

profoundly the sociobiological synthesis has transformed the study of animal behavior and large parts of biological anthropology (3). More recently, it has influenced research in many other fields, including botany (4), reproduction and development (5), genetics and molecular biology (6), neurobiology and psychology (7), women's studies and political science (8), art and philosophy (9), and economics and law (10). Oddly, this vigorous interdisciplinary research enterprise remains largely defined in public consciousness by its detractors rather than by its practitioners.

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Rethinking AIDS and Cancer

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finger. In his News & Comment article about the XI International AIDS Conference (19 July, p. 302), Jon Cohen refers to multi-drug AIDS therapy as "Shooting for the moon with drugs."

Cures for AIDS and for a majority of cancers have not been realized, despite the expenditure of vast amounts of resources—both in terms of money and manpower. Although some tumors can be effectively treated with surgery and chemotherapy, and recent suggestions of combinations of anti-retroviral drugs hold promise for the extended survival of patients who have AIDS, these should not be considered as cures. Efforts have concentrated on treating the consequences of these conditions without focusing on more fundamental aspects of the problem. Thus, antitumor therapy is aimed at reducing or eliminating the tumor mass, and drug therapy for human immunodeficiency virus (HIV) is targeted at decreasing viral load (particularly free virus in plasma) and at increasing CD4 counts.

Because HIV proviral DNA is incorporated into the genome of the infected host and can be activated later, effective antiviral drugs might eliminate HIV only if administered for the lifetime of the patient. Such an approach is expensive, induces toxic side effects, and selects for resistant variants.

We suggest a major strategy of restoring and strengthening cellular immunity, supplemented when practical with limited drug therapy. We view chemotherapy as the finger and immune-based therapy as the moon.

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Evidence of Single-File Diffusion in Zeolites

In the report "NMR studies of single-file diffusion in unidimensional channel zeolites" (3 May, p. 702), Volker Kukla *et al.* state that their study is the first direct evidence of single-file diffusion. A paper by our group ["Evidence for single-file diffusion of ethane in the molecular sieve AlPO₄-5" (1)], which appeared just after the report by Kukla *et al.* was submitted to *Science*, demonstrated that the mean square displacement of ethane in the one-dimen-

sional molecular sieve AlPO₄-5 varies as the square root of the observation time. The single-file mobility factor (F) was found to be $1.4 \times 10^{-11} \text{ m}^2 \text{ s}^{-0.5}$, as compared with the value of $6 \times 10^{-11} \text{ m}^2 \text{ s}^{-0.5}$ determined by Kukla *et al.* for methane in AlPO₄-5.

In a previous paper (2), we found that while methane underwent unidirectional diffusion in AlPO₄-5, the behavior of the mean square displacement with time was not representative of single-file diffusive behavior. However, for the same system, Kukla *et al.* have reported single-file diffusive behavior. The reasons for this discrepancy are unclear.

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