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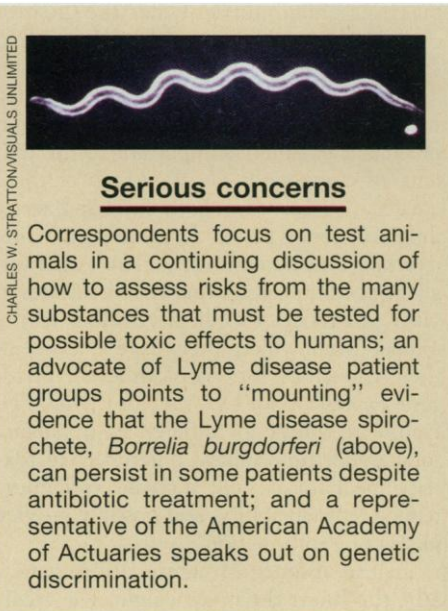
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# LETTERS



## Serious concerns

Correspondents focus on test animals in a continuing discussion of how to assess risks from the many substances that must be tested for possible toxic effects to humans; an advocate of Lyme disease patient groups points to "mounting" evidence that the Lyme disease spirochete, *Borrelia burgdorferi* (above), can persist in some patients despite antibiotic treatment; and a representative of the American Academy of Actuaries speaks out on genetic discrimination.

## Lyme Disease Research

The main focus of Eliot Marshall's article "Lyme disease: NIH gears up to test a hotly disputed theory" (News & Comment, 13 Oct., p. 228) is the controversy between patient advocacy groups and treating physicians on one side, and university-based researchers (who frequently dispute the existence of chronic Lyme disease) on the other. The article reports that the patient groups' tactics to have chronic Lyme disease studied "have angered research leaders such as Allen Steere of Tufts University." Is patient-initiated research really so bad?

Steere has been one of the most outspoken skeptics about the existence of a chronic Lyme disease epidemic (1) and one of the most outspoken proponents of the success of modest (10- to 30-day) courses of antibiotics (1). In 1993, Steere wrote (2) that, in Lyme disease, "Standard antibiotic treatment probably fails less often than one might think. Most apparent treatment failures actually reflect misdiagnosis."

However, evidence is mounting that the Lyme disease spirochete, *Borrelia burgdorferi*, can persist in some patients despite antibiotic therapy. The spirochete has been isolated from the skin (3, 4), spinal fluid (4, 5), blood (6), ligamentous tissue (7), and iris tissue (8) of patients after antibiotic therapy, including intravenous or long courses of supposedly curative antibiotics, or both (9).

It may surprise some to learn that in the first few years he was associated with Lyme disease, Steere promoted the idea that antibiotics were ineffective. In 1977 (10), Steere and his colleagues stated, "We remain skeptical that antibiotic therapy helps." In 1978, Steere and his colleagues wrote (11), "To sum up the therapy of Lyme arthritis (Lyme disease), it appears that at this point only symptomatic treatment is feasible." In a 1979 paper about the neurological abnormalities of Lyme disease (12), Steere and his colleagues reported that they "have noted no benefit from antibiotic treatment." However, an extensive literature search revealed 17 medical papers published before 1979 reporting the efficacy of antibiotics in treating Lyme disease. Only one (besides Steere's) reported no benefit.

The controlled studies (12) to see whether longer term antibiotics can help prevent chronic or relapsing Lyme disease (both successful) were performed in Europe. As Steere himself is quoted by Marshall as saying, the proposed National Institutes of Health study of chronic Lyme disease "would never have been funded" through the "normal mechanisms" of investigator-initiated research.

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## Diet and Test Animals

Philip H. Abelson's editorial "Flaws in risk assessments," (13 Oct., p. 215) correctly points out the critical role that diet can play