

AIDS closes in

THE latest report on global AIDS crisis published in the first week of December 2000 by UNAIDS, the UN agency monitoring the epidemic, gives little comfort. A staggering 21.8m people have died of AIDS since the first cases were diagnosed in the early 1980s, three million in the last year alone.

FOR years health experts have known that HIV, the virus that causes AIDS could bring a devastating scourge to countries like India, Myanmar, the Philippines, Pakistan, China, Cambodia, Vietnam and Bangladesh, with a poor and largely illiterate population.

the full brunt of the HIV problem has been felt. What's feared most: the two diseases combined, according to some AIDS Control Organisation are "an epidemic within an epidemic."

In Bangladesh the situation is assuming worrisome proportions. Reports published in the dailies through Police Department sources after the murder of an Industrialist in Uttara indicate that private brothels have proliferated through some posh areas of the city where among other enjoyments, unprotected heterosexual relationships are a way of life.

research and studies show that Bangladeshi society now is more footloose and sexually free than is commonly admitted. As a result of such mobility that is now surging up, HIV no longer remain confined to red light zones alone, if these exist in some cities and roadside brothels that service long distance truckers.

The problem with HIV -- either in our country or adjoining India's countryside is that awareness of the disease is often non-existent -- literacy is less than 50 per cent in rural areas and medical care is primitive and dependent on diagnosis through symptoms. Yet HIV does not normally produce symptoms until it triggers full-blown AIDS, a process that can take years.

In comparison Myanmar has 530,000 people infected, Thailand 755,000, China 500,000 and Malaysia 49,000. In Africa South Africa will pay dearly for AIDS crisis. The figures are startling: about 3.5 million of that country's 40 million citizens are HIVinfected -- more than three times the US rate and 50,000 new HIV cases emerge each month.

Even in Zimbabwe, where several prominent figures, including government ministers, have died after contracting AIDS, the real cause of death is kept secret. "There is consistent denial here by the government," says Marvellous Mhloyi, a demographer at the University of Zimbabwe in Harare.

Tuberculosis is also prevalent in India and Bangladesh; nearly half the population has a latent TB infection. Normally only three to four per cent of those cases develop into active TB. But a person who is HIV-positive, with a weakened immune system, is prone to the disease and in conventionally crowded living conditions in this region, could spread it to 20 others.

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to UNAIDS, is 13,000 which include 610 orphans. The number of deaths caused due to AIDS in 1999 according to the same source is 1000, a figure that is really alarming. Most worrisome, half of all sex workers in the country are infected with syphilis, meaning condoms are not being used.

If it comes that way it will be a national shock. Until 1996, most people in the country considered AIDS a scourge of the libertine West that posed no threat to a relatively isolated land with a conservative society based on monogamous marriages. But the country now, it must be noted, has hundred and thousands of sailors, construction labourers of all varieties who work abroad for a time and a continual tide of students and businessmen returning from overseas.

of treatment in the West for HIV could be largely irrelevant in our region, where the drugs involved are so expensive that they might be available only to the wealthy.

The triple-drug therapy namely one protease inhibitor with two reverse transcriptase inhibitors seems to have fulfilled the promise. Even for those who can stay the course, triple drug therapy at US\$16,000 a year per patient is for now a rich man's solution to a disease that largely affects poor people.

Md. Asadullah Khan is the Controller of Examinations, BUET



A little piglet tugs on the plastic covering the boots of a worker at an educational and advice centre of the Agriculture Chamber of Schleswig-Holstein. Because of the suspect presence of foot and mouth disease in Germany all workers and visitors to the centre must wear protective clothing to prevent the possibilities of transmitting the disease to the animals.

When Ebola and HIV are your friends

AFP, Paris

EBOLA and HIV, two of the most terrifying viruses known to Man, are being harnessed to fight a killer lung disease.

In a remarkable tale of poachers-turned-gamekeepers, Ebola and the human immunodeficiency virus (HIV) that causes AIDS are being called upon along with the flu virus to help treat people with cystic fibrosis.

Scientists hope to cure inherited lung diseases with gene therapy, in which a gene is tucked inside a harmless virus. Like the Trojan Horse, the virus would infect the lung cells, delivering a good gene to replace the flawed gene that causes the ailment.

The problem, though, is finding a Trojan Horse smart enough to penetrate the thick wall of the lungs, which in the case of cystic fibrosis are covered by a mucus barrier.

This is where Ebola and the flu virus, both notorious for attacking the lungs, come in, the monthly journal Nature Biotechnology reports in its March issue.

A team led by James Wilson from the Institute for Human Gene Therapy at the University of Philadelphia Health System, stripped the lung-binding proteins from the Ebola and flu virus.

They then inserted these proteins into the coating of a lentivirus, a disabled virus based on HIV, which would be the vehicle for the therapeutic gene.

The new lentivirus proved a success in delivering its secret weapon to lung cells in a test tube as well as small samples of trachea tissue, and also penetrated the lungs of lab mice.

The Wilson team stressed that additional testing on primates had to be carried before this "pseudotyped" lentivirus could be put to any human trials, notably to see whether it caused any backlash from the immune system or whether the HIV components of the virus mutated.

Gene therapy is highly experimental and somewhat controversial, as researchers are discovering there are few diseases that are pinned to a single gene and can thus be reversed without complications.

One big success in gene therapy was reported last year, when French researchers stunningly restored the immune system of several "bubble" babies who would otherwise have been condemned to spend their lives in sterile plastic tents to ward off infection.

Ebola is a ferociously virulent disease that causes death by severe haemorrhaging. The latest outbreak, in Uganda, killed 173 people before it was officially declared over on Tuesday.

Nature or nurture?

Why are we mad, creative, thieving, impulsive, obsessive, depressed, loving or murderous? Is it because of our genes or because of our environment? Ever since mankind contemplated his own existence, the "nature versus nurture" debate has raged. Now a powerful new tool has entered the fray: the human genetic code, writes Richard Ingham of AFP from Washington

RESEARCHERS poring over the genome, whose draft was unveiled February 12 this year, are already enthusiastically predicting it will unlock dramatic evidence about the molecular causes of behaviour.

"Ultimately the human genome sequence will revolutionise psychology and psychiatry," Kings College London researchers say this week in the US journal Science.

"The most important impact will be on understanding the neuro-biological basis of individual differences and achieving a better grasp of the etiology of (mental) diseases."

But they downplay fears that the genome will serve to reinforce the bleakest view of determinists.

Genes, they say, are likely to be more important than environment on behaviour, according to studies that have notably looked at the fate of identical twins who were separated and brought up by different families.

But headline-making claims that a given gene can be the cause of crime, homosexuality or sporting brilliance are dangerous nonsense, they say.

For one thing, behaviour is likely to be a cause of complex action between multiple genes rather than just one. And behaviour is still strongly affected by moral

them, McGuffin said. Another rich area for gene-hunters are the DNA sequences that could make an individual more vulnerable to addiction.

"Between 40 and 60 per cent of an individual's risk for an addiction, whether it is to alcohol, opiates or cocaine, is genetic," says a team led by Eric Nestler of the University of Texas Southwestern Medical Centre, writing this week in the British journal Nature.

In a preliminary search of the genome, they spotted a bunch of genes that appear to control proteins which "desensitise" neurone receptors, the latch mechanisms on the cell surface which determine whether a brain cell is receptive to a drug molecule or closed to it.

Receptor desensitisation is important, as it means the drug taker has to take more and more of the drug to achieve the same pleasurable effect.

The next task is to compare individual genetic codes with each other to spot sequences that could identify behavioural genes, a task that could be done with ease by number-crunching super-computers.

There are ethical fears about behavioural genomics, but the London researchers say that many of these are misplaced.

'AIDS Drugs? where can I get some?'

Ghana remains without any of the drugs that allow AIDS sufferers in rich countries to lead full lives. Efforts by an Indian company to market them here failed when a drug multinational issued a patents challenge. Eugenia Adofo of Gemini News Service correspondent visited an Accra hospital to speak to a patient who could not fathom why she is denied medicine that can help.

YOU mean that there are drugs that can lessen my suffering? Ama (not her real name) asked with a mild sense of bewilderment that failed to mask the physical pain racking her frail body.

least if they will dull the pain and let me die a merciful death... Her voice trails off... "Where can I get some to buy?" Ama was a pretty and rotund housewife in a former life that she cannot even remember now.

ians infected with HIV, the virus that causes AIDS. Her husband, a long-distance truck driver, apparently contracted HIV while having sex on one of his hauls and infected Ama and their second child, who died shortly before the age of three.

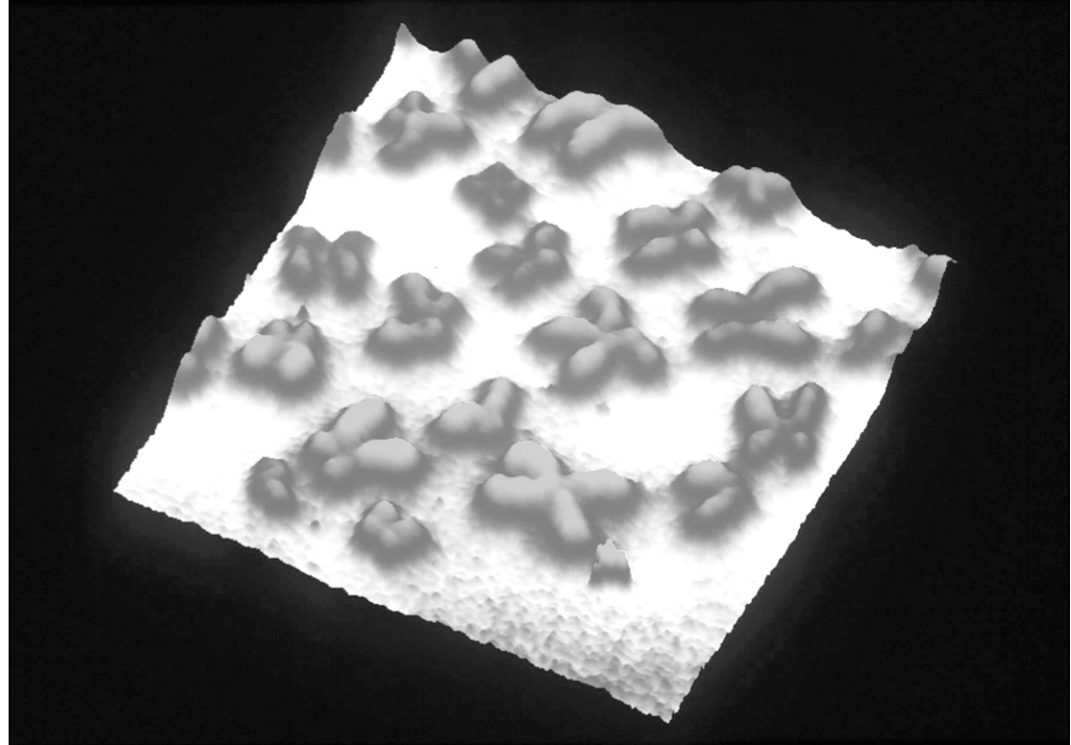
eyes and the widest smile," she recalled. "I watched the disease eat away at his smile and then it got to his eyes. It broke my heart." "I would have sold my soul to the devil to reduce the pain that my little boy went through. He got infected through no fault of his and I think he deserved more medical care than the useless antibiotics and pain killers that the doctors gave him."

medicines, reinforcing the link between ill-health and poverty, and widening the health gap between the rich and poor. "We know that making life-saving drugs more affordable isn't the whole answer," Oxfam policy director Justin Forsyth said.

Infographic titled 'The cost of health' with sections: MANAGING AIDS, UNTREATED DISEASES, CAPACITY, and PRICED OUT? It includes statistics on drug production, costs, and access in various countries.

It was news to Ama that antiretroviral drugs such as AZT and 3TC would have supported her baby and possibly kept him alive longer. They would also have numbed Ama's tired body. For hundreds of thousands of people with the disease in wealthy countries, these drugs are a miracle allowing them to lead full and healthy lives.

In Ghana, health authorities, reluctant to get dragged into a patent dispute, have refused to let Cipla to distribute the drug. "When the elephants fight, it is the grass that suffers," commented a Central Hospital nurse who is bitter about the patent row. GlaxoSmithKline maintains it is not to blame for the absence of antiretrovirals in Ghana, where 33,000 people died of AIDS in 1999.



A computer-generated handout of human chromosomes, codes and social pressures.

Worries that someone with an inherited disorder may be branded a social outcast are unfounded, they hope. In fact, conditions such as autism, depression, dyslexia, schizophrenia or senility, which still widely provoke fear, disapproval or superstition, will be universally acknowledged as a disease and thus destigmatised, they predict.

Such arguments mean little to people like Ama who need the drugs -- or will suffer and die a needlessly painful death. Eugenia Adofo is an Accra-based freelance journalist.

"Identifying genes involved in behavioural disorders will do much to improve public perception and tolerance," in the same way that former US president Ronald Reagan helped acceptance of Alzheimer's disease by publicly acknowledging that he had this ailment, they say.