KNEE AND HIP ARTHROPLASTY FOR OSTEOARTHRITIS
Y. Z. Lim¹, F. M. Cicuttini¹, Y. Wang¹, G. G. Giles¹, J. Shaw², D. Magliano², S. Graves³, S. Hussain¹ • ¹Monash Univ., Melbourne, Australia, ²Baker Heart and Diabetes Inst., Melbourne, Australia, ³Australian Orthopaedic Association Natl. Joint Replacement Registry, Adelaide, Australia

383 DOES ADHERENCE TO DIETARY GUIDELINES HAVE A ROLE IN THE INCIDENCE AND PROGRESSION OF KNEE OSTEOARTHRITIS?
E. Erazo, D. Schiphof, I. Szilagyi, T. Voortman, K. Braun, J. B. van Meurs, S. M. Bierma-Zeinstra • Erasmus MC, Rotterdam, Netherlands

384 WHAT TO DEPLOY TO PREVENT HIP OA • POPULATION ATTRIBUTABLE FRACTIONS OF RISK FACTORS FOR INCIDENT CLINICAL AND RADIOGRAPHIC HIP OA
J. Runhaar¹, M. Hall², D. Schiphof³, F. Saberi Hosnjeh³, J. van Meurs¹, R. Agricola¹, K. Allison², R. Hinman², K. Bennell³, T. Winzenberg³, A. Lahham³, F. Pan³, H. Ahedi³, G. Jones³, F. Cicuttini³, S. Bierma-Zeinstra¹ • ¹Erasmus MC Univ. Med. Ctr. Rotterdam, Rotterdam, Netherlands, ²The Univ. of Melbourne, Melbourne, Australia, ³Univ. of Tasmania, Hobart, Australia, ⁴Monash Univ., Melbourne, Australia

385 ASSOCIATION BETWEEN MENISCUS VOLUME AND DEVELOPMENT OF KNEE OSTEOARTHRITIS
D. Xu, M. Hansson, S. Klein, E. H. Oei, F. Wagner, S. M. Bierma-Zeinstra¹, J. Runhaar • Erasmus MC Univ. Med. Ctr. Rotterdam, Rotterdam, Netherlands

386 SATISFACTION FOLLOWING SURGERY FOR HIP, KNEE AND SPINE OSTEOARTHRITIS: THE IMPACT OF PHYSICIAN-PATIENT COMMUNICATION IN THE PRE-SURGICAL CONSULTATION

387 INFLAMMATORY POTENTIAL OF DIET AND RISK OF KNEE OSTEOARTHRITIS: DATA FROM THE OSTEOARTHRITIS INITIATIVE
Q. Liu¹, N. Shivappa², J. R. Hébert², J. Lin³, Y. Zhang¹ • ¹Peking Univ. People’s Hosp., Beijing, China, ²Univ. of South Carolina, Columbia, SC, ³Massachusetts Gen. Hosp., Harvard Med. Sch., Boston, MA

388 TRAJECTORIES OF WEIGHT GAIN IN YOUNG ADULTS FOLLOWING ANTERIOR CRUCIATE LIGAMENT RUPTURE: THE DELAWARE-OSLO ACL COHORT STUDY
L. M. Thoma¹, L. Snyder-Mackler¹, M. Risberg², D. K. White¹ • ¹Univ. of Delaware, Newark, DE, ²Norwegian Sch. of Sport Sci., Oslo Univ. Hosp., Oslo, Norway

389 RISK FACTOR PROFILES FOR INDIVIDUALS WITH DIAGNOSED OSTEOARTHRITIS VERSUS OSTEOARTHRITIS-LIKE SYMPTOMS: A POPULATION-BASED STUDY

390 TRAJECTORIES OF STRENUOUS PHYSICAL ACTIVITY AND EXTENSIVE SITTING AND 10-YEAR INCIDENT RADIOGRAPHIC KNEE OA

391 WHAT PROPORTION OF PAIN IN THE POPULATION IS ATTRIBUTABLE TO ARTHRITIS?
392
A NOMOGRAM TO PREDICT THE INCIDENT RADIOGRAPHIC KNEE OSTEOARTHRITIS IN A CHINESE RURAL AREA
C. Lin1, Q. Liu1, X. Cheng2, J. Lin1 • 1Peking Univ. People’s Hosp., Beijing, China, China, 2Zezhou People’s Hosp., Jingchen City, Shanxi Province, China

393
ARE WE MAKING PROGRESS? TRENDS IN PUBLICATIONS ON OSTEOARTHRITIS 2007-2016

394
KNEE PAIN, WITH OR WITHOUT OSTEOARTHRITIS, IS ASSOCIATED WITH SIGNIFICANT CO-MORBIDITY IN A PRIMARY CARE POPULATION
P. Moon, H. Maddocks, T. R. Freeman • Univ. of Western Ontario, London, ON, Canada

395
ACTIVITY LEVEL INFLUENCES THE LIKELIHOOD OF DEVELOPING KNEE OSTEOARTHRITIS
J. Bednarz, Jr., A. Kolatorowicz, C. M. Lowe • Lincoln Mem. Univ., Harrogate, TN

396
PREVALENCE OF OBESITY AND THE ASSOCIATED RISK AMONG PATIENTS WITH TOTAL KNEE ARTHROPLASTY IN ALBERTA
F. Baghbani Naghadehi, S. Armijo Olivo, M. Forhan, C. Prado, L. Gramlich, L. Woodhouse • Univ. of Alberta, Edmonton, AB, Canada

397
TRENDS IN PRESCRIPTION PAIN MANAGEMENT AMONG US ADULTS WITH ARTHRITIS OR BACK PAIN, 1999-2014
A. Stokes1, K. M. Berry1, K. Hempstead2, T. Neogi1 • 1Boston Univ. Sch. of Publ. Hlth., Boston, MA, 2Robert Wood Johnson Fndn., Princeton, NJ, 3Boston Univ. Sch. of Med., Boston, MA

398
DO NON-STERoidal ANTI-INFLAMMATORY DRUGS CAUSE OSTEOARTHRITIS PROGRESSION, A SYSTEMATIC REVIEW AND META ANALYSIS
M. Simic1, A. Harmer1, M. van der Esch2, K. Bennell3, P. Ferreira1, L. March4, M. Fransen5, R. Day1 • 1The Univ. of Sydney, Lidcombe, Australia, 22 Reade, Ctr. for Rehabilitation and Rheumatology, Amsterdam, Netherlands, 3The Univ. of Melbourne, Melbourne, Australia, 4The Univ. of Sydney, Sydney, Australia, 5Univ. of New South Wales, Darlinghurst, Australia

EPIGENETICS

399
THE PROGRESSION OF POST-TRAUMATIC OSTEOARTHRITIS IN THE MURINE DMM MODEL IS MARKED BY DISTINCTIVE EPIGENOMIC PATTERNS ASSOCIATED WITH TRANSCRIPTOMIC CHANGES IN ARTICULAR CARTILAGE.
P. Singh1, S. G. Lessard1, P. Mukherjee2, C. B. Carballo1, S. A. Rodeo1, M. Otero1 • 1Hosp. for Special Surgery, NEW YORK, NY, 2Weill Cornell Med., NEW YORK, NY

400
THE ASSOCIATIONS BETWEEN CIRCULATING MICRORNAs AND OSTEOARTHRITIS OF THE KNEE IN COMMUNITY-DWELLING PEOPLE: YAKUMO STUDY
Y. Takegami, T. Seki, S. Imagama, N. Ishiguro • Nagoya Univ. Graduate Sch. of Med., Nagoya, Japan

401
ARTHROFIBROTIC NEO-SYNOVIAL TISSUES RETRIEVED AT THE TIME OF REVISION SURGERY EXHIBIT DISTINCT TRANSCRIPTOMIC AND EPIGENETIC SIGNATURES
S. G. Lessard1, T. Pannellini1, L. Chen1, P. Singh1, A. A. Nocon1, D. Oliver1, P. Mukherjee2, G. Perino1, M. A. Kirksey1, M. F. Koff1, H. G. Potter1, L. B. Ivashkiv1, A. B. Periris1, T. W. Bauer1, T. P. Sculco1, T. M. Wright1, P. K. Sculco1, M. Otero1 • 1Hosp. for Special Surgery, New York, NY, 2Weill Cornell Med., New York, NY
**POSTER PRESENTATIONS**

**402**
MICRORNA 27B-3P: ROLE IN EXTRACELLULAR MATRIX REGULATION IN OSTEOARTHRITIS SYNOVIAL FIBROBLASTS

G. Tavallaee1,2, C. Sarda2, S. Ali2, E. Rossomacha2, K. Shestopalofo2, K. Perry2, G. M. Mitchell2, R. Gandhi7, J. Rockel1, M. Kapoor1,2 • 1Dept. of Lab. Med. and Pathobiology, Univ. of Toronto, Toronto, ON, Canada, 2Arthritis Program, Krembil Res. Inst., Univ. Hlth. Network, Toronto, ON, Canada

**403**
FUNCTIONAL ROLE OF MIR-140 AND MIR-146A IN INFLAMMATION AND CATABOLIC PROCESSES IN OSTEOARTHRITIS

I. Papathanasiou1, E. Mourmoura1, K. Malizos2, A. Tsezou1 • 1Univ. of Thessaly, Faculty of Med., Lab. of Cytogenetics and Molecular Genetics, Larissa, Greece, 2Univ. of Thessaly, Faculty of Med., Dept. of Orthopaedics, Larissa, Greece

**404**
GENE EXPRESSION AND DNA METHYLATION ANALYSIS AT THE OA SUSCEPTIBILITY LOCUS MARKED BY RS6516886 PRIORITIZES SPECIFIC GENE AND REGULATORY SEQUENCES AS FUNCTIONAL TARGETS OF THE ASSOCIATION SIGNAL

E. Parker, S. Anjum, M. Tselepi, S. J. Rice, D. Deehan, L. N. Reynard, J. Loughlin • Newcastle Univ., Newcastle upon Tyne, United Kingdom

**405**
EXPRESSION OF THE RIBOSOMAL RNA PSEUDO-URIDYLASE DYSKERIN IS DECREASED BY INFLAMMATORY MEDIATORS IN ARTICULAR CHONDROCYTES.

G. G. van den Akker, A. Chabronova, D. A. Surtel, A. Cremers, M. M. Caron, T. J. Welting • Maastricht Univ., Maastricht, Netherlands

**GENOMICS, PROTEOMICS & METABOLOMICS**

**406**
CIRCULATING MICRORNA SIGNATURES IDENTIFIED IN EARLY VERSUS LATE KNEE OSTEOARTHRITIS

S. A. Ali, K. Shestopalofof, R. Gandhi, M. Kapoor • Krembil Res. Inst., Toronto, ON, Canada

**407**
A GENOME-WIDE ASSOCIATION STUDY IN JAPANESE IDENTIFIED A NEW KNEE OSTEOARTHRITIS SUSCEPTIBILITY LOCUS

H. Takuwa1,2, M. Nakajima3, N. Kumahashi1, S. Kuwata1, S. Ito1, T. Wakatsuki1, M. Isomura1, T. Nabika4, C. Terao5, Y. Uchio1, S. Ikegawa2 • 1Dept. of Orthopedic Surgery, Shimane Univ., Izumo, Japan, 2Dept. of Bone and Joint Diseases, RIKEN Ctr. for Integrative Med. Sci., Tokyo, Japan, 3Dept. of Human Sci.s, Shimane Univ., Matsue, Japan, 4Dept. of Pathology, Shimane Univ., Izumo, Japan, 5Lab. for Statistical Analysis, RIKEN Ctr. for Integrative Med. Sci., Yokohama, Japan

**408**
TRANSCRIPTOMIC SIGNATURES OF MONOCYTES SHOW HIGH SIMILARITY BETWEEN PATIENTS WITH OSTEOARTHRITIS AND RHEUMATOID ARTHRITIS

R. Q. Zhang, Q. L. Liu, B. Zhang, H. F. Qiao, C. D. Shi, X. C. Li • Shaanxi Univ. of Chinese Med., Xianyang, China

**409**
INFLUENCE OF MITOCHONDRIAL DNA HAPLOGROUPS IN THE RISK OF RAPIDLY PROGRESSIVE OSTEOARTHRITIS OF THE KNEE. DATA FROM THE OSTEOARTHRITIS INITIATIVE

A. Durán-Sotuela, Jr., M. Fernández-Moreno, Sr., M. Vázquez-Mosquera, Jr., P. Ramos-Louro, Jr., A. Dalmao-Fernández, Jr., S. Relaño, Jr., N. Oreiro, Sr., B. Francisco J., Sr., I. Rego-Perez, Sr. • INIBIC, A Coruña, Spain

**410**
ACTIVATION OF THE PHOSPHATIDYLCHOLINE TO LYSOPHOSPHATIDYLCHOLINE PATHWAY IS ASSOCIATED WITH OSTEOARTHRITIS KNEE CARTILAGE VOLUME LOSS OVER TIME: DATA FROM A 2-YEAR MULTICENTRE CLINICAL TRIAL

G. Zhai1, J-P. Pelletier5, M. Liu1, D. Aitken2, E. Randell1, P. Rahman1, G. Jones3, J. Martel-Pelletier2 • 1Mem. Univ. of Newfoundland, St. John’s, NL, Canada, 2Univ. of Montreal Hosp. Res. Ctr., Montreal, QC, Canada, 3Menzies Res. Inst., Univ. of Tasmania, Hobart, Australia
411
METABOLITE PROFILES DISCRIMINATE BETWEEN ACL INJURED CASES AND UNINJURED CONTROLS WITHIN THE FIRST YEAR FOLLOWING INJURY AND SURGERY
K. L. Cameron1, J. R. Trump1, S. E. Prebighalo2, S. J. Svoboda1, J. Wickiser2, R. E. Synovec2 • Keller Army Hosp., West Point, NY, 2Univ. of Washington, Seattle, WA, 3United States Military Academy, West Point, NY

412
A SYSTEMATIC REVIEW OF THE SECRETOME OF SKELETAL MUSCLE CELLS
A. Florin1, C. Lambert1, C. Sanchez1, A. Mobasher2, Y. Henrotin • 1Bone and Cartilage Res. Unit, Arthropôle Liège, Univ. of Liège, CHU Sart-Tilman, Belgium, Liège, Belgium, 2Dept. of Regenerative Med., State Res. Inst. Ctr. for Innovative Med., Vilnius, Lithuania., Vilnius, Lithuania

413
EXPLORATORY PROTEOMIC ANALYSIS OF HUMAN SYNOVIAL FLUID IN KNEE OSTEOARTHRITIS: TOWARDS BIOMARKER IDENTIFICATION
N. Ali1, J. Tjörnstand2, P. Neuman2, E. Folkesson1, V. Hughes1, P. Önnerfjord1, M. Englund1 • 1Clinical Epidemiology Unit, Orthopedics, Dept. of Clinical Sci., Lund Univ., Lund, Sweden, 2Dept. of Orthopedics, Skåne University Hospital, Sweden, 3Molecular Skeletal Biology, Section for Rheumatology, Dept. of Clinical Sci., Lund Univ., Lund, Sweden

414
AUTOANTIBODIES AS POTENTIAL BIOMARKERS FOR PRE-SYMPTOMATIC KNEE OSTEOARTHRITIS. DATA FROM THE OSTEOARTHRITIS INITIATIVE
M. Camacho Encina1, F. Picchi1, V. Balboa1, I. Rego Pérez1, V. Calamia1, J. Van Duine2, J. Qiu2, R. Manzano3, M. Fuentes1, N. Oreiro1, J. LaBaer2, C. Ruiz Romero1, F. Blanco1 • 1INIBIC-CHUAC, A Coruña, Spain, 2Virginia G. Piper Biodesign Ctr. for Personalized-Biodesign Inst., Tempe, AZ, 3Proteomic Unit-Cancer Res. Ctr., Salamanca, Spain

415
ALTERED SYNOVIAL GENE EXPRESSION REFLECTS EARLY CHANGES IN POST-TRAUMATIC OSTEOARTHRITIS IN A NOVEL ANIMAL MODEL
A. M. Kemper1, T. N. Trumble2, M. K. Boyce2, M. P. Brown1, A. M. McCoy • 1Univ. of Illinois, Urbana, IL, 2Univ. of Minnesota, St. Paul, MN, 3Univ. of Florida, Gainesville, FL

416
PROTEOMIC ANALYSIS AND CELL VIABILITY OF NINE AMNION-DERIVED BIOLOGICS

417
CHARACTERIZATION OF THE IL-17 EFFECT ON ARTICULAR CARTILAGE IN A TRANSLATIONAL MODEL. AN EXPLORATIVE STUDY
D. Sinkeviciute1,2, C. Porcelli2,3, A. Aspberg1, P. Onnerfjord1, A-C. Bay-Jensen2 • 1Lund Univ., Lund, Sweden, 2Nordic BioSci., Herlev, Denmark, 3Univ. of Copenhagen, Copenhagen, Denmark

418
CLUSTERING ANALYSIS AND CLINICAL DATA INTEGRATION REVEALS TWO SUBGROUPS OF OSTEOARTHRITIS PATIENTS.

419
ELUCIDATING GENETIC ASSOCIATIONS THAT DIFFERENTIATE PAIN PROGRESSION CLUSTER GROUPS IN KNEE OSTEOARTHRITIS PATIENTS
B. S. Glicksberg, J. Lee, N. Rappoport, F. Liu, V. Pedia, A. J. Butte, S. Majumdar • Univ. of California, San Francisco, San Francisco, CA

420
ASSOCIATION IL1BGENE POLYMORPHISMS (RS1143634 AND RS1143627) WITH KNEE OSTEOARTHRITIS (KOA) RISK IN THE NORTH INDIAN POPULATION
A. K. Bhagat, R. N. Srivastava, A. C. Sharma, S. R. Srivastava • King George’s Med. Univ., Lucknow, India
RNA SEQ STUDY OF SYNOVIAL BIOPSIES FROM EARLY OSTEOARTHRITIS AND EARLY RHEUMATOID ARTHRITIS PATIENTS

R. Q. Zhang, B. Zhang, Q. L. Liu, H. F. Qiao, X. C. Li • Shaanxi Univ. of Chinese Med., Xianyang, China

HEALTH SERVICES RESEARCH

PHYSICAL THERAPY AND UTILIZATION OF INTRA-ARTICULAR THERAPIES IN KNEE OSTEOARTHRITIS: PRELIMINARY FINDINGS FROM A LARGE INSURANCE DATABASE

D. Kumar1, C. Pelouquin1, L. N. Marinko1, J. Camarinos1, M. Dubreuil1, M. T. Felson2 • 1Boston Univ., Boston, MA, 2Boston Univ. Sch. of Med., Boston, MA

MATCHED COMPARISON OF HEALTH CARE USE AND COSTS 3-10 YEARS AFTER A YOUTH SPORT-RELATED KNEE INJURY

D. A. Marshall1, G. R. Currie1, J. L. Whittaker2, C. A. Emery1 • 1Univ. of Calgary, Calgary, AB, Canada, 2Univ. of Alberta, Edmonton, AB, Canada

2-YEAR COST-EFFECTIVENESS OF TOTAL KNEE REPLACEMENT: RESULTS FROM THE FIRST RANDOMIZED TRIAL ON TOTAL KNEE REPLACEMENT IN ADDITION TO NON-SURGICAL TREATMENT

S. T. Skou1,2, E. M. Roos1, M. Laursen3,4, L. Arendt-Nielsen4, S. Rasmussen3,4, O. Simonsen3,4, R. Ibsen2, A. T. Larsen4, J. Kjellberg4 • 1Res. Unit for Musculoskeletal Function and Physiotherapy, Dept. of Sports Sci. and Clinical Biomechanics, Univ. of Southern Denmark, Odense, Denmark, 2Dept. of Physiotherapy and Occupational Therapy, Naestved-Slagelse-Ringsted Hosp., Slagelse, Denmark, 3Orthopedic Surgery Res. Unit, Aalborg Univ. Hosp., Aalborg, Denmark, 4Ctr. for Sensory-Motor Interaction (SMI), Dept. of Hlth.Sci. and Technology, Faculty of Med., Aalborg Univ., Aalborg, Denmark, 5I2minds, Arhus, Denmark, 6VIVE - The Danish Ctr. of Applied Social Sci., Copenhagen, Denmark

OPTIMISING PRIMARY CARE MANAGEMENT OF KNEE OSTEOARTHRITIS (THE PARTNER STUDY): LESSONS FROM A NON-RANDOMISED PILOT STUDY

J. L. Bowden1, K. Schuck1, C. Marshall1, M. King1, K. L. Bennell2, R. S. Hinman2, T. Egerton2, A. M. Briggs4, S. J. Bunker3, A. B. Forbes4, S. D. French1, J. Kasza1, P. Nicholson2, M. Pirotta3, D. J. Schofield6, N. A. Zwar6, D. J. Hunter1,10 • 1Inst. of Bone and Joint Res., The Univ. of Sydney, Sydney, Australia, 2Ctr. for Hlth., Exercise and Sports Med., The Univ. of Melbourne, Melbourne, Australia, 3Dept. of Gen. Practice, The Univ. of Melbourne, Melbourne, Australia, 4Sch. of Physiotherapy and Exercise Sci., Curtin Univ., Perth, Australia, 5Medibank, Melbourne, Australia, 6Sch. of Publ. Hlth.and Preventive Med., Monash Univ., Melbourne, Australia, 7Dept. of Chiropractic, Macquarie Univ., Sydney, Australia, 8Dept. of Economics, Faculty of Business and Economics, Macquarie Univ., Sydney, Australia, 9Sch. of Publ. Hlth.and Community Med., UNSW Australia, Sydney, Australia, 10Dept. of Rheumatology, Royal North Shore Hosp., Sydney, Australia

PATIENTS REPORT INFERIOR QUALITY OF CARE FOR KNEE OSTEOARTHRITIS PRIOR TO ASSESSMENT FOR KNEE REPLACEMENT SURGERY - A CROSS-SECTIONAL COHORT STUDY

L. H. Ingelsrud1, E. M. Roos2, K. Gromov3, A. Troelsen1 • 1Copenhagen Univ. Hosp. Hvidovre, Hvidovre, Denmark, 2Univ. of Southern Denmark, Odense, Denmark, 3Dept. of Chiropractic, Macquarie Univ., Sydney, Australia

ARE ILLNESS PERCEPTIONS A BARRIER TO UPTAKE OF EVIDENCE BASED INTERVENTIONS FOR KNEE OSTEOARTHRITIS? A QUALITATIVE STUDY

S. Bunzli1, P. O’Brien2, D. Ayton2, M. Dowsey1, J. Gunn1, J-A. Manski-Nankervis1 • 1The Univ. of Melbourne, Melbourne, Australia, 2Monash Univ., Melbourne, Australia

“I WOULD NEVER HAVE DONE IT IF IT HADN’T BEEN DIGITAL”: EXPECTATIONS AND EXPERIENCES OF A DIGITAL MANAGEMENT PROGRAM FOR HIP AND KNEE OSTEOARTHRITIS

A. Cronström, L. E. Dahlberg, H. Nero, J. Ericson, C. Sjödahl Hammarlund • Lund Univ., Lund, Sweden
MULTI-LEVEL REFORM IS REQUIRED TO SUPPORT HIGH-VALUE OSTEOARTHRITIS CARE DELIVERY: OUTCOMES OF A MULTINATIONAL SURVEY OF CLINICIANS AND STUDENTS

A. M. Briggs1, R. S. Hinman2, B. Darlow2, K. L. Bennell2, E. Houlding3, T. Pizzari3, M. Leech4, P. J. Larmer5, C. MacKay6, A. M. Greig7, L. A. Desmond8, A. Bendrups9, A. Francis-Cracknell9, J. E. Jordan10, H. Slater1 • 1Curtin Univ., PERTH, Australia, 2Univ. of Melbourne, Melbourne, Australia, 3Univ. of Otago, Wellington, New Zealand, 4Univ. of Ottawa, Ottawa, ON, Canada, 5La Trobe Univ., Melbourne, Australia, 6Monash Univ., Melbourne, Australia, 7Auckland Univ. of Technology, Auckland, New Zealand, 8Toronto Rehabilitation Inst., Toronto, ON, Canada, 9Univ. of British Columbia, Vancouver, BC, Canada, 10Western Hlth., Melbourne, Australia, 11Hlth. Sense (Aust) Pty Ltd, Melbourne, Australia

FREQUENCY OF PHYSICAL ACTIVITY AND WEIGHT REDUCTION ADVICE IN PRIMARY CARE FOR PATIENTS WITH SELF-REPORTED OSTEOARTHRITIS, HYPERTENSION AND/OR DIABETES

L. Baumbach1, E. Roos1, J. Lykkegaard2, K. Thomsen1, P. Kristensen3, A. Christensen4 • 1Dept. of Sports Sci. and Clinical Biomechanics, Res. Unit for Musculoskeletal Function and Physiotherapy, Univ. of Southern Denmark, Odense, Denmark, 2Dept. of Publ. Hlth., Res. Unit for Gen. Practice, Univ. of Southern Denmark, Odense, Denmark, 3Dept. of Sports Sci. and Clinical Biomechanics, Res. Unit for Exercise Epidemiology, Univ. of Southern Denmark, Odense, Denmark, 4Dept. of Population Hlth.and Morbidity, Univ. of Southern Denmark, Odense, Denmark

ASSOCIATION OF HEALTH DETERMINANTS WITH CHANGE IN PATTERNS OF RESOURCE USE AFTER TOTAL KNEE REPLACEMENT SURGERY

R. Lee1, B. Sharif2, S. Vik2,3, K. Yee2, J. Werle1, D. Marshall1 • 1Univ. of Calgary, Calgary, AB, Canada, 2Alberta Hlth.Services, Edmonton, AB, Canada

EXPERIENCES OF STIGMA AMONG PEOPLE WITH OSTEOARTHRITIS WHO UNDERWENT A TOTAL JOINT REPLACEMENT OF THE KNEE OR HIP

L. Trojanowski1, A. Davis2, W. Berta3, F. Weber4 • 1Dalla Lana Sch. of Publ. Hlth.Univ. of Toronto, Toronto, ON, Canada, 2Krembil Res. Inst., Univ. Hlth.Network, Toronto, ON, Canada

WHAT ATTRIBUTES OF INTERVENTIONS FOR OSTEOARTHRITIS DRIVE PREFERENCES? A DISCRETE CHOICE EXPERIMENT INVOLVING CROSS-SECTORAL AND MULTI-DISCIPLINARY STAKEHOLDER GROUPS

J. Chua1, P. Hansen1, A. M. Briggs2, J. H. Abbott1 • 1Univ. of Otago, Dunedin, New Zealand, 2Curtin Univ., Perth, Australia

THERAPEUTIC ALLIANCE BETWEEN PHYSOTHERAPISTS AND PATIENTS WITH KNEE OSTEOARTHRITIS CONSULTING VIA TELEPHONE A LONGITUDINAL STUDY

B. J. Lawford1, K. L. Bennell1, P. K. Campbell1, J. Kasza2, R. S. Hinman1 • 1The Univ. of Melbourne, Melbourne, Australia, 2Monash Univ., Melbourne, Australia

OSTEOARTHRITIS AND HEALTH RELATED QUALITY OF LIFE IN COMMUNITY LIVING AUTONOMOUS ELDERLY

S. R. Pais1,2, L. N. Ferreira3,4, M. Botelho5,2, A. Marreiros1,6 • 1Univ. of Algarve-Dept. of BioMed. Sci. and Med., Faro, Portugal, 2Centro de Investigação Biomédica (CBMR), Faro, Portugal, 3Univ. of Algarve-ESGHT, Faro, Portugal, 4Ctr. for Hlth.Studies and Res. of the Univ. of Coimbra (CEISUC), Coimbra, Portugal, 5Univ. of Algarve-ESSUAlg, Faro, Portugal, 6Algarve BioMed. Ctr. (ABC), Faro, Portugal

HEALTH SYSTEM EXPENDITURES ON OSTEOARTHRITIS ACROSS DISTINCT CARE PATHWAYS IN ALBERTA FROM 2018 TO 2025

B. Sharif, F. Zaerpour, D. Marshall • Univ. of Calgary, Calgary, AB, Canada
437
DISEASE BURDEN IN OSTEOARTHRITIS (OA) IS SIMILAR TO RHEUMATOID ARTHRITIS (RA) FROM THE PATIENT’S PERSPECTIVE, SLIGHTLY HIGHER IN RA AT PRESENTATION, SIMILAR ONE YEAR LATER, AND SLIGHTLY HIGHER IN OA TWO YEARS LATER
M. J. Bergman1, M. Riad2, I. Castrejon2, T. Pincus1 • 1Drexel Univ., school of Med., Philadelphia, PA, 2Rush Univ. Med. Ctr., Chicago, IL

438
MANAGEMENT OF HIP AND KNEE OSTEOARTHRITIS IN GENERAL PRACTICE: A SYSTEMATIC REVIEW
J. Fraser, A. Lahham, S. Balogun, T. Winzenberg, L. Laslett, D. Aitken • Univ. of Tasmania, Hobart, Australia

439
IMPLEMENTATION PRIORITIES FOR OSTEOARTHRITIS MANAGEMENT PROGRAMS
J. P. Eyles1,2, K. L. Bennell3, K. S. Dziedzic4, R. S. Hinman3, M. van der Esch9, M. Holden4, D. J. Hunter1,2, J. L. Bowden1,2, OARSI International Osteoarthritis Management Programs Discussion Group: Joint Effort Initiative • 1Inst. of Bone and Joint Res., Kolling Inst., Univ. of Sydney, Sydney, Australia, 2Rheumatology Dept., Royal North Shore Hosp., Sydney, Australia, 3Cfr. for Hlth., Exercise and Sports Med., Dept. of Physiotherapy, The Univ. of Melbourne, Melbourne, Australia, 4Res. Inst. for Primary Care and Hlth.Sci., Keele Univ., Keele, United Kingdom, 5Rehabilitation Res. Ctr. Reade, Univ. of Applied Sci., Amsterdam, Netherlands

440
INTEGRATING VALUES AND PREFERENCES WITH THE BEST AVAILABLE EVIDENCE: A MULTI-CRITERIA DECISION ANALYSIS APPROACH
J. Chua1, P. Hansen1, A. M. Briggs2, R. Wilson1, D. P. Gwynne-Jones1, J. H. Abbott1 • 1Univ. of Otago, Dunedin, New Zealand, 2Curtin Univ., Perth, Australia

441
HOW DO PATIENTS APPRAISE SATISFACTION, AND PAIN AND FUNCTION OUTCOMES AFTER TOTAL KNEE REPLACEMENT? A QUALITATIVE INVESTIGATION.
N-R. Klem1, S. Bunzli2, M. Dowsey1, R. Schute1, P. O’ Sullivan1, P. Kent1, P. Choong2, A. Smith1 • 1Curtin Univ., Perth, Australia, 2The Univ. of Melbourne, Melbourne, Australia

442
IS PATIENT ACTIVATION ASSOCIATED WITH CHANGES IN SYMPTOMS FOLLOWING AN OSTEOARTHRITIS MANAGEMENT PROGRAM?

443
QUALITY INDICATORS FOR INTERMEDIATE CARE OF KNEE AND HIP OSTEOARTHRITIS: A SYSTEMATIC REVIEW
I. G. Arslan1, R. Rozendaal1, M. van Middelkoop1, S. A. Stitzinger1, M-P. van de Kerkhove2, V. Voorbrood1,2, P. J. Bindels1, S. M. Bierma-Zeinstra3, D. Schiphof1 • 1Erasmus Univ. Med. Ctr., Rotterdam, Netherlands, 2Gen. Practice Pallion, Hulst, Netherlands

444
THE RELATIONSHIP BETWEEN PRE-OPERATIVE PATIENT-REPORTED EXPECTATIONS OF TOTAL KNEE ARTHROPLASTY AND SATISFACTION WITH SURGICAL OUTCOME AT SIX MONTHS
G. A. Hawker1,2, B. Ravi1, D. A. Marshall3, M. J. Dunbar4, E. Bohm5, The BEST Knee Study Team • 1Univ. of Toronto, Toronto, ON, Canada, 2Women’s Coll. Res. Inst., Women’s Coll. Hosp., Toronto, ON, Canada, 3Univ. of Calgary, Calgary, AB, Canada, 4Dalhousie Univ., Halifax, NS, Canada, 5Univ. of Manitoba, Winnipeg, MB, Canada

445
DETERMINANTS OF OPIOID ANALGESICS USE IN PATIENTS WITH KNEE OSTEOARTHRITIS REFERRED FOR CONSIDERATION OF TOTAL KNEE ARTHROPLASTY
L. K. King1, D. A. Marshall2, G. A. Hawker1 • 1Univ. of Toronto, Toronto, ON, Canada, 2Univ. of Calgary, Calgary, AB, Canada
THE COST-EFFECTIVENESS OF RECOMMENDED ADJUNCTIVE OSTEOARTHRITIS MANAGEMENT OPTIONS IN NEW ZEALAND: RESULTS FROM A COMPUTER SIMULATION MODEL
R. Wilson¹, J. Chua¹, A. M. Briggs², J. H. Abbott¹ • Univ. of Otago, Dunedin, New Zealand, ²Curtin Univ., Perth, Australia

MID-TERM FOLLOW UP AND ANALYSIS OF THE SUBSEQUENT NEED FOR HIP REPLACEMENT FOLLOWING COMPLETION OF THE CHAIN (CYCLING AGAINST HIP PAIN) PROGRAMME
T. W. Wainwright, L. Burgess, T. Immins, R. G. Middleton • Bournemouth Univ., Bournemouth, United Kingdom

ATTITUDES TOWARDS SEEKING CARE FOR LOWER LIMB PAIN AND INJURY IN AUSTRALIA
J. L. Bowden¹, ², R. Lamberts¹, D. J. Hunter¹, ², L. Melo³, K. A. Mills⁴ • ¹Univ. of Sydney, Sydney, Australia, ²Institute of Bone and Joint Res., Sydney, Australia, ³Australian Natl. Univ., Canberra, Australia, ⁴Royal North Shore Hosp., Sydney, Australia

PROJECTING THE HEALTHCARE BURDEN OF KNEE OSTEOARTHRITIS IN NEW ZEALAND: RESULTS FROM A COMPUTER SIMULATION MODEL
J. H. Abbott¹, R. Wilson¹, J. K. Sullivan², N. K. Lenhard³, E. Losina¹ • ¹Univ. of Otago, Dunedin, New Zealand, ²Brigham and Women’s Hosp., Boston, MA, ³Harvard Med. Sch., Boston, MA

IMAGING – OTHER JOINTS AND JOINT MORPHOMETRY

STRUCTURAL PROGRESSOR THRESHOLDS OF FEMOROTIBIAL CARTILAGE CHANGE OVER 1 TO 4-YEARS FOR DIFFERENT MRI ORIENTATIONS AND CONTRASTS - DATA FROM THE OSTEOARTHRITIS INITIATIVE
W. Wirth¹, ², S. Maschek¹, ², C. Ladel¹, H. Guehring², M. Michaelis³, F. Eckstein¹, ² • ¹Paracelsus Med. Univ., Salzburg, Austria, ²Chondrometrics GmbH, Airing, Germany, ³Merck KGaA, Darmstadt, Germany

T1RHO MRI OF THE SUBTALAR ARTICULAR CARTILAGE IS INCREASED IN THOSE WITH CHRONIC ANKLE INSTABILITY
E. A. Wikstrom, K. Song, M. Casey, W. Karakash, C. Mueller, C. Overman, B. Pietrosimone • UNC - Chapel Hill, Chapel Hill, NC

SEMI-AUTOMATED QUANTIFICATION OF CARTILAGE VOLUME IN KNEE OSTEOARTHRITIS: RESPONSIVENESS AND CONCURRENT VALIDITY
A. Mathiessen¹, E. Huang¹, E. L. Ashbeck², C. Woh³, J. Dureya¹ • ¹Brigham and Women’s Hosp., Harvard Med. Sch., Boston, MA, ²Univ. of Arizona Arthritis Ctr., Univ. of Arizona Coll. of Med., Tucson, AZ

CORRELATES BETWEEN MAGNETIC RESONANCE IMAGING AND X-RAY ABNORMALITIES AND HAND SYMPTOMS IN OLDER ADULTS.
S. Mattap¹, K. Wills¹, D. Aitken¹, A. Halliday², S-N. Luong³, K. Squibb¹, G. Jones¹, L. L. Laslett¹ • ¹Menzies Inst. for Med. Res., Univ. of Tasmania, Hobart, Australia, ²Dept. of Med. Imaging, Royal Hobart Hosp., Hobart, Australia, ³Univ. of New South Wales, Sydney, Australia

CORRELATES OF HAND ABNORMALITIES AND MEASURES OF HAND PAIN AND FUNCTION IN OLDER ADULTS.
S. Mattap¹, L. Laslett¹, K. Squibb¹, K. Wills¹, P. Otahal¹, F. Pan¹, D. Aitken¹, H. Keen², T. Winzenberg³, G. Jones¹ • ¹Menzies Inst. for Med. Res., Univ. of Tasmania, Hobart, Australia, ²Univ. of Western Australia, Crawley, Australia

FEASIBILITY, INTER-READER RELIABILITY, AND COMPARISON OF FLUORESCENCE OPTICAL IMAGING ENHANCEMENT IN PATIENTS WITH EROSIve HAND OSTEOARTHRITIS AND RHEUMATOID ARTHRITIS
Ø. Maugesten¹, S. Ohndorf², D. Glinatsi³, M. Ammitzbøll-Danielsen¹, Y. Kisten³, M. Østergaard³, L. Terslev³, T. Uhlig³, T. K. Kvien¹, I. K. Haugen³ • ¹Dept. of Rheumatology, Diakonhjemmet Hosp., Oslo, Norway, ²Dept. of Rheumatology and Clinical Immunology, Charité Univ. medizin, Berlin, Germany, ³Copenhagen center for Arthritis Res. (COPCARE), Ctr. for Rheumatology and Spine Diseases, Rigshosp.at, Glostrup, Copenhagen, Denmark

446
447
448
449
450
451
452
453
454
455
456 WHOLE BODY LOW DOSE CT TO ASSESS OVERALL BURDEN OF OSTEOARTHRITIS: DEVELOPMENT OF AN ATLAS AND RELIABILITY TESTING OF A NEW SCORING SYSTEM.

W. Gielis1, W. Foppen2, F. J. Nap3, F. W. Roemer4, H. Weinans5, P. A. de Jong6 • 1Dept. of Orthopedics and Dept. of Radiology, UMC Utrecht, Utrecht, Netherlands, 2Dept. of Radiology, UMC Utrecht, Utrecht, Netherlands, 3Dept. of Radiology, Central Military Hosp. (CMH) Utrecht, Utrecht, Netherlands, 4Dept. of Radiology, Univ. of Erlangen-Nuremberg, Erlangen, Germany, 5Dept. of Radiology, Boston Univ. Sch. of Med., Boston, MA, 6Dept. of Orthopedics, UMC Utrecht, Utrecht, Netherlands

457 CHANGES IN BONE SHAPE ARE BOTH A RISK FACTOR FOR AND A RESULT OF HIP OSTEOARTHRITIS, A FOLLOW-UP STUDY IN THE CHECK COHORT.

W. Gielis1, H. Rayegan2, C. Lindner3, A. K. Davison4, V. Arbabi5, T. F. Cootes6, P. A. de Jong7, H. Weinans8 • 1Dept. of Orthopedics and Dept. of Radiology, UMC Utrecht, Utrecht, Netherlands, 2Dept. of Mechanical Engineering, Faculty of Engineering, Univ. of Birjand, Birjand, Iran, Islamic Republic of, 3Div. of Informatics, Imaging & Data Sci., Univ. of Manchester, Manchester, United Kingdom, 4Dept. of Biomechanical Engineering, TU Delft, Delft, Netherlands

458 3D PATELLA BONE SHAPE MODELING AFTER ACL INJURY AND THE ASSOCIATION WITH CARTILAGE HEALTH OVER 3-YEARS AFTER ACL RECONSTRUCTION

M. Yang1, K. Sunshine2, V. Pedroia3, B. C. Ma3, X. Li1 • 1Cleveland Clinic, Cleveland, OH, 2Case Western Reserve Univ., Cleveland, OH, 3Univ. of California San Francisco, San Francisco, CA

459 COMPARISON OF TALAR CARTILAGE THICKNESS BETWEEN THOSE WITH AND WITHOUT CHRONIC ANKLE INSTABILITY: A ULTRASONOGRAPHY STUDY.

K. Song, B. G. Pietrosimone, E. A. Wikstrom • UNC Chapel Hill, Chapel Hill, NC

460 THE RELATIONSHIP BETWEEN SONOGRAPHIC AND BIOLOGICAL MARKERS OF SHOULDER PATHOLOGY FOLLOWING A DYNAMIC UPPER EXTREMITY TASK

P. Jayabalan1, D. Amin2, H. Kim1, Y-S. Lin1, J. Soo Hoo3 • 1Shirley Ryan AbilityLab, Chicago, IL, 2Rosalind Franklin Univ., Chicago, IL, 3Weill Cornell Med., New York, NY

IMAGING – PRECLINICAL MODELS

461 NOVEL MICROCOMPUTED TOMOGRAPHY METHOD FOR THICKNESS ANALYSIS OF CALCIFIED CARTILAGE

L. Huang1, P. K. Tanska1, R. K. Korhonen1, S. J. Saarakkala2, W. Herzog4, M. A. Finnilä1,2 • 1Dept. of Applied Physics, Univ. of Eastern Finland, Kuopio, Finland, 2Res. Unit of Med. Imaging, Physics and Technology, Faculty of Med., Univ. of Oulu, Oulu, Finland, 4Dept. of Diagnostic Radiology, Oulu Univ. Hosp., Oulu, Finland, 3Human performance laboratory, Faculty of Kinesiology, Univ. of Calgary, Calgary, AB, Canada

462 18F-SODIUM FLUORIDE ULTRA-LOW DOSE USING DIGITAL POSITRON EMISSION TOMOGRAPHY IN A PRECLINICAL CANINE MODEL

M. I. Menendez1, R. Moore, K. Binzel, J. Zhang, C. Wright, M. Abdel-Rasoul, S. Fernandez, R. D. Jackson, M. V. Knopp • The Ohio State Univ., Columbus, OH

463 CARTILAGE SURFACE INTEGRITY INFLUENCES CONTRAST ENHANCED CT IMAGING OF OSTEOARTHRITIS

C. Flynn, M. Hurtig, J. Proulx • Univ. of Guelph, Guelph, ON, Canada
464 CORRELATION BETWEEN A NOVEL ULTRASONOGRAPHIC SCALE FOR ACTIVITY OF KNEE OSTEOARTHRITIS AND CLINICAL PARAMETERS.
M. MORTADA, Y. Amer, A. Ebaid, G. Abu Elsoad, L. Kotb • RHEUMATOLOGY & REHABILITATION Dept., FACULTY OF MEDICINE, ZAGAZIG Univ., ZAGAZIG, Egypt

465 THE ASSOCIATION OF SUBCHONDRAL AND SYSTEMIC BONE MINERAL DENSITY WITH OSTEOARTHRITIS-RELATED TOTAL JOINT REPLACEMENTS IN OLDER ADULTS

466 INTERSITE COMPARISON AND TEST-RETEST RELIABILITY OF CARTILAGE THICKNESS AND COMPOSITIONAL ANALYSIS IN THE APPROACH STUDY – A 2-YEAR MULTICENTER EUROPEAN EXPLORATORY STUDY FOR PHENOTYPE CHARACTERIZATION OF KNEE OSTEOARTHRITIS

467 ASSOCIATION BETWEEN BASELINE MENISCAL EXTRUSION ON MRI AND LONG-TERM INCIDENT KNEE OSTEOARTHRITIS IN TWO DIFFERENT COHORTS
J. A. van der Voet1,2, D. Schiphol1, D. Vroegindewey2, E. H. Oei1, S. M. Bierma-Zeinstra1, J. Runhaar1 • 1Erasmus Med. Ctr., Rotterdam, Netherlands, 2Maasstad Hosp., Rotterdam, Netherlands

468 IMPACT OF CONTRALATERAL RADIOGRAPHIC STATUS ON LONGITUDINAL CHANGE OF CARTILAGE TRANSVERSE RELAXATION TIME (T2) IN RADIOGRAPHICALLY NORMAL KNEES, A MODEL OF EARLY OA? - DATA FROM THE OSTEOARTHRITIS INITIATIVE
S. Maschek1,2, W. Wirth1,2, F. Roemer1,2, G. N. Duda4, L. Sharma5, F. Eckstein1,2 • 1Paracelsus Med. Univ., Salzburg, Austria, 2Chondrometrics GmbH, Airing, Germany, 3Univ. of Erlangen, Erlangen, Germany, 4Charité, Berlin, Germany, 5Northwestern Univ., Chicago, IL

469 CARTILAGE THICKNESS LOSS CORRELATES TO UTE-T2* EARLY AFTER ACL RECONSTRUCTION
A. Williams1, F. Eckstein2,3, W. Wirth2,3, C. R. Chu1 • 1Stanford Univ., Stanford, CA, 2Paracelsus Med. Univ., Salzburg, Austria, 3Chondrometrics GmbH, Airing, Germany

470 [18F]-SODIUM FLUORIDE IMAGING OF BONE METABOLISM AFTER ACUTE LOADING
F. Kogan1, B. Haddock2, A. Fan1, N. R. Jørgensen2, C. Suetta2, G. E. Gold1 • 1Stanford Univ., Stanford, CA, 2Copenhagen Univ. Hosp., Copenhagen, Denmark

471 KNEE JOINT DISTRACTION IS MORE EFFICIENT IN REBUILDING CARTILAGE THICKNESS IN THE MORE AFFECTED COMPARTMENT THAN HIGH TIBIAL OSTEOTOMY IN PATIENTS WITH KNEE OSTEOARTHRITIS
M. P. Jansen1, S. Maschek2, R. J. Van Heerwaarden3, S. C. Mastbergen1, W. Wirth3, F. P. Lafeber1, F. Eckstein2 • 1Univ. Med. Ctr. Utrecht, Utrecht, Netherlands, 2Chondrometrics GmbH, Airing, Germany, 3Klinik ViaSana, Mill, Netherlands
DIFFUSE TIBIOFEMORAL CARTILAGE CHANGE PRIOR TO THE DEVELOPMENT OF ACCELERATED KNEE OSTEOARTHRITIS: DATA FROM THE OSTEOARTHRITIS INITIATIVE

M. Harkey1,2, J. Davis1, B. Lu3, L. Price1, C. Eaton2, G. Lo4,5, M. Barbe6, R. Ward3, M. Zhang2,3, S-H. Liu4, K. L. Lapane1, J. W. MacKay10, T. E. McAlindon2, J. B. Driban2


NOVEL COMPOSITE KNEE STRUCTURE METRICS OF DISEASE ACTIVITY AND CUMULATIVE DAMAGE PREDICT THE DEVELOPMENT OF ACCELERATED KNEE OSTEOARTHRITIS: DATA FROM THE OSTEOARTHRITIS INITIATIVE

M. Harkey1,2, J. Davis1, B. Lu3, L. Price1, R. J. Ward1, J. W. MacKay5, C. B. Eaton4, G. H. Lo7,8, M. F. Barbe5, M. Zhang1,2,10, J. Pang11, A. C. Stout12, M. LaValley13, T. E. McAlindon1, J. B. Driban2


IS THE HYPERTROPHIC PHENOTYPE OF TIBIOFEMORAL OSTEOARTHRITIS ASSOCIATED WITH FASTER STRUCTURAL PROGRESSION? THE MOST STUDY

M. D. Crema1, A. Guermazi1, D. T. Felson1, X. Sun1, M. C. Nevitt2, C. E. Lewis3, J. Torner4, F. W. Roemer1

• 1Boston Univ., Boston, MA, 2Univ. of California at San Francisco, San Francisco, CA, 3Univ. of Alabama, Birmingham, AL, 4Univ. of Iowa, Iowa City, IA

LONGITUDINAL ASSESSMENT OF CARTILAGE COMPOSITION BY HIGH-FIELD MRI IN PATIENTS WITH LOW-GRADE KNEE CARTILAGE INJURY


RELIABILITY OF KNEE ULTRASOUND IN A COMMUNITY BASED COHORT

C. Alvarez1, T. A. Schwartz2, S. Savage-Guin3, C. J. Bakewell2, M. J. Kohler1, J. Lin4, J. Samuels5, A. E. Nelson1

• 1Univ. of North Carolina at Chapel Hill, Chapel Hill, NC, 2Intermountain Hlth.Care, Salt Lake City, UT, 3Massachusetts Gen. Hosp., Boston, MA, 4Stanford Univ., Stanford, CA, 5NYU Langone Med. Ctr., New York City, NY

MICRO-COMPUTED TOMOGRAPHY OF 3D MICROSTRUCTURE OF INTACT AND OSTEOARTHRITIC HUMAN MENISCUS

I. Kestilä1, E. Folkesson2, M. A. Finnilä1, A. Turkiewicz2, P. Önnerfjord2, V. Hughes2, J. Tjörnstrand2, M. Englund2, S. Saarakkala2 • 1Univ. of Oulu, Oulu, Finland, 2Lund Univ., Lund, Sweden

SEMI-AUTOMATED LONGITUDINAL ASSESSMENT OF QUANTITATIVE JOINT SPACE WIDTH AT THE HIP IN A COMMUNITY-BASED COHORT

J. A. Smith1, C. Alvarez2, J. B. Renner1, J. M. Jordan1, Y. M. Golightly1, J. Duryea2, A. E. Nelson1 • 1Univ. of North Carolina at Chapel Hill, Chapel Hill, NC, 2Harvard Med. Sch. Dept. of Radiology Brigham and Women’s Hosp., Boston, MA
479
FACTORS ASSOCIATED WITH LONGITUDINAL CHANGE OF MENISCAL EXTRUSION IN OVERWEIGHT WOMEN WITHOUT CLINICAL SIGNS OF KNEE OSTEOARTHRITIS.
J. A. van der Voet¹,², D. Wessels¹, D. Vroegindeweij¹, E. H. Oei¹, S. M. Bierma - Zeinstra¹, J. Runhaar¹
¹Erasmus Med. Ctr., Rotterdam, Netherlands, ²Maasstad Hosp., Rotterdam, Netherlands

480
AN EFFICIENT ALTERNATIVE TO MAGNETIC RESONANCE (MR) COMPOSITE RELAXATION (R2R1P) MAPPING IN HUMAN KNEE CARTILAGE STUDY AT 3T
Y. Pang, R. Palmieri-Smith • Univ. of Michigan, Ann Arbor, MI

481
THE DEGENERATION OF MEDIAL MENISCUS IN MENISCAL BODY AND POSTERIOR HORN SHOWS A GREATER CHANGE THAN THAT IN ANTERIOR HORN ACCORDING TO THE SEVERITY OF MEDIAL MENISCUS EXTRUSION IN EARLY- TO PRIMARY-STAGE KNEE OSTEOARTHRITIS
S. hada¹,², M. Ishijima¹,², H. Kaneko¹, L. Lizu¹,², H. Arita¹, T. Aoki¹, Y. Takazawa¹, H. Ikeda¹, T. Nishiura¹, Y. Okada¹, K. Kaneko¹,², ¹Dept. of Med. for Orthopaedics and Motor Organ, Juntendo Univ. Graduate Sch. of Med, Tokyo, Japan, ²Dept. of Orthopedic Surgery, Tama-Nanbu Chiiki Hosp., Tokyo, Japan, ³Dept. of Pathophysiology for Locomotive and Neoplastic Diseases, Juntendo Univ. Graduate Sch. of Med, Tokyo, Japan, ⁴Sportology Ctr., Juntendo Univ. Graduate Sch. of Med., Tokyo, Japan

482
INFLUENCE OF SEX ON TIBIOFEMORAL CARTILAGE RESPONSE TO RUNNING IN YOUNG HEALTHY MEN AND WOMEN
E. C. Brenneman¹, A. A. Gatti², M. R. Maly¹,² • ¹McMaster Univ., Hamilton, ON, Canada, ²NeuralSeg Ltd, Hamilton, ON, Canada, ³Univ. of Waterloo, Waterloo, ON, Canada

483
ASSOCIATIONS OF PROGRESSION OF OSTEOARTHRITIS MRI FEATURES WITH THE COURSE OF KNEE PAIN OVER A FIVE YEARS PERIOD IN AN OPEN FEMALE POPULATION
D. Schiphof, J. Waarsing, E. Oei, S. Bierma-Zeinstra • Erasmus MC, Rotterdam, Netherlands

484
3D JOINT SPACE MAPPING IS A BETTER PREDICTOR OF FUTURE TOTAL HIP REPLACEMENT THAN CURRENT 2D RADIOGRAPHIC GOLD STANDARDS: AN AGES-REYKJAVIK STUDY
T. D. Turmezei¹, G. M. Treece², A. H. Gee³, S. Sigurðsson³, H. Jónsson³, T. Aspelund³, V. Gudnason⁴, K. E. Poole⁵, ¹Norfolk and Norwich Univ. Hosp. NHS Fndn. Trust, Norwich, United Kingdom, ²Univ. of Cambridge, Cambridge, United Kingdom, ³Icelandic Heart Association, Kopavogur, United Kingdom, ⁴Landspitalinn Univ. Hosp., Reykjavik, Iceland, ⁵Icelandic Heart Association, Kopavogur, Iceland

485
RELATIONSHIPS BETWEEN VASTUS MEDIALIS FAT INFILTRATION WITH BODY MASS INDEX, DISEASE SEVERITY AND ANTERIOR CRUCIATE LIGAMENT STATUS IN PATIENTS WITH KNEE OSTEOARTHRITIS
A. Teoli¹, S. Robbins¹,², F. Abram³, J.-P. Pelletier¹, J. Martel-Pelletier¹, ¹McGill Univ., Montreal, QC, Canada, ²Constance Lethbridge Rehabilitation Ctr., Montreal, QC, Canada, ³Arthrolab Inc., Montreal, QC, Canada, ⁴Univ. de Montreal, Montreal, QC, Canada

486
THE EFFECT OF KNEE ALIGNMENT ON CARTILAGE LOSS DIFERS BASED ON ANTERIOR CRUCIATE LIGAMENT STATUS IN PATIENTS WITH OR AT RISK OF KNEE OSTEOARTHRITIS: DATA FROM THE OSTEOARTHRITIS INITIATIVE
S. Robbins¹,², A. Teoli¹, F. Abram³, J.-P. Pelletier⁴, J. Martel-Pelletier¹, ¹McGill Univ., Montreal, QC, Canada, ²Constance Lethbridge Rehabilitation Ctr., Montreal, QC, Canada, ³Arthrolab Inc., Montreal, QC, Canada, ⁴Univ. de Montreal, Montreal, QC, Canada
487 3D JOINT SPACE MAPPING OF THE KNEE: A FEASIBILITY STUDY WITH STANDING CT DATA FROM THE MULTICENTER OSTEOARTHRITIS STUDY

S. B. Low¹, S. A. Neil², J. A. Lynch³, G. M. Treece⁴, A. H. Gee⁴, K. E. Poole⁴, T. D. Turmezei¹ • ¹Norfolk and Norwich Univ. Hosp. NHS Fndn. Trust, Norwich, United Kingdom, ²Univ. of Kansas Med. Ctr., Kansas City, KS, ³Univ. of California, San Francisco, San Francisco, CA, ⁴Univ. of Cambridge, Cambridge, United Kingdom

488 RELIABILITY OF A NEW SCORING SYSTEM FOR INTRAARTICULAR MINERALIZATION OF THE KNEE: BUCKS (BOSTON UNIVERSITY CALCIUM KNEE SCORE)

A. Guermazi¹, M. Jarrraya², J. A. Lynch³, D. T. Felson³, M. Clancy³, M. Nevidt³, C. Lewis³, J. Torner³, T. Neogi⁵ • ¹Boston Univ., Boston, MA, ²Mercy Catholic Med. Ctr., Darby, PA, ³UCSF, San Francisco, CA, ⁴Univ. of Alabama at Birmingham, Birmingham, AL, ⁵Univ. of Iowa, Iowa City, IA

489 CROSS-SECTIONAL STUDY OF INTRA-ARTICULAR MINERALIZATION ON KNEE DUAL-ENERGY COMPUTED TOMOGRAPHY: THE MULTICENTER OSTEOARTHRITIS STUDY

M. Jarrraya¹, T. Neogi², J. A. Lynch³, M. Clancy³, D. T. Felson³, M. Nevitt³, C. Lewis³, J. Torner³, A. Guermazi⁶ • ¹Boston Univ., Boston, MA, ²Mercy Catholic Med. Ctr., Darby, PA, ³UCSF, San Francisco, CA, ⁴Univ. of Alabama at Birmingham, Birmingham, AL, ⁵Univ. of Iowa, Iowa City, IA

490 EFFECTS OF RUNNING ON KNEE CARTILAGE IN FEMALE RUNNERS WITH AND WITHOUT OSTEOARTHRITIS: A PILOT STUDY

J-F. Esculier¹, M. Jarrett¹, N. M. Krowchuk¹, A. Rauscher¹, V. Wiggerrmann¹, J. E. Taunton¹, D. Wilson¹, A. Gatti², M. A. Hunt² • ¹Univ. of British Columbia, Vancouver, BC, Canada, ²McMaster Univ., Hamilton, ON, Canada

491 THE EFFECTS OF WEIGHT LOSS ON IMAGING OUTCOMES IN OVERWEIGHT OR OBSE藝 PEOPLE WITH OSTEOARTHRITIS IN THE HIP OR KNEE JOINT: A SYSTEMATIC REVIEW OF IMAGING REPORTING IN INTERVENTIONAL STUDIES

C. L. Daugaard¹,², S. Hangaard³, E. Bartels³, H. Gudbergsen⁴, R. Christensen⁵, H. Bliddal⁶, M. Englund⁷, P. G. Conaghan⁸, M. Boesen⁹ • ¹The Parker Inst., Bispebjerg & Frederiksberg Hosp., Frederiksberg, Denmark, ²Dept. of Radiology, Copenhagen Univ. Hosp., Bispebjerg & Frederiksberg, Copenhagen, Denmark, ³Dep. of Neurology, Copenhagen Univ. Hosp., Bispebjerg & Frederiksberg, Copenhagen, Denmark, ⁴Dept. of Rheumatology, Odense Univ. Hosp., Odense, Denmark, ⁵Clinical Epidemiology Unit, Orthopedics, Dept. of Clinical Sci., Lund Univ., Lund, Sweden, ⁶Leeds Inst. of Rheumatic and Musculoskeletal Med., Univ. of Leeds, Leeds, United Kingdom, ⁷NIHR Leeds BioMed. Res. Ctr., Leeds, United Kingdom

492 PREDICTORS OF RADIOGRAPHIC OSTEOARTHRITIS 2-3 YEARS AFTER ACL RECONSTRUCTION: DATA FROM THE MULTICENTER ORTHOPAEDIC OUTCOMES NETWORK ON SITE (MOON) NESTED COHORT

M. H. Jones¹, S. R. Oak², J. T. Andrish³, R. H. Brophy⁴, C. L. Cox⁴, C. L. Duong⁵, W. R. Dunn⁶, D. C. Flanagan⁶, B. C. Fleming⁶, L. J. Huston⁶, C. K. Aedina⁶, M. Koloskya⁶, G. Kuyumcu¹, T. S. Lynch⁵, R. A. Magnusson⁶, M. J. Matava⁶, R. D. Parker⁶, E. K. Reinke³, E. A. Scaramuzza¹, M. V. Smith¹, C. Winalski¹, R. W. Wright¹, A. Zajichek¹, K. P. Spindler¹ • ¹Cleveland Clinic Orthopaedic Sports Hlth., Garfield Heights, OH, ²Cleveland Clinic Dept. of Orthopaedic Surgery, Cleveland, OH, ³Washington Univ. Sch. of Med. Dept. of Orthopaedic Surgery, Chesterfield, MO, ⁴Vanderbilt Univ., Nashville, TN, ⁵UW Hlth.at The American Ctr., Madison, WI, ⁶The Ohio State Univ. Dept. of Orthopaedics, Columbus, OH, ⁷Bioengineering Labs, Providence, RI, ⁸Vanderbilt Orthopaedic Inst., Nashville, TN, ⁹The Ohio State Univ. Wexner Med. Ctr., Columbus, OH, ¹⁰Cleveland Clinic Dept. of Quantitative Hlth.Sci., Cleveland, OH, ¹¹Cleveland Clinic Imaging Inst., Cleveland, OH, ¹²Columbia Univ. Vagelos Coll. of Physicians and Surgeons, New York, NY, ¹³Cleveland Clinic Diagnostic Radiology, Cleveland, OH, ¹⁴Washington Univ. Sch. of Med. Dept. of Orthopaedic Surgery, St. Louis, MO
POSTER PRESENTATIONS

493

GAIT RETRAINING AS A CONSERVATIVE TREATMENT FOR MEDIAL KNEE OSTEOARTHRITIS

V. Mazzoli1,2, S. Uhrlrich1,2, E. Rubin1, F. Kogan1, B. Heargraves1, S. Delp1,4, G. S. Beaufre1,4, G. E. Gold1
• 1Dept. of Radiology, Stanford Univ., Stanford, CA, 2Musculoskeletal Res. Lab., VA Palo Alto Hlth. care System, Palo Alto, CA, 3Dept. of Mechanical Engineering, Stanford Univ., Stanford, CA, 4Dept. of Bioengineering, Stanford Univ., Stanford, CA

494

NO DIFFERENCE IN THE PREVALENCE OF PATELLOFEMORAL JOINT CARTILAGE DEFECTS ON MRI 2 YEARS AFTER BONE-PATELAR TENDON-BONE ANTERIOR CRUCIATE LIGAMENT RECONSTRUCTIONS COMPARED TO THE CONTRALATERAL KNEE

X. Li1, F. Altahawi2, S. R. Oak1, C. S. Winalska1, M. H. Jones1, K. P. Spindler1, 1Cleveland Clinic Dept. of BioMed. Engineering, Garfield Heights, OH, 2Cleveland Clinic Dept. of Regional Radiology, Cleveland, OH, 3Cleveland Clinic Dept. of Orthopaedic Surgery, Cleveland, OH, 4Cleveland Clinic Diagnostic Radiology, Cleveland, OH, 5Cleveland Clinic Orthopaedic Sports Hlth., Garfield Heights, OH

495

DO TIBIOFEMORAL JOINT SHAPE AND ALIGNMENT DIFFER BETWEEN YOUTH AT INCREASED RISK OF KNEE POST-TRAUMATIC OSTEOARTHRITIS FOLLOWING A SPORT-RELATED KNEE INJURY AND UNINJURED CONTROLS?

J. L. Whittaker1, T. C. Blaney2, C. A. Emery3, G. Kuntze3, J. L. Ronsky3, J. L. Jaremko1 • 1Univ. of Alberta, Edmonton, AB, Canada, 2McGill Univ., Montreal, QC, Canada, 3Univ. of Calgary, Calgary, AB, Canada

496

ASSOCIATIONS BETWEEN VITAMIN C AND D INTAKE AND MR-BASED CARTILAGE COMPOSITION AND KNEE JOINT MORPHOLOGY OVER 4 YEARS: DATA FROM THE OSTEOARTHRITIS INITIATIVE

G. B. Joseph1, C. E. McCulloch2, M. C. Nevitt2, J. Neumann1, J. A. Lynch2, N. E. Lane3, T. M. Link1 • 1Dept. of Radiology and BioMed. Imaging, Univ. of California San Francisco, San Francisco, CA, 2Dept. of Epidemiology and Biostatistics, Univ. of California San Francisco, San Francisco, CA, 3Dept. of Rheumatology, Univ. of California, Davis, Davis, CA

497

POSTOPERATIVE MRI FINDINGS AFTER ARTHROSCOPIC SURGERY FOR FEMOROACETABULAR IMPINGEMENT


498

ASSOCIATION BETWEEN KNEELING ACTIVITY AND PATELLOFEMORAL CARTILAGE DAMAGE IN SUBJECTS WITH/WITHOUT PATELLA ALTA: DATA FROM FOUNDATION FOR THE NATIONAL INSTITUTES OF HEALTH BIOMARKERS CONSORTIUM STUDY

A. Haj-Mirzaian1, B. Mohajer2, A. Guermazi3, F. W. Roemer1, S. Demehri1 • 1Johns Hopkins Univ. Sch. of Med., Baltimore, MD, 2Tehran Univ. of Med. Sci., Tehran, Iran, Islamic Republic of, 3Boston Univ. Sch. of Med., Boston, MA

499

ASSOCIATION BETWEEN THE OSTEOPHYTE WIDTH, MEDIAL MENISCUS EXTRUSION (MME), AND PATELLOFEMORAL CARTILAGE DAMAGE IN SUBJECTS FROM THE OSTEOARTHRITIS INITIATIVE: Population Cohort - A Sportology Core Study2

Y. Negishi1, M. Ishijjima1,2, H. Kaneko1, T. Aoki1,2, L. Liu2, H. Arita1, M. Momoe1, S. Hada1, Y. Tamura2,3, Y. Watada2,3, R. Kawamori2,3, K. Kaneko1,2 • 1Juntendo Univ. Graduate Sch. of Med., Bunkyo-ku, Tokyo, Japan, 2Sportology Ctr., Juntendo Univ. Graduate Sch. of Med., Bunkyo-ku, Tokyo, Japan, 3Dept. of Metabolism & Endocrinology, Juntendo Univ. Graduate Sch. of Med., Bunkyo-ku, Tokyo, Japan

500

HEBERDEN’S NODES AND THEIR ASSOCIATION WITH MRI-BASED KNEE OSTEOARTHRITIS: EXPLORATORY STUDY FROM THE FOUNDATION FOR THE NATIONAL INSTITUTES OF HEALTH STUDY

A. Haj-Mirzaian1, B. Mohajer2, A. Guermazi3, D. Shakoor1, I. Haugen4, F. W. Roemer5, S. Demehri1 • 1Johns Hopkins Univ. Sch. of Med., Baltimore, MD, 2Tehran Univ. of Med. Sci., Tehran, Iran, Islamic Republic of, 3Boston Univ. Sch. of Med., Boston, MA, 4Diakonhjemmet Hosp., Oslo, Norway, 5Univ. of Erlangen-Nuremberg, Erlangen, Germany
501
PATELLOFEMORAL MORPHOLOGY MEASUREMENTS AND THEIR ASSOCIATIONS WITH Tibiofemoral Osteoarthritis Progression: EXPLORATORY ANALYSIS ON THE OSTEOARTHRITIS INITIATIVE
1Johns Hopkins Univ. Sch. of Med., Baltimore, MD, 2Boston Univ. Sch. of Med., Boston, MA, 3Tehran Univ. of Med. Sci., Tehran, Iran, Islamic Republic of, 4Univ. of Erlangen-Nuremberg, Erlangen, Germany, 5Univ. of Massachusetts Med. Sch., Boston, MA, 6Florida Hosp., Maitland, FL

502
GAGCEST MRI AT 3T CAN DETECT CARTILAGE DIFFERENCES BETWEEN HEALTHY AND OSTEOARTHRITIC SUBJECTS
1Stanford Univ., Stanford, CA, 2VA Palo Alto Hlth.care System, Palo Alto, CA

503
BMI-RELATED SUBCHONDRAL BONE MICROSTRUCTURAL CHANGES IN KNEE OSTEOARTHRITIS: OVERLOADING OR METABOLIC DISTURBANCE?
F. Wuchu, A. Weber, C. Yan, C. Wen
1The Hong Kong Polytechnic Univ., Hong Kong, Hong Kong, 2The Univ. of Hong Kong, Hong Kong, Hong Kong

504
CARTILAGE HEALTH IN THE PATELLOFEMORAL JOINT OVER 3-YEARS AFTER ACL RECONSTRUCTION AND THEIR ASSOCIATION WITH PATIENT-REPORTED OUTCOMES
1Cleveland Clinic, Cleveland, OH, 2Yodogawa Christian Hosp., Osaka, Japan, 3Univ. of California, San Francisco, San Francisco, CA, 4Hokkaido Univ. Med. Sch., Sapporo, Japan

505
ASSOCIATION OF HIP SHAPES WITH KNEE OSTEOARTHRITIS OUTCOMES IN OLDER-ADULTS

506
BONE MARROW LESION SUBTYPE AND SYMPTOMS IN KNEE OSTEOARTHRITIS
1The Univ. of Manchester, Manchester, United Kingdom, 2Boston Univ., Boston, MA, 3The Univ. of Oxford, Oxford, United Kingdom

507
ASSOCIATION BETWEEN MEDIAL MENISCUS EXTRUSION (MME) AND REGION OF MENISCAL TEAR IN MIDDLE AGED AND ELDERLY POPULATION COHORT -A SPORTOLOGY CORE STUDY2-
Juntendo Univ., Tokyo, Japan

508
COMPUTER TOMOGRAPHY ACQUIRED HIP ANGLES AND PATIENT REPORTED OUTCOMES IN PATIENTS WITH FEMOROACETABULAR IMPINGEMENT SYNDROME
S. Kierkegaard, L. Rømer, B. Lund, U. Dalgaas, K. Søballe, I. Mechlenburg, H. Rasmussen, Aarhus, Denmark, 2Aarhus Univ., Aarhus, Denmark, 3Aarhus Univ. Hosp., Aarhus, Denmark
509
RELATIONSHIP BETWEEN KNEE ALIGNMENT AND QUADRICEPS MUSCLE PASSIVE TENSION IN INDIVIDUALS WITH KNEE OSTEOARTHRITIS
C. Huang1, S. Fu1, Z. Li1, S. Yeung2, W. Lai1, P. Chan3, C. Yan4, K. Chiu1 • 1The Hong Kong Polytechnic Univ., Hong Kong, Hong Kong, 2MacLahose Med. Rehabilitation Ctr., Hong Kong, Hong Kong, 3Queen Mary Hosp., Hong Kong, Hong Kong

510
PREDICTING TOTAL KNEE REPLACEMENT FROM ULTRASOUND USING MACHINE LEARNING
A. Tiulpin1, S. Saarakkala1,2, A. Mathiessen3, H. B. Hammer2, O. Furnes4, A. M. Fenstad4, L. Nordsletten5, M. Englund6, K. Magnusson6,3 • 1Res. Unit of Med. Imaging, Physics and Technology, Univ. of Oulu, Oulu, Finland, 2Dept. of Diagnostic Radiology, Oulu Univ. Hosp., Oulu, Finland, 3Dept. of Rheumatology, Diakonhjemmet Hosp., Oslo, Norway, 4Haukeland Univ. Hosp., Bergen, Norway, 5Div. of Orthopaedic Surgery, Ullevål Univ. Hosp., Oslo, Norway, 6Clinical Epidemiology Unit, Orthopaedics, Dept. of Clinical Sci. Lund Faculty of Med., Lund Univ., Lund, Sweden

511
LESS FEMORAL CARTILAGE DEFORMATION FOLLOWING WALKING ASSOCIATES WITH CLINICALLY RELEVANT SYMPTOMS IN INDIVIDUALS WITH ANTERIOR CRUCIATE LIGAMENT RECONSTRUCTION
H. C. Davis-Wilson, C. D. Johnston, S. J. Pfeiffer, N. Thomas, O. Khawaja, C. E. Kershner, J. Blackburn, B. Pietro Simone • UNC Chapel Hill, Chapel Hill, NC

512
THE RELATIONSHIP OF THREE-DIMENSIONAL JOINT SPACE WIDTH MEASURED ON STANDING COMPUTED TOMOGRAPHY WITH CONCURRENT PAIN AND PHYSICAL FUNCTION IN THE MOST STUDY
N. A. Segal1,2, M. D. Kothari1, K. G. Rabe1, D. D. Anderson2, M. C. Nevitt4, J. A. Lynch4 • 1Univ. of Kansas, Kansas City, KS, 2The Univ. of Iowa, Iowa City, IA, 3Univ. of Texas, Dallas, TX, 4Univ. of California San Francisco, San Francisco, CA

513
PATIENT CHARACTERISTICS ASSOCIATED WITH BENEFITS FROM WEIGHT LOSS TO PREVENT PROGRESSION OF KNEE OSTEOARTHRITIS: DATA FROM THE OSTEOARTHRITIS INITIATIVE
C. E. von Schacky1, S. C. Foreman1, A. S. Gersing1, G. B. Joseph1, C. E. McCulloch1, J. Neumann1, M. C. Nevitt1, N. E. Lane2, T. M. Link1 • 1Univ. of California, San Francisco, San Francisco, CA, 2Univ. of California, Davis, Davis, CA

514
CRUCIATE LIGAMENT INJURIES OF THE KNEE: A META-ANALYSIS OF THE DIAGNOSTIC PERFORMANCE OF THREE-DIMENSIONAL MRI
D. Shakoor1, A. Guermazi2, R. Kojowski3, J. Fritz4, F. Roemer5, S. Jalali-Farahani6, S. Demehri7 • 1Johns Hopkins Univ. Sch. of Med., Baltimore, MD, 2Quantitative Imaging Ctr., Dept. of Radiology, Boston Univ. Sch. of Med., Boston, MA, 3Dept. of Radiology, Univ. of Wisconsin, Madison, WI, 4Dept. of Radiology, Univ. of Erlangen-Nuremberg, Erlangen, Germany

515
ANATOMICAL CHARACTERISTICS OF RECURRENT PATELLAR INSTABILITY
J. J. Elias1, M. Yang2, K. Sunshine2, C. Colak2, C. Winalski2, K. C. Jones3, X. Li2 • 1Cleveland Clinic Akron Gen., Akron, OH, 2Cleveland Clinic, Cleveland, OH, 3Akron Children’s Hosp., Akron, OH

516
T2 RELAXATION TIME IN FEMORAL CARTILAGE CHANGES WITH RADIOGRAPHIC PROGRESSION OF MEDIAL KNEE OA – DATA FROM THE OSTEOARTHRITIS INITIATIVE
S. N. Edd1, H. Babell1, L. C. Pereira1, B. M. Jolles1,2, P. Omoumi1,2, J. Favre1 • 1Ctr. Hosp. ier universitaire vaudois (CHUV) and Univ. of Lausanne (UNIL), Lausanne, Switzerland, 2Ecole Polytechnique Fédérale de Lausanne (EPFL), Inst. of Microengineering, Lausanne, Switzerland, 3Ctr. Hosp. ier Univ. ier Vaudois (CHUV) and Univ. of Lausanne (UNIL), Dept. of Diagnostic and Interventional Radiology, Lausanne, Switzerland
517 CONTINUOUS AND INTERVAL-BASED APPROACHES TO CALCULATING THE WEIGHTED CENTROID OF IN VIVO KNEE ARTICULAR CARTILAGE CONTACT
J. C. Kupper1, P. Zandiyeh2, J. Beveridge3, B. Ritchie4, G. Kuntze1, J. L. Ronsky1 • 1Univ. of Calgary, Calgary, AB, Canada, 2Univ. of Texas, Houston, TX, 3Brown Univ., Providence, RI

518 SUBSTANTIAL IMPLICATIONS FOR STUDY NUMBERS BASED ON TYPICAL STUDY POPULATIONS, USING DIFFERENT MRI SLICE THICKNESS FOR BONE SHAPE AND CARTILAGE THICKNESS: DATA FROM THE OSTEOARTHRITIS INITIATIVE
M. A. Bowes1, A. Brett1, P. G. Conaghan2 • 1Imorphics Ltd, Manchester, United Kingdom, 2Leeds Inst. of Rheumatic and Musculoskeletal Med., Leeds, United Kingdom

519 METHOD FOR CO-REGISTRATION OF HIGH RESOLUTION 3T MAGNETIC RESONANCE IMAGING WITH STANDING 0.5T MAGNETIC RESONANCE IMAGING TO INVESTIGATE WEIGHT BEARING JOINTS
E. Peake1,2, Y. Zedan1,2, S. Pszczolkowski3, R. Kerslake1,2, B. Scammell1,2, D. Auer1,2 • 1NIHR Nottingham BioMed. Res. Ctr., The Univ. of Nottingham, Nottingham, United Kingdom, 2Arthritis Res. UK Pain Ctr., Nottingham, United Kingdom, 3Faculty of Med. & Hlth.Sci., The Univ. of Nottingham, Nottingham, United Kingdom

520 DO BODY MASS INDEX AND KNEE OSTEOARTHRITIS STATUS AFFECT MENISCAL EXTRUSION AND SIZE?

521 EVALUATING THE RELATIONSHIP BETWEEN GAGC E S T MRI AND CARTILAGE BIOCHEMICAL COMPOSITION IN JUVENILE BOVINE ARTICULAR CARTILAGE

522 VALIDITY OF MUSCULOSKELETAL ULTRASONOGRAPHY IN MEASURING JOINT EFFUSION IN KNEE OSTEOARTHRITIS
M. S. Daniel1, W. M. Oo1, X. Wang1, L. A. Deveza1, J. Linklater2, D. J. Hunter1 • 1Rheumatology Dept., Royal North Shore Hosp., and, Inst. of Bone and Joint Res., Kolling Inst., Univ. of Sydney, Camperdown, Australia, 2Dept. of Musculoskeletal Imaging, Castlereagh Sports Imaging, St. Leonards, Australia

INFLAMMATION AND IMMUNITY

525 IMPERATORIN, A PLANT DERIVED SMALL MOLECULE, INHIBITS OXIDATIVE STRESS AND PREVENTS MITOCHONDRIAL DAMAGE IN HUMAN OA CHONDROCYTES
N. Ahmad, M. Ansari, T. Haqqi • Northeast Ohio Med. Univ., Rootstown, OH

526 MORE SEVERE OA PATHOLOGY IN A HUMANIZED MOUSE MODEL FOR APOE-Ε4 AS COMPARED TO APOE-Ε3: APOE-ISOFORMS AS POSSIBLE RISK FACTOR FOR INFLAMMATORY OSTEOARTHRITIS DEVELOPMENT?
M. H. van den Bosch, N. N. Kruisbergen, W. de Munter, A. W. Sloetjes, P. M. van der Kraan, A. B. Blom, P. L. van Lent • Radboud Univ. Med. center, Nijmegen, Netherlands
527
FOLATE RECEPTOR POSITIVE MACROPHAGES IN RAT MODELS FOR OA: PHENOTYPE SWITCH IN RESPONSE TO ANTI-INFLAMMATORY MEDICATION
N. M. Korthagen¹, M. Siebelt², H. M. de Visser³, M. Sandker¹, C. Müller², H. Weinans¹ • ¹Utrecht Univ., Utrecht, Netherlands, ²Erasmus Med. Ctr., Rotterdam, Netherlands, ³Univ. Med. Ctr. Utrecht, Utrecht, Netherlands, ⁴Paul Scherrer Inst., Villingen, Switzerland

528
INTRA-ARTICULAR TREATMENT WITH TRIAMCINOLONE ACETONIDE-LOADED LIPOSOMES IN THE RAT HIGH-FAT DIET GROOVE MODEL
N. M. Korthagen¹, H. M. de Visser², G. Geusebroek¹, G. Storm¹, N. Dupuis¹, S. G. Plomp¹, K. Warmink², N. Eijkelkamp², M. Tryfonidou¹, P. R. van Weeren¹, H. Weinans² • ¹Utrecht Univ., Utrecht, Netherlands, ²Univ. Med. Ctr. Utrecht, Utrecht, Netherlands

529
INCREASED INFLAMMATION IN THE INFRA-PATELLAR FAT PAD AS A RESULT OF SURGICAL DESTABILIZATION OF THE MEDIAL MENISCUS AND HIGH-FAT DIET
K. Warmink¹, A. E. Kozijn², I. Bobeldijk², R. Stoop², H. H. Weinans¹, N. M. Korthagen¹,² • ¹Univ. Med. Ctr. Utrecht, Utrecht, Netherlands, ²TNO, Leiden, Netherlands

530
IMMUNOMODULATORY ABILITIES OF LICENSED MESenchymAL STEM CELLS: A POTENTIAL THERAPEUTIC STRATEGY IN OSTEOARTHRITIS
C. Hennessy, P. Mancuso, A. Ivanovska, A. Burke, E. Mukeria, T. Ritter, F. Barry, M. Murphy, A. Ryan • Natl. Univ. of Ireland Galway (NUIG), Galway, Ireland

531
14-3-3E, A NEW ALARMIN CANDIDATE, ELICITS A CATABOLIC AND PROINFLAMMATORY EFFECT INVOLVING INNATE IMMUNITY THROUGH TLR SIGNALING IN OSTEOARTHRITIS
M. MILLERAND, Jr.¹, L. SUDRE, Sr.¹, M. NEFLA, Jr.², F. PENE, Sr.³, C. ROUSSEAU⁴, A. RAVAT, Jr.¹, A. PONS, Jr.¹, G. ANDRE-LEROUX, Sr.⁴, F. BERENBAUM, Sr.⁵, C. JACQUES, Sr.¹ • ¹INSERM UMRS_938 - CDR St-Antoine-Sorbonne Université, PARIS, France, ²UMRS_938 - CDR St-Antoine- Univ. Paris 6, PARIS, France, ³Inst. Cochin, INSERM U1016, CNRS UMR8104, Université Paris Descartes, PARIS, France, ⁴MalAGE, INRA, Université Paris Saclay, Jouy-en-Josas, France, ⁵INSERM UMRS_938 - Dept. of Rheumatology, AP-HP, Hôpital St-Antoine - CDR St-Antoine- Sorbonne Université, PARIS, France

532
PERIPHERAL BLOOD MONOCYTE AND SYNOVIAL MACROPHAGE SUBSETS IN THE MOUSE MODEL OF OSTEOARTHRITIS INDUCED BY DESTABILIZATION OF THE MEDIAL MENISCUS

533
INVOSSA-K INDUCES AN ANTI-INFLAMMATORY INTRA-ARTICULAR TREATMENT IN A RAT MIA MODEL VIA MACROPHAGE POLARIZATION
H. Lee¹, H. Kim¹, Y. Lee¹, K. Park¹, B. Lee², S. Kim¹, M. Lee³, H. Choi¹ • ¹Kolon life Sci., Seoul, Korea, Republic of, ²Kolon Tissuegene, Rockville, MD, ³Seoul Natl. Univ., Seoul, Korea, Republic of

534
TRANSIENT RECEPTOR POTENTIAL ANKYRIN 1 (TRPA1) AS A FACTOR AND DRUG TARGET IN OSTEOARTHRITIS: TRPA1 MEDIATES FIBROBLAST GROWTH FACTOR 2 EXPRESSION IN CHONDROCYTES
E. Nummenmaa¹, M. Hämäläinen¹, A. Pennmäki¹, L. J. Moilanen¹, R. Nieminen¹, T. Moilanen², K. Vuolteenaho¹, E. Moilanen¹ • ¹The Immunopharmacology Res. Group, Faculty of Med. and Hlth. Technology, Tampere Univ. and Tampere Univ. Hosp., Tampere, Finland, ²Coxa Hosp. for Joint Replacement, Tampere, Finland
INHIBITION OF STEROL REGULATORY ELEMENT-BINDING PROTEIN-2 ALLEVIATES HIGH-FAT DIET-INDUCED DETERIORATION OF KNEE CARTILAGE: AN OSTEOARTHRITIS ANIMAL MODEL STUDY

K. TAO, Sr., R. Li, H. Li, Y. Ke, J. Lin • Peking Univ. People’s Hosp., Beijing, China

EFFECT OF SOLUBLE EPOXIDE HYDROLASE AND CYCLOOXYGENASE INHIBITION ON LAMENESS AND SYNOVIAL FLUID PROSTANOIDS IN HORSES WITH EXPERIMENTALLY INDUCED RADIOCARPAL SYNOVITIS

A. Guedes1, T. Trumble1, T. Tucker1, C. Baldo1, E. Wendt-Hornickle1, S. Hwang2, C. Morisseau2, B. Hammock2 • 1Univ. of Minnesota, St Paul, MN, 2Univ. of California, Davis, Davis, CA

COMPREHENSIVE EFFECTS OF IBUPROFEN ON GENE EXPRESSION IN CHONDROCYTES AS DETERMINED BY RNA-SEQ

A. Pemmari1, L. Tuure1, M. Hämäläinen1, T. Leppänen1, K. Vuolteenaho1, T. Moilanen1,2, E. Moilanen1 • 1The Immunopharmacology Res. Group, Faculty of Med. and Hlth. Technology, Tampere Univ. and Tampere Univ. Hosp., Tampere, Finland, 2Coxa Hosp. for Joint Replacement, Tampere, Finland

TOLL-LIKE RECEPTOR SIGNALING IN CHONDROCYTE PROMOTES THE DEVELOPMENT OF OSTEOARTHRITIS

P. Shen1, M. Fuchs2, M.-J. Reisener3, C. Grinner3, P. Wu1, T. Jung1, M. Pumberger1, C. Parka1, M. Löhning1 • 1German Rheumatism Res. Ctr., Berlin, Germany, 2Univ.-und Rehabilitationskliniken Ulm – Dept. of Orthopedic Surgery, Ulm, Germany, 3Charité Univ. medizin, Berlin, Germany

INTERLEUKIN-17 IS A POTENTIAL CONTRIBUTOR TO THE INFLAMMATORY ENVIRONMENT IN THE OA JOINT

J. Y. Mimpen1, S. Kluzek1, S. G. Dakin1, A. J. Price1, F. E. Watt1, A. J. Carr2, S. J. Snelling2 • 1Univ. of Oxford, Oxford, United Kingdom, 2Univ. of Oxford, Oxford, United Kingdom

EX VIVO POLARIZED PRO-INFLAMMATORY VS. HOMEOSTATIC MONOCYTES/MACROPHAGES ELICIT DIFFERENTIAL RESPONSES WITHIN A HUMAN OSTEOARTHRITIC JOINT EXPLANT MODEL

M. Chan1, A. Gómez-Aristizábal1, R. Gandhi1, W. Marshall1, N. Mahomed1, S. Viswanathan1,2, M. J. Juryniec • 1Arthritis Program, Krembil Res. Inst., Univ. Hlth. Network, Toronto, ON, Canada, 2Inst. of Biomaterials and BioMed. Engineering, Univ. of Toronto, Toronto, ON, Canada

DISCOVERY OF NOVEL OSTEOARTHRITIS SUSCEPTIBILITY GENES, COMMON PATHWAYS, AND A MOUSE MODEL USING THE HYPERINFLAMMATORY HUMAN RIPC2 DISEASE ALLELE

D. J. Grunwald1, Y. Ma1, J. Weis, M. J. Juryniec • 1Univ. of Uath, Salt Lake City, UT

IMMUNOREGULATORY PROPERTIES OF I.A. MESENCHYMAL STEM CELLS ARE MAINTAINED IN A XENOGENIC ANIMAL MODEL

K. Lamers, M. Hurtig • 1Univ. of Guelph, Guelph, ON, Canada

PYCARD GENE POLYMORPHISM AND PRISTANE INDUCED ARTHRITIS IN MICE SELECTED FOR ACUTE INFLAMMATORY RESPONSE

J. G. de Souza1, J. R. Jensen2, N. Starobinas2, L. F. Monteleone1, W. H. Cabrera1, O. C. Ibañez • Butantan Inst., São Paulo, Brazil

TARGETED SMALL MOLECULE-MEDIATED IMMUNOMODULATION OF GP130 RECEPTOR ATTENUATES RHEUMATOID ARTHRITIS IN RATS

N. Q. Liu1, B. Van Handel1, R. Shkhyan1, S. Limfat1, S. Lee1, Y. Ling1, L. Li1, J. Lu1, D. Evseenko • 1Univ. of Southern California, Los Angeles, CA

INTERLEUKIN-17 IS A POTENTIAL CONTRIBUTOR TO THE INFLAMMATORY ENVIRONMENT IN THE OA JOINT

J. Y. Mimpen1, S. Kluzek1, S. G. Dakin1, A. J. Price1, F. E. Watt1, A. J. Carr2, S. J. Snelling2 • 1Univ. of Oxford, Oxford, United Kingdom, 2Univ. of Oxford, Oxford, United Kingdom

TARGETED SMALL MOLECULE-MEDIATED IMMUNOMODULATION OF GP130 RECEPTOR ATTENUATES RHEUMATOID ARTHRITIS IN RATS

N. Q. Liu1, B. Van Handel1, R. Shkhyan1, S. Limfat1, S. Lee1, Y. Ling1, L. Li1, J. Lu1, D. Evseenko • 1Univ. of Southern California, Los Angeles, CA

MACHINE LEARNING – CLINICAL AND BASIC

PROFILING PATIENTS WITH FOOT AND ANKLE SYMPTOMS AND OSTEOARTHRITIS AT OTHER JOINTS: A CLUSTER ANALYSIS

M. Castano Betancourt1, C. L. Morais1, M. N. Lipay1, E. Marchi1 • Faculdade de Med. de Jundiaí, Jundiaí, Brazil
546
CLINICAL VALIDATION OF FULLY AUTOMATED SEGMENTATION OF THIGH MUSCLE AND ADIPOSE TISSUE CROSS SECTIONAL AREAS USING MACHING LEARNING WITH A CONVOLUTIONAL NEURAL NETWORK
J. Kemnitz1,2, C. F. Baumgartner3, A. Ruhdorfer1, W. Wirth1,2, F. Eckstein1,2, S. K. Eder1, E. Konukoglu3, 1Paracelsus Med. Univ., Salzburg, Austria, 2Chondrometrics GmbH, Ainring, Germany, 3ETH, Zurich, Switzerland

547
DEEP LEARNING-BASED AUTOMATIC ESTIMATION OF VOLUME AND FAT FRACTION IN ABDUCTOR MUSCLES AND THEIR ASSOCIATIONS WITH T1RHO AND T2 IN HIP OSTEOARTHRITIS PATIENTS
R. Tibrewala, V. Pedroia, C. Kinnunen, T. Popovic, R. Souza, S. Majumdar • Univ. of California San Francisco, San Francisco, CA

548
DISCOVERING KNEE OSTEOARTHRITIS BONE SHAPE FEATURES USING DEEP LEARNING
A. G. Morales Martinez, I. Flament, F. Liu, J. Lee, P. Cao, S. Majumdar • Univ. of California San Francisco, San Francisco, CA

549
DETECTING HIP OSTEOARTHRITIC DEGENERATIVE CHANGES IN MRI USING DEEP LEARNING
R. Tibrewala, E. Ozhinsky, R. Shah, S. C. Foreman, V. Pedroia, S. Majumdar • Univ. of California San Francisco, San Francisco, CA

550
APPLICATION OF DEEP LEARNING FOR THE QUANTITATIVE ASSESSMENT OF BONE MARROW LESIONS (BMLS)
F. Preiswerk, M. Sury, J. Wortman, J. Duryea • Brigham and Women’s Hosp., Boston, MA

551
CHARACTERIZATION OF POTENTIAL PROGRESSION PHENOTYPES IDENTIFIED THROUGH CLUSTER ANALYSIS: THE JOHNSTON COUNTY OSTEOARTHRITIS PROJECT
A. E. Nelson, F. Fang, L. Arbeeva, M. Fuller, R. J. Cleveland, T. A. Schwartz, J. M. Jordan, L. F. Callahan, J. S. Marron, R. F. Loeser • Univ. of North Carolina at Chapel Hill, Chapel Hill, NC

552
WHICH IMAGING SHAPE AND MORPHOMETRY MARKERS RELATE TO PAIN? WITH DATA FROM THE OAI
E. B. Dam1,2 • 1Univ. of Copenhagen, Copenhagen, Denmark, 2Biomediq, Copenhagen, Denmark

553
AUTOMATIC KNEE CARTILAGE AND MENISCI SEGMENTATION FROM 3D-DESS MRI USING DEEP SEMI-SUPERVISED LEARNING
E. Panfilov1, A. Tiulpin1, M. Juntunen1, V. Casula1, M. Nieminen1,2, S. Saarakkala1,2, 1Univ. of Oulu, Oulu, Finland, 2Oulu Univ. Hosp., Oulu, Finland

554
DETERMINANTS OF OSTEOARTHRITIS 3D BONE SHAPE AND IT’S CHANGE IN THE THREE KNEE BONES: A LATENT GROWTH MODELLING APPROACH ON 37 583 MR IMAGES FROM THE OSTEOARTHRITIS INITIATIVE
B. Dube1, M. A. Bowes2, E. M. Hensor1, S. R. Kingsbury1, P. G. Conaghan1 • Leeds Inst. of Rheumatic & Musculoskeletal Med., Leeds, United Kingdom, 1Imorphics, Manchester, United Kingdom

555
A MACHINE LEARNING APPROACH TO PRECISION MEDICINE TO DETERMINE OPTIMAL TREATMENTS FOR OVERWEIGHT AND OBESE ADULTS WITH KNEE OSTEOARTHRITIS
X. Jiang1, A. Nelson1, B. Cleveland1, D. Beavers2, T. Schwartz1, L. Arbeeva1, C. Alvarez2, L. Callahan1, S. Messier2, R. Loeser1, M. Kosorok1 • 1Univ. of North Carolina, Chapel Hill, NC, 2Wake Forest Univ., Winston-Salem, NC

556
VALIDATION OF AN OPEN SOURCE, GENERIC DEEP LEARNING ARCHITECTURE FOR 3D MRI SEGMENTATION - WITH DATA FROM THE OAI, PROOF, AND CCBR
M. Perslev1, A. Pai2,3, C. Igeli, J. Runhaar4, E. B. Dam1,3 • 1Univ. of Copenhagen, Copenhagen, Denmark, 2Cerebriu, Copenhagen, Denmark, 3Biomediq, Copenhagen, Denmark, 4Erasmus Med. Ctr., Rotterdam Univ. Hosp., Rotterdam, Netherlands
557
SEMI-AUTOMATIC 3D OSTEOARTHRITIS HISTOPATHOLOGICAL GRADING OF HUMAN OSTEOCHONDRAL TISSUE FROM CONTRAST-ENHANCED MICRO-COMPUTED TOMOGRAPHY
S. Rytky1, T. Frondelius1, A. Tiulpin1, M. A. Finnilä1, M. Valkealahti2, P. Lehenkari2,3, H. J. Nieminen4,1, S. Saarakkala1,5 • 1Res. Unit of Med. Imaging, Physics and Technology, Univ. of Oulu, Oulu, Finland, 2Dept. of Surgery, Oulu Univ. Hosp., Oulu, Finland, 3Cancer and Translational Med. Res. Unit, Faculty of Med., Univ. of Oulu, Oulu, Finland, 4Dept. of NeuroSci. and BioMed. Engineering, Aalto Univ., Espoo, Finland, 5Dept. of Radiology, Oulu Univ. Hosp., Oulu, Finland

558
DEEP LEARNING APPROACH TO PREDICT RADIOGRAPHIC KNEE OSTEOARTHRITIS PROGRESSION
B. Guan1, F. Liu1, A. H. Mizaia2, S. Demhri2, T. Neogi3, A. Guermazi3, R. Kijowski3,4 • 1Univ. of Wisconsin-Madison, Madison, WI, 2Johns Hopkins Univ., Baltimore, MD, 3Boston Univ., Boston, MA

559
AUTOMATED SEVERITY GRADING OF RADIOGRAPHIC HIP OSTEOARTHRITIS FEATURES WITH DEEP LEARNING
C. E. von Schacky1, F. Liu1, S. C. Foreman, P. M. Jungmann, L. Nardo, M. C. Nevitt, T. M. Link, J. H. Sohn, V. Pedoia • Univ. of California, San Francisco, San Francisco, CA

560
DEEP LEARNING PREDICTS KNEE OSTEOARTHRITIS PROGRESSION FROM PLAIN RADIOGRAPHS

561
MRI-BASED MULTI-TASK DEEP LEARNING FOR CARTILAGE LESION SEVERITY STAGING IN KNEE OSTEOARTHRITIS
B. Astuto Arouche Nunes1, I. Flament1, R. Shah1,2, M. Bucknor1, T. Link1, V. Pedoia1,2, S. Majumdar1,2 • 1Univ. of California San Francisco, San Francisco, CA, 2Ctr. for Digital Hlth.Innovation, UCSF, San Francisco, CA

562
HARMONIZATION OF MRI-BASED SEMI-QUANTITATIVE KNEE OSTEOARTHRITIS SCORING SYSTEMS. I. Flament1, F. Liu1, T. Link1, V. Pedoia1,2, S. Majumdar1,2 • 1Dept. of Radiology and BioMed. Imaging, Univ. of California San Francisco, San Francisco, CA, 2Ctr. for Digital Hlth.Innovation, UCSF, San Francisco, CA

563
DO CHANGES IN FEATURE SELECTION PARAMETERS INFLUENCE THE CLASSIFICATION OF KNEE REHABILITATION EXERCISES WHEN USING BODY WORN ACCELEROMETER DATA?
P. Jones1, S. Woodgate1,2, E. Doheny2, P. Biggs1,4, D. Williams1, C. Holt1,2 • 1Cardiff Sch. of Engineering, Cardiff Univ., CARDIFF, United Kingdom, 2Cardiff Sch. of Med., Cardiff Univ., Cardiff, United Kingdom, 3Insight Ctr. for Data Analytics, Univ. Coll. Dublin, DUBLIN, Ireland, 4Arthritis Res. UK Biomechanics and Bioengineering Ctr., Cardiff, United Kingdom

564
TEXT SENTIMENT ANALYSIS FOR CARTILAGE ABNORMALITIES DETECTION FROM RADIOLOGY REPORTS
L. Chen, R. Shah, T. Link, M. Bucknor, S. Majumdar, V. Pedoia • Univ. of California San Francisco, San Francisco, CA

PAIN – CLINICAL

565
PAIN AND FUNCTION TRAJECTORY TYPES OF KNEE ARTHROPLASTY PATIENTS
566
THE ASSOCIATION OF BODY MASS INDEX WITH PAIN SENSITIZATION: THE MULTICENTER OSTEOARTHRITIS STUDY.
L. C. Carlsson1, D. Felson2, N. A. Segal3, L. Frey-Law4, N. Wang2, C. E. Lewis5, M. Nevitt6, T. Neogi7 • 1Université de Montréal, Montréal, QC, Canada, 2Boston Univ., Boston, MA, 3Univ. of Kansas, Kansas City, KS, 4Univ. of Iowa, Iowa City, IA, 5Univ. of California at San Francisco, San Francisco, CA

567
HISTOMORPHOLOGICAL OBSERVATION OF RAT MODEL OF KNEE OSTEOARTHRITIS BY LIUWEI DIHUANG DECOCTION
G. Yang1, J. Yao2, B. Dong3, R. Chen4 • 1Shaanxi Univ. of Traditional Chinese Med, Xian Yang, China, 2Dept. of Nursing, Shaanxi Univ. of Chinese Med., Xian Yang, China, 3Dept. of orthopedic, Affiliated Hosp. of Shaanxi Univ. of Chinese Med., Xian Yang, China

568
IS BEING BAREFOOT, WEARING SHOES AND PHYSICAL ACTIVITY ASSOCIATED WITH KNEE OSTEOARTHRITIS PAIN FLARES? DATA FROM A SRI LANKAN COHORT

569
CORRELATION BETWEEN CATASTROPHIZING AND PAIN IN KNEE OSTEOARTHRITIS PATIENTS
G. C. Campos, M. S. Pietrobon, A. R. Zorzi, J. B. Miranda • UNICAMP, Campinas, Brazil

570
MORPHOLOGY OF GUSHU DECOCTION IN RABBIT MODEL OF KNEE OSTEOARTHRITIS STUDY OBSERVATION AND INFLUENCE OF BFGF EXPRESSION
Z. Li1, R. Chen2 • 1Affiliated Hosp. of Shaanxi Univ. of Chinese Med., Xian Yang, China, 2Shaanxi Univ. of Chinese Med., Xian Yang, China

571
WHAT IS THE PREVALENCE AND RELATIONSHIP OF BONY MORPHOLOGY AND FEATURES ASSOCIATED WITH EARLY HIP OSTEOARTHRITIS IN SUB-ELITE FOOTBALLERS WITH AND WITHOUT HIP AND GROIN PAIN?
J. J. Heerey1, J. L. Kemp1, R. Agricola2, M. G. King1, P. Lawrenson3, A. I. Semciw1, T. Pizzari1, M. Scholes4, K. M. Crossley1 • 1La Trobe Univ., Bundoora, Australia, 2Erasmus MC, Rotterdam, Netherlands, 3Univ. of Queensland, Brisbane, Australia

572
EFFECTIVENESS OF VARIOUS CORTICOSTEROIDS FOR THE MANAGEMENT OF KNEE AND HIP OSTEOARTHRITIS: A SYSTEMATIC REVIEW AND NETWORK META-ANALYSIS
Z. Luo, Z. Huang, Z. Zhou • West China Hosp., Sichuan Univ., Chengdu, China

573
PAIN SENSITIVITY STUDY IN THE DUTCH POPULATION: RELATIONSHIP WITH CURRENT PAIN, GENDER AND SPORTS
E. Blaney Davidson, R. van Boekel, R. Smits, K. Stolzenbach, T. Bouw, M. van Nieuwland, H. Timmerman, S. van der Wal, M. Steegers • Radboudumc, Nijmegen, Netherlands

574
ASSOCIATION OF BONE MARROW LESIONS LOCALISATION WITH WEIGHT BEARING PAIN IN PEOPLE WITH KNEE OSTEOARTHRITIS: DATA FROM THE OSTEOARTHRITIS INITIATIVE
K. Aso1,2, S. Shahtaheri2, D. McWilliams3, D. Walsh2 • 1Kochi Med. Sch., Kochi Univ., Nankoku, Japan, 2Arthritis Res. UK Pain Ctr. & NIHR Nottingham BioMed. Res. Ctr., Univ. of Nottingham, Nottingham, United Kingdom
575
ASSESSING PAIN CHARACTERISTICS IN PERSONS WITH HAND OSTEOARTHRITIS USING THE MCGILL PAIN QUESTIONNAIRE

576
NEUROPATHIC-LIKE PAIN IN PERSONS WITH HAND OSTEOARTHRITIS AND ASSOCIATIONS WITH QUANTITATIVE SENSORY TESTING
P. Steen Pettersen1, T. Neogi2, M. Gloersen1, K. Magnusson1,2, H. B. Hammer1, T. K. Kvien1, T. Uhlig1, I. K. Haugen1 • 1Diakonhjemmet Hosp., Dept. of Rheumatology, Oslo, Norway, 2Clinical Epidemiology Res. and Training Unit, Boston Univ. Sch. of Med., Boston, MA, 3Lund Univ., Dept. of Clinical Sci. Lund, Orthopaedics, Clinical Epidemiology Unit, Lund, Sweden

577
CONDITIONED PAIN MODULATION AND TEMPORAL SUMMATION IN PERSONS WITH HAND OSTEOARTHRITIS AND ASSOCIATIONS WITH PAIN SEVERITY
P. Steen Pettersen1, T. Neogi2, K. Magnusson1,2, H. B. Hammer1, T. K. Kvien1, T. Uhlig1, I. K. Haugen1 • 1Diakonhjemmet Hosp., Dept. of Rheumatology, Oslo, Norway, 2Clinical Epidemiology Res. and Training Unit, Boston Univ. Sch. of Med., Boston, MA, 3Lund Univ., Dept. of Clinical Sci. Lund, Orthopaedics, Clinical Epidemiology Unit, Lund, Sweden

578
THE RELATIONSHIP BETWEEN RESTLESS SLEEP AND SYMPTOMS OF THE KNEE: DATA FROM THE OSTEOARTHRITIS INITIATIVE

579
RELATION OF SENSITIZATION AND CONDITIONED PAIN MODULATION TO POST-KNEE REPLACEMENT PAIN
T. Neogi1, N. Wang1, C. E. Lewis2, M. Nevitt1, L. Frey-Law4 • 1Boston Univ. Sch. of Med., Boston, MA, 2Univ. of Alabama, Birmingham, AL, 3Univ. of California, San Francisco, CA, 4Univ. of Iowa, Iowa City, IA

580
DISABLING FOOT PAIN IS ASSOCIATED WITH BONE MINERAL DENSITY IN MEN: THE GEELONG OSTEOPOOROSIS STUDY
W. Peiris1, H. Menz2, J. Pasco1, S. Brennan-Olsen3, M. Kotowicz3, F. Cicuttini1, A. Wluka1 • 1Monash Univ., Melbourne, Australia, 2La Trobe Univ., Melbourne, Australia, 3Univ. of Melbourne, Melbourne, Australia, 4Monash Univ., MELBOURNE, Australia

581
ASSOCIATION OF OBESEITY, PHYSICAL PERFORMANCE AND MENTAL HEALTH STATUS WITH LOW BACK PAIN: A PROSPECTIVE COHORT STUDY
B. Alyousef1, F. M. Cicuttini1, Y. Wang1, D. M. Urquhart1, A. E. Wluka1, J. E. Shaw2, D. J. Magliano2, S. Hussain1 • 1Monash Univ., Melbourne, Australia, 2Baker Heart and Diabetes Inst., Melbourne, Australia

582
TWO APPROACHES TO EVALUATE THE ASSOCIATIONS BETWEEN PATELLOFEMORAL JOINT ALIGNMENT, MORPHOLOGY, RADIOGRAPHIC OSTEOARTHRITIS AND ANTERIOR KNEE PAIN: THE MOST STUDY
E. M. Macri1,2, T. Neogi1, I. Tolstykh3, R. Widajahakim3, C. E. Lewis4, J. C. Torner1, M. C. Nevitt5, M. Roux6, J. J. Stefanik3,6 • 1Erasmus MC, Rotterdam, Netherlands, 2Univ. of Delaware, Newark, DE, 3Boston Univ., Boston, MA, 4Univ. of California San Francisco, San Francisco, CA, 5Univ. of Massachusetts Med. Sch., Worcester, MA, 6Univ. of Alabama, Birmingham, AL, 7Univ. of Iowa, Iowa City, IA, 8Hosp. for Special Surgery, New York, NY, 9Northeastern Univ., Boston, MA

583
NATURAL COURSE OF PAIN IN MIDDLE-AGED SUBJECTS WITH EARLY HIP OSTEOARTHRITIS 10-YEAR FOLLOW-UP IN THE CHECK-STUDY
A. C. van Berkel, D. Schiphof, J. Waarsing, J. Runhaar, J. van Ochten, P. Bindels, S. Bierna- Zeinstra • Erasmus Med. Ctr., Rotterdam, Netherlands

584
DIFFERENTIAL ASSOCIATIONS OF KNEE EFFUSIONS AND SUBCHONDRAL BONE CYSTS WITH KNEE PAIN AT REST AND KNEE PAIN WITH WALKING
Q. Liu1, H. Li1, N. Lane2, D. Hunter1, D. Xing1, J. Lin1, Y. Zhang3 • 1Peking Univ. People’s Hosp., Beijing, China, 2Univ. of California, Davis Sch. of Med., Sacramento, CA, 3The Univ. of Sydney, Sydney, Australia, 4Massachusetts Gen. Hosp., Harvard Med. Sch., Boston, MA
LOWER LIMB TORSIONAL MALALIGNMENT IS ASSOCIATED WITH PAIN IN INDIVIDUALS WITH MEDIAL COMPARTMENT KNEE OSTEOARTHRITIS

S. Fu¹, C. Huang², Z. Li³, S. Yeung², W. Lai³, P. Chan³, C. Yan³, K. Chiu³ • The Hong Kong Polytechnic Univ., Hong Kong, Hong Kong, ¹MacLahose Med. Rehabilitation Ctr., Hong Kong, Hong Kong, ²Queen Mary Hosp., Hong Kong, Hong Kong

DOES DIET THERAPY REDUCE PAIN IN OBESE AND OVERWEIGHT ADULTS WITH KNEE OSTEOARTHRITIS?

K. A. Marriott, L. Filice, E. Wiebenga, M. Maly • Univ. of Waterloo, Waterloo, ON, Canada

PERIPHERAL AND CENTRAL SENSITIZATION AND NEUROPATHIC PAIN ARE PRESENT IN BOTH OSTEOARTHRITIS AND RHEUMATOID ARTHRITIS


SERUM VITAMIN D AND KNEE OSTEOARTHRITIS: IS ITS ROLE OVER-EMPHASIZED?

S. R. Srivastava, R. N. Srivastava, A. C. Sharma, L. Raj • KING GEORGE’S Med. Univ., LUCKNOW, India

RELATIONSHIP BETWEEN HIP/LOW BACK SYMPTOMS AND PAIN SENSITIZATION IN PEOPLE WITH SYMPTOMATIC KNEE OSTEOARTHRITIS: THE MULTICENTER OSTEOARTHRITIS (MOST) STUDY

H. P. French¹, C. E. Lewis², X. Sun², N. Segal³, C. L. Lewis³, T. Neogi² • ¹Royal Coll. of Surgeons in Ireland, Dublin, Ireland, ²Div. of Preventive Med., Sch. of Med., Univ. of Alabama at Birmingham, Birmingham, AL, ³Dept. of Biostatistics, Boston Univ., Boston, MA, ⁴Dept. of Rehabilitation Med., Univ. of Kansas, Kansas, KS, ⁵Dept. of Physical Therapy and Athletic Training, Boston Univ., Boston, MA, ⁶Clinical Epidemiology Res. and Training Unit, Boston Univ. Sch. of Med., Boston, MA

SYNOVIAL FLUID CYTOKINES AND ADIPOKINES AS PREDICTORS OF POOR OUTCOME IN TOTAL HIP AND KNEE JOINT REPLACEMENT IN PATIENTS WITH OSTEOARTHRITIS

D. E. Nanus¹, E. T. Davis², S. W. Jones³ • ¹Univ. of Birmingham, Birmingham, United Kingdom, ²The Royal Orthopaedic Hosp. NHS Fndn. Trust, Birmingham, United Kingdom, ³Univ. of Birmingham, Birmingham, United Kingdom

CHARACTERIZING PAIN AND RELIEF AFTER JOINT REPLACEMENT IN HIP AND KNEE OSTEOARTHRITIS

J. Barroso¹, K. Wakaizumi², D. Reckziegel³, J. Ramos³, T. Schnitzer³, V. Galhardo³, A. Apkarian³ • ¹FMUP, Porto, Portugal, ²Shirley Ryan Ability Lab, Chicago, IL, ³Northwestern Univ., Chicago, IL

STUDY ON THE GENDER DIMORPHISM AND TRPV1 EXPRESSION ON CHRONIC PAIN IN DMM-INDUCED OSTEOARTHRITIS MODEL MICE

J-I. Hong¹,², I. Park¹,², J-R. Kim¹,², H. Kim¹,² • ¹Div. of rheumatology, Hallym Univ. Sacred Heart Hosp., Anyang, Korea, Republic of, ²Skeletal Aging, Hallym Univ., Chunchon, Korea, Republic of

CYCLIC COMPRESSION LOADING ON THREE-DIMENSIONAL TISSUE OF HUMAN ARTICULAR CHONDROCYTES UPREGULATES INFLAMMATORY MEDIATORS AND PAIN-SENSITIZING MOLECULES

595 INTRA-ARTICULAR INJECTION OF TRIAMCINOLONE ACETONIDE IN A SUSTAINED RELEASE POLYESTERAMIDE FORMULATION SHOWS PROLONGED ANTI-INFLAMMATORY EFFICACY IN A RAT MODEL
I. Jansen1, N. Woike2, S. de Jong3, S. Versteegg, M. Kik4, P. Emans5, G. Mihov6, J. C. Thies2, N. Eijkelkamp5, M. A. Tryfonidou2, L. B. Creemers1 • 1Dept. of Orthopedics, University Medical Center Utrecht, Netherlands, 2DSM BioMed. B.V., Geleen, Netherlands, 3Lab. of Translational Immunology, University Medical Center Utrecht, Netherlands, 4Dept. of Pathobiology, Faculty of Vet. Med., Utrecht University, Netherlands, 5Dept. of Orthopedics, Maastricht University Medical Center, Netherlands, 6Dept. of Clinical Sci. of Companion Animals, University Utrecht, Netherlands

596 IN VITRO EFFECTS OF SOLUBLE EPOXIDE HYDROLASE INHIBITION ON CHONDROCYTE APOPTOSIS AND SENSITIZATION OF PERIPHERAL SENSORY NERVES
A. Guedes1, T. Trumble1, L. Tucker1, C. Baldo1, E. Wendt-Hornickle1, S. Hwang2, C. Morrisseau2, B. Hammock2 • 1Univ. of Minnesota, St Paul, MN, 2Univ. of California, Davis, Davis, CA

597 INFERIORITY OF LABORAS OVER INCAPACITANCE TESTING TO MEASURE SPONTANEOUS MURINE OSTEOARTHRITIS PAIN
I. S. von Loga, L. Jostins, J. Miotla-Zarebska, Y-S. Huang, M. Curtinha, R. O. Williams, T. L. Vincent • Univ. of Oxford, Oxford, United Kingdom

598 ANGIOTENSIN 2 TYPE 2 RECEPTOR BLOCKADE IS A NOVEL TARGET FOR MURINE OSTEOARTHRITIS PAIN
I. S. von Loga1, J. Miotla-Zarebska1, E. Wyeth1, T. McCarthy2, C. Bountra1, T. L. Vincent1 • 1Univ. of Oxford, Oxford, United Kingdom, 2Molecule 2 Med., Stanton Harcourt, United Kingdom

599 NOCICEPTIVE NEUROPLASTICITY OF THE MURINE KNEE JOINT PRECEDES SEVERE STRUCTURAL JOINT DAMAGE IN A SURGICAL MODEL OF OA
A. Obeidat, R. Miller, A. Malfait • Rush Univ. Med. center, CHICAGO, IL

600 EFFECTS OF PROLONGED CHEMOGENETIC INHIBITION OF NOCICEPTORS IN A MURINE SURGICAL MODEL OF OSTEOARTHRITIS
P. B. Tran1, S. Ishihara1, R. E. Miller1, R. J. Miller2, A-M. Malfait1 • 1Rush Univ. Med. Ctr., Chicago, IL, 2Northwestern Univ., Chicago, IL

601 SUBSTANCE P EXPRESSION IN THE DRG OF THREE MURINE MODELS OF ARTHRITIS PAIN: CORRELATION WITH PAIN MEASURES AND EFFECT OF LOCAL NEUROTOXIN ANALGESIA
H. E. Krug1, N. Blanshan2, C. Dorman2, S. Frizzle2 • 1Univ. of Minnesota, Minneapolis, MN, 2Minneapolis VA Hlth.Care System, Minneapolis, MN, 3Minneaoplis VA Hlth.Care System, Minneapolis, MN

REGENERATIVE MEDICINE

602 MESENCHYMAL STEM CELL THERAPY MODULATES SYNOVIAL MACROPHAGES IN A MURINE MODEL OF OSTEOARTHRITIS
P. Mancuso, A. Burke, A. Ivanovska, C. Hennessy, E. Mukeria, S. Raman, F. Barry, M. Murphy • REMEDI (NUI Galway), Galway, Ireland

603 THE FATE OF NANOSCALE DRUG DELIVERY SYSTEMS FOR CARTILAGE IS INFLUENCED BY OSTEOARTHRITIS PROGRESSION AND TISSUE TARGETING STRATEGY
S. Brown, L. Wang, B. Sharma • Univ. of Florida, Gainesville, FL

604 MESENCHYMAL STEM CELL ENCAPSULATION IN ALGINATE MICRO-PARTICLES FOR INTRA-ARTICULAR INJECTION IN OSTEOARTHRITIS
A. Smith1, J. Boulestreau1, M. Marquis2, D. Renard2, B. Legoff3, F. Blanchard3, C. Vinatier1, J. Guichieux1, A. des Rieux4, C. Le Visage1 • 1Inserm U1229 Regenerative Med. and Skeleton, Nantes, France, 2UR1268 BIA (Biopolymères Interactions Assemblages), INRA, Nantes, France, 3Inserm UMR 1238 Phy-Os, Nantes, France, 4Louvain Drug Res. Inst., Louvain, Belgium
605
IMMORTALIZATION OF “OSTEOARTHRITIS” AND “HEALTHY” MESENCHYMAL STROMAL CELLS WITHOUT LOSS OF MESENCHYMAL FEATURES
M. PIÑEIRO RAMIL, Sr.1, R. CASTRO VIÑUELAS Sr.1, C. SANJURJO RODRÍGUEZ Jr., S. RODRÍGUEZ FERNÁNDEZ Jr., T. HERMIDA GÓMEZ Jr., F. BLANCO GARCÍA Jr., I. FUENTES BOQUETE Sr.1. S. DÍAZ PRADO, Sr.1 • 1UNIVERSIDADE DA CORUÑA, A CORUÑA, Spain, 2INIBIC, CHU A CORUÑA, A CORUÑA, Spain

606
ENCAPSULATION IN ALGINATE BEADS PROLONGS MESENCHYMAL STEM CELL LONGEVITY IN VIVO BUT DOES NOT ENCHANCE THEIR THERAPEUTIC EFFICACY IN A MURINE MODEL FOR OSTEOARTHRITIS
S. Khatab1,2, M. J. Leijs1,2, G. M. van Buul1, J. C. Haeck2, N. Kops1, K. P. Bos1, J. A. Verhaar1, M. R. Bernsen2, G. J. van Osch1,3. 1Orthopedics, Erasmus MC, Rotterdam, Netherlands, 2Radiology and Nuclear Med., Erasmus MC, Rotterdam, Netherlands, 3Otorhinolaryngology, Erasmus MC, Rotterdam, Netherlands

607
MICROENCAPSULATION OF HUMAN OSTEOARTHRITIS CHONDROCYTES IN COLLAGEN MICROSPHERE - AN IN VITRO MODEL FOR OSTEOARTHRITIS STUDIES
P. Yeung, K. Cheng, C. Yan, B. P. Chan • The Univ. of Hong Kong, Hong Kong, China

608
ATTENUATION OF SURGICALLY-INDUCED OSTEOARTHRITIS (OA) BY INHIBITION OF AUTOTAXIN

609
A CULTURE ENGINEERING STRATEGY TO ENHANCE MESENCHYMAL STROMAL CELLS FOR TREATMENT OF OSTEOARTHRITIS
K. Robb, A. Gómez-Aristizábal, R. Gandhi, S. Viswanathan • Univ. Hlth.Network, Toronto, ON, Canada

610
SYNOVIAL FIBROBLASTS HAVE HIGH PLASTICITY AND FORM MESENCHYMAL STEM CELL (MSC) ANTIGEN-POSITIVE CELLS DURING THE TWO-DIMENSIONAL CULTURE
K. Tsuji, T. Muneta, I. Sekiya, H. Koga • Tokyo Med. and dental Univ., Tokyo, Japan

611
CHIMERIC PEPTIDE COMBINING BOTH GROWTH HORMONE AND SOMATOSTATIN SEQUENCES (REG-O3) IMPROVES FUNCTION AND PREVENTS CARTILAGE DEGRADATION IN RAT MODEL OF OSTEOARTHRITIS
R. Montjean1, S. Escaich1, C. Carelli1, C. Vêtu1, Y. Henrotin2,3 • 1Regulaxis SAS, Romainville, France, 2Artialis SA, Liege, Belgium, 3Univ. of Liege, Liège, Belgium

612
GENERATION OF HUMAN INDUCED PLURIPOTENT STEM CELLS (IPSC) FROM HAND OSTEOARTHRITIS PATIENT-DERIVED FIBROBLASTS
R. Castro-Viñuelas, Sr.1, C. Sanjurjo-Rodríguez, Sr.1, M. Piñeiro-Ramil, Sr.1, T. Hermida-Gómez, Sr.2, J. De Toro-Santos, Sr.1, F. Blanco-García, Sr.2, I. Fuentes-Boquete, Sr.1. S. Díaz-Prado, Sr.1 • 1Universidade Da Coruña, A Coruña, Spain, 2Inst. Of Biomed. Research Of A Coruña, A Coruña, Spain

613
ANTI-OSTEOARTHRITIS AND ANTI-DIABETIC PROPERTIES OF CITRUS LEAF EXTRACT IN STREPTOZOTOCIN-INDUCED RATS.
N. S. Umran1, L. S. Fong2, S. Mohamed1 • 1Inst. O Biosci., Universiti Putra Malaysia, Malaysia, 2Faculty Of Veterinary Medicine, Universiti Putra Malaysia, Malaysia

614
IN VITRO AND IN VIVO EVALUATION OF AN ELECTROSPUN-ALIGNED MICROFIBROS IMPLANT FOR ANNULUS FIBROSUS REPAIR
M. Gluais1, J. Clouet1, M. Fusellier1, C. Decante2, C. Moraru2, M. Dutilleul1, J. Veziers1, J. Lesueur1, D. Dumas2, J. Abadies4, A. Hamel2, E. Bord2, S. Chew5, J. Guichieux1, C. Le Visage1 • 1Insterm U1229, Regenerative Med. and Skeleton, Nantes, France, 2CHU Nantes, Nantes, France, 3IMoPA, UMR 7365 CNRS, Vandœuvre-lès-Nancy, France, 4ONIRIS, Coll. of Vet. Med., Nantes, France, 5Nanyang Technological Univ., Singapore, Singapore
615 UNDERSTANDING THE DUAL ROLE OF IL6 SIGNALING MEDIATED BY MESENCHYMAL STROMAL CELL SIGNALING TO JOINT MACROPHAGES IN OSTEOARTHRITIS
R. Rabani, C. Yan, A. Gómez-Aristizábal, S. Viswanathan • Univ. Hlth.Network, Toronto, ON, Canada

616 INTRA-OSSEOUS DELIVERY OF TESTOSTERONE ENCAPSULATED PLGA MICROSPHERES IN COMBINATION WITH ALENDRONATE STIMULATES SUBCHONDRAL BONE FORMATION IN RABBIT FEMUR
E. J. Geven1, C. van de Ven1, P. M. van der Kraan2, J. A. Gossen1 • 1Osteo-Pharma BV, Oss, Netherlands, 2Experimental Rheumatology, Radbou University Med. Ctr., Nijmegen, Netherlands

617 THE CLOT THICKENS: POOLED PLASMA AND AUTOLOGOUS FIBRIN SEALANTS’ SHOW EQUIVALENT FAILURE MECHANICS AND REPAIR ADHESION TO ARTICULAR CARTILAGE

618 SELF-ASSEMBLED ARTIFICIAL CARTILAGE-HYDROXYAPATITE CONJUGATE FOR COMBINED ARTICULAR CARTILAGE AND SUBCHONDRAL BONE REPAIR.
K. Yudoh, T. Kumai, N. Yui • St. Marianna Univ. Sch. of Med., Kawasaki City, Japan

619 POPULATED COLLAGEN HYDROGEL AND POLYHYDROXYALKANOATE COMPOSITES: NOVEL MATRICES FOR CARTILAGE REPAIR AND REGENERATION?
C. De Pascale, E. Marcello, S. J. Getting, I. Roy, I. C. Locke • Univ. of Westminster, LONDON, United Kingdom

620 QUANTITATIVE BIOIMAGING OF GLYCOSAMOGLYCANS IN CARTILAGE TISSUE-ENGINEERING USING CONTRAST ENHANCED COMPUTED TOMOGRAPHY
J. Garcia1, A. Longoni2, M. W. Grinstaff3, J. Töyräs4, H. Weinans5, L. B. Creemers6, B. Pouran1,6 • 1Dept. Orthopedics, UMC Utrecht, Utrecht, Netherlands, 2Dept. of Maxillofacial Surgery, UMC Utrecht, Utrecht, Netherlands, 3Dept. of Chemistry and BioMed. Engineering, Boston Univ., Boston, MA, 4Dept. of Physics, Univ. of Kuopio, Kuopio, Finland, 5Dept. of Biomechanical Engineering, TU Delft, Delft, Netherlands, 6Dept. of Biomechanical Engineering, TU Delft, Delft, Netherlands

621 CONDROGENESIS OF MESENCHYMAL STEM CELLS DERIVED FROM HUMAN AMNIOTIC FLUID IN CHITOSAN-XANTHAN SCAFFOLDS UNDER TGF-BETA 3 STIMULI
I. I. Damas, C. C. Zuliani, Â. M. Moraes, C. B. Westin, K. C. Andrade, L. F. Castro, I. B. Coimbra • Univ. of Campinas, Campinas, Brazil

622 PROLONGED INTRA-ARTICULAR RETENTION OF MESENCHYMAL STEM CELLS BY ADVANCED MICROENCAPSULATION
L. P. Karbaat1, N. M. Korthagen2, K. Warmink1, N. Dupuis3, B. Zoetebier4, J. Leijten4, H. Weinans3, M. Karperien1 • 1Univ. of Twente, Enschede, Netherlands, 2Univ. of Utrecht, Utrecht, Netherlands, 3Univ. Med. Ctr. Utrecht, Utrecht, Netherlands

623 OSTEOARTHRITIC MILIEU AND HYPOXIA EXERT SPECIFIC EFFECTS ON ADIPOSE MESENCHYMAL STROMAL CELL MIGRATION AND CYTOKINE RECEPTOR EXPRESSION
C. Manferdini1, F. Paolella1, E. Gabusi1, D. Trucco1, L. Cattini1, M. Rojewski2, H. Schrezenmeier2, O. Addimanda1, R. Meliconi1, G. Lisignoli1 • 1IRCCS, Istituto Ortopedico Rizzoli, Bologna, Italy, 2Inst. für Transfusionsmedizin, Univ. Ulm, and Inst. für Klinische Transfusionsmedizin und Immunogenetik, DRK-Blutspendedienst Baden-Württemberg - Hessen & Univ.klinikum, Ulm, Germany
624 CHONDROGENIC EFFECT OF KARTOGENIN ON AN IMMORTALIZED CELL LINE DERIVED FROM MESENCHYMAL STROMAL CELLS ISOLATED FROM HUMAN BONE MARROW
C. Guiance-Varela1,2, C. Rodríguez-Pereira1,2, E. F. Burguera1,3, T. Hermida-Gómez1,3, N. Goyanes1, A. L. Oliveira4, F. J. Blanco1, J. Magalhães1,3 • 1Unidad de Med. Regenerativa. Grupo de Investigación en Reumatología (GIR), Inst. de Investigación Biomédica de A Coruña (INIBIC). CHUAC. SERGAS. C/ As Xubias de Arriba, 84, 15006, A Coruña, Spain, 2Centro de Investigaciones Científicas Avanzadas (CICA), Univ. de A Coruña (UDC), As Carballeiras, S/N, Campus de Elviña, 15071, A Coruña, Spain, 3Centro de Investigación Biomédica en Red (CIBER). Av. Monforte de Lemos, 3-5. Pabellón 11. Planta 0 28029, Madrid, Spain, 4CBQF - Centro de Biotecnología e Química Fina, Laboratário Associado, Escola Superior de Biotecnologia, Univ.e Católica Portuguesa, Rua Arquiteto Lobão Vital, 4202-401, Porto, Portugal

625 USING A MOUSE MODEL OF OSTEOCHONDRAL INJURY TO UNDERSTAND BONE AND ARTICULAR CARTILAGE REPAIR
F. E. Beaton, K. Newell, V. Piombo, F. M. Henson, M. A. Birch, A. W. McCaskie • Univ. of Cambridge, Cambridge, United Kingdom

626 STATISTICAL MODELING TO OPTIMIZE THE MANUFACTURING PROCESS OF MESENCHYMAL STROMAL CELLS
S. Waseem1, J. Audet1, S. Viswanathan2 • 1Inst. of Biomaterials and BioMed. Engineering, Univ. of Toronto, Toronto, ON, Canada, 2Arthritis Program, Krembil Res. Inst., Univ. Hlth.Network, Toronto, ON, Canada

627 HETERO SPECIFIC BIVALENT HEAVY CHAIN ONLY ANTIBODIES FOR TARGETING BMP7 TO OSTEOCHONDRAL LESIONS
M. Koerselman1, X. Huang1, E. D. Rodrigues1, T. Verrips2, M. Karperien1 • 1Univ. of Twente, Enschede, Netherlands, 2QVQ BV, Utrecht, Netherlands

628 GENERATING BIOMIMETIC MINERALIZED COLLAGEN SCAFFOLDS FOR BONE REGENERATION
L. Luo, S. Viswanathan, E. Sone • Univ. of Toronto, Toronto, ON, Canada

629 QUANTITATIVE ASSESSMENT AND COMPARISON OF THE HETEROGENEOUS CHONDROGENIC PROGENITORS RESIDENT IN VARIOUS TISSUES AROUND OSTEOARTHRITIC KNEE FOR CARTILAGE REPAIR
V. R. Mantripragada, B. Wes, N. Piuzzi, C. Boehm, N. Obuchowski, R. Midura, G. Muschler • Cleveland Clinic, Cleveland, OH

630 HUMAN UMBILICAL CORD MESENCHYMAL STROMAL CELLS DO NOT EVOKE AN IMMUNE RESPONSE IN THE PARTIAL MEDIAL MENISCECTOMY MURINE MODEL OF OSTEOARTHRITIS
J. Perry1,2, C. Mennan1,2, H. S. McCarthy1,2, G. Bou-Gharios3, R. van ’t Hof4, P. Milner4, K. T. Wright1,2, S. Roberts1,2 • 1RJAH Orthopaedic Hosp., Oswestry, United Kingdom, 2Keele Univ., Keele, Newcastle-under-Lyme, United Kingdom, 3Liverpool Univ., Liverpool, United Kingdom

631 MANAGING OSTEOARTHRITIS: A QUALITATIVE STUDY OF NOVICE PHYSICAL THERAPISTS’ PERCEPTIONS, EXPERIENCES AND LEARNING NEEDS
M. Bartlett1, U. Cheema1, M. Cundari1, S. Peyvandi1, S. Provad1, E. Waugh1,2, C. MacKay3,4 • 1Univ. of Toronto, Toronto, ON, Canada, 2Women’s Coll. Hosp., Toronto, ON, Canada, 3West Park Hlth.care Ctr., Toronto, ON, Canada, 4Toronto Rehabilitation Inst., Toronto, ON, Canada

632 THE EFFECTS OF CRYOTHERAPY ON PAIN AND FUNCTION IN INDIVIDUALS WITH KNEE OSTEOARTHRITIS: A SYSTEMATIC REVIEW OF RANDOMIZED CONTROLLED TRIALS
L. O. Dantas1, R. F. Carreira Moreira1, F. M. Norde1, P. R. Mendes Silva Serra1, F. A. Sendín2, T. F. Salvini1 • 1Federal Univ. of São Carlos, São Carlos, Brazil, 2Sociosanitary Sci., Radiology and Physical Med., Univ. of Córdoba and Inst. Maiomónides de Investigación Biomédica, Córdoba, Spain
633
A MULTI-FACETED, NON-DRUG, NON-SURGICAL INTERVENTION COMPARED TO USUAL GP CARE FOR SYMPTOMATIC RADIOGRAPHIC OSTEOARTHRITIS OF THE FIRST METATARSOPHALANGEAL JOINT: A RANDOMISED CONTROLLED FEASIBILITY STUDY
K. L. Paterson1, R. S. Hinman1, B. Metcalf1, P. Campbell1, H. B. Menz1, D. J. Hunter5, K. L. Bennell9 • 1The Univ. of Melbourne, Carlton, Australia, 2La Trobe Univ., Bundoora, Australia, 3The Univ. of Sydney, Sydney, Australia

634
MOVEMENT PATTERN TRAINING COMPARED TO STANDARD STRENGTHENING AND FLEXIBILITY AMONG PATIENTS WITH PREARTHRITIC HIP DISORDERS: A PILOT MULTICENTER RANDOMIZED CLINICAL TRIAL
M. Harris-Hayes1, K. Steger-May1, A. M. Bove2, S. N. Foster1, M. J. Mueller1, J. C. Clohisy1, 1Washington Univ. Sch. of Med., Saint Louis, MO, 2Univ. of Pittsburgh, Pittsburgh, PA

635
VARIATION IN THE RECOVERY OF KNEE-RELATED QUALITY OF LIFE FOLLOWING ANTERIOR CRUCIATE LIGAMENT RECONSTRUCTION IN YOUNG ATHLETES
C. Y. Le1, C. Hui1, C. A. Emery2, P. J. Manns1, J. L. Whittaker1 • 1Univ. of Alberta, Edmonton, AB, Canada, 2Univ. of Calgary, Calgary, AB, Canada

636
TECHNOLOGY-ASSISTED REHABILITATION FOLLOWING TOTAL KNEE OR HIP REPLACEMENT FOR PEOPLE WITH OSTEOARTHRITIS: A SYSTEMATIC REVIEW AND META ANALYSIS
X. Wang1, D. J. Hunter1, G. Vesentini2, D. Pozzobon1, M. L. Ferreira1 • 1Univ. of Sydney, St Leonards, Australia, 2San Paulo State Univ., San Paulo, Brazil

637
EFFECTS OF INFRARED RADIATION AND SHORTWAVE DIATHERMY ON THE PATIENTS WITH CHRONIC LOW BACK PAIN DUE TO OSTEOARTHRITIS OF THE LUMBAR SPINE
M. A. Shakoor, Sr. • Bangabandhu Sheikh Mujib Med. Univ., Dhaka, Bangladesh

638
MULTIMODAL REHABILITATION IN PATIENTS WITH PERSISTENT PAIN AND FUNCTIONAL DISABILITY AFTER PRIMARY OR REVISION TOTAL KNEE ARTHROPLASTY
J. B. Larsen1,2, L. Mogensen1, L. Arendt-Nielsen2, P. Madeleine1 • 1Sport Sci., Dept. og Hlth.Sci. and Technology, Aalborg Univ., Aalborg, Denmark, 2Ctr. of Sensory-Motor Interaction, Dept. of Hlth.Sci. and Technology, Aalborg Univ., Aalborg, Denmark, 3Montebello - Dept. of rehabilitation, North Zealands Hosp., Benalmadena Pueblo, Spain

639
GLA:D® BACK: GROUP-BASED PATIENT EDUCATION AND EXERCISES TO SUPPORT SELF-MANAGEMENT OF PERSISTENT BACK PAIN
P. Kjaer1, A. Kongsted2, I. Ris1, A. Abbott1, C. Norregaard Rasmussen4, E. Roos1, S. Skou1, T. Elmore Andersen1, J. Hartvigsen1,2 • 1Univ. of Southern Denmark, Odense M, Denmark, 2Nordic Inst. of Chiropractic and Clinical Biomechanics, Odense M, Denmark, 4Linköping Univ., Linköping, Sweden, 4Natl. Inst. for Res. in the Working Environment, Copenhagen, Denmark

640
GLA:D® BACK: FEASIBILITY OF IMPLEMENTING STANDARDIZED CARE FOR BACK PAIN THROUGH A 2-DAY CLINICIAN TRAINING COURSE
A. Kongsted1,2, J. Hartvigsen1,2, I. Ris1, P. Kjaer1, E. Boyle1, L. Thomassen1, W. Vach3 • 1Univ. of Southern Denmark, Odense M, Denmark, 2Nordic Inst. of Chiropractic and Clinical Biomechanics, Odense M, Denmark, 3Univ. Hosp. Basel, Basel, Switzerland

641
COMPREHENSIVE OSTEOARTHRITIS MANAGEMENT PROGRAMME :A MULTI-DISCIPLINARY NON-SURGICAL MANAGEMENT PROGRAMME FOR CHINESE PATIENT WITH OSTEOARTHRITIS OF KNEE
P. K. CHAN1, S. S. YEUNG2, K. W. SIU2, Y. L. NG2, C. C. TSANG2, H. CHAN2, C. H. ‘YAN1, K. Y. CHIU1 • 1Queen Mary Hosp., The Univ. of Hong Kong, Pokfulam, Hong Kong, 2MacLehose Med. Rehabilitation Ctr., Sandy Bay, Hong Kong
642 SUBGROUPING AND TARGETED EXERCISE PROGRAMMES FOR KNEE AND HIP OSTEOARTHRITIS (STEER OA) INDIVIDUAL PARTICIPANT DATA META-ANALYSIS. PROGRESS UPDATE AND SELECTION OF POTENTIAL MODERATORS FOR ANALYSES.


643 EFFECT OF EXERCISE ON PSYCHOLOGICAL WELL-BEING IN PEOPLE WITH KNEE OSTEOARTHRITIS: SYSTEMATIC REVIEW AND META-ANALYSIS OF RANDOMISED CONTROLLED TRIALS

M. Hall1, R. K. Neilligan1, F. L. Dobson1, N. J. Collins2, E. J. Smits2, M. H. Ross2, J. E. Kasza3, K. L. Bennell4 • 1Univ. of Melbourne, Melbourne, Australia, 2Univ. of Queensland, Brisbane, Australia, 3Monash Univ., Melbourne, Australia

644 IS FUNCTIONAL LEVEL RELATED WITH BODY COMPOSITION IN PATIENTS WITH KNEE OSTEOARTHRITIS

M. P. KURTÇA, U. B. ASLAN, H. ŞENOL • PAMUKKALE Univ., DENİZLİ, Turkey

645 A QUALITATIVE EVALUATION OF PHYSIOTHERAPISTS ACCEPTABILITY OF A CLINICAL SENSOR BASED APPROACH TO MOVEMENT FEEDBACK REHABILITATION

K. A. Nicholas1,2, M. Al-Amri1,2, J. L. Davies1,2, V. Sparkes1,2, K. Button1,2 • 1Sch. of Hlth.care Sci., Cardiff Univ., Cardiff, United Kingdom, 2Arthritis Res. UK Biomechanics and Bioengineering Ctr., Cardiff Univ., Cardiff, United Kingdom

646 KNEELING ACTIVITY IN DAILY LIFE AFTER TOTAL KNEE ARTHROPLASTY

H. Maehara, K. Aso, J. Dan, M. Izumi, M. Ikeuchi • Kochi Med. Sch., Nankoku, Japan

647 FOOT AND LEG MUSCLE WEAKNESS IN INDIVIDUALS WITH MIDFOOT PAIN AND OSTEOARTHRITIS

J. B. Arnold1,2, J. Halstead-Rastrick2,3, A.-M. Keenan2,4, C. L. Hill5,6, A. C. Redmond2 • 1Sch. of Hlth.Sci., Univ. of South Australia, Adelaide, Australia, 2Inst. of Rheumatic and Musculoskeletal Med., Univ. of Leeds & NIHR Leeds BioMed. Res. Ctr., Leeds, United Kingdom, 3Leeds Community Hlth.care NHS Trust, Leeds, United Kingdom, 4Sch. of Hlth.care, Univ. of Leeds, Leeds, United Kingdom, 5Dept. of Rheumatology, The Queen Elizabeth Hosp., Adelaide, Australia, 6Discipline of Med., Faculty of Hlth.& Med. Sci. The Univ. of Adelaide, Adelaide, Australia
POSTER PRESENTATIONS

648  
THE INFLUENCE OF PSYCHOLOGICAL, SOCIAL AND CONTEXTUAL FACTORS ON RECOVERY FOLLOWING A SPORT-RELATED KNEE INJURY: A SCOPING REVIEW  
L. K. Truong, A. D. Mosiewich, C. J. Holt, C. Y. Le, M. Miciak, J. L. Whittaker • Univ. of Alberta, Edmonton, AB, Canada

649  
A SYSTEMATIC REVIEW ON RISK FACTORS FOR FALLS IN PATIENTS AFTER TOTAL HIP/KNEE ARTHROPLASTY  
A. Y. Wong1, C. Lo1, W. Tsang1, C. Yan2, L. Stephen3, K. Hill4 • 1The Hong Kong Polytechnic Univ., Hong Kong, Hong Kong, 2The Univ. of Hong Kong, Hong Kong, Hong Kong, 3NeuroSci. Res. Australia, Sydney, Australia, 4Curtin Univ., Western Australia, Australia

650  
THE DESIGN, USER CHARACTERISTICS AND EFFICACY OF ONLINE SUPPORT GROUPS FOR ARTHRITIS AND OTHER CHRONIC MUSCULOSKELETAL DISORDERS: A SYSTEMATIC REVIEW  
K. A. Mills1, L. R. Maclachlan2, B. Lawford3, M. Besomi2, T. Egerton3, J. Eyles4, L. M. Hall3, L. Melo5, R. Mellor2, M. L. Plisinga2, S. R. Robbins4, J. Setchell5, D. J. Hunter6, B. Vicenzino2, K. L. Bennell7 • 1Macquarie Univ., Sydney, Australia, 2Univ. of Queensland, Brisbane, Australia, 3Univ. of Melbourne, Melbourne, Australia, 4Univ. of Sydney, Sydney, Australia, 5The Sax Inst., Sydney, Australia

651  
INVESTIGATION OF THE FUNCTIONAL STATUS OF PATIENTS WITH UNICONDYLAR KNEE PROSTHESIS  
H. R. Güngör, N. Büker, G. Bayrak, N. Ök, R. Şavkin • PAMUKKALE Univ., DENIZLI, Turkey

652  
FUNCTIONAL OUTCOMES AFTER CLINICAL PATHWAY FOR INPATIENT REHABILITATION OF TOTAL KNEE ARTHROPLASTY  
S. Lee, M. Suh, B. Kim, J. Kim • Jeju Natl. Univ. Hosp., Jeju Natl. Univ. Sch. of medicine, Jejusi, Korea, Republic of

653  
HOW CO-ACTIVATION IS AFFECTED BY DIFFERENCES IN CONTRACTION INTENSITY OF KNEE EXTENSOR IN TOTAL KNEE ARTHROPLASTY PATIENTS  
K. Nojin1, T. Kobayashi2, T. Kannnari3, H. Horiuchi4, N. Matsu1i5, T. Ito5, K. Kakuse6, M. Okawa8 • 1no affiliation, sapporo, Japan, 2Hokkaido Chitose Coll. of Rehabilitation, sapporo, Japan, 3Hokkaido Orthopaedic Mem. Hosp., sapporo, Japan, 4NTT East Corp. Sapporo Hosp., sapporo, Japan, 5Sapporo Central Hosp., sapporo, Japan, 6Sinsapporo Nagai Orthopedics Clinic, sapporo, Japan

654  
INFLAMMATORY CYTOKINES MEDIATE THE EFFECTS OF DIET AND EXERCISE ON PAIN AND FUNCTION IN KNEE OSTEOARTHRITIS, INDEPENDENT OF BMI  
J. Runhaar1, D. Beavers2, G. Miller3, B. Nicklas1, R. Loeser4, S. Bierma-Zeinstra1, S. Messier • 1Erasmus MC Univ. Med. Ctr. Rotterdam, Rotterdam, Netherlands, 2Wake Forest Sch. of Med., Winston-Salem, NC, 3Wake Forest Univ., Winston-Salem, NC, 4Univ. of North Carolina, Chapel Hill, NC

655  
ADDITION OF TRANSCUTANEOUS ELECTRICAL NERVE STIMULATION TO THERAPEUTIC EXERCISE AND ACTIVITIES OF DAILY LIVING DOES NOT ENHANCE THE DEVELOPMENT OF QUADRICEPS STRENGTH AND VOLUNTARY ACTIVATION: A RANDOMIZED CONTROLLED TRIAL  
B. Pietrosimone1, B. A. Luc-Harkey2, M. S. Harkey3, H. C. Davis-Wilson1, S. J. Pfeiffer1, T. A. Schwartz1, D. Nissman1, D. A. Padua1, P. Olmos1, J. Spang1, J. T. Blackburn1 • 1Univ. of North Carolina at Chapel Hill, Chapel Hill, NC, 2Massachusetts Gen. Hosp., Boston, MA, 3Tufts Med. Ctr., Boston, MA

656  
A SYSTEMATIC REVIEW OF AEROBIC EXERCISE PROGRAMS FOR PATIENTS WITH KNEE OSTEOARTHRITIS AND META-ANALYSES OF PHYSIOLOGICAL EFFECTS  
J. M. Schulz1,2, T. B. Birmingham1,2, H. F. Atkinson1,2, E. Woehrle1, C. A. Primeau1,2, M. J. Lukacs1,2, B. K. Al-Khazraji1,2, M. C. Khan1,2, B. O. Zomar1,2, R. J. Petrella1,2, F. Beier1,2, C. T. Appleton1,2, J. K. Shoemaker1,2, D. M. Bryant1,2 • 1Western Univ., London, ON, Canada, 2Bone and Joint Inst., London, ON, Canada
657 FUNCTIONAL RECOVERY OF PATIENTS WITH DIABETES MELLITUS FOLLOWING AN ARTHROPLASTY: A SYSTEMATIC REVIEW
A. Na1, L. Oppermann2, R. Coronado2 • 1Univ. of Texas Med. Branch, Galveston, TX, 2Vanderbilt Univ., Nashville, TN

SPINE & INTERVERTEBRAL DISC

658 COMPARATIVE EFFICACY AND SAFETY OF CONSERVATIVE CARE FOR PREGNANCY-RELATED LOW BACK PAIN: A SYSTEMATIC REVIEW AND NETWORK META-ANALYSIS
L. Chen1, M. Ferreira2, P. Beckenkamp1, E. Caputo3, P. Ferreira1 • 1Discipline of Physiotherapy, Faculty of Hlth. Sci., Univ. of Sydney, Sydney, Australia, 2Inst. of Bone and Joint Res., Kolling Inst., Sydney Med. Sch., Univ. of Sydney, Sydney, Australia, 3Federal Univ. of Pelotas, Pelotas, Brazil

659 A SYSTEMATIC REVIEW OF MEASUREMENT PROPERTIES OF WALKING OUTCOME MEASURES FOR LUMBAR SPINAL STENOSIS
D. B. Anderson1, S. Mathieson1, J. Eyles1, C. Maher1, V. Bella2, C. Tomkins-Lane3, C. Ammendolia4, J. Van Gelder5, M. L. Ferreira1 • 1The Univ. of Sydney, Sydney, Australia, 2The Univ. of Notre Dame, Sydney, Australia, 3Mount Royal Univ., Calgary, AB, Canada, 4The Univ. of Toronto, Toronto, ON, Canada, 5The Univ. of New South Wales, Sydney, Australia

660 THE ASSOCIATION BETWEEN INSOMNIA, HIGH SENSITIVE C-REACTIVE PROTEIN, AND CHRONIC LOW BACK PAIN: CROSS-SECTIONAL ANALYSIS OF THE HUNT STUDY, NORWAY
K. K. Ho1, M. Simic1, M. Cvanacarova Småstuen2, M. B. Pinheiro1, P. H. Ferreira1, M. Bakke Johnsen1,2, I. Heuch2, M. Grotle2, J. A. Zwart3, K. B. Nilsen5 • 1The Univ. of Sydney, Musculoskeletal Res. Group, Faculty of Hlth. Sci., Sydney, Norway, 2Dept. of research, innovation and education, Div. of clinical NeuroSci., Oslo Univ. Hosp., Oslo, Norway, 3Inst. of clinical medicine, Univ. of Oslo, Oslo, Norway, 4NTNU, Dept. of Neuromedicine and Movement Sci., Trondheim, Norway

661 ‘TEXT4MYBACK’ – THE DEVELOPMENT PROCESS OF A SELF-MANAGEMENT INTERVENTION DELIVERED VIA TEXT MESSAGE FOR LOW BACK PAIN
C. Gassen Fritsch, J. Prior, P. Ferreira, A. McLachlan, C. Chow, J. Redfern, M. Ferreira • Univ. of Sydney, Sydney, Australia

662 THE ASSOCIATION OF A SMOOTH MUSCLE ACTIN WITH INTERVERTEBRAL DISC DEGENERATION
F. Lyu1,2, M. Zheng3, Q. Zheng4 • 1South China Univ. of Technology, Guangzhou, China, 2Dept. of Orthopaedics and Traumatology, Li Ka Shing Faculty of Med., The Univ. of Hong Kong, Hong Kong SAR, China, 3Faculty of Med., The Univ. of Western Australia, Perth, Australia, 4Guangdong Gen. Hosp., Sch. of Med., South China Univ. of Technology, Guangzhou, China

663 WHAT IS AN ‘OPTIMAL’ SPINAL POSITION DURING SLEEP? A SYSTEMATIC REVIEW.
J. L. Sewell1, E. Ong1, Y. Wang2, S. Monira Hussain2, F. Cicuttini2 • 1Alfred Hlth., Melbourne, Australia, 2Dept. of Epidemiology and Preventive Med., Sch. of Publ. Hlth.and Preventive Med., Monash Univ., Melbourne, Australia

664 LIPID NANOCAPSULES FOR THE SUSTAINED RELEASE OF THERAPEUTIC MiRNA: NEW PERSPECTIVE IN REGENERATIVE MEDICINE OF INTERVERTEBRAL DISC
B. Le Moal1,2, E. Lepeltier3, V. Geoffroy1,4, A. Galvani1,4, C. Le Visage1,4, C. Passirani3, J. Guicheux1,2, J. Clouet1,2 • 1UMR 1229, RMeS, Regenerative Med. and Skeleton, Université de Nantes, ONIRIS, Nantes, France, 2CHU Nantes, PHU4 OTONN, Nantes, France, 3MINT, UNIV Angers, INSERM 1066, CNRS 6021, Université Bretagne Loire, Angers, France, 4Université de Nantes, UFR Odontologie, Nantes, France
ENDOGENOUS PROGENITOR-LIKE CELLS IN INTERVERTEBRAL DISCS

F.-J. Lyu1,2, K. Cheung2, Z. Zheng3, H. Wang1, D. Sakai4, V. Leung2,5 • 1Sch. of Med., South China Univ. of Technology, Guangzhou, China, 2Dept. of Orthopaedics and Traumatology, Li Ka Shing Faculty of Med., The Univ. of Hong Kong, Hong Kong SAR, China, 3Dept. of Spine Surgery, the First Affiliated Hosp., Sun Yat-sen Univ., Guangzhou, China, 4Dept. of Orthopaedic Surgery, Tokai Univ., Tokyo, Japan, 5Stem Cell and Regenerative Med. Consortium, Li Ka Shing Faculty of Med., The Univ. of Hong Kong, Hong Kong SAR, China

SELF-REPORT VERSUS PHYSICAL MEASURES OF SPINAL STIFFNESS

J. Nielsen1, C. Nim1,2, S. O’Neill1,2, J. Hartvigsen1,3, E. Boyle1, G. Kawchuk2 • 1Univ. of Southern Denmark, Odense M, Denmark, 2Lillebaelt Hosp. Middelfart, Odense M, Denmark, 3Nordic Inst. of Chiropractic and Clinical Biomechanics, Odense M, Denmark, 4Univ. of Alberta, Edmonton, AB, Canada

IS RESTRICTED RANGE OF MOTION ONE OF THE SIGNS OF LUMBAR DISC DEGENERATION IN OLDER ADULTS WITH LOW BACK PAIN?

R. van den Berg, A. Chiarotto, W. T. Enthoven, E. I. de Schepper, E. H. Oei, B. W. Koes, S. M. Bierna-Zeinstra • Erasmus MC, Rotterdam, Netherlands

LUMBAR DISC DEGENERATION IS LONGITUNALLY ASSOCIATED WITH LOW BACK PAIN PRESENCE IN OLDER ADULTS

R. van den Berg, A. Chiarotto, W. T. Enthoven, E. I. de Schepper, E. H. Oei, B. W. Koes, S. M. Bierna-Zeinstra • Erasmus MC, Rotterdam, Netherlands

GALECTIN-1 AND GALECTIN-3 IN THE HUMAN INTERVERTEBRAL DISC: EVIDENCE FOR DIFFERENT LOCALIZATION PATTERNS AND GENE ACTIVATION PROFILES

S. Toegel1, K. Kinslechner1, M. Elshamly1, D. Weinmann1, S. M. Walzer1, J. G. Grohs1, H.-J. Gabius1, R. Windhager1 • 1Med. Univ. of Vienna, Vienna, Austria, 2Ludwig Maximilians Univ., Munich, Germany

THERAPEUTIC POTENTIAL OF A NOVEL SMALL MOLECULE IN MODIFYING LUMBAR DISC DEGENERATION

Y. Sun, K. Kwan, Y. Hsu, E. Zhang, K. Cheung, V. Leung • The Univ. of Hong Kong, Hong Kong, Hong Kong

SYNOVIUM, LIGAMENT, MENISCUS, MUSCLE, TENDON: CLINICAL

DOES BASELINE AND CHANGE IN LOWER EXTREMITY LEAN AND FAT COMPOSITION OVER 5 YEARS PREDICT THE INCIDENCE OF RADIOGRAPHIC KNEE OSTEOARTHRITIS IN WOMEN?

P. Krishnasamy1, M. Hall2, L. Goulston3, D. Hunter1, N. Arden1,4 • 1Inst. of Bone and Joint Res., Kolling Inst. of Med. Res., Northern Clinical Sch., Faculty of Med., Univ. of Sydney, NSW, Sydney, Australia, 2Ctr. for Hlth., Exercise and Sports Med., Dept. of Physiotherapy, Sch. of Hlth.Sci., Univ. of Melbourne, Victoria, Melbourne, Australia, 3MRC Lifecourse Epidemiology Unit, Southampton Gen. Hosp., Univ. of Southampton, SO16 6YD, Southampton, United Kingdom, 4The Nuffield Dept. for Orthopaedic, Rheumatology, Musculoskeletal Sci., Univ. of Oxford, Nuffield Orthopaedic Ctr., OX3 7LD, Oxford, United Kingdom

MENISCUS POSITION AND SIZE IN KNEES WITH VERSUS WITHOUT STRUCTURAL KNEE OSTEOARTHRITIS PROGRESSION - DATA FROM THE OSTEOARTHRITIS INITIATIVE

K. Sharma1,2, F. Eckstein1,3, W. Wirth1,3, K. Emmanuel1,4 • 1Paracelsus Med. Univ., Salzburg, Austria, 2Kathmandu Univ. Sch. of Med. Sci., Dhulikhel, Nepal, 3Chondrometrics, GmbH, Airing, Germany, 4Univ. Hosp. for Orthopedics & Trauma Surgery, Univ. Hosp., Salzburg, Austria

DOES RADIOGRAPHIC KNEE OA STATUS IMPACT AGE-RELATED REDUCTION OF THIGH MUSCLE SPECIFIC STRENGTH - DATA FROM THE OSTEOARTHRITIS INITIATIVE

R. Shakya1,2, J. Kemnitz1,3, W. Wirth1,3, S. Maschek1,3, R. Shrestha2, G. N. Duda4, F. Eckstein1,3 • 1Paracelsus Med. Univ., Salzburg, Austria, 2Kathmandu Univ. Sch. of Med. Sci., Dhulikhel, Nepal, 3Chondrometrics GmbH, Airing, Germany, 4Julius Wolff Inst., Charité, Berlin, Germany
**674**

PREVALENCE OF SELF-REPORTED KNEE INSTABILITY IN PATIENTS WITH MENISCAL TEARS WITH AND WITHOUT CONCOMITANT KNEE OSTEOARTHRITIS


• ¹Dept. of Sports Sci. and Clinical Biomechanics, Univ. of Southern Denmark, Odense, Denmark, ²Sch. of Behavioural and Hlth.Sci., Australian Catholic Univ., Brisbane, Australia, ³Lund Univ., Faculty of Med., Dept. of Clinical Sci. Lund, Orthopedics, Clinical Epidemiology Unit, Lund, Sweden, ⁴Clinical Epidemiology Res. and Training Unit, Boston Univ. Sch. of Med., Boston, MA, ⁵Lund Univ., Faculty of Med., Dept. of Clinical Sci. Lund, Orthopedics, Lund, Sweden, ⁶Dept. of Orthopedics and Traumatology, Odense Univ. Hosp., Odense, Denmark, ⁷Dept. of Orthopedics, Lillebaelt Hosp., Kolding, Denmark, ⁸Dept. of Orthopedics, Lillebaelt Hosp., Vejle, Denmark

**678**

PROGRESSIVE CARTILAGE DEGRADATION IN OSTEOARTHRITIS PATIENTS WAS ASSOCIATED WITH SKEWED PROPORTIONS OF MATRIX METALLOPROTEINASES AND THEIR INNATE INHIBITORS AS INVESTIGATED IN SYNOVIAL FLUID AND SYNOVIAL TISSUE

D. R. INGALE, P. G. KULKARNI, S. J. KOPPIKAR, A. ELECTRICWALA, S. D. JAGTAP, A. M. HARSULKAR

• ¹Interactive Res. Sch. for Hlth.Affairs (IRSHA), Pune, India, ²Electricwala Hosp., Pune, India

**675**

SYNOVIAL FLUID LUBRICIN INCREASES IN CANINE CRUCIATE LIGAMENT RUPTURE


**676**

INCREASED JOINT SPACE NARROWING AFTER ARTHROSCOPIC PARTIAL MENISCECTOMY: DATA FROM THE OSTEOARTHRITIS INITIATIVE


• ¹Cleveland Clinic Orthopaedics Dept., Cleveland, OH, ²Cleveland Clinic Dept. of Quantitative Sci., Cleveland, OH, ³George Washington Univ. Dept. of Orthopaedic Surgery, Washington, DC, ⁴Cleveland Clinic Fndn., Cleveland, OH, ⁵Cleveland Clinic Orthopaedic Sports Hlth., Garfield Heights, OH

**677**

ASSOCIATION BETWEEN SARCOPENIA AND OSTEOARTHRITIS-RELATED KNEE STRUCTURAL CHANGES: A SYSTEMATIC REVIEW

H. Amirthalingam, F. M. Cicuttini, Y. Wang, L. Chou, A. E. Wluka, ¹S. Hussain

• Monash Univ., Melbourne, Australia

**679**

EVALUATION OF THE MODIFIED RADIO-ULNAR LINE IN CORRELATION WITH IMAGING FEATURES OF THE DISTAL RADIO-ULNAR JOINT OSTEOARTHRITIS, USING A 4D CT EXAMINATION

D. Shakoor, N. Hafezi-Nejad, A. Haj-Mirzaian, R. Kwee, J. Shores, S. Lifchez, ¹S. Demehri

• Johns Hopkins Univ. Sch. of Med., Baltimore, MD

**680**

RELATIONSHIP BETWEEN RECOVERY OF TENDON BIOMECHANICS, GAIT AND PATIENT FUNCTION AFTER ACHILLES TENDON RUPTURE

D. Laurent, L. Walsh, A. Muaremi, F. Chaperon, H. Haber, N. Beckmann, J. Goldhahn, A. Klauser, M. Blauth, M. Schiekert

• ¹Novartis Pharma AG, Basel, Switzerland, ²Novartis Ireland Ltd, Dublin, Ireland, ³Inst. for Translational Med. at ETH, Zuerich, Switzerland, ⁴Dept. of Radiology, Med. Univ. Innsbruck, Innsbruck, Austria, ⁵Dept. of Trauma Surgery, Univ. Hosp., Innsbruck, Austria

**681**

CORRELATION OF SYNOVIAL FLUID LEPTIN WITH BODY HABITUS IN THE HEALTHY AND OSTEOARTHRITIC CANINE KNEE

S. A. KLEINE, S. Sanderson, C. George, I. Roth, R. Gogal, M. Thaliath, ¹S. C. Budsberg

• Univ. of Georgia, ATHENS, GA
682
INCREASED SEROLOGICAL LEVELS OF VITRONECTIN (AMINO ACID 381-397) AND C3F PEPTIDES IN OSTEOARTHRITIS, LUPUS AND SCLERODERMA. INTERACTION WITH TGF-Β.
D. de Seny1, C. Deroyer1, E. Charlier1, F. Ciregia1, G. Cobraiville1, M-A. Meuwis2, E. Louis2, M. Fillet2, M. Malaise1 • 1Lab. of Rheumatology, GIGA Res., Univ. of Liège, CHU Liège, Liège, Belgium, 2Lab. of Translational Gastroenterology, GIGA Res., Univ. of Liège, CHU Liège, Liège, Belgium

683
RESVERATROL-ENHANCED AUTOPHAGIC FLUX REDUCES SEVERITY OF EXPERIMENTAL RHEUMATOID ARTHRITIS

684
KNEE OSTEOARTHRITIS INDUCES ATROPHY AND NEUROMUSCULAR JUNCTION REMODELING IN THE QUADRICEPS AND TIBIALIS ANTERIOR MUSCLES OF RATS
J. E. Cunha1, G. M. Barbosa1, P. A. Castro1, T. L. Russo1, F. A. Vasilceac1, T. M. Cunha2, F. Q. Cunha2, T. F. Salvini1 • 1Federal Univ. of São Carlos, São Carlos, Brazil, 2Univ. of São Paulo, Ribeirão Preto, Brazil

685
MAPPING THE PROTEIN DISTRIBUTION IN ZONES OF THE HEALTHY HUMAN MEDIAL MENISCUS BODY
E. Folkesson1,2, A. Turkiewicz1, V. Hughes1, N. Ali1,2, J. Tjörnstrand1, P. Önnerfjord2, M. Englund1,2 • 1Lund Univ., Faculty of Med., Dept. of Clinical Sci. Lund, Orthopaedics, Clinical Epidemiology Unit, Lund, Sweden, 2Lund Univ., Faculty of Med., Dept. of Clinical Sci. Lund, Rheumatology and Molecular Skeletal Biology, Lund, Sweden

686
COMPARISON MICRORNAS EXPRESSION IN NORMAL AND RUPTURED CANINE CRUCIATE LIGAMENTS
Y. Ashraf Kharaz1, M. Peffers1, E. Comerford1,2 • 1Inst. of Ageing and Chronic Disease, Liverpool, United Kingdom, 2Small Animal Hosp., Inst. of Vet. Sci., Neston, United Kingdom

687
INFLAMMATORY RESPONSE OF A HUMAN MENISCAL IN VITRO MODEL STUDIED BY PROTEOMICS
A. Yifter-Lindgren1, V. Tillgren2, M. Englund1,4, P. Önnerfjord1 • 1Lund Univ., Faculty of Med., Dept. of Clinical Sci. Lund, Section for Rheumatology and Molecular Skeletal Biology, Lund, Sweden, 2Lund Univ., Faculty of Med., Dept. of Clinical Sci. Lund, Section for Rheumatology and Molecular Skeletal Biology, Lund, Sweden, 3Lund Univ., Faculty of Med., Dept. of Clinical Sci. Lund, Orthopaedics, Clinical Epidemiology Unit, Lund, Sweden, 4Clinical Epidemiology Res. and Training Unit, Boston Univ. Sch. of Med., Boston, MA

688
QUANTIFYING PARTICLE DISTRIBUTION IN HEALTHY AND OSTEOARTHRITIC RAT KNEE JOINTS USING FLUORESCENT IMAGING AND ELECTRON PARAMAGNETIC RESONANCE SPECTROSCOPY
B. Partain, M. Unni, J. Dobson, C. Rinaldi, K. Allen • Univ. of Florida, Gainesville, FL

689
ADIPONECTIN IS A POTENTIAL MEDIATOR OF SYNOVIAL FIBROSIS FROM EARLY TO LATE KNEE OSTEOARTHRITIS
S. A. Ali, P. Datta, M. Kapoor, R. Gandhi • Krembil Res. Inst., Toronto, ON, Canada

690
OSTEOPHYTES FORMATION PROCESSES IN EARLY STAGE KNEE OSTEOARTHRITIS IN HUMAN
H. Kaneko1, A. Arepati1, H. Arita1, M. Momoea1, Y. Negishi1, T. Aoki1,2, L. Liu1, S. Hada1, J. Shiozawa1, Y. Okada1, K. Kaneko1,2, M. Ishijima1,2 • 1Dept. of Med. for Orthopaedics and Motor Organ, Juntendo Univ. Graduate Sch. of Medicine, Tokyo, Japan, 2Dept. of Pathophysiology for Locomotive and Neoplastic Diseases, Juntendo Univ. Graduate Sch. of Med., Tokyo, Japan
691
STRUCTURAL AND MOLECULAR CHANGES IN THE MENISCI OF EXPERIMENTAL MODELS OF POST-TRAUMATIC OSTEOARTHRITIS

C. Blaker1,2, H. Platzer1,3, C. Shu1, E. Clarke4, C. Little1
• 1Raymond Purves Bone and Joint Res. Lab., Inst. of Bone and Joint Res., Kolling Inst., Northern Clinical Sch., Faculty of Med. and Hlth., Northern Sydney Local Hlth.District, Univ. of Sydney, St. Leonards, Australia, 2Murray Maxwell Biomechanics Lab., Inst. of Bone and Joint Res., Kolling Inst., Northern Clinical Sch., Faculty of Med. and Hlth., Northern Sydney Local Hlth.District, Univ. of Sydney, St. Leonards, Australia, 3Dept. of Orthopaedics, Trauma Surgery and Paraplegiology, Heidelberg Univ. Hosp., Heidelberg, Germany, 4Murray Maxwell Biomechanics Lab., Inst. of Bone and Joint Res., Kolling Inst., Northern Clinical Sch., Faculty of Med. and Hlth., Northern Sydney Local Hlth.District, Univ. of Sydney, St. Leonards, Australia

692
SYNOVIAL FLUID MICRORHEOLOGY TO IDENTIFY POTENTIAL CANDIDATES FOR VISCOSUPPLEMENTATION

R. Yin, J. Su, M. Colville, M. Paszek, H. Reesink • Cornell Univ., Ithaca, NY

THERAPY – BIOLOGIC: CLINICAL TRIAL

693
PLATELET-RICH PLASMA AND PLASMA FOR TREATMENT OF KNEE OSTEOARTHRITIS: A DOUBLE-BLIND PLACEBO-CONTROLLED RANDOMIZED CLINICAL TRIAL.

M. DÓRIO1, R. M. PEREIRA1, R. M. OLIVEIRA2, A. G. LUZ3, R. FULLER1 • 1Univ. of São Paulo, São Paulo, Brazil, 2Laboratório RDO, São Paulo, Brazil

694
OBJECTIVE AND SUBJECTIVE EVALUATION OF PLASMA RICH IN GROWTH FACTORS THERAPY FOR THE TREATMENT OF OSTEOARTHRITIS IN DOGS

B. Cuervo1, D. Chicharro1, A. Del Romero1, E. Damia1, J. Carrillo1, J. Sopena1, P. Peláez1, L. Miguel1, J. Vilar2, M. Rubio1 • 1Univ. UCH-CEU, CEU Universities • Garcia Cugat Fnd., Valencia, Spain, 2Univ. de Las Palmas de Gran Canaria Trasmontaña • Garcia Cugat Fnd., Las palmas de gran Canaria, Spain

695
NOVEL NERVE GROWTH FACTOR-TARGETING THERANOSTICS FOR OSTEOARTHRITIS PAIN MANAGEMENT

M. Au, J. Shi, M. Yang, C. Wen • The Hong Kong Polytechnic Univ., Hong Kong, Hong Kong

696
IL37 AMELIORATES EXPERIMENTAL MURINE OSTEOARTHRITIS

A. P. van Caam, E. W. van Geffen, J. Aarts, E. N. Vitters, E. N. Blaney Davidson, P. M. van der Kraan • Radboud Univ. Nijmegen Med. Ctr., Nijmegen, Netherlands

THERAPY – NON-PHARMACOLOGIC: CLINICAL TRIAL

697
NO NEW TRIALS ON EXERCISE ARE NEEDED IN KNEE OSTEOARTHRITIS


698
RANDOMIZED CLINICAL TRIAL OF PAIN COPING SKILLS TRAINING FOR PATIENTS WHO CATASTROPHIZE ABOUT PAIN PRIOR TO KNEE ARTHROPLASTY

D. L. Riddle1, F. Keefe2, D. Ang3, J. Slover4, M. Jensen5, M. Bair4, K. Kroenke5, R. Perera1, S. Reed2, D. McKee2, L. Dumenci8 • 1Virginia Commonwealth Univ., Richmond, VA, 2Duke Univ., Durham, NC, 3Wake Forest Univ., Winston-Salem, NC, 4New York Univ., New York, NY, 5Univ. of Washington, Seattle, WA, 6Univ. of Indiana, Indianapolis, IN, 7Indiana Univ., Indianapolis, IN, 8Temple Univ., Philadelphia, PA
699 EFFECTIVE CONSERVATIVE CARE TARGETING MECHANICAL MARKERS AS RISK FACTORS FOR KNEE OSTEOARTHRITIS PROGRESSION: A CLUSTER RANDOMIZED CONTROLLED TRIAL
A. CAGNIN1,2, M. CHOIINIÈRE1,3, N. J BUREAU1,3, M. DURAND1,3, N. MEZGHANI1,2, N. GAUDREAULT1,3, N. HAGEMEISTER1,2 • 1Res. Ctr. of the Ctr. Hosp.ier de l’Université de Montréal, Montreal, QC, Canada, 2Laboratoire imagerie et orthopédie de l’École de technologie supérieure, Montreal, QC, Canada, 3Faculty of Med., Université de Montréal, Montreal, QC, Canada

700 ISOMETRIC CONTRACTION OF THE QUADRICEPS REDUCES THE KNEE INJECTION PAIN VIA THE SUPEROLATERAL APPROACH
M. Wada1, Y. Inagaki2, T. Fujii3, T. Nagano4, Y. Tanaka2 • 1Wada Orthopaedic Clinic, Osaka, Japan, 2NaraMed. Univ., Nara, Japan, 3Kashiba Asahigaoka Hosp., Nara, Japan, 4Nagano Orthopaedic Clinic, Nara, Japan

701 EFFECTS OF ACTIVITY MODIFICATION IN OLDER POPULATION HAVING OSTEOARTHRITIS OF KNEE: A RANDOMIZED CONTROLLED TRIAL
M. ISLAM • Sir Salimullah Med. Coll., Dhaka, Dhaka, Bangladesh

702 THE ROLE OF FUNCTIONAL ORTHOSIS IN PATELLOFEMORAL OSTEOARTHRITIS: A CONTROLLED RANDOMIZED CLINICAL TRIAL
G. P. OCAMPOS, Sr., M. U. DE REZENDE, G. J. YAMAMOTO, Sr., M. M. LUZO, F. E. DE FARIAS, C. A. DA SILVA • IOT-HC-FMUSP, SAO PAULO, Brazil

703 FOOT ORTHOSES AND FOOTWEAR IN INDIVIDUALS WITH PATELLOFEMORAL OSTEOARTHRITIS: A PILOT RANDOMISED TRIAL
N. Wyndow1, K. M. Crossley1, B. Vicenzino2, K. Tucker2, N. J. Collins2 • 1Latrobe Univ., Melbourne, Australia, 2The Univ. of Queensland, Brisbane, Australia

704 CLINICAL EFFECTIVENESS OF ENHANCED EXERCISE THERAPY FOR ADULTS WITH KNEE OSTEOARTHRITIS. 3 YEAR FOLLOW-UP A RANDOMISED CONTROLLED TRIAL (THE BEEP TRIAL)
N. E. Foster1,2, E. L. Healey1, E. Nicholls1,2, M. A. Holden1, S. Tooth3, E. M. Hay1 • 1Res. Inst. for Primary Care and Hlth.Sci., Keele Univ., Newcastle-under-Lyme, United Kingdom, 2Keele Clinical Trials Unit, Keele Univ., Newcastle-under-Lyme, United Kingdom

705 IDENTIFYING SUBGROUPS OF AFRICAN AMERICAN PATIENTS WITH DIFFERENTIAL IMPROVEMENT FOLLOWING A PAIN COPING SKILLS TRAINING PROGRAM FOR OSTEOARTHRITIS
K. D. Allen1,2, L. Arbeeva1, L. Campbell1, C. Cené1, F. J. Keefe4, E. Oddone1, T. Somers4, C. Coffman4,2 • 1Univ. of North Carolina, Chapel Hill, NC, 2Durham VA Hlth.care System, Durham, NC, 3East Carolina Univ., Greenville, NC, 4Duke Univ., Durham, NC

706 RESPONDERS TO EXERCISE THERAPY IN PATIENTS WITH OSTEOARTHRITIS OF THE HIP: A SYSTEMATIC REVIEW AND META-ANALYSIS
C. H. Teirlinck, Jr.1, A. P. Verhagen1, E. A. Reijneveld-van de Vendel1, J. Runhaar1, M. van Middelkoop1, L. Hermens2, I. B. de Groot2, S. M. Biemer-Zeinstra1 • 1Erasmus MC, Rotterdam, Netherlands, 2Natl. Hlth.Care Inst., Diemen, Netherlands

707 CLINICAL-LIKE CRYOTHERAPY IMPROVES GAIT FUNCTION AND REDUCES SYNOVIAL INFLAMMATION IN RATS WITH KNEE OSTEOARTHRITIS
G. M. Barbosa1, J. E. Cunha1, P. A. Castro1, T. M. Cunha2, F. F. Oliveira3, F. Q. Cunha2, F. S. Ramalho2, T. F. Salvini1 • 1Federal Univ. of São Carlos, São Carlos, Brazil, 2Univ. of Sao Paulo, Ribeirão Preto, Brazil

708 EFFECTS OF SKIN COOLING ON INTRA-ARTICULAR KNEE TEMPERATURE IN HEALTHY SUBJECTS
R. M. Stevens1, J. N. Campbell1, K. Guedes1, N. Mistry1, D. X. Lascelles1, D. Ball3 • 1Ctrxion Therapeutics Inc., Boston, MA, 2MAC Clinical Res., Manchester, United Kingdom
POSTER PRESENTATIONS

THERAPY – NON-PHARMACOLOGIC: OBSERVATIONAL

709
IMPACT OF PRIOR KNEE SURGERY ON REDUCTION IN KNEE PAIN FOLLOWING EDUCATION AND SUPERVISED EXERCISE THERAPY: ANALYSIS OF 13,120 PATIENTS WITH KNEE OSTEOARTHRITIS
K. Pihl1, S. T. Skou1,2, D. T. Grønne1, E. M. Roos3 • 1Dept. of Sports Sci. and Clinical Biomechanics, Univ. of Southern Denmark, Odense, Denmark, 2Dept. of Physiotherapy and Occupational Therapy, Næstved-Slægels-Ringsted Hosp., Slagelse, Denmark

710
ASSOCIATION BETWEEN WEIGHT LOSS AND SPONTANEOUS CHANGES IN PHYSICAL INACTIVITY IN OVERWEIGHT/OBSESE INDIVIDUALS WITH KNEE OSTEOARTHRITIS: AN 8-WEEK COHORT STUDY
C. Bartholdy1,2, R. Christensen1,3, L. Kristensen1, H. Gudbergesen1, H. Bliddal1, A. Overgaard1, M. U. Rasmussen1, M. Henriksen1,2 • 1The Parker Inst., Copenhagen, Denmark, 2Dept. of Physical and occupational therapy, Copenhagen Univ. Hosp. Bispebjerg and Frederiksberg, Copenhagen, Denmark, 3Professor of Biostatistics and Clinical Epidemiology: Dept. of Rheumatology, Odense Univ. Hosp., Odense, Denmark

711
CHANGES IN PHYSICAL INACTIVITY DURING SUPERVISED EDUCATIONAL AND EXERCISE THERAPY IN PATIENTS WITH KNEE OSTEOARTHRITIS: A PROSPECTIVE COHORT STUDY
C. Bartholdy1,2, S. T. Skou1,4, H. Bliddal1, M. Henriksen1,2 • 1The Parker Inst., Copenhagen, Denmark, 2Dept. of Physical and occupational therapy, Copenhagen Univ. Hosp. Bispebjerg and Frederiksberg, Copenhagen, Denmark, 3Res. Unit for Musculoskeletal Function and Physiotherapy, Dept. of Sports Sci. and Clinical Biomechanics, Univ. of Southern Denmark, Odense, Denmark, 4Dept. of Physiotherapy and Occupational Therapy, Næstved-Slægels-Ringsted Hosp., Slagelse, Denmark

712
FACTORS ASSOCIATED WITH PATIENTS’ WILLINGNESS TO CONSIDER JOINT SURGERY AFTER COMPLETION OF A DIGITAL OSTEOARTHRITIS TREATMENT PROGRAM
A. Cronström, H. Nero, C. Sjödahl Hammarlund, L. E. Dahlberg • Lund Univ., Lund, Sweden

713
THE ASSOCIATION BETWEEN COMORBIDITY AND PHYSICAL ACTIVITY LEVELS IN PEOPLE WITH OSTEOARTHRITIS: SECONDARY ANALYSIS FROM TWO RANDOMISED CONTROLLED TRIALS.
S. Mckevitt, E. L. Healey, C. Jinks, T. Rathod-Mistry, J. G. Quicke • Keele Univ., Keele, United Kingdom

714
DO INDIVIDUALS WITH KNEE OSTEOARTHRITIS WEAR APPROPRIATE FOOTWEAR? A CROSS SECTIONAL ANALYSIS OF COMMON FOOTWEAR STYLES AND FEATURES
P. K. Campbell1, K. L. Paterson1, B. R. Metcalf1, K. L. Bennell1, T. V. Wrigley1, J. Kazsa2, R. S. Hinman1 • 1The Univ. of Melbourne, Carlton, Australia, 2Monash Univ., Melbourne, Australia

715
COMPARISON OF EDUCATION, HOME EXERCISE AND SUPERVISED EXERCISE IN PATIENTS WITH KNEE AND HIP OSTEOARTHRITIS: DATA FROM THE BOA REGISTRY
A. Dell’Isola, T. Jönsson, J. Ranstam, E. E. Hansson, L. Dahlberg • Lund Univ., Lund, Sweden

716
DIGITAL OSTEOARTHRITIS TREATMENT - EFFECTS ON PAIN AFTER 6 MONTHS OF ADHERENCE

717
BETTER MANAGEMENT OF PATIENTS WITH OSTEOARTHRITIS - EVIDENCE BASED EDUCATION AND EXERCISE DELIVERED NATIONWIDE IN SWEDEN
T. S. Jönsson, L. E. Dahlberg, A. Dell’Isola, E. Ekvall Hansson • Univ. of Lund, Lund, Sweden
THE FEASIBILITY AND EFFICACY OF A 12-WEEK BODY RE-COMPOSITION AND NEUROMUSCULAR EXERCISE PROGRAM IN PATIENTS WITH KNEE OSTEOARTHRITIS
C. A. Primeau1,2, T. B. Birmingham1,2, G. Thomas1, T. Olver1, A. L. Lorbergs1,2, R. M. Moyer1,2, K. M. Leitch1,2, J. Giffin1,2,1, Wolf Orthopaedic Biomechanics Lab., Western Univ., London, ON, Canada, 2Bone and Joint Inst., Western Univ., London, ON, Canada, 3Exercise Nutrition Res. Lab., Western Univ., London, ON, Canada, 4Dept. of Vet. BioMed. Sci., Univ. of Saskatchewan, Saskatoon, SK, Canada, 5Canadian Frailty Network, Kingston, ON, Canada, 6Sch. of Physiotherapy, Faculty of Hlth., Dalhousie Univ., Halifax, NS, Canada, 7Fowler Kennedy Sport Med. Clinic, Western Univ., London, ON, Canada

SOCIOECONOMIC INEQUALITIES IN THE PROVISION OF OSTEOARTHRITIS CARE - RESULTS FROM A NATIONAL SELF-MANAGEMENT PROGRAM
K. Gustafsson1,2, K. Kvist1,2, M. Eriksson1,2, L. Dahlberg2, O. Rolfson2, 1Div. of Physiotherapy, Dept. of Med. and Hlth.Sci., Linköping Univ., Linköping, Sweden, 2Rehabilitation Ctr., Ryhov County Hosp., Jönköping, Sweden, 3Karolinska Inst.t, Dept. of Neurobiology, Care Sci. and Society, Div. of Physiotherapy, Stockholm, Sweden, 4Univ. of Linköping, Dept. of Med. and Hlth. Sci., Linköping, Sweden, 5Futurum Region Jönköping County, Jönköping, Sweden, 6Lund Univ., Dept. of Clinical Sci., Orthopedics, Skåne Univ. Hosp., Lund, Sweden, 7Univ. of Gothenburg, Inst. of Clinical Sci., Dept. of Orthopaedics, Sahlgrenska Academy, Gothenburg, Sweden

THERAPY – PHARMACOLOGIC: CLINICAL TRIAL

SYMPTOMATIC EFFICACY OF ORAL CHONDROITIN SULFATE IN KNEE OSTEOARTHRITIS: A SYSTEMATIC REVIEW AND META-ANALYSES OF RANDOMIZED, PLACEBO-CONTROLLED TRIALS
G. HONVO, O. BRUYERE, A. GEERINCK, J-Y. REGINSTER • Univ. of Liege, Liege, Belgium

SAFETY OF ORAL CHONDROITIN SULFATE IN THE MANAGEMENT OF KNEE OSTEOARTHRITIS: RESULTS OF A NEW META-ANALYSIS OF RANDOMIZED, PLACEBO-CONTROLLED TRIALS
G. HONVO, J-Y. REGINSTER, A. GEERINCK, O. BRUYERE • Univ. of Liege, Liege, Belgium

INTRA-ARTICULAR CNTX-4975 FOR OSTEOARTHRITIS KNEE PAIN: SUBGROUP AND POST HOC ANALYSES OF A RANDOMIZED PHASE 2 STUDY
R. M. Stevens1, J. N. Campbell1, K. Guedes2, V. H. Smith2, P. D. Hanson1, J. Ervin3, P. G. Conaghan4, 1Ctr. for Pharmaceutical Res., Kansas City, MO, 2Premier Res., Durham, NC, 3The Ctr. for Pharmaceutical Res., Kansas City, MO, 4Univ. of Leeds, West Yorkshire, United Kingdom

EFFICACY OF DULOXETINE FOR MULTI-SITE PAIN IN PATIENTS WITH KNEE PAIN DUE TO OSTEOARTHRITIS: AN EXPLORATORY POST HOC ANALYSIS OF A JAPANESE PHASE 3 RANDOMIZED STUDY

BIO-OPTIMIZED CURCUMA LONGA EXTRACT IS EFFICIENT ON KNEE OSTEOARTHRITIS PAIN: A DOBLE-BLIND MULTICENTER RANDOMIZED PLACEBO CONTROLLED STUDY
Y. Henrotin1, M. Malaise, Sr.1, R. Wittoek2, k. de Vlam3, J-P. Brasseur4, F. Luyten2, Q. Jiangang2, Y. Berghe2, R. Uhoda3, J. Bentin5, T. De Vroey6, L. Erpicum7, 1Univ. of Liege, Liège, Belgium, 2UZ Gent, Gent, Belgium, 3ZNA Jan Palfijn, Merksem, Belgium, 4CHU UCL Namur - Site de Godinne, Yvoir, Belgium, 5Univ. Hosp. Leuven, Leuven, Belgium, 6Hôpitaux Iris Sud, Brussels, Belgium, 7Algemeen Stedelijk Ziekenhuis, Aalst, Belgium, 8Ctr. Hosp.ier du Bois de l’Abbaye, Seraing, Belgium, 9CHU Brugmann, Brussels, Belgium, 10UZA, Antwerpen, Belgium, 11Private practice, Anthisne, Belgium, 12Tilman SA, Baillonville, Belgium
725
THE ZODIAK TRIAL: PROTOCOL OF A DOUBLE-BLIND, PLACEBO-CONTROLLED, TWO-YEAR CLINICAL TRIAL OF ZOLEDRONIC ACID AS A DISEASE-MODIFYING DRUG IN KNEE OSTEOARTHRITIS WITH BONE MARROW LESIONS
W. E. van Spil1, W. P. Gielis1, H. H. Weijnans1, R. J. Custers1, J. E. Bekkers2, K. A. Schrijvers-Te Brake1, F. P. Lafeber1 • 1Univ. Med. Ctr. Utrecht, Utrecht, Netherlands, 2Diakonessenhuis, Utrecht, Netherlands

726
SAFETY AND EFFICACY OF SIX MONTHS’ OPEN LABEL EXTENSION POST-RCT USING THE NOVEL CATHEPSIN K INHIBITOR MIV-711 IN PATIENTS WITH KNEE OSTEOARTHRITIS

727
THE IMPACT OF THE ADMINISTRATION OF PRP AND DISEASE-MODIFYING THERAPY ON THE SYNOVIAL ENVIRONMENT, GENERAL HEALTH AND TREATMENT EFFICACY IN PATIENTS WITH OSTEOARTHRITIS OF THE KNEE
K. Shirokova, V. Gorokhkova, L. Shirokova • Yaroslavl State Med. Univ., Yaroslavl, Russian Federation

728
EFFICACY AND SAFETY FROM A PHASE 2B TRIAL OF SM04690, A NOVEL, INTRA-ARTICULAR, WNT PATHWAY INHIBITOR FOR THE TREATMENT OF OSTEOARTHRITIS OF THE KNEE

729
THE EFFECT OF GLUCOSAMINE AND CHONDROITIN SULFATE ON MRI-BASED OSTEOARTHRITIS FEATURES IN THE PATELLOFEMORAL JOINT IN PEOPLE WITH KNEE OSTEOARTHRITIS: A RANDOMISED PLACEBO-CONTROLLED TRIAL OF SINGLE AND COMBINATION REGIMENS
S. Kobayashi1, E. Pappas, M. Fransen, K. Refshauge, M. Simic • Univ. of Sydney, Sydney, Australia

730
HIGH MOLECULAR WEIGHT INTRAARTICULAR HYALURONIC ACID FOR THE TREATMENT OF KNEE OSTEOARTHRITIS: NETWORK META-ANALYSIS
C. Hummer1, F. Angst2, E. Schemitsch3, C. Whittington4, C. Maniit5, W. Ngai• • 1Premier Orthopaedics and Sports Med., Media, PA, 2Rehabilitation Clinic (‘RehaClinic’), Bad Zurzach, Switzerland, 3London Hlth.Sci. Ctr., London, ON, Canada, 4Doctor Evidence, Santa Monica, CA, 5Intl. Ctr. for Professional Dev. in Hlth.and Med., Dollard-des Ormeaux, QC, Canada, 6Sanofi, Bridgewater, NJ

731
SAFETY AND SYSTEMIC EXPOSURE OF TRIAMCINOLONE ACETONIDE FOLLOWING INTRAARTICULAR INJECTION OF TRIAMCINOLONE ACETONIDE EXTENDED-RELEASE OR STANDARD TRIAMCINOLONE IN PATIENTS WITH HIP OSTEOARTHRITIS

732
REPEAT ADMINISTRATION OF TRIAMCINOLONE ACETONIDE EXTENDED-RELEASE AFFORDS CONSISTENT, CLINICALLY RELEVANT IMPROVEMENTS IN PAIN: RESULTS FROM A PHASE 3B, SINGLE-ARM, OPEN-LABEL STUDY
733
PROCEDURE PAIN ASSOCIATED WITH INTRA-ARTICULAR INJECTION OF CNTX-4975 FOR MANAGEMENT OF PAINFUL OSTEOARTHRITIS OF THE KNEE VARIES WITH COOLING
R. M. Stevens1, J. N. Campbell1, K. Guedes1, N. Mistry1, D. X. Lascelles1, D. Ball2, Ctx.xion Therapeutics Inc., Boston, MA, MAC Clinical Res., Manchester, United Kingdom

734
BILATERAL INTRA-ARTICULAR INJECTION OF CNTX-4975 FOR MANAGEMENT OF PAINFUL OSTEOARTHRITIS OF THE KNEE: RESULTS AT 6 WEEKS FROM AN OPEN-LABEL TRIAL
R. M. Stevens1, J. N. Campbell1, K. Guedes1, N. Mistry1, D. X. Lascelles1, D. Ball2, Ctx.xion Therapeutics Inc., Boston, MA, MAC Clinical Res., Manchester, United Kingdom

THERAPY – PHARMACOLOGIC: OBSERVATIONAL
735
RECOMMENDATIONS OF THE FRENCH SOCIETY OF RHEUMATOLOGY FOR THE PHARMACOLOGICAL MANAGEMENT OF KNEE OSTEOARTHRITIS

736
WHICH KNEE OA COMPARTMENT HAS BETTER RESPONSE TO VISCOSUPPLEMENTATION?
M. Zhang, C. Kam, B. Tan, SingHlth., Singapore, Singapore

737
COMPARISON OF THE EFFECT OF INTRAARTICULAR HYALURONIC ACID AND EFFECT OF NAPROXEN SODIUM IN PATIENTS WITH OSTEOARTHRITIS OF THE KNEE.
M. T. KHAN, RAJSHAHI Med. Coll. Hosp., RAJSHAHI, Rajshahi, Bangladesh

738
DISCOVERY OF POTENTIAL THERAPEUTICS FOR POST-TRAUMATIC OSTEOARTHRITIS USING A HIGH THROUGHPUT MECHANICAL INJURY PLATFORM
J. Cresta1,2, F. Yousefi1,2, E. Rabut1,2, B. Mohanraj1,2, R. L. Mauck1,2, G. R. Dodge1,2, The Univ. of Pennsylvania Orthopaedic Surgery, Philadelphia, PA, Translational Musculoskeletal Res. Ctr., Crescenz VA Med. Ctr., Philadelphia, PA

739
DO CORTICOSTEROIDS OR HYALURONIC ACID INTRA-ARTICULAR INJECTIONS IMPACT THE RISK OF TOTAL KNEE REPLACEMENT? REAL-LIFE DATA FROM THE KHOALA COHORT
A. Latourte, Jr.1, A-C. Rat, Sr.2, W. Ngueyvon Sime, Jr.2, A. Omorou, Sr.2, F. Eymard, Sr.1, J. Sellam, Sr.1, C. Roux, Sr.1, F. Guillemin, Sr.2, P. Richette, Sr.1, Hôpital Lariboisière, Paris, France, CHRU Nancy, Nancy, France, Hôpital Henri Mondor, Créteil, France, Hôpital Saint Antoine, Paris, France, CHU Pasteur 2, Nice, France

740
VITAMIN K INHIBITOR USAGE IS ASSOCIATED WITH INCREASED INCIDENCE AND PROGRESSION OF KNEE AND HIP OSTEOARTHRITIS

741
PREPARATION OF A POLYMERIC INTRA-ARTICULAR PPAR DELTA ANTAGONIST DELIVERY SYSTEM
I. J. Villamagna, A. Borecki, D. Bryce, E. R. Gillies, F. Beier, Univ. of Western Ontario, London, ON, Canada
742
STATIN AND NODAL KNEE OSTEOARTHRITIS: A LONGITUDINAL PROPENSITY SCORE-MATCHED STUDY ON THE KNEE OSTEOARTHRITIS FROM THE OSTEOARTHRITIS INITIATIVE (OAI) COHORT
1Johns Hopkins Univ. Sch. of Med., Baltimore, MD, 2Tehran Univ. of Med. Sci., Tehran, Iran, Islamic Republic of, 3Boston Univ. Sch. of Med., Boston, MA, 4Univ. of Erlangen-Nuremberg, Erlangen, Germany

743
CLINICAL OUTCOMES OF HUMAN UMBILICAL CORD BLOOD DERIVED MESENCHYMAL STEM CELLS APPLICATION IN KNEE OSTEOARTHRITIS PATIENTS
J-Y. Pak • Sun’s Orthopaedic Clinic, Seoul, Korea, Republic of

744
MESENCHYMAL STEM CELLS: WHY INTRA-ARTICULAR? A SYSTEMATIC REVIEW OF ANIMAL STUDIES AND CLINICAL EVIDENCE ON MSC FOR KNEE OSTEOARTHRITIS
D. Xing, J. Kwong, B. Ma, Y. Chen, J. Lin • 1Peking Univ. People’s Hosp., Peking Univ., Beijing, China, 2the Chinese Univ. of Hong Kong, Hong Kong, Hong Kong, 3Lanzhou Univ., Lanzhou, China

745
EFFECT OF MESENCHYMAL STEM CELL INJECTIONS ON STRUCTURAL OUTCOMES OF THE KNEE - A SYSTEMATIC REVIEW
J. Gong, F. Cicuttini, S. Hussain, J. Fairley, R. Vashishtha, L. Chou, A. Wluka, Y. Wang • 1Monash Univ., Melbourne, Australia, 2La Trobe Univ., Melbourne, Australia

746
PERIPHERAL BLOOD DERIVED STEM CELLS IN OA KNEE AT LOW RESOURCE SETTING: A PHASE II RCT

THERAPY – STEM CELL: CLINICAL TRIAL

743
CLINICAL OUTCOMES OF HUMAN UMBILICAL CORD BLOOD DERIVED MESENCHYMAL STEM CELLS APPLICATION IN KNEE OSTEOARTHRITIS PATIENTS
J-Y. Pak • Sun’s Orthopaedic Clinic, Seoul, Korea, Republic of

THERAPY – STEM CELL: OBSERVATIONAL

747
HUMAN UMBILICAL ORIGIN STEM CELLS MITIGATE OA PROGRESSION IN A LARGE ANIMAL MODEL OF OSTEOARTHRITIS
M. Hurtig, S. Jeong, C. Flynn, J. Ha, K. Lamers • 1Univ. of Guelph, Guelph, ON, Canada, 2Medipost Co., Ltd., Seoul, Korea, Republic of

THERAPY – SURGERY: OBSERVATIONAL

748
EXAMINATION OF THE AMERICAN ACADEMY OF ORTHOPAEDIC SURGEONS SYSTEM FOR CLASSIFYING APPROPRIATENESS OF HIP ARTHROPLASTY
D. L. Riddle, R. Perera • Virginia Commonwealth Univ., Richmond, VA

749
IN-HOSPITAL MORTALITY AFTER KNEE REPLACEMENT IN CHINA: ANALYSIS OF A LARGE NATIONAL DATABASE

750
TKA POSTOPERATIVE VARUS ALIGNMENT DOES NOT INCREASE THE RISK OF LATERAL LIGAMENT LAXITY
T. Maeda, M. Kubo, K. Kumagai, H. Fujikawa, S. Araki, K. Uenaka, N. Okumura, T. Mimura, Y. Matsusue, S. Imai • Shiga Univ. of Med. Sci., Otsu, Shiga, Japan
751
KNEE JOINT DISTRACTION AS STANDARD OF CARE TREATMENT FOR KNEE OSTEOARTHRITIS: A COMPARISON WITH CLINICAL TRIAL PATIENTS

752
PREOPERATIVE OPIOID USE AND SHORT-TERM SAFETY EVENTS FOLLOWING TOTAL KNEE REPLACEMENT SURGERY
S. C. Kim1, P. D. Franklin2, Y. Jin1, Y. C. Lee3, J. Lii1, J. M. Franklin1, J. N. Katz1, R. J. Desai1 • 1Brigham and Women’s Hosp., Boston, MA, 2Univ. of Massachusetts, Worcester, MA, 3Northwestern Univ., Chicago, IL
2020 OARSI
World Congress on Osteoarthritis

April 30–May 3, 2020
MESSE WIEN EXHIBITION & CONGRESS CENTER
Vienna, Austria

Save THE Date!