relationship between a potential treatment target and PTOA have been considered. A scoping review of existing investigations, identified through an electronic database and manual search, has revealed that individuals who sustained a joint injury (primarily knee) are more likely to be overweight or obese by BMI, exhibit greater adiposity (total percent fat mass and abdominal fat), be less physically active, and have a side-to-side functional balance and strength deficits compared to uninjured controls. Further, there is evidence that delaying surgical interventions (i.e., Anterior Cruciate Ligament reconstruction and menisectomy) in lieu of exercise therapy, completeness of rehabilitation prior to return to sport, modifications in sport and recreation participation, nutritional counselling and approaches aimed at establishing realistic expectations and identity evolution may have a role to play in secondary prevention of PTOA after knee injury. The presentation will conclude with considerations for designing studies aimed at evaluating the development, implementation and evaluation of interventions aimed at secondary prevention of PTOA following joint injury.

I-23
YEAR IN REVIEW – REHABILITATION & OUTCOMES

N.J. Collins †, H.F. Hart ‡, K.A.G. Mills §, K.M. Crossley ‡. † *The University of Queensland, Brisbane, Australia;* ‡ *La Trobe University, Melbourne, Australia;* § *Macquarie University, Sydney, Australia*

Purpose: To systematically review the literature on rehabilitation interventions for osteoarthritis, published between April 2017 and March 2018.
Methods: A comprehensive search strategy will be used to search key electronic databases (e.g., PubMed, EMBASE, Cinahl, Web of Science, Physiotherapy Evidence Database [PEDro], Cochrane). Search terms will include osteoarthritis, rehabilitation, systematic review, and randomised controlled trial. Papers will be included if they fulfil the following criteria: (i) randomised controlled trial (RCT), or systematic review of RCTs; (ii) human participants with a diagnosis of osteoarthritis in any joint (symptoms ± imaging features); (iii) evaluation of a non-surgical, non-pharmacological rehabilitation intervention for osteoarthritis (e.g., exercise, physiotherapy, manual therapy, footwear or shoe inserts, bracing, taping, acupuncture, combined interventions); and (iv) published in English. Methodological quality will be evaluated by two independent reviewers using the Assessment of Multiple Systematic Reviews (AMSTAR) tool for systematic reviews and meta-analyses, and PEDro rating scale for RCTs. A third reviewer will resolve discrepancies if required.
Results and conclusions: A summary of key findings will be presented. This will be based on methodological quality and their potential influence on clinical management of osteoarthritis and future rehabilitation research directions.

I-24
YEAR IN REVIEW – OA BIOLOGY

J. Sherwood. *Institute of Musculoskeletal Medicine, University Hospital Muenster, Muenster, Germany*

Purpose: To present and review research highlights from recent literature published on the biology of osteoarthritis.
Methods: A PubMed search was used to select articles published since the 2017 OARSI congress, with a research focus on the biology of osteoarthritis.
Results: Highlighted articles and developing themes from the last year have been identified from the published literature. Emerging areas to be discussed include studies on the role of cell senescence in regeneration, the contribution of progenitor cells to skeletal repair, and the harnessing of the properties of articular cartilage itself in the therapeutic modulation of signalling pathways.
Conclusions: Significant developments and their implications for further research and potential therapeutic progress are discussed.

I-25
YEAR IN REVIEW – OA CLINICAL

L.A. Mandl †‡. † *Hospital for Special Surgery, New York, NY, USA;* ‡ *Weill Cornell Medicine, New York, NY, USA*

Purpose: The purpose of this review is to highlight the most important clinical and epidemiologicl research studies in osteoarthritis published from May 2017 through April 2018.
Methods: Articles were identified through both systematic literature review and expert consensus.

I-26
YEAR IN REVIEW – GENETICS, GENOMICS & EPIGENETICS

M.A. Jeffries †‡. † *University of Oklahoma, Oklahoma, OK, USA;* ‡ *Oklahoma Medicine Research Foundation, Oklahoma, OK, USA*

Purpose: To summarize important findings from research publications in the osteoarthritis literature related to genetics, genomics, and epigenetics published in the period from April 2017 until January 2018.
Methods: Articles were selected from a PubMed search using the search terms 'osteoarthritis' in combination with at least one of the following: 'genetic', 'genomic', 'epigenetic', 'DNA methylation', 'DNA hydroxymethylation', 'histone modification', 'noncoding RNA', 'miRNA', and 'lncRNA'. Non-English-language articles were excluded. Publication dates were set at 4/1/2017 – 1/15/2018 and compared to 4/1/2016 – 1/15/2017.
Results: The total number of articles on 'osteoarthritis' have dropped dramatically compared to last year (701 vs. 5046). Articles related to OA genetics, genomics, and epigenetics using the descriptors listed above have also declined by 30% (359 vs. 511). Review articles represented 19% of total publications, and have declined by 45% compared to the previous year. Articles reviewed included OA genetics (117), miRNA (60), epigenetics (25), histone modifications (15), noncoding RNA (31), miRNA (60), lncRNA (15), DNA methylation (17) and DNA hydroxymethylation (1).
Conclusions: Although there continue to be substantial and important works published in OA genetics, genomics, and epigenomics, the number of published studies continue to decline. This review will highlight selected studies of particularly high significance published during the last year.

I-27
YEAR IN REVIEW: BIOMARKERS

F. Saberi Hosnijeh. *Erasmus University Rotterdam, Rotterdam, Netherlands*

Purpose: The aim of this narrative review is to summarize important findings from biochemical markers studies relevant to osteoarthritis (OA) in the context of new discoveries and clinical and scientific need in OA.
Methods: We conducted a systematic search of electronic medical databases (Embase, Medline, Web of Science, Cochrane central, PubMed Publisher, and Google Scholar) between 01/03/2017 and 01/04/2018. The search was restricted to human, English language and full text available publications and reviews were excluded. Only papers describing protein based biomarkers measured in human body fluids (blood, urine and synovial fluid) were included.
Results: This review highlights a selection of studies based on their quality and perceived importance to the field mainly including those that (1) evaluate prognostic value of biomarkers for OA progression (i.e., biomarkers reflecting change in composition of joint tissues and biomarkers of inflammation), (2) are innovative and uncovering new candidate biomarkers, or use new approaches in biomarker discovery.
Conclusions: Key findings and implications for possible clinical utility of biochemical markers are summarized and discussed.

I-28
OSTEOARTHRITIS YEAR IN REVIEW 2017: IMAGING

M.T. Nieminen †‡. † *University of Oulu, Oulu, Finland;* ‡ *Oulu University Hospital, Oulu, Finland*

Purpose: To provide a review of the original research published in the last year on osteoarthritis imaging, covering articles with most relevance, novelty and impact to the OA research community.
Methods: The PubMed database was used to recover all relevant publications published between April 2016 and March 2017. Search words included "OA" or "osteoarthr*" used in conjunction with words "radiography", "X-ray", "MRI", "magnetic resonance", "ultrasound", "computed tomography", "computer tomography", "CT", "nuclear medicine", "scintigraphy", "SPECT", "SPET", "PET", "PET-CT" and "PET-MRI". Review articles, case studies and *in vitro* or animal studies were excluded. The