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Status of the *Mycobacterium bovis* and the interrelationship with human health in Amazonas State, Brazil

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Brazilian national mortality and incidence rates were reduced by 38.9% (3.6 to 2.2/ 100,000) and 34.1% (51.8 to 33.2/100,000), respectively, from 1990 to 2015. In contrast to the national figures, in the Amazonas State the TB incidence rate have been rising in the last decade, reaching 67.2/100,000 persons in 2016 - the highest incidence in the country, third highest mortality rate due to TB (3.2/100.00). Despite the efforts of the local Amazonas authorities in diagnosing TB, and free access to treatment of TB, a significant reduction in TB cases has not been achieved. Alarmingly, the major risk factors associated with zoonotic TB (due to *M. bovis*), such as the occurrence of *M. bovis,* low rates of milk pasteurization, and high consumption of products from raw milk are routine in Amazonas's municipalities, and physicians might be unaware of the risk of the occurrence of zoonotic infection, and therefore specific diagnosis is not requested. This project aims to uncover the contribution of *M. bovis* to human tuberculosis in Amazonas State. The specific aims of this study are to: 1) determine the prevalence of *M. bovis* in *M. tuberculosis* complex in animals in slaughterhouses (cattle and buffalo), human population, milk, and cheese from raw milk; and 2) determine the risk factors associated with the prevalence in humans. To date the preliminary results show that the disease is widespread and that the prevalence is much higher than predicted (81.4% vs 13%), indicating that the bovine tuberculosis is a significant problem in Amazonas State.

Biography

Paulo Alex Machado Carneiro obtained a DVM degree by the Amazon Federal Rural University (1992), Master of Science degree at the University of Sao Paulo (2000), and currently is a PhD candidate in the Comparative Medicine and Integrative Biology Program at Michigan State University. He has 25 years of experience teaching and 11 years of governance as President of the Amazonas State Board of Veterinary Medicine. He is Amazonas State representative at several regional and national meetings related to the public health, animal production, and disease surveillance. He also has experience and expertise in beef, dairy, and veterinary regulatory affairs in Brazil and the USA.

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