

- hyaluronan as diagnostic markers for degenerative joint diseases by ELISA technique. Chiang Mai : Graduate School Chiang Mai University, 2000:86.
8. Caterson BJ, Griffin, et al. Monoclonal antibodies against chondroitin sulphate isomers : their use as probes for investigating proteoglycan metabolism. *Biochem Soc Trans* 1990;18:820-3.
9. Hardingham TE. Changes in chondroitin sulphate structure induced by joint disease. *Acta Scand* 1995;226 (suppl):107-10.

CHONDROITIN SULFATE EPITOPES IN SERA OF NORMAL AND OSTEOARTHRITIC HORSES

Siriporn Peansukmanee,¹ Chumnarn Trinarong,¹ Prachya Kongtawelert,²
Siriwan Ong-chai²

¹*Department of Equine Clinic, Faculty of Veterinary Medicine,*

²*Department of Biochemistry, Faculty of Medicine, Chiang Mai University*

Abstract Equine osteoarthritis, also called degenerative joint disease, may be defined as a disease of diarthrodial joint comprising destruction of articular cartilage. Chondroitin sulfate proteoglycan, a major biomolecular substance in cartilage matrix, is released when deterioration of articular cartilage occurred. Immunoassay using specific monoclonal antibodies, mAb WF6 and 3B3 can detect the released chondroitin sulfate in serum. Objective of this study is to compare serum chondroitin sulfate proteoglycan (WF6 and 3B3 epitopes) among each age group of horses and between osteoarthritic horses and non-osteoarthritic horses. These epitopes were measured by competitive ELISA. The result showed the significantly higher ($p < 0.0001$) of WF6 epitope that was native epitope in osteoarthritic horses than in non-osteoarthritic horses while there was no different significance of this epitope among each age group of horses. Contrary to 3B3 epitope that was neo-epitope, there was significantly lower ($p < 0.001$) 3B3 epitope level in osteoarthritic horses but higher in new borned to two-year-old foals when compare with other age groups. This suggested that WF6 epitope can be use as cartilage destruction marker in diagnosis osteoarthritis and 3B3 epitope as cartilage anabolism marker in following up osteoarthritic treatment.

Keywords : Horse - osteoarthritis, Chondroitin sulfate epitope
