

# Radionuclide Studies of Articular Cartilage in the Early Diagnosis of Arthritis in the Rabbit

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## Abstract

*The compound Se-75 bis[β-(N,N,N-trimethylamino-)ethyl]selenide diiodide (Se-75 BISTAES) has been synthesized and its biodistribution in rabbits studied. A high uptake of radioactivity is found in the knee cartilage. Good scans of the knee are obtained by nuclear scintigraphy at 15 minutes after the injection of Se-75 BISTAES. The results of an equilibrium dialysis study show that Se-75 BISTAES binds to chondroitin sulfate and the binding is directly proportional to the chondroitin concentration. It appears that Se-75 BISTAES or its derivative should have potential as an articular imaging agent.*

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*Key words: Articular cartilage, Chondrotin, Nuclear scintigraphy, Se-75 BISTAES*