

# Telford, Sam

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***Babesia microti, B. duncani, & B. miyamotoi***

Sam Telford is an epidemiologist focusing on arthropod-transmitted infections. He received his BA in ecology and evolution from Johns Hopkins in 1983; MS in tropical public health (1987) and ScD in parasitology (1990; ecology of Lyme disease) from the Harvard School of Public Health. Following postdoctoral work at Harvard on the Lyme disease vaccine, he served for 10 years as Lecturer in Tropical Public Health there, teaching parasitology and tropical medicine and continuing research on aspects of deer tick transmitted infections such as Lyme disease, babesiosis, human granulocytic ehrlichiosis, and deer tick virus. He moved to Tufts vet school in 2002, where he is currently Professor of Infectious Disease and Global Health and Director of the New England Regional Biosafety Laboratory and teaches graduate level courses on biodefense and on the epidemiology of zoonoses. Dr. Telford has or has had federal, state, and private funding for his research on the epidemiology and ecology of tick-borne infections, and has published >220 peer reviewed reports. He advises local, state, and national organizations on public health interventions against tick and mosquito-borne infection.

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## ***Conference Lecture Summary***

I will review the epidemiology, clinical picture, diagnosis,

and treatment of human babesiosis, particularly with respect to the northeastern United States. Babesiosis is increasing in prevalence and distribution after having lagged that of the co-transmitted Lyme disease. Elsewhere in the U.S. and globally, babesiosis remains a rare and sporadic infection usually affecting only severely immunocompromised individuals. Babesiosis is the most important protozoal transfusion risk because infection tends to be subclinical in healthy younger individuals and donors cannot be excluded based solely on questions about exposure history. Even with treatment, case fatality rates can approach 5%; new treatment regimens need to be developed, particularly for those patients who are immunocompromised. Risk of acquiring babesiosis may be reduced by preventing tick exposure or by any of the many modalities to reduce environmental contamination by ticks. Vaccine development remains a challenge, a perspective that follows from the difficulties faced by the efforts to develop effective vaccines against the related malaria parasites.