

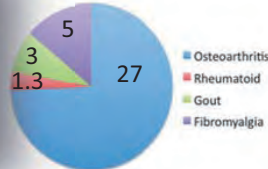
Cartilage-specific Bio-imaging Probes (Diagnostic or Drug Discovery Uses for Osteoarthritis)

Toshitaka Oohashi, Ph.D., Hiroki Kakuta, Ph.D.
Graduate School of Medicine, Dentistry and Pharmaceutical Sciences,
Okayama University

What is Osteoarthritis?

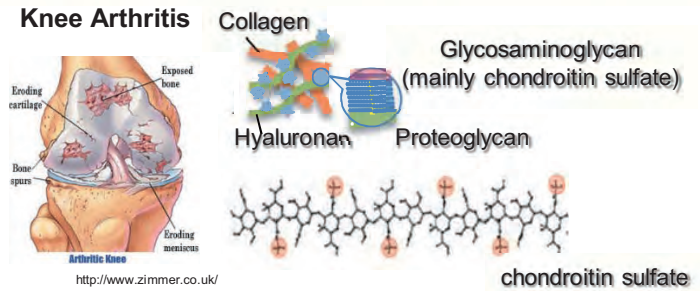


Prevalence of Arthritis (million)

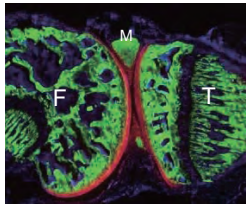
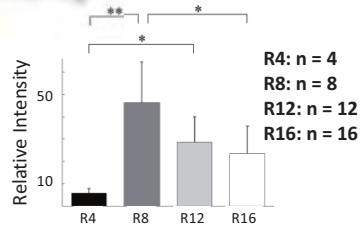
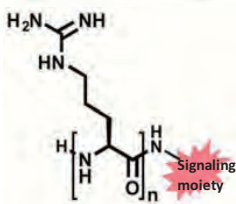


Osteoarthritis is a most common degenerative joint disease and the leading cause of chronic disability in the developed countries including US. Early diagnosis enables early treatment of pre-osteoarthritis.

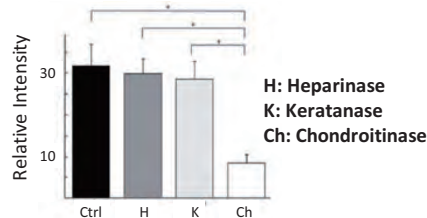
Detect an early event of cartilage loss before a point of no return.



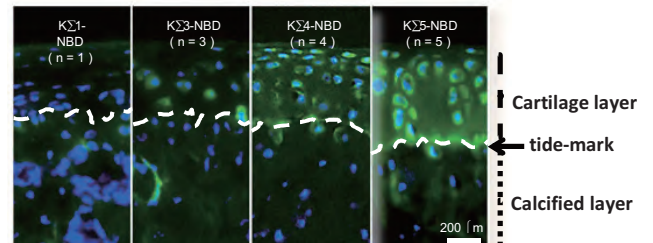
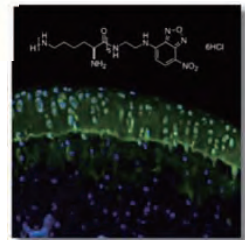
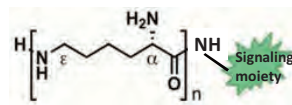
Our Probe 1 (Arginine oligomers)



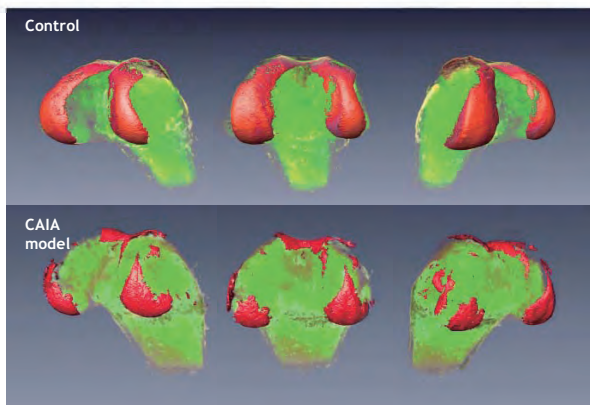
M: meniscus; F: femur; T: tibia



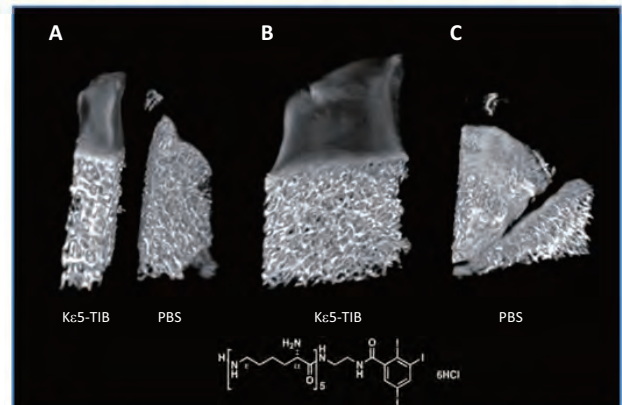
Our Probe 2 (ε-Lysin oligomers)



3D Analysis (Ex Vivo) of R8-labeled Knee Joint CT image of Kε5-TIB-labeled Porcine Cartilage



Japanese patent application No. 2008-154179.
Inagawa et al., Osteoarthritis Cartilage, 2009.



Japanese patent application No. 2012-055511.

These projects are supported by Grant-in-Aid for Scientific Research (KAKENHI), and the Subsidy to Promote Science and Technology in the Prefectures where Nuclear Power Plants and Other Power Plants are Located.