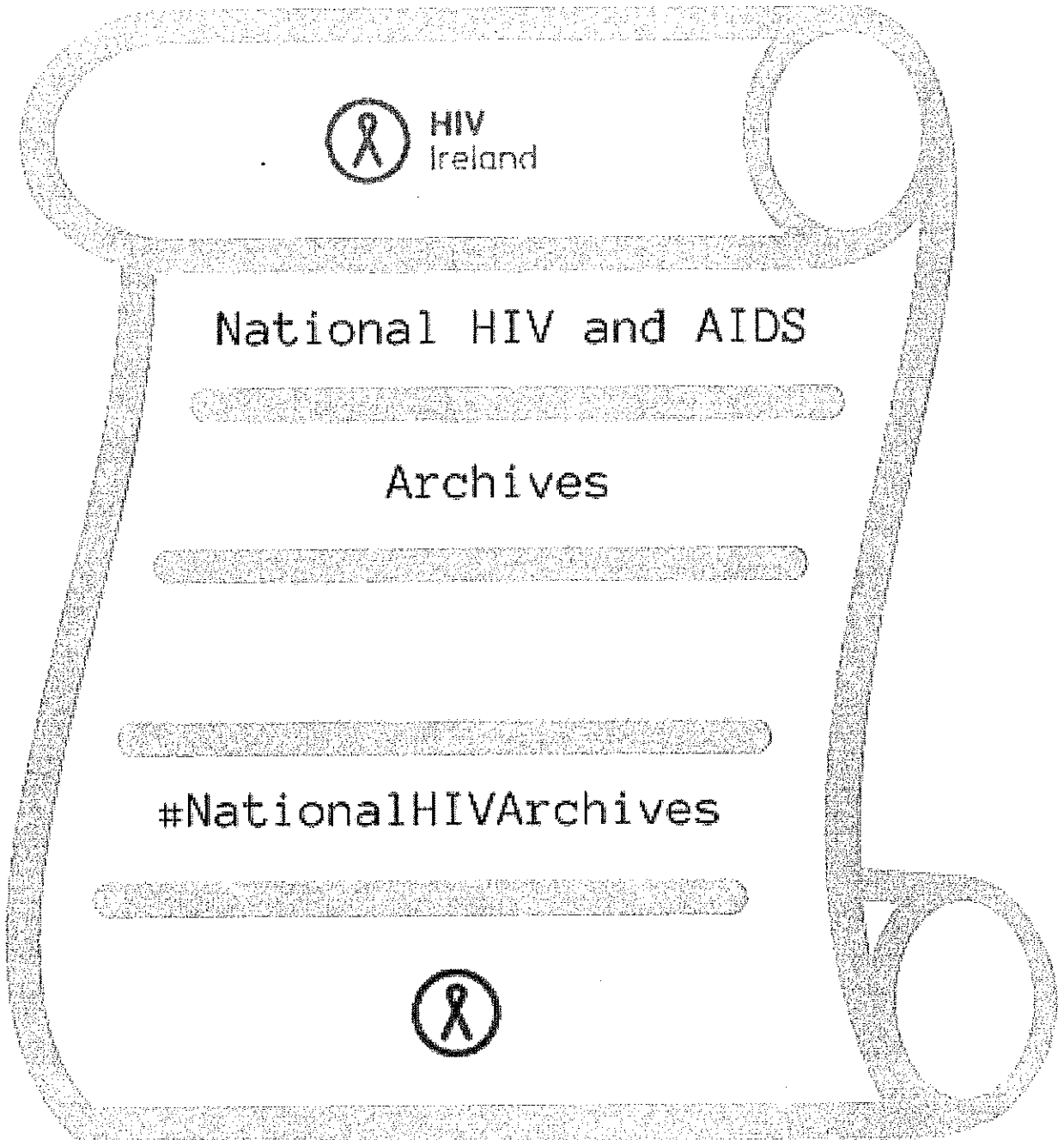


# Print Media



16th to 20th June 1987

Evening Herald  
16<sup>th</sup> June 1987

## Aids double— think 'must go'

AN IRISH Aids expert has called for an end to the great national double-think.

Dr. Zachary Johnson says that single people do not want to admit even to themselves that they are having sex with their partner.

So they fool themselves by not carrying and using condoms. This, says Dr. Johnson, not only leads to unwanted pregnancy but to the danger of contracting Aids.

Dr. Johnson, who is attached to the Eastern Health Board, says that studies have shown that the double-think exists.

"They have demonstrated that people won't use contraceptive because by doing so they are admitting they are having sex.

"That sort of attitude leads to pregnancy because people won't use condoms due to the fact they don't want to really admit they are having sex."

BUSINESS EXTRA

# High risk and high rewards in the race to find a cure for AIDS

AIDS is big business. Share prices for many companies, especially drug companies, have made wild gains with announcements of involvement in AIDS-related products. British Biotech, for example, rose from 10p to 100p in 1986, and its share price rose from 10p to 100p in 1986, and its share price rose from 10p to 100p in 1986.

But the price of the drug is expected to go to the drug anti-cancer agent, Wellcome were against AIDS, investigate its use. Although Rees wouldn't say how much the three-

London office. One estimate puts the cost of developing a new drug at 400 million. The drug rate is also "colossal", according to Rees, who estimates that for every 10,000 compounds chemically isolated, only one will make it to the market. Although the cost of the products which are marketed is about 100 million, there are about 100 million products, like Thalidomide, in the pharmaceutical industry has a bright future, it also has a grim past.

Although royalties from testing AIDS, Wellcome is planning to market a drug, Retrovir, the brand name for a compound originally called AZT but now known as Zidovudine. First developed in the '60s as a potential anti-cancer agent, Wellcome were against AIDS, investigate its use.

However, Wellcome is not how much the three-

Year development programme Rees says it had been "very small" adding that if the cost of Retrovir is 100 million, it costs 25,000 shares. All of this is under way for research scientists in effect in the U.S. and the National Cancer Institute. Rees says that the U.S. are already heavily invested in AIDS research. It is in places depending on Retrovir alone. Rees would not divulge details, but he did say that there were 100 million shares under way for research scientists in effect in the U.S. and the National Cancer Institute. Rees says that the U.S. are already heavily invested in AIDS research. It is in places

search will be peripheral. This is not a revelation on Irish scientists, but because AIDS has come late to Ireland. Researchers in effect in the U.S. and the National Cancer Institute. Rees says that the U.S. are already heavily invested in AIDS research. It is in places

less, drugs under contract for the Kennedy, ICP announced details of a new anti-AIDS drug. Developed by the Haiman drug Institute, a Philadelphia-based group of scientists, the drug is expected to be marketed in 1988. The progress of AIDS, involving both healthy and infected volunteers.



● AUSTIN BARRAGH, Chairman of the Institute of Clinical Pharmacology — the firm's link with the search to find a cure for AIDS.

## Developing new drugs is "very much a high-risk investment", according to Michael Rees, spokesman for Wellcome's London office.

search and development. Rees says that the money spent on developing a vaccine is done. Irish scientists are generally UCD, believes that the major work will probably be done at the Pasteur Institute, but she is also

ICP does not stand the same chance of making money as the drug company of the high-profile Ampligen contract will be good publicity. Already ICP's share price has doubled since it went public in November 1984.

spokesman David Derragh said the increase was a reflection of the company's share price rather than any effect of the involvement in AIDS research. Mary Mulvihill

ICP does not stand the same chance of making money as the drug company of the high-profile Ampligen contract will be good publicity. Already ICP's share price has doubled since it went public in November 1984.

● AUSTIN BARRAGH, Chairman of the Institute of Clinical Pharmacology — the firm's link with the search to find a cure for AIDS.

# Ron jr. wants AIDS push

PRESIDENT Reagan's son, in an explicit U.S. television documentary on AIDS, says his father's administration is not doing enough to stop the spread of the disease, according to a report published yesterday.

"Yet someone in Washington know you don't think enough is being done," Ron Reagan Jr. was quoted as saying in a public service announcement made with the film, Newsweek magazine said.

"Write to your Congressman or to someone higher up," said Reagan. His remarks were accompanied by a wry smile.

The magazine said that in the film, which may never be aired because of its sexual content, Reagan



dangles a prophylactic on camera and says: "This is a condom."

The President's son, who once danced in his underwear on a late-night television show, told Newsweek that the right wing welcomes AIDS as punishment for homosexuality.

He said U.S. Education Secretary William Bennett's recent call for widespread AIDS testing pandered to this notion.

Meanwhile, in Washington, Bennett said yesterday that prisoners with AIDS who threaten to spread the disease may have to be kept in prison after serving their sentences and a Republican senator raised the possibility of quarantine for AIDS carriers.

Mr. Bennett and Senator Jesse Helms, a hard-line conservative, made their remarks in

separate interviews on U.S. television.

IT LOOKS as if Liberace still has a flair for the dramatic stunt! Some pals threw the deceased showman a 68th birthday bash at his Vegas restaurant and even set an empty place for him under his portrait.

Then, as one old friend stood to give a toast, the portrait, which has hung safely on the wall for years, suddenly crashed to the floor. The spooked partyers scattered in double-quick time.

Diana Ross strolled into a crowded San Francisco restaurant and the arrogant maitre d' asked a fellow to give up his table to "a real celebrity". The guy meekly stood up, never mentioning his own name — Norman Mailer.

## AIDS carrier identified

From Conbr O'Clery,  
in Moscow

A SOVIET specialist who caught the AIDS virus in an African country has been identified as the cause of more than a quarter of the AIDS cases in the Soviet Union, a leading Soviet medical scientist disclosed yesterday.

The number of people in the Soviet Union with AIDS has almost doubled in the last three months, with a further 10 suspect cases being examined, the president of the USSR Academy of

Sciences, Dr Valentine Pokrovsky, said in an interview.

Since March the official figure has stood at 31, all but three of them students or trainees from abroad, mainly Africa. However, the specialist, who caught the disease in Tanzania, infected a chain of 15 Soviet citizens.

The specialist is one of four people in the Soviet Union dying from the disease, Dr Pokrovsky said. The other three are foreigners.

Dr Pokrovsky also criticised the Moscow AIDS clinic, opened two months ago, which he said was in

very poor shape. The laboratory operates from a small room in a dilapidated building near the city centre.

Between 60 and 100 people queued up at the clinic every day. But tests showed only one visitor so far was suffering from AIDS. He has not been identified by the authorities as the callers remain anonymous.

Dr Pokrovsky recommended the passing of a law to punish anyone with the disease, putting others at risk, and the testing of all foreign citizens, drug addicts, homosexuals and prostitutes.

SL

## *Immuno AG Seeks to Test AIDS Vaccine on Humans*

A WALL STREET JOURNAL News Roundup

VIENNA—Immuno AG said that it produced a prototype vaccine against acquired immune deficiency syndrome and that it hopes to start clinical tests on humans early next year.

The Austrian vaccine producer said chimpanzees injected with the genetically engineered vaccine, called GP 160, had shown immunity to infection with the AIDS virus without side-effects.

"We assume that, given ideal conditions, clinical tests on human beings can be started at the beginning of 1988," clinical research director Marta Eibl told a news conference. The first human tests are likely to take place in the U.S. and West Germany, she said.

But the company's scientists stressed that the vaccine could protect only those who had not been infected, and would not help AIDS carriers or sufferers.

Robert Gallo, a leading U.S. AIDS researcher who has been working with Immuno on the project, told the news conference the vaccine could represent a historical achievement.

But he cautioned that it still might prove impossible to make an AIDS vaccine for humans. "Rather than use the word breakthrough, I would prefer to say it is a substantial scientific step forward," he said.

GP 160 reproduces the entire so-called envelope of the AIDS virus. Attempts to produce a vaccine using only parts of the envelope have failed so far, said Mr. Gallo, a professor at the U.S. National Cancer Institute at Bethesda, Md.

Immuno, whose shares are closely held, employs 2,000 people and has annual sales of about three billion Austrian schillings (\$238 million). It was co-developer of the Salk vaccine against polio.

Daily Mail  
17<sup>th</sup> June 1987

Daily Mail, Wednesday, June 17, 1987

# Churches condemn AIDS fight

**RELIGIOUS** leaders have attacked the Government's fight against AIDS as 'immoral'.

One told a committee of MPs that the 'Don't Die of Ignorance' campaign encourages promiscuity.

The revelations came in written evidence to the Commons Social Services Committee.

Britain's Jewish leader, Dr Immanuel Jakobovits, declares: 'I cannot accept anything which publicly condones or encourages immorality. The present campaign does, in effect it encourages promiscuity by advertising it. It tells people not what is right but how to do wrong and get away with it.'

The Chief Rabbi attacks the slant of the campaign and believes the fact that most AIDS victims are homosexuals should not be covered up.

Evening Herald, Wednesday, June 17, 1987

# Women join the fight on the Aids epidemic

THE Irish Federation of Women's Clubs was represented by president Imelda Gogan, and PR Maeve Durkan at a "pilot" meeting of a newly launched organisation called "Women in Aids", held in Eccles Street, Dublin, this week.

hoped to publish leaflets on the subject and perhaps to hold public meetings.

The IFWC representatives will report back to its people at the next quarterly meeting.

\* \* \*

The group, which hopes to provide lecturers for clubs, circles and youth organisations, in an educational programme on Aids, was addressed by Sue Richardson and Mary Clune.

Mary, a nurse, spoke at the meeting on "Aids and Pregnancy".

Delegates from a number of different associations were at the Eccles Street session. They included ICA, Irish Housewives, Cairde, Aids Hotline, The Society of Social Workers, the Well Women, The Buddy Group, and Aids Action.

The aim of the organisers is to find ways of spreading the word about

© 1987 The Irish Federation of Women's Clubs



**Evening Herald**  
**17<sup>th</sup> June 1987**

## **Reagan Aids ad**

PRESIDENT Ronald Reagan's son says the federal government is not doing enough to stop the spread of Aids.

Ron Reagan told Newsweek magazine that the right wing views Aids as a punishment for homosexuality. And in a public service announcement made to accompany an upcoming Aids documentary, he decries the lack of government effort to battle the fatal disease.

# Aids: 'get patients' OK doctors told

By MICHAEL LAVERY

FAMILY doctors who have to report to insurance companies on patients with the Aids virus, must get the written consent of the person involved, the Irish Medical Organisation said today.

And the I.M.O. backed a decision by their British counterparts that specialists should not disclose the results of Aids tests to GPs without the patient's permission.

There are now 590 confirmed Aids carriers in Ireland, it was revealed today. To date, a total of 9,338 people have been tested for the virus.

The Ethics Committee of the I.M.O. has told doctors who have to give reports to insurance firms that the patient must sign a consent form in the doctor's presence—and it must be an "informed" consent.

"If the patient has been tested for Aids he must realise that it may mean he will not get insurance

at all, or if he does, it will be very heavily loaded," said Dr. Aidan Meade, the Ethics Committee chairman.

The I.M.O. is currently waiting for a reply from the insurance companies on what their policy will be for patients who are asked questions about their lifestyle. The companies have not specified what sexually transmitted diseases they are concerned about, he said.

The British Medical Organisation's annual GPs conference decided the results of Aids tests should not be disclosed to family doctors without the patient's consent and I.M.O. agree with this, said Dr. Meade.

In Ireland, the Department of Health is notified of Aids virus cases but it is "absolutely confidential and is not mandatory" for the doctors involved.

Ireland, in line with other Western countries, has not made the reporting of Aids cases mandatory.

**Financial Times**  
**18<sup>th</sup> June 1987**

**AIDS test secrecy**

Doctors at the British Medical Association GPs' conference defeated a motion calling for GPs to be told if a patient is an AIDS carrier. The results of clinic tests will stay confidential.

SV

Irish Press  
18<sup>th</sup> June 1987

# Sexual restraint the only answer to Aids—bishop

THE spread of aids is a result of sexual promiscuity, and only by a reawakening of the value of self-discipline, restraint, fidelity, will disaster be averted, Bishop William McCappin of the Connor Diocesan Synod said yesterday.

Dr. McCappin was making a presidential address at the diocesan synod. He said that it was not so many years ago that the Christian ideal of chastity before marriage, and faithfulness within marriage, would have been received with scorn and derision. "But the advent of Aids has caused a re-think, or maybe made people really think for the first time," he said.

The Christian response must be one of prayer and compassion. "While showing compassion we must also refute those false prophets who have misled people into believing that there is no moral limit to human freedom. Today there is widespread

encouragement for promiscuous behaviour. the spread of Aids in modern society is a result of sexual promiscuity," he said.

Turning to the violence of the North, he said that in the country areas — particularly on the Border — the sense of neighbourliness had been undermined by the suspicion that because of sectarian differences residents had been "fingered" by people in their own local community.

"Even though I started my ministry during the Second World War, we now live in a more violent and dangerous society where terrorist murderers callously ignore the greatest human right of all — the right to live," he said.

The last 18 months had shown that the Anglo-Irish Agreement had not achieved lasting peace, stability and reconciliation. Instead, there had been increased violence and bitterness. If there had been an alienated minority, there was not an alienated and sullen

majority.

The last 18 months since the Anglo-Irish Agreement had been particularly difficult for the RUC in their professional work of impartially administering the law. It was reprehensible that while they were combating the ruthless terrorism and murder campaign of the IRA — their own homes and families had been under threat.

Some RUC officers were murdered simply for the fact that as policemen or policewomen they were regarded as "legitimate targets" — like the foul murder of Const. McClean as he worked on his farm at BallyEofey in Co. Donegal two weeks' ago. "There are no 'legitimate targets' for murder," the bishop said.

This will be the last time that Bishop McCappin will preside over the diocesan synod as he is retiring in September of this year.

IP 18/6/87

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# AIDS transforms moral landscape, says Cardinal

From Robert Nowell,  
in London

THE MORAL landscape has in fact altered irrevocably with the onset of AIDS," said Cardinal Basil Hume, Archbishop of Westminster, in his preface to a book published today on how the Church and the Churches are responding and should respond to this crisis.

"The Church has an indispensable role to play," he added. "It must be unyielding in principle and compassionate in practice. Alongside the desperate need for medical and scientific knowledge, skills and inventiveness "we have to learn how to live and love in a more genuinely human way." It was a hard saying, but nonetheless true, "that our future as a society depends on our rediscovery of a strict moral code."

The book — "AIDS: Meeting

the Community Challenge" — brings together contributions by a variety of experts on the medical, social, theological and pastoral aspects largely from a Catholic viewpoint. The situation in Ireland is described by the Rev Brian Power, of the Dublin Diocesan Task Force on AIDS.

But — to the surprise and indignation of senior Church officials who had been consulted in planning the book — one contribution that had originally been commissioned has been omitted. This was by Clifford Longley, religious affairs correspondent of the *London Times* (and a Catholic). The publishers, Society of St Paul, found it too controversial and out of keeping with how they saw the rest of the book.

Yet in his contribution Mr Longley was concerned to suggest how the challenge of AIDS could

enable the Churches to develop a sexual morality that people would once again find convincing. AIDS, he argued, was a kind of judgment both for the sexual liberation of recent years and for the attitudes and standards which that liberation had replaced, at least partly because people no longer had confidence in them.

In particular, he suggested that at the biochemical level, AIDS was confirming and reinforcing the Biblical insight that through sex a couple become 'two in one flesh' and that sexual intercourse, no matter how casual, has enduring effects and consequences involving the whole person. In this way the Churches had both an opportunity and a duty to supply the moral counterpoint to the medical arguments and precautions, "not contradicting them but expanding and explaining them."

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## AIDS Strategies

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Something is certainly wrong when the American administration's proposals for AIDS testing draw boos and hisses at an international conference on the disease. The proposals, leaving the initiative mostly in the hands of state authorities, are an essentially moderate and tentative response to an epidemic about which we still know too little.

The administration has directed virus screening for immigrants seeking permanent residency and requested a plan for testing federal prisoners. U.S. servicemen already are routinely tested. The administration also chartered a study of what might be done in veterans hospitals, and President Reagan recommended that state and local authorities undertake further testing—of applicants for marriage licenses, for example.

One can debate whether this initiative will prove effective, but it is in no way a program against AIDS victims or homosexuals. Treating it as such invites prejudice among the general population, just as hecklers invited Vice President Bush's crack about a "gay group."

The disease has claimed tens of thousands of lives, threatens hundreds of thousands more and is already devastating Haiti and much of Africa. The U.S. Senate, with a 96-0 vote, certainly had no problem ordering testing for immigrants. The Senate also voted to throw in \$77 million, including \$20 million to mail an AIDS pamphlet to every household in the nation. A recent analysis of a similar program in Britain concluded that it "raised considerable anxieties in the

lowest-risk groups" but had "little impact" among high-risk groups.

The issue about testing, reflected in the tentative nature of the U.S. administration's recommendations, is that it's not clear what actually will help. In particular, it's not clear what to do with test information once you collect it. Some authorities may choose the screening of applicants for marriage licenses, if only to allay fears and perhaps reduce the incidence of children infected at birth. No American state has opted to do so yet, and all but about 10 states have abandoned screening for syphilis because it just doesn't yield many people with sexual diseases. Certainly Mr. Reagan's suggestion that patients at sexual-disease and drug clinics be tested ought to strike many as sensible.

The unknown danger of AIDS is with us now, but it pays to stress the word "unknown." An African-style epidemic is certainly possible, especially with a mutation of the virus. But this has not happened yet in the U.S. or Europe, and it is not a sure thing. Unless the testing in the coming weeks and months shows a major breakout of the virus into the larger community, it may be that the wrath of this disease will remain largely confined to vulnerable pockets. That would argue for continued, selective efforts.

At this stage we certainly can't afford to stigmatize reasonable proposals. But given that we don't know what will work, neither do we need a crash federal effort to do something for the sake of doing something. What we need is every suggestion and a lot of experimentation.

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1206 (LIC) 19/6/87

# Aids fear boosts sales at LIG

ALAN WOLTZ, chairman of London International Group, said yesterday that condom sales were rising rapidly. "We are expecting a 40 per cent increase in shipments this year," he added. "I have never seen growth like this in my 16 years with the company".

LIG's Durex brand is the leading British condom, with 95 per cent of the market. The company also has 65 per cent of the Continental market and 40 per cent in the US.

"Condoms offer the only recommended protection against Aids and therefore have become one of the most important health care products," said Mr Woltz.

The fear of Aids has reversed the long-term decline of the con-

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By Robert Peston

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traceptive, which began in the mid-sixties when the pill started to take off.

In the first four months of the current year there has been a 26 per cent rise in deliveries in Britain and a jump in American orders greater than 40 per cent.

The IBA has recently given permission for condom advertisements on television. LIG has earmarked several million pounds for a TV campaign expected to begin in September. There will also be several hundreds of thousands of pounds spent on research into new condoms and £7m on new production capacity.

Sales of medical gloves are rising rapidly for the same reason. Mr Woltz cited dentists as having started to wear rubber gloves as a protection against Aids. LIG has almost half the British market for surgical gloves.

LIG yesterday announced full year results showing a 12 per cent rise in pre-tax profits to £27.1m.

Strong growth in condom and glove sales were held back by a small decline in cough medicines and some toiletry brands. There was also good progress by photo-processing and electrical businesses.

But the absence of American tourists in London which followed the bombing of Libya led to a fall in profits from fine china

maker Royal Worcester Spode from £3.6m to £1.48m. Sales in America rose strongly, however, in response to a price-cutting campaign.

LIG ended the year with net cash of £4.8m in its balance sheet. Last year it disposed of several peripheral activities in the manufacture of drink dispensing machines, orthotic shoes and hot water bottles. The company is now committed totally to branded consumer products and is assessing acquisitions

"The group has made a particularly strong start to the year," said Mr Woltz. Brokers expect a sharp jump in current year pre-tax profits to £34m. The share price rose 2p to 332p.

SW

# Warning over Aids patients' right to confidentiality

PATIENTS infected with the Aids virus may have to lose their right to medical confidentiality in the interests of the population at large, the National Association of Health Authorities was told yesterday.

If World Health Organisation predictions were correct, "we are faced with a potential plague of a dimension previously unknown in our time", Arthur Taylor, chairman of the association, told its annual conference in Bournemouth.

"We need to be prepared to take a radical look at our practices in terms of confidentiality and ethical issues relating to testing and screening, and to change them where necessary."

Mr Taylor's views were heavily criticised by the British Medical Association, which accused him of a panic reaction. Outside the conference Mr Taylor said the time might come when Aids should be made notifiable, and when people should be screened without their consent.

At present general practitioners could not be told without the patient's consent if a patient was HIV positive. But, he said, the GP might need to know in the interests of the patient's family. There were also risks to surgeons and other hospital staff, though few cases of medical personnel becoming infected had been reported. The time to change the rules had not yet arrived, but

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By Nicholas Timmins  
Health Services  
Correspondent

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when it did "we should not shrink from grasping the nettle".

The BMA said that if confidentiality were lost there could be an increase in Aids because people would not come forward. "Hospital staff are best protected against Aids by good practice which prevents infection with other blood-borne viruses such as hepatitis, rather than by a test which does not guarantee that the patient is not infected" a spokesman said.

■ The time may have come when services for the elderly, the mentally ill and the handicapped should cease to receive priority over acute hospital services, Arthur Taylor, chairman of the National Association of Health Authorities, said.

The continuing pressure to shift money into the so-called priority services was "creating enormous pressure on acute hospital services in some places," he said, leading to wards closing and treatment being restricted.

Services for the elderly, mentally ill and handicapped had been a priority for many years. "We have to ask how long do priority services remain a priority? When do they lose priority because adequate levels of service have been achieved, or because

other services are falling short of desirable levels?"

The problem appeared most acutely in teaching centres, Mr Taylor, who is chairman of Newcastle Health Authority, said; but not only there.

"The money available for acute services is eroded and it is that pressure which encourages health authorities to charge for the treatment of patients from other authorities," Mr Taylor said he would favour some form of "internal market" in which hospitals could charge the health authority from which the patient came for specialist treatment.

"If my authority puts a pacemaker in for someone from another district it costs £1,500 just for the pacemaker." At the moment authorities were reimbursed two years after the event and at an average, rather than the real, cost.

■ Health authorities are paying hundreds of thousands of pounds a year for locums because they cannot recruit junior doctors to hospital posts, the conference was told. NHS rules stopped hospitals paying junior doctors more than £6.36 for each four hours of overtime at weekends, but a senior house officer working as locum could earn £409 for a weekend.

The conference urged the Government to reform the career structure for junior doctors and to limit the rates agencies could charge.



Evening Press  
20<sup>th</sup> June 1987

EVENING PRESS, SATURDAY, JUNE 20, 1987

## ***AIDS prostitute may be charged***

POLICE in the US said they were considering charging an alleged prostitute who has AIDS with attempted murder.

The woman, Stephanie Smith (36), was arrested in a bar in Fresno, California, after police saw her solicit a man for a sex act, a police spokesman said.

SV

## The treatments to come

Drug makers are scrambling to get a piece of what promises, unfortunately, to be a huge market for AIDS medicines. AIDS drugs can be divided into two groups: those that tackle HIV (the virus that causes AIDS) directly and those that try to deal with the damage it does to the immune system. HIV itself does not kill: it knocks out the immune system and lets other infections run rampant through the body. There are plenty of substances under investigation that either give the body weapons it can no longer produce for itself, or push what remains of the immune system to greater efforts. But neither of these really touches HIV, which has already ducked the defences. More useful are direct attacks against the enemy.

HIV weaves itself into the genetic fabric of its victim, making it hard to destroy without killing the cells it has infected. For the foreseeable future, the best that can be done for patients is to hold the virus in check. Victims may have to take anti-AIDS drugs for the rest of their lives. So an AIDS drug has to be suitable for long-term use. It must be easy to take: by mouth is best. Every dose should last a long time so the patient is not forever gulping medicine. It must not be too toxic, or the drug could damage the body more than AIDS does. And it must be able to cross from the blood stream to the brain, which is one of the first sites of infection.

Azidothymidine (AZT), made by Burroughs-Wellcome under the brand name Retrovir, nearly fits the bill. AZT has been approved for use against AIDS in most industrialised countries. AZT is made from thymidine, which is extracted from herring and salmon sperm. When HIV is replicating itself it puts azidothymidine where plain thymidine should go. The virus is then unable to build upon azidothymidine and so fails to reproduce. Human cells are less affected by AZT.

AZT has been around since the 1960s, when it was investigated as a possible cancer drug (much AIDS research consists of screening old drugs for use against the new threat). The problem with AZT is that it hinders the production of blood by the bone marrow. Extracting thymidine from herring and salmon sperm is expensive, and so is AZT. Patients also have to take pills around the clock. AZT, however, has no competitor. It is already being used by over 9,000 patients. Other drugs have yet to be used outside small clinical trials. Combining AZT with other anti-viral drugs may reduce the amount needed. Less Retrovir would mean fewer side effects.

Apart from AZT, most current excite-

ment about prospective AIDS drugs focuses on dideoxycytidine (ddC) and Ampligen. Another failed cancer drug, ddC works on the same principle as AZT and was at least as effective as AZT in cell culture tests done at America's National Cancer Institute (NCI). It is now in the early stages of clinical testing. Early results showed that ddC's side effects may be less severe than those of AZT. For this reason, it is considered to have a bright future—which pleases Hoffmann-La Roche, which now owns the drug—dimmed by reports that it causes skin rashes. The NCI says that many chemical relatives of ddC and AZT work just as well in culture dishes. However, ddC is



only in the early stages of clinical testing. It will be at least a year before ddC and its relatives hit the market.

Ampligen works differently from ddC and AZT. It is a dummy virus that was developed by HEM Research, an American company, and is now licensed to Du Pont. Immune-system cells react to Ampligen, and HIV gets caught in the crossfire. Ampligen molecules have built-in defects that make it easy for the body to break them down before they cause any side effects. Ampligen crosses the blood/brain barrier easily and has boosted the effectiveness of AZT in cell culture tests. Moreover, it seems to suppress the action of HIV in cells that are already infected. As a bonus, it boosts the immune system. Initial tests on a small number of AIDS and AIDS-Related-Complex (ARC) patients showed promising results. (ARC is a condition in which only some AIDS symptoms appear.) Patients had to take the drug intravenously, but only twice a week, and doctors believe that a reduced course of doses may be possible after initial treatment. Such news has made Ampligen a rising star in the galaxy of AIDS products.

One drug that held early promise is foscarnet, made by Astra, a Swedish company, under the brand name Foscavir. In test tubes it interferes with the reproduction of a large range of viruses, including HIV, while leaving the host cells alone. But it lasts in the blood only for a short time, so

patients must take it as a continuous intravenous injection; also, the brain absorbs Foscavir poorly. It has largely been written off as a primary weapon against AIDS, though it may be used to treat secondary viral infections.

Ribavirin is a drug made by ICN Pharmaceuticals under the brand name Virazole. Virazole has been more successful in the laboratory than in clinical trials. In America it is approved only for use in an aerosol spray for infants with respiratory viral infections. The claim by ICN that it prevents the onset of AIDS in people carrying HIV was probably premature. Desperate Americans are buying Virazole from Mexico, where it is an approved drug.

Last year, America's National Institute of Mental Health (NIMH) developed peptide T, a chain of amino acids found in the

protein jacket of the AIDS virus. NIMH found evidence (as yet unconfirmed) that it stops the virus binding to immune-system cells. Peptide T is not toxic, but may damage the immune system.

Praxis Pharmaceutical's AL-721 is a substance derived from chicken's eggs that was developed at Israel's Weizmann Institute. It is thought to remove cholesterol from the virus's jacket, making the virus unable to attach to immune system cells. AL-721 is non-toxic and its ingredients can be found in most kitchens. Praxis has had difficulty manufacturing the drug, which has slowed testing. In the meantime, do-it-yourself recipes for similar concoctions have appeared in the United States.

Medirace, a new British firm, is taking another approach. It discovered the ratio of saturated to unsaturated fatty acids in cell membranes to be far lower than normal in people infected with HIV. This imbalance weakens the structure of all cells in an AIDS victim's body. In particular, immune-system cells lose their ability to detect viruses. Medirace is investigating a fatty-acid derivative called Contracan which fixes the fatty-acid ratio with the aim of restoring the membranes of all cells, and strengthening the walls of the infected cells so that they trap the virus and prevent it spreading. This has been achieved in cell cultures, but has not been tested in humans. The drug would have the advantage of being cheap and long-lasting.

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