



## Retrovirus 2003

- Immune-Based Therapies
- HCV/HIV

- Heart Disease
- New Horizons



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# Editor's Note

## ADAP in Crisis

by Carl Winfield



*This issue of Positively Aware focuses primarily on the promising news related to HIV therapy and new treatment options coming out of the 2003 Conference on Retroviruses and Opportunistic Infections. Yet, the reality of the situation is that more and more men, women and children in the U.S. are being left on the outside looking in when it comes to access to healthcare and medicines. In a "guest editorial," my good friend Carl Winfield discusses the crisis in ADAPs across America and what it means as the number of uninsured and low income people living longer with HIV climbs, as the annual cost of anti-HIV drugs continues to increase, and federal support for ADAP slows.*

Be Strong. Stay Safe.

*Charles E. Clifton*

Charles E. Clifton  
Executive Director / Editor  
Send comments and reactions to  
ed@tpan.com

**T**he AIDS Drug Assistance Program (ADAP) has been in crisis from the start, but now, some 20 years later, the program is collapsing at a time when it is needed the most.

Consistent state and federal budget shortfalls have forced ADAPs around the country to "modify" their approach to care. Formularies—the list of drugs available—have been reduced to the point where some antiretroviral medications are simply "unavailable." Newly diagnosed men and women seeking access to the program are being instructed to sign waiting lists for care, in the hope that they will be the next on the list to receive drug therapy. Pharmaceutical companies argue that returns on their investments are too low and everybody wonders how they will be able to afford antiretroviral

drugs in the worst economic environment of recent memory.

Nationwide campaigns like the AIDS Treatment Action Coalition (ATAC) Save ADAP drive coupled with the efforts of Senators Charles Schumer (D-NY) and Gordon Smith (D-Oregon) succeeded in getting Congress to recently approve an \$80 million increase in ADAP's federal funding. However, that sum is a far cry from the \$162 million increase needed to address the growing HIV epidemic in the U.S. ADAP is funded under Title II of the Ryan White CARE Act, its funding must be appropriated as a part of federal discretionary spending, as well as subsidized by state government dollars.

The Centers for Disease Control and Prevention (CDC) estimates that there are as many as 900,000 people living with HIV/AIDS in the U.S. The CDC suggests that as many as 300,000 of those infected with the virus receive no HIV-related medical treatment. Further estimates by the CDC suggest that at least 240,000 people with HIV are unaware that they are infected.

As ADAPs around the country fight for their continued existence, newly diagnosed men and women are forced to gamble with their health. "Without access to testing and care people... will just fall through the cracks," said Lei Chou of AIDS Treatment Data Network in New York City.

Federal spending for ADAP has risen steadily for some time: going from \$219 million in 1996 to \$639 million in 2002. Thirty-six states provided more than \$157 million for ADAP in fiscal year 2002. Percentages of Title I funding from the Ryan White CARE Act yielded more than \$40 million, bringing total funding for fiscal year 2002 to \$714 million. However, it's been reported that ADAPs continued to operate under an \$82 million deficit in 2002.

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# Readers' Forum

*Positively Aware* will treat all communications (letters, faxes, e-mail, etc.) as letters to the editor unless otherwise instructed. We reserve the right to edit for length, style or clarity.

Write to: Positively Aware,  
5537 North Broadway  
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E-mail: readersforum@tpan.com

## LARRY

Larry passed away from complications due to AIDS. He had no viral load and a T-cell count above 250, had controllable seizures, and I think he thought that it was time to leave. He said to me a couple of days before he died, "You know that this has to end." He was losing a lot of weight and had no appetite to eat. As his guardian and as a registered nurse, I could have initiated a lot of lifesaving measures, but he wanted to leave and I had agreed at the beginning of his journey that I would abide by his wishes always. I figure that he lived about 20 years with the disease. He was, and is, the love of my life and the pain is awful. In a way it gets a little better over time in the fact that it is not as raw and as acute. You continue to have that longing and you miss the companionship and the confidences that you shared with someone for half of your life. Someone who shared all of your life secrets, and that takes years for that trust to build. Someone you could tell anything to and rest assured in the knowledge that it would never be used against you under any circumstances.

We had two Shar-Pei male dogs, Buster and Bags. Little Bagger went to join Larry on February 4th. He was diagnosed with cancer and lost over 20% of his body weight in less than a month. It was heartwrenching to lose him but I know that Larry was on the Rainbow Bridge waiting for him. His brother Buster is mourning the loss as well. They were inseparable. Our dogs are wonderful and they have been a great comfort to me during this whole ordeal.

Lew,  
Cleveland, OH

## BRIAN'S STORY

I was diagnosed in 1996. At that time my CD4 was 173—AIDS defining. Viral load was 11,000. I was treated with AZT (Retrovir) and 3TC (Epivir) for a year when I noticed leg and arm veins protruding. If it is not those two drugs, I suppose the virus itself may be responsible for lipodystrophy. Now I'm on four drugs (Crixivan, Norvir, Viramune and Ziagen) since '97 with undetectable viral load. No particular change in lipodystrophy but perhaps less pronounced for the last three years. I was surprised with lymphoma: B-cell, giant, follicular, grades III and IV last year. I opted for no treatment and have been doing okay. I am 61 years old. If anyone out there may be interested in a study of my particular case of HIV and its effects, I can be reached through sunbreth@hialoha.net. Kudos to scientists, those great doubters who find, eventually, truth.

Name withheld,  
Ocean View, HI

## O GREAT PHARMACY GOD:

Alright, I just kinda accidentally found out that my friend's boyfriend is positive and taking Combivir. I wasn't actually informed of his status, I just noted the presence of the bottle and some literature pertaining to HIV. So I am now wondering if my friend is positive as well. I saw him take some pretty hefty pills, orange if I remember correctly, that had to be refrigerated before we went out the other day. Any idea what those might be, specifically in the context of HIV? If he is pos, it's obviously not going to change the fact that he is a good friend I would help out of any jam. I guess I just want to know for my own personal reference so my big mouth never gets me into trouble by accident. I didn't just want to go right out and ask him if

he was pos...do you think that would be rude of me?

Name withheld,  
via the Internet

*Glen Pietrandoni responds—to readers: I'm sure this is a common occurrence. This actually happened to me, but I knew what I had found. If keeping one's status quiet is an issue, maybe folks need to be more careful. If keeping your HIV status quiet is important, be careful where you keep your medication stored. Even in the refrigerator, a visitor may recognize the medication and blow your cover. Lots of people know the names of HIV meds now because of all of the media and advertising. [He also responded directly to the writer.]*

## AIDS

I have been working in the HIV/AIDS arena since 1989 and have been reading your magazine for a number of years. In my opinion, it is the most educational of the HIV magazines available. However, I felt compelled to respond to One-on-One with Dr. Peter Piot (March/April). The first sentence stated that, "AIDS will kill tens of millions of people over the next 20 years." Although there are now over 43 million individuals infected with HIV, no one has ever died of AIDS. AIDS is an acronym that stands for a syndrome (Acquired Immune Deficiency Syndrome). No one dies from a syndrome. An individual dies because of the suppressed immune system caused by the virus—this problem eventually causes the person to be diagnosed as having AIDS, but it is an AIDS-defining condition that causes the death, not AIDS itself.

Linda "P", MA, LMHC, NCC,  
Orlando, FL ☪

# News Briefs

by Enid Vázquez



## **FUZEON APPROVED**

Fuzeon (T-20) was approved by the U.S. Food and Drug Administration (FDA) in March. The twice-daily injections were approved for people with HIV drug experience whose antiviral therapy is failing to work for them. Fuzeon is the first in a new class of anti-HIV drugs to hit the market: fusion inhibitors. It literally prevents HIV from infecting (fusing to) cells. The best use would be in someone who also has another active drug to add to their regimen along with the Fuzeon. People taking Fuzeon are advised to seek medical evaluation immediately if they develop signs or symptoms suggestive of pneumonia, such as cough with fever, rapid breathing and shortness of breath. They should also beware of an allergic reaction. Fuzeon is a peptide, which is expensive and difficult to produce. As a result, there are two major access problems: cost (more than \$20,000 per year) and production. See the January/February Annual HIV Drug Guide for more information.

## **SEND UNUSED DRUGS ABROAD**

...through the Starfish Project of New York-Presbyterian Hospital and Cornell University. The program is approved by the U.S. Food and Drug Administration (FDA). Medications are sent to Africa. Contact [www.thestarfishproject.org](http://www.thestarfishproject.org) or call (212) 746-4180. In Chicago, drugs may be dropped off at Howard Brown Health Center, 4025 N. Sheridan Rd. Bottles may be opened or unopened. The name comes from the story of the girl throwing some of the hundreds of starfish back into the sea. When asked what difference she could make, she replies, "It makes a difference to this one."

## **NKOSI'S ORPHANAGES**

*Positively Aware* did not find information on the Nkosi Johnson AIDS Foundation before presstime for the orphans resource list in the March/April issue. The website is <http://nkosi.iafrica.com>. Nkosi Johnson is the South African child who spoke at the 2000 International AIDS Conference and died of AIDS,

but not before helping to start an organization that would help other orphans.

## **NEW DETROIT PROGRAM**

The Detroit LIGHT House now has a specialized substance abuse treatment program (intensive outpatient with home visits) for people with HIV. The program focuses on African Americans and men who have sex with men (MSM). Services include one-on-one and groups dealing with topics such as emotional management and recovery (drug use, relapse prevention, health, depression, anxiety and AIDS). Free housing provided to eligible clients. Legal and financial counseling is available. For more information, call (313) 832-1300.

## **POZ HETEROCRUISE**

The Center for Positive Connections is hosting its 6th annual Poz HeteroCruise October 12-19th, leaving from San Juan, Puerto Rico. Reservations must be made by May 12, or as soon as possible. Payments must also begin the sooner the better. For more information call tollfree (888) POS-CONN (767-2666) or visit [www.positiveconnections.org](http://www.positiveconnections.org). TCPC, located in Miami, is an organization for HIV-positive heterosexuals.

## **RESISTANCE DATABASE**

Scientists have started a non-profit database of HIV drug mutations, the HIV Resistance Response Database Initiative. It hopes to collect data from doctors around the world. Efforts include responding to clinician inquiries. RDI was founded by Brendan Larder. Members include Julio Montaner of the British Columbia Centre for Excellence in HIV/AIDS, Victor DeGruttola of Harvard University and Scott Wegner of the U.S. Military HIV Research Group. Visit [www.hivr.org](http://www.hivr.org).

## **WOMEN'S WEBSITE**

The United Nations Development Fund for Women (UNIFEM) with UNAIDS (United Nations Programme on HIV/AIDS) has developed a comprehensive website on women and HIV/AIDS. UNIFEM notes that, "Programmes on HIV/AIDS

are beginning to mainstream gender.... Best practices are being identified. And women are increasingly being regarded as active participants in bringing about change, rather than helpless victims." Visit [www.GenderandAIDS.org](http://www.GenderandAIDS.org).

#### **AIDS VACCINE FAILS**

The first AIDS vaccine to reach an advanced stage of research (Phase III) showed no difference when compared to placebo (fake drug). Overall, people in the study were infected with HIV whether or not they received the vaccine (about 6% each). Results are out to three years with more than 5,000 people at high risk of infection.

VaxGen, the manufacturer of AIDSvax, reported that the vaccine seems to have protective ability for African Americans and Asians. However, the numbers of these people in the study were so small, they were basically irrelevant until much more research takes place. The statement served to mislead people, some of whom called the claim of ineffectiveness of the vaccine "racist." Gay Men's Health Crisis, an HIV-service organization in New York City, called the company's statement "grossly premature."

VaxGen can, of course, continue studies to see if the vaccine may indeed protect certain populations. Raising money for this may be difficult with the disappointing results of this trial. However, many vaccine advocates were optimistic. They noted that while the results were poor, the importance of the effort was huge.

AIDSvax was supposed to stop HIV from reproducing by blocking one of its proteins, gp120. There are more HIV vaccines in development which work in different ways. The company has another vaccine in the works, in Thailand, with results also expected this year.

#### **"SAFER" SMALLPOX**

The U.S. Department of Health and Human Services (DHHS) awarded two grants for the search of a smallpox vaccine that can be used by people with a compromised immune system. Such a group includes people with HIV and those on cancer chemotherapy. Preliminary results may come as early as this year.

#### **BUSH BACKSLIDES**

It was hard to believe that President Bush could really be an advocate for people

with HIV, despite his pledge of \$15 billion for fighting AIDS in Africa and the Caribbean during his January State of the Union address. Sure enough, the President basically took back his pledge later by saying that only organizations that do not perform or advocate for abortions can receive money. This makes it virtually impossible for medical clinics and other organizations that help people with HIV get money for AIDS treatment as outlined in the President's proposal. The President said organizations can get money by setting up separate facilities for AIDS work. This too is virtually impossible.

#### **NEWS FROM THE 10TH CONFERENCE ON RETROVIRUSES AND OPPORTUNISTIC INFECTIONS, HELD IN BOSTON IN FEBRUARY**

##### **PRISONERS AND HIV**

Researchers noted that "as many as 20% of HIV-infected persons in the U.S. enter and leave a correctional facility each year." Lead researcher Dr. David Wohl told Reuters news service that areas of the country with high rates of HIV also have high rates of incarceration, "and we were wondering if this is more than just a coincidence." The researchers talked with 80 prisoners, more than half of them women, and again after they were released (83% of them at the time of the report). They found that half of the ex-inmates had sex within a week after leaving prison. Although most of the people getting out of prison (64%) had a main partner without HIV or with unknown HIV status, 24% of them had unprotected sex with the partner. (In the year before incarceration, 78% had unprotected sex with the partner.) The University of North Carolina research team reported that, "Given their current sex behavior 31% of releasees felt that it was very likely or somewhat likely that they would infect their HIV-negative main partner."

Other research has found a high risk of HIV infection among partners of former prisoners. The health risks are thought to be so high, one Chicago blood bank refuses donations from anyone ever locked up for 48 hours.

##### **908/FOS-AMPRENAVIR**

Final 48 weeks results from the NEAT study are in for the new formulation of Agenerase. GW433908 (908 for short) is a

protease inhibitor with a low pill burden—two tablets twice a day. It was compared to Viracept (five tablets twice a day), both given with Epivir and Ziagen.

908 twice a day "showed evidence of greater efficacy" than Viracept. In people who had more than 100,000 viral load at the start of treatment (half of the participants), 67% of the 908 group had less than 400 viral load, compared with 35% of the people on Viracept.

Overall, the number of people who went below 400 viral load was 66% for 908 and 48% for Viracept. (Under 50 copies, it was 908 - 58% and Viracept - 42%.)

Half of the group of 249 participants had less than 200 T-cells. Both drugs increased T-cells by 200. TheBody.com reported that the drop-out rate was more than 30% for 908 and 46% for Viracept. The report noted that perhaps the advanced disease stage of so many of the patients made therapy more difficult to tolerate. Many participants were from poor countries in Central and South America, although most were from the U.S.

908 is expected to be dosed once a day with Norvir. It's also hoped that 908 is active against resistant virus.

##### **908 VS. KALETRA**

Now here's a drug to beat. Kaletra is a potent protease inhibitor, even for people with extensive drug resistance.

In the CONTEXT study, Kaletra and 908 both showed a strong response in people who had already experienced viral load failure on therapy (defined as more than 1,000). About half of the participants had advanced disease—less than 260 T-cells. These are preliminary results from six months of treatment.

Using intent-to-treat analysis (a strict standard), the percentage of people getting below 50 viral load at 24 weeks was 48 for Kaletra, 42 for 908 once daily and 40 for 908 twice daily. T-cell increases were around 65 for all groups.

In this study, 908 was given with a small dose of Norvir, either once or twice a day. Two nucleoside drugs (the class of drugs that includes Retrovir and Ziagen) were added with the use of resistance testing, to make sure the nukes were effective in the participants. The 320 people in the study were from 13 countries, most from the U.S. ☞

There is good news on the horizon for people needing new options for HIV therapy. At the 10th Conference on Retroviruses and Opportunistic Infections held in Boston in February, a bumper crop of new therapies was presented. Many of the drugs are from new classes, different from the existing HIV therapies now in the pharmacy. In addition, older approved drugs are being simplified and developed into better formulations. This news represents an important shift in HIV research and development. It provides hope for those who are drug resistant and experiencing a multitude of toxicities.

Even a year ago the pipeline for new drugs seemed to be running dry. Drug companies had merged and biotech firms had closed up shop. HIV drug development appeared to be in big trouble. But this March one new drug from a new class was approved and three others will be up for approval in the coming year. A number of drugs from different classes and some designed to work against resistant virus are showing promise, but are in very early stages of testing that will require very preliminary “proof of principle” studies before they can go further. Then, it’s not clear how many of them will prove to be practical, safe and effective. So, the exciting news from Boston must be tempered with the reality that some of the drugs may fail and not make it past where they are now. Also, due to the rigorous studies the drugs have to go through, they may not be in wider access for several years, leaving a gap where there may be few options.

But overall the news is positive and is a bit of a pay-off for all the hard work AIDS treatment activists have done for the last several years. We’ll see how everything plays out. In this article, I cover the “pipeline” drugs presented in Boston, and the ones that seem most interesting and exciting.

#### **FUZEON**

Fuzeon (also known as T-20, or enfurvitide), from Roche/Trimeris, is the newest FDA-approved therapy that represents a breakthrough into a new era of HIV research and development. It is from a new class of anti-HIV drugs that works by blocking the fusion process of HIV entry into the human CD4 cell. It is a welcome addition to the existing available antivirals, but not without some significant issues. Access to Fuzeon may be extremely difficult to come by. It is the most expensive anti-AIDS drug thus far, twice the cost of the highest existing antiviral. ADAP (AIDS Drug Assistance Program), Medicaid, HMO’s and other insurers may not add it to their formularies because they simply cannot afford it. To further complicate matters, it is delivered by twice daily subcutaneous (under the skin) injections and in studies so far most people experience reactions from those injections. Because of these issues it’s clear that Fuzeon should only be used by a select population of people with indisputable need.

People should recognize that combined data from studies show 30% of people on Fuzeon went below 400 viral load at 48 weeks compared to 12% not receiving Fuzeon. Eighty percent of the treated individuals maintained an undetectable viral load at 48 weeks. This information should be looked at carefully as it shows that Fuzeon is

not actually the breakthrough drug people may have thought. It may work best with those who have another active drug to add to an existing regimen. This begs the question of who should be able to access it given the expense, difficulty in administering and the side effects. Activists maintain that Fuzeon should be available to those who need it most, based on the fact they cannot construct a viable treatment regimen.

#### **ATAZANAVIR**

Atazanavir, from Bristol Myers-Squibb, is a protease inhibitor currently available in expanded access and next in line for approval. Its advantages are that it is a once-a-day therapy and may have less of an effect on cholesterol than other protease inhibitors. It has similar effectiveness as Viracept but may be cross-resistant to other protease



## **A Different Class: New HIV Therapies on the Horizon**

*by Matt Sharp*

inhibitors. While the resistance is different from available PIs and takes longer to develop, it’s not clear if it will be any better than existing protease inhibitors.

#### **COVIRACIL**

Coviracil from Gilead/Triangle is a once-a day drug with an efficacy profile very similar to its close cousin Epivir. It may be less likely than Epivir to fail due to resistance, but may show more toxicity. Bottom line is that it is one more option for people with AIDS. Hopefully, Gilead will price the drug lower than Epivir.

#### **FOS-AMPRENAVIR (908)**

Fos-amprenavir (908) is a pro-drug of the current Agerase from GlaxoSmithKline (it acts like Agerase after it enters the body). A protease inhibitor, there are fewer pills required with this drug than with Agerase. Boosted with low-dose ritonavir (Norvir), it is a potent addition to the available drugs. Unfortunately, the ritonavir boost causes side effects. A 48-week study presented in Boston showed it was more effective in those who were drug naïve compared to Viracept. But in an interim analysis of a drug-experienced population compared to Kaletra, there was no discernible difference. Fos-amprenavir may be a useful drug for those who cannot get access to Fuzeon. (See page 13.)

#### **TIPRANAVIR**

Boehringer-Ingelheim’s tipranavir is possibly a more exciting protease inhibitor showing good effectiveness for people with drug resistant HIV. Studies in heavily treated people show at least a one log drop in viral load in two weeks. Phase III studies are beginning and an expanded access will follow in six to nine months. Like so

many other protease inhibitors it will be co-administered with ritonavir due to the boosting effect. Diarrhea is the main side effect. Tipranavir may be an up-and-coming drug for people who are in dire need of a potent protease inhibitor to add to their combination.

There are several companies developing new protease inhibitors. This is an important area of research because PIs have shown to be the most potent anti-HIV drugs yet they have also caused more side effects, so a new chemical PI class is welcomed and needed.

## NON-NUKES

Non-nucleoside reverse transcriptase inhibitors (NNRTIs) have the highest incidence of failure because of resistance to HIV. There are several new NNRTIs in development that were picked from the drawing board because they are active against the current NNRTIs. TMC-125 from Tibotec is being studied in Phase II trials in Europe. So far the data looks compelling. Glaxo is screening a whole new class of non-nukes that won't be cross-resistant.

## INTEGRASE INHIBITORS

An interesting new class of drugs that target the integrase enzyme in virus replication are coming into the spotlight. Several years ago there was work being done with integrase inhibition but the first compound did not make it very far. Today there are two integrase inhibitors that have made it to clinical trials. They are S-1360 from GlaxoSmithKline/Shinogi that is in Phase I/II and Merck's L-870, 810 in early Phase I.

The science of entry inhibition was inspired by Fuzeon's success. Since that drug is proving to work, scientists are looking at all the different ways HIV attaches and enters the cell. Without all of the connecting mechanisms in place, the virus cannot attach, fuse and then finally enter and infect the cell. There are currently six classes that make up 12 different types of entry inhibitors in various stages of development, quite a bumper crop indeed.

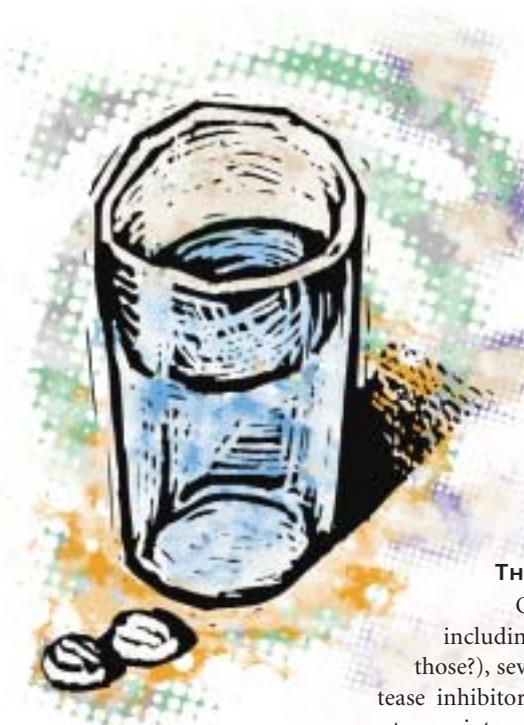
One promising class is the CCR5 antagonists that seek to stop co-attachment of HIV to the CD4 cell. CCR5 co-receptors are a type of receptor that are associated with most people with HIV, so in theory, it is hoped they can work to stop attachment. The leading CCR5 inhibitors are Schering-Plough's SCH C and Pfizer's UK-427, 857. This technology holds great promise; however, one concern is that many other cells use the CCR5 co-receptor, so until more studies are done we won't know if the drugs will harm other cells.

Another attachment inhibitor compound is PRO-452 that works in conjunction with human antibodies to stop early attachment, before the fusion and entry steps. The only problem is that this drug is also delivered by subcutaneous injections.

Finally, Fuzeon's sister compound, T-1249, shows the most promise in early Phase II development in people who are resistant to Fuzeon. From studies so far, the drug shows a 1.12-log viral load

drop in resistant trial participants. Studies show the longer you have T-20 resistance the less effective T-1249 will be.

One out of the ordinary development in Boston was the presentation of TNX-355, another new class of anti-HIV drugs. It is a monoclonal antibody that inhibits post binding on the CD4 cell. It is moving into Phase I in an open-label study. Its big drawback thus far is that it is given by a once monthly IV infusion. But as with Fuzeon, it may be a good drug for those who are multi-drug resistant. It is moving into dose escalation studies.



## BRAND NEW

One final drug class under development and presented at the conference was what is being called a "maturation inhibitor." Panaco's PA-457 has only been studied in the laboratory but the company plans to submit their Investigational New Drug (IND) application to the FDA for clinical trials in a few months. This drug works by disrupting the new RNA that is budding out of the cell in its baby virion. However, how it does that is not entirely clear. This drug is a surprise because it is a totally new class that few expected.

## THERE'S MORE

Other drugs are coming down the pike including zinc finger inhibitors (remember those?), several cellular factor inhibitors, new protease inhibitors and nucleoside and non-nucleoside reverse transcriptase inhibitors. Also, we cannot forget the importance of treatment vaccines in development and other immune-based technologies that often get forgotten in the antiviral shuffle (see page 16).

This large group of AIDS drugs has promise, simply in the fact that there is so much new interest in developing therapies that work for more and more people who have become drug resistant. I asked Ben Cheng from the Forum for Collaborative HIV Research how many of the 59 drugs he lists being studied would end up useful and he replied, "Based on my very unscientific tracking of the drugs that have been presented at conferences (usually starting pre-clinical and have some in vitro activity), about 10-15% make it to market."

The pipeline for new HIV drugs is indeed impressive and hopeful for the people who have access. However, with the latest approval of Fuzeon, it is clear that new high technology drugs from this point on may be only available to a few people in developed countries, and not at all in the rest of the world.

The pricing of new classes of AIDS drugs must be monitored by the community. People with AIDS must continue to proactively monitor pharmaceutical pricing discussions during the development of all new drugs. There should be a demand for worldwide access to all new drugs from day one. It is simply our moral obligation. The American Foundation for AIDS Research has a telling advertisement that reads, "1 million treated for HIV ... 41 million to go." ☚

The relatively low profile of immune-based therapies (IBTs) at this year's Retrovirus Conference reflects the current state of the field. While we have

nearly 20 anti-retroviral drugs that attack HIV replication, we have no approved therapies directed at the immune system. In theory, IBTs could offset the damage to the immune system done by HIV, improve the quality and strength of the immune

response, or help the immune system control HIV without antiretrovirals. The field of IBTs offers hope

that researchers can develop strategies allowing people with HIV to delay or interrupt antiretroviral therapy, ideally reducing drug resistance problems and side effects due to HAART (highly active antiretroviral therapy).

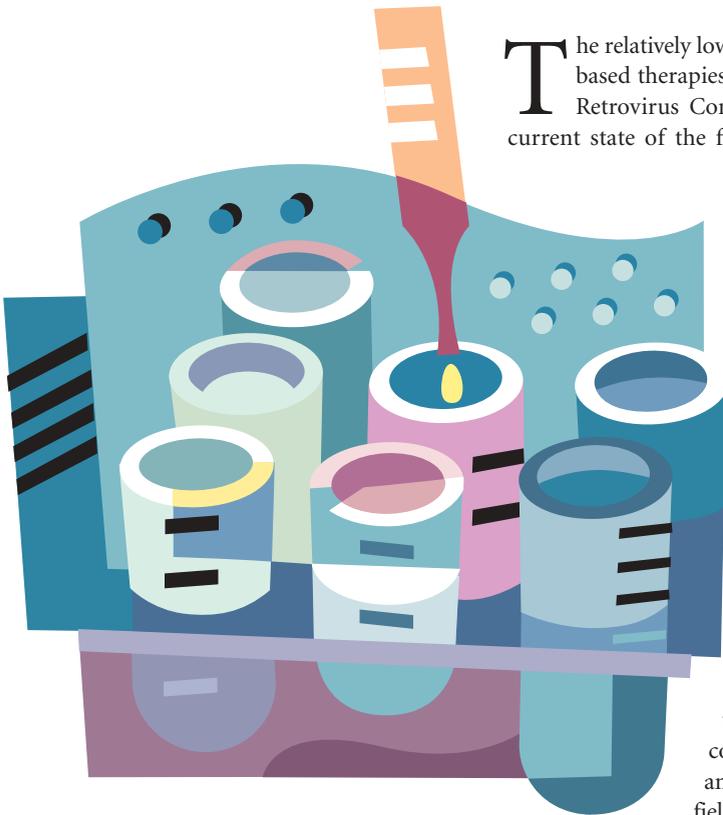
Despite the potential for changing HIV treatment, only one IBT—interleukin-2 (IL-2)—is currently in phase III trials; the results from the IL-2 trials, SILCAAT and ESPRIT, won't be available for years. Therapeutic vaccines, designed to improve the immune system's ability to control HIV in people who are chronically infected, are still in the early stages of development. The therapeutic vaccines furthest along are being researched in small studies designed to determine safety and measure changes in the immune response to HIV.

An oral abstract session dedicated to IBTs focused primarily on two therapeutic vaccine candidates—MVA-BN-Nef and ALVAC. MVA-BN-Nef is the Bavarian Nordic version of modified Vaccinia Virus Ankara that expresses HIV's *nef* gene; MVA-BN (without the *nef* gene) will soon enter trials as a stand-alone smallpox vaccine for people with HIV. Dr. Harrer from the University of Erlangen, Germany, presented safety and immunogenicity data from a Phase I study of MVA-BN-Nef vaccine. The

vaccine was safe in a group of 14 people on HAART with CD4 counts over 400. Subjects received three immunizations, and then interrupted HAART. While measurements of immune response to *nef* improved after vaccination, all 14 subjects experienced viral rebound within weeks of interrupting treatment. Vaccination did not lead to immune control of HIV in the absence of antiretroviral therapy, although five subjects appeared to maintain viral loads at lower levels than their original viral setpoint—the viral load at the time when HAART was first initiated.

Results from two ALVAC studies—VACCITER (ANRS 094) and VACCIL-2 (ANRS 093)—conducted in France similarly failed to generate much enthusiasm. ALVAC is a recombinant form of the canarypox virus that contains several HIV genes; ALVAC vCP1433, the version of ALVAC used in these studies, expresses genes for HIV's *env*, *gag*, and sections of *pol* and *nef*. Dr. Tubiana reported on ANRS 094, in which a group of 48 people (on stable HAART, with CD4 counts above 400) received a series of four vaccinations. In order to assess whether ALVAC could help the immune system control HIV without medication, all participants discontinued HAART four weeks after their last ALVAC immunization. After 44 weeks of follow-up, only four subjects (8%) maintained a viral load below 10,000 copies and CD4 counts above 250 without restarting HAART—results no better than in other treatment interruption studies that do not use vaccines. Dr. Tubiana suggested that the series of four ALVAC immunizations may have been too many, exhausting the HIV-specific immune response, but results from other ALVAC trials have generally been underwhelming.

Another French study, ANRS 093, also used a treatment interruption to explore the effects of vaccination on HIV-specific immune control, this time in a controlled trial of ALVAC vCP1433 in combination with Lipo-6T, followed by 3 cycles of IL-2. Lipo-6T is another vaccine construct made up of a set of HIV lipopeptides (sections of HIV proteins attached to a fat molecule, or lipid tail), while IL-2 is an immune modulator that raises CD4 counts. Dr. Levy reported that subjects who received the vaccines and IL-2 had better HIV-specific immune responses and somewhat better viral control off treatment than a control group. Overall,



## Immune-Based Therapies at the Retrovirus Conference

by Daniel Raymond

only 10 subjects showed immune control of HIV during the treatment interruption—29% of the vaccine/IL-2 group vs. 5% of the control group—and results were only reported through the 12th week off treatment.

Therapeutic vaccines against HIV face a number of obstacles discussed during the immunology and pathogenesis sessions at the conference. Dr. Bruce Walker from Harvard University and others described the dynamics of immune escape, the development of viral mutations that allow HIV to evade the immune system—a process similar to the emergence of drug resistance through the accumulation of viral mutants. Walker described a group of patients treated with HAART during acute infection who then interrupted therapy, in the hope that early HAART treatment might preserve an HIV-specific immune response strong enough to control HIV without medication. Despite lengthy periods where subjects maintained low viral loads off treatment, over the first few years a progressively increasing number of subjects experienced viral breakthrough (detectable viral load). In many cases, loss of viral control was associated with the development of escape mutations.

While immune escape may contribute to loss of viral control in early HIV infection, mounting evidence indicates that people with chronic infection have a flawed HIV-specific immune response—their HIV-specific T-cells have functional defects. Dr. Rika Draenert reported that a cohort of untreated people with chronic HIV infection had CD8 responses to HIV that were fairly broad and strong in magnitude, not significantly different than the CD8 responses of long-term non-progressors. These CD8 T-cells were ultimately ineffective at controlling viral load, despite little evidence of viral escape mutations in preliminary analyses. However, many of the HIV-specific CD8 cells had not fully matured, and would be ineffective at viral control. Chronic HIV infection is commonly thought of in terms of a quantitative deficiency—progressively fewer T-cells available to fight infections. New research sug-

gests that the qualitative defects in immune response are receiving more attention, and appear to play a key role in determining the failure of immune control of HIV.

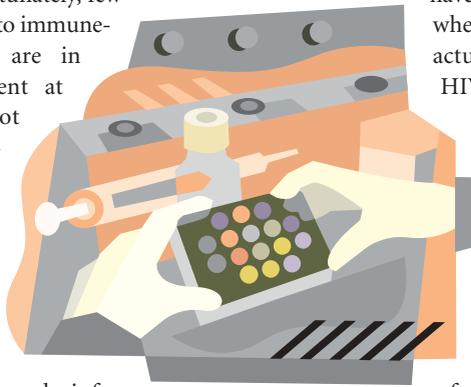
The implications of immune escape and qualitative defects for the development of therapeutic vaccines are unclear, and the current pessimism in some quarters about the prospects of therapeutic vaccines may be premature. Unfortunately, few other approaches to immune-based therapies are in active development at this time. A pilot study of Peg-Intron (pegylated interferon alfa-2b, approved for the treatment of hepatitis C) saw benefits in CD4 gains and viral load decreases in early infection, though the number of subjects was small (five persons were treated). Audience members noted that these findings contrasted with the clinical experience of people co-infected with HIV and hepatitis C, who generally experience a temporary decline in CD4 counts during Peg-Intron treatment.

Several posters from European researchers looked at mycophenolate mofetil in combination with HAART. Mycophenolate mofetil (MMF) is an immunosuppressant used to prevent organ rejection in kidney, liver, and heart transplants. Preliminary studies had suggested that MMF might indirectly prevent HIV replication, and act synergistically with abacavir (Ziagen). MMF could also potentially reduce the viral reservoir of HIV-infected cells by inhibiting the proliferation of CD4 cells, the cells most susceptible to HIV infection. The results from these studies were mixed and inconclusive; the AIDS Clinical Trials Group is currently studying MMF in combination with DAPD (amdoxovir), an experimental nucleoside analog, in treatment-experienced patients.

Immune-Based Therapy research was largely eclipsed at this year's conference by new antiretroviral compounds (see page 14) and new insights into immunology and virology. Immunologists have identified compounds which can modulate aspects of the immune system, and vaccines which can show increases in various measures of HIV-specific immune response, but to date we have little information about whether these agents will actually help people with HIV stay healthier and live longer. Ironically, the success of HAART may have slowed down IBT research—SILCAAT and ESPRIT, the large IL-2 studies, will continue for years because the endpoints are incidence of disease and death, relatively rare occurrences in the HAART era. Many IBTs may not directly increase CD4 counts or lower HIV viral loads, making it difficult to assess their impact. Nor is there consensus on which measures of HIV-specific immune response are the best ones to guide further research.

These factors have led to a reluctance among pharmaceutical companies to invest in IBT research for HIV. Similarly, advances in immunology have largely failed as yet to produce effective therapies for autoimmune diseases, cancers, allergies and asthma. However, the promise of IBTs should not be discarded—early attempts at IBTs suffered from being too crude, too toxic, or too risky before the availability of HAART, while the therapeutic vaccine candidates that have been most thoroughly studied to date may not be the most immunogenic. As scientists expand and refine our knowledge of the course of HIV disease, newer methods and approaches to research may begin to bear fruit. This will require a concerted effort among industry, academia and government, and the HIV community can play a vital role in urging the research process forward. ☒

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Co-infection with hepatitis C virus (HCV) has become a significant concern for an estimated 16% to 25% of HIV-positive Americans. Although results from two pivotal studies on the efficacy of pegylated interferon and ribavirin for treatment of hepatitis C in co-infected people are not yet available (results from the Adult AIDS Clinical Trials Group's 5071 are expected later this year, and Roche's APRICOT will conclude in 2004), this year's Conference on Retroviruses and Opportunistic Infections (CROI) offered information on HIV/HCV epidemiology, natural history, diagnostics, treatment strategies, side effect management, drug interactions and liver transplantation in HIV-positive people.

This information is essential, yet several other important concerns revolve around co-infection. To address some of these issues and introduce their draft Research & Policy Recommendations for Hepatitis C Virus (HCV)/HIV Co-infection

(<http://www.aidsinfonyc.org/tag/comp/hcvhivresearch.html>), the Treatment Action Group hosted a roundtable discussion on the opening day of CROI. Panelists included Dan Church, the Massachusetts Hepatitis C Coordinator, Donald Grove, the Director of Operations at Harm Reduction Coalition, Dr. Lisa Hirschhorn, the Director of HIV Medical Care and Research at Dimock Community Health Center, Jules Levin, the Executive Director of NATAP (National AIDS Treatment Advocacy Project) and Dr. Kenneth E. Sherman, the Director of Hepatology and Liver Transplant Section at Cincinnati College of Medicine. They discussed a range of issues affecting people with hepatitis C and HIV/HCV co-infection: the lack of state and federally funded programming for HCV prevention and education, questions about sexual transmission of HCV, the expense of, and limited access to, HCV treatment, barriers to care and treatment for active drug users and prisoners, the absence of treatment guidelines for co-infected individuals and other aspects of treatment, research and policy. Despite these crucial questions, Dr. Sherman provided an optimistic perspective of the current state of affairs, reminding us of breakthroughs in hepatitis C research and treatment, from the identification of the hepatitis C virus in 1989 to the current pegylated interferon-based regimens which have greatly improved hepatitis C treatment outcomes for HCV-monoinfected individuals.

#### EPIDEMIOLOGY AND NATURAL HISTORY

In the United States, an estimated 16% to 25% of people with HIV are also co-infected with hepatitis C; rates of co-infection are higher among those with a history of injection drug use (IDU). A closer look at HCV prevalence and co-infection prevalence among 557 current and former injection and non-injection drug users in New York City found that 89% (204/229) of the HIV-positive study volunteers had antibodies to hepatitis C, indicating an exposure to the virus. To confirm or rule out current, active hepatitis C infections, HCV RNA (viral load) testing was performed on those with antibodies to HCV (unlike HIV, a person can have antibodies to hepatitis C without harboring the virus). Three-quarters of the HCV-antibody positive group (170/229) had detectable HCV RNA, indi-

cating the presence of chronic HCV infection. HIV-positive people were more likely to have detectable HCV RNA, as were males and people with a history of IDU.

Hepatitis C is a smaller virus than HIV; larger amounts of it are usually present in infected blood. Because hepatitis C viral loads are often high, and there's so much actual virus in a small amount of blood, hepatitis C is very easily transmitted from injection drug use with shared, unsterilized equipment—much more so than HIV. Many co-infected injection drug users already had hepatitis C before

contracting HIV. In the pre-HAART (highly active antiretroviral therapy, for HIV) era, there were a few instances of rapid HCV disease progression in individuals who were infected with HIV and HCV at the same time, or had an underlying

HIV infection when they acquired HCV. Coming at this question from the other side, a group of researchers examined the influence of hepatitis C viral load on HIV progression in a group of injection drug users who had hepatitis C before becoming infected with HIV. They found no association with the amount of HCV RNA in a person's blood prior to HIV infection and CD4 T-cells decreases, progression to AIDS or AIDS-related death.

Another group looked at the trends in HIV-related hospitalizations by diagnosis in 1996, 1998 and 2000, finding that hospitalizations for liver-related complications rose significantly, while hospital admissions for opportunistic infections have decreased dramatically. More than 327,000 hospitalizations from 12 states were separated into four groups: opportunistic illnesses, complications from injection drug use, liver-related complications and other causes. Between 1996 and 2000, hospital admissions for opportunistic infections decreased from 41% to 29%. The number of hospital admissions for complications from injection drug use remained fairly stable, and the hospitalizations for liver-related complications grew from 13% to 18%.

Many studies have found that HIV accelerates hepatitis C disease progression. A direct look at liver biopsies from 492 co-infected people with elevated liver enzymes discovered more advanced liver disease than that found in people with a similar estimated duration of HCV monoinfection. Three factors were associated with more severe liver fibrosis: being infected with hepatitis C for more than 15 years, heavy alcohol consumption and being over 20 years old when infected with HCV. More than half of the study participants had never used antiretroviral therapy.

While a number of other studies have identified end-stage liver disease as a leading cause of death for people with HIV, new data from the Veteran's Aging Cohort Study found that the risk of death from HIV alone before 1996 was higher than the risk of death from co-infection after 1996. In this cohort, the risk of death from HCV mono- or co-infection has increased since 1996, while the risk of death from HIV has decreased during the same period. It appears that the gains in survival from HAART have offset the increased risk of mortality from co-infection in this group, although co-infected



people had a higher risk of death than those with HCV alone. However, a longer follow-up period is needed to truly assess the impact of co-infection and HAART on survival in this group.

Many co-infected people are wondering how HAART will affect the liver. A study of 33 co-infected individuals starting their first HAART regimen examined immunologic responses and liver disease progression after 12 months of antiretroviral therapy. Immune response was defined as either an increase of 100 or more CD4 T-cells or a doubled CD4 T-cell count after 12 months of HAART. Liver biopsies were performed on 25 participants at study entry and 12 months after starting antiretroviral treatment. Liver disease progression was defined by an increase of at least two points on the Knodell score and more than one point on the Metavir score over 12 months (the Knodell and Metavir systems are used to determine both the amount of disease activity [grade] and the amount of liver damage [stage]). Although this study did not find a relationship between immunologic response to HAART and liver disease progression, it did observe a significant relationship between elevated liver enzymes and liver disease progression; 80% of the five individuals with liver enzyme elevations (defined as five times above the upper limit of normal) also had liver disease progression. According to the study investigators, elevations in liver enzymes were caused by alcohol intake in two persons, by hepatitis C in two persons and by antiretrovirals (Fortovase, Norvir, Ziagen and Zerit) in one person. The study concluded with recommendations for frequent monitoring of liver enzymes and reducing or eliminating alcohol intake while on HAART. Longer and larger studies are needed to provide us with more information on the effect of HAART on liver histology.

An analysis of the data from 41,262 HIV-positive male veterans in care found higher rates of diabetes mellitus in those with HIV/HCV co-infection than those with HIV alone; 19.7% of co-infected individuals were diagnosed with diabetes, as compared with 14.8% of those with HIV alone. As a comparison, the rate of diabetes in the general population is 6.2%, and the rate of diabetes among all veterans in care is 11.83%. The prevalence of diabetes increased among co-infected individuals over 40 years of age, Black and

Hispanic males and individuals with an alcohol-related diagnosis. Data on family history and body mass index, two predictors of diabetes, were not available. Information on protease inhibitor use in this cohort was not available. Diabetes is more prevalent among individuals taking PI-based regimens; the link with protease inhibitors, diabetes and co-infection needs further investigation. The authors concluded with a recommendation to screen co-infected veterans for diabetes so that they may benefit from early diagnosis and intervention.



## DIAGNOSTICS

Currently, liver biopsy is the only way to truly assess the grade and stage of liver disease, and biopsy results are used to evaluate the need for hepatitis C treatment. The search for less invasive, less

painful and less expensive substitutes for biopsy is an important concern for co-infected people, clinicians, researchers and payers. The data from five hepatitis C treatment trials—including demographics, liver biopsy results, HIV status and other clinical information were examined. Mean alanine aminotransferase (ALT) levels were higher in co-infected individuals with no fibrosis, mild to serious fibrosis and cirrhosis than in those with HCV mono-infection. Mean ALT level did increase with fibrosis progression; in persons with mild or no fibrosis, the mean ALT level was 96.8; the mean ALT rose to 120.9 in individuals with fibrosis and to 137.9 in those with severe fibrosis or cirrhosis. However, ALT levels appeared to have limited predictive value for determining liver histology, and the search for biopsy substitutes continues.

## TREATMENT STRATEGIES

Data from pivotal studies of pegylated interferon and ribavirin have indicated that a sustained virologic response (SVR, undetectable HCV RNA six months after finishing a course of hepatitis C treatment) is extremely unlikely for individuals who don't have either undetectable HCV RNA or a 2-log drop in HCV RNA after 12 weeks of treatment. Because the side effects of interferon and ribavirin may

be quite severe, especially among co-infected people, an early evaluation of the probability of achieving an SVR spares those who are unlikely to achieve a sustained virologic response from continuing HCV treatment. A group of researchers examined the applicability of this "early stopping rule" to co-infected individuals using ribavirin with pegylated or standard interferon, finding a negative predictive value of 100% at week 12. However, a high rate of relapse was observed in individuals with early virologic responses (EVR) at 12 weeks; while 52/89 (58%) had a 12 week EVR, only 29 of those 52 (56%) achieved a sustained virologic response. High relapse rates were observed in those

### MORPHINE AND HEPATITIS C REPLICATION

One study looked at the effects of morphine on HCV replication, using a replicon system. Because hepatitis C doesn't replicate in cells outside of the human body, researchers use replicons (synthetic RNA sequences containing pieces of the HCV genome) to study what HCV does inside of cells. Although hepatitis C replicons can copy themselves, they cannot infect new cells.

Although morphine enhanced expression of HCV RNA in the replicon system, these results may not apply to the more complex environment of the human body; a replicon is not the hepatitis C virus itself, and a replicon system is not the human body. The effects of morphine on a replicon are not equal to the effects of morphine on the human body.

with genotypes 2 and 3, who received six months of treatment as compared with the year of treatment given to individuals with genotypes 1 and 4. Although six months of treatment appears to be adequate for individuals with HCV alone, co-infected people with genotypes 2 and 3 may want to consider a year of treatment.

The efficacy of two dosing strategies of standard interferon with ribavirin was evaluated in 180 co-infected people. One group was given interferon daily, while the other received three doses of interferon per week. The discontinuation rate was high, and the rate of sustained virologic response was low in both arms. The once-daily arm had fewer dropouts and a higher rate of SVR by on-treatment (those who finished the study, and those with no data missing) as well as intent-to-treat analysis (discontinuations and missing data were considered as treatment failures). The on-treatment analysis found SVR among 42.9% of those in the daily interferon arm and 28% in the thrice-weekly arm. When the more strict intent-to-treat analysis was used, the SVR rates dropped to 9.3% of those receiving daily interferon and 4.3% in the thrice-weekly arm. Hopefully, higher rates of SVR will be achieved with pegylated interferons, mirroring the improvement in treatment outcomes seen with pegylated interferons in HCV mono-infection.

#### **SIDE EFFECT MANAGEMENT**

Many side effects have been associated with hepatitis C treatment. Ocular problems, such as blocked blood supply to the retina, retinal hemorrhages, and cotton wool spots are known side effects of interferon alfa. Optic neuropathy, which may result in color blindness or complete loss of vision, is a rarer side effect of interferon alfa. New information about screening for, and incidence of, ophthalmologic disorders during treatment with pegylated interferon was also presented at the 10th CROI. A study of 18 co-infected people who were treated for hepatitis C with pegylated interferon alfa-2b (Schering's Peg-Intron) and ribavirin found a 39% incidence of different ocular pathologies (cataracts in one or both eyes and cotton wool spots) among study participants. Eye exams were done at baseline and at least every three months. Treatment was not discontinued in individuals with evidence of mild retinopathy (less than five cotton wool spots in the back of either eyeball); if an individual had more than ten cotton wool spots in the back of either eyeball and any other signs of ocular problems, treatment was discontinued. One individual had a 50% loss in color vision, which was evidence of optic neuropathy. Treatment was discontinued and the problem resolved completely 10 weeks later. Currently, there are no guidelines for performing ophthalmologic evaluations during treatment with pegylated interferon; vigilant surveillance during treatment with standard and pegylated interferons, including color vision testing, will decrease the risk of permanent ocular damage.

#### **DRUG INTERACTIONS**

The FDA's Adverse Event Reporting system (AERS, Med Watch) has received information on several cases of apparent mitochondrial toxicity among HIV/HCV co-infected individuals who took rib-

avirin with nucleoside reverse transcriptase inhibitors (NRTIs). A search of the AERS by a group from the FDA and the University of Cincinnati found 85 unduplicated reports of adverse events among individuals who were taking ribavirin with NRTIs. A cluster of events suggestive of mitochondrial toxicity were reported in 31 of 85 cases. The reported events included pancreatitis and increased lipase (18), lactic acidosis/increased lactate (17), increases in liver function tests (8), hepatic steatosis (fatty liver) (5), hepatic failure (3), increased



CK (1) and neuropathy (1). Of the 31 individuals with suspected mitochondrial toxicity, 27 were receiving Videx (and 20/27 also received Zerit). Five of the individuals with events suggestive of mitochondrial toxicity died from complications of lactic acidosis; all five had

received Videx. From this data, the combination of Videx and ribavirin was associated with a 5-fold increase in the risk of side effects suggesting mitochondrial toxicity as compared with the use of ribavirin with other nucleoside reverse transcriptase inhibitors. In September 2002, the FDA began including a precaution that co-administration of ribavirin and Videx is not recommended because ribavirin increases exposure of Videx's active metabolite (ddI-triphosphate), which may cause or worsen ddI-related clinical toxicities, including pancreatitis, symptomatic hyperlactatemia/lactic acidosis, and peripheral neuropathy.

#### **LIVER TRANSPLANTATION**

Before HAART, transplantation in HIV-positive people was turned down because of poor survival; since the advent of HAART, a small number of HIV-positive people have undergone liver transplants. A follow-up of 23 HIV-positive liver transplant recipients found that their post-transplant survival rates at 12, 24 and 36 months were similar to those of HIV-negative organ recipients of comparable age and race. Survival at 12, 24 and 36 months was 90.9%, 75.9% and 75.9% for HIV-positive recipients vs. 86.6%, 82.3% and 79.2% for HIV-negative recipients. Although pre-transplant CD4 count, HIV RNA level and ability to tolerate HAART did not influence transplant outcomes, post-transplant survival was poorer among those who were unable to tolerate HAART after transplantation, individuals with post-transplant CD4 T-cells counts under 200 and HIV viral load above 400 copies/ml.

Although hepatitis C was associated with poorer post-transplant survival, there was no difference in survival between co-infected transplant recipients and those with HIV alone. ☚

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# DOES VIRAMUNE = SUSTIVA?

BY ENID VÁZQUEZ

Many doctors have long thought that Viramune was just as potent as Sustiva, but they didn't have good data to back them up. Now it appears that they do. Still, as usual doctors are disagreeing about the strengths of the two drugs.

"Did it [study results] tell us anything we didn't already know?" said one HIV specialist who believes both drugs are equally effective. Yet another said that Sustiva is still the drug to bet on for strength and durability. He noted that Sustiva may be safer than Viramune. It has also shown excellent results in many more large clinical trials, including superiority over most of the protease inhibitors.

The international 2NN study was reported at the 10th Conference on Retroviruses and Opportunistic Infections (CROI) in February, held in Boston. Researchers found that efficacy in terms of viral load decrease and T-cell increase was "comparable" between Sustiva and Viramune. "NN" stands for non-nucleoside, the class of HIV drugs Viramune and Sustiva belong to.

Overall, about 70 percent of the people on each drug got their viral load below 50 (undetectable, or below the level of detection). T-cell increases were around 170. Moreover, many of these people (all taking therapy for the first time) started with a viral load

greater than 100,000, and Viramune did just as well for them as did Sustiva.

The importance of 2NN is the strength of the science: it's a large study (1,216 participants). It was randomized (people were randomly put into the different arms of the study, which helps eliminate bias). Plus, it was a prospective study, which means that it was designed and then carried out. Several previous retrospective ("look-back") studies suggested that Sustiva was more effective than Viramune, but those studies are not as reliable as prospective clinical trials.

What else did 2NN show? Ironically, treatment failure was high—44% for Viramune twice daily and 38% for Sustiva. However, the study used a strict definition of failure (which is common in clinical trials): less than one log decline in viral load within three months; viral load failure after six months (two consecutive viral loads above 50); disease progression or change in therapy. One audience member thought that the two viral loads over 50 could "bias" the results, saying that, "In our experience, most people who go above 50 return to below 50."

Still, the rate of Grade 3 or 4 (serious) adverse events was high, more than 22 percent for every combination of drugs.

*continued on page 37*

Drug	Pros	Cons
Viramune	Less expensive Well-tolerated Prevents mother-to-infant transmission	Dangerous and potentially fatal Stevens-Johnson syndrome in a small number of patients (early recognition can prevent serious damage) Greater potential for liver damage, prevented by monitoring, especially among hepatitis co-infection Smaller studies to its credit
Sustiva	Once daily dosing Extensive long-term research making it a gold standard Has shown superiority to protease inhibitors in long-term studies	Psycho-neural side effects (and may be more problematic for people in recovery) Potential for birth defects (May require sequential pregnancy testing) May increase cholesterol levels

For several years now there has been debate and confusion over whether coronary heart disease is a real phenomenon for people with HIV. In the HIV community, heart attacks are most certainly on the rise at least anecdotally. Increased levels of cholesterol and triglycerides that result from treatment may or may not be contributing to heart disease. So the important questions are: do HIV drugs cause an

The other problem in discerning what is going on with heart disease is asking what to look for. Do you look for signs of heart disease, or actual disease, symptoms or risks? A long-term prospective matched study that is well controlled and looking for actual heart disease would be the most definitive. But that kind of study won't help anyone right now. Since heart disease takes many years to take hold, it's going to take a lot more

time. They can then analyze people who enter the study not on HAART and then start medications, and begin to sort out factors contributing to heart disease from HIV and its therapies versus the traditional risk factors such as smoking, age, sex and previous cardiovascular heart disease. Longer term prospective information will give important information in this large cohort.

Another sizeable cohort came from Johns Hopkins University. As with the Friis-Møller analysis, there were many confounding factors here. Bottom line is that incidence of heart disease is higher in this study than a matched population based survey used as a comparison. But comparing historic controls to a current database is not accurate and does not account for smoking, metabolic complications and HIV disease. With this cohort there is no indication if HIV therapy has anything to do with the slightly higher incidence of heart disease.

Two other studies were presented in the Complications of HIV session in Boston through prospective studies looking at carotid artery intima-medial thickness (IMT), a measurement of the thickness of the heart wall that is predictive of clinical cardiac disease. The AIDS Clinical Trials Group (ACTG) designed a prospective study without the confounding issues seen in the large cohorts above and was the first study looking at the relation of HIV therapies and HIV to heart disease. Forty-five "triads" consisting of one person with HIV on a protease inhibitor, one person with HIV not on a protease inhibitor, and one HIV uninfected individual (the control group) were compared at seven sites and analyzed at 96 weeks.

When the study was complete there was an increase in waist to hip measurement (one of several measurements of fat redistribution) and elevated triglycerides and total cholesterol in the people on protease inhibitors. However, there was no significant difference in the IMT between all three groups. Even though it takes decades to develop cardiovascular heart disease, this well matched controlled study is the right design to find out if the increased IMT translates into actual heart disease in people using protease inhibitors. It will just take longer

*continued on page 37*

## Heart Disease and HIV: The Ongoing Debate

by Matt Sharp

increase in heart complications, or are people with AIDS becoming more susceptible as they age while continuing to survive? Or is it both?

Several past HIV conferences have presented controversial studies disputing the actual incidence of heart disease in HIV. At the 10th Conference on Retroviruses and Opportunistic Infections in Boston in February there was an entire session devoted to heart disease. But the session generated much controversy and debate based on the conflicting reports. As in the past, each study seemed to contradict the others.

One conundrum in figuring out if there is a problem is just trying to count heart disease cases through different retrospective or "look back" studies of people with HIV. In order for the studies to be accurate you have to consider all the other factors that may influence heart disease such as age, smoking, previous heart disease, body weight, diabetes and hypertension, all symptoms that are very common in the general population. The best way to see if heart disease is actually happening as a result of HIV therapy, or long-term HIV disease is to design a study following similar matched groups of people, one group taking the drugs, the other not taking them and using a control group as a comparison.

time to see that anything is happening through a prospective study.

In the Boston conference, the D:A:D study, one very large retrospective analysis by Dr. Friis-Møller and colleagues, looked at 23,490 people in 11 cohorts (groups) on three continents. Data collected were risk of heart attack (specifically myocardial infarction or MI), incidence of MI, and HIV disease.

The investigators showed that HAART use (highly active antiretroviral therapy) was associated with a 27% relative increase in the rate of MI per year of exposure over the first seven years of data collection. Interestingly, they also saw that lipodystrophy was found to be protective against heart disease, but it was defined by subjective analysis, so that may not be accurate. Overall, despite those results, and the shortcomings of the study, the investigators concluded that the benefits of HAART outweigh concerns over cardiovascular disease. One of the researchers noted that the actual risk was small—there were only 129 MIs among the nearly 24,000 people, of which 36 were fatal.

There are significant questions about the analysis and measurements used in this study. There were limitations to collecting the information retrospectively, then conducting prospective follow-up. However, the researchers plan to follow the cohort over

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**N**ews from the 10th Conference on Retroviruses and Opportunistic Infections (CROI), the most important HIV medical conference held in the U.S., held this year in Boston in February. Visit [www.retro-conference.org](http://www.retro-conference.org) for more information.

#### **SUPER-SHEDDERS**

HIV in genital secretions might increase the risk of transmission. British researchers called some men “seminal super-shedders” because of the unusually high amount of virus found in their semen (actually, their “seminal plasma”).

They wrote that usually viral load in semen is found less frequently, and at lower levels, than in the blood. The study looked at the semen of men who were not on therapy and had a viral load greater than 400. The majority, 58% of the 73 men, had detectable virus in their semen, but not higher than that found in their blood. A third had a seminal viral load less than 400. (This doesn't mean the virus wasn't there—it might need to be measured differently, such as using tissue samples.)

This left 12% (nine men) who were super-shedders. Even though their blood viral load was not statistically different from that of the other shedders (the majority group), their semen viral load was significantly higher. Their T-cell counts and AIDS status were also the same as that of the other shedders.

The technology used to measure viral load throughout the body is not available in clinics. Therefore, people may be at greater risk of transmitting HIV without knowing it.

#### **VAGINAL SHEDDING**

U.S. researchers found that sub-clinical inflammation (no symptoms or disease) was associated with increased HIV shedding in the vagina, no matter what a woman's viral load was. As with men, this shedding may increase the risk of transmission. They said the finding helps explain transmission despite having a low viral load in the blood. Previously the researchers had found that low viral load in the blood was associated with low shedding in the vagina (and vice



## **The Super-shedders and other Retrovirus Tales**

*by Enid Vázquez*

versa), and that pro-inflammatory cytokines (a type of cell) associated with cervical ulcers increase shedding. The study looked at 60 vaginal samples.

#### **PROTECTION AGAINST HIV**

Researchers found that a virus discovered about 10 years ago may protect people with HIV against disease progression and death. GBV-C is closely related to hepatitis C virus. Researchers found that men co-infected with GBV-C had an 80% survival rate, while the guys who weren't had a 36% survival rate. However, the survival for the men who had been infected with GBV-C but had cleared the virus was only 16%. The study looked at stored blood samples over a 10-year period from 271 men in MACS (Multicenter AIDS Cohort Study).

Another group of researchers reported that GBV-C in the test tube almost completely suppresses HIV. The idea of infecting HIV-positive people with GBV-C to protect them is tantalizing, but can't be considered until the mechanisms and dangers are understood. The advantage of continuous infection was compared to having an extra 300 T-cells. GBV-C hasn't been found to cause any symptoms of disease, another reason why it's intriguing as a weapon for people with HIV.

#### **SIX MONTHS**

Researchers looked at data from 13 cohorts (groups of patients). Just getting T-cells above 25 after six months of therapy cut

the risk of death in half. Overall, where people are at six months after starting therapy was more closely related to survival than where they were when they started. Researchers concluded that, “It matters where you are, not where you came from!”

#### **EUROSIDA—SURVIVING**

Thanks to therapy, deaths related to HIV/AIDS were cut by 10% for each six-month period after September 1998. So was the development of AIDS itself. Doctors gathered the information from a European database of 8,551 patients. They found that even people with less than 20 T-cells had a significantly greater survival in the

HAART era (highly active antiretroviral therapy) than before it.

#### **MORE AIDS CASES**

AIDS cases went up one percent between 1999 and 2001, the first increase since 1993.

HIV infection also went up, by 8% for the 25 states that report HIV cases. HIV went up by 10% among heterosexuals and 14% among gay men. These numbers did not include states with large numbers of HIV-positive people, like New York and California.

Officials from the U.S. Centers for Disease Control and Prevention (CDC), who reported the findings, said that

- Approximately 1/3 of 900,000 people with HIV in the U.S. are unaware of their infection, increasing the risk of transmission.
- Medical providers should make rapid HIV testing more routine so that infections are found more quickly.
- More counseling is needed for people who know that they're positive.

CDC researchers also listed possible reasons for increased risk-taking. These include the sense that effective therapy is lowering fear of infection and lack of first-hand knowledge or memory of the “dark days” when people often died. ☒

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# Decisions, Decisions—Starting or switching anti-HIV therapy

by Steve McGuire



Although 18 approved medications are now available to treat HIV infection, the process of deciding how best to use them has become complex. Making decisions about whether or when to start HIV treatment—and which drug combinations will work best for you—presents complex challenges for both a person living with HIV and health care providers. Because there is now so much information to absorb and interpret, communication and an open mind will be the keys to a successful treatment regimen. A critical first step is to learn all that you can about the antiretroviral (ARV) drugs that are available today, and even about the ones that are likely to gain FDA approval in the near future.

Another important lesson to learn early on is that there is no cookie-cutter approach to selecting an ARV regimen. In other words, there is no right or wrong approach; you and your physician together need to select the treatment that will work best for you as an individual. Two key factors will help determine when to start therapy and which medications to use:

- Your physical health—meaning your viral load (VL), T-cell count, how you feel, and any conditions besides HIV
- Your willingness and ability to take all of your HIV medications according to the instructions provided by your doctor and pharmacist

Routine blood tests for your viral load and T-cell count can help determine how healthy your immune system is and when you should start or switch therapy. The T-cell count may be the most critical factor to consider in deciding when to start treatment, because it provides a strong indication of how much damage HIV has caused to the immune system.

*The HIV Treatment Series is sponsored in part by an unrestricted grant from Abbott Virology.*



Viral load plays a less critical role in deciding when to start treatment, but it can still provide vital information for some people who have not yet started treatment. For example, if your T-cell count is 250 and your viral load is over 100,000, your T-cell count could fall below 200 before it is measured again three to six months later. This is because the higher a person's viral load is, the faster the T-cell count is likely to decline. A high viral load could mean that the T-cell count will continue downward and should be playing a role in deciding whether to start treatment.

#### OFFICIAL GUIDELINES

Two major medical organizations regularly issue treatment guidelines that make general recommendations about when people living with HIV should start or switch anti-HIV therapy. One is the federal agency that is responsible for setting U.S. health-related policies, National Institutes of Health ([www.aidsinfo.nih.gov/guidelines/](http://www.aidsinfo.nih.gov/guidelines/)). The other is an association of leading professionals specializing in HIV research and treatment, the International AIDS Society–USA (IAS–USA, [www.iasusa.org/pub/index.html](http://www.iasusa.org/pub/index.html)).

The two sets of guidelines make somewhat different recommendations about when to start ARV therapy. However, both guidelines strongly urge therapy for people who have AIDS-related symptoms or a T-cell count between 200 and 350. Research indicates that individuals who begin ARV treatment after their T-cell counts have fallen below 200 may experience a less successful treatment course than those who begin when their T-cell counts are higher than 200.

#### WHAT ABOUT LOGS?

Log is short for “logarithm,” which is a mathematical term used to describe a change by a factor of 10 (that is, “times 10”) in the quantity of whatever is being measured. Put another way, logs are a shorthand way to express a very large number. A log is the number of times 10 must be multiplied by itself to equal a certain number.

In relation to HIV, logs are sometimes used to state a patient's total viral load. For example, a viral load of 100,000 is log5 because it equals to  $10 \times 10 \times 10 \times 10 \times 10$ .

Most people with HIV, however, have read or heard “log” used as the way to state how much their viral load has gone up or down. For example, if the baseline viral load is 20,000 copies/ml plasma, then a 1-log increase equals a 10-fold (10 times) increase, or 200,000 copies/ml. A 2-log increase equals 2,000,000 copies/mL plasma, or a 100-fold increase. As another example, a reduction in viral load from 100,000 to 1,000 copies/ml is a 2-log (or 99 percent) reduction. However, a half-log (0.5 log) change is not a five-fold difference, but a change of 3.16-fold.

A matter that is still controversial is whether to start ARV therapy “early,” which currently is considered to be having a T-cell count higher than 350. Some experts prefer to start therapy early, before the T-cell count shows that the immune system has been seriously compromised. Others believe that starting therapy early will not produce better results and that therapy should wait until the T-cell count has fallen below 350, though not below 200.

#### GETTING STARTED

Once you and your doctor have decided that it is time to start therapy, you'll need to make equally difficult decisions about what combination of medications will work best for you. Both the IAS–USA and the federal guidelines agree that, whatever initial ARV regimen you decide on, therapy should aim to decrease viral load to the lowest level possible—that is, undetectable as determined by viral load testing—for as long as possible. This means that you should select the strongest ARV drug combination that suits your clinical condition and lifestyle needs.

Besides T-cell count and VL, certain non-HIV issues play important roles in determining an ARV regimen that will be effective and that you can adhere to over the long haul. Be sure to discuss with your health care provider:

- Any dietary restrictions
- Limitations related to your daily routine (work, school, children, and so on)
- Your support system of family and friends
- Other medications you need to take
- Financial barriers

An ARV drug regimen should consist of at least three drugs, usually from at least two of the four different classes of ARV drugs:

- Protease inhibitors (PIs)
- Nucleoside/nucleotide reverse transcriptase inhibitors (NRTIs)
- Non-nucleoside reverse transcriptase inhibitors (NNRTIs)
- Fusion inhibitors

Above all, it is important that you understand exactly how and when you should take the combination of drugs you select. Here are some key questions that you should clarify with your physician:

- Should you take your pills with food or on an empty stomach?
- How many times a day should you take each drug?
- What should you do if you miss a dose?

- What should you do if you don't feel well when starting therapy?

Make sure you know the answers to these questions before starting your regimen. Fortunately, ARV regimens do not have to be difficult to take. For example, some HIV drugs need to be taken only once a day, and at least one combination involves taking just three pills, once a day (Viread, Videx-EC, and Sustiva).

#### WHAT TO EXPECT AFTER STARTING TREATMENT

After a person begins anti-HIV therapy, his or her viral load (VL) should drop dramatically. After two weeks of treatment, VL typically drops at least 90%. For example, a starting VL of 100,000 should drop to 10,000 or less within two weeks. (By the eighth week, the viral load should have dropped even more, with the goal being to go below the level of the viral load test's ability to detect any viral particles. That is, the VL should become undetectable.) For someone with a very high viral load, up to 16 weeks may pass before the VL becomes undetectable. Many physicians still use the VL test in which undetectable means fewer than 400 copies of HIV. However, more and more doctors prefer to use the ultrasensitive tests that can detect as few as 50, or even 20, copies. In many, if not most, cases, the T-cell count will likely increase by 100–200 cells during the first 12 to 18 months of treatment.

To make sure your VL remains undetectable, you will need to visit your doctor's office every three to six months to have it checked. An increase in VL during ARV treatment could mean that drug resistance has developed. You should also be sure that your doctor's lab always uses the same type of VL test. This is because there are two different types of test, and test results from the different types should not be compared directly. Even when the same type of test is used regularly, you and your doctor need to interpret any changes in VL. The VL needs to change by at least a factor of three (3 times) before the change is considered meaningful. For example, an increase from 10,000 to 25,000 copies may be due only to the sensitivity of the test and may not reflect an actual change in viral load. A T-cell count should also be performed at the same time as the VL test.

Even if you are not due to have another set of lab tests done, do not hesitate to discuss with your provider any problems that you are having with your ARV regimen. If you find that you have trouble taking every dose on time or are experiencing side effects, you and your doctor may be able to find a different combination that is easier to take or has fewer side effects. Doing this sooner rather than later is crucial. Having a regimen that you can adhere to for the long run will help the treatment work best. Strict adherence to your treatment regimen will mean that resistance will take a longer time to develop and you won't have to consider new treatment regimens so soon.

#### WHEN A REGIMEN FAILS

In spite of best efforts to adhere to an HIV treatment regimen, nearly everyone with HIV will at some point need to switch to a different regimen. This can happen for several reasons:

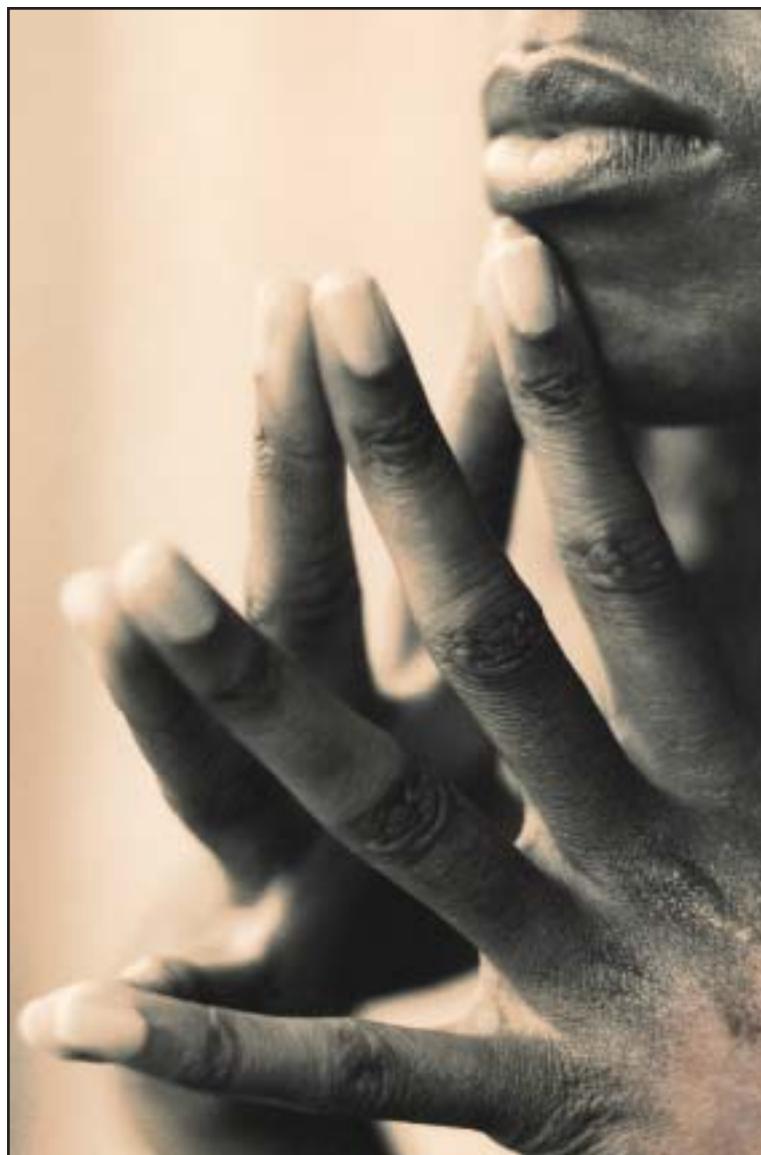
- Viral load begins to climb

- The T-cell count consistently declines

- HIV-related illness occurs

- Side effects worsen

Occurrence of any of these developments is called "treatment failure," which is a more harsh-sounding term than it really is. Treatment failure basically means that the anti-HIV drugs you are currently taking are no longer doing what they should. The key tool for determining whether treatment failure has occurred is a VL test to check for the amount of virus in your blood. If your viral load does not decrease significantly and stay down while you are using highly active antiretroviral therapy (HAART), your T-cell count



could decrease and you could be at risk for symptoms of HIV disease progression.

If any of the following occurs, your ARV treatment may not be working the way it should:

- If your viral load does not decrease by 90% within eight weeks after starting therapy.
- If your viral load does not become undetectable within 16 weeks after starting HAART.
- If a VL that had been undetectable becomes detectable, the test should be done again. This is to be sure that the increase was not due to an error or is not just a temporary blip. If the second test confirms the results of the first, you should discuss with your doctor whether you need to consider switching therapies.
- If your viral load increases significantly, most specialists would recommend a change in treatment. This is because a VL that is

increasing while you stick with the same regimen can mean that your HIV is becoming increasingly resistant.

- If your T-cell count drops significantly or if it drops continuously, your ARV therapy may not be working well enough.

HIV can stop responding to HAART for a number of reasons, but the good news is that you and your health care provider can control some of these:

- For some people with high viral loads before starting therapy—for example, more than 1 million copies—VL may not become undetectable using a three-drug combination. Some specialists prescribe four or more drugs to control very high viral loads.
- Poor drug absorption can also lead to treatment failure. Absorption refers to the amount of drug that is absorbed into the bloodstream after being swallowed or injected. Regular vomiting or diarrhea due to ARV medications or other reasons may affect the amount of drug that remains in the system to get absorbed. Not following dietary requirements carefully can also affect the amount of drug that is absorbed by the body. Some drugs must be taken either on an empty stomach or with food. Be sure to ask your doctor to explain any food or liquid restrictions required for each drug in your regimen—and discuss any nausea, vomiting, or diarrhea you are experiencing.
- Drug-drug interactions can affect the levels of drug in the body. This can prevent the drug from working well enough or can cause adverse reaction. Drug interactions can occur from ARV drugs in combination with other medications you may be taking—such as, painkillers, antifungal drugs, birth-control pills, or antibiotics. Tell your doctor about all medications you are taking—both prescription and over-the-counter—before starting ARV therapy, and from then on.
- Not adhering exactly to the directions for taking each drug in your regimen can be a major cause of the ineffectiveness of ARV drugs. However, this is one problem over which you can have a lot of control. If you are missing doses of your anti-HIV drugs or do not clearly understand how you need to take them, discuss this with your doctor immediately.
- Drug resistance—which refers to the tiny changes, or mutations, in HIV’s genetic structure that can make the virus less sensitive to ARV drugs—is one of the most common and serious reasons for treatment failure. Some of the things that can contribute to the development of drug resistance include the factors listed above, so understanding what resistance is and how it can be avoided is important.

## UNDERSTANDING RESISTANCE TESTS

### GENOTYPE TESTS

If highly active antiretroviral therapy (HAART) is no longer working well for a patient, genotypic resistance testing helps medical providers make decisions about switching to a different therapy. It does this by identifying which drug or drugs in a HAART cocktail the patient’s HIV has become resistant to. Genotype tests look for specific changes, called mutations, in the genetic code of an individual’s HIV that are known to be associated with resistance to particular antiretroviral drugs. A genotype test will determine the genetic code of a person’s HIV by examining a sample of the virus from the patient’s blood to identify any mutations in the virus. HIV that does not have any mutations is called wild type virus, which is the most common form of HIV. This usually means that antiretroviral drugs can still work against the virus.

### PHENOTYPE TESTS

Phenotype tests aim to see how an individual patient’s HIV actually responds when it is exposed to specific antiretroviral medications. Technicians grow a sample of a patient’s HIV in the lab and then expose the virus to different antiretroviral medications. The phenotype test will determine if the virus grows slower or faster when each drug is present. If the HIV sample grows faster, the virus is more “resistant” to that drug. If the sample of virus grows slower, the virus is considered “susceptible” to the medication. This means the medicine will still work for that patient.

## DEALING WITH SIDE EFFECTS

If you started HAART recently and are experiencing a major side effect, like serious or persistent diarrhea, feel free to talk with your doctor about switching the drug that is causing the problem for one that offers the same strength but with fewer or more tolerable side effects. Your health care provider may also suggest things you can do to help control problems like diarrhea, without having to switch to a different HIV medication.

Of course, people who have been taking HAART for some time and have an undetectable viral load can also experience serious side effects. Perhaps the best-known example of this is lipodystrophy, which many researchers believe is due at least in part to ARV therapy. Lipodystrophy refers to body-shape changes and increased levels of fats (triglycerides and cholesterol) and sugar in the blood.

Furthermore, high cholesterol or triglycerides in an HIV-positive person can be treated according to the guidelines for the general population published by the National Cholesterol Education Project ([www.nhlbi.nih.gov/about/ncep/index.htm](http://www.nhlbi.nih.gov/about/ncep/index.htm)). Be sure to discuss with your doctor any changes in body shape that you feel you are experiencing—and make sure to have a regular blood lipid screening performed.

## DEALING WITH RESISTANCE PROBLEMS

The primary reason that HIV becomes resistant is the mistakes that the virus makes as it replicates. Because HIV replicates very rapidly, it makes many mistakes, leading to mutations in the virus's genetic code. These mutations then cause anti-HIV medications to work less and less well. Therefore, holding down replication is the key to limiting the development of resistance.

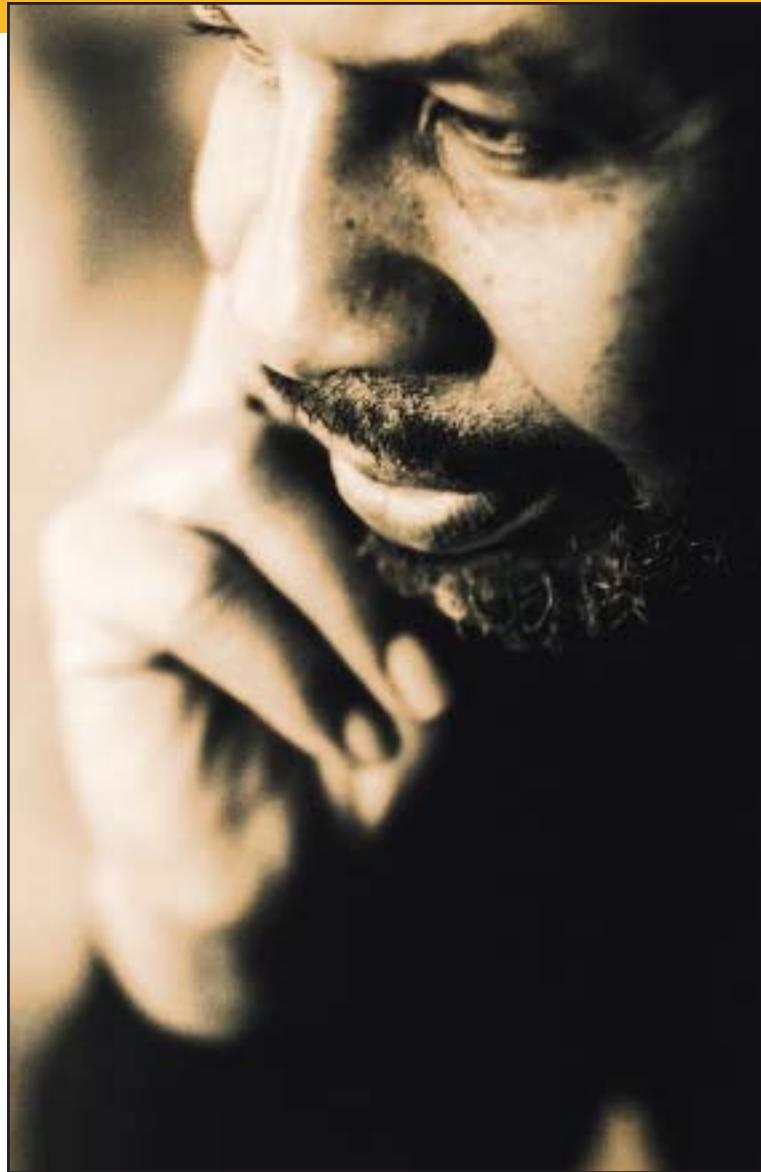
A number of HIV mutations caused by treatment with one drug can cause your HIV to become resistant to other drugs in the same class as the one that led to that particular mutation. This is called cross-resistance, and it poses one of the biggest hurdles in switching ARV regimens. Cross-resistance is most difficult among PIs and NNRTIs. For example, if your HIV has become resistant to Sustiva (efavirenz), it is likely also fairly resistant to Viramune (nevirapine).

## RESISTANCE TESTS

Both the federal and IAS-USA guidelines support the use of drug-resistance testing in these situations:

- When viral load becomes detectable (to more than 1,000 copies) while on ARV therapy
- When VL fails to become undetectable within about 16 weeks of starting a new ARV regimen

Not all insurance companies, Medicaid programs, and other third-party payers cover the high costs of resistance tests. This may eventually change, because both guidelines now officially recommend using them. If your viral load is increasing while on therapy, ask your doctor about having an HIV drug-resistance test. If your doctor can prove that it is medically necessary, your third-party payer may agree to cover the cost.



## DECIDING WHAT TO SWITCH TO

Like figuring out when to start therapy and what drugs to start with, deciding when to switch therapies and what drugs to switch to is a complex process. The choices of ARV regimens available to you will depend on which drugs you are now taking and those you have used in the past. This is because of the resistance patterns that your HIV might have developed to either specific drugs or whole classes of drugs.

You and your physician should consider the following federal guidelines when selecting a different treatment regimen:

- If your viral load becomes detectable while taking your current ARV drug regimen, you should have a second VL test to confirm the results. A VL can show a one-time blip that will disappear with a second test.
- In most cases, just switching one drug or just adding one drug to a failing regimen is not advisable. The best approach is to use at least two new drugs or, preferably, an entirely new com-

bination. If a drug-resistance test shows that your HIV is resistant to only one drug in your regimen, it may be possible to replace only that drug.

- Among the PIs, avoid switching from Norvir (ritonavir) to Crixivan (indinavir) or vice versa, as high-level cross-resistance is likely.
- Among the NNRTIs, switching from one NNRTI (like Sustiva) to another (like Viramune) to control viral load is not likely to work because of cross-resistance between the two.

### SALVAGE TREATMENT

People who have extensive treatment experience—meaning they have used most of the approved HIV medications—have special problems in switching ARV regimens. Treatment strategies for such individuals are often referred to as salvage therapy.

One possible approach is to “recycle” drugs that you have used in previous ARV regimens. Drugs that you stopped using for reasons other than development of resistance (due, for example, to side effects) may be the best candidates for recycling. Recycling drugs to which you are resistant is much less likely to help. Before doing so, discuss with your doctor the possibility of performing an appropriate resistance test to see if you may be able to recycle any of the drugs you have used before. If you and your doctor agree on a combination of drugs to which your HIV has only low-level resistance, this type of salvage treatment may be able to reduce your VL to a low level again.

Another option is “mega-HAART,” a strategy that uses a combination of up to nine anti-HIV drugs. The idea behind this approach is that, no matter how many drugs and drug combinations a person has taken, the virus in his or her body is not likely to be resistant to all of the drugs in such a complex regimen. Of course, adherence and side effects will pose serious difficulties with this strategy.

### TREATMENT INTENSIFICATION

Treatment intensification is another form of salvage therapy. Intensification means adding one or two additional drugs to an existing regimen. It does not mean increasing the dose of any of the drugs in your regimen. This might be an option for people who are unable to achieve an undetectable viral load within four to six months after starting therapy. Intensification may also work for someone who has been on HAART with an undetectable VL, but whose VL has recently become detectable again.

To intensify a regimen, your doctor can prescribe a fourth anti-HIV drug, often the protease inhibitor Norvir (ritonavir). Although ritonavir can have undesirable interactions with a number of other medications, it can also raise the blood levels of other PIs and some NNRTIs. These increased levels can help put additional pressure on the virus, with the goal of reducing it to an undetectable level.

### CONTINUING WITH A “FAILING” REGIMEN

Sometimes people on HAART may experience a VL that becomes detectable, while their T-cell counts remain relatively high

or even increase. If you are in this situation, your provider may recommend continuing on your current regimen, particularly if you have already used most of the available anti-HIV drugs. This strategy may be most appropriate for those with a high T-cell count and no symptoms of HIV progression. Other specialists feel that continuing on a failing regimen, with an increasing viral load, could cause your HIV to become even more resistant to other drugs, even ones that have not yet been approved.

### NEW DEVELOPMENTS

Some newly approved HIV medications and others that are expected to be approved this year should offer improved treatment choices for many HIV-positive people, both those deciding when to start therapy and those needing to switch ARV regimens:

- **Zerit XR:** This once-a-day extended-release formulation of Zerit received FDA approval early this year.
- **Fuzeon:** This first drug in the new class of ARV treatments known as fusion inhibitors was approved by the FDA in early March.
- **Atazanavir:** By the middle of 2003, most observers expect this protease inhibitor to be approved. One expected advantage is that atazanavir does not cause adverse effects in blood lipids.
- **fos-Amprenavir (908):** A reformulated version of this protease inhibitor will likely receive approval later this year. (see “A Different Class” on page 14)

### HELPING TO CHART YOUR TREATMENT COURSE

HIV treatment will probably never become a truly simple matter. However, you can take a number of measures to help direct the course and success of your HIV treatment:

- Learn as much as you can about current and future HIV treatments and how they work.
- Communicate openly and regularly with all your health care providers and your personal support network.
- Do all that you can to adhere strictly to the requirements of your anti-HIV treatment regimen.

In the foreseeable future, drugs that are simpler to take and drugs that do not have the same resistance patterns as the current ones will become available. Doing all that you can today will leave you in a stronger position to benefit from these upcoming developments. ☞

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## Heart Disease and HIV: The Ongoing Debate *continued*

*continued from page 24*

than 96 weeks to see if something shows up. The study is continuing.

A San Francisco study looked at IMT in 106 patients on HIV therapy. At one year the study showed a small increase in IMT matched to previous general population studies. In contrast to the ACTG study mentioned above, the investigators concluded that HIV and its therapy in addition to traditional risk factors may contribute to the development of heart disease. The differences between the outcome of these two studies may be because of the location of the measurement of heart wall thickness. Also, there was no control group to use as a com-

parison in this study. Again, more time and the addition of a control group would help support the findings of this study. This information would seem to be common sense and leads to the preventative message that anyone on a protease inhibitor should not smoke if they want to help prevent any heart disease.

So, one can see through these reported studies the complexity and confusion over just what exactly is happening with heart disease in HIV. It has become a major area of AIDS research due to the concern over the life-threatening implications of heart disease and the growing concern about drug toxic-

ty. Certainly, heart disease is much more life threatening than body fat redistribution. But we still don't know if the two complications are related.

Clearly, there is a great need for better analysis, controlled comparative studies, and a look at all the confounding risk factors in long-term prospective studies if we are going to find any true answers and stop all the wondering. But the conflicting results in these studies may just be what it takes to persuade researchers into designing the best, most appropriate studies to give us an answer. Meanwhile, we wait in hope and anticipation. ☒

## Does Viramune = Sustiva? *continued*

*continued from page 23*

However, the discontinuation rate for toxicity was the same for both drugs.

The only significant difference in the rate of side effects was a higher incidence of liver-associated laboratory abnormalities for Viramune, especially in the once-daily dose (13.2%). (Once-daily Viramune has not been approved by the U.S. Food and Drug Administration, or FDA.) But clinical hepatitis did not differ among the meds.

However, there were two deaths attributed to Viramune, both in residents of poor countries. One was related to Stevens-Johnson syndrome and the other to liver toxicity. A third death occurred due to Zerit. Each drug combination was given with Zerit and Efavirenz, which could be changed due to toxicity. Viramune was given at its FDA-approved dose of 200 mg (one tablet) twice a day, or the unapproved 400 mg once a day. Sustiva was probably given as three capsules once a day. (Today it is FDA-approved as one 600 mg tablet once a day.) A fourth combination, using Sustiva and Viramune along with Zerit and Efavirenz, had the highest rate of toxicity, and the researchers recommended that people not take the two non-nukes together.

Choosing between Viramune and Sustiva may have to do with side-effects and toxicity concerns. A person with a history of mental illness or illicit drug use may experience higher rates of psychiatric side effects from Sustiva. These include vivid dreams and sleep disturbances, and even flashbacks. Sustiva can also raise cholesterol and triglycerides more than Viramune, though protease inhibitors tend to have a greater effect on lipids than either Sustiva or Viramune.

Women may be between a rock and a hard place. They're more prone to serious rashes and liver toxicity with Viramune, both of which can be life threatening. On the other hand, Sustiva cannot be taken by someone who's hoping to become pregnant. It may cause birth defects.

The data from the 2NN trial are reassuring for people who may need to switch from one NNRTI to the other because of toxicity or side effects. There is previous evidence that this strategy works well. And finally, Viramune is cheaper by about \$100 less a month. This might cause government medical assistance programs, such as ADAP (AIDS Drug Assistance Program), that are low on funds to push for Viramune prescriptions over Sustiva.

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# If You Want It Done Right: Learning Women's Health

by Laura Jones

**Y**ou've heard people say it: If you want it done right, sometimes you have to do it yourself. And these days, it's especially true for women and girls who are looking for information about sexual health. Most of us grow up feeling like sex is something we're not supposed to talk about, or maybe the adults in our lives didn't know the answers to our questions or were simply too uncomfortable to talk with us. Whatever the reason, very few women are lucky enough to reach adulthood with a full understanding of how our bodies work, how to explore what we want out of sex, and how to talk with a partner about what we want and don't want. Too many of us also grow up feeling like our bodies are shameful, or that our sexuality belongs to other people to use as they see fit. All these messages can make it hard for us to choose when we will and will not be sexual, and how we will protect ourselves when we are having sex.

## WELL, DON'T BE AFRAID

Knowledge is your right! Don't be afraid to look for answers to the questions you have about your body, your sexuality, and your health. There are many people, books, and websites available to assist you—all you have to do is find them.

## SEEK IT OUT!

Nowadays, you can find a lot of resources right in a neighborhood bookstore, or through an online book resource like [Powells.com](http://Powells.com). If you can't afford to buy the books you want, write down their titles and authors and see if they're available at your local library. And there's lots of good information on the Internet, too—if you know where to look. We've got a list of books and websites at the end of this article to help get you started, but you'll find many more!

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## GENERAL WOMEN'S HEALTH

Comprehensive women's health manuals and books that offer medically-accurate, down-to-earth information on a wide range of topics: physical/emotional/sexual health, body image, personal values and decision-making, relationships, anatomy, birth control, pregnancy, menopause, etc.

**Our Bodies, Ourselves for the New Century**—Boston Women's Health Collective (also available in Spanish)

**A New View of a Woman's Body**—The Federation of Feminist Women's Health Centers

**Body and Soul: The Black Women's Guide to Physical Health and Emotional Well-Being**—Linda Villarosa/The National Black Women's Health Project

**Black Women's Health Book**—Evelyn C. White

**Salud: A Latina's Guide to Total Health**—Jane L. Delgado (also available in Spanish)

**The Lesbian Health Guide**—Regan McClure/Anne Vespry

**Good For You: A Handbook on Lesbian Health and Well-Being**—Tamsin Wilton

**The New Ourselves, Growing Older: Women Aging with Knowledge and Power**—Paula B. Doress-Worters/Diana Laskin Siegal

**Cunt: A Declaration of Independence**—Inga Muscio

**Fat?So!: Because You Don't Have to Apologize for Your Size**—Marilyn Watt

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## SEXUALITY AND SEXUAL HEALTH

More specific information about sexuality and having sex: feelings about sex and our bodies, decision-making, safer sex, sex with yourself (masturbation), sex with partners, and much more!

**What Your Mother Never Told You About S-E-X**—Hilda Hutcherson, M.D.

**Sex Smart: How Your Childhood Shaped Your Sex Life and What to Do About It**—Aline P. Zoldbrod, Ph.D.

**The New Good Vibrations Guide to Sex**—Cathy Winks/Anne Semans

**The Mother's Guide to Sex**—Cathy Winks/Anne Semans

**The Whole Lesbian Sex Book**—Felice Newman

**Stolen Women: Reclaiming Our Sexuality, Taking Back Our Lives**—Gail Elizabeth Wyatt

**Sex Over 50**—Joel Block, PhD/ Susan Crain Bakos

**Still Doing It: Men and Women Over 60 Write About Their Sexuality**—Joani Blank

**Playbook for Women About Sex**—Joani Blank

**Sex For One: The Joys of Self-Loving**—Betty Dodson

**Big, Big Love: A Sourcebook on Sex for People of Size and Those Who Love Them**—Hanne Blank

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## SEXUAL HEALTH BOOKS FOR GIRLS, ADOLESCENTS, AND CHILDREN

One of the greatest gifts you can offer the young people in your life is solid, medically accurate sexual health information. Knowledge is Power!

**Real Girl, Real World**—Heather Gray/Samantha Phillips

**Deal With It! A Whole New Approach to Your Body, Brain, and Life as a Gurl**—Esther Drill/Heather McDonald/Rebecca Odes

**The What's Happening to My Body? Book for Girls**—Lynn Madaras

**The Period Book: Everything You Don't Want to Ask But Need to Know**—Karen and Jennifer Gravelle

**La Menstruación**—J. Gardner/B. Lopez

**Changing Bodies, Changing Lives**—Ruth Bell

## LEARN TOGETHER!

Sometimes it's easier to learn this stuff with a group of women than all on your own. If you're already part of a women's group (like church, school, or HIV support group), you can suggest your group spend some time studying up on women's health and sexuality issues (maybe pooling money to buy books the whole group can share). If that's not an option, you can grab your closest girlfriends and female family members and form a special group of your own. If you don't like groups, you might want to find a Study Buddy—just having another person to learn with can sometimes make it all more fun.

## BUILD IT UP!

As you learn, share your knowledge! Talk with other women in your life, especially young women. Lend your books and articles (be careful! You may not get them back!), or build up your own Resource List to hand out in your community. If you're really ambitious, you can form a Speaker's Group to give presentations, start a neighborhood Women's Health Project, or build a website with your own writing—the possibilities are endless!

## DON'T FORGET YOUR YOUNG PEOPLE!

In many families, adults believe that keeping sexual health knowledge from children preserves their "innocence," keeps them

from becoming sexually active, or even protects them from being sexually harassed or assaulted. But ignorance doesn't protect our youth—in fact, it can even make them more vulnerable to scary misinformation, peer pressure, or sexual violence. Talking straight with young people and providing them with medically accurate information helps empower them and keep them safe, from childhood on up through adulthood.

So share your information and resources with young people, and help them do their own research and develop their own resources. Read books and websites with them, and answer their questions honestly as they come up (remember: "I don't know" is an acceptable answer. Kids will respect you for being honest, and you can find the answers together). Give them privacy to learn on their own, too. And if you don't feel comfortable talking with the children in your life, find other knowledgeable people who are—family, community people, youth workers—and give them permission to talk with your child(ren). Use them as a resource for yourself as well. We never know all there is to know, so there's no shame in learning.

You have the power! We all have questions about our bodies and about sexuality, and we all deserve real answers and information we can use to keep us healthy and safe. So go to it! Do it yourself, and it may just get done right! ☘

**The What's Happening to My Body? Book for Boys**—Lynn Madaras  
**It's Perfectly Normal**—Robie H. Harris

**More Speaking of Sex: What Your Children Need to Know and When They Need to Know It**—Joani Blank

**A Kid's First Book About Sex**—Joani Blank

**Your Body Belongs To You**—Cornelia Spelman

## RECOVERY AFTER SEXUAL, PHYSICAL, AND/OR EMOTIONAL VIOLENCE

Too many of us live with the fallout from emotional, physical, and sexual violence. We deserve a happy sex life and healthy relationships. These books can be helpful in our healing and our efforts to reclaim our bodies, minds, and a sense of safety.

**The Survivor's Guide to Sex**—Staci Haines

**The Sexual Healing Journey**—Wendy Maltz

**The Courage to Heal**—Ellen Bass/Laura Davis

**Crossing the Boundary: Black Women Survive Incest**—Melba Wilson

**Trauma and Recovery**—Judith L. Herman

**I Can't Get Over It: A Handbook for Trauma Survivors**—Aphrodite Matsakis

**Trust After Trauma: A Guide to Relationships for Survivors and Those Who Love Them**—Aphrodite Matsakis

## WEBSITES

These Internet sites are among the most reliable ones I've found for sexual health and other women's health information... you may not agree with all the opinions expressed, but you can feel confident that you're getting medically accurate information. Some sites may be restricted to viewers over age 18, and sites may also be blocked by fil-

ters in schools, libraries, or home computers with "parental screening" devices in place. Hunt around for an accessible computer (and some privacy) if you're having trouble loading them. Enjoy!

*Women's Health Information Page*—

<http://www.fwhc.org/health/health.htm>

*Web by Women for Women*—

[www.io.com/~wwwomen/sexuality/index.html](http://www.io.com/~wwwomen/sexuality/index.html)

*Coalition for Positive Sexuality*—[www.positive.org](http://www.positive.org)

*Scarleteen: Sex Education for the Real World*—[www.scarleteen.com](http://www.scarleteen.com)

*Sexuality Information and Education Council of the United States (SEICUS)*—[www.seicus.org](http://www.seicus.org)

*Society for Human Sexuality: Sexuality.org*—[www.sexuality.org](http://www.sexuality.org)

*Good Vibrations Online Shop*—[www.goodvibes.com](http://www.goodvibes.com)

*BABES Network: A Sisterhood of Women Facing HIV Together*—[www.babesnetwork.org](http://www.babesnetwork.org)

*Dentata: an online 'zine*—[www.geocities.com/dentatamag/introduction.html](http://www.geocities.com/dentatamag/introduction.html)

*Women Alive*—[www.women-alive.org](http://www.women-alive.org)

*WORLD (Women Organized to Respond to Life-threatening Diseases)*—[www.womenhiv.org](http://www.womenhiv.org)

*Wise Words: Project Wise Homepage*—

[www.projinf.org/pub/ww\\_index.html](http://www.projinf.org/pub/ww_index.html)

*GLBT Health WebPages*—

[www.metrokc.gov/health/glbtlbwomen.htm](http://www.metrokc.gov/health/glbtlbwomen.htm)

*Features at The Body: Women and HIV*—[www.thebody.com/features/women/](http://www.thebody.com/features/women/)

\* If you have copies of good books, donate them to a local Prison Book Project! Try this website: *Prison Book Project*—<http://prison-books.org/index.php> or look for a Project in your own city/state!

## Anatomy of a Study: Trizivir vs. Sustiva

by Daniel S. Berger, MD

Results of important studies often become available when they are presented at national and international conferences, this being well before publication in a medical journal. Sometimes, however, the study can be terminated with results of safety issues unveiled even earlier. In other words, the study design can be changed or terminated when there is a significant disparity in treatment for a particular study arm; those study subjects may be taking a significantly inferior treatment or one in which a significant toxicity is more common. In this situation a letter is generally sent to all the investigators of a study.

This is the case in a study comparing Trizivir and Sustiva. In this instance a communication was mailed to all HIV practitioners; investigators studying Trizivir vs. Sustiva (efavirenz) felt there to be a significant difference in effectiveness of one treatment arm and one inferior arm was terminated. Let's dissect the information to investigate the possibility of any existing drama in ACTG A5095 (AIDS Clinical Trials Group).

### BACKGROUND

Basically, this study compares Trizivir against two Sustiva-based regimens. However, we have already known the following facts regarding these two agents, since they have been in use for quite some time and are considered very basic knowledge by most savvy HIV specialists.

- 1) Using a Sustiva-based regimen with two other drugs affects the virus from two vantage points with two drug

classes (non-nucleosides + nucleoside background), as opposed to a single regimen comprised of Trizivir, of which all three components are of the same nucleoside class of drugs.

- 2) Sustiva is a very potent agent and its effect has been compared to potent single (non-boosted) protease inhibitors.
- 3) Durability of the effect of Sustiva-based regimens are quite long, thus failure rates are comparatively low.
- 4) Trizivir offers the benefit of having three drugs combined into one pill; thus offering the patient simplified administration, thought to improve adherence.
- 5) Patients with very advanced disease should initially be started on a more potent regimen than Trizivir alone, since they are more at risk for treatment failure.
- 6) Trizivir can be used as a component of other regimens; it easily adds potency without unduly increasing the pill burden.

### DETAILS AND RESULTS OF ACTG A5095

All study participants of ACTG A5095 were naïve to antiviral medications (having no experience on any antiviral meds previ-

ously); their antiviral treatment arm was chosen at random in a double blinded manner (neither physician nor patient would know which regimen the patient was taking). There was not a CD4 count criteria for entrance into this trial. The study participants were to receive either

- Trizivir + Sustiva placebo (sugar pill),
- or Combivir + Sustiva (efavirenz),
- or Trizivir + Sustiva

Trizivir consists of Retrovir (AZT), Efavirenz (3TC) and Ziagen (abacavir). Combivir consists of Retrovir and Efavirenz.

1,147 patients were followed for an average of 32 weeks. The mean (average) CD4 T-cell count at baseline (start of study) was 238 cells and HIV RNA was 78,825. However, 43% of study patients had viral loads greater than 100,000 copies vs. 57% had HIV RNA below 100,000 at start of study.

Since the National Institutes of Health sponsors and funds all ACTG studies, they sent a letter to physicians informing them of the interim results. They reported that 21% of the patients on Trizivir only had been considered virologic failures vs. 10% in the other two groups (both Sustiva arms) combined. It is worthy to note that this study considers and deems virologic failures for viral loads greater than 200 copies at least four months after starting treatment.

With these results in hand, an independent panel, the Data Safety Monitoring Board (DSMB), recommended stopping the Trizivir arm and is providing the volunteers with the option of an alternative regimen,

whether they were failing (viral loads above 200 copies) or still at undetectable levels. It is common to have an independent panel of experts review studies during the ongoing trial, they would intercede for the benefit of the patients. Additionally, the remaining patients of the two other treatment arms who were administered Sustiva were told they were taking Sustiva but still blinded as to which nucleosides were their background treatment.

According to sources familiar with this study, 74% of patients randomized to Trizivir arm and 89% of the pooled Sustiva arms still maintained viral loads undetectable at an average at week 48 (Intent-to-Treat analysis). Approximately 50% of patients had CD4 counts less than 200 and the median CD4 count was 214 cells in this study. In fact, 17% of patients randomized to the Trizivir arm and 20% in the pooled Sustiva arms had CD4 counts between 0-50 cells.

#### ISSUES REGARDING ADVANCED DISEASE PATIENTS

One should understand that all patients in this study had an equal chance of being randomized to any of the three regimens, even when knowing that patients who had either very low CD4 count or very high viral loads before treatment, or at baseline, have an increased risk of virologic failure. Moreover, there have been several studies demonstrating that patients with viral loads greater than 100,000 would be better off with

a quadruple regimen (two protease inhibitors, for example) or one that contains Sustiva.

Particularly, another study, DMP-006, was completed several years ago and ran for more than three years. It was historically important because of several significant findings and it led to the quick approval of Sustiva by the FDA. Here patients were randomized to either Sustiva or Crixivan, each with Combivir (vs. Crixivan + Sustiva alone). Sustiva was shown to be superior over Crixivan, and a sub-analysis in this trial demonstrated patients with CD4 count below 100 or high viral RNA at baseline were also successfully treated with Sustiva.

Moreover, other studies showed the benefit of administering dual protease inhibitor regimens in these immune-suppressed patients as being more advantageous for durability (longer time to treatment failure), than a triple therapy regimen. With this in mind, many physicians do not offer a simplified regimen of Trizivir for the patient considered very advanced or in a late stage of disease.

One wonders the rationale for designing a study that potentially places the immune-devastated patient on Trizivir alone. Alternatively, the results of a Sustiva-based treatment (not to mention a quadruple therapy arm containing Sustiva) in this advanced disease population beating out Trizivir was not a revelation nor a shock to us.

#### A BRIEF SUMMARY DISCUSSION

The results of this trial should not be overlooked. One does not criticize this ACTG study with its strict study design as being double-blinded and placebo controlled. However, one notes that placing patients in a blinded study, in which Trizivir randomized patients are instructed to take their Sustiva placebo on an empty stomach unfairly abolishes the real life advantage of one Trizivir pill twice daily, *with or without food*. Also, uncertainty does exist regarding the use of certain three- and four-drug combinations utilizing specific drug classes, which may be one of the questions that the ACTG intended to answer with this trial. However, from a clinician's experience, some things remain as clear as before this study: Trizivir does have its place in the HIV treatment armamentarium. Sustiva-based regimens are very powerful. Also, for the advanced disease patient, more potent regimens need to be considered so that those individuals have a better chance of success with their first regimen. ☩

*Daniel S. Berger, MD, is Medical Director of Chicago's largest private HIV treatment and research center, NorthStar Healthcare, and Clinical Assistant Professor of Medicine at the University of Illinois at Chicago and editor of AIDSInfoSource (www.aidsinforesource.com). He also serves as medical consultant and columnist for Positively Aware. Dr. Berger can be reached at DSBergerMD@aol.com or (773) 296-2400.*

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Test Positive Aware Network (TPAN) is a not-for-profit organization dedicated to providing support and information to all people impacted by HIV.

## We've Outlived AIDS!

by Tom Setto

It wasn't what I expected to hear. I went to the doctor complaining about the pain and stiffness in my knees and ankles. I was prepared to hear that it was another side effect of my meds, a progression of my neuropathy or worse yet joint deterioration.

"Sure it's a side effect... a side effect of getting old," he said. "Accept it, you're getting older."

I wasn't ready for this. I had accepted the possibility of death. I was mentally prepared for the fight to live. But getting old, that was the last thing I expected.

Not me, I can't possibly get old. In my teens I never thought I'd make it past 30. When I was diagnosed I accepted the fact that two or three years more was all I'd have. Thirteen years later I realize now that I *am* getting old.

I was sitting with my friends at the Montrose last Saturday having breakfast and trying to think of a way to bring this up. I started to notice something.

Ken had to take his glasses off to read the menu. "Ken, aren't glasses supposed to be used to help you see better?" I asked.

"Oh yeah, they are. But I'm having trouble seeing smaller print in certain lighting. I just had my eyes examined and asked about it. The doctor told me that as most men get older, usually around 40 or so, they start having trouble seeing small print. It's weird. My prescription hasn't changed, but I may have to get bifocals. I guess I'm just getting old."

"You too?" Gary jumped in. "I used to love to sit on the floor with my coffee on Sunday mornings and spread out the newspaper sections."

"You're not doing your Sunday morning ritual anymore? I remember seeing you with your piles, 'must read', 'read', 'try to read',

and 'if I have time'. But your first priority is always checking out the sales and clipping those coupons," I said.

"You all know that I do love a bargain. Don't get me wrong, I still do it. I just make sure I have everything I need: scissors, coffee, something to munch on, the phone. Getting down there is no problem. Getting up is now a three-step process. First I have to get on my hands and knees, then I have to put my hands on the sofa to get my feet under me. Then I can stand up."

"You guys have a few years on me but my roommate just accused me of making 'old man' sounds when I stand up from sitting at my dining room table," adds Miguel.

"Old man sounds?" we all asked.

"Yeah, it's kind of a combination of a grunt and a moan, like this." He demonstrated as he excused himself to use the restroom.

"And have you noticed how noisy it's getting at this table?" Jerome asks.

"That's because you all like to talk so much," I said with a smile.

"That's a given. But really, and not from me of course since I am the youngest, a mere child compared to the rest of you, but you 'old men' at this table are starting to make a lot more noise when you chew your food. When I first started having breakfast with you guys everyone had good table manners. Now there are crumbs and spills everywhere and all that smacking and slurping is deafening."

"Huh?" we all answer jokingly.

"Don't joke, and y'all are getting hard of hearing," Jerome answers. "Some of you are starting to talk a lot louder too."

"And get this," Joey says. "I wasn't going to say anything about this. A couple days ago I stopped for a cocktail and as I left the bar these two guys who looked to be barely 21

were coming in. I heard one of them say 'Don't leave so soon, Daddy!'"

"Mmmm, Daddy," Jerome laughs.

"Can you believe they had the nerve to call me Daddy?"

"Well, think about it," I said, "you *are* actually old enough to be their father and you are starting to look the part."

"I just never thought of myself as a Daddy-type."

"I am losing my hair where I want it and growing it where I don't," Joey adds while lifting his cap.

"Of course we all are losing things more often now," Ken says. "I'm getting used to forgetting where my keys or the remote are and having to call my cell phone to find where I put it down last. I just laugh them off as 'senior moments'."

"I admit, though," Jerome says, "the other day I was looking in the mirror and noticed some lines on my face that weren't there before." He runs his fingers from his cheekbones to the corners of his mouth. "I immediately started worrying about facial wasting but I remembered that my father and my grandfather both have lines in the same place. So I guess it's happening to me too."

"This has been a great help for me, guys," I said. "My doctor just gave me the bad news that some of my aches and pains are a product of getting old. I haven't thought about it in those terms before. We kid each other about our ages but we don't think too much about aging."

"We concentrate so much on staying alive that we forget that we *are* alive," Ken said. "I guess getting old is one side effect of the meds that we all can live with." ☛

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# Pickett Fences

## Casualties of War

by Jim Pickett

It's four days into the war against Iraq as I write this.

It's over 21 years into the war against AIDS.

The Sunday before the war started, I attended a peace rally in downtown Chicago with thousands of other people—all ages, all stripes—some representing a broad array of organizations, some simply representing themselves, some wearing two or three hats. Rallies, demonstrations and protests such as this have been happening for months now, mobilizing millions and millions of people here and around the world, in cities big and small. In high schools, colleges and churches, in parks, squares and plazas. Millions of phone calls have been made, millions of faxes and millions of e-mails been sent. Millions have signed their names to petitions and letters.

The outcry is not disproportionate to the horrors of war.

Last year, three million people in the world died due to another war, AIDS. That's like a city the size of Chicago—emptied. That's like one thousand repeats of the devastation of the World Trade Center attacks on September 11, 2001, in which three thousand people died. Remember how we felt the week of those attacks. Multiply that by one thousand. Roughly, the amount of deaths worldwide due to AIDS last year is like three 9/11's every single day of the year. That's how many people three million looks like. That's how awful it is.

As I stood in Daley Plaza that beautiful spring-like day and listened to the impassioned speakers, surrounded by so many people who cared about injustice, by so many people who cared about human suffering and devastation, so deeply and with such conviction, I got a lump in my throat

more than once. The first was from the overwhelming beauty of being in this milieu, of being in a country that allowed me to dissent, of feeling the love and energy and intense concern in the crowd.

It almost made me cry.

The second lump has yet to leave my throat. And while I want to cry, while I need to cry, I find I cannot. It's not the only thing I can't do lately—can't sleep or concentrate either. This second lump comes from a terrible frustration and an overwhelming sadness. And not a little jealousy. Over 21 years into the worst human catastrophe the world has ever seen, over 21 years after the most ruthless and wily terrorist ever to be unleashed started wreaking havoc, decimating lives, families, societies and cultures around the globe... where is the response from everyday people? Where are the rallies? Why aren't there protests in the streets of London and Madrid, Tokyo and New York and Omaha?

Where are the coalitions? Where is the civil rights movement? Where are the churches? The high school and college students? Where are the labor unions? Where are the soccer moms and the crusty old lefties from the 60's? Where is everybody?

To be sure, there are many people here and far fighting this uphill battle every single second of every single day. But the numbers just aren't there. The mass outrage just isn't there. The compassion is missing in action.

Tell me, was there ever a time that over 100,000 people took to the streets of New York to say "No more AIDS?" That's how many were in the streets on Saturday, the 22nd of March, to say "No war." By all accounts it was a pretty amazing and powerful display, all that diverse energy unified on

an issue of such great importance. Interestingly, it just so happens that more than 100,000 New Yorkers are HIV-positive, and about half of those are diagnosed with AIDS. With three percent of the country's total population, New York is the epicenter of the epidemic in the United States, accounting for 16 percent of the country's AIDS cases. I bet that every single marcher in that antiwar protest in New York was touched by AIDS themselves—be it through friends, family, coworkers or their own infection, whether they knew it or not. Tell me, how many in that march knew someone in or from Iraq?

The night the war started, around 10,000 people in Chicago blocked traffic on Lake Shore Drive, one of the city's main thoroughfares. It made international news.

In Chicago, over twice that many are living with HIV. More than that number have already died from AIDS. And we have a hard time getting the press to cover the story. "Where's the angle?" "What's new?"

How many more faggots, niggers, junkies and ho's around the world and here at home—you and me—must die? How many more poor, disenfranchised, disconnected, stigmatized and marginalized people around the world and here at home—you and me—must die? Are you next? Am I? Will anyone notice? Will an editor be able to find a "news peg?"

The war on AIDS deserves, and yes, needs, millions in the streets and millions burning up the Internet, millions firing off letters to legislators and editors. That would be a proportionate response to the unparalleled disaster of three million people dying in one year. Any less is immoral, amoral, sub-human. ☛

# TPAN Calendar of Events

All events held at TPAN unless otherwise indicated.

For additional information on these events please contact Michael Barnett at (773) 989-9400.

## May 2003

Date	Time	Event
Monday 5th		TEAM Training (Treatment, Education, Advocacy, Management) Call Michael Barnett for further information
Wednesday 7th	7:30-9 PM	Committed to Living Series forum on housing
Tuesday 13th	7-9 PM	TPAN Tuesday at @mosphere
Sunday 18th		"Tune Up" T-dance at Domaine Nightclub, 1054 Rush St., Chicago
Tuesday 20th	7:00 PM	TPAN Board Meeting at Ann Sathers restaurant, Chicago
Thursday 29th	6-10 PM	End of the month Party Positive at Berlin

## June 2003

Date	Time	Event
Wednesday 4th	7:30-9 PM	Committed to Living Series forum on STD Coinfection with Dr. Neel French
Tuesday 17th	7:00 PM	TPAN Board Meeting at Ann Sathers restaurant, Chicago
Saturday 21st		3rd Annual HIV-positive Women's Symposium "Life Pathways" Call Kathleen Barber for further details
Wednesday 25th	7-9 PM	TEAM Training (Treatment, Education, Advocacy, Management), Adhearance Call Michael Barnett for further information
Thursday 26th	6-10 PM	End of the month Party Positive at Berlin
Friday 27th	4-8 PM	TPAN Anniversary BBQ, Margate Park, Chicago
Sunday 29th		Chicago Gay Pride Parade

## Editor's Note continued

*continued from page 7*

During the Clinton administration, ADAP was able to keep pace with the rising costs of antiretroviral medications and the number of people applying for ADAP assistance, but an economic slowdown and the war with Iraq has drained resources that could have been used to increase ADAP funding.

The current administration has experienced a series of public relations backlashes as a result of its economic policies. Not least among them was an early proposal to provide flat funding for the Ryan White CARE Act. While a lump sum would have given the appearance that the Bush administration was concerned about ADAP's availability, it would have made it virtually impossible to obtain more money and further eroded ADAP's ability to provide care to people with low income and no insurance.

Ultimately, the issue of ADAP budget appropriations was passed on to Congress, which granted the program \$80 million dollars. However, with projected nationwide increases in unemployment, a growing inability of most people to afford health care and an estimated one million people losing access to antiretrovirals and other medications through Medicaid this year, it is questionable whether or not ADAP will survive.

"The... difference in the degree of the [ADAP] 'crisis'" said Bill Arnold, of Washington D.C.'s ADAP Working Group, "is whether the problem is at the door or is projected to arrive at some point... in the future." Many of us believe that the problem has been at the door for a long time, and that the future is now. ☒

# Programs and Meetings

All meetings held at TPAN unless otherwise indicated:

5537 North Broadway, Chicago.

Office hours: Monday–Thursday, 9 am–8 pm. Friday, 9 am–6 pm

phone: (773) 989–9400 • fax: (773) 989–9494

e-mail: [programs@tpan.com](mailto:programs@tpan.com) • [www.tpan.com](http://www.tpan.com)

Support groups sponsored by the Chicago Department of Public Health  
Peer Support and Buddy programs sponsored by the AIDS Foundation of Chicago

## MONDAY

### MEDICAL CLINIC

Free medical care provided by a nurse practitioner. This program is in conjunction with the Needle Exchange Program and is offered by Access Community Health Network. Call for an appointment. Mondays 10:00 am–6:30 pm.

### TPAN DAYTIMERS

A group for people with HIV who prefer to meet during the day. Mondays and Thursdays at 10:30 am.

### SPIRIT ALIVE!

Through a collaborative effort of AIDS Pastoral Care Network (APCN) and Test Positive Aware Network, Spirit Alive! Meets Monday evenings from 7:30–9 p.m. at TPAN. With a respect for people of all faiths, Joe Flint facilitates group discussions around hope vs. despair, strength in times of adversity, the existence of a higher power, and faith as a rich resource for healing.

## TUESDAY

### LIVING POSITIVE

HIV positive gay men discuss how being positive affects life and relationships. Socials and speakers on occasion. Meets Tuesdays at 7:30 p.m.

### POSITIVE PROGRESS

A peer-led group for HIV positive individuals in recovery. Special emphasis is placed on living a clean and sober lifestyle as a priority to effectively living and dealing with HIV. Meets Tuesdays from 7:00–9 p.m.

## WEDNESDAY

### MEDICAL CLINIC

Free medical care provided by a nurse practitioner. This program is in conjunction with the Needle Exchange Program and is offered by Access Community Health Network. Call for an appointment. Wednesdays 10:00 am–6:30 pm.

### NEEDLE EXCHANGE PROGRAM

Free, anonymous, legal syringe exchange and HIV/AIDS prevention. Every Wednesday 5:00 pm–7:00 pm at TPAN office. In association with Chicago Recovery Alliance.

### SHE (STRONG, HEALTHY AND EMPOWERED)

A group for HIV-positive women. Meets on Wednesday at 7:30 p.m. Call Kathleen at (773) 989–9400 for more information.

### YOGA

Wednesdays at 7:30 pm.

## THURSDAY

### TPAN DAYTIMERS

A group for people with HIV who prefer to meet during the day. Mondays and Thursdays at 10:30 am.

### BROTHERS UNITED IN SUPPORT (BUS)

A group for HIV-positive gay and bisexual men of African descent. Thursdays at 7:00 pm.

### POSITIVE NOW

Whether newly diagnosed or having been living with HIV, you're invited to join Positive Now. Providing support, education and the opportunity to share experiences in a relaxing, empowering environment. Socials on occasion. Meets Thursday evenings at 7:00 p.m.

## THURSDAY CONTINUED

### PARTY POSITIVE SOCIAL AT BERLIN

Berlin, 954 W. Belmont, Chicago. Thursdays from 6:00–10:00 pm.

## FRIDAY

### SAFE PASSAGE

A group for young adults (ages 18–24) who are HIV-positive. Fridays at 7:00 pm.

## SCHEDULED BY APPOINTMENT

### FAMILY AIDS SUPPORT NETWORK (FASN)

A group for family, friends, and caregivers. Call Betty Stern at (773) 989–9490.

### SPEAKERS BUREAU

Individuals are available to community groups and organizations to educate on HIV, safer sex, harm reduction and experiences of living with HIV. Call Rodney at (773) 989–9400.

### PEER SUPPORT NETWORK

Provides one-on-one support for recently diagnosed individuals. Volunteers provide support, information and referrals. Call Rodney at (773) 989–9400 to get a buddy!

### POSITIVE BUDDY

Volunteers provide individuals living with HIV/AIDS one-on-one emotional and physical support. Call Rodney at (773) 989–9400 to get a buddy!

## MISCELLANEOUS

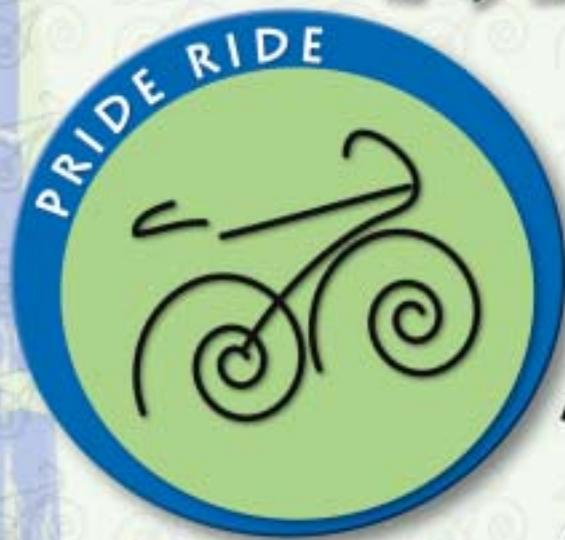
### CHICAGOPOS18TO24 AT AOL.COM

AOL chat room for young adults (ages 18–24) who are HIV-positive. Hosted by TPAN's Young Adult Program. Go to AOL town square. Monday through Friday 3:00 pm–5:00 pm.

**AUGUST  
23RD & 24TH**



# PRIDE RIDE



**2 DAYS  
200 MILES  
2 REASONS**

**YOU CAN  
MAKE A DIFFERENCE,  
YOU WILL  
MAKE A DIFFERENCE**



**PRIDE RIDE IS A  
TWO-DAY BICYCLE EVENT CREATED BY  
VOLUNTEERS TO RAISE NEEDED FUNDS FOR  
TEST POSITIVE AWARE NETWORK**

**FOR MORE INFORMATION  
CONTACT JEFF ALLEN AT  
773-989-9400  
OR VISIT  
WWW.PRIDERIDE.ORG**

