

# ENHANCEMENT OF IN SITU HYBRIDIZATION TO DETECT BOVINE HERPESVIRUS 4 IN PARAFFIN SECTIONS

O. Kim<sup>1,2</sup>, D. Kwak<sup>3</sup>

<sup>1</sup>Department of Laboratory Animal Sciences, College of Medicine, Seoul National University, South Korea;

<sup>2</sup>Center for Animal Resource Development, College of Medicine, Seoul National University, South Korea;

<sup>3</sup>Department of microbiology and pathology, College of medicine, Washington state university, USA

## SUMMARY

*In situ hybridization (ISH) protocols including different pre-treatment regimes were developed and compared for their effects on detecting bovine herpesvirus 4 (BoHV-4) in formalin fixed, paraffin embedded tissue. Results were compared for the hybridization and background signal intensities, and cellular morphology. We found that optimum results were obtained using enzyme treatment-thermal cycling as a pre-treatment of ISH. The results showed that the combination of protease and thermal cycling would be recommended as a means of supplementing in situ hybridization methods, especially when using long-term formalin fixed, paraffin-embedded tissue.*

**KEY WORDS:** optimization, pretreatment, enhancing, in situ hybridization

*Received July 11, 2004*

*Accepted August 4, 2004*