The existing theories need to be reevaluated in light of the emerging evidence on chronic infection in late Lyme disease.

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Enantiomerically Pure Drugs

In response to an article by Ivan Amato about asymmetric synthesis ("Looking glass chemistry," Research News, 15 May, p. 964), John F. Beary III and C. Robert Eaton, the senior vice president and the manager of the research and development programs of the Pharmaceutical Manufacturers Association, urge discretion in the development of a drug regimen in which all new chiral entrants are marketed only as the pure active enantiomer, in cases where the bioactivity resides mainly or solely in that enantiomer (Letters, 10 July, p. 145). They cite the potential additional cost and delay incurred in the synthesis of pure enantiomers on a clinical scale but do not mention impending developments in chemical synthesis (the thrust of Amato's article) which will reduce the time required for such a regimen to well within the time frame of 12 years cited by Beary and Eaton as that needed for the launch of a drug de novo.

To illustrate their points they cite the case of ibuprofen, the Boots nonsteroidal anti-inflammatory agent currently marketed as a racemate. Only the S enantiomer is active, but as they remark, the R enantiomer is converted into S in a unidirectional manner in vivo. This fact is used to support their case that the therapist might as well administer the racemic mixture as the pure active S enantiomer. Unfortunately, a

more detailed appraisal does not support this stance. The conversion of R to S enantiomer in vivo is incomplete (*1*), being largely (60%) independent of the size and enantiomeric composition of the administered dose. The clearance of each enantiomer is also independent of the administered dose (*2*). These observations should be set in the context of findings from clinical trials that twice the dose of racemic ibuprofen is needed to attain the same plasma concentration of S form as compared with the pure S enantiomer (*3*). In plain language, the S enantiomer of ibuprofen is a better drug than the racemate.

Anti-inflammatory agents are typically administered over long time periods to rheumatoid arthritis patients and are not devoid of side effects. In such circumstances, it is surely imperative to minimize the dose. If the research findings cited are fully sustained, then a clear case will be made for the exclusive licensing of the S enantiomer of ibuprofen and the pursuit of enantiomerically pure drugs in general.

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HIV-Free AIDS Reports

A 31 July News & Comment article by Jon Cohen about HIV (human immunodeficiency virus)–free AIDS cases reported at the VIII International AIDS Conference in Amsterdam (p. 604) ends with a call by Michael Merson "to launch 'a worldwide study of this situation' as quickly as possible." I am responding to this call with an offer to provide, to anyone who requests it, now [or later (*1*)] a list of references to more than 800 HIV-free immunodeficiencies and AIDS-defining diseases in all major American and European AIDS risk groups. In addition, I can provide references to more than 2200 HIV-free African AIDS cases that all meet the World Health Organization definition of AIDS (*1*). Each of these cases was diagnosed after the "AIDS test" for antibodies to HIV was introduced in 1984.

There may be more HIV-free AIDS-like cases, as only about 50% of all AIDS cases reported by the Centers for Disease Control (CDC) are confirmed as HIV-positive (*2*, *3*); the remainder are based on presumptive diagnoses (*2*, *4*). Surprisingly, the CDC does not survey HIV in its monthly *HIV/AIDS Surveillance* reports (*5*).

Rather than rushing to a "new AIDS virus" as the explanation, *Science* could focus more attention on "[a]lternatives to a virus" that could resolve the growing paradoxes of the virus-AIDS hypothesis.

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Population Genetics: Founding Fathers

In his article "The evolution of sexes" (Research News, 17 July, p. 324), Alun Anderson describes Cambridge University's Ronald Fisher as "the founding father of modern population genetics." Fisher was indeed a great geneticist and a statistician. He was *among* the three founding fathers of modern population genetics (the other two were J. B. S. Haldane and S. Wright), but not *the* founding father!

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Corrections and Clarifications

In the author note for the Nobel lecture "Soft matter" by P. G. de Gennes (24 Apr., p. 495), the last sentence should have read, "It is published here with the permission of the Nobel Foundation and will also be included in the complete volume *Les Prix Nobel 1991* (in English) as well as in *Nobel Lectures* (in English) to be published by Elsevier Publishing Company, Amsterdam and New York."

In figures 1B and 2C of the report "Dendritic cells exposed to human immunodeficiency virus type-1 transmit a vigorous cytopathic infection to $CD4^+$ T cells" by P. U. Cameron *et al.* (17 July, p. 383), the y axes should have read, "RTase 10^3 CPM/μl." The last line of reference 20 should have read "agarose gel stained with ethidium bromide."