End of a scourge?

To mark the 30th anniversary of the discovery of HIV, Adeeba Kamarulzaman and Reena Rajasuriar reflect on scientific advances that may bring the world closer to a cure.

It was 30 years ago that HIV was first identified at Institut Pasteur in Paris. It is apt to reflect on just how far HIV science has come and its impact on the epidemic.

AIDS is no longer a death sentence, thanks to the development of antiretroviral pills that keep people alive well into old age.

In more recent years, there was no doubt that the field of HIV/AIDS scientific research has undergone a resurgence.

Two years ago, a US study confirmed what researchers had long suspected — that early diagnosis and treatment reduce a person’s infectiousness.

Thanks to the 2011 study, we now know that early treatment can reduce the possibilities of transmission by 96 per cent. Treatment as prevention (TasP) had officially gained legitimacy.

The announcement five years ago that a man had been cured of HIV via a bone marrow transplant for a form of blood cancer made headlines.

The case of Timothy Brown, known as the Berlin Patient, has once again got scientists talking about the possibility of an HIV cure.

Using the C-word had been almost taboo since the mid 1990s when widely available highly active antiretroviral therapy became available for the first time.

Researchers were initially optimistic that it might provide the clue to eliminating HIV from the body but their hopes were dashed and talk of a cure was put on the back burner.

RENEWED OPTIMISM

Fast forward to 2013 and we have some renewed but measured optimism that a cure might be worth investigating again.

The globe’s leading scientists and community voices have linked up to produce a global scientific strategy to guide the process, headed by the co-discoverer of HIV, Nobel Laureate Françoise Barre-Sinoussi, who is also the International Chair of the upcoming 7th IAS Conference on HIV Pathogenesis, Treatment and Prevention (IAS 2013), in Kuala Lumpur next month.

This resurgence in HIV science is most welcome but it also brings with it a set of challenges which we ought to be planning for now.

It is clear, for instance, that TasP has the potential to vastly reduce HIV infectiousness and infections in both key affected populations and the general community but there are a myriad of obstacles standing in the way, such as stigma and a better understanding of how this knowledge can be implemented globally.

The field of HIV research is relatively new in Malaysia. The Centre of Excellence for Research in AIDS (CERiA) at Universiti Malaya was established in 2007 to respond to the need to better understand the Malaysian HIV epidemic and build local capacity in conducting research.

It has a particular focus on HIV and substance use being one of the main drivers of the local epidemic and related co-morbidities including tuberculosis and hepatitis C.

Apart from the need to recruit more scientists to continue the work that’s currently been done, there are major gaps that require new scientists to explore new fields that have not been carried out in Malaysia.

This is especially urgent given the explosion in the understanding of the HIV epidemic globally and the need apply it in local context.

Take, for example, the needle exchange programme funded by the Malaysian government five years ago.

Without science showing that the spread of HIV in Malaysia was largely being driven by injecting drug use, the go-ahead to implement this programme would not have been possible.

We now have new research con-
firming the effectiveness of the programme, saving the government millions of ringgit and more importantly, saving thousands of lives.

The field of HIV prevention and treatment also requires more scientists to answer the remaining questions in the implementation of knowledge in clinical and public health practice.

The challenges will be many and varied firstly because HIV research is still very young in Malaysia. We have many early-mid career researchers with limited experience in dealing with administrative aspects such as setting up research infrastructure and work processes.

Secondly, creating a number of scientists in the field is fundamental. We have been very fortunate to have had many funding opportunities and expert linkages with international collaborators to help us setup research infrastructure.

What we are lacking now is the people to develop and drive the research ideas. Without the numbers it will be very hard to compete at a global level.

The government needs to value the power of solid research and fund it appropriately. In the last two years, the injection of funds through High Impact Research Grant from the Ministry of Higher Education to Universiti Malaya has enabled CERiA to undertake several research projects in different areas of HIV research with researchers from around the world.

We are already seeing the fruits of this investment in the amount of new knowledge being generated that can have a significant impact on the HIV epidemic in this country.

Adeeba Kamarulzaman is the director of the Center of Excellence for Research in AIDS and Dean, Faculty of Medicine, Universiti Malaya.

Reena Rajasuriar is a young scientist at the Department of Pharmacy and CERiA at the Faculty of Medicine, Universiti Malaya.

The most effective rounded policy making is always backed by strong science and the past three decades of this epidemic have shown us how science can indeed make a difference.

THE HIV/AIDS TIMELINE

1983 • HIV identified for the first time at Institut Pasteur in France.

1986 • First case of HIV/AIDS reported in Malaysia.

1987 • AZT, the first anti-retroviral medicine, approved by the US Food and Drug Administration (FDA).


1990 • Eight million people living with HIV worldwide.

1991 • A red ribbon becomes the symbol of HIV/AIDS awareness and solidarity.

1992 • Malaysian AIDS Council (MAC) established by the Ministry of Health as an umbrella body to coordinate efforts of NGOs in the HIV/AIDS response.

1996 • First combined antiretroviral treatment introduced.

1998 • The Ministry of Health rolls out prevention of mother-to-child transmission of HIV programme nationwide.

2002 • Women comprise about half of all adults living with HIV/AIDS worldwide.

2006 • The Ministry of Health pilots — later expands — the needle and syringe exchange programme to reduce the risk of HIV transmission in people who inject drugs.

2008 • Luc Montagnier and Francoise Barre-Sinoussi of Institut Pasteur team who discovered HIV receive the Nobel Prize for Medicine.

2009 • Case of the Berlin Patient cured of HIV through a bone marrow transplant appears in the New England Journal of Medicine.

2011 • 34 million people living with HIV worldwide.

2013 • In Malaysia there are 94,841 cumulative cases of HIV infections and 14,986 AIDS-related deaths reported (since 1986).

Sources: International AIDS Society, Malaysian AIDS Council, UNAIDS & Kaiser Family Foundation.
A beneficiary of Malaysia’s Needle and Syringe exchange programme (NSEP) receives a kit containing sterile injecting paraphernalia and information on safe injecting practices from an outreach worker.