Progress in the fight against HIV/AIDS was recognised by the Prince Mahidol Award Foundation this year, with the award in the field of medicine and the award in the field of public health both going to leading lights from the HIV/AIDS community.

The annual award, now in its 21st year, was established by the Government of Thailand in honour of His Royal Highness Prince Mahidol of Songkla. After narrowing down a field of 64 nominees, the board of trustees announced in late November that the award in the field of public health would be shared by World Bank Group President Jim Yong Kim, previously the Director of WHO’s HIV/AIDS Department, and Peter Piot, the Director of the London School of Hygiene and Tropical Medicine, UK, and former Executive Director of UNAIDS. The award in the field of medicine was conferred jointly on the Director of the US National Institute of Allergy and Infectious Diseases (NIAID) Anthony Fauci, and David Ho, Scientific Director of the Aaron Diamond AIDS Research Center, Rockefeller University, NYC.

"The award reflects a turning point in the history of HIV/AIDS when the agenda transformed from one of despair to one of opportunity with the advent of anti-retroviral medicines and the mobilization toward access of life-saving drugs to everyone, no matter their background or economic status", said Kim, in a statement released by the Washington-based World Bank.

But amid the celebratory air, some of the award’s recipients sounded a more cautionary note. “It’s true that much progress has been made in the fight against HIV/AIDS”, says Ho, who got into AIDS research after seeing some of the earliest cases in 1980 and 1981. “Back then, I got interested because of a scientific curiosity without ever realising AIDS would turn into a pandemic”, he explains. Ho was one of the pioneers of highly active antiretroviral therapy; one of the key advances that turned a lethal infection into a manageable disease in places where effective therapies are available. But recent rhetoric about the coming of an AIDS-free generation may be premature, he says. “Without a cure and without an effective vaccine, the epidemic will continue. The world cannot be complacent.”

“‘We have won a few battles against HIV/AIDS, but we must remember that we are still losing the war.’”

That warning against complacency was echoed by Fauci who, in addition to masterminding NIAID’s research portfolio since 1984, was one of the principal architects of the US President’s Emergency Plan for AIDS Relief. “I believe strongly that we have the scientific foundation, based on years of basic and clinical research, to make an AIDS-free generation feasible”, he says, but his optimism is cautious, “since we still need to fully implement the treatment and prevention interventions that have been made possible by AIDS research”.

After decades of slow progress, eye-catching advances in the scientific understanding of HIV have been a feature of the past few years, fuelling hopes that a cure may soon be in sight. “This is still in the discovery and aspirational phase”, says Fauci, “but recent developments have provided a degree of optimism about the possibility of allowing at least a subset of patients to maintain virological remission without the need for daily antiretroviral therapy, although much still needs to be done before we can feel confident that this will be possible”.

Progress towards an effective vaccine has also come on in leaps and bounds, “with important advances, based on structure-based vaccine design, in understanding the nature of and potential inducement of broadly protective antibodies”, says Fauci. And Ho is convinced that new methods of preventing the spread of the disease will be the most important development in the coming years.

Reflecting on more than 30 years of involvement in the fight against HIV/AIDS, Fauci says it has been an “extraordinary” experience. “From the very beginning in the summer of 1981, I felt that this was going to be a much bigger problem than we imagined”, he says. “But I never imagined that 32 years later there would have been 70 million people infected with HIV and 36 million deaths. Nor did I grasp at the time the possibility of such extraordinary scientific advances where we went from not even knowing the cause of a disease that was almost 100% fatal to a situation where we had developed therapies that transformed a virtual death sentence into an almost normal life span.”

All of which goes to show that “anything is possible”, says Fauci. And for the next generation of researchers hoping to follow in the footsteps of this year’s Prince Mahidol Award winners, Ho has some words of encouragement. “Take on the huge challenges posed by HIV/AIDS, and view them as an opportunity to contribute and make a difference”, he implores. “We have won a few battles against HIV/AIDS, but we must remember that we are still losing the war.”

David Holmes