allied academies

Annual Conference on

MICROBIAL PATHOGENESIS, INFECTIOUS DISEASE, ANTIMICROBIALS AND DRUG RESISTANCE

August 23-24, 2017 | Toronto, Canada

Analysis of bovine tuberculin antigens of different potencies by western blot

Luciene Airy Nagashima and **Krys P Nocera**
Institute of Technology of Parana, Brazil

Bovine tuberculosis is a chronic disease caused primarily by *Mycobacterium bovis*. This zoonotic disease constitutes a public health issue and causes damage to the agricultural industry. In Brazil, the National Program for the Control and Eradication of Brucellosis and Tuberculosis establishes mandatory measures such as the diagnosis tests in animals. The standard method for detection of bovine tuberculosis is the tuberculin test, which uses the purified protein derivate (PPD) as antigen. The bovine tuberculin PPD is a complex mixture of proteins derived from the cultivation of *M. bovis*. Its composition and mechanisms involved in the immune response of the tuberculin test are not entirely clear. In the present work, bovine tuberculins which had low reactivity in the skin test in sensitized guinea pigs compared to a reference preparation, and tuberculins with positive results in potency test were analyzed by immune enzymatic assay (ELISA) and by western blot. The results showed differences in reactivity of the antibodies to the different samples of tuberculin, in both tests. The tuberculins with lower potencies revealed low intensity bands, especially below 30kDa, which indicates that the proteins in these bands may be essential to the immunogenicity of the product. The identification of these proteins could help to elucidate which proteins are effective in intradermal reaction, enabling the development of more specific tests.

Speaker Biography

Luciene Airy Nagashima has completed her MD and PhD in Microbiology at the State University of Londrina, Brazil. Her research is focused on immune response to fungal infection, especially with experimental infection with *Arthrographis kalrae* and its hemolytic factors. She is currently working as an Industrial Biotechnology Analyst in the Institute of Technology of Parana (Brazil), with the production of antigens for the diagnosis of bovine brucellosis, tuberculosis and enzootic bovine leukosis.

e: luciene@tecpar.br

Notes: