

RESEARCH NEWS

neered bacteria secreted CD4 and reduced the rate of HIV infection in cells by at least half as assessed by single-cycle infection assays using HIV-1_{HXB2} carrying a luciferase reporter gene. Further, co-incubation of the engineered bacteria with recombinant HIV-1_{HXB2} reporter virus led to a significant decrease in virus infectivity of HeLa cells expressing CD4-CXCR4-CCR5. They are now trying to make the technique more effective by engineering *Lactobacillus* to express CD4 on its surface. Preliminary studies using monkeys showed the engineered bacteria grew well and were safe. If it works, the bacteria could be made into a vaginal suppository a woman could quietly use to protect herself. Only extended clinical trails could demonstrate

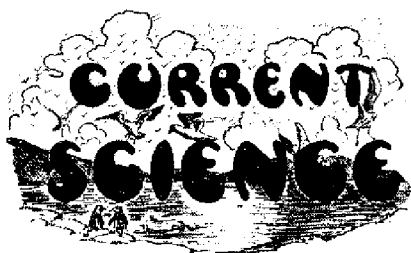
if the modified bacteria work effectively in the vagina in the presence of mucus and semen, and other sexually transmitted pathogens. Other hurdles include getting clearance for the use of genetically modified bacteria.

Clearly, this technology holds tremendous promise. These bacteria could be modified to express other HIV-binding proteins, and also to prevent the transmission of other viruses, including human papilloma virus and herpes. It is also possible to prepare a vaccine by genetically modifying these bacteria. Only time will reveal if this idea could be translated into a viable product or would be forgotten as yet another promising approach buried within the covers of scientific journals.

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*Usha Natraj lives at 71, Redington Road, London NW3 7RP, UK.
e-mail: ushan3@rediffmail.com*

FROM THE ARCHIVES



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H. E. Lord Wavell on Indian Science

Inaugurating the Thirty-first Session of the Indian Science Congress, His Excellency Lord Wavell said: “India, one of the oldest civilisations, has perhaps felt the impact of modern science later and less than any other great people. A large proportion of her population still lives the old life untouched by the vast changes of the century. Her realm has been of the spirit rather than of the earth. It may be said of the West hereafter that we took too much from India materially and too little spiritually.

But if India is to play the part in the world to which her size, her population, her history and her position entitle her, she too must make every possible use of scientific advancement.

She has already produced many great scientists, she bears many more in her fertile womb. Her contributions to science have always been on the side of peace and progress. She has everything to gain by combining modern science with her old culture indeed her traditional outlook should enable her to make an increasingly fine and characteristic contribution to natural knowledge. Indian science has made in fact a very remarkable stride forward during the last twenty-five years, as is shown by the foundation of many new societies, new journals and new departments of science in universities and under Government.

In this war science has played a great role in India as elsewhere. It has made a splendid contribution to maintaining the health of the fighting men, through the activities of such bodies as the Malaria Institute, the Indian Research Fund Association, the Nutrition Laboratories at

Coonoor, and others. It has also played an important part in munitions production and in solving problems of supply. As an ex-Commander-in-Chief, I should like to thank Indian science for the invaluable assistance it has given to the armies in the field.

It must play a great part also in post-war development. The coming years will be vital to India. She must learn to make use of her abundant resources with the aid of science. Science is the most international of all human interests.

Professor Hill has himself said in an address elsewhere: ‘I believe that the pursuit of knowledge for the welfare of mankind is one of the greatest agents for goodwill between men in every land.’ It is in that belief that he is here to-day.

This Session of the Indian Science Congress has a momentous task to perform; to discover how best to bring the aid of science to the development of India’s great resources in agriculture and industry, to the improvement of health and to social advancement and prosperity.