MT 12-009: Gene identification for Mediastinal Lymphoma in Oriental-Type Cats

This study examined the genetic sequence of the prime candidate gene for autosomal recessive lymphoma in the Oriental cats. Information from the human genome suggested a specific gene (termed PTPRJ) as a strong candidate for the cat cancer. The regions of this gene that make the protein were DNA sequenced in cats that were normal and those that had the cancer. Although some variation was identified between cats, no DNA variation was suggested to cause a change in the protein or was concordant with cats that had disease. Therefore the alternative approach was initiated, which was to examine other candidate genes for causative variants. Candidate genes are in the process of being identified through sequencing of the entire genome (all chromosomes) of multiple cats. This project will provide large amounts of information that can be shared among researchers examining genetically inherited disease conditions. The analysis for mutations is ongoing; any variations found will be screened for in affected cats to hopefully identify any link to lymphoma.