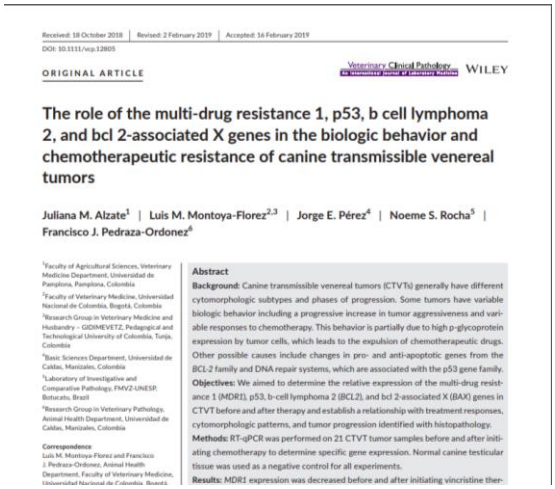
Docente del programa de Medicina Veterinaria publica en la revista Veterinary Clinical Pathology (A2)

La docente Médica Veterinaria Juliana María Alzate, encargada de las asignaturas Histoembriología y Patología Especial del programa de Medicina Veterinaria, publicó un artículo científico en la revista *Veterinary Clinical Pathology* categorizada A2 por Ministerio de Ciencias, titulado: "The role of the multi-drug resistance 1, p53, b cell lymphoma 2, and bcl 2-associated X genes in the biologic behavior and chemotherapeutic resistance of canine transmissible venereal tumors".

Una investigación la cual tuvo el objetivo de determinar la expresión relativa de los genes de resistencia múltiple a las drogas: 1 (MDR1), p53, b-linfoma celular, 2 (BCL2), y el bcl 2-asociado X (BAX), en tumores venéreos caninos y establecer la relación entre la respuesta al tratamiento y los patrones citomorfológicos y la progresión tumoral identificada con la histopatología.

De esta manera, se consolida la calidad de los docentes del programa y la relación docencia investigación en los procesos de formación de los futuros médicos veterinarios, del programa de Medicina Veterinaria de la Facultad de Ciencias Agrarias de la Universidad de Pamplona.



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The role of the multi-drug resistance 1, p53, b cell lymphoma 2, and bcl 2-associated X genes in the biologic behavior and chemotherapeutic resistance of canine transmissible venereal tumors

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Abstract
Background: Canine transmissible venereal tumors (CTVTs) generally have different cytomorphologic subtypes and phases of progression. Some tumors have variable biologic behavior including a progressive increase in tumor aggressiveness and variable responses to chemotherapy. This behavior is partially due to high p-glycoprotein expression by tumor cells, which leads to the expulsion of chemotherapeutic drugs. Other possible causes include changes in pro- and anti-apoptotic genes from the BCL-2 family and DNA repair systems, which are associated with the p53 gene family.
Objectives: We aimed to determine the relative expression of the multi-drug resistance 1 (*MDR1*), p53, b-cell lymphoma 2 (*BCL2*), and bcl 2-associated X (*BAX*) genes in CTVT before and after therapy and establish a relationship with treatment responses, cytomorphologic patterns, and tumor progression identified with histopathology.
Methods: RT-qPCR was performed on 21 CTVT tumor samples before and after initiating chemotherapy to determine specific gene expression. Normal canine testicular tissue was used as a negative control for all experiments.
Results: *MDR1* expression was decreased before and after initiating vincristine ther-