

Bangkok AIDS Conference: Small steps

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There isn't a lot of Earth-shattering news to report from Bangkok, but as always there were numerous small developments. As PAUL KIDD explains, some of these small steps could develop into giant leaps.

An International AIDS Conference is a surprisingly organic beast. With hundreds of simultaneous presentations and thousands of participants, it's impossible for anyone to hope to cover everything. So 'hallway conversations' become an important part of getting a sense of what's going on in the sessions you've been unable to get to.

By half-way through the second day, the hallway chatter in Bangkok had started to assume a surprisingly consistent line: there's not very much in the way of momentous scientific breakthroughs, but there are encouraging signs that we're moving forward.

New treatments

Perhaps the most troubling area was in the development of new treatments to fight HIV. It would be alarmist to say 'there aren't any', but the truth is that the drug development pipeline is currently more of a trickle than a flood.

For Australia, there are still several drugs at advanced stages of development — including T-20, atazanavir, and fosamprenavir — which are yet to come into widespread use here, so the horizon isn't barren, but beyond the arrival of these drugs, there's not a lot to look forward to. At least not in the short term.

That's the bad news. The good news is that there are drugs coming which are exciting and promise big things. These drugs were the focus of several presentations in Bangkok. But it will be several years before we're likely to see them in [clinical](#) [1]Pertaining to or founded on observation and treatment of participants, as distinguished from theoretical or basic science. use in Australia, if at all.

One area which generated a lot of excitement is the development of 'maturation inhibitors', a new class of anti-HIV drugs which work by preventing immature [viruses](#) [2]A small infective organism which is incapable of reproducing outside a host cell. from 'maturing' inside cells. One drug, PA-457, has been promising in animal and test-tube studies: it appears to be potent, including against [resistant](#) [3]HIV which has mutated and is less susceptible to the effects of one or more anti-HIV drugs is said to be resistant. strains of HIV. The conference heard the results of the first human study, a small [phase 1](#) [4]A clinical trial designed to establish whether an experimental drug is safe for humans to take. Phase I studies determine the metabolism and pharmacologic actions of drugs in humans, the side effects associated with increasing doses, and look for early evidence of effectiveness; these studies may include either people with HIV, HIV-negative volunteers, or both study in HIV-negative people, looking at the drug's safety and pharmacokinetics. The results of this study were encouraging and the drug is expected to start [phase 2](#) [5]A smaller clinical trial designed to establish whether a drug is effective. Phase II studies are conducted to evaluate the effectiveness of the drug for a particular indication or indications in patients with the disease or condition under study and to determine the common short-term side effects and risks. If there is evidence that the drug is effective, a Phase III study is undertaken, with a larger number of participants, to confirm this. trials later this year which will examine its safety and [effectiveness](#) [6](Of a drug or treatment). The maximum ability of a drug or treatment to produce a result regardless of dosage. A drug passes efficacy trials if it is effective at the dose tested and against the illness for which it is prescribed. In the standard procedure, Phase II clinical trials gauge efficacy, and Phase III trials confirm it. in positive people.

Reverset is an [experimental](#) [7](Of a drug) Not licensed for use in humans, or as a treatment for a particular condition. Experimental drugs are studied in clinical trials to determine their safety and efficacy, and are sometimes made available via Special Access Schemes prior to their approval. nucleoside analogue drug which has already been through a couple of human studies. It appears to be effective against AZT and 3TC-resistant virus and can be dosed once a day.

TMC-114 is a next-generation protease inhibitor which is currently going through clinical trials in Australia and elsewhere. It appears to be effective against HIV which has become resistant to existing protease inhibitors.

A poster presentation reported on 695634, an experimental non-nucleoside being developed by GlaxoSmithKline that test-tube studies have shown to be effective against non-nucleoside resistant virus. The study reported in Bangkok was a small 'dosing' study looking at how the drug is distributed in the body, which had promising results.

CCR5 inhibitors are a type of potential anti-HIV drug which have generated a lot of excitement in recent years. The conference included a presentation on UK-427,857, the first CCR5 inhibitor to enter large [phase 3](#) [8]A large clinical trial designed to establish whether a drug is effective and safe enough for widespread use. Phase III studies include expanded controlled and uncontrolled trials after preliminary evidence suggesting effectiveness of the drug has been obtained, and are intended to gather additional information to evaluate the overall benefit-risk relationship of the drug and provide an adequate basis for physician labeling. studies. After ten days of monotherapy with this drug, participants experienced decreases in [viral load](#) [9]A measurement of the quantity of HIV RNA in the blood. Viral load blood test results are expressed as the number of copies (of HIV) per milliliter of blood plasma. of between 1.3 and 1.6 logs, and there were relatively few adverse effects reported. CCR5 inhibitors are an especially promising area of HIV research as they prevent HIV from attaching itself to cells, which it has to do before it can enter them, so these results are very encouraging.

Long-term follow-up data from studies of T-20 showed that the drug continues to be effective up to 96 weeks (almost two years) after commencement. Of the 661 people who were given T-20 as part of the TORO1 study, more than half were still taking the drug after 96 weeks. There were no new adverse events reported and the drug continued to be effective for a substantial number of people.

Superinfection

This continues to be a major area of concern for positive people and there is a lot of research being done. Unfortunately, we still do not have a clear picture of how significant an issue this is going to become.

One study at Bangkok found that there was no evidence of superinfection in 33 HIV-positive people who had been highly exposed to the virus through unprotected sex with a single partner. Another study found disturbingly high levels of multiple infection among women in three African countries. A third study demonstrated the negative effects that superinfection can have on CD4 counts and viral loads.

While it's clear that superinfection can and does occur, we still need to know the circumstances under which it occurs and we still need an answer to the question of what that means for positive people.

Lipodystrophy

There was relatively little news on this front. Several studies looked at the relationship between d4T and lipodystrophy, and suggested that switching to other drugs could result in improvements to facial fat loss in people taking d4T. People may also be at greater risk of developing lipo if they take d4T when their CD4 counts are low, according to another study.

[Hep](#) [10]Any inflammation of the liver. It is usually caused by viral infection, toxic agents or drugs but may be an autoimmune response. It is characterised by jaundice, abdominal pain, liver enlargement and sometimes fever. The different types of viral hepatitis include hepatitis A (formerly called infectious hepatitis), hep B (serum hepatitis), hep C (formerly called non-A, non-B hepatitis), and hepatitis D, E, F and G. C coinfection

This is an area where there are many encouraging signs. The APRICOT study is looking at the effectiveness of pegylated interferon plus [ribavirin](#) [11]An antiviral drug which is effective against a range of viruses including herpes, the hepatitis C virus and several strains of influenza. in HIV/[HCV](#) [12]Hepatitis C virus. coinfecting people. Results from this study presented in Bangkok showed that people taking pegylated interferon were more likely to show signs of improvement than those taking the older form of interferon. Between 63 percent and 88 percent of coinfecting patients had signs of an early virologic response after 12 weeks' treatment, depending on their HCV genotype (88% for genotype 2/3, 63% for genotype 1). Sustained viral response rates after 48 weeks were 29 and 62 percent respectively.

Further data presented from the same study showed that, even among people who did not achieve a sustained

virologic response, the evidence of [liver](#) [13]A large organ, located in the upper right abdomen, which assists in digestion by metabolising carbohydrates, fats and proteins, stores vitamins and minerals, produces amino acids, bile and cholesterol, and removes toxins from the blood. damage detected by [biopsy](#) [14]Surgical removal of a piece of tissue from a living subject for microscopic examination to make a diagnosis (e.g., to determine whether abnormal cells such as cancer cells are present). improved, or at least did not worsen, in a significant number of cases.

- [atazanavir](#)
- [bevirimat \(MPC-4326, PA-457\)](#)
- [conference reports](#)
- [enfuvirtide \(T-20\)](#)
- [fosamprenavir/amprenavir](#)
- [HIV treatments](#)
- [Lipodystrophy and lipoatrophy](#)
- [maturation inhibitors](#)
- [Thailand](#)

Links:

[1] <http://www.napwa.org.au/glossary/term/475>

[2] <http://www.napwa.org.au/glossary/term/125>

[3] <http://www.napwa.org.au/glossary/term/109>

[4] <http://www.napwa.org.au/glossary/term/90>

[5] <http://www.napwa.org.au/glossary/term/91>

[6] <http://www.napwa.org.au/glossary/term/486>

[7] <http://www.napwa.org.au/glossary/term/491>

[8] <http://www.napwa.org.au/glossary/term/92>

[9] <http://www.napwa.org.au/glossary/term/416>

[10] <http://www.napwa.org.au/glossary/term/97>

[11] <http://www.napwa.org.au/glossary/term/352>

[12] <http://www.napwa.org.au/glossary/term/132>

[13] <http://www.napwa.org.au/glossary/term/102>

[14] <http://www.napwa.org.au/glossary/term/413>