

Origin and spread of AIDS

SIR — Some people have decided that the origin of AIDS will be forever associated with Africa, hence such unscientific statements as “there is now little doubt human AIDS began in Africa”. Their evidence is that “not only is the disease widespread in Central Africa but only in Africa are there monkey species naturally infected with lentiviruses related to human immunodeficiency virus”. An African might have written similarly of syphilis in Europe and in the Middle Ages: “There is little doubt that syphilis began in Europe. Not only is the disease widely spread there, but only in Europe it seems are people naturally susceptible to the disease.” At that time, there was not a single case of syphilis reported from black Africa, even though there were sailors going to and returning from Africa to Europe, thanks to acquired immunity against syphilis because of widespread yaws. We all know now that syphilis did not begin in Europe.

If members of the Idjwi tribe had practices that would constitute an efficient means of trans-species transmission and could be responsible for the emergence of simian immunodeficiency virus (SIV) infections of man and thus AIDS, why have they only now developed AIDS? Perhaps A. Karpas (*Nature* 348, 578; 1990) would have us believe that they had acquired an immunity to AIDS

until they suddenly lost it in 1959. Sexual practices in East Zaire, in a small circumscribed tribe, led to a suggestion that SIV could have given rise to HIV-2 infection of man in West Africa thousands of miles away. How elastic is Karpas's imagination?

He goes on to contradict himself by stating that “in spite of long association between Europeans and black Africa there is no evidence for the existence of HIV in Europe, the Americas or Arabia during the past century or even the first half of this century, which argues strongly that the widespread HIV infection Africa is a recent event”. So what is the relevance of the peculiar sexual practices of the Idjwi tribe except to ridicule black Africa or to excuse the poor sexual performance of Europeans?

“All in all, the epidemiological evidence thus points to the spread of HIV infection from Africa since the Second World War with the widespread introduction of syringes and needles from the West, together with vaccination programmes.” Does the author not find it strange that the first case of AIDS was reported in 1959 or that doctors from Europe practising in Africa during the colonial period were so poorly trained that they could not even describe a disease with such a dramatic impact on the population?

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Sinister change

SIR — Is B-DNA really right-handed? Some recent advertisements suggest otherwise. Genosys (*Nature* 14 June 1990), ZymoGenetics (*Science* 15 June 1990), Applied Biosystems (*Science* 10 August 1990), Oncor (*Science* 28 September 1990), Clontech (*Nature* 4 October 1990), and Eppendorf (*Science* 25 January 1991), all of which claim DNA expertise, indicate that the molecule is left-handed.

Other experts seem to agree. The newly revised eighth edition of the textbook *Principles of Genetics* by Gardner, Simmons and Snustad features on its front cover in vivid green and yellow a giant drawing of a left-handed DNA molecule.

The Center for Advanced Biotechnology and Medicine, a facility jointly administered by Rutgers University and the University of Medicine and Dentistry of New Jersey and called by the Newark *Sunday Star-Ledger* (26 June 1988) the centrepiece of a “\$50-million gamble”, confirmed that remark by adopting as its logo a left-handed B-DNA helix. They have had second thoughts, however, and are now putting their money on the right-handed form. Did they switch prematurely?

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No money

SIR — In the correspondence in *Nature* following the news of the financial problems faced by the Medical Research Council and the Science and Engineering Research Council (SERC), there has been a notable absence of comment from the group of research workers at the sharp end of the current cuts — those of us employed on fixed-term grant-funded contracts. This should not be construed as reticence; rather, it reflects the belief that nothing we say is likely to stimulate solutions to the seemingly intractable problem of extracting more money from a government, locked into a recession, with little concept of the importance of maintaining a strong research base in Britain.

Yet as potential members of the future British scientific community, we must spell out our concerns. This may even help to strengthen the arguments (and resolve) of the more altruistic members of this community (such as the pressure group Save British Science, the retired president of the Royal Society, Lord Porter, and the new chairman of the SERC, Sir Mark Richmond) who have all recently advocated increasing the resources available to young scientists.

The feelings of many of us can be quite concisely summarized. When our grant ap-

plications are highly rated for the quality of their science but are not funded because of lack of money, we — like our tenured colleagues — are extremely frustrated. But, unlike them, we may also find ourselves facing the imminent prospect of unemployment.

Over the past few years, it has become increasingly apparent that the brighter undergraduates and postgraduates are discouraged from pursuing careers in British science by the increasingly poor prospects this affords. No doubt the current situation is exacerbating this problem by forcing even established research workers to consider alternative careers — not because they crave greater financial reward (those who embark on an academic career accept that they will receive a moderate salary), but because even those of us who love the challenges that research offers simply cannot survive on a wing and a prayer.

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AZT patents

SIR — The report by Christopher Anderson (*Nature* 349, 93; 1991) is most useful in regard to the political/legal climate in the United States regarding Zidovudine (AZT). But it is deficient regarding the important prior art upon which the question of inventive step has to be judged.

The *Merck Index* gives US Patent 4724232 and German Offenlegungsschrift 3608606, in the names of J.L. Rideout *et al.*, as the origin of protection — yet there is so far no German patent. The origin of the US claim resides in two British applications by the Wellcome Foundation, but they have been withdrawn, as is the case with its British patent application 2181128, withdrawn on 7 April 1988.

A correlation and correction of the essential prior art concerning Zidovudine is given in the box below.

PCT. WO. 7901068, Netherlands application (NLA) 8100177.

Ostertag *et al.* Proc. Nat. Acad. Sci. USA 71 (1974).
Exp. Cell. Res., 116: 31–37, 1978.
P.N.A.S. 82: 7096–7100, 1985.
J.A.M. Med. Assoc. 254: 2521, 2522, 2529, 1985.
Chem. Eng. News 64: 28–40, 1986.
FDA Drug Bull. 15: 27–32, 1985.
Proc. Am. Assoc. Con. Res. 27: 422, 1986.
Con. Res. 32: 1547–1583, 1972.
Biochemical Pharmacology. Vol 29 (1980), pages 1849–51.
The Lancet, Apr. 25, 1987, pp. 957–958.
J. Med. Chem. 26: 1691–1696, 1983.
J. Med. Chem., 26: 891–895, 1983.
Carr. Chemother Immunother. Proc. Int. Cong. Chemother, 12th, vol. 2: 1062–1064, 1982.
Nucleic Acids Res. Sym. Ser., No. 9, pp. 49–52, 1980.

See also US Patents 4780453, 4818538, 4828838, 4833130 and 4837208.

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