Jeudi 6 juin 2019
Journée nationale de formation des infirmier(ère)s en infectiologie

35 ans d’infection VIH
Le regard du Virologue

JC Tardy
Déclaration de liens d’intérêt avec les industries de santé en rapport avec le thème de la présentation (loi du 04/03/2002):

Jean Claude TARDY
35 ans d’infection VIH

- Consultant ou membre d’un conseil scientifique
  - OUI

- Conférencier ou auteur/rédacteur rémunéré d’articles ou documents
  - OUI

- Prise en charge de frais de voyage, d’hébergement ou d’inscription à des congrès ou autres manifestations
  - OUI

- Investigateur principal d’une recherche ou d’une étude clinique
  - NON
Il était une fois …

A TRANSMISSIBLE AVIAN NEOPLASM (SARCOMA OF THE COMMON FOWL.)

Journal of Experimental Medicine 1910

P. Rous (1879-1970) Nobel 1966

RNA tumor viruses

H. Temin ; D. Baltimore : Nobel 1975

RNA-dependent DNA Polymerase in Virions of Rous Sarcoma Virus

Viral RNA-dependent DNA Polymerase

Nature June 27 1970

Retrovirus
Early 1970s ... my coworkers and I also decided to search for human retroviruses, an unpopular goal at this time.

Detection and isolation of type C retrovirus particles from fresh and cultured lymphocytes of a patient

B.J Poiesz et al; PNAS 1980

R.C Gallo

... when Gallo first submitted their report on HTLV-I to Journal of Virology it was rejected right away by the editor Robert Wagner "insisting that they should cease, and not continue to perpetuate the controversy, strongly implying that we all know human retroviruses do not exist"

If they did, they were not associated with human diseases

If somehow active human retroviruses did exist, such agents played a relatively minor or "anecdotal" role in the public health

Retroviruses by their very nature were inherently untreatable, based primarily on their capacity to integrate into the host genome and/or rapidly mutate
Isolation of a T-Lymphotropic Retrovirus from a Patient at Risk for Acquired Immune Deficiency Syndrome (AIDS)

F. Barré-Sinoussi et al; Science 1983

It happened on Friday, 4 February 1983, at 5:45 p.m. I saw a virus under the screen. I ran out of the lab, screaming, “I have it, I have it!”

Charlie Dauguet

F. Barré-Sinoussi et al; Nat.Med. 2003
Nobel 2008
Plusieurs noms... UN seul virus

Courtesy of Willy Rozenbaum

The Discovery of HIV as the Cause of AIDS

RC. Gallo and L. Montagnier; NEJM 2003
Ça n’existe pas
The Durban Declaration

HIV causes AIDS. Curbing the spread of this virus must remain the first step towards eliminating this devastating disease.
Et puis il y a les vraiment bons

He cites organizing an AIDS conference in South Africa in 2000 as “the most important thing I ever did”

Mark made both important scientific and policy contributions to address the HIV pandemic. We will miss him.
One World One Hope
Les ARV arrivent ... et les outils aussi

Mesure de la charge virale dans le suivi des patients atteints par le VIH

Viral Load = Speed of the train
CD4 count = Distance from cliff

J. Coffin, XI International Conf. on AIDS, Vancouver, 1996
Les ARV arrivent ... et les outils aussi

High Levels of HIV-1 in Plasma During All Stages of Infection Determined by Competitive PCR

M. Piatak et al; Science 1993

DD Ho et al; Nature 1995

Taken together, our findings strongly support the view that AIDS is primarily a consequence of continuous, high-level replication of HIV-1, leading to virus- and immune-mediated killing of CD4 lymphocytes.
Les ARV arrivent ... et les outils aussi

« ... initiation of HAART as early as 10 days after the onset of symptoms of primary HIV-1 infection could not prevent formation of a latent reservoir of virus »

T.W Chun et al ; PNAS 1998
Drug-resistance genotyping in HIV-1 therapy: the VIRADAPT randomised controlled trial

J. Durant et al; Lancet 1999

We found genotypic-resistance testing to have a significant benefit on the virological response when choosing a therapeutic alternative.
HIV-1 and HAART: A time to cure, a time to kill

....we can at least offer patients the reassurance that modern HAART regimens, if taken correctly, can maintain suppression of viral replication indefinitely »

Combination therapy for HIV infection represents a triumph for modern medicine. This can be attributed to more potent drugs, fewer adverse effects, fixed dose of combinations


M.S Saag and J.M Kilby; Nat.Med 1999


D.D Richman et al; Science 2009
Histoire extraordinaire ... mais pas terminée
Un grand MERCI... et une pensée