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## Small animal models of osteoarthritis: Understanding drug bio-distribution, activity, safety, therapeutic effects and mechanisms of action

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Osteoarthritis (OA) is among the most prevalent chronic human health disorders and the most common form of arthritis. It is among the leading cause of disability worldwide and with increasing life expectancy; OA is a major socioeconomic and clinical concern. OA is characterized by cartilage deterioration/damage, inflammation, synovial fibrosis, subchondral bone remodelling and osteophyte formation. Aetiology and pathogenesis underlying OA is poorly understood. Several pre-clinical animal models (large and small animal models) have been used to understand the mechanisms associated with the pathophysiology of OA disease. Further, several models serve as an essential tool to determine drug bio-distribution, activity, safety as well as the therapeutic effects at pre-clinical phase. In my talk, I will shed light on the usefulness and limitations of using small animal models of osteoarthritis in understanding (a) mechanisms of disease as well as in (b) drug delivery, bio-distribution, activity, safety and therapeutic effects.

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