

## PARASITOLOGY

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## Molecular epidemiology of Crimean Congo hemorrhagic fever virus in collected ticks from west part of Iran

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Crimean-Congo hemorrhagic fever (CCHF) is a tick-borne viral disease which is endemic in 24 out of 31 provinces in Iran. Being the reservoir and the vector for the CCHF virus (CCHFV), ticks' population and distribution plays an important role in the epidemiology of CCHF. Therefore, determination of infection rate in tick population in different geographical region and tick fauna are necessary to design public health policies for prevention of CCHF outbreak. The present study aimed to determine the prevalence and seasonal activity as well as the frequency of CCHFV infection of tick population in Hamadan province, west of Iran. The study areas included both lowland (plains) and highland (mountains) and covered 5 percent of the villages in 3 counties where 10 herds per village (sheep and goats) were randomly selected for hard tick collection. In this cross sectional study, a total of 983 animals in 141 herds of sheep and goats were examined between June 2013 and May 2014. In total, 881 ticks were collected from infested livestock (34.9%) of which 79.8% were obtained during the month of June. The collected ticks belonged to 3 genera including, *Rhipicephalus* (95.6%, n=842), *Hyalomma* (4.1%, n=36) and *Haemaphysalis* (0.4%, n=4). After species identification, 100 randomly selected ticks were subjected to Reverse Transcriptase Polymerase Chain Reaction (RT-PCR) for detection of CCHFV infection. The infection was observed in 7 (7%) of collected ticks, of which 4 (54.1%), 2 (28.6%) and one (14.3%) belonged to *R. sanguineus*, *R. bursa* and *Hy. asiaticum* respectively. The findings of the present study suggest that *Hyalomma* and *Rhipicephalus* ticks are the main vectors of CCHFV in Hamadan province.

## Biography

Mohammad Saaïd Dayer has completed his MSc and PhD at the University of Newcastle upon Tyne (UK). He is an Assistant Professor in the Department of Parasitology and Medical Entomology of the Faculty of Medical Sciences in Tarbiat Modares University, Tehran, Iran. He is an Insect Pathologist and has published more than 27 papers both in national and international journals. His is currently focusing on ectoparasites, their involvement as vectors of infectious diseases and their control.

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