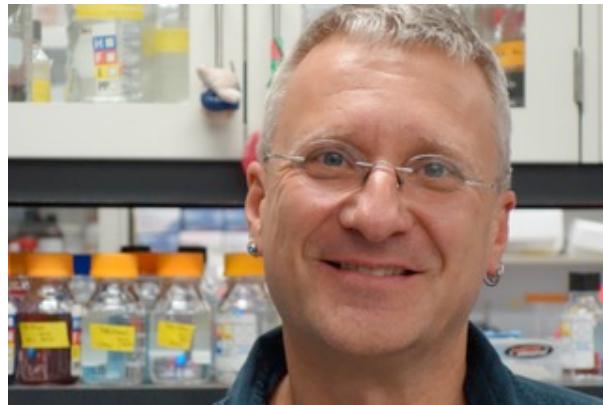


# Biologisches Kolloquium

am Dienstag, den 10.12.19 17:00 Uhr, N25 / H8



**Dr. Frank Beier**  
University of Western Ontario  
London, Ontario, Canada

Frank Beier is the Canada Research Chair in Musculoskeletal Research at the University of Western Ontario and a member of Western's Bone and Joint Institute. He is a Professor and Chair of the Department of Physiology and Pharmacology. His lab explores mechanisms controlling cartilage and joint biology, both during development and in diseases such as osteoarthritis. He was one of the first researchers to apply genome-wide gene expression studies (first microarrays, then RNA sequencing) to models of osteoarthritis. Following that he was amongst the international pioneers in using genetically modified mice for osteoarthritis research. Amongst other accomplishments, his research first implicated the EGFR pathway, several nuclear receptors, and the channel protein Pannexin 3 in this disease. Based on the identification of these pathways as mediators of osteoarthritis pathogenesis, and therefore as potential targets for therapy, several of his current projects attempt to translate these basic findings towards clinical applications.

Dr. Beier has published 127 peer-reviewed articles and gave more than 120 invited presentations. He was a member of the Board of Directors of the *Osteoarthritis Research Society International* (OARSI) and is a current member of several editorial boards, including Deputy Editor for *Osteoarthritis & Cartilage*. He was the Chair of the 2017 *Cartilage Gordon Conference*, was awarded the Basic Science Award from OARSI in 2019, and was recently induced as a *Fellow of International Orthopaedic Research* (FIOR).

## “Nuclear receptors in cartilage development and osteoarthritis”

Recent evidence demonstrates important roles of metabolism in both skeletal development and osteoarthritis. Nuclear receptors are key regulators of metabolic pathways, for example in lipid metabolism. Due to the availability of many pharmacological modulators, they are promising drug targets for osteoarthritis and other skeletal diseases. However, the roles of these receptors in the skeleton are not fully understood. Here I will present recent data from our lab examining the role of several nuclear receptors (in particular PPARdelta and RXRalpha) both during cartilage growth plate development and in mouse models of osteoarthritis.

Alle Kollegen, Studenten und Gäste sind herzlich eingeladen!