

PANORAMA

Thematic portfolio



Facilitation of international movement of competition horses



PERSPECTIVES

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AROUND THE WORLD

DOSSIER

Development of a safer vaccine against African horse sickness

Vaccination is an effective control measure against African horse sickness (AHS), a severe equine disease. However, there are safety concerns associated with the current use of attenuated live vaccines. A safer inactivated AHS vaccine is under development.

KEYWORDS

#African horse sickness (AHS), #International Equestrian Federation (FEI), #International Federation of Horseracing Authorities (IFHA), #International Horse Sports Confederation (IHSC), #public-private partnership, #vaccine, #World Organisation for Animal Health (OIE).

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Vaccination and microchipping. © John Grewar

African horse sickness (AHS) is a vector-borne disease caused by any of the nine serotypes of the AHS virus (AHSV), resulting in severe morbidity and high mortality in susceptible horse populations, and less severe to non-pathogenic infection in other equids. Vaccination is a very effective control measure in enzootic and also epizootic regions.

African horse sickness (AHS), one of the [OIE-listed diseases](#), is endemic in sub-Saharan Africa, but outbreaks have also been recorded in Spain, North Africa and the Middle East. AHS is considered a growing threat to non-endemic regions, due to climatic change and the international movement of equids. For this reason, movements of horses between endemic and non-endemic regions must comply with the OIE standards (in particular, [Chapter 12.1. of the Terrestrial Animal Health Code](#)).

Current AHS vaccines: safety concerns

The currently used attenuated live vaccine (ALV) contains attenuated strains of different combinations of the nine serotypes. South Africa remains the major producer and user of the AHS ALV, while Senegal and Ethiopia produce and use different combinations of the vaccine.

Safety concerns associated with AHS ALV, including the risk of reassortment with wild-type AHSV and persistence in the environment, have often complicated the control of the disease in endemic regions and impeded the movement of horses from endemic countries, thus excluding them from international trade and sports events. As a result, non-endemic countries are not keen to consider the use of AHS ALV in the event of an epidemic. Monovalent inactivated AHS vaccines have been used in limited cases, but are no longer commercially available. Although several safer technologies have been developed or tried, no alternative to the AHS ALV is currently commercially available.

Towards the development of a safer AHS vaccine

[The International Horse Sports Confederation \(IHSC\) and the OIE have embarked on a public-private partnership](#) to support the development of better measures for the safe international movement of sport horses for competition. AHS vaccine technologies are one of the areas reviewed by the scientific studies supported through this partnership.

Based on the outcome of this review, the IHSC, through a consultative process involving various stakeholders, has proposed inactivated AHS vaccine technology as the best option in the medium term to be supported for further development, as it could address the current shortcomings of the AHS ALV, and meet the identified key characteristics of a suitable AHS vaccine. Work towards a multivalent inactivated AHS vaccine has been initiated in South Africa.

<https://doi.org/10.20506/bull.2019.2.2979>

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