**Pioneer sets out plan**

**GENEVA, Friday**

Three new lines of potential defense against the virus which causes Aids were set out yesterday by Dr Robert Gallo, the pioneering American’ researcher who helped discover the HIV virus:

Dr Gallo said work should concentrate on methods of blocking the virus from entering healthy cells, moving on from current therapies which' stop it reproducing.

He also gave an upbeat assessment of a simple vaccine already tried in humans that could stimulate the body's own defense against invasion by HIV, offering the first real hope of treatment for millions of HIV-infected people in the third world.

But he told the a meeting at the 12th World Aids conference that it was too soon to pour all available resources into the quest for a preventative vaccine, which had uncertain prospects and would do nothing to help the tens of millions of people in poorer countries already infected with the virus.

Dr Gallo, who is director of the Institute of Virology at the University of Maryland, Baltimore, said existing drug therapies had been very successful, but· the threat of toxicity building up from long-term use and a buildup of resistance

by the virus had to be faced.

"For some people it is going very well, but the problem of compliance is there. We have to face up to the toxicity and solve the third world problem," he said.

"Despite great advances in against HIV and the likelihood of additional anti-HI V chemical inhibitors being developed in the coming years, the problem of treatment for HIV-infected people is not solved."

In 1995 Dr Gallo and other colleagues demonstrated that chemokine- proteins which play 'a role in inflammation - can naturally block the, entry of the HIV virus into healthy cells.

Chemokines have been likened to bouncers at a night club – the more you have, the better able they are to keep out undesirable elements. Dr Gallo pointed to a

group of hemophiliacs repeatedly inoculated with HIV-infected blood up to 1985 who had not become HIV-positive.

He said they were found to have more than twice the level of chemokines in their blood than those who became infected.

Treatments and preventative drugs based on chemokines could be in place in three or four year time, he believes.

Creation of drugs which stop so-called fusion of the virus with healthy cells - already the subject of much discussion at the conference is another promising area, Dr Gallo said.

The third main target would be a vaccine to stimulate the immune system by lowering levels of interferon, which can help destroy the body's defences, and another protein called tat. The vaccine has been tested on a small number of people in Europe for three years with promising results, and larger scale trials are due to start in Baltimore later this year.

Administered perhaps three times a year, it could be the first cost-effective way of treating most of the 40 mi lion people likely to be infected by Aids by the turn of the century.

Although optimistic about vaccines that treat Aids, Dr Gallo was cautious about prospects for one that will prevent the condition altogether.

"On a preventative vaccine I can't promise anything," he said. "In 1984 I was asked by the (US) secretary of health when we would have a (preventative) vaccine, and I said about three years.”

Dr Gallo's pessimism about a preventative vaccine was underscored by Dr Ruth Ruprecht of Harvard University.

She told the conference a five year experiment using a supposedly disabled, or attenuated, version of the HIV virus to stimulate an immune response in monkeys had failed, with most of the monkeys either dead' or sick from Aids.

On Wednesday, the conference heard that drugs that stop HIV in its tracks may also allow the body's Aids-wrecked defenses against disease to rebuild themselves.

Treatment combinations that include medicines called protease inhibitors have dramatically changed Aids therapy. The drugs have pulled some patients back from the brink of death while stopping many others from getting sick.

Still in doubt, though, is whether the body's immune system - the main target of the virus – is able to reconstitute itself after Aids or whether it remains permanently weakened.

Dr Brigitte Autran of Pitie Salpetriere Hospital in Paris said yesterday that measurements of patients crucial white blood cells suggests the news is good.

"We are now providing proof that indeed the immune system is not dead," she said yesterday at the 12th World Aids Conference.

HIV's target is a category of disease fighting white blood cells called CD4 T cells. Like others, Dr Autran found that these soon rebound after treatment starts.

She followed 303 patients in very late stages of Aids. After 18 months of treatment, their CD4 T cell counts rose from an average of 51 per cubic millimeter of blood to 194.

About a year into treatment, she also found a rise in so-called naïve cells, newly generated cells that had never been exposed to HIV. This is considered a good sign that the immune system is indeed returning to its former state.

"We saw a' very strong very strong but very late regeneration of naive cells in every single patient" whose virus levels had plummeted, she said.

Furthermore, the patients' CD4 cells appeared to be more aggressive disease fighters.

Dr Anthony Fauci, head of the US National' Institute of Allergy and Infectious Diseases, said evidence of immune reconstitution has been building, although it's still not clear how complete it will be.

He said Dr Autran's "work is among the best in showing that there is at least partial reconstitution of the immune system."

Despite their improvement, many of these once terminally ill patients continue to take a variety of drugs intended to fight off so called opportunistic infections.

These are diseases caused by usually innocuous germs that are dangerous because of the lack of strong immune defenses.

Dr Fauci said he believes doctors should not routinely take patients off these medicines until a study is conducted to see if their immune systems are truly strong enough to ward off these microbes.

(Agencies)

**Third World countries plight highlighted**

**By JONATHAN BIRT**

**GENEVA, Friday**

Scientists and organizers of the 12th World Aids Conference announced new research and initiatives on Monday to slow the spread of the epidemic and improve treatment where it is needed most - the developing world.

On the first full day of the meeting, the United Nations AIDS agency UNAIDS revealed plans to help stop HIV-positive women in 11 of the world's poorest countries from passing the virus on to their babies.

And the search for a vaccine that could spell an end to the killer disease in the worst-hit comers of the world was given a boost by the US National Institutes of Health *(NIH), which said it* would provide additional funds to help speed clinical trials.

"The global epidemic is such that...we need to take certain potential products forward into the field, that is into human trials, as fast as possible," said the NIH's newly-appointed director of Aids research Mr Neal Nathanson.

UNAIDS said its project was targeted at around 30,000 women, who will receive antenatal care, counseling and improved medical assistance during labour ,and birth.

In poor countries, 25-30 'per cent of women with the virus pass it on to their babies at birth or through breastfeeding, compared to just five per cent in the industrialized world.

A study conducted in Thailand by Dr Nathan Shaffer of the US

Centres for Disease Control (CDC) showed a one-month course of anti-viral drug AZT (zidovudine) was able to halve the risk of babies contracting the virus during birth in women who did not breastfeed.

The drug's.maker Glaxo Wellcome Plc will supply the drug to the UN at around 75 per cent of its usual cost.

Mother-to-child transmission is the most common way of passing on the virus in the developing world, where around 90 per cent of all Aids an HIV cases are found. Countries to be targeted include Botswana, Cambodia, Zambia and Zimbabwe.

"This is an important 'issue, and one that nee s to addressed," said UNAIDS director of policy, strategy and research Ms Awa- Marie Coli-Seck

While the development of a cost-effective and efficient vaccine is widely thought to be a long way off, drug companies announced progress on Monday in finding new ways to suppress the virus in the blood.

Glaxo Wellcome, Hoffmann-, La Roche an Bristol-Myers Squibb all published data claiming encouraging results for combinations of drugs which did not include' *proteas* inhibitors, the potent treatment s which over the past two years ,have saved the lives of many thousands in countries rich enough to pay for them.

While Glaxo and Roche were airing results on drugs that have not yet been put on the market, Bristol~Myers c me up with data