White Paper on HIV Antibody Testing

Background. The appropriate use of HIV antibody testing has been a source of considerable debate since the procedure was first introduced to screen blood donors in March of 1985. Whether such testing should be done only on a voluntary basis or be required under certain circumstances is a question currently occupying the attention of many legislative bodies around the world. How, when, and to whom the test is administered, how the test information is to be used, what privacy protection is appropriate for individuals tested, and what protection is necessary against various kinds of discrimination that may result from disclosure of an HIV antibody test result are only a few issues surrounding this complex question.

The purpose of the following discussion is help the reader gain a better understanding of some of these issues. The discussion is organized around three major legal and ethical aspects of HIV antibody testing. These are: (1) consent, (2) disclosure of results, and (3) discrimination and other consequences of the test.

Consent

Proposed Position. HIV antibody testing should be performed either under conditions of complete anonymity or with written
consent of the individual to be tested after that person has been fully informed of the ramifications of the test. If the individual is incompetent to give such consent, the person lawfully authorized to make health care decisions for the person could give the consent after being fully informed.

Refusal of consent should not be an acceptable grounds for refusing to provide medical or other services. In situations where the patient or client may be infected, health care or other service providers should follow appropriate infection control procedures.

Patients should never be required to submit to testing against their will except when there is a compelling public health reason for imposing such a requirement. The compelling reason should be based on evidence and allow for due process, as it may require physical restraint and force to obtain the blood specimen.

Rationale for the position. Diagnosis of HIV infection is a serious and important event. Current evidence suggests that 25-50 percent of infected persons will develop AIDS during the first eight years of their infection. AIDS has proved to be a deadly disease: out of the 39,263 people in the United States who have been diagnosed as having AIDS (CDC, July 27, 1987), 22,548, or 57 percent, have died. Retrovir, the only approved treatment for an AIDS-depressed immune system, may extend the
post-diagnosis life span of some AIDS patients a year or two, but it is far from being a cure. Moreover, at this time there is no medical treatment available for asymptomatic HIV seropositive individuals or persons with lymphadenopathy.

Not only does such a diagnosis drop the terrible pall of a likely premature death over the individual, it throws into doubt every social connection and expectation the infected individual may have, and opens the door to stigmatization and overt discrimination. The person may be abandoned by friends and family, evicted, thrown out of school, fired from a job, or be refused health insurance.

And since HIV infection is a communicable, sexually transmitted disease, the sexual practices of the person who learns he or she is seropositive may have to be changed to avoid infecting others or further exposing him- or herself. The need for condoms precludes natural conception, and pregnant women may require abortion. For certain individuals these options are not acceptable. Separation, divorce, and other significant disruptions of personal lives may occur. Severe guilt can occur if infections of other family members, spouse, or children have occurred.

Because of the stress associated with these consequences, the diagnosis of HIV infection has significant mental health implications. Profound psychological reactions to HIV testing
are not infrequent, even in programs where the patients freely choose to be tested. The knowledge of infection can tax an individual's psychosocial skills and support mechanisms beyond their limits. Suicides following HIV testing have been documented.

For all of these reasons it is morally imperative that a patient be fully informed of the possible consequences of a positive result before being asked to submit to a test for HIV antibodies or to any other procedures for diagnosing HIV infection.

In some instances, HIV antibody testing may be medically contraindicated. Use of the HIV antibody test, like all medical procedures, should be conducted under the supervision of a qualified physician for appropriate medical reasons. Legally mandated requirements for testing interfere with the responsible practice of medicine by pre-empting the discretionary responsibility of the physician.

Situations in which HIV testing might be medically contraindicated include the following:

1. Admission testing in drug abuse clinics. Drug addicts may not be stable enough to cope with knowledge of HIV positivity; requiring them to be tested and forcing those who are positive to face this fact could increase relapse rates. Drug addicts should be stabilized in the program
and tested only when the therapeutic relationship with
the patient is such that a positive result will not cause
a relapse into drug use and needle sharing.

2. Testing of certain sociopathic individuals whose response
might be to infect others deliberately.

3. Testing of individuals if the consequences would be to
modify behaviors in a way that would increase the
likelihood of transmission. For example, some high risk
individuals might practice safe sex as long as they think
they are uninfected, but take the attitude that it is
somebody else's problem if they learn that they are
infected.

4. Testing in a setting, such as a prison or jail, where
knowledge of a positive result could lead to
inappropriate and even life-threatening actions against
the individual.

5. Testing of a person for whom suicide is a likely outcome
if the result is positive, unless the person is admitted
to a locked facility where adverse psychological
reactions can be managed.

It is only good medical practice to defer testing in suicidal or
sociopathic individuals and in situations where the diagnosis of
HIV infection itself could be expected to have serious negative consequences.

The counseling provided to individuals before they consider consenting to an HIV antibody test needs to go beyond the mere provision of information about the test. An assessment of the individual's capacity to withstand the psychosocial impact of a positive result should be assessed by discussing his or her support network and the way he or she would handle a positive result. The individual's current attitude toward "safe sex" practices is important to know since the diagnosis off an infection in a relationship where "safe sex" has been established may have less serious consequences than it would in one where such procedures must be introduced if either partner in the relationship is positive. And if the individual is not practicing safe sex and is at risk, it is important to discuss the consequences of this in the context of the individual's possible HIV antibody status. The intent of the individual regarding AIDS prevention behavior modifications, if positive or negative, should be explored. Techniques for overcoming resistance to behavioral changes will need to be applied to individuals who intend to continue high risk activity whether they test positive or negative. They should also be asked if they intend to inform their spouse or regular sexual partner of their HIV antibody status, again, whether negative or positive. If the individual anticipates continuing unsafe sexual practices with the spouse or sexual partner and anticipates problems in
informing that person if the test result is positive, he or she should be offered assistance in accomplishing this. If this person says he or she simply will not be able to do it, permission to disclose the result obtained from the individual should be sought before the test is given.

Given the substantial personal "risks" involved in being tested and identified as positive, it is entirely appropriate that control over whether or not the test is performed is kept in the hands of the individual who would be tested. Medicine relies on the consent of the patient. It would be extraordinary for any medical procedure to be undertaken in the face of serious objection by the patient. Indeed, the right of a patient to refuse a physician's recommendation and sign an AMA (against medical advice) statement is well recognized.

Providing the test on a voluntary and anonymous basis along with pretest and post-test counseling has proved to be an effective AIDS prevention strategy because it brought people at risk into a process involving a growth of self-knowledge and control over the behaviors that place them at risk for AIDS. More and more people are initiating this process by taking advantage of the anonymous testing and counseling offered at Alternative Test Sites in California. People are finding the motive for learning and changing in themselves, and that is how this process must begin if it is going to result in real change. Trying to force it by making HIV antibody testing mandatory will
only destroy the educational potential of testing, and that is the only value the test has at this time.

Compulsory testing can only be justified by a compelling public health reason. Since AIDS is only transmitted in certain specific ways and casual contact is not one of them, there is no justification for coercively identifying HIV infected people. If they were identified in this way, nothing could be done to control the spread of HIV infection that cannot be done without knowing exactly who they are -- short of quarantining them.

It may be that the quarantine of HIV infected people is what is really behind the movement for compulsory testing. If so, it should be pointed out that quarantining seropositive people is even less justifiable than the mandatory testing process that would be required to identify them. Both measures violate the rights of individuals in the name of public health. However, as noted already, AIDS is a disease that is transmitted for the most part between adults engaging in behaviors involving mutual consent. The only realistic way to fight the epidemic is to inform people of the way the infection is transmitted and then to persuade them to avoid behaviors that place them at risk.

The test should only be given after informed consent. Consent of the individual places control over whether or not the test is performed in the hands of the person tested. This control is critical because testing can have a major and often destructive
impact on the individual's life. To take this control away would represent a serious abridgement of the right of individuals to have control over their own destinies.
DRAFT -- WHITE PAPER ON HIV ANTIBODY TESTING

Background: The appropriate use of HIV antibody testing has been a source of considerable debate since the procedure was first introduced to screen blood donors is the Spring of 1985. Whether such testing should be strictly voluntary or required in certain situations is being if before many legislative bodies throughout the world. How, when and to whom the test is administered, how the test information is to be used, what privacy protection is appropriate for individuals tested, and what protection against various kinds of discrimination that may result based on the HIV antibody test needs to be in place, are only part of the many complex issues. In order to better understand some of the issues, the three major legal and ethical aspects of HIV antibody testing are considered. They are 1. Consent, 2. Disclosure of Results, and 3. Discrimination and other consequences of testing.

Consent

Proposed Position: HIV antibody testing should either be anonymous or only performed only with the informed written consent of the patient, if competent to give such consent, or the person lawfully authorized to make health care decisions for the person tested, if incompetent, unless there is a compelling public health reason to require a patient to submit to testing against their will. Such a compelling reason should be based on evidence and allow for due process, as it may require physical restraint and force to obtain the blood specimen for testing. Refusal of consent should not be grounds for denial of medical or other services, but providers should follow appropriate infection control procedures in all situations where infection of the patient (client) is possible.

Disclosure of Results

Proposed Position: HIV antibody test results should be regarded as highly confidential patient information. The physician who orders the test and obtains the result has the responsibility to his patient to insure that a confidential physician-patient relationship is maintained. Disclosure of the results of the HIV antibody test, as with all medical information, requires the consent of individual or other person lawfully authorized to make health care decisions for the individual. Access to patient information in many medical settings is based on the notion that consent for medical care implies access to this information within the institution where the consent was obtained, however the access to the patient's chart is often far broader than is really necessary for good patient care. Discloser of patient data to third parties, including other health care providers, insurance companies, and government agencies is often done on the basis of blanket consents for the release of all data in the chart. Frequently the patient has never seen the chart themselves, and has no idea of what the physician may have recorded in the medical record.

In order to insure that the patient is fully informed, a separate, written informed consent should be obtained. Specifically requiring that individuals who have been told this information be named in the consent affords the maximum amount of protection to the individual, but presents many difficulties for medical care institutions where this level of control of patient information is usually not done. Blanket disclosure to persons responsible for patient care avoids the necessity for obtaining consent to inform each individual, but potentially provides access to anyone who has access to the patient chart. Since infection control procedures can be used routinely or ordered without stating the diagnosis, there no reason to believe that the entire health care team needs to be aware of the patient's diagnosis. In situations, where staff are inexperienced in dealing with AIDS issues,
and the care of the patient may be compromised out of unwarranted concerns, the risks of charting HIV status may outweigh the benefits. The major issue of documentation of HIV status appears to be concerns about subsequent disclosures in situations where employment, insurability, housing, or access to medical treatment might be affected. These situations generally involve extra-institutional disclosures which require written consent, however, since blanket consents are commonly used, may not afford the necessary protection for the individuals. Hence, there appears to be good reason to restrict access to this information to persons who have a legitimate need to know, to place such information in a separate file or distinct part of the chart so that it is not inadvertently sent to third parties without checking with the patient first.

Rationale for the Position:

The diagnosis of HIV infection is a serious and important event, not a "routine" medical procedure. Current evidence suggests 25-50 percent of infected persons will develop AIDS during the first 8 years of their infection. It is unethical to subject a patient to any medical procedure that has the potential of so significantly affecting their lives as does testing for HIV or other diagnostic procedures for HIV infection or related disease, without informing the patient of the consequences should the outcome be positive.

HIV infection is a communicable sexually transmitted disease. When a diagnosis of HIV infection is established, the need for drastic changes in sexual behavior is also established. The need for condoms precludes natural conception and pregnant women may require abortion. For certain individuals these choices are not acceptable. Separation, divorce, and other significant disruptions of personal lives may occur.

HIV infection may stigmatize the individual in many different ways, and subject the person to overt discrimination. The individual may be abandoned by fearful friends and family, evicted from his apartment or other living situation, thrown out of school, or be fired from his job. Inability to obtain health insurance may limit future access to health care due to documentation of a preexisting condition. Because HIV infection is prevalent in drug abusers and homosexuals, issues of illegal activity or sexual orientation will arise if the infection is not otherwise readily explained.
The diagnosis of HIV infection has significant mental health implications. The ability of the individual tested to cope with the diagnosis must be established prior to initiation of the testing. It is unacceptably bad medical practice to test an individual, find out that they are positive, and as an afterthought, discover that they do not have the psychosocial skills and support mechanisms to deal with having a fatal infectious disease.

Sever psychological reactions to HIV testing are not infrequent, even in programs where the patients freely choose to be tested and those most prone to adverse outcomes probably elect not to find out their diagnosis. Sever guilt can occur if infections of other family members, spouse or children, has occurred. Suicides following HIV testing have been documented.

HIV antibody testing may be medically contraindicated in some individuals. Legally mandated requirements for testing is therefore an unacceptable interference in the practice of medicine. The use of the HIV antibody test, like all medical procedures, should be conducted under the supervision of a qualified physician for appropriate medical reasons. Situations where HIV testing might be medically contraindicated include the following:
1. Admission testing in drug abuse clinics, where knowledge of HIV positivity might increase relapse rates. Instead, drug addicts should be stabilized on the program, and tested when an adequate therapeutic relationship exists to insure the patient does not relapse in drug use and needle sharing when given a positive result.
2. Testing of certain sociopathic individuals, whose response might be to deliberately infect others.
3. Testing of individuals if the consequences would be to modify behaviors in a way that would increase the likelihood of transmission. For example, some high risk individuals might practice safe sex feeling that they might be uninfected, but if they find out they are infected may simply view the issue as somebody else's problem.
4. Testing in setting where inappropriate action would be taken against the patient if positive.
5. Testing of a person in whom suicide is a likely outcome unless admitted to a locked facility where adverse psychological reactions can be managed.

Deferring testing in suicidal or sociopathic individuals, and in other situations while appropriate psychosocial support and counseling is made available, or until transfer to another appropriate facility is good medical practice and quality patient care.

In considering testing it is appropriate to consider that no medical treatment currently is available for asymptomatic HIV seropositives or persons with Lymphadenopathy. Increased medical monitoring of high risk individuals can be instituted without testing for HIV. A much cited benefit is that knowledge of HIV antibody status will permit seropositives to follow "safer sex practices", however, many "high risk" persons have adopted "safe sex" practices routinely. In fact public health usually recommends use of HIV infection control procedures routinely for health care and other workers who might become exposed to HIV rather than relying on knowledge of HIV antibody status. Routine use of "safe sex" procedures are similarly recommended for members of "high risk" groups. Hence the public health benefit of testing, e. g. promotion of low risk behaviors, can be achieved in those individuals in whom testing is contraindicated or who simply chose not to know for any of the reasons stated above, without testing, as can most medical benefits, particularly in the early phases of disease.
The above situation mitigates for informing the individual about the HIV antibody test. This informing however, needs to go beyond the mere provision of information about the test. Exploration of the individuals psychosocial support network and coping skills should be performed. The individuals current attitude toward "safe sex" practices is important to know, since the diagnosis of an infection in a relationship where "safe sex" has been established may have less serious consequences that in one where such procedures must be introduced if either individual is positive. Furthermore, if the individual is at risk and not practicing safe sex with his/her current partner, then testing is positive may alter behavior in time to prevent infection. Thus intent of the individual if positive or negative is important to explore. Techniques for overcoming resistance to behavioral changes will need to be applied to individuals who intend to continue high risk activity whether positive or negative. Intent of the person to inform their spouse or regular sexual partner should be asked, assistance provided if they are unable to accomplish this themselves, and permission to disclose the result obtained from the individual if continued unsafe sexual practices with the spouse or sexual partner is anticipated.

Furthermore, consent of the individual places control as to whether or not the test is performed into the hands of the person tested. Given the substantial personal "risks" of being tested and identified as positive, it is entirely appropriate that such control should reside with the individual. Medicine relies on the consent of the patient. It is entirely extraordinary for any medical procedure to be undertaken in the face of serious objection by the patient. Indeed the rights of a patient to sign out AMA (against medical advice) are recognized. The notion of mandatory AIDS tests invokes the precedence of the use of electroconvulsive therapy of mental patients and forced sterilization of the mentally defective. While coercing individuals to undergo medical procedures is not unprecedented, certainly doing so with a procedure that results in the kind of personal impact that a diagnosis of HIV infection should be looked at seriously from that standpoint of the rights of individuals to control over their own destinies, particularly in situations where risks to others are either not present or readily controlled by simple infection control procedures, such as wearing of gloves.
AB 1952 (Filante) - AIDS

CALIFORNIA AIDS DRUG DEVELOPMENT PROGRAM

Under existing law, the Department of Health Services may authorize clinical trials and/or the manufacture of a new drug if the drug is tested and manufactured entirely within the state; the department may also authorize the sale of such a drug as long as all sales are within the state. (Health & Saf. Code sec. 26670 et seq.) This authority has been exercised only in limited instances in the past.

AB 1952 directs the Director of the Department of Health Services to implement this authority for the purpose of approving the testing and sale of new drugs which offer a reasonable possibility of treating people who have been infected with the AIDS virus. The bill creates an AIDS Drug Review Committee to provide the director with the best expert advice available to review proposals submitted for testing or sale under this new program.

This bill offers a realistic alternative to the federal Food and Drug Administration’s process for approving new drugs. There has been widespread criticism of the slowness with which the FDA has responded to the AIDS crisis. This statute will provide a means for expediting the testing of drugs in California which show promise in the treatment of AIDS and the AIDS virus, and can significantly assist in expediting the testing of promising AIDS-related drugs in California.

In undertaking its own drug approval program, the State of California will not be exposing itself to new civil liability because of the protection provided by Government Code section 818.4 and other related provisions.

RESEARCH GRANT PROGRAM

Legislation enacted last year provided a total of $10 million in funding for the research and development of AIDS treatments: (a) AB 2404 (Filante) appropriating $4 million in grants to California manufacturers for the development of an AIDS vaccine prior to FDA approval, and (b) AB 4250 (Vasconcellos) appropriating $6 million for subsidizing human clinical trials of vaccines approved by the FDA.
AB 1952 allows these funds to also be used to assist California companies in developing and testing new drugs under the new, independent state program created above or under FDA approval. Since these funds have already been appropriated, the bill requires no new funding. Financing for future years will come from any of the following: (a) the $10 million already encumbered for research and development of AIDS vaccines, (b) revenue generated from the tax credit created by AB 563 (Klehs) should that measure become law, and/or (c) annual budget appropriations.

The bill provides that the State is to be reimbursed for the total cost of this program should a grant recipient develop and successfully market an AIDS drug under this program.

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Special Counsel to Attorney General  
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AMENDMENTS TO ASSEMBLY BILL NO. 1952
AS AMENDED IN ASSEMBLY MAY 12, 1987

Amendment 1

In lines 1 and 2 of the title, strike out "Section 113 of," and to add Chapter 4.5 (comencing with Section 1635) to Division 2 of," and insert:

Sections 199.57(3) and 199.59 of, and to add Section 26679.5 to,

Amendment 2

In line 3 of the title, after "health" insert:

, making an appropriation therefor, and declaring the urgency thereof, to take effect immediately

Amendment 3

On page 3, strike out line 1 and insert:

The Legislature finds and declares all of the following:

(a) Over the past five years, AIDS has reached an epidemic state. It is estimated that 50,000 Californians will be diagnosed with AIDS by the end of
(b) AIDS appears to be universally fatal, and estimates of the percentage of those infected with the AIDS virus who will actually develop AIDS are continually being revised upwards.

(c) It is estimated by the National Academy of Sciences that as many as 1.5 million Americans have already been infected with the AIDS virus. If infection rates follow the pattern of diagnosed AIDS cases, over 300,000 Californians are presently infected.

(d) The estimated costs of medical care alone for the 9,000 AIDS cases that have occurred to date in California totals approximately 225,000,000, of which approximately thirty million dollars ($30,000,000) has been paid by the Medi-Cal program. By the end of 1991, medical care for AIDS patients in California is projected to approach two billion five hundred million dollars ($2,500,000,000) and the total public health and medical care expenditures are expected to exceed five billion dollars ($5,000,000,000).

(e) To date, the costs of caring for people with AIDS related complex (ARC) have not been officially calculated. However, it is safe to assume the costs will be substantial over time. The illnesses of ARC patients,
although they may not be fatal, may be quite severe. For example, the virus may invade the brain, sometimes rendering patients incapable of caring for themselves. It is, therefore, plausible that a percentage of ARC patients will need to be institutionalized.

(f) Eighty-eight percent of the state's AIDS cases have occurred in persons between the ages of 20 and 49. In addition to direct medical costs, the state will bear the loss of the productivity and potential contributions of those who develop AIDS.

SEC. 2. The Legislature finds and declares all of the following:

(a) California has a strong interest in facilitating and expediting the clinical testing of AIDS drugs. At the same time, California has an interest in ensuring that such testing is performed only under carefully considered, developed and recognized medical protocols.

(b) The Department of Health Services already has the authority to approve new drug applications (Health and Safety Code Section 26670, et seq.) and to permit investigational use of new drugs by qualified investigators (Health and Safety Code, Section 26679) where the drug is manufactured and used only within the
state.

(c) To facilitate and expedite the development of AIDS drugs, California manufacturers who are developing AIDS drugs should be offered the alternative of applying to the Department of Health Services for permission to conduct clinical trials and for approval of new drug applications.

(d) The Department of Health Services has adopted the regulations of the federal Food and Drug Administration (FDA) to implement Health and Safety Code Sections 26670 to 26680. As much as possible, the protocols for investigative new drugs under Health and Safety Code, Section 26679 shall be similar to those approved by the FDA, so that the data acquired in such investigations may also be submitted to the FDA under Section 505(i) of the federal Food and Drug Act (21 USC Section 355(i)).

(e) It is the intent of the Legislature that the procedures in Health and Safety Code Sections 26670 to 26680 be utilized to supplement federal procedures to the maximum extent possible under federal law to facilitate the development and testing of AIDS-related drugs and that they be utilized, to the extent feasible, in cooperation with the FDA.
There is hereby created the AIDS Vaccine Research and Development Advisory Committee within the State Department of Health Services which shall review and make recommendations to the state department regarding the award of the AIDS vaccine research and development grants. In accordance with Section 26679.5, the committee may also review requests for approvals for AIDS-related drugs pursuant to Section 26670, or for exemptions from these approval requirements pursuant to Section 26679.

The membership of the committee shall be appointed by the State Director of Health Services within 30 days of the effective date of this chapter. The chairman of the committee shall be the State Director of Health Services, or his or her designee.

(b) The committee shall be composed of the following five members:

(1) The State Director of Health Services, or his or her designee.

(2) An expert in infectious disease and vaccine development to be appointed by the state department.

(3) The chief physician involved in the treatment of AIDS patients at San Francisco General Hospital, or his or her designee.

(4) The Chief of the Office of AIDS within the
State Department of Health Services, or his or her
designee.

(5) An expert in retro-viruses/AIDS virus
research to be appointed by the state department.

(c) Members of the committee shall serve without
compensation but shall be reimbursed for any actual and
necessary expenses incurred in connection with the
performance of their duties under this chapter.

(Added by Stats. 1986, Ch. 1462, Sec. 1.
Effective September 30, 1986.)

SEC. 4. Section 199.59 of the Health and Safety
Code is amended to read:

199.59. (a) The recipients of the grants shall use the moneys of the grant to develop an AIDS vaccine until the Federal Food and Drug Administration (FDA) approves the clinical testing of an AIDS vaccine on humans. Any grant funds not encumbered or expended at the time of the FDA approval of the clinical testing of an AIDS vaccine on humans shall not be used by the recipients until the state department authorizes further expenditure or requires the funds to be returned to the AIDS Vaccine Research and Development Grant Fund pursuant to subdivision (b).

(b) If an AIDS vaccine which has received FDA
approval for clinical testing on humans has been developed by a grant recipient pursuant to this chapter, then any funds which have been granted to, but not expended or encumbered by, the grant recipient shall be expended for the clinical testing of the vaccine on humans in accordance with the FDA protocol.

With respect to the other grant recipients, or when none of the recipients have received the FDA approval for the vaccine they are developing, the committee shall meet to consider whether the grant recipient has a good chance of developing a vaccine which will receive FDA approval for clinical testing on humans and shall make recommendations to the state department. If the state department, taking into consideration the committee's recommendations, determines that the grant recipient has a good chance of developing an FDA approved vaccine, it shall inform the grant recipient in writing to continue expending its grant funds for the development of an AIDS vaccine.

If the state department, taking into consideration the committee's recommendations, determines that the grant recipient does not have a good chance of developing a vaccine which will receive FDA approval for clinical testing on humans, it shall inform the recipient
in writing that the funds not encumbered or expended, as described in subdivision (a), shall be returned to the state department for deposit in the AIDS Vaccine Research and Development Grant Fund.

Any funds remaining in the AIDS Vaccine Research and Development Grant Fund after the state department's determinations pursuant to this subdivision, shall, in the state department's discretion, either be expended for (1) further support of the clinical trials of a vaccine developed in whole or in part by a grant recipient or for (2) further research and development of a vaccine by a grant recipient who has been permitted, in accordance with this subdivision, to continue expending grant funds for development of a vaccine, or be expended for (3) both purposes. If no grant recipient is conducting clinical trials or developing a vaccine pursuant to this subdivision, then the moneys in the AIDS Vaccine Research and Development Grant Fund shall revert to the General Fund.

(c) Notwithstanding any other provision of this section, the state department may make grants to applicants even after approval has been given by the federal Food and Drug Administration to conduct clinical testing of an AIDS vaccine on humans.
(Added by Stats. 1986, Ch. 1462, Sec. 1.
Effective September 30, 1986.)

SEC. 5. Section 26679.5 is added to the Health and Safety Code, to read:

26679.5. In making determinations on requests for approval for investigation of AIDS-related drugs, as defined in subdivision (b), in accordance with Section 26670, including exemptions from these requirements pursuant to Section 26679.5, the department shall in the following:

(1) Obtain review of these requests by the AIDS Vaccine Research and Development Committee.

(2) Enter into contracts with appropriate and qualified persons or entities for the review of these requests.

(b) "AIDS-related drug" means either of the following:

1. A vaccine to protect against human immunodeficiency virus (HIV) infection.

2. Antiviral agent, immune modulator, or other agent to be administered to persons who have been infected with HIV, to counteract the effects of this infection, or any drug to treat opportunistic infections associated with AIDS.

(c) The department shall report annually to the
Legislature on the activities conducted pursuant to this section.

SEC. 6. There is hereby reappropriated, from funds appropriated to the State Department of Health Services from the AIDS Vaccine Research and Development Grant Fund pursuant to Section 2 of Chapter 1462 of the Statutes of 1986, to the State Department of Health Services the sum of two million dollars ($2,000,000) in order to implement Section 26679.5 of the Health and Safety Code, as contained in Section 5 of this act.

In addition, the State Department of Health Services may utilize these funds to employ up to two persons to implement Section 26679.5 of the Health and Safety Code, to conduct approval for the investigation specified in that section.

SEC. 7. That any manufacturer that receives approval from the Legislature to investigate an AIDS vaccine as contained in Section 26679.5 of the Health and Safety Code, as contained in Section 5 of this act, may be eligible to receive grants under AB 503 or AB 603, if either or both of those bills are enacted during the 1987-88 Regular Session.
Legislature on the activities conducted pursuant to this section.

SEC. 6. There is hereby reappropriated, from funds appropriated to the State Department of Health Services from the AIDS Vaccine Research and Development Grant Fund pursuant to Section 2 of Chapter 1462 of the Statutes of 1986, to the State Department of Health Services the sum of two million dollars ($2,000,000) in order to implement Section 26679.5 of the Health and Safety Code, as contained in Section 5 of this act.

In addition, the State Department of Health Services may utilize these funds to employ up to two persons to implement Section 26679.5 of the Health and Safety Code to conduct reviews of requests for approval for the investigation of AIDS-related drugs, as specified in that section.

SEC. 7. This is the intent of the Legislature that any manufacturer or investigator who receives approval from the State Department of Health Services to investigate an AIDS-related drug, as defined in Section 26679.5 of the Health and Safety Code, as contained in Section 5 of this act, may be eligible to receive grants under AB 503 or AB 603, if either or both of those bills are enacted during the 1987-88 Regular Session.
SEC. 8. This act is an urgency statute necessary for the immediate preservation of the public peace, health, or safety within the meaning of Article IV of the Constitution and shall go into immediate effect. The facts constituting the necessity are:

In order to protect the California population from the rapidly spreading AIDS epidemic and to protect the substantial numbers of persons already infected by the virus from death, it is necessary for this act to take effect immediately.

Amendment 5

On page 3, strike out lines 2 to 30, inclusive, and strike out pages 4 to 12, inclusive
AB 1952 (Filante) - AIDS

CALIFORNIA AIDS DRUG DEVELOPMENT PROGRAM

Under existing law, the Department of Health Services may authorize clinical trials and/or the manufacture of a new drug if the drug is tested and manufactured entirely within the state; the department may also authorize the sale of such a drug as long as all sales are within the state. (Health & Saf. Code sec. 26670 et seq.) This authority has been exercised only in limited instances in the past.

AB 1952 directs the Director of the Department of Health Services to implement this authority for the purpose of approving the testing and sale of new drugs which offer a reasonable possibility of treating people who have been infected with the AIDS virus. The bill creates an AIDS Drug Review Committee to provide the director with the best expert advice available to review proposals submitted for testing or sale under this new program.

This bill offers a realistic alternative to the federal Food and Drug Administration’s process for approving new drugs. There has been widespread criticism of the slowness with which the FDA has responded to the AIDS crisis. This statute will provide a means for expediting the testing of drugs in California which show promise in the treatment of AIDS and the AIDS virus, and can significantly assist in expediting the testing of promising AIDS-related drugs in California.

In undertaking its own drug approval program, the State of California will not be exposing itself to new civil liability because of the protection provided by Government Code section 818.4 and other related provisions.

RESEARCH GRANT PROGRAM

Legislation enacted last year provided a total of $10 million in funding for the research and development of AIDS treatments: (a) AB 2404 (Filante) appropriating $4 million in grants to California manufacturers for the development of an AIDS vaccine prior to FDA approval, and (b) AB 4250 (Vasconcellos) appropriating $6 million for subsidizing human clinical trials of vaccines approved by the FDA.
AB 1952 allows these funds to also be used to assist California companies in developing and testing new drugs under the new, independent state program created above or under FDA approval. Since these funds have already been appropriated, the bill requires no new funding. Financing for future years will come from any of the following: (a) the $10 million already encumbered for research and development of AIDS vaccines, (b) revenue generated from the tax credit created by AB 563 (Klehs) should that measure become law, and/or (c) annual budget appropriations.

The bill provides that the State is to be reimbursed for the total cost of this program should a grant recipient develop and successfully market an AIDS drug under this program.

Richard Jacobs
Special Counsel to Attorney General
(415) 557-0285
To the Members of the California Assembly:

I have signed this date Assembly Bill No. 1952. This bill would appropriate $500,000 to the Department of Health Services for new staff to review and approve for use in California AIDS-related drugs.

I am concerned that by signing this bill into law, the public will expect California, independent of the FDA, to approve drugs for use in the treatment of AIDS. Quite the contrary is true.

The United States Food and Drug Administration (FDA) is making the approval of AIDS-related drugs a priority. California could not, or should not, ever match the resources provided by the FDA. The review and approval of drugs is a national issue and it is unrealistic to expect California to duplicate their work or resources.

AIDS, however, is a tragic health problem for many California victims. By approving this bill I am hopeful that Californians will have more opportunities to participate in clinical drug trials, which are closely monitored by the scientific and medical community. This is certainly preferable to the unsupervised use of experimental drugs in foreign countries.

Our Department of Health Services will work closely with the FDA to ensure the maximum benefit of our resources. I am, of course, hopeful that more effective drugs for the treatment of AIDS will soon be developed and approved. We should not, though, unrealistically view this legislation as a substitute for FDA approval of drugs in the treatment of AIDS or as a precedent for drugs in the treatment of any other disease.

Cordially,

George Deukmejian
The governor vetoed the following bills:

**AB 318** Cortese, D-San Jose. Authorizes public agencies to charge other public agencies prescribed nondiscriminatory user charges for costs of capital facilities. Urgency.

**AB 563** Klehs, D-San Leandro. Authorizes a tax credit under both the Personal Income Tax Law and the Bank and Corporations Tax Law equal to 55 percent of contributions made to the AIDS Research Trust Fund.

**AB 603** Klehs, D-San Leandro. Creates an AIDS Research Trust Board to administer the AIDS Research Trust Fund authorized in AB 563.

**AB 1120** Vasconcellos, D-San Jose. Establishes in the office of Criminal Justice Planning a program of court-appointed special advocates for minors in proceedings related to juvenile dependency and termination of parental rights to custody.

**SB 343** Rosenthal, D-Los Angeles. Requires the South Coast Air Quality Management District to establish a five-year program which promotes projects which increase the use of clean-burning fuels in the transportation and stationary source sectors.

**SB 436** Hart, D-Santa Barbara. Appropriates $75 million for the 1988-89 fiscal year to fund the first year of an incentive program to reduce class sizes in grades 9-12.

**SB 711** Robbins, D-Van Nuys. Provides a substantial General Fund appropriation to Los Angeles County for costs incurred but unbilled to the state related to incarcerating state prisoners and parolees for Fiscal Year 1981-82 through 1984-85.

**SB 836** Presley, D-Riverside. Creates an eight-member advisory committee within the Department of the Youth Authority for the purpose of developing alternatives to incarceration for parole violators. Urgency.

**SB 1658** Torres, D-Los Angeles. Establishes a minimum wage of not less than $4.25, commencing January 1, 1988.

# # # # #
CONCURRENCE IN SENATE AMENDMENTS

AB 1952 (Filante) - As Amended: September 9, 1987

ASSEMBLY VOTE 78-0 (June 4, 1987) SENATE VOTE 38-0 (September 10, 1987)

Original Committee Reference: HEALTH

DIGEST

Urgency statute. 2/3 vote required.

Existing law:

1) Does not provide for the licensing and regulation of tissue banks by the Department of Health Services (DHS).

2) Creates the AIDS Vaccine Research and Development Grant Program, which permits DHS to make grants for AIDS vaccine research under specified conditions and authorizes DHS to approve the sale or the investigational use of drugs.

As passed by the Assembly, this bill required every tissue bank operating in California on or after July 1, 1988, to have a current and valid tissue bank license issued by DHS, as specified. The bill, in addition:

1) Specified that the collection, processing, storage, or distribution of tissue for the purpose of transplantation shall be the rendition of a service and not be construed to be a sale of the tissue for any purpose, and referenced federal and state law relative to the sale of human organs.

2) Required DHS to (a) appoint an advisory committee to assist, advise and make recommendations for the establishment of rules and regulations necessary for administration and enforcement of this bill, and (b) determine the composition and terms of office of committee members. Specified that members shall be compensated for actual and necessary expenses incurred in the performance of the duties of advisory committee members.

3) Permitted DHS to adopt regulations governing their administration and enforcement, and permitted the regulations to include minimum standards, as specified, including testing assessment of donors to prevent the spread of disease through transplantation.

4) Required any person seeking a license for a tissue bank to file with DHS a verified application on forms prescribed by the department, as specified.

- continued -
5) Specified that new licenses shall expire 12 months from the date of issuance and renewal licenses may be issued for a two-year period provided the licensee has been in compliance with statutory requirements, regulations, and standards during the preceding license period.

6) Specified terms in which a license shall be forfeited by operation of law prior to its expiration date.

7) Specified grounds for denial of a license and for a hearing, thereof, and procedures and grounds for the temporary suspension, suspension or revocation of the license.

8) Established a tissue bank license fee of $865 per year, created the Tissue Bank License (TBL) Fund and required that the fees collected be deposited in the TBL Fund and used to support the program.

9) Specified that the licensing fee be adjusted annually to maintain the TBL Fund balance at the end of the fiscal year at less than 110% of the annual licensing costs.

10) Permitted any duly authorized representative of DHS to (a) enter and inspect a licensed tissue bank or bank which has applied for licensure and (b) inspect and copy any records, reports, test results or other information related to the requirements of this bill. Protected confidential records, reports or tests, and permitted the department to require licensed tissue banks to demonstrate satisfactory performance in laboratory procedures, as specified.

11) Provided that any person who violated the provisions of this bill or who willfully and repeatedly violated any rule or regulation adopted under these provisions would be guilty of a misdemeanor subject to a fine not to exceed $1,000 or imprisonment in a county jail for a period not to exceed 180 days, or both.

12) Permitted DHS to bring an action to enjoin the violation or threatened violation of the provision which would require, with certain exceptions, that every tissue bank operating in California have a current and valid tissue bank license issued by the department.
The Senate amendments delete the Assembly version and, instead, authorize the AIDS Vaccine Research and Development Advisory Committee to review requests for approval of the sale or the investigational use of AIDS-related drugs and (2) require the DHS to employ or contract for persons to conduct these reviews. In addition, the amendments:

1) Clarify that the department may continue awarding AIDS vaccine research and development grants even after the federal Food and Drug Administration (FDA) has approved clinical testing of an AIDS vaccine on humans.

2) Require the department to contract with appropriate and qualified persons or entities to review these requests, including the AIDS Vaccine Research and Development Advisory Committee, or any member thereof.

3) Require DHS to report to the Legislature annually beginning by July 1, 1988, regarding its review of requests for approval of AIDS-related drugs.

4) Express legislative intent that manufacturers and investigators who receive approval from the department to investigate an AIDS-related drug may also be eligible for funding under AB 563 (Klehs) and AB 603 (Klehs), if these bills are enacted.

5) Provide the state with government immunity under Government Code Section 818.4 and 821.6 for undertaking its own drug approval program.

6) Reappropriate $500,000 from the Aids Vaccine Research and Development Grant Fund for 1987-88 costs.

7) Add an urgency clause.

FISCAL EFFECT

According to the Legislative Analyst, annual costs to the General Fund of approximately $500,000 to approve the sale or investigational use of AIDS-related drugs and to issue an annual report to the Legislature. The bill reappropriates $500,000 from the AIDS Vaccine Research and Development Grant Fund, which was established pursuant to Chapter 1462, Statutes of 1986, and appropriated up to $4 million to the fund, for 1987-88 costs.

COMMENTS

As passed by the Assembly, this bill related to the licensing and regulation of tissue banks by DHS. The Assembly version was deleted and new language added to authorize the AIDS Vaccine Research and Development Advisory Committee to review requests for approval of the sale or the investigational use of AIDS-related drugs.

- continued -
According to the Attorney General's office, this bill offers a realistic alternative to the federal Food and Drug Administration's process for approving new drugs. There has been widespread criticism of the slowness with which the FDA has responded to the AIDS crisis. This bill, if enacted, will provide a means for expediting the testing of drugs in California which show promise in the treatment of AIDS and the AIDS virus, and can significantly assist in expediting the testing of promising AIDS-related drugs in California.
AIDS DRUG DEVELOPMENT PROGRAM
SUMMARY

1. This bill would create an AIDS Drug Development Grant Program in the Department of Health Services to provide grants for manufacturers and investigators for clinical trials of AIDS-related drugs that have been approved for trials in human subjects for control of HIV infection and related conditions by either the federal Food and Drug Administration or the state Department of Health Services. It would establish an advisory committee to screen grant applications and make recommendations to the Director of Health Services similar to the process that was set up in AB 1432 (Filante) for vaccine development.

2. Under existing law the Department of Health Services may approve applications for new drugs and allow clinical trials of investigative new drugs where the drug is manufactured entirely within the State and is used solely within the State. This bill would establish within the Department an AIDS Drug Review Committee to review new drug submissions for AIDS-related drugs and to make recommendations to the Director of Health Services for the approval of these submissions. In addition, it would provide for additional staff within the Department to assist the review Committee.

3. The bill would appropriate $5,000,000 for the grant program, $250,000 for the grant advisory committee and its staff and $750,000 to augment the existing program for reviewing new drug submissions.
THE PEOPLE OF THE STATE OF CALIFORNIA DO ENACT AS FOLLOWS:

SECTION 1. Chapter 1 (commencing with Section 199) is added to Part 1 of Division 1 of the Health and Safety Code, to read:

CHAPTER 1. ACQUIRED IMMUNE DEFICIENCY SYNDROME (AIDS) DRUG DEVELOPMENT (GRANT) PROGRAM

199. The Legislature finds and declares all of the following:

(a) Over the past five years AIDS has reached an epidemic state. It is estimated that 50,000 Californians will be diagnosed with AIDS by the end of 1991.

(b) AIDS appears to be universally fatal, and estimates of the percentage of those infected with the AIDS virus who will actually develop AIDS are continually being revised upwards.

(c) It is estimated by the National Academy of Sciences that as many as 1.5 million Americans have already been infected with the AIDS virus. If infection rates follow the pattern of diagnosed AIDS cases, over 300,000 Californians are presently infected.

(d) The estimated costs of medical care alone for the 9,000 AIDS cases that have occurred to date in California totals approximately ______. By the end of 1991, medical care for AIDS patients in California is projected to approach two billion five
hundred million dollars ($2,500,000,000) and the total public health and medical care expenditures are expected to exceed five billion dollars ($5,000,00,000).

(e) To date, the costs of caring for people with AIDS related complex (ARC) have not been officially calculated. However, it is safe to assume the costs will be substantial over time. The illnesses of ARC patients, although they may not be fatal, may be quite severe. For example, the virus may invade the brain, sometimes rendering patients incapable of caring for themselves. It is, therefore, plausible that a percentage of ARC patients will need to be institutionalized.

(f) Eighty-eight percent of the State's AIDS cases have occurred in persons between the ages of 20 and 49. In addition to direct medical costs, the State will bear the loss of the productivity and potential contributions of those who develop AIDS.

199. The Legislature further finds and declares all of the following:

(a) There is a tremendous need for drugs to treat HIV infection and restore the immune systems of those who have been infected.

(b) Much research has already been completed by the private sector and should be utilized to the maximum extent possible. Making public funds available for clinical trials of promising drugs will facilitate drug development by private companies.
(c) Profitmaking corporations are (1) not eligible for most of the existing public funding sources as are institutions of higher learning and nonprofit corporations; (2) when eligible, the public funding amounts are not adequate to conduct research; and (3) private grants are only available to nonprofit corporations.

(d) Moreover, private research companies, already having established drug development and manufacturing capabilities, are uniquely situated to maximize available resources and to utilize both management and research staff, equipment, and technical innovations to their greatest efficiency towards the specific goal of developing and manufacturing AIDS drugs at the earliest possible time.

(e) Exclusion of private corporations from public funding to develop AIDS drugs will likely result in (1) a delay in the development of drugs to treat HIV infection; (2) continued deaths from AIDS; and (3) continued increases in private and public funds to care for AIDS victims.

(f) Public funding for testing of AIDS drugs will serve as a stimulus for California's private sector pharmaceutical industry and for its emerging biotechnology industry, which will benefit the State's economy.

(g) An AIDS Drug Development Grant Program should be established to encourage and expedite AIDS drug development by the private sector.

(h) It is appropriate to mandate that a grant made to a private entity to develop an AIDS drug should be reimbursed to
the State from the sale of such drug, once the drug has been approved by the FDA or the Department of Health Services for use by the general population.

(i) In addition, to make clinical trials available to more patients, grants should be available to facilitate participation in clinical trials by private physicians.

(j) Funds should also be made available by the State to purchase drugs for compassionate use when they appear particularly efficacious.

(k) Funds should also be made available to universities and to private research foundations to conduct clinical trials.

199.____. The Legislature further finds and declares all of the following:

(a) California has a strong interest in facilitating and expediting the clinical testing of AIDS drugs. At the same time, California has an interest in ensuring that such testing is performed only under carefully considered, developed and recognized medical protocols.

(b) The Department of Health Services already has the authority to approve new drug applications (Health and Safety Code section 26670 et seq.) and to permit investigational use of new drugs by qualified investigators (Health and Safety Code section 26679) where the drug is manufactured and used only within the State.

(c) To facilitate and expedite the development of AIDS drugs, California manufacturers who are developing AIDS drugs
should be offered the alternative of applying to the Department of Health Services for permission to conduct clinical trials and for approval of new drug applications.

(d) The Department of Health Services has adopted the regulations of the federal Food and Drug Administration (FDA) to implement Health and Safety Code sections 26670-26680. As much as possible the protocols for investigative new drugs under Health and Safety Code section 26679 shall be similar to those approved by the FDA, so that the data acquired in such investigations may also be submitted to the FDA under section 505(i) of the federal Food and Drug Act (21 U.S.C. section 355(i)).

(e) It is the intent of the Legislature that the procedures in Health and Safety Code sections 26670-26680 be utilized to supplement federal procedures to the maximum extent possible under federal law to facilitate the development and testing of AIDS-related drugs and that they be utilized, to the extent feasible, in cooperation with the FDA.

199. (a) There is hereby created an AIDS Drug Development Grant Program. There is hereby established an AIDS Drug Development Grant Fund the moneys in which shall, upon appropriation to the State Department of Health Services, be available for the purposes of this chapter.

(b) For the purposes of this chapter:

(1) "AIDS" means acquired immune deficiency syndrome.

(2) "AIDS-related drug" or "AIDS drug" means an anti-viral agent, immune modulator or other agent to be administered
to persons who have been infected with HIV, to counteract the effects of such infection, or any drug to treat opportunistic infections associated with AIDS.

(3) "California manufacturer" means a manufacturer with management or officers based in this State and operations for the conduct of research and development of an AIDS drug in this State.

(4) "Committee" means the AIDS Drug Development Grant Advisory Committee.

(5) "Director" means the State Director of Health Services.

(6) "Grant" means AIDS drug development grants.

199. (a) There is hereby created the AIDS Drug Development Grant Advisory Committee within the State Department of Health Services which shall review and make recommendations to the Director regarding the award of the AIDS drug development grants. The members of the committee shall be appointed by the Director within 30 days of the effective date of this chapter.

The Director appoint one of the members to be chair of the Committee.

(b) The Committee shall be composed of seven members, as follows:

(1) A person from the department staff;

(2) One person with significant experience in conducting or reviewing clinical trials of drugs.

(3) One medical doctor with significant experience in
treat-ting AIDS patients.

(4) One person with experience in the private sector pharmaceutical industry.

(5) One person with background in finance or business planning.

(c) Members of the committee shall serve without compensation but shall be reimbursed for any actual and necessary expenses incurred in connection with the performance of their duties under this chapter.

199. (a) The State Department of Health Services shall initiate a process for application for grants within 60 days of the effective date of this chapter, based on the criteria provided in subdivision (d). The state department shall publish this fact along with the annual deadline for grant applications in the newspapers with the greatest circulation in the major cities of the state, as determined by the state department. Additionally, the same information shall be transmitted to the Secretary of the Senate and the Chief Clerk of the Assembly for publishing in the respective journals of each house of the California Legislature.

(b) Any California manufacturer or investigator may submit an application to the state department for a grant for the clinical trials of any drug for which protocols have been agreed to by the FDA or the state department.

(c) At six month intervals the committee shall review the proposals and make recommendations to the Director. The Director, taking into consideration the committee’s
recommendations, shall award grants to California manufacturers and investigators from the Fund.

(d) The announcement of the availability of the grants shall include a clear description of the criteria to be used to select the projects which will receive funding pursuant to this chapter. The criteria shall include, but not be limited to, the following:

(1) The potential of the drug to treat or ameliorate the effects of HIV infection.

(2) The financial, technical, and managerial commitment of the grant recipient to the development of an AIDS drug.

(3) The demonstrated need of the grant recipient for state funding.

(e) The grants made pursuant to this chapter are not subject to the State Contract Act (Part 2 (commencing with Section 10100) of Division 2 of the Public Contract Code).

199. (a) The recipients of the grants shall use the moneys of the grant to conduct phase 2 or 3 clinical trials of the AIDS-related drug for which the grant was made on humans pursuant to protocols agreed to by either the FDA or the state department.

(b) The protocol shall contain provisions for close monitoring of the trials to ensure that they are conducted in strict conformance with the protocol.

199.___. The AIDS Drug Development Grant Advisory
Committee shall have appropriate staff assistance for the review of grant proposals.

199. If a drug that is developed in part through a grant or grants awarded pursuant to this chapter is approved by the FDA or the Department for sale as a new drug, the State of California shall be reimbursed for the grant as provided in this section. Until the total amount of the grants for the development of the drug, including grants to those other than the manufacturer, is repaid including interest at the legal rate from the time the drug is approved for sale, repayments at the rate of ___ percent of the annual sales of the drug shall be deposited by the grant recipient into the General Fund.

SECTION 2. Article 5 of Chapter 6 of Division 21 of the Health and Safety Code is amended to read:

26679a. (a) When an exception to section 26670 is sought for an AIDS-related drug, as defined in section 199. of this Code, it shall be reviewed by the AIDS Drug Review Committee within the state department. The Review Committee shall make recommendations to the Director for exemptions for AIDS-related drugs and for new drug approvals pursuant to section 26670.

(b) The Review Committee shall consist of three members who have significant experience in either reviewing or conducting clinical trials, or in AIDS research.

(c) The Review Committee members shall serve without compensations but shall be reimbursed for any actual and necessary expenses incurred in connection with the performance of
their duties under this chapter.

26679b. There is created in the Department of Health Services an AIDS Drug Development Unit consisting of a full-time staff of medical consultants, pharmacological consultants, research scientists, data analysts and other support staff which shall be funded from funds appropriated for the purposes of this chapter.

26679c. In addition, the AIDS Drug Development Unit, at the request of the Review Committee, shall have the authority to enter into contracts with appropriate and qualified persons or entities for the review of data submissions for AIDS-related drugs, which shall not be subject to the State Contract Act (Part 2 (commencing with Section 10100) of Division 2 of the Public Contract Code).

SECTION 3. The sum of six million dollars ($6,000,000) is hereby appropriated from the General Fund in accordance with the following schedule:

(a) To the AIDS Drug Development Grant Fund for the grants awarded pursuant to Health and Safety Code section 199. in fiscal year 1987-1988. The unencumbered and unexpended balance of funds appropriated pursuant to this subdivision shall be carried over for expenditure in the same manner for fiscal year 1988-1989.

---------------------------------$5,000,000

10
(b) For purposes of Chapter_______ of Part 1 of Division 1 of the Health and Safety Code

$ 250,000

(c) For the purposes of Section 26679a-26679c of the Health and Safety Code

$ 750,000

SECTION 4. This act is an urgency statute necessary for the immediate preservation of the public peace, health or safety within the meaning of Article IV of the Constitution and shall go into immediate effect. The facts constituting the necessity are:

In order to protect the California population from the rapidly spreading AIDS epidemic and to protect the substantial numbers of persons already infected by the virus from death, it is necessary for this act to take effect immediately.

[In addition, if there is not already a provision that would cover it, a provision is needed to require disclosure and/or disqualification of any advisory or review committee member who has a conflict of interest with regard to any matter under review.]
September 1, 1987

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Diane Abbitt, Esq.
Co-Chair
No on 64 Campaign
c/o Abbitt & Bennett
12121 Wilshire Boulevard, Suite 1100
Los Angeles, California 90025

Mr. Larry Sprenger
Treasurer
No on 64 Campaign
7985 Santa Monica Boulevard, Suite 109-251
Los Angeles, California 90046-5112

Re: No on 64 Campaign

Dear Diane and Larry:

We have not received the courtesy of a response to our letter of March 12, 1987 outlining several outstanding matters regarding the No on 64 campaign and the Center for Health Policy and Education. We assume you no longer wish to retain this firm to do legal work for this committee.

The matters outlined in our March 12, 1987 letter, (copy enclosed) still remain outstanding.

Under separate cover, we are sending ten boxes to the Abbitt & Bennett law firm by United Parcel which represent all of the information relating to the preparation of the campaign statements conducted by our office and other Nielsen, Merksamer files regarding the nonprofit organization. Enclosed is an inventory of those boxes.

Sincerely yours,

Sherry C. Levit

SCL:ryb
Enclosures
cc: Harry Britt
    David Mixner
    Bruce B. Decker
MEMORANDUM

To: Robert Anderson, M.D.
From: Bruce Decker
Date: September 24, 1987
Re: Follow up to San Francisco Discussion (Sept. 22nd)

You are right: the largest, least complicated and potentially profitable AIDS market are asymptomatic seropositives.

As we discussed, they are generally employed, thus insured and have a most compelling reason for seeking competent, convenient, and comprehensive care.

We estimate that 400,000 Californian fall into this category and that approximately 40% are in the San Francisco Bay Area.

By offering confidential, in-house laboratory work to physicians and self-referred patients in a state-of-the-art atmosphere, you create your foundation. Supplement that with constant monitoring of all facets of the rapidly changing interventions, research and access to experimental drugs and protocols and you will have created a private sector AIDS treatment and evaluation unit.

Increasing numbers of people are seeking confidential antibody testing and associated counseling. When found to be antibody positive they naturally are encouraged to and many seek, a physical and blood test evaluation of their current condition. Those who remain well are enrolled in regular re-testing and monitoring and are counseled about avoidance of risk accelerating behavior habits. Others are diagnosed at various stages of infection and more seriously treated.

Many physicians wish to provide these full range of services, but lack the time, space, equipment or experience necessary. Your plan to offer these services billed through the office of the referring physician is enlightening.

It offers physicians with both large and small numbers of patients the opportunity to provide optimum care for their patients without relinquishing control of them.

As a credible source of the most up-to-date information in the rapidly changing AIDS arena you will be providing an invaluable service to both physicians and patients.

Furthermore, you will be providing an alternative to the impersonal, inefficient public health facilities for those who have the means to afford it.

This facility could be easily duplicated at a series of satellite locations and could serve as the foundation from which a wide cross section of extended services could be offered.
I am enthusiastic and flattered at the opportunity of being involved in the development of this effort. I will make myself available to assist at a rate of $750.00 per day plus expenses.

I will plan to meet with you October 12th should I receive from you confirmation that your Board wishes my involvement.

My experience, training, and skills in organizational development with particular emphasis on marketing and communications uniquely qualify me for this task. I am attaching a brief resume for your use.

My thanks, as always for your great work!

BBD/dms
Enclosure
Dictated but not read
BIography
BRUCE B. DECKER

Founder and President of Health Policy and Research Foundation; a tax exempt foundation dedicated to better coordination through long term strategic planning of Federal, State, Local and private sector AIDS programs.

Founder and Finance Chairman: NO ON 64/Stop LaRouche; the $2.5 million campaign which defeated by over 70%, the AIDS Quarantine Initiative in California (1986).

Member and former Chairman, California AIDS Advisory Committee; appointed by Governor George Deukmejian in July, 1984. Committee is a nine-member statutory committee created by the California Legislature in Senate Bill 910 to advise the Governor, Legislature and Department of Health Services on AIDS-related legislative, fiscal and policy matters.

Assisted in founding the American Foundation for AIDS Research; Peter Carpenter, Chairman, Dr. Mathilde Krim and Dr. Michael Gottlieb, Co-chairs; Miss Elizabeth Taylor, National Chairman, the first nationwide AIDS-related organization dedicated to private sector funding of AIDS research (1985).

Member, Board of Governors, Municipal Elections Committee of Los Angeles (MECLA); and Californians for Individual Rights and Civil Liberties (CIRCL); political action committees dealing with issues relating to gay, lesbian and women's rights (1986).

Member, California Republican State Central Committee; full voting member appointed by Assemblyman William J. Filante, M.D. (1985).

Member, Board of Directors, The Fund for Human Dignity; an educational foundation of the national gay and lesbian community (1987).

President and Founder of Cypress Associates, a public affairs and political consulting firm founded in 1977 to serve individuals, corporations, foundations, and political committees, primarily in the area of fund administration (raising, reporting, recording, spending).

Based in Los Angeles, with strong ties to the Reagan and Deukmejian administrations, his background includes work with Presidents Ford, Reagan and Nixon, Vice-Presidents Ford, Rockefeller and Bush, Senator Wilson, and a host of California candidates and officeholders in Congress, State Senate and State Assembly.

Born and raised in the San Francisco Bay Area, he attended the Robert Louis Stevenson School in Pebble Beach (Class of 1968), earning his undergraduate degree in Business, Finance and Marketing at the University of Santa Clara (Class of 1972), and his graduate degree in Hotel and Restaurant Management from the University of Denver (Class of 1974).
AIDS ANTIBODY TESTING at Alternative Test Sites

A Program of the California Department of Health Services

Kenneth W. Kizer, M.D., M.P.H.
Director

Information to help you make an informed decision about whether to take the test
THE AIDS ANTIBODY TEST AT ALTERNATIVE TEST SITES IN CALIFORNIA

The AIDS ANTIBODY TEST is available free of charge at Alternative Test Sites in California. This is a program of the California Department of Health Services. The AIDS antibody test detects the presence of antibodies to the AIDS virus by using a simple blood test.

This is not a test for AIDS. The test does not tell you if you have AIDS or any AIDS Related Condition (ARC); it does show whether you have been infected with the virus which can cause AIDS.

Infection means that a virus has been retained in your body. If you are infected with the AIDS virus, your body will produce antibodies, which can be identified by the AIDS antibody test. Infection does not occur by casual contact with persons infected with the virus. Instead, infection occurs through intimate sexual contact, passage of contaminated blood (such as occurs among persons sharing needles when using intravenous drugs), or from infected mothers to fetus.

Many people are concerned that they might face insurance or employment discrimination if the results of their AIDS antibody test were revealed. Although the test is available at other locations, your anonymity is guaranteed if you take the test at an Alternative Test Site. You can get test results at Alternative Test Sites in California without revealing your personal identity.

Your decision whether to take this test may be a difficult one. You must decide for yourself. This publication provides information to help you make an informed decision. If you have questions which are not answered here or at the Alternative Test Site, call the Northern California Hotline (1-800-367-AIDS) or Southern California Hotline (1-800-922-AIDS).

TEST PROCEDURE AT ALTERNATIVE TEST SITES

Anonymity is built into the Alternative Test Site system. You do not give your name, address, Social Security number, or other identifying numbers.

To take the test at an Alternative Test Site, you need to make an appointment by telephone. The entire visit, including education, will take approximately one hour. You will need to return to the Alternative Test Site in person within two weeks to get your test result. The test and all education and referral services are free at Alternative Test Sites.

When you call to make an appointment for testing, an operator will give you an appointment number. This number cannot be traced back to you. When you go to the Alternative Test Site, you will be given further information about the test. Afterward, if you decide not to take the test, you may leave. If you decide to take the test, you will be given a new number to identify your blood sample. This number does not reveal your personal identity.

Within two weeks you will need to return to the test site to get your test result. Upon presentation of your number, a health advisor will give you your test results and explain them to you in private. You will also receive a referral list in case you wish further services or consultation with a physician.

CONFIDENTIALITY AND ANONYMITY

Confidentiality is an agreement that information about you will not be disclosed without your consent. Anonymity is a condition in which your personal identity is unknown to others. Your anonymity is guaranteed if you are tested at an Alternative Test Site. If you take the test anywhere else, your anonymity may not be guaranteed, except in some research programs.

SHOULD YOU TAKE THE TEST?

- The following people should consider taking the test:
  - People who want to know if they have been infected with the AIDS virus.
  - People who want to know if they might transmit the AIDS virus to someone else.
  - People who want information that can reinforce safe, healthful behavior.
  - People considering pregnancy if one or both partners might be at risk for AIDS.

People who do not want to know the result should not take the test. People who feel unwilling or unable to cope with the implications of the result should not take the test.

The test will not tell you if:

- You have AIDS or AIDS Related Condition (ARC).
- You will develop AIDS or ARC in the future.
- You are immune to AIDS or ARC.
- You are healthy.

Whether or not you take the test, if you are at risk for AIDS you should not engage in practices which transmit AIDS.
The AIDS antibody is a protein naturally produced in the body in response to the presence of the AIDS virus. The virus is called by several names: HIV-1, HIV-2, LAV, ARV, and HDV, with HIV being the preferred name.

A positive test result indicates that the antibody has been found in your blood. A negative test result indicates that the antibody has not been found in your blood.

A Positive Test Result

If you test positive, it does mean:

• Your blood sample has been tested more than once and the tests indicate that antibodies to the AIDS virus are present.

• You have been infected with the AIDS virus and your body has produced antibodies.

• Researchers have shown that most people with AIDS antibodies have active virus in their bodies. Therefore, you are capable of passing the virus on to others.

If you test positive, it does not necessarily mean that:

• You have AIDS or AIDS Related Condition (ARC).

• You will get AIDS or ARC.

• You are immune to AIDS.

Therefore, if you test positive:

• Protect yourself from any further infection.

• Protect others from the virus by following AIDS precautions.

• Consult a physician for a complete health evaluation and advice on health maintenance.

• Follow good health habits to improve your chances of staying healthy, e.g., avoid drugs and heavy alcohol use, maintain good nutrition, and avoid fatigue and stress.
• Do not donate blood, plasma, sperm, body organs, or other tissue.

A Negative Test Result

If you test negative, it means that no antibodies to the AIDS virus have been found in your blood at this time. There are three possible explanations for this:

• You have not been infected with the virus.

• You have had contact with the virus but have not become infected and, therefore, have not produced antibodies. However, repeated exposure to the AIDS virus will increase the likelihood that you will become infected.

• You have been infected by the virus but have not yet produced antibodies. Researchers indicate most people will produce antibodies within two to eight weeks after infection. Some people will not produce antibodies for six months or more. A very small number of people will never produce antibodies.

If you test negative, it does not mean that:

• You have nothing to worry about.

• You are immune to the virus.

• You have not been infected with the virus. (You may have been infected and not yet produced antibodies.)

HOW IS AIDS TRANSMITTED?

AIDS is transmitted from person to person most commonly through sexual contact in the form of oral, anal, or vaginal sex or by sharing drug needles. In other words, AIDS can be transmitted in the following manner.

• Gay and bisexual men
• Intravenous drug users
• Hemophiliacs
• People who have had sexual contact or have shared needles with someone who may have been infected with the AIDS virus.
• Babies born to parents in any of the above categories.
• People who received blood transfusions between 1978 and 1984 who have a very slight risk of infection.

WHAT GROUPS ARE KNOWN TO BE AT RISK FOR AIDS?

• Males and females-heterosexual, bisexual, or homosexual
• Hemophiliacs
• Intravenous drug users
• Transplant patients
• Health-care workers exposed to AIDS patients

In some situations, an AIDS virus infection cannot be transmitted, even though it exists.

• People who have been infected with HIV but who remain asymptomatic and have normal immune systems for a number of years.
• People who have been exposed to HIV through blood transfusions or organ transplants.
• People who have been infected with HIV but who have an intact immune system.

In the United States, the most common group at risk for AIDS are homosexual men (gay and bisexual).

PROTECTIVE MEASURES FOR REPRODUCTIVE HEALTH IN AIDS:

• Abstaining from sexual contact
• Using a condom for oral, anal, and vaginal sex
• Not sharing syringes or needles

RECOMMENDATIONS FOR AVOIDING TRANSMISSION OF THE AIDS VIRUS

In situations where infection is possible, prevention is the only way to avoid HIV.

• Use a condom during all sexual contact.
• Avoid sharing needles or syringes.
• Do not have sex with someone who has had multiple sexual partners.

WHEN CAN THE AIDS VIRUS BE TRANSMITTED?

The AIDS virus can be transmitted by the following routes:

• Sexual contact
• Parenteral drug use
• Blood transfusions
• Organ transplants
• Occupational exposures

It cannot be transmitted by the following routes:

• Coughing, sneezing, or touching
• Kissing
• Saliva
• Urine
• Droplets

If you decide to take the telephone alternative Test Site to make your test, call the AIDS Hotline at 1-800-367-AIDS (in Northern California) or 1-800-922-AIDS (in Southern California).

WHAT HAPPENS WHEN YOU BECOME INFECTED WITH THE AIDS VIRUS?

AIDS stands for Acquired Immune Deficiency Syndrome, a disease caused by a virus which breaks down a part of the body's immune system. This breakdown leaves the body vulnerable to a variety of infections. Not everyone infected with the virus will develop AIDS. There are several possibilities:

• Many infected people will develop antibodies to the virus but remain healthy. They will display none of the symptoms of AIDS. Research indicates that most people in this group can transmit the virus to others by intimate sexual contact or by contaminated blood.

The long-term effect of infection in healthy, antibody-positive people is not known.

• A smaller group of people who are also antibody-positive will develop some of the symptoms of AIDS. These people are diagnosed as having an AIDS Related Condition (ARC). They may exhibit mild to severe symptoms such as swollen lymph nodes; unexplained, persistent diarrhea; an unusual weight loss; mild or intermittent fever; drenching night sweats; fatigue; and/or yeast and fungus infections.

• An unknown percentage of infected, antibody-positive people will develop AIDS. A diagnosis of AIDS is made only after finding a combination of life-threatening infections or malignancies that do not normally occur in healthy people.

The two most common diseases associated with AIDS are Pneumocystis carinii pneumonia (PCP) and Kaposi's sarcoma (KS).

The information provided in these pages has been compiled by the San Francisco AIDS Foundation under contract from the San Francisco Department of Public Health and revised by the California Department of Health Services.

The information provided by the California Department of Health Services is based on the latest available data and is intended to provide general information about health and well-being. It is not intended to be a substitute for professional medical advice. Readers are encouraged to consult their healthcare provider for advice on specific health concerns and to discuss the risks and benefits of any treatments mentioned. The information provided is intended to be accurate and up-to-date, but it is subject to change as new research and information become available.
MEMORANDUM

To: Robert Anderson, M.D.
From: Bruce Decker
Date: September 24, 1987
Re: Follow up to San Francisco Discussion (Sept. 22nd)

You are right: the largest, least complicated and potentially profitable AIDS market are asymptomatic seropositives.

As we discussed, they are generally employed, thus insured and have a most compelling reason for seeking competent, convenient, and comprehensive care.

We estimate that 400,000 Californian fall into this category and that approximately 40% are in the San Francisco Bay Area.

By offering confidential, in-house laboratory work to physicians and self referred patients in a state-of-the-art atmosphere, you create your foundation. Supplement that with constant monitoring of all facets of the rapidly changing interventions, research and access to experimental drugs and protocols and you will have created a private sector AIDS treatment and evaluation unit.

Increasing numbers of people are seeking confidential antibody testing and associated counseling. When found to be antibody positive they naturally are encouraged to and many seek, a physical and blood test evaluation of their current condition. Those who remain well are enrolled in regular re-testing and monitoring and are counseled about avoidance of risk accelerating behavior habits. Others are diagnosed at various stages of infection and more seriously treated.

Many physicians wish to provide these full range of services, but lack the time, space, equipment or experience necessary. Your plan to offer these services billed through the office of the referring physician is enlightening.

It offers physicians with both large and small numbers of patients the opportunity to provide optimum care for their patients without relinquishing control of them.

As a credible source of the most up-to-date information in the rapidly changing AIDS arena you will be providing an invaluable service to both physicians and patients.

Furthermore, you will be providing an alternative to the impersonal, inefficient public health facilities for those who have the means to afford it.

This facility could be easily duplicated at a series of satellite locations and could serve as the foundation from which a wide cross section of extended services could be offered.
I am enthusiastic and flattered at the opportunity of being involved in the development of this effort. I will make myself available to assist at a rate of $750.00 per day plus expenses.

I will plan to meet with you October 12th should I receive from you confirmation that your Board wishes my involvement.

My experience, training, and skills in organizational development with particular emphasis on marketing and communications uniquely qualify me for this task. I am attaching a brief resume for your use.

My thanks, as always for your great work!

BBD/dms
Enclosure
Dictated but not read
PROJECT INFORM

25 Taylor St. Suite 618
San Francisco, CA. 94102

FOR IMMEDIATE RELEASE

DATE: October 1, 1987

PROJECT INFORM RELEASES THE REPORT OF ITS SURVEY OF AIDS/ARC PATIENTS SELF-MEDICATING TREATMENTS IMPORTED FROM MEXICO.

Project Inform has released its report on people purchasing and using Ribavirin and Isoprinosine, a popular combination therapy that has been in use since 1984. Project leaders Joe Brewer and Martin Delaney cautioned the public to recognize the limited conclusions which can be drawn from this type of survey. "Since this type of survey does not meet standard research assumptions of random selection, random grouping of participants, and homogeneity of the sample group, it is incorrect to generalize from the data presented," Brewer said. Delaney added "It's best to think of this report solely as a description of the experiences of the people who participated, not as a general statement about the safety or effectiveness of these drugs." After expressing these cautions, they went on to say they believed the survey was important because it is the only information available regarding patients' treatment experience with the combined use of self-obtained Ribavirin and Isoprinosine and may provide useful input for future research.

The survey followed a total of 119 men, using the combination of the two drugs or using Ribavirin alone. Participants included a wide mix of people with full-blown AIDS, ARC, LAS, and others without symptoms who had tested positive to HIV. Use of the drugs was divided between those who used them on an every-day basis and others who followed an intermittent or "pulse dosing" approach. Dosages, particularly of Ribavirin, ranged widely, with a substantial percentage using amounts higher than those tested in the manufacturer's controversial clinical studies. Many patients used doses of 1000 mg or higher, with some as high as 2400 mg., versus a maximum of 800 mg. in the official studies. The survey tracked 36 individual symptoms, standard blood and T-cell tests, and participants' subjective assessment of side effects and their overall health and experience using the drugs.

The survey report concluded that, overall, participants experienced a decline in reported symptoms, except for participants with AIDS on low doses of drug. A number of symptoms showed statistically significant improvements and an advantage was noted for patients using the higher doses.

Participants reported favorably on their experience, with 51% saying their health improved overall, despite the normally
regressive nature of the disease; 65.6% claimed that their overall rate of deterioration from HIV "slowed, stopped, or reversed" while on treatment. At the last reporting period of the survey, 67% reported they still were using Ribavirin. The most common reason cited for discontinuing was the cost or difficulty of obtaining the drug. A larger number reported discontinuing the use of Isoprinosine, citing uncertainties about its effectiveness as the most common reason. Project Inform felt it would be very difficult to determine which drug was providing perceived benefits, and wondered whether unfavorable opinions expressed by some researchers about Isoprinosine might have affected participants' views. Shortly after conclusion of the survey, Ribavirin also became the subject of unfavorable commentary due to disputes between its manufacturer and the FDA, probably leading to increased drop-out among Ribavirin users.

The side effect most commonly noted was anemia, reported by 37% of participants. Analysis of lab data supplied by a subgroup of participants, however, showed the degree of anemia was small, with a mean drop in hemoglobin of 9.9% and mean drop of hematocrit of 11.3% after 3 or more months of treatment. Of interest was the finding that the use of higher doses of Ribavirin in the survey was not associated with increased anemia. The next most common side effect reported was a drop in white blood cell counts.

In its discussion of the results, Project Inform concluded that although the survey participants reported a positive experience no matter how the question was asked, more research is required before generalizations can be made about the use of these drugs. Others using them may or may not have similar experiences. Project leaders, however, feel that the survey clearly points to the need for continuing research. Future research might explore the effects of higher doses and the use of intermittent or pulse dosing. At the release of the survey, Project leaders were pleased to note that new studies of both drugs were already underway, testing higher doses of Ribavirin and larger groups with Isoprinosine. "It's about time," Delaney said, "that the FDA stopped its stalling tactics and put more effort into helping determine whether these drugs can help. Controversial FDA actions on both drugs is in the best interests of neither science nor the lives of HIV infected people." Delaney pointed out that the FDA's analysis of the recent study of Ribavirin with LAS patients has now been disputed by four world class statistical experts, as well as the 4 independent researchers who conducted the study. He said he believed there was a growing trend among NIH researchers to reconsider that study and the drug, although few seem willing to directly confront the FDA over it.

Copies of the complete study are available through the Project Inform hotline. The report will also be supplied to the National Institutes of Health and the FDA, which requested this in Project Inform's meeting with them in Washington on July 28th, 1987.
October 2, 1987

Mr. Bruce B. Decker
7985 Santa Monica Blvd. #109-251
Los Angeles, CA  90046

Dear Bruce:

Attached is a draft copy of the proposed business plan for DSW Laboratories. On October 8, 1987 there will be a board meeting which will determine whether or not to begin full implementation of the attached plan. I would, therefore, appreciate your comments in advance of the meeting if you are not scheduled to attend. I can be reached at 415/362-4022 days or 415/647-5391 evenings.

A new name for the business more appropriate to its plan is needed, and I would welcome your suggestions and participation in helping to choose it.

I would recommend that in any discussions about DSW Laboratories that the company be represented as a private for profit clinical research center. At the present time, it is entirely unclear who will be paying the bills for patient care at the center. For treatment protocol investigational drugs, third party reimbursement may be available. For Phase II and Phase III clinical trials, the costs will be largely underwritten by the companies and to some extent by the patient's private insurance. In California regulatory changes are being proposed that would even permit the Medi-Cal program to pay for investigational treatments. Hence, the extent of out-of-pocket expense to the patients themselves that will be necessary to conduct clinical research and investigational treatment may not be significant for many treatments offered.

I apologize for the short turn around on the attached document, and appreciate any comments that you might have regarding it.

Yours truly,

Robert E. Anderson, M.D.
President
Background

Acquired Immune Deficiency Syndrome (AIDS) is a group of illnesses caused by progressive destruction of the immune system by a retrovirus called the Human Immunodeficiency Virus (HIV). This virus has both a narrow host specificity; infecting only humans and chimpanzees, and a narrow cell specificity; attacking the CD-4 T-helper/inducer lymphocyte, monocytes, and, as yet not fully characterized cells in the brain. The degree of immunodeficiency produced is profound, and dementia and other neurological diseases are observed in at least half of all AIDS patients during the course of their illness. As of August 31, 1987, 41,366 AIDS cases have been reported to the United States Centers for Disease Control. The number of HIV infected individuals in the U. S. is not known precisely, but is certainly no fewer than 420,000 (10 times the number of U. S. cases), and is probably between 1,000,000 and 2,000,000.

World-wide the AIDS problem is particularly severe in urban Central Africa, where about 15 percent of the general population, 50 percent of patients in hospitals, and about 25 percent of all newborns are infected with the virus. Europe, Australia, Brazil, and Haiti are other areas where significant numbers of AIDS cases are evident, and West African countries are reporting AIDS cases due to a newly identified strain of the virus called HIV-2.

Antibodies to the virus in the blood of HIV infected individuals are usually detectable by the second month after infection and virtually always present by the end of the sixth month. Reliable screening tests (ELISA) have been available since April 1985, but reactive tests need to be confirmed with more specific antibody test procedures such as the Western Blot or Indirect Immunoflourescent Antibody Tests. HIV tests are performed on all blood or tissue donors, and are available for free at anonymous testing sites in California, and on a fee for service basis in many physicians offices. At least one company advertises walk-in HIV testing for $39.00 in San Francisco.

Current data suggests that HIV infection is progressive in at least 80 percent of infected individuals and that development of AIDS will occur in 25 to 50 percent of HIV infected persons within the first 8 years after infection. Clinical status, the concentration of CD-4 lymphocytes in peripheral blood, and the presence of viral core (p24) antigen (or loss of anti-p24 antibody) appear to be the best predictors of development of severe immunodeficiency and death in HIV infected individuals. Serial monitoring of these parameters have important prognostic value to HIV seropositives. For example, the combination of abnormally low CD-4 cells and certain clinical findings confers a 40 percent chance of developing AIDS in two years, while normal CD-4 cells and no clinical findings indicates that and an HIV infected individual has a less than 5 percent chance of having AIDS in two years. Such monitoring is not always available. If performed in the physician's office, laboratory and other costs are about $150-300 per visit. If third party reimbursement is obtained, the patient becomes indetified as seropositive to his health insurance carrier.
The only drug currently licensed for use against HIV infection is Zidovudine (Retrovir, Burroughs Wellcome Co.). A list of drugs undergoing clinical trials is included in the marketing section. About 40 different drugs and immunomodulators are in 100 FDA sanctioned clinical investigations in the United States. The National Institute for Allergy and Infectious Diseases has established a system of 19 AIDS Treatment Evaluation Units (ATEU) which are currently conducting experimental trials on approximately about 1,000 patients. Although the total number of individuals with HIV infection and with AIDS seems large, the actual number which meet the criteria of a particular protocol is often very restricted. Furthermore, any given ATEU may only access a small percentage of the patients in a given area. Referral to the ATEU is usually required and community physicians are often reluctant to make these referrals since their patient may be lost to further care. No system currently exists for systematically identifying patients interested in drug trials, for locating trials in process, for assisting physicians interested in making referrals, or for helping the patients in directly accessing experimental therapy.

Proposed Business

In order to address the need of patients for both improved access to experimental treatment and to diagnostic and monitoring procedures, the need of physicians to improve access for experimental therapy for their patients, and the need of the pharmaceutical and biotechnology industry for access to patients interested in participating in experimental therapy, it is proposed that DSW Laboratories create a private for profit HIV/AIDS Clinical Research Center (HACRC). This core facility will be created at a location of convenience to HIV infected individuals. The high AIDS morbidity areas in the US where such a business might be located are listed in the marketing section. A demonstration HACRC is proposed for San Francisco.

Within this core facility will be a clearinghouse where patients (or their physicians) can telephone or walk in and receive information about the availability of experimental treatments for HIV infection, AIDS, and associated illnesses. The clearinghouse will include a testing center offering HIV antibody and CD-4 tests and interview rooms where individuals interested in receiving experimental drugs can be counseled about the availability of experimental therapy. Direct advertising to patients and physicians and other efforts to generate referrals within the community such as lectures, television appearances and interviews will be used to attract patients. Volunteers for drug trials will be interviewed in person or by telephone to determine the extent of their present illness and their interest in participating in clinical research. If funds from a trial are available potential participants can be tested, examined, and staged according to their degree of illness at no personal expense. Such staging (consisting of a medical history, limited physical examination, and laboratory tests) will also be offered on a fee for service basis. The HACRC will solicit drug company support for trials in these patients, promising to deliver sufficient volunteers in the stages of HIV infection called for by the protocol and to conduct the drug trials in a professional and scientifically valid manner. Individuals who are uninfected and at risk may be eligible for vaccine trials.

Use of investigational new drugs under treatment protocols has been recently expanded under new FDA regulations. Such protocols may provide a mechanism by which experimental therapy for treatment use can be provided to a large number of patients. While some of these protocols may be easy to administer and accessible in the private
doctors office, those that are more complex may only be available in the HACRC, ATEUs, or similar institutions where the necessary laboratory monitoring and administrative work can be performed.

The core facility will also have a medical clinic where patients undergoing experimental treatment will be seen by the medical staff, a licensed clinical laboratory that will offer both initial screening tests and sophisticated research procedures needed to monitor the effectiveness of experimental therapy on the patient, and, in the San Francisco HACRC, the administrative offices for the corporation. The HACRC will operate a commercial blood banking operation with the capability of supplying clinical material to industry collected from HIV positive individuals. A market has already been identified for anti-HIV antibody positive plasma. Additional markets for a variety of patient derived materials, such as lymphocytes removed using a blood cell separator, cell lines infected with HIV, and HIV antigens produced in the laboratory are likely to be identified given the world wide scope of AIDS research activities.

In order to insure that an effective patient referral network is established and maintained, a newsletter to physicians and patients will be created. Each time a patient is seen either for screening or as a participant in a clinical research program, an individualized letter will be sent to his physician detailing any relevant clinical or laboratory information. Great care will be taken to insure that patients are referred back to the private doctors for care unrelated to the clinical protocol and upon completion of the experimental treatment, with a full written report for the patient's chart.

The following table summarizes the minimum core services to be provided and a list of possible additional services that HACRC can offer to patients, physicians, and industry.

### Core Services
- Treatment Clearinghouse including HIV Antibody Testing and CD-4 (T-Helper) Cell Counts*
- Enrolling Patients Interested in Therapeutic Trials
- Conducting Research/Treatment Using Experimental HIV/AIDS Treatments

### Added Services
- Consistently With Above Plan
  - Diagnostisc Medical Laboratory Services
    - p24 Antigen, anti-p24 antibody titer, virus culture
    - Other AIDS related Microbiology and Immunology
  - Specialty Laboratory Services
    - Pharmaceutical Industry Testing (in support of development)
    - Pharmaceutical Industry Testing (in support of trials)
  - Basic Medical Monitoring and Periodic Follow-up*

- Plasmapheresis Center
  - Collection of anti-HIV positive plasma
  - Other Blood Bank Services (Red Cell Infusions, Cell Separations for Lymphocyte Storage, Activation, and Infusion, HIV antibody infusion both human and murine)
  - Antigen production/cell culture facility - reagents & products & Facility for pilot manufacturing therapeutic agents (e.g. vaccines, human/murine antibodies, blocking antigens, activated lymphocytes)

- Possibly in Partial Conflict with Above Plan
  - Outpatient Medical Care
  - Administration of Inhaled Pentamidine/other therapy
  - Formation of a Medical Group Practice

* these services may be viewed as competitive by some private MDs
There are currently 40 drugs and immunomodulators in over 100 FDA approved clinical trials in the United States. A list of the companies and their products which have announced that they are in clinical trials is as follows:

### Experimental AIDS Drugs Currently Approved for FDA Sanctioned Clinical Testing

<table>
<thead>
<tr>
<th>Potential Immuno-Modulating Agents</th>
<th>Sponsor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thymopentin</td>
<td>Ortho Pharmaceuticals, Raritan, NJ</td>
</tr>
<tr>
<td>Thymostimuline</td>
<td>Serono Laboratories, Inc., Randolph, MA</td>
</tr>
<tr>
<td>Methionine-enkepalin</td>
<td>National Jewish Hospital, Denver, CO</td>
</tr>
<tr>
<td>Isoprinosine</td>
<td>Newport Pharmaceuticals, Newport Beach, CA</td>
</tr>
<tr>
<td>Alpha Interferon</td>
<td>Hoffmann-La Roche Inc., Nutley, NJ</td>
</tr>
<tr>
<td>Gamma Interferon</td>
<td>Genentech, Inc., San Francisco, CA</td>
</tr>
<tr>
<td>Imreg-I</td>
<td>IMREG Inc, New Orleans, LA</td>
</tr>
<tr>
<td>Interleukin-II</td>
<td>Hoffman-La Roche, Inc., Nutley, NJ</td>
</tr>
<tr>
<td>Ampligen</td>
<td>HEM Research, Rockville, MD</td>
</tr>
<tr>
<td>Immune Globulin IG-IV</td>
<td>Sandoz Pharmaceuticals Corp., East Hanover, NJ</td>
</tr>
<tr>
<td>Anti-alpha interferon serum</td>
<td>Alpha Therapeutics, Los Angeles, CA</td>
</tr>
</tbody>
</table>

### Potential Anti-Viral Agents

<table>
<thead>
<tr>
<th>Potential Anti-Viral Agents</th>
<th>Sponsor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ansamycin</td>
<td>Adria Laboratories, Dublin, CA</td>
</tr>
<tr>
<td>Ribavirin</td>
<td>Viratek/ICN Pharmaceuticals, Cosa Mesa, CA</td>
</tr>
<tr>
<td>DDC (Dideoxycytidine)</td>
<td>Hoffmann-La Roche, Inc., Nutley, NJ</td>
</tr>
<tr>
<td>HPA-23</td>
<td>Rhone-Poulenc, Monmouth, NJ</td>
</tr>
<tr>
<td>AL 721</td>
<td>Matrix Laboratories, New York, NY</td>
</tr>
<tr>
<td>Foscarnet</td>
<td>NIAID, Bethesda, MD</td>
</tr>
<tr>
<td>UA001</td>
<td>Ueno Fine Chemicals Industry Ltd., NY, NY</td>
</tr>
</tbody>
</table>

### Vaccines

- Institute for Immunological Disorders, Houston, TX
- Bristol-Myers's Oncogen Division, New York, NY

These companies will be contacted initially to see if the HACRC can participate in their clinical trials. Through industry contacts, appropriate literature searches, and personal contacts, companies moving into early trials will be contacted in an attempt to establish the HACRC as the primary site for testing drugs. Relationships with the government sponsored ATEU system and private concerns which conduct drug trials, such as the Porton Medical Group, will be established if possible.

The amount of revenue which will be earned in the course of therapeutic trials will vary depending on the complexity of the protocol. Two recent trials conducted in San Francisco, Retrovir in Pneumocystis carinii pneumonia patients and Beta interferon in Kaposi's Sarcoma patients, averaged about $4,000 per patient from the drug companies. Additional charges to the patient's private health insurance also occur. For planning purposes it will be assumed that an average trial will last about three months and result in about $4,000 in revenue from the drug company and from $2,000 to $6,000 in claims billed to the patient's private insurance.
The mechanism for administering treatment use protocols for investigational new drugs has yet to be worked out. Revenue projections are not possible at this time. However, it is anticipated that the HACRC will provide an ideal setting for administration of treatment use protocols for investigational new drugs. Careful laboratory monitoring of patients will be possible and knowledgeable clinical monitors will be available to complete the necessary paperwork. In marketing services, the HACRC will encourage drug companies not presently offering their investigational drugs under treatment use protocols to set up such protocols with the HACRC. Staff will offer direct assistance to the manufacturer in establishing and filing such protocols with the FDA.

The market for patient services is distributed according to the distribution of patients. The following table indicates other areas of the country where HACRC's might be located.

<table>
<thead>
<tr>
<th>SMSA*</th>
<th>Population</th>
<th>AIDS Cases</th>
<th>Cases/Million</th>
<th>SMSA/US</th>
</tr>
</thead>
<tbody>
<tr>
<td>New York</td>
<td>9,120,000</td>
<td>10,751</td>
<td>1,179</td>
<td>6.56</td>
</tr>
<tr>
<td>San Francisco</td>
<td>3,250,000</td>
<td>4,007</td>
<td>1,233</td>
<td>6.86</td>
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<td>Los Angeles</td>
<td>7,480,000</td>
<td>3,551</td>
<td>475</td>
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<tr>
<td>Houston</td>
<td>2,910,000</td>
<td>1,346</td>
<td>463</td>
<td>2.57</td>
</tr>
<tr>
<td>Washington</td>
<td>3,060,000</td>
<td>1,217</td>
<td>398</td>
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</tr>
<tr>
<td>Miami</td>
<td>1,630,000</td>
<td>1,149</td>
<td>705</td>
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<td>Chicago</td>
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<td>Dallas</td>
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<td>Philadelphia</td>
<td>4,720,000</td>
<td>794</td>
<td>168</td>
<td>.94</td>
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<td>Atlanta</td>
<td>2,030,000</td>
<td>666</td>
<td>328</td>
<td>1.83</td>
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<tr>
<td>Boston</td>
<td>2,760,000</td>
<td>637</td>
<td>231</td>
<td>1.28</td>
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<td>Fort Lauderdale</td>
<td>1,020,000</td>
<td>529</td>
<td>519</td>
<td>2.89</td>
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<tr>
<td>San Diego</td>
<td>1,860,000</td>
<td>526</td>
<td>283</td>
<td>1.57</td>
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<tr>
<td>Nassau-Suffolk</td>
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<td>515</td>
<td>197</td>
<td>1.10</td>
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<td>Jersey City</td>
<td>560,000</td>
<td>462</td>
<td>825</td>
<td>4.59</td>
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<tr>
<td>Seattle</td>
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<td>New Orleans</td>
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<td>Denver</td>
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<td>218</td>
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<td>Anaheim</td>
<td>1,930,000</td>
<td>338</td>
<td>175</td>
<td>.97</td>
</tr>
<tr>
<td>Rest of US</td>
<td>168,720,000</td>
<td>11,024</td>
<td>65</td>
<td>.36</td>
</tr>
<tr>
<td>Total</td>
<td>230,120,000</td>
<td>41,366</td>
<td>180</td>
<td>1.00</td>
</tr>
</tbody>
</table>

* Standard Metropolitan Statistical Area

The total size of the HIV positive community in the US is probably at least ten times the number of cumulative cases, and may be as high as 50 times that number. Hence, nationally, there are from 420,000 to 2,100,000 infected persons, and in the San Francisco bay area, there are 40,000 to 200,000 infected individuals. In addition, there are persons at risk for HIV which include an addition 100,000 uninfected gay men, and 100,000 multipartner heterosexuals who may be interested in HIV testing and counseling, and participation in vaccine trials.

Marketing Research Plan

A private marketing research organization has been contacted for a proposal to conduct research relevant to the creation of this business. Their research will focus on three key areas. First; the pharmaceutical manufacturers will be contacted about the need for such a clinical center and the factors which would influence their decision to conduct their clinical trials at this center as opposed to alternatives (such
as ATEUs, other University Clinical Research Centers, etc.). Second, private physicians will be contacted in order to determine the factors that would influence their decision to make referrals of their patients to the HACRC, and determine incentives that would encourage these physicians to actively assist in identifying protocol eligible patients. Third, a random sample of persons at risk for HIV will be contacted to determine the extent of interest in receiving experimental treatment and the size of the pool of patients potentially available in the area from which the HACRC will be able to attract. Focus groups will be used to determine how the business should present itself to the patient in order to secure initial self referral and eventual participation in the protocol.

Workload Analysis and Facilities Requirements at Capacity

Clinical Drug Trials

At capacity, the San Francisco HACRC will be able to manage 300 patients on an ongoing basis in drug trials. Patients will have to be seen from 1 to 5 times per week for from 15 to 60 minutes, depending on the protocol. The average protocol will probably be 3 months, indicating a total of 1,200 patients will receive investigational drugs to sustain 300 patients in ongoing trials. With two visits per week of one half hour each, 300 man hours will be required in direct clinical work with the patients. Assuming the center is open extended hours (about 60 per week), patients would be seen by a physician, nurse practitioner, or registered nurse depending on the complexity of the protocol. The staffing and space required are presented in exhibits A and B. A total of 2,630 square feet of clinic space and a payroll of $444,000 annually will be required. In addition, the clinic will utilize a significant percentage of administrative time and heavily utilize the laboratory.

Revenue projections for the clinical trials include fees charged to the pharmaceutical company for conducting the trial. These fees will vary depending on the complexity of the clinical and laboratory monitoring required, but will probably be about $4,000 per patient. In addition the patient will be required to pay himself or permit the HACRC to bill his private insurance for any other necessary medical expenses not covered by fees from the drug company. These will vary in the $2,000 to $6,000 range, depending on the complexity of the trial. Therefore, with 300 patients in ongoing trials and 1,200 patients per year completing trials in the center, projected revenues from the drug trials are 1,200 patients x $8,000 / patient = $9,600,000 total. Many of these fees will be generated in the laboratory.

Clearinghouse

In order to maintain an active patient population sufficient to have 300 patients in trials, it will be necessary to recruit about 250 patients a month into the center who are interested in such trials. This recruitment will be done through advertising, physician referrals, and other mechanisms previously mentioned. It can be anticipated that a successful campaign will generate 1000 calls per month to the HACRC, requiring an average of 10 minutes per call, 250 potential participants will be interviewed for 30 minutes, and 30 screening physical exams and laboratory workups will be scheduled. In addition, the clearinghouse will be offering HIV antibody tests to 100 walk-in clients per month, 100 CD-4 cell counts and p24 antigen levels, and an additional 30 screening examinations on walk-in patients. The clinic will incur 200 hours of telephone time, 125 hours of patient interviews, 60 physical examinations, and 260 interviews to discuss laboratory test results. Staffing and space requirements are presented in Exhibits A and B.
Some revenue will be derived from the clearinghouse in the form of fees for HIV testing, CD-4 monitoring and clinical staging of patients. It is anticipated that these fees will be held relatively low in order to attract patients into the drug trials. At $40 per test for HIV screening, $60 per test for CD-4 and p24 monitoring, and $50.00 per examination for clinical staging. Projected revenues of $162,000 are as follows:

- HIV Screening 1,200 @ $40 = $48,000
- CD-4 + p24 antigen 1,200 @ $60 = $60,000
- Clinical Exams 1,080 @ $50 = $54,000

Plasmapheresis Center

A four bed plasmapheresis center can complete a donation in about two hours per donor. Therefore, at capacity the center can draw about 80 units per week, or 320 units per month. The staffing required will be one medical assistant/clerk to make appointments and perform initial tests prior to donation, two floor nurses, and one centrifuge operator. Staffing and space requirements are presented in Exhibits A and B. About $5.00 of disposables per donation are consumed and donor fees will probably be about $50.00 per donation.

Presently at least two companies are manufacturing anti-HIV positive immunoglobulin. It can be anticipated that they will pay between $0.50-$1.00 per ml for raw product plamsa. Hence, this four bed center has the potential to generate $250.00 - $500.00/donation x 3840 donations/year or from $960,000 to $1,920,000 per year in gross revenue.

Laboratory

The HACRC laboratory will perform laboratory tests necessary to support the clearinghouse, clinical drug trials, and the plasmapheresis center. In addition, it will market laboratory services to physicians in the community at large. The projected weekly workload follows:

<table>
<thead>
<tr>
<th>Tests</th>
<th>Trials</th>
<th>Clearinghouse</th>
</tr>
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<tbody>
<tr>
<td>CBC</td>
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<td>67</td>
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<tr>
<td>SMAC</td>
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<tr>
<td>Drug Levels - Selected Protocols</td>
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<td>CD-4 Cell Counts - Selected Protocols</td>
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<td>50</td>
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<td>HIV p24 Antigen Levels</td>
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<td>HIV Elisa</td>
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<td>Anti-p24 Antibody Titers</td>
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<td>25</td>
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<td>HIV Cultures Selected Protocols</td>
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<tr>
<td>Other Special Micro and Immuno Tests</td>
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</tr>
</tbody>
</table>

Staffing and space requirements are presented in Exhibits A and B.

In addition, research laboratory procedures in support of drug, vaccine, or immunotherapy development in industry will be offered. The payroll for such personnel will be derived from the research contracts themselves. Production of viral antigens and other commerical sales of reagents derived from HIV positive materials are anticipated.
Revenues for the laboratory have been discussed in the previous sections, since overall revenues include those charged for laboratory services. Additional revenues in the form of referral of patients for laboratory services, production of viral antigens, and special research services are anticipated. Government research contracts are also possible. No revenue projections for these aspects of the business have been developed, however several hundred thousand dollars per year could potentially be derived from such services.
<table>
<thead>
<tr>
<th><strong>STAFFING REQUIREMENTS</strong></th>
<th><strong>TOTAL SALARY</strong></th>
<th><strong>CLINICAL DRUG TRIALS CLEARING HOUSE</strong></th>
<th><strong>PLASMA PHRESIS CENTER</strong></th>
<th><strong>LABORATORY OTHER</strong></th>
</tr>
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<tbody>
<tr>
<td><strong>ANNUAL SALARY RATE EMP</strong></td>
<td><strong>108,000 1.5</strong></td>
<td><strong>216,000 1.0 36,000</strong></td>
<td><strong>60,000 2.0 60,000</strong></td>
<td><strong>18,000</strong></td>
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<tr>
<td><strong>NURSE PRACTITIONER/PHYSICIAN ASSTS</strong></td>
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<td><strong>216,000 1.0 36,000</strong></td>
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<tr>
<td><strong>REGISTERED NURSES</strong></td>
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</tr>
<tr>
<td><strong>OFFICE ASSISTANTS/RECEPTIONISTS</strong></td>
<td><strong>24,000</strong></td>
<td><strong>24,000</strong></td>
<td></td>
<td></td>
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<tr>
<td><strong>TELEPHONE COUNSELORS</strong></td>
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<td><strong>36,000</strong></td>
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</tr>
<tr>
<td><strong>CLINICAL INTERVIEWERS/PROTOCOLS &amp; RESULTS</strong></td>
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<td><strong>48,000</strong></td>
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<td><strong>ANALYST/PROGRAMMER</strong></td>
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<td><strong>CHEIF FINANCIAL OFFICER</strong></td>
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<td><strong>5.0 290,000</strong></td>
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<td>SPACE REQUIREMENTS</td>
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<td>CLINICAL DRUG TRIALS</td>
<td>PLASMA- PHRESIS HOUSE CENTER</td>
<td>LABORATORY</td>
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<td>CLEARINGHOUSE</td>
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<td><strong>NET BEFORE TAXES</strong></td>
<td>(119)</td>
<td>(300)</td>
<td>(56)</td>
<td>138</td>
</tr>
</tbody>
</table>
LILIAN KAUFMAN

CLINICAL TRIALS CONSULTANT
Project Coordinator
Data Management
Quality Assurance

20 Quickstep Lane
SAN FRANCISCO, CA 94115
415-921-3627
Dear Mr. Decker:

This letter follows our telephone conversation of today. I have enclosed my resume for your inspection.

My expertise is in the areas of clinical trials; directing AIDS drug studies, implementing and coordinating related projects; working closely with the medical and scientific communities and working directly with people with AIDS and ARC.

My job requires the extensive knowledge of AIDS and AIDS related investigational drugs, both current and in development, as I am available as a resource and outreach person to community physicians, patients and their families regarding clinical trials.

I have been the primary study coordinator/monitor of several of our largest and best known clinical trials. My most recent study was DTC (Diethyldithiocarbamate), an immune modulator open to people with AIDS and ARC. For this placebo controlled study I screened and enrolled approximately eighty patients. My closed and completed studies include Suramin, Ribavirin, Gamma Interferon, and Alpha Interferon.

I look forward to meeting you.

Sincerely yours,

Lilian Kaufman
LILIAN KAUFMAN  
20 Quickstep Lane  
San Francisco, CA 94115  
415-921-3627

PROFESSIONAL EXPERIENCE

CLINICAL TRIALS MANAGER/MONITOR, AIDS CLINIC/SAN FRANCISCO GENERAL HOSPITAL, UNIVERSITY OF CALIFORNIA—SAN FRANCISCO  
March 1984—present

Responsible for protocol adherence, patient and clinic staff compliance.

Chart review and patient interview to screen for probable/possible study eligibility. Have thorough knowledge of protocol-specific parameters.

Arrange screening/staging physicals and laboratory procedures, evaluate results to determine eligibility per protocol requirements.

Patient Education: explain protocol and procedure rationale, obtain cursory medical history, obtain informed consent.

Design protocol-specific forms, obtain test results, abstract data, and record in appropriate Case Report Forms.

Monitor data for continuing patient eligibility and reportable serious adverse reactions (toxicity).

Retrieve data and follow-up; quality control.

RADIOLOGIC TECHNOLOGIST, DEPARTMENT OF RADIOLOGY, UNIVERSITY OF CALIFORNIA MEDICAL CENTER, SAN FRANCISCO  
Prior to 1984

Diagnostic Radiology: all routine radiology procedures, including surgery, fluoroscopy, and CT.

Research: in charge of radiology research lab. Available to all research groups in need of x-ray to facilitate animal experiments.

Therapeutic Radiology: simulator.

SPECIALIZED SKILLS

Knowledge of FDA/IRB, statistics, computers, and analysis/reports. Responsible to the sponsoring pharmaceutical companies and/or the NIH for quality data and study management.

Extensive knowledge of medical terminology, oncology, and AIDS.

Thorough understanding of the principles of chemo-, immuno-, and anti-viral therapies.

FORMAL EDUCATION

A.A.  Erie Community College, Buffalo, New York

R.T.  Radiology Technology, Roswell Park Memorial Institute Cancer Research Center, Buffalo, New York

Member of the American Registry of Radiologic Technologists and State of California Certified Radiologic Technologist (C.R.T.)

References upon request.
**Cypress Associates**  
9060 Santa Monica Blvd., #106  
Los Angeles, CA 90069  
(213) 271-0393

VIRx  
# 3 Embarcadero Center, #2560  
San Francisco, CA 94111

*** INVOICE ***  
October, 1987

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AL 721 Today

AL 721 Today by John S. James

AL 721, also called "egg lecithin lipids" or just "lipids", may be getting more public and professional attention today than any other alternative or experimental treatment for AIDS and ARC. Many people want to know what this treatment is, what evidence supports its use, and how can they obtain it and try it.

We have published several articles on AL 721 (1) since April of last year. Here we summarize its status as of early October 1987, report recent developments, and answers the questions most often asked.

Background

AL 721 was developed at The Weizmann Institute of Science, Rehovot, Israel, by a team led by Meir Shinitzky, Ph.D., a cancer researcher there. It consists entirely of three ingredients, all of which are found in ordinary egg yolks. The first formal human trial was a successful test to correct a certain immune deficiency (diminished lymphocyte proliferative response) in elderly persons, all of whom were over 95 years old. The problem returned when the treatment was stopped.

AL 721 does cross the blood-brain barrier.

Other early medical interests in AL 721 (before any antiviral properties were known) were for treating cystic fibrosis, and also for reducing the symptoms of alcohol or opiate withdrawal in order to help people quit using these drugs. These possibilities still look promising.

Statement of Purpose

AIDS Treatment News reports on experimental and alternative treatments, especially those available now. It collects information from medical journals, and from interviews with scientists, physicians and other health practitioners, and persons with AIDS or ARC.

Long-term AIDS survivors have usually tried many different treatments, and found combinations which work for them. AIDS Treatment News does not recommend particular therapies, but seeks to increase the options available.

We will also examine the ethical and public-policy issues around AIDS treatment research.
Theory suggests that AL 721 may also be useful with other lipid-coated viruses, such as Epstein-Barr. We are hearing anecdotal reports of successful use for treating chronic fatigue syndrome.

The first public notice of any connection between AL 721 and AIDS came in a letter published in the New England Journal of Medicine, November 14, 1985, by several scientists including Robert Gallo, M.D. of the U.S. National Cancer Institute, one of the world's leading AIDS researchers. The letter reported that AL 721 clearly inhibited AIDS virus infection of human white blood cells in the laboratory. It also mentioned that oral doses had been well tolerated in the preliminary tests on elderly persons mentioned above, and that these doses had indeed shown a medicinal effect comparable to what would be expected from laboratory data.

The fact that a treatment inhibits the AIDS virus in the laboratory certainly does not prove that it will work in people. But AL 721 not only worked in the laboratory. It had already been given to people with no sign of any toxicity. (And it consists entirely of food substances, further reducing the risk.) In addition, it had already demonstrated pharmacological benefit when taken orally for a non-viral immune deficiency. The oral medicine had indeed reached the bloodstream, and had shown the expected effect on white blood cells in the human body.

All this was published two years ago, in a letter in the most prestigious medical journal in the United States. Why not simply try AL 721 for treatment of AIDS or ARC?

In the two years since publication of that information, only eight persons with any AIDS-related condition have received AL 721 in scientific tests. This trial with eight people, sponsored by Praxis Pharmaceuticals (now Ethigen), was conducted at St. Luke's/Roosevelt Hospital Center (affiliated with Columbia University) in New York. It found encouraging results, especially a large reduction in reverse transcriptase, a measure of viral activity. But despite this success, presented at a scientific meeting in the Fall of 1986, no other clinical trials have begun in the last year.

A few days ago the U.S. National Institutes of Health had planned to begin its own clinical trials—almost two years after the New England Journal of Medicine publication—but these trials were placed on hold, for reasons unknown to the NIH press office. We called the FDA, which said it placed the hold because Ethigen had changed its supplier—the company with which it had contracted to manufacture the AL 721—but that now Ethigen had agreed to use the original supplier, the hold had been released and the trials could start.

The new manufacturer for Ethigen was to have been Abbott Laboratories, surely capable of making AL 721 properly. This incident illustrates the kinds of delays holding up treatment research.

Unfortunately the trials now supposed to begin will be "phase I" (dosage and toxicity) studies, apparently repeating the work of the last two years. They will have room for very few people. Beth Israel Medical Center in New York, which plans to conduct NIH trials of AL 721, is not recruiting at this time.

Except for the eight persons at the St. Luke's/Roosevelt study, no one with AIDS or ARC has received AL 721 in scientific trials anywhere in the U.S.—or anywhere else except Israel (see below).

The problem isn't lack of volunteers. There are widespread reports that hundreds of persons with AIDS or ARC are now on a waiting list for a larger study which was supposed to start at St. Luke's/Roosevelt, and that researchers there are despondent about not being able to let these people begin. We called St. Luke's/Roosevelt to confirm or deny these reports, but
were unable to get the permission required to discuss the matter with their researchers before press time.

Scientists looking for in-depth background on the laboratory work which led to the development of AL 721 should see Physiology of Membrane Fluidity, edited by Meir Shinitzky, Ph.D.—the principal developer of AL 721—and published by CRC Press, Boca Raton, FL. This two-volume book, by Shinitzky and 19 other scientists, is a model of thoroughness and careful workmanship. Shinitzky's article, "Membrane Fluidity and Cellular Functions", has over 300 references to relevant scientific papers.

Researchers should also note that the Medline computerized database, produced by the U.S. National Library of Medicine, has over 1,800 articles indexed under "membrane fluidity", the concept on which AL 721 is based.

**New Israeli Results**

The Baltimore Jewish Times, in a story on AL 721 scheduled for publication today, obtained recent information on the use of this treatment in Israel through its correspondent there.

"Of the 60 AIDS victims (sic) who have been treated with AL 721 in the past year, 48 have shown very considerable improvement in their general well being, sometimes within days of embarking on the treatment. They have lost much of the lassitude associated with AIDS, fevers have been reduced, other symptoms have diminished, and they have suffered no side effects. Three patients who were considered terminal are now in remission. More importantly, clinical tests show that in a phase of the treatment, the deadly virus loses much of its infectivity, in other words its power to spread from one cell to another." Baltimore Jewish Times, October 9, 1987.

Despite these good results, Yehuda Skornick, M.D., one of one of several Israeli physicians using AL 721 to treat AIDS and ARC, emphasized that this treatment is not a cure. "There is as yet no cure for AIDS, and it would be wicked and irresponsible to claim otherwise."

We called Dr. Skornick before going to press; he told us that 52 of the 60 are now showing improvement.

**Underground Medicine**

For the first 14 months after publication of the New England Journal of Medicine article, AL 721 was completely unavailable in the U.S.; a handful of Americans were treated secretly in Israel. Only in January of 1987 did the first good substitute reach the United States—the "home formula" made from concentrated soy lecithin (see discussion and formula below). Several months later, in May of 1987, the first all-egg version became available, in New York City only, through PWA organizations there. Today people can buy several different all-egg versions, through buyers clubs in some cities, at health-food stores in many areas, or from several different suppliers by mail.

Thousands of people are using one or another of these AL 721 substitutes at this time. Three independent surveys have questioned hundreds of these users (see Appendix below), and are finding exactly the same result—that a large majority report substantial benefits or better. Many users have reported dramatic improvement in their health, even some near death when they started, and have attributed their recovery to AL 721.
The original eight-patient study at St. Luke's/Roosevelt did not find any consistent change in T-cell counts. Others have used AL 721 and found that counts did increase, although slowly. T-cell improvement is not a strong point of AL 721; therefore some physicians suspect that the treatment might work especially well in combination with DTC, an immune modulator which is very good at improving T-helper counts, but no trials have been done. Israeli scientists are reportedly developing treatments which combine AL 721 with thymus hormones.

AL 721 seems to be most helpful in improving overall clinical condition. People report more energy, reduced or eliminated night sweats, clearing of skin conditions, and improved sense of well being. Skin mitogen tests as well as viral assays improve.

We do know that AL 721 is not a cure; it needs to be continued indefinitely. It does not help everybody; maybe ten to 20 percent of those who try it report that it does nothing for them.

We also know that AL 721 is harmless—although there may be a dangerous "rebound effect" if someone with AIDS or ARC stops taking it suddenly. See discussion of side effects below.

The overwhelming weight of available evidence indicates that AL 721 is a significant benefit to most people who use it—and decisive for many. All the information points in the same direction. But we don't have conclusive proof of efficacy because no one has done the clinical research necessary to know for sure.

It is almost impossible that Federal approval for general use of AL 721 could happen before 1989—the year after next—if it even happens then. Meanwhile, thousands of people have build a grassroots movement to obtain this treatment for themselves and their friends.

**What Went Wrong?**

If AL 721 really is good, why has it had to develop as underground medicine? Why has mainstream, official research done so little with it in the U.S.? The answer is that AL 721 (and most other promising treatments) have fallen through many cracks in the current AIDS research system.

Despite the highly touted advances in AIDS research, almost all of the work has been in high-tech studies which could not possibly lead to useful treatments in the near future. Such projects stimulate professional and commercial interest because they generate elegant science, will probably produce Nobel prizes, and tie into the vast economic potential of commercial biotechnology. But for many reasons it takes years to go from a challenging scientific idea to a practical medicine in widespread use. These high-tech studies produce fundamental knowledge of inestimable value, and may lead to an eventual cure for AIDS; certainly they are worth doing.

But they are unlikely to save the lives of those now ill. For that we need competent, speedy testing of a number of treatments already available and supported by all existing evidence, but largely dropped from official research because no major institution cares enough to push them through the 50 to 80 million dollar process of new-drug approval.

And despite the Wall Street feeding frenzy around AIDS research, most of the commercial interest isn't in treatments at all but in new HIV tests—much easier to develop, gain Federal approval for, and bring to market. And the treatments which do receive financial attention are again the high-tech ones which will take years to be ready for widespread use. Companies can get a better return on their investment by manipulating their stock prices with...
public relations, than by actually trying to develop and market a treatment for AIDS.

Why haven't physicians insisted on studies of AL 721? First, because the great majority of physicians do not treat anyone with AIDS, so they are not involved—and neither are their professional associations. Most physicians are too busy treating patients to keep up with research. And the medical literature has carried almost nothing about AL 721—understandably, since the research hasn't been done so there is nothing to publish.

Because AL 721 is patented (U.S. patent #4,474,773, "Lipid Fraction for Treating Disease", October 2, 1984) and unavailable from the patent holder, physicians cannot be involved without bending or breaking the rules—unless they happen to be working in the only existing official trial, with the handful of patients at St. Luke's/Roosevelt. Physicians don't advance professionally by bending or breaking rules, nor by spending their time learning how, when, and why to do so. They have every professional incentive to simply ignore the matter.

Because of the patent and Federal restrictions, nothing can happen unless the patent holder, the FDA, and a number of other parties including investors, institutional review boards, physicians, and patients can all work together. One problem anywhere can stop all clinical research on a drug.

And no one has investigated or articulated these problems. Until recently the mainstream press blacked out almost all stories about AL 721 and similar treatments. It didn't want to raise false hope, or risk being used in possible quackeries or scams. So newspapers and other media did not allow their reporters to cover medical stories at all until they were published in a professional forum or appeared in official press releases — and the science which should have been done but wasn't will never appear in these ways.

Even today, most investigative reporting on AIDS treatments is looking very hard for fraud—not because of any great evidence or problem of fraud, but because journalists don't feel safe reporting that an unapproved treatment might possibly be good.

These media policies, predilections, and restraints make it almost impossible for journalists to cover AIDS research in any critical fashion. Instead, the major media has covered treatment research almost exclusively by rewriting official press releases.

For both similar and different reasons, most AIDS activists and organizations, especially those which receive public funds, have completely abandoned treatment and research as issues. They have refused to develop expertise or provide critique or scrutiny. They have refused to support persons with AIDS in any involvement with unapproved treatments. They have left treatment and research—the only way to save the lives of those already infected—solely to the experts and professionals, as they would never do with issues of testing, education, social services, or civil liberties. They have placed the FDA, the NIH, and the research departments of drug companies into an Olympus above criticism, by anyone except the very experts whose professional constraints and dependencies prevent them from speaking freely.

But medical research does not occupy a magic pedestal above the mismanagement, opportunism, and defective national commitment seen elsewhere in the U.S. response to AIDS. Even doctors and scientists with the highest personal motives must make accommodations to national policy—deeply flawed in this case—in order to operate at all.

We have today a near-complete abandonment of persons with AIDS or ARC who are actually trying to save their lives with anything other than the one
approved treatment, AZT. Many thousands of people are now building their own treatment movements from scratch because the AIDS, the gay, the medical, the religious and ethical, the political, and all other institutions of our society have refused to support or assist, refused to cooperate, refused to become informed, refused to even discuss the issues. Promising treatments like AL 721 will continue to be underground medicine until physicians, activists, and others have the courage and commitment to look at the evidence, make informed, independent decisions, and speak and act accordingly.

Footnote

(1) The name "AL-721" is a trademark of Ethigen Corp. in Los Angeles (formerly Praxis Pharmaceuticals), and technically refers only to the proprietary product of that company.

The current popular interest in AL 721 developed entirely independently of Ethigen, and probably against its wishes, mainly through PWA organizations mostly in and around New York City. The people in this AIDS treatment movement generally use "AL 721" as a generic term, but acknowledge that technically it refers only to the proprietary product and that "egg lecithin lipids", "lipids", or "AL 721 substitute" would be more correct.

The phrase "AL 721" has been used in the medical literature at least since 1985 (Sarin and others, 1985); "AL" and "active-lipid", other names for the same substance, have been used at least since 1982 (Heron and others, 1982). We will use "AL 721" and "egg lecithin lipids" interchangeably.

To Be Continued

Part II of this article will tell how to use AL 721, what different versions are available, and where to obtain them, including a list of buyers clubs in different cities. It will address common questions such as the rebound effect, and how to use AL 721 while traveling when refrigeration is not available. It will summarize four different survey studies of persons using AL 721 for AIDS or ARC. It will include technical background and references, including citations to several double-blind clinical studies—largely unknown in the U.S.—which used the main active ingredient of AL 721 successfully for treating several different forms of viral hepatitis.

Common Antibiotic May Stop AIDS Virus

Fusidin (fusidic acid), a cheap and readily available antibiotic marketed since 1962, has shown very promising results in early human tests for persons with AIDS. Two October 9 dispatches by Reuters, an international wire service, carried the story, which first appeared in a Danish newspaper.

About ten people in Denmark have received Fusidin for treatment of AIDS or ARC, and other tests are starting in England. The news stories had only a sketchy report of results from one patient, who had taken Fusidin tablets three times a day for several months. He regained 10 kilograms of the 16 kilograms weight that he had lost, with no side effects. We do not know what dose was used.

Fusidin seems to work by preventing the virus from entering healthy
cells. Scientists do not know whether it kills the virus or only suppresses it.

We checked medical files for non-AIDS uses of Fusidin, and for side effects. This antibiotic is used for many kinds of infections. There seem to be few side effects of Fusidin given orally, although some patients develop jaundice which clears up when the medicine is stopped.

Unfortunately Fusidin is not marketed in the United States at this time. Apparently it is used in Canada, in Europe, and in many other countries. Scientists studying Fusidin for AIDS/ARC include Professor Viggo Faber of the National Hospital in Copenhagen, and British virologist Angus Dalgleish of the Northwick Park Hospital in Harrow, England. The manufacturer is Loevens Kemiske Fabrik, in Denmark. The British Medical Council will meet next week to consider how extensive the British trials should be.

We will continue to follow this important research. Let us know if you hear more about Fusidin.

Fusidin Warning

Fansidar, a drug usually used to prevent or treat malaria, is also being used as a preventive for pneumocystis. Physicians and patients should be aware of rare but sometimes fatal side effects, and of the need to stop using Fansidar immediately in case a skin rash develops or in certain other situations. Recently we heard from the lover of someone who died when his physician failed to give the warning, or to recognize the problem when it developed.

The 1987 Physicians Desk Reference includes the following in bold text in a separate box—reproduced twice on the same page for additional emphasis: "Fatalities associated with the administration of fansidar have occurred due to severe reactions, including Stevens-Johnson syndrome and toxic epidermal necrolysis. Fansidar prophylaxis should be discontinued at the first appearance of skin rash, if a significant reduction in the count of any formed blood elements is noted, or upon the occurrence of active bacterial or fungal infections."

A long list of additional warnings and precautions urges that "patients should be warned that at the first appearance of a skin rash, they should stop the use of Fansidar and seek medical attention immediately. Adequate fluid intake must be maintained in order to prevent crystalluria and stone formation. Patients should also be warned that the appearance of sore throat, fever, pallor, purpura, jaundice or glossitis may be early indications of serious disorders which require prophylactic treatment to be stopped and medical treatment to be sought."

The person who died was prescribed Fansidar and not given the warnings. He developed a skin rash about a week and a half after starting the treatment, and went to his doctor, who said not to worry about it. When the rash became severe, it was misdiagnosed as herpes zoster. Only at autopsy was the condition diagnosed as toxic epidermal necrolysis—a cause of fatalities mentioned in the Fansidar warning above.

This case reflects medical negligence—not the unknown risk of using a new or experimental treatment. Apparently a physician prescribed the drug without taking ten minutes to read the manufacturer's instructions and precautions. We are concerned at the trend toward a lower standard of care...
for persons with AIDS—perhaps rationalized by the preconception they will all die anyway so sloppiness and mismanagement don't matter as much.

You can look up prescription drugs yourself in the Physician's Desk Reference; most public libraries have it, or you can buy it for $32.95 in bookstores. A new edition comes out each March. Note that this book emphasizes dangers and problems; the texts are written by pharmaceutical manufacturers which must cover themselves legally, and some of the drug descriptions may be unduly alarming. The value is that if side effects do occur, patients will know to consider the drug as a possible cause, and take appropriate precautions.

A number of other drug reference books, including some written for the general public, may also serve this purpose.

A Call for Volunteers Interested in Alternative Treatments

The AIDS Treatment Library is a new service being developed in San Francisco that will utilize a cluster concept to help inform people with AIDS about treatment options. A series of self-contained mini libraries, each offering a range of information about both conventional and alternative treatments for AIDS, will be placed in bookstores, AIDS service organizations, cafes, etc.

John James has been involved from the beginning of the planning process, and the AIDS Treatment News will be included as part of the library's resources. The goal is to assure that people with AIDS are receiving the information they need to make informed decisions about available treatments.

The project requires committed, energetic volunteers, with a considerable degree of initiative, to serve as coordinators for the project. The role involves helping to identify and approach appropriate sites to house the mini libraries; to regularly check on the condition of the libraries; and to bring updated information to the libraries as new findings emerge.

If you would like to become involved, send a letter including a statement about your interest in the project, and an estimate of the number of hours per month you are able to contribute, to: Gordon Bradley, 222 Castro Street, San Francisco, CA 94114, by November 1.

How to Subscribe to AIDS Treatment News

Send $25. per quarter ($8. for persons with AIDS or ARC) to John S. James, P.O. Box 411256, San Francisco, CA 94141. Or call me at (415) 282-0110 any time 24 hours a day to start your subscription immediately.

Subscriptions include several back issues at no extra charge.

If you want the complete set of over 40 back issues, include $30. ($12. for persons with AIDS or ARC) in addition to the subscription price. You may order the back issues separately if you want. Back issues—and future issues—including information on AL 721, DTC (Imuthiol), dextran sulfate, lentinan, propolis, coenzyme Q, monolaurin, fu zheng herbal therapy, DNCB, aerosol pentamidine, fluconazole, and other experimental or alternative treatments.

To protect your privacy, we mail first class without mentioning AIDS on the envelope, and keep our subscriber list confidential.

Outside North America, add $5. for airmail postage.

- Public/Community relations:
- Government relations:
- Strategic planning

**IMAGE**

- Gay Community Physicians
- Drug Community

**DECOR BOARD MEETING**

- DEC 3: DEC 11 BOARD MEETING
- 14/15 SF

**CONFIDENTIAL**
MEMORANDUM

To: Robert Anderson, M.D.
Steven Price

From: Bruce Decker
David Smith

Re: AIDS Intervention/Treatment Clearinghouse

Date: October 21, 1987

By accumulating information on therapies that are proven effective against opportunistic infections and/or provide hope to otherwise untreatable conditions into a clinical database, we establish VIRx as a credible source of information about the ever expanding AIDS treatment protocols and associated interventions for HIV infection.

Once the existing data has been accumulated, we will design the mechanism to monitor a wide cross section of scientific publications in order to update the information on treatment and intervention therapies as to keep the database current.

Condensing and organizing this information onto a computer database will make it readily available to VIRx staff, physicians and concerned individuals both by calling in and by newsletter. Physicians would be provided with a "VIRx AIDS Treatment" binder which would be periodically updated by a newsletter.

With the first mailing, the binder could include instructions on how to easily get more information on treatment topics and enrolling patients by calling our information center.

Through this process we establish VIRx as the most reliable resource for treatment and intervention therapies available to HIV infected individuals.

This project will be divided up into four phases:

1) Establish key information resources with medical databases, research centers, pharmaceutical companies, major research institutions, and the Centers for Disease Control.

2) Compile the most current information on treatment and interventions utilized for HIV associated opportunistic infections and experimental therapies in use which have showed promise in slowing the manifestation of disease. Identify drug trials in process nationwide and monitor progress.
3) Utilizing "user friendly" database software, categorize and condense this data, facilitating fast and efficient information retrieval.

4) Making this information available to VIRx staff through the clinical database and making it available to physicians and potential patients through a hotline and newsletter.

cc: Martin Delaney
November 2, 1987

Dr. Robert Anderson  
c/o DSW Laboratories, Inc.  
3 Embarcadero Center  
Suite 2560  
San Francisco, California 94111

Dear Bob:

Your "concept paper" relating to financing of clinical trials through direct patient fees, forwarded with Mr. Price's letter of October 22, 1987, prompts me to clarify the legal aspects of this matter.

As a general rule, there are two important components to financing of clinical trials through direct patient fees. First DSW must obtain access to the investigational drug. Second, it must then obtain payment, both within FDA rules and within the rules established by government reimbursement or private insurance.

With regard to obtaining access to the drug, most investigational compounds (although not all) are patented. If the drug is patented, the pharmaceutical company owning the patent must provide it to DSW. Even if it is not patented, moreover, this is usually the only realistic way to obtain it, since DSW is unlikely to be able to manufacture it. Once access is obtained to the drug, there are two ways to handle the IND with FDA. The pharmaceutical company that provides the drug could include DSW under its IND or file a separate IND for DSW trial. Second, the pharmaceutical company could authorize DSW to refer to its drug master file (DMF), and DSW could file its own IND. In most instances, the pharmaceutical industry far prefers the first approach.

With respect to payment for an investigational drug, the first (and most important) hurdle is the FDA regulations. Any payment by a patient must be within the rules set down in the FDA regulations. The new drug provisions of the Federal Food, Drug, and Cosmetic Act prohibit any commercialization of
an unapproved (investigational) drug. FDA therefore allows payment for an investigational drug by a patient only under two circumstances. First, Section 312.7(d) of the new IND regulations provides, as a general rule, that if an investigational drug is to be sold, the sponsor of the IND should submit a notification to FDA providing a full explanation why sale is required and why the sale should not be regarded as the commercialization of a new drug for which an NDA is not approved. Such sale could possibly be justified as necessary to recoup costs for a small emerging company. Under no circumstances could it be justified to make a profit. Second, the even-more-recent treatment IND provisions in Section 312.34 (not yet codified in the Code of Federal Regulations) provide that, under the relatively limited and stringent provisions applicable to treatment INDs, the investigational drug may also be sold. As with the other more general provision, the price must be limited to recouping cost.

As you know, there is no real precedent yet in the FDA handling of treatment INDs. A treatment IND is intended largely for Phase III and the end of Phase II, and is highly unlikely to occur in Phase I. There is some flexibility in early Phase II, but this is likely to be unusual.

It should also be noted that, as a general rule, the major pharmaceutical companies have fought against patient payment for investigational drugs. Since DSW is likely to be dependent on these companies to obtain investigational drugs, this will be an additional hurdle to overcome.

If, and only if, DSW can obtain agreement both from the pharmaceutical company supplying the drug and from FDA under an IND, the patient can then be charged for the drug. If the patient is able to pay without reimbursement, that will end the matter. If the patient requires reimbursement, however, the policy and practice of HCFA and private insurers must be examined. Our experience is that there is no rule without exceptions. Generally, neither wish to reimburse for "investigational" procedures, including drugs. Private insurers are more likely to break that rule than HCFA. Another possibility would be to attempt to obtain reimbursement funds from a charitable foundation.

There are two ways of avoiding the issue of obtaining agreement from the pharmaceutical company and FDA with respect to payment. The first way is to have the clinical trial funded by a government agency or private group. The second way is to make the drug part of a total treatment
program, and to charge for the surrounding treatment but not for the drug itself.

Finally, it is likely that most, if not all, of the drugs in which you will be interested will have or can obtain orphan drug status. This does not give you the right to charge for the drug, in itself, but it undoubtedly helps persuade at least FDA of the need to sell the drug to patients. Orphan drug status (prior to NDA approval) only provides tax benefits for DSW, which may or may not be of significance to the company.

With best regards,

Sincerely yours,

Peter Barton Hutt

bav
Concept Paper

Financing of Clinical Trials Through Direct Patient Fees

At the present time clinical trials of experimental therapies are financed through a combination of support from the pharmaceutical industry, private foundations, federal research grants, and the patient's private insurance. Usually a patient participating in a clinical drug trial does not have to pay any out-of-pocket expenses associated with a trial, since most trials are conducted at university medical centers with heavy subsidies from the government. While this system serves the drug companies and academia, it has major disadvantages from the perspective of the patients interested in better treatments for their illnesses. In addition it limits hypothesis generation and markedly restricts experimental therapy.

As an alternative, the concept proposed herein is to undertake experimental drug research on behalf of patients for necessary fees required to accomplish the research. This research would be done in support of finding better treatments for HIV infection and AIDS, but is applicable to other diseases. As conceived, an expert committee would develop the very best experimental treatments for patients in various stages of HIV infection. Perhaps 2-4 protocols would be established for each stage of disease (e.g. asymptomatic HIV-seropositives and individuals with only PGL, individuals with symptoms and low CD-4 cell counts, and AIDS). Pharmaceutical companies who are developing the drugs called for in the protocols would be contacted and asked to submit an IND with the HIV/AIDS Clinical Research Center (HACRC) investigators. The drug could be provided free or paid for by the HACRC. No support from the drug company would be required since the costs would be paid by the patients on the protocols. Patients who wish to receive the experimental protocol will be informed that this is unproven therapy but represents the best treatment in the judgement of the investigators. A fee necessary for the conduct of the trial will be collected from the patient at the time of enrollment or as in-process payments as the trial progresses, and a contract between the patient and the HACRC will be established. The patient will be provided with a full description of the protocol and all medical services provided in order to contact his insurance company about possible reimbursement, and he will be given superbills during the course of the treatment to submit for reimbursement. It is anticipated that some but not all fees associated with the protocol may be covered.

By not requiring support from the drug companies a major barrier to gaining access to experimental compounds will be removed. However, it should be anticipated that companies developing drugs will be keenly interested in the protocol and may not agree to use of the compound if the protocol is likely to fail to show
efficacy or have serious toxicity since the research results might delay licensing of the compound for other uses or harm sales efforts. In general, however, drug companies are anxious to have their compounds investigated in humans and, since the data developed during the course of the protocol will be very useful to the drug companies, partial or even full support for the protocol is possible. Whether such support should be used to decrease the cost of the protocol or simply be donated to a non-profit foundation that pays the fees for patients who would otherwise not be able to afford the protocol has yet to be determined.

The proposed concept has the advantage of providing the best possible care to the patients. When attempting to seek extensive support from the drug companies, the compounds will likely be tested under very narrow restrictions. Combining drugs from different manufacturers will be difficult, and the best possible protocols may not be available from the HACRC because the company has elected to use other investigators for the protocol they have established.

For the IND to be established, data from the study will have to be submitted to the company and FDA. Hence the drug company will obtain valuable research data that may assist them in licensing the compound or in obtaining internal support for developing the compound. Many companies may be willing to partially support these protocols. It may also be possible to establish contracts that provide exclusive use of the compounds to the HACRC if the HACRC shows efficacy. Such arrangements may allow the HACRC to have a monopoly on new treatments which it develops and tests. It can be anticipated that these arrangements may be difficult to secure.

Because the HACRC will have a sophisticated retrovirology and immunology laboratory, initial in vitro testing of compounds may be done. Biotherapeutics, a cancer research company, uses a materials-transfer agreement in order to effect this transfer for research purposes. If the compound looks promising, then additional agreements with regards to testing and exclusive use are developed. An IND is then filed and human trials begun at their collaborating research centers. Similar arrangements are possible with the HACRC.

The concept is to develop the most promising treatment protocols, to support investigation of these protocols, including all necessary laboratory procedures through fees to a patient under contract with the HACRC. External support from the drug company, government, or private sources will be sought by a non-profit foundation that will defray the costs to patients unable to pay for these treatments and underwrite investigator-initiated projects at the HACRC.
BUSINESS CONCEPT PAPER

DSW LABORATORIES - HIV/AIDS CLINICAL RESEARCH CENTER

Infection with the Human Immunodeficiency Virus (HIV) and the progressive immunodeficiency it produces leading to AIDS form one of the most significant medical problems facing the world today. At present there is no effective vaccine and only a single approved drug (Retrovir) for treatment of the primary infection. However over 40 drugs and immunomodulators are in various stages of FDA approved clinical trials and many more compounds are under development. Access to these experimental therapies is currently limited. Most studies are being conducted through government sponsored AIDS Treatment Evaluation Units which have received considerable criticism from patient advocate groups for the slow pace of implementation of the drug trials.

In order to address the need of patients for both improved access to experimental treatment and to diagnostic and monitoring procedures, the need of physicians to improve access for experimental therapy for their patients, and the need of the pharmaceutical and biotechnology industry for access to patients interested in participating in experimental therapy, it is proposed that DSW Laboratories, Inc. create a private for profit HIV/AIDS Clinical Research Center (HACRC). This core facility will be created at a location of convenience to HIV infected individuals. A demonstration HACRC is proposed for San Francisco. The HACRC will consist of a treatment information clearinghouse, a screening and monitoring clinic, a medical clinic specialized for the conduct of clinical research, a medical laboratory offering routine and specialized immunology, retrovirology, and drug monitoring procedures, and the corporate administrative offices. A description of these facilities and the projected revenue stream from these activities follows. The short term goal of this business is to have 300 patients on therapeutic protocols on an ongoing basis by the end of 1989.

Information Clearinghouse

In order to maintain an active patient population sufficient to have 300 patients in trials, it will be necessary to recruit about 250 patients a month into the HACRC who are interested in such trials. In order to accomplish this, an information clearinghouse on treatment for HIV infection, AIDS, and associated illnesses will be created. This may include a computer accessible database, but will at a minimum have an 800 number for patients and another for physicians as well as a walk-in area. Recruitment of interested patients may be through direct advertising to patients and physicians or other efforts to generate referrals within the community such as lectures, television appearances and interviews. It can be anticipated that a successful public relations effort will generate 1000 calls per month to the HACRC, requiring an average of 10 minutes per call.
and 250 potential participants will be interviewed for 30 minutes. These volunteers will be interviewed in person or by telephone to determine the extent of their present illness and their interest in participating in clinical research. Potential participants will be referred for initial intake and staging to the screening center described next, or held on file for staging until a protocol they match is available.

Screening Center

Screening of patients to determine if they are infected with HIV and periodic assessment of their clinical status and immune function will be offered to persons at risk for HIV infection, regardless of their current interest in participating in clinical research. With estimated progression rates to AIDS now hovering at 50 percent of all infected individuals or more, many infected individuals will likely become interested in state-of-the-art treatment, including promising experimental therapy, as the epidemic continues and their personal situation deteriorates. For those disinterested in experimental treatment, proven therapies such as inhaled pentamadine and AZT (Retrovir) are available to HIV infected individuals. Unfortunately many patients remain untested and unaware of their level of immune function until their first opportunistic infection.

The screening center will offer HIV antibody tests, CD-4 lymphocyte counts, and anti-p24 antibody/p24 antigen titers, and interview rooms where individuals interested in receiving experimental drugs can be counseled about the availability of experimental therapy. Limited physical examinations may be performed to assist in staging patients for clinical trials. For community physicians with established referral relationships the patients' initial clinical assessment can be performed by the physician in his office on forms supplied by the HACRC. Laboratory work will have to be standardized requiring the patient to be referred or specimens provided the HACRC.

If funds from a trial are available potential participants can be referred to the screening center and tested, examined, and staged according to their degree of illness at no personal expense. Such staging (consisting of a medical history, limited physical examination, and laboratory tests) will also be offered on a fee for service basis, at the HACRC or through participating physicians' offices. Depending on the availability of protocols and patient interest anywhere from 30 to 250 screening physical exams and laboratory workups will be scheduled. In addition, the screening center will be offering HIV antibody tests to 100 walk-in clients per month, and another 100 CD-4 cell counts, p24 antigen levels and screening examinations on walk-in patients.

Some revenue will be derived from the screening center in the form of fees for HIV testing, CD-4 monitoring and clinical
staging of patients. It is anticipated that these fees will be held relatively low in order to attract patients into the drug trials. At $40 per test for HIV screening, $60 per test for CD-4 and p24 monitoring, and $50 per examination for clinical staging, the projected revenues are as follows:

<table>
<thead>
<tr>
<th>Service</th>
<th>Patient Count</th>
<th>Fee</th>
<th>Revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIV Screening</td>
<td>1200</td>
<td>$40</td>
<td>$48,000</td>
</tr>
<tr>
<td>CD-4 + p24 antigen</td>
<td>1560</td>
<td>$60</td>
<td>$93,600</td>
</tr>
<tr>
<td>Clinical Exams</td>
<td>1560</td>
<td>$50</td>
<td>$78,000</td>
</tr>
</tbody>
</table>

Clinical Drug Trials

The HACRC will solicit drug company support for trials in patients, promising to deliver sufficient volunteers in the stages of HIV infection called for by the protocol and to conduct the drug trials in a professional and scientifically valid manner. At capacity, the San Francisco HACRC will be able to manage 300 patients on an ongoing basis in drug trials. Patients will have to be seen from 1 to 5 times per week for from 15 to 60 minutes, depending on the protocol. The average protocol will probably be 3 months, indicating that a total of 1200 patients will receive investigational drugs to sustain 300 patients in ongoing trials. With two visits per week of one half hour each, 300 man hours will be required in direct clinical care by physicians, nurse practitioners or registered nurses.

At present there are 40 drugs and immunomodulators in 100 FDA approved clinical investigations. These companies will be contacted initially to see if the center can participate in their clinical trials. Through industry contacts, appropriate literature searches, and personal contacts, companies moving into early trials will be contacted in an attempt to establish the HACRC as the primary site for testing drugs. Relationships with the government-sponsored ATEU system and private concerns which conduct drug trials will be established if possible.

Revenue projections for the clinical trials include fees charged to the pharmaceutical company for conducting the trial. These fees will vary depending on the complexity of the clinical and laboratory monitoring required, but will probably be about $4,000 per patient. In addition the patient will be required to pay himself or permit the HACRC to bill his private insurance for any other necessary medical expenses not covered by fees from the drug company. These also will vary in the $2,000 to $6,000 range, depending on the complexity of the trial. Therefore, with 300 patients in ongoing trials and 1200 patients per year completing trials in the center, projected revenues from the drug trials are 1200 patients x $8,000/patient = $9,600,000 total. Many of these fees will be generated in the laboratory.

Furthermore, the use of investigational new drugs under treatment protocols has been recently expanded under new FDA regulations.
Such protocols may provide a mechanism by which experimental therapy for treatment use can be provided to a large number of patients. While some of these protocols may be easy to administer and accessible in the private doctor's office, those that are more complex may only be available in the HACRC, ATEUs, or similar institutions where the necessary laboratory monitoring and administrative workload can be performed. The mechanism for administering treatment use protocols for investigational new drugs has yet to be worked out, hence revenue projections are not possible at this time. In marketing services to the drug companies, the HACRC will attempt to encourage drug companies not presently offering the investigational drugs under treatment use protocols to set up such protocols with the HACRC. Staff will offer direct assistance to the manufacturer in establishing and filing such protocols with the FDA.

In order to insure that an effective patient referral network is established and maintained, a newsletter to physicians and patients will be created. Each time a patient is seen either for screening or as a participant in a clinical research program, an individualized letter will be sent to his physician detailing any relevant clinical or laboratory information. Great care will be taken to insure that patients are referred back to the private doctors for care unrelated to the clinical protocol and upon completion of the experimental treatment, with a full written report for the patient's chart.

Clinical Laboratory

The HACRC laboratory will perform laboratory tests necessary to support the screening center and the clinical drug trials. In addition, it has the potential for marketing laboratory services to physicians in the community at large. Because the laboratory will specialize in retrovirology and immunology procedures, non traditional markets may also exist. For example, HACRC will have extensive connections with the pharmaceutical industry, and hence can establish special procedures and research projects, such as assays for drug screening or isolation and production of viral proteins for research use.

CBC
SMAC
Urinalysis
Drug Levels - Selected Protocols
CD-4 Cell Counts - Selected Protocols
HIV p24 Antigen Levels
HIV ELISA
HIV IFA/West. Blot
Anti-p24 Antibody Titers
HIV Cultures Selected Protocols
Other Special Micro and Immuno Tests
In addition, research laboratory procedures in support of drug, vaccine, or immunotherapy development in industry will be offered. Production of viral antigens and other commercial sales of reagents derived from HIV positive materials are anticipated.

Revenues for the laboratory have been discussed in the previous sections, since overall revenues include those charged for laboratory services. Additional revenues in the form of referral of patients for laboratory services, production of viral antigens, and special research services are anticipated. Government research contracts are also possible. No revenue projections for these aspects of the business have been developed; however, several hundred thousand dollars per year could potentially be derived from such services.
Background

Acquired Immune Deficiency Syndrome (AIDS) is a group of illnesses caused by progressive destruction of the immune system by a retrovirus called the Human Immunodeficiency Virus (HIV). This virus has both a narrow host specificity; infecting only humans and chimpanzees, and a narrow cell specificity; attacking the CD-4 T-helper/inducer lymphocyte, monocytes, and, as yet not fully characterized cells in the brain. The degree of immunodeficiency produced is profound, and dementia and other neurological diseases are observed in at least half of all AIDS patients during the course of their illness. As of August 31, 1987, 41,366 AIDS cases have been reported to the United States Centers for Disease Control. The number of HIV-infected individuals in the U. S. is not known precisely, but is certainly no fewer 420,000 (10 times the number of U. S. cases), and is probably between 1,000,000 and 2,000,000.

World-wide the AIDS problem is particularly severe in urban Central Africa, where about 15 percent of the general population, 50 percent of patients in hospitals, and about 25 percent of all newborns are infected with the virus. Europe, Australia, Brazil, and Haiti are other areas where significant numbers of AIDS cases are evident, and West African countries are reporting AIDS cases due to a newly identified strain of the virus called HIV-2.

Antibodies to the virus in the blood of HIV-infected individuals are usually detectable by the second month after infection and virtually always present by the end of the sixth month. Reliable screening tests (ELISA) have been available since April 1985, but reactive tests need to be confirmed with more specific antibody test procedures such as the Western Blot or Indirect Immunofluorescent Antibody Tests. HIV tests are performed on all blood or tissue donors, and are available for free at anonymous testing sites in California and on a fee-for-service basis in many physicians' offices. At least one company advertises walk-in HIV testing for $39.00 in San Francisco.

Current data suggests that HIV infection is progressive in at least 80 percent of infected individuals and that development of AIDS will occur in 25 to 50 percent of HIV-infected persons in the first 8 years after infection. Clinical status, the concentration of CD-4 lymphocytes in peripheral blood, and the presence of viral core (p24) antigen (or loss of anti-p24 antibody) appear to be the best predictors of development of severe immunodeficiency and death in HIV-infected individuals. Serial monitoring of these parameters have important prognostic value to HIV seropositives. For example, the combination of abnormally low CD-4 cells and certain clinical findings confers a 40 percent chance of developing AIDS in two years, while normal CD-4 cells and no clinical findings indicates that an HIV-infected individual has a less than 5 percent chance of having AIDS in two years. Such monitoring is not always available. If performed in the physician's office, laboratory and other costs are about $150-300 per visit. If third-party reimbursement is obtained, the patient becomes identified as seropositive to his health insurance carrier.
The only drug currently licensed for use against HIV infection is Zidovudine (Retrovir, Burroughs Wellcome Co.). A list of drugs undergoing clinical trials is included in the marketing section. About 40 different drugs and immunomodulators are in 100 FDA-sanctioned clinical investigations in the United States. The National Institute for Allergy and Infectious Diseases has established a system of 19 AIDS Treatment Evaluation Units (ATEUs) which are currently conducting experimental trials on about 1,000 patients. Although the total number of individuals with HIV infection and with AIDS seems large, the actual number which meet the criteria of a particular protocol is often very restricted. Furthermore, any given ATEU may only access a small percentage of the patients in a given area. Referral to the ATEU is usually required and community physicians are often reluctant to make these referrals since their patient may be lost to further care. No system currently exists for systematically identifying patients interested in drug trials, for locating trials in process, for assisting physicians interested in making referrals, or for helping the patients in directly accessing experimental therapy.

Proposed Business

In order to address the need of patients for both improved access to experimental treatment and to diagnostic and monitoring procedures, the need of physicians to improve access for experimental therapy for their patients, and the need of the pharmaceutical and biotechnology industry for access to patients interested in participating in experimental therapy, it is proposed that DSW Laboratories create a private for-profit HIV/AIDS Clinical Research Center (HACRC). This core facility will be created at a location of convenience to HIV-infected individuals. The high AIDS morbidity areas in the U.S. where such a business might be located are listed in the marketing section. A demonstration HACRC is proposed for San Francisco.

Within this core facility will be a clearinghouse where patients (or their physicians) can telephone or walk in and receive information about the availability of experimental treatments for HIV infection, AIDS, and associated illnesses. The clearinghouse will include a testing center offering HIV antibody and CD-4 tests and interview rooms where individuals interested in receiving experimental drugs can be counseled about the availability of experimental therapy. Direct advertising to patients and physicians and other efforts to generate referrals within the community such as lectures, television appearances and interviews will be used to attract patients. Volunteers for drug trials will be interviewed in person or by telephone to determine the extent of their present illness and their interest in participating in clinical research. If funds from a trial are available potential participants can be tested, examined, and staged according to their degree of illness at no personal expense. Such staging (consisting of a medical history, limited physical examination, and laboratory tests) will also be offered on a fee-for-service basis. The HACRC will solicit drug company support for trials in these patients, promising to deliver sufficient volunteers in the stages of HIV infection called for by the protocol and to conduct the drug trials in a professional and scientifically valid manner. Individuals who are uninfected and at risk may be eligible for vaccine trials.
Use of investigational new drugs under treatment protocols has been recently expanded under new FDA regulations. Such protocols may provide a mechanism by which experimental therapy for treatment use can be provided to a large number of patients. While some of these protocols may be easy to administer and accessible in the private doctor's office, those that are more complex may only be available in the HACRC, ATEUs, or similar institutions where the necessary laboratory monitoring and administrative workload can be performed.

The core facility will also have a medical clinic where patients undergoing experimental treatment will be seen by the medical staff, a licensed clinical laboratory that will offer both initial screening tests and sophisticated research procedures needed to monitor the effectiveness of experimental therapy on the patient, and, in the San Francisco HACRC, the administrative offices for the corporation. The HACRC will operate a commercial blood banking operation with the capability of supplying clinical material to industry collected from HIV positive individuals. A market has already been identified for anti-HIV antibody-positive plasma. Additional markets for a variety of patient-derived materials, such as lymphocytes removed using a blood cell separator, cell lines infected with HIV, and HIV antigens produced in the laboratory are likely to be identified given the world-wide scope of AIDS research activities.

In order to insure that an effective patient referral network is established and maintained, a newsletter to physicians and patients will be created. Each time a patient is seen either for screening or as a participant in a clinical research program, an individualized letter will be sent to his physician detailing any relevant clinical or laboratory information. Great care will be taken to insure that patients are referred back to the private doctors for care unrelated to the clinical protocol and upon completion of the experimental treatment, with a full written report for the patient's chart.

The following table summarizes the minimum core services to be provided and a list of possible additional services that the HACRC can offer to patients, physicians, and industry.

**Core Services**

- Treatment Clearinghouse including HIV Antibody Testing and CD-4 (T-Helper) Cell Counts*
- Enrolling Patients Interested in Therapeutic Trials
- Conducting Research/Treatment Using Experimental HIV/AIDS Treatments

**Added Services**

(Consistent With Above Plan)

- Diagnostic Medical Laboratory Services
  - p24 Antigen, anti-p24 antibody titer, virus culture
  - Other AIDS-related Microbiology and Immunology
- Specialty Laboratory Services
  - Pharmaceutical Industry Testing (in support of development)
  - Pharmaceutical Industry Testing (in support of trials)
- Basic Medical Monitoring and Periodic Follow-up*
- Plasmapheresis Center
Collection of anti-HIV positive plasma
Other Blood Bank Services (Red Cell Infusions, Cell Separations for Lymphocyte Storage, Activation, and Infusion, HIV antibody infusion both human and murine)
Antigen production/cell culture facility - reagents & products Facility for pilot manufacturing therapeutic agents (e. g. vaccines, human/murine antibodies, blocking antigens, activated lymphocytes)

(Possibly in Partial Conflict with Above Plan)
Outpatient Medical Care
Administration of Inhaled Pentamidine/other therapy
Formation of a Medical Group Practice

Market for Services

There are currently 40 drugs and immunomodulators in over 100 FDA-approved clinical trials in the United States. A list of the companies and their products which have announced that they are in clinical trials is as follows:

**Experimental AIDS Drugs Currently Approved for FDA-Sanctioned Clinical Testing**

**Potential Immuno-Modulating Agents**

<table>
<thead>
<tr>
<th>Experimental Treatment</th>
<th>Sponsor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thymopentin</td>
<td>Ortho Pharmaceuticals, Raritan, NJ</td>
</tr>
<tr>
<td>Thymostimuline</td>
<td>Serono Laboratories, Inc., Randolph, MA</td>
</tr>
<tr>
<td>Methionine-enkepalin</td>
<td>National Jewish Hospital, Denver, CO</td>
</tr>
<tr>
<td>Isoprinosine</td>
<td>Newport Pharmaceuticals, Newport Beach, CA</td>
</tr>
<tr>
<td>Alpha Interferon</td>
<td>Hoffmann-La Roche Inc., Nutley, NJ</td>
</tr>
<tr>
<td>Gamma Interferon</td>
<td>Genentech, Inc., San Francisco, CA</td>
</tr>
<tr>
<td>Imreg-I</td>
<td>IMREG Inc, New Orleans, LA</td>
</tr>
<tr>
<td>Interleukin-II</td>
<td>Hoffman-La Roche, Inc., Nutley, NJ</td>
</tr>
<tr>
<td>Ampligen</td>
<td>HEM Research, Rockville, MD</td>
</tr>
<tr>
<td>Immune Globulin IG-IV</td>
<td>Sandoz Pharmaceuticals Corp., East Hanover, NJ</td>
</tr>
<tr>
<td>Anti-alpha interferon serum</td>
<td>Alpha Therapeutics, Los Angeles, CA</td>
</tr>
</tbody>
</table>

**Potential Anti-Viral Agents**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Ansamycin</td>
<td>Adria Laboratories, Dublin, CA</td>
</tr>
<tr>
<td>Ribavirin</td>
<td>Viratek/ICN Pharmaceuticals, Cosa Mesa, CA</td>
</tr>
<tr>
<td>DOC (Dideoxycytidine)</td>
<td>Hoffmann-La Roche, Inc., Nutley, NJ</td>
</tr>
<tr>
<td>HPA-23</td>
<td>Rhone-Poulenc, Monmouth, NJ</td>
</tr>
<tr>
<td>AL 721</td>
<td>Matrix Laboratories, New York, NY</td>
</tr>
<tr>
<td>Foscarnet</td>
<td>NIAID, Bethesda, MD</td>
</tr>
<tr>
<td>UA001</td>
<td>Ueno Fine Chemicals Industry Ltd., NY, NY</td>
</tr>
</tbody>
</table>

* these services may be viewed as competitive by some private MDs
These companies will be contacted initially to see if the Center can participate in their clinical trials. Through industry contacts, appropriate literature searches, and personal contacts, companies moving into early trials will be contacted in an attempt to establish the HACRC as the primary site for testing drugs. Relationships with the government-sponsored ATEU system and private concerns which conduct drug trials, such as the Porton Medical Group, will be established if possible.

The amount of revenue which will be earned in the course of therapeutic trials will vary depending on the complexity of the protocol. Two recent trials conducted in San Francisco involving Retrovir in Pneumocystis carinii pneumonia patients and Beta interferon in Kaposi's Sarcoma patients averaged about $4,000 per patient from the drug companies. Additional charges to the patient's private health insurance also occur. For planning purposes it will be assumed that an average trial will last about three months and result in about $4,000 in revenue from the drug company and from $2,000 to $6,000 in claims billed to the patient's private insurance.

The mechanism for administering treatment use protocols for investigational new drugs has yet to be worked out; therefore, revenue projections are not possible at this time. However, it is anticipated that the HACRC will provide an ideal setting for administration of treatment use protocols for investigational new drugs. Careful laboratory monitoring of patients will be possible and knowledgeable clinical monitors will be available to complete the necessary paperwork. In marketing services to the drug companies, the HACRC will attempt to encourage drug companies not presently offering the investigational drugs under treatment use protocols to set up such protocols with the HACRC. Staff will offer direct assistance to the manufacturer in establishing and filing such protocols with the FDA.

The market for patient services is distributed according to the distribution of patients. The following table indicates other areas of the country where HACRC's might be located.

<table>
<thead>
<tr>
<th>SMSA*</th>
<th>Population</th>
<th>AIDS Cases</th>
<th>Cases/Million</th>
<th>SMSA/US</th>
</tr>
</thead>
<tbody>
<tr>
<td>New York</td>
<td>9,120,000</td>
<td>10,751</td>
<td>1,179</td>
<td>6.56</td>
</tr>
<tr>
<td>San Francisco</td>
<td>3,250,000</td>
<td>4,007</td>
<td>1,233</td>
<td>6.86</td>
</tr>
<tr>
<td>Los Angeles</td>
<td>7,480,000</td>
<td>3,551</td>
<td>475</td>
<td>2.64</td>
</tr>
<tr>
<td>Houston</td>
<td>2,910,000</td>
<td>1,346</td>
<td>463</td>
<td>2.57</td>
</tr>
<tr>
<td>Washington</td>
<td>3,060,000</td>
<td>1,217</td>
<td>398</td>
<td>2.21</td>
</tr>
<tr>
<td>Miami</td>
<td>1,630,000</td>
<td>1,149</td>
<td>705</td>
<td>3.92</td>
</tr>
<tr>
<td>Chicago</td>
<td>7,100,000</td>
<td>991</td>
<td>140</td>
<td>.78</td>
</tr>
<tr>
<td>Newark</td>
<td>1,970,000</td>
<td>957</td>
<td>486</td>
<td>2.70</td>
</tr>
<tr>
<td>Dallas</td>
<td>2,970,000</td>
<td>796</td>
<td>268</td>
<td>1.49</td>
</tr>
<tr>
<td>Philadelphia</td>
<td>4,720,000</td>
<td>794</td>
<td>168</td>
<td>.94</td>
</tr>
<tr>
<td>Atlanta</td>
<td>2,030,000</td>
<td>666</td>
<td>328</td>
<td>1.83</td>
</tr>
<tr>
<td>Boston</td>
<td>2,760,000</td>
<td>637</td>
<td>231</td>
<td>1.28</td>
</tr>
<tr>
<td>Fort Lauderdale</td>
<td>1,020,000</td>
<td>529</td>
<td>519</td>
<td>2.89</td>
</tr>
<tr>
<td>San Diego</td>
<td>1,860,000</td>
<td>526</td>
<td>283</td>
<td>1.57</td>
</tr>
<tr>
<td>Nassau-Suffolk</td>
<td>2,610,000</td>
<td>515</td>
<td>197</td>
<td>1.10</td>
</tr>
</tbody>
</table>
Jersey City 560,000 462 825 4.59
Seattle 1,610,000 403 250 1.39
New Orleans 1,190,000 354 297 1.65
Denver 1,620,000 353 218 1.21
Anaheim 1,930,000 338 1,620,000 1.93
Rest of US 168,720,000 11,024 65 825
Total 230,120,000 41,366 180 1.00

* Standard Metropolitan Statistical Area

The total size of the HIV-positive community in the U.S. is probably at least ten times the number of cumulative cases, and may be as high as 50 times that number. Hence, nationally, there are from 420,000 to 2,100,000 infected persons, and in the San Francisco bay area, there are 40,000 to 200,000 infected individuals. In addition, there are persons at risk for HIV which include an additional 100,000 uninfected gay men, and 100,000 multipartner heterosexuals who may be interested in HIV testing and counseling, and participation in vaccine trials.

Marketing Research Plan

A private marketing research organization has been contacted for a proposal to conduct research relevant to the creation of this business. Their research will focus on three key areas. First, the pharmaceutical manufacturers will be contacted about the need for such a clinical center and the factors which would influence their decision to conduct their clinical trials at this center as opposed to alternatives (such as ATUs, other University Clinical Research Centers, etc.). Second, private physicians will be contacted in order to determine the factors that would influence their decision to make referrals of their patients to the HACRC, and to actively assist in identifying protocol-eligible patients in their practice. Third, a random sample of persons at risk for HIV will be contacted to determine the extent of interest in receiving experimental treatment and the size of the pool of patients potentially available in the area from which the HACRC will be able to attract. Focus groups will be used to determine how the business should present itself to the patient in order to secure initial self-referral and eventual participation in the protocol.

Workload Analysis and Facilities Requirements at Capacity

Clinical Drug Trials

At capacity, the San Francisco HACRC will be able to manage 300 patients on an ongoing basis in drug trials. Patients will have to be seen from 1 to 5 times per week for from 15 to 60 minutes, depending on the protocol. The average protocol will probably be 3 months, indicating a total of 1200 patients will receive investigational drugs to sustain 300 patients in ongoing trials. With two visits per week of one-half hour each, 300 man hours will be required in direct clinical work with the patients. The center would be open extended hours (about 60 per week). Patients would be seen by a physician, nurse practitioner, or registered nurse depending on the complexity of the protocol. The staffing and space required are presented in exhibits A and B. A total of 2,630 square feet of clinic space and a
payroll of $444,000 annually will be required. In addition, the clinic will utilize a significant percentage of administrative time and utilize the laboratory heavily.

Revenue projections for the clinical trials include fees charged to the pharmaceutical company for conducting the trial. These fees will vary depending on the complexity of the clinical and laboratory monitoring required, but will probably be about $4,000 per patient. In addition the patient will be required to pay himself or permit the HACRC to bill his private insurance for any other necessary medical expenses not covered by fees from the drug company. These also will vary in the $2,000 to $6,000 range, depending on the complexity of the trial. Therefore, with 300 patients in ongoing trials and 1200 patients per year completing trials in the center, projected revenues from the drug trials are 1200 patients x $8,000 / patient = $9,600,000 total. Many of these fees will be generated in the laboratory.

Clearinghouse

In order to maintain an active patient population sufficient to have 300 patients in trials, it will be necessary to recruit about 250 patients a month into the center who are interested in such trials. This recruitment will be done through advertising, physician referrals, and other mechanisms previously mentioned. It can be anticipated that a successful campaign will generate 1000 calls per month to the HACRC, requiring an average of 10 minutes per call, 250 potential participants will be interviewed for 30 minutes, and 30 screening physical exams and laboratory workups will be scheduled. In addition, the clearinghouse will be offering HIV antibody tests to 100 walk-in clients per month, 100 CD-4 cell counts and p24 antigen levels, and an additional 30 screening examinations on walk-in patients. 200 hours of telephone time, 125 hours of patient interviews, 60 physical examinations, and 260 interviews to discuss laboratory test results. Staffing and space requirements are presented in Exhibits A and B.

Some revenue will be derived from the clearinghouse in the form of fees for HIV testing, CD-4 monitoring and clinical staging of patients. It is anticipated that these fees will be held relatively low in order to attract patients into the drug trials. At $40 per test for HIV screening, $60 per test for CD-4 and p24 monitoring, and $50 per examination for clinical staging, the projected revenues are as follows:

<table>
<thead>
<tr>
<th>Test Description</th>
<th>Quantity</th>
<th>Rate (per unit)</th>
<th>Revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIV Screening</td>
<td>1200</td>
<td>$40</td>
<td>$48,000</td>
</tr>
<tr>
<td>CD-4 + p24 antigen</td>
<td>1200</td>
<td>$60</td>
<td>$60,000</td>
</tr>
<tr>
<td>Clinical Exams</td>
<td>1080</td>
<td>$50</td>
<td>$54,000</td>
</tr>
</tbody>
</table>

Plasmapheresis Center

A four bed plasmapheresis center can complete a donation in about two hours per donor. Therefore, at capacity the center can draw about 80 units per week, or 320 units per month. The staffing required will be one medical assistant/clerk to make appointments and perform initial test prior to donation, two floor nurses, and one centrifuge operator. Staffing and space requirements are presented in Exhibits A and B. About $5.00 of disposables per donation are consumed and donor fees will probably be about $50.00 per donation.
At present at least two companies are manufacturing anti-HIV positive immunoglobulin. It can be anticipated that they will pay between $0.50-$1.00 per ml for raw product plasma. Hence, this four-bed center has the potential to generate $250.00 - $500.00/donation x 3840 donations/year or from $960,000 to $1,920,000 per year in gross revenue.

Laboratory

The HACRC laboratory will perform laboratory tests necessary to support the clearinghouse, clinical drug trials, and the plasmapheresis center. In addition, it will market laboratory services to physicians in the community at large. The projected weekly workload are as follows:

<table>
<thead>
<tr>
<th>Trials</th>
<th>Clearinghouse</th>
</tr>
</thead>
<tbody>
<tr>
<td>CBC</td>
<td>300</td>
</tr>
<tr>
<td>SMAC</td>
<td>300</td>
</tr>
<tr>
<td>Urinalysis</td>
<td>300</td>
</tr>
<tr>
<td>Drug Levels - Selected Protocols</td>
<td>50</td>
</tr>
<tr>
<td>CD-4 Cell Counts - Selected Protocols</td>
<td>100</td>
</tr>
<tr>
<td>HIV p24 Antigen Levels</td>
<td>300</td>
</tr>
<tr>
<td>HIV ELISA</td>
<td>30</td>
</tr>
<tr>
<td>HIV IFA/West. Blot</td>
<td>30</td>
</tr>
<tr>
<td>Anti-p24 Antibody Titers</td>
<td>50</td>
</tr>
<tr>
<td>HIV Cultures Selected Protocols</td>
<td>20</td>
</tr>
<tr>
<td>Other Special Micro and Immuno Tests</td>
<td>60</td>
</tr>
</tbody>
</table>

In addition, research laboratory procedures in support of drug, vaccine, or immunotherapy development in industry will be offered. The payroll for such personnel will be derived from the research contracts themselves. Production of viral antigens and other commercial sales of reagents derived from HIV-positive materials are anticipated. Staffing and space requirements are presented in Exhibits A and B.

Revenues for the laboratory have been discussed in the previous sections, since overall revenues include those charged for laboratory services. Additional revenues in the form of referral of patients for laboratory services, production of viral antigens, and special research services are anticipated. Government research contracts are also possible. No revenue projections for these aspects of the business have been developed, however several hundred thousand dollars per year could potentially be derived from such services.
EXECUTIVE SUMMARY

Focus Group Research Among Self-Identifying Gay Men in San Francisco, Conducted On Behalf of DSW Laboratories, Inc.

- Respondents were highly positive in their reaction to the DSW Laboratories, Inc., business concept, particularly that of an information clearing house. There was great interest in the idea of a centralized data bank with up-to-date information on AIDS treatment trends and existing drug trials.

- There was also high interest in the other proposed DSW services, including comprehensive immunological and virological testing. While some respondents had questions about what tests were included and why the cost was so great, many expressed interest in this service. This is an indication that HIV infected individuals are open to all courses of action that show some promise of result.

- The drug trials also generated significant interest. Many respondents indicated that they would use the clearinghouse and referral capabilities and participate in the trials of drugs they were interested in. The data suggest that many patients will be willing to directly pay for promising drugs that would not otherwise be available to them.

- When asked at the conclusion of the discussion whether they would use the services of the company, nearly every respondent answered affirmatively. The only exceptions were one or two individuals that felt that their current monitoring and treatment programs were adequate and those respondents lacking health insurance.

- Three of the nine potential company names received positive responses. "ViRx" was greeted with real enthusiasm in one group interview and drew few negative reactions in any of the interviews. "Viral Immunodeficiency Research Institute" tested well among many respondents as did "HIV Treatment Center".

- Participants unanimously supported the direct patient fee concept. Most respondents believed that the drug companies had an obligation to pay for testing if compounds were perceived to be beneficial. But there seemed to be a very pragmatic orientation toward acquiring drugs and making them broadly available.

- Respondents tended to be critical of randomized, placebo studies. The data suggest that DSW's proposed treatment evaluation design, which excludes the use of placebos, will be favorably viewed by many infected individuals anxious to have immediate access to experimental therapies. Remarkably little concern was expressed about the use of experimental drugs that may have harmful side effects.
The data suggest that many members of the target audience do not understand how drug trials are organized in the United States, or what is unique about DSW Laboratories Inc. in this area. Yet, once these issues are explained, many react positively to the alternative approach that DSW proposes to take. Specifically, participants agreed that there was a need for a proactive approach and for co-ordination in the search for effective therapies.

Respondents perceived both holistic and pharmaceutical interventions to be legitimate and believed that patients should be actively involved in both fact checking and decision making about what course of treatment to follow. If the proposed facility is open to holistic therapies, it is likely to receive a more favorable reaction from the target audience than if it appears to be closed to alternative approaches.

Probability samples of self-identifying gay men in San Francisco indicate that only one-third of this population has been tested. Local AIDS risk reduction campaigns and mainstream media frequently convey messages unsupportive of testing and treatment. This requires DSW Laboratories Inc. to undertake a general educational effort encouraging testing and active intervention. This effort should be conducted in collaboration with AIDS service providers and public health authorities and should be simultaneous with the marketing of the proposed facility itself.

The data suggest that private physicians and/or group health providers have a high level of credibility with their patients and are a principle source of information about AIDS treatment issues. A major audience for the marketing program should be local physicians who will be consulted by their patients before using the new facility. In addition, a co-operative arrangement between the new facility and outside physicians will have great appeal for many members of the target market.

Mainstream print media are principal sources of information on AIDS-related trends and developments, particularly the Chronicle and Examiner. Some respondents also identified local gay newsweeklies as information sources. Community based groups such as Project Inform and "the buyers clubs" are also perceived to be credible information sources, and initial marketing and community relations efforts should focus on winning the support of these groups.
Concept Paper

Financing of Clinical Trials Through Direct Patient Fees

At the present time clinical trials of experimental therapies are financed through a combination of support from the pharmaceutical industry, private foundations, federal research grants, and the patient's private insurance. Usually a patient participating in a clinical drug trial does not have to pay any out-of-pocket expenses associated with a trial, since most trials are conducted at university medical centers with heavy subsidies from the government. While this system serves the drug companies and academia, it has major disadvantages from the perspective of the patients interested in better treatments for their illnesses. In addition it limits hypothesis generation and markedly restricts experimental therapy.

As an alternative, the concept proposed herein is to undertake experimental drug research on behalf of patients for necessary fees required to accomplish the research. This research would be done in support of finding better treatments for HIV infection and AIDS, but is applicable to other diseases. As conceived, an expert committee would develop the very best experimental treatments for patients in various stages of HIV infection. Perhaps 2-4 protocols would be established for each stage of disease (e.g. asymptomatic HIV-seropositives and individuals with only PGL, individuals with symptoms and low CD-4 cell counts, and AIDS). Pharmaceutical companies who are developing the drugs called for in the protocols would be contacted and asked to submit an IND with the HIV/AIDS Clinical Research Center (HACRC) investigators. The drug could be provided free or paid for by the HACRC. No support from the drug company would be required since the costs would be paid by the patients on the protocols. Patients who wish to receive the experimental protocol will be informed that this is unproven therapy but represents the best treatment in the judgement of the investigators. A fee necessary for the conduct of the trial will be collected from the patient at the time of enrollment or as in-process payments as the trial progresses, and a contract between the patient and the HACRC will be established. The patient will be provided with a full description of the protocol and all medical services provided in order to contact his insurance company about possible reimbursement, and he will be given superbills during the course of the treatment to submit for reimbursement. It is anticipated that some but not all fees associated with the protocol may be covered.

By not requiring support from the drug companies a major barrier to gaining access to experimental compounds will be removed. However, it should be anticipated that companies developing drugs will be keenly interested in the protocol and may not agree to use of the compound if the protocol is likely to fail to show
efficacy or have serious toxicity since the research results might delay licensing of the compound for other uses or harm sales efforts. In general, however, drug companies are anxious to have their compounds investigated in humans and, since the data developed during the course of the protocol will be very useful to the drug companies, partial or even full support for the protocol is possible. Whether such support should be used to decrease the cost of the protocol or simply be donated to a non-profit foundation that pays the fees for patients who would otherwise not be able to afford the protocol has yet to be determined.

The proposed concept has the advantage of providing the best possible care to the patients. When attempting to seek extensive support from the drug companies, the compounds will likely be tested under very narrow restrictions. Combining drugs from different manufacturers will be difficult, and the best possible protocols may not be available from the HACRC because the company has elected to use other investigators for the protocol they have established.

For the IND to be established, data from the study will have to be submitted to the company and FDA. Hence the drug company will obtain valuable research data that may assist them in licensing the compound or in obtaining internal support for developing the compound. Many companies may be willing to partially support these protocols. It may also be possible to establish contracts that provide exclusive use of the compounds to the HACRC if the HACRC shows efficacy. Such arrangements may allow the HACRC to have a monopoly on new treatments which it develops and tests. It can be anticipated that these arrangements may be difficult to secure.

Because the HACRC will have a sophisticated retrovirology and immunology laboratory, initial in vitro testing of compounds may be done. Biotherapeutics, a cancer research company, uses a materials-transfer agreement in order to effect this transfer for research purposes. If the compound looks promising, then additional agreements with regards to testing and exclusive use are developed. An IND is then filed and human trials begun at their collaborating research centers. Similar arrangements are possible with the HACRC.

The concept is to develop the most promising treatment protocols, to support investigation of these protocols, including all necessary laboratory procedures through fees to a patient under contract with the HACRC. External support from the drug company, government, or private sources will be sought by a non-profit foundation that will defray the costs to patients unable to pay for these treatments and underwrite investigator-initiated projects at the HACRC.
October 22, 1987

Mr. Peter Hutt
Covington & Burling
1201 Pennsylvania Avenue, N.W.
P.O. Box 7566
Washington, D.C. 20044

Dear Mr. Hutt,

As part of the ongoing development of the concept behind DSW Laboratories and its proposed operational thrust, Dr. Anderson has begun to explore the feasibility of some portion of the drug trial process being patient-financed. Enclosed are his recent thoughts on this avenue.

Dr. Anderson is concerned as to the legal or ethical implications this new twist might have. Please call to discuss with him your feelings regarding this concept, or perhaps for further clarification. Our telephone number is (415) 362-4022.

Thank you for your consideration.

Sincerely,

Steven M. Price
Administrative Assistant

Enclosure
December 20, 1987

Mr. Bruce Decker
*4  20th Ave #101
Venice Beach  CA

Dear Bruce:

In the past our paths have crossed and we have enjoyed networking and exchanging information. Now we have a unique opportunity to expand the sharing to fight AIDS, a disease that is having a phenomenal impact on society, now and in the future.

Therefore, of all the issues surrounding the AIDS health crisis, few are of more concern to the scientific and medical communities than the challenge of coordinating and disseminating the vast amount of research information that we are generating. As scientists and clinicians worldwide work around the clock in their laboratories and hospitals, they are often frustrated by the inability to communicate freely with their colleagues in other countries (or even adjacent institutions). Even more dangerous for research programs, scientists and clinicians are often unaware of what others are doing so they cannot ask questions or seek to compare, cross-validate, or collaborate. The need for a worldwide information system to support AIDS researchers and clinicians is simply overwhelming and vitally needed.

I am now the Executive Director of the World Immunological Network, WIN. WIN is a service of the Hospital Satellite Network, HSN, which is established in more than 1300+ hospitals, as well as all WIN subscribing sites. WIN can provide the means for transfer of information, coordination of multisite research studies, sharing of findings from work-in-program and perhaps most critical of all, it will provide a supportive collegial forum for AIDS researchers and clinicians to share their ideas, voice concerns, and permit scientific creativity to flourish.
WIN’s purpose is to provide rapid and widespread dissemination of information concerning AIDS programs, both live and pre-produced, will cover topics of importance to fundamental researchers, medical specialists, general practitioners, allied health personnel, as well as patients and their families.

As the Executive Director of “WIN”, I am currently expanding our data bank in order that the maximum vital information about AIDS will be available to all. We want to keep abreast of all findings and any information that you have access to will be welcome, so WIN’s data bank will be on the cutting edge.

If you have any information, data, questions, or comments, please do not hesitate to call me, (213) 663-0088. Please take a little time to fill out the short questionnaire below and return it to the above address.

Cordially,

Geneviève M. Clavreul
Executive Director “WIN”

GMC/cme

P.S.: Please fill out enclosed questionnaire, fold it, staple it and mail back. Thank you for your time.
Please check the topics that apply to you:

- Are you interested in submitting data?
- Are you interested in receiving data?
- Would you be interested in subscribing?

Thank you for your time.

Name: ___________________________ Speciality: ___________________________
Institution: ______________________ Phone Number: (______) __________
Address: __________________________
GALLO-MONTAGNIER AGREE ON REGULAR TELECONFERENCING

Two eminent AIDS researchers, Robert Gallo of the National Cancer Institute and Luc Montagnier of the Institut Pasteur, agree to regular data-sharing teleconferences. Meanwhile, Patent Office will soon permit flow of U.S.-French royalties to start international AIDS foundation. See story page 10.

10 AIDS RECORD
INTERNATIONAL DATA-SHARING NETWORK AGREED TO BY GALLO, MONTAGNIER

When the United States and France, last March, formally ended the long-standing feud over who had discovered the AIDS virus, and who was entitled to patent rights on the AIDS test, a key part of the settlement was to be an international foundation for AIDS research, funded with 80 percent of test royalties from each country.

At the annual meeting of Dr. Robert Gallo’s tumor cell biology laboratory last month, Gallo of the National Cancer Institute, and guest speaker, Dr. Luc Montagnier of the Pasteur Institute, the acknowledged co-discoverers of the virus, wondered what has happened to the foundation.

The answer, it seems, lies at the U.S. Patent Office and the need for some 20 signatures from scientists and officials in both countries on every document required to revise the test patent. The completed revision now awaits Patent Office approval, then printing. Federal officials anticipate the process will be completed in October. Once that is done, the foundation will be formed.

Without waiting, and to demonstrate their commitment to collaboration, Gallo and Montagnier signed an agreement to share data and materials, planning to expedite work with regular teleconferences via satellite hookup. The hookup, as part of the World Immunological Network (WIN), will use the existing Hospital Satellite Network and can be expanded as needed to include researchers throughout the world. Eventually, Gallo and Montagnier hope the foundation will pay for the data sharing effort. Meanwhile, WIN is looking for start-up funding.

For more Information contact: Genevieve Clavreul, executive director, WIN, (213) 277-6710.
1:30 Peter Coppola
494-5000

Vicki 391-5202

3:00 Edna/Greta 914-445-7827
Druh Smith

\sqrt{Vix} Dr Layton Reed, MD

Amos Grant Bob Hosten
Pres. Interhealth / Zafarani Leventhal
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S.F. lab tests breakthrough in AIDS detection

• First human test of new AIDS drug to begin Page A-9
• Forced AIDS testing of prisoners criticized Page A-17

By Lisa Krieger and Paul Freiberg

OF THE EXAMINER STAFF

A San Francisco laboratory has begun marketing a sophisticated diagnostic test that can find evidence of AIDS infections undetected by other standard tests.

But the test is expensive, useful only on accused pathogens, and has not yet won approval from the U.S. Food and Drug Administration. Its track record has not been published or reviewed by the medical community.

The test, offered by Virunostics Inc. of San Francisco, detects the actual human immunodeficiency virus — not the antibodies that the body develops after exposure to HIV.

The traditional antibody test now offered in AIDS-testing clinics is limited in its usefulness because it shows only the evidence of past exposure to the virus. It cannot measure the levels of virus in the bloodstream.

The viral test could give answers to people not helped by an antibody test: newborn infants, organ or sperm donors, and those who have tested "false positive" or "false negative" on other tests for acquired immunodeficiency syndrome.

Unlike the antibody test, a viral test can monitor the progression of disease or the success of anti-AIDS drugs.

"It will be very useful in certain specific patients," said Dr. David R. Minor, a San Francisco physician who has treated more than 100 AIDS patients. "Until now, the viral culture test has not been available to the average physician."

The Sutter Street lab is the first in what Virunostics Inc. hopes will be a nationwide chain of viral culture laboratories. But the company will be unable to expand its service until it receives FDA go-ahead.

Some experts wonder whether such pre-approval marketing, while legal, is proper.

"It's something that on the surface definitely concerns me," said Jim Barquest, a AIDS researcher in Washington, D.C., who plans to conduct the test in the state of Health Services. "You don't have the capability of applying the standards normally applied to products related to AIDS."

Virunostics' test, called the Viral Culture Test, works by placing a sample of blood, semen, cervical secretions or spinal cells in a special preparation, and watching to see whether the virus grows.

The test has been available to patients in some Bay Area hospitals who were involved in government-sponsored AIDS virus research projects. But this will be the first time it will be sold commercially to patients outside research facilities.

The test will cost $300 for patients referred by doctors and $900 for those without physicians. Medical will not reimburse the expense. The antibody test, by comparison, is free from the county health department and costs about $35 from most doctors or private medical clinics.

Patients will have to wait four to six weeks for results, compared with several days for the antibody test.

No data are available to measure the Virunostics test's failure rate, although company officials estimate it is 90 to 95 percent effective. By contrast, the antibody test is 99 percent accurate. "Our major goal is to establish a da a bank," said Dr. Daniel E. Thor, vice president and director of Virunostics.

The test is not advised for the average patient, who is at low risk for AIDS and, even if infected, has probably already developed antibodies to the virus.

"It is not for people who walk in off the street," said Dr. Lawrence Drew, director of the clinical micro­biology and virology lab and associate chief of medicine at San Francisco's Mount Zion Hospital.

Virunostics is prohibited from selling the test outside California because the Food and Drug Administration has not yet cleared it as being safe and effective.

Any AIDS or other biomedical test requires FDA approval before it can become an acceptable commercial product sold throughout the United States. Virunostics can not offer its test in the form of a kit to sell to other labs unless the FDA grants the product investigational New Drug (IND) status and specifies the conditions under which it can be sold.

Currently, Virunostics says it doesn't need FDA approval because it is not offering a kit, only the test. Dr. Susan Cruzan, an FDA spokes­woman, confirmed that FDA regulations do not cover such a "service," so long as the company is "not taking it across state lines."

In such a situation, state regulations apply. Virunostics said it had been licensed by the state Department of Health Services.

Nevin Miller, Virunostics' chief executive officer, said the company planned to apply for IND status within a few months and for FDA product approval within a year. He said it didn't make sense to wait to offer the test because of the contribution it could make.

"We have a service that is going to prove invaluable in helping to combat the epidemic," Miller said. "We have a product that is needed right now. We're working as fast as we can to get FDA approval."

Regarding safety, he said, "I'd feel it's safe because it has the blessing of the state's Health Services Department."

Those who could be helped by a viral test include:

• People who are infected but do not display symptoms or evidence of antibodies. Antibodies do not form in the first weeks, even months, after infection. In this two- to six-month "window" between infection and antibody formation, the virus culture test could reveal evidence of the virus.

• People who have tested negative to the antibody test because not enough time has elapsed for their immune system to respond to the infection.

• Newborns of HIV-infected mothers. These infants carry maternal antibodies but may not be infected themselves.

• People who are ill and receiving anti-viral drugs such as AZT. A virus culture could determine the level of virus in the body and show whether the drugs are effective in blocking replication of the virus.

• Donors of organs, sperm or tissue. The test could ensure that the virus is not present in the cells of these tissues.

In a doctors' briefing Monday, Thor offered to test physicians who think they have been exposed to the virus through needle sticks but do not want to wait the several weeks it would take for antibodies to form.

In addition, it is possible to use these tests without getting patient consent. State law requires written consent for antibody testing, not for viral culturing.

Thus, the viral test could be used by doctors who are preparing for surgery on patients who seem to be at high risk for AIDS but decline to be tested. For example, a doctor attempting to remove bone spurs, or a gynecologist who may want to test the women's semen, could use the test.

Miller announced the research on the viral test a year ago. At the time, he said it wouldn't likely cost about $300 to $400, and eight to 14 days. He said Virunostics was "doing everything we can to bring the testing price down."

Virunostics licensed the test from AMS Biotech Corp., a public company in Vancouver, British Columbia, which is affiliated with AMS Research Corp. of Mill Valley. The test was developed by AMS Biotech and is marketed by Virunostics, Thor said.
Alternative Description of Services with Associated Costs

1. Drug Trials
   Sign Up Interview and Fee
   $50.00 for interview and list of available trials with indication
   of trials that individual is eligible
   Subscription to newsletter

   For patients who are already workup up by PMD
   Need to know HIV +
   Clinical Information
   Some lab data perhaps
   Skin tests, CD-4 Counts, p24 Antigen +/-, etc.

2. HIV antibody test with confirmation and drug interview
   Pre-Test Information about Test and ViRx, Inc. $30.00
   HIV Elisa Test
   $20.00 - $40.00
   Confirmatory Testing
   $60.00 - $80.00
   Post-Test Counseling
   Negative $30.00
   Positive w/ Confirmation $30.00
   Positive $140.00 - $180.00
   Negative $80.00 - $100.00

3. Initial Cash Workup for Persons Unwilling to be Tested and Staged with insurance billing
   If not know to be positive then all in 2 plus following if HIV+
   Initial Blood Drawing $8.00
   CBC $15.00
   FACSCAN Lymphs/CD-4 $150.00 - $162.00
   p24 Antigen Titer $150.00
   Skin Test Applied $20.00
   H & P 1 Hr NP/PA $80.00
   Total for Insurance $423.00 // Anonymous Cash $300.00

   Other procedures as required - all have extra cost
   KOH Prep of Oral Candadia
   Biopsy of KS Lesions
   Biopsy of Hairy Leukoplakia

4. Comprehensive Immunological and Virological Workup
   Free of opportunistic infections
   Baseline titers of antibodies to potential pathogens
   Extensive testing of baseline immune function
   Neuro Assessment?
   Approximate costs to be determined $4,000 - $8,000

5. Drug Trials
   Contract negotiated between ViRx, Inc. & Patient & Medical Group or Clinical Research Center
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Prepared for
Larry L. Bye, President
Communication Technologies

19 November 1987

* * * * *

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