American Society of Tropical Medicine and Hygiene - Washington, D.C., 4-8, 12, 88

37th Annual Meeting of the

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CRIMEAN-CONGO HEMORRHAGIC FEVER IN SENEGAL: INFECTION RATES AND EPIDEMIOLOGIC ASSOCIATIONS OF TICK VECTORS AND VERTEBRATE HOSTS.

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Transmission of Crimean-Congo Hemorrhagic Fever virus, family Bunyaviridae, is focally enzootic throughout Africa and southern Eurasia. Zoonotic disease sporadically erupts in localized epidemics causing significant morbidity and mortality. The ecological factors that permit "silent" maintenance or reintroduction of the virus, and that promote epizootics or epidemics, remain obscure. In sub-saharan West Africa, our research is directed toward analysis of tick-host population dynamics, quantification of horizontal and vertical transmission rates, identification of candidate reservoirs, and evaluation of risk to human health. Initial results demonstrate that potential vector ticks, notably *Hyalomma* spp., are abundant and widespread; domestic ungulates host numerous adult ticks throughout the year, yet immature ticks, enigmatically rare, apparently feed primarily on birds and small mammals from August to November. Observations on vertebrate hosts suggest that certain species are important to vector reproduction, but not to virus transmission. Using suckling mouse inoculation and antigen-capture ELISA, adult ticks, eggs and unfed immatures are being tested to compare horizontal and vertical infection rates. Despite the extensive distribution of potential tick vectors, prevalence of infection varies considerably. Maternal transmission of IgG to offspring occurs. Incidence rates suggest that low-level transmission may be seasonal.