ICAP 2017

5TH INTERNATIONAL CONGRESS ON ANALYTICAL PROTEOMICS

3rd – 6th July 2017 | Caparica | Portugal

PROCEEDINGS BOOK

CONTACTS

José Luís Capelo Martínez

Carlos Lodeiro

http://www.icap2017.com

jlcm@fct.unl.pt

PROTEOMASS scientific society | www.proteomass.org

http://www.bioscopegroup.org

www.bioscopegroup.org BIOSCOPE in the forefront of science

ICAP 2017 Proceedings Book

5th International Congress on Analytical Proteomics

Caparica – Portugal

3rd – 6th JULY 2017

5th International Congress on Analytical Proteomics – ICAP 2017

Cover design: Tomás Miranda

Organization of the Book of Abstracts: Marta Silva, Yegor Borovkov, José Luis Capelo and Carlos Lodeiro

ISBN: 978-989-99639-4-8

Printed by Proteomass (Portugal)

Printage: 50 copies (paper)

Caparica, Portugal, 2017

O 01A - Activation of MMPs during experimental infection of goats by CAEV

Angela Maria Xavier Eloy[1], Ylana Santos de Galiza[2], Alice Andrioli Pinheiro[3], Raymundo Rizaldo Pinheiro[4]

[1]*Embrapa Goats and Sheep, Animal Reproduction and Proteomic, Sobral, Ceará, Brazil*
[2]*Universidade Estadual do Maranhão (UEMA), Animal Production, São Luiz, Maranhão, Brazil*
[3]*Embrapa Goats and Sheep, Reproductive Diseases, Sobral, Ceará, Brazil*
[4]*Embrapa Goats and Sheep, Virology, Sobral, Ceará, Brazil*

Abstract

Caprine arthritis encephalitis virus (CAEV) is a disease that affects goats of any breed, sex and age, showing an extensive incubation period. This study evaluated the MMPs behavior and activity in blood serum of goats experimentally infected by CAEV. Five adult goats' dairy herds were used, and the seronegativity was obtained after three consecutive Western Blotting (WB) and Nested-PCR (PCRn) tests, at 30-day interval. The animals were infected by CAEV-Cork virus strain, titer 105.6TCID50/mL intravenously. Blood was collected by jugular vein before infection (step 1) and thereafter every week post-infection until the 23rd week. On step 1, all the animals presented proMMP9 (92 kDa) and MMP2 (64-66 kDa); in the seroconversion time (step 2), it was found the MMP2 (64-66 kDa) and MMP9 (80-84 kDa) besides the proMMP13 (48 kDa) that acts as mediator of others enzymes (LOFTUS and THOMPSON, 2002). On step 3 (post-seroconversion), it was observed the presence of MMPs 2 and 9 and its respective latent forms (Fig.1). On this step, one animal didn't show reaction to WB, although showed the same MMPs profile as seropositive animals. It happens due to "restricted replication" allowing the virus to remain latent in host monocytes, not being detectable by the immune system (PUGH, 2004). Then, as the proMMP13 activate the others MMPs and is presenting only in the first seroconversion, it can be used as a possible biomarker to CAE in recent infections.

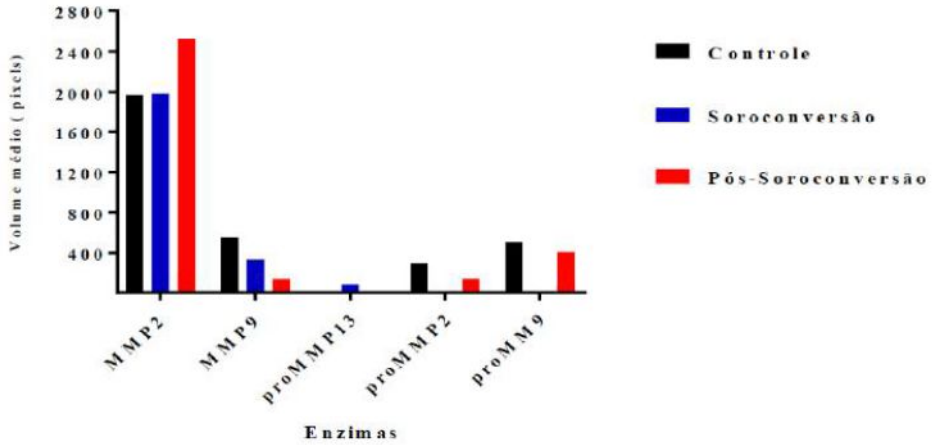

Figure 1. Mean volume in pixels of MMPs found in blood serum samples from experimentally infected animals by CAEV.

References

PUGH, D. C. Clínica de ovinos e caprinos. São Paulo: Roca, 2004. 513 p.

LOFTUS, I. M.; THOMPSON, M. M. The role Of Matrix Metalloproteinases in Vascular Disease. Vascular Medicine 7 (2002) 117-133.