In 1989 MacDonald asked a Question of Transfusion Medicine Experts
about Borrelia in the Blood and its Potential to cause
problems in Blood Transfusions
In the year 2006, the question was answered in a Research Paper

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The Year Was 1989

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instance, the tell-tale rash may not develop. Instead, the
microbe may travel directly to the joints or
brain, and the first symptoms may be arthritis or meningitis.
Confusion could also result from the common practice of
treating transfusion recipients with antibiotics
for their underlying condition. While some antibiotics kill
the Lyme spirochete, others are less effective.
The Lyme microbe is most likely to circulate in the blood
during the first week after the onset of
symptoms. But it is not known when, or if, the organism is
present thereafter.
Some scientists, like Dr. Alan C. Steere of the Tufts
Medical School in Boston, believe that the
spirochete is present in blood for only a short phase of the
disease. In 1975, when he was at Yale
University, Dr. Steere headed the team credited with
detecting Lyme disease.
But Dr. Willy Burgdorfer, who discovered the Lyme spirochete
at the Public Health Service's Rocky
Mountain Laboratory in Hamilton, Mont., said, "We know
nothing about how long the spirochete is
present in the bloodstream, and that problem has to be
addressed."
Because the low rate of detection of the Lyme spirochete in
blood may simply reflect an inability to
isolate the organism with current techniques, researchers
need to improve the ways of growing the
organisms in the laboratory, said Dr. Burgdorfer, who is now
a scientist emeritus at the Montana
laboratory.
Researchers are also seeking to adapt a new laboratory
technique called polymerase chain reaction so
that the sensitive technique can detect Lyme spirochetes
when they are present in tiny numbers.
Critics are urging more research to follow the medical
course of individuals who receive blood from
donors who tested positive for Lyme disease. Such medical
surveillance could determine the frequency
with which healthy carriers spread the Lyme spirochete in
transfusions.
In addition, critics say many of the health officials who
publicly say there is little risk of transmitting
Lyme disease through transfusions are being hypocritical.
At a recent meeting, Dr. Alan B. MacDonald asked a panel of
health officials whether they would accept
a transfusion from someone who had tested positive. Dr.

MacDonald, who does Lyme research at
Southampton Hospital in Southampton, L.I., said all of them
answered no, although no one
recommended discarding blood from such donors.

FAST FORWARD TO YEAR 2006

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> 1: J Parasitol. 2006 Aug;92(4):869-70. Links
> Transfer of Borrelia burgdorferi s.s. infection via blood
transfusion in a murine model.
> Gabitzsch ES,
> Piesman J,
> Dolan MC,
> Sykes CM,
> Zeidner NS.
> Centers for Disease Control and Prevention, Division of Vector-
Borne Infectious Diseases, Bacterial Zoonoses Branch, Foothills
Campus, Fort Collins, Colorado 80522, USA.
> Without antibiotic treatment, the Lyme-disease-causing
bacterium, Borrelia burgdorferi can be cultured from the peripheral
blood of human patients nearly 6 wk post-tick bite. To determine if
Lyme disease spirochetes can be transmitted from a spirochetemic
donor mouse to a naive recipient during blood transfusion, blood
taken from immunocompetent infected mice was transfused into either
immunodeficient (SCID) mice, inbred immunocompetent animals
(C3H/HeJ), or outbred mice. Nine of 19 (47.7%) immunodeficient mice,
7 of 15 (46.8%) inbred immunocompetent mice, and 6 of 10 (60.0%)
outbred mice became infected with B. burgdorferi after transfusion.
Our results indicate that it is possible to acquire B. burgdoferi
infection via transfused blood in a mouse model of Lyme borreliosis.
> PMID: 16995409 [PubMed - in process]