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ABSTRACT

LOUSE-BORNE PATHOGENS.

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A number of pathogens are transmitted by lice, especially sucking lice (Anoplura), which are exclusively ectoparasites of eutherian mammals including humans. Louse-borne pathogens include swinepox virus which is transmitted by the hog louse, *Haematopinus suis*, seal heartworm, which is transmitted by the seal louse, *Echinophthirius horridus*, and various agents of rodent and lagomorph eperythrozoonosis, haemobartonellosis, and hepatozoonosis, which are transmitted by a variety of sucking louse species. In addition, the human body louse, *Pediculus humanus humanus*, is capable of transmitting at least three different pathogens of humans. These are *Rickettsia prowazekii* which causes epidemic (louse-borne) typhus, *Borrelia recurrentis* which causes epidemic (louse-borne) relapsing fever, and *Bartonella quintana*, which causes a variety of ailments including trench fever, bacillary angiomatosis and endocarditis. In the recent past, when more humans were infested by body lice, these pathogens were major causes of human morbidity and mortality. Historically, epidemic typhus has been the most important of these pathogens and has affected humankind in many ways. For example, the Great Plague of Athens in 430 B.C., which effectively ended the preeminence of that culture, was almost certainly due to epidemic typhus. Also, Napoleon's army of 1812 that invaded Russia, lost more troops to epidemic typhus than to battle casualties and this greatly influenced the outcome of the campaign. In 1816-1819, 700,00 cases of epidemic typhus occurred in Ireland; combined with the potato famine, this encouraged many people to emigrate to North America which resulted in epidemic typhus being introduced into this Continent. Many years later, European immigrants who had recovered from the disease would often experience recrudescent typhus (Brill-Zinsser disease) and initiate new epidemics. Today, because of widespread body louse control, louse-borne diseases of humans are relatively rare, especially in developed countries. Exceptions include recent outbreaks of epidemic typhus in Burundi, China, Ethiopia, Peru, and Russia; and of epidemic relapsing fever in several African nations. A recent resurgence of infections due to *B. quintana* is puzzling because this pathogen apparently can be transmitted opportunistically to immunocompromised or homeless people in the absence of lice; this has been recorded in several developed nations, including the United States.

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ABSTRACTS! Abstracts must be received by September 29, 2000 to ensure inclusion in the program.

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