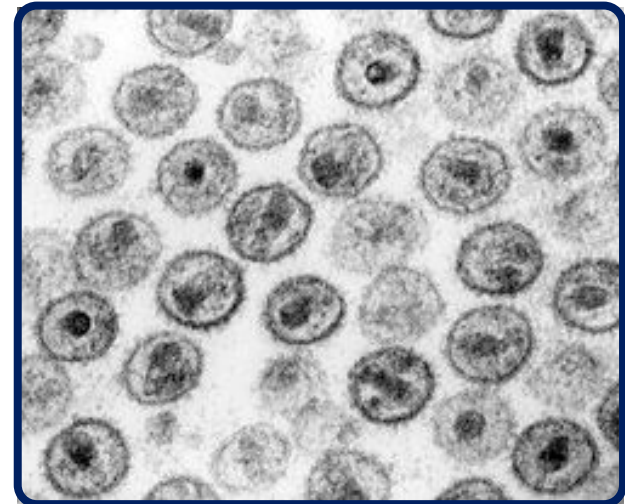


Jeudi 6 juin 2019
Journée nationale de formation des infirmier(ère)s
en infectiologie

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

L'orateur ne
souhaite pas
répondre

- Consultant ou membre d'un conseil scientifique
- Conférencier ou auteur/rédacteur rémunéré d'articles ou documents
- Prise en charge de frais de voyage, d'hébergement ou d'inscription à des congrès ou autres manifestations
- Investigateur principal d'une recherche ou d'une étude clinique

OUI

NON

OUI

NON

OUI

NON

OUI

NON

Il était une fois ...



RNA tumor viruses



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

*Journal of Experimental
Medicine 1910*



P.Rous (1879-1970) Nobel 1966



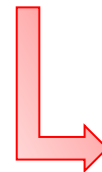
H.Temin ; D.Baltimore : Nobel 1975



**RNA-dependent DNA Polymerase in
Virions of Rous Sarcoma Virus**

Viral RNA-dependent DNA Polymerase

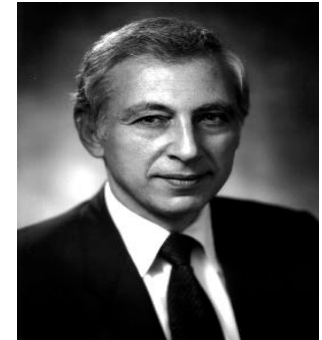
Nature June 27 1970



Retrovirus

C'était pas gagné !!!

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



R.C Gallo



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

B.J Poiesz et al ; PNAS 1980

... 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**"

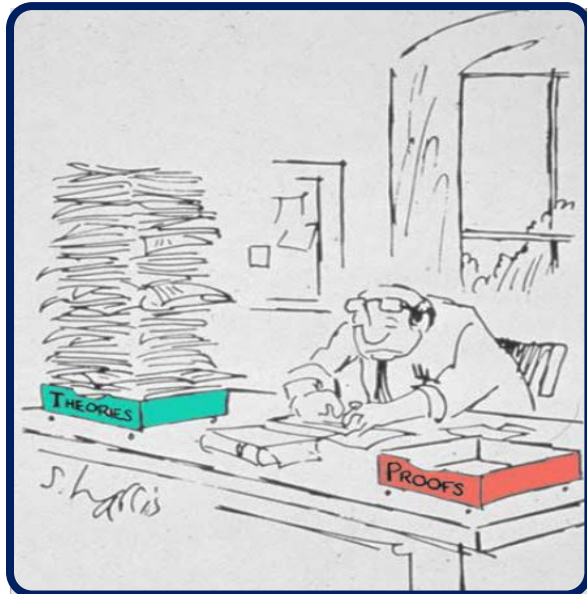
If they did, they were **not associated** with human diseases

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**

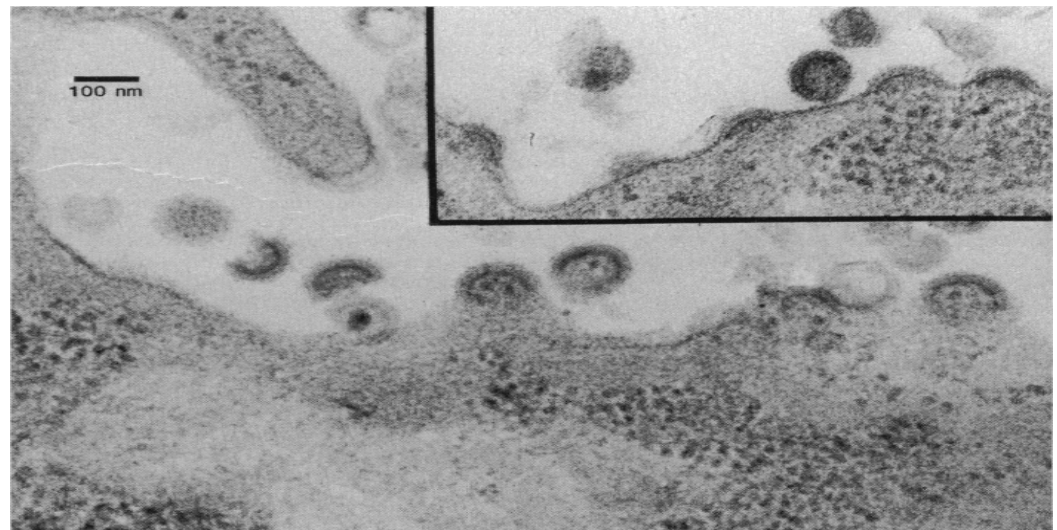


« I have it, I have it ! »



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!"*

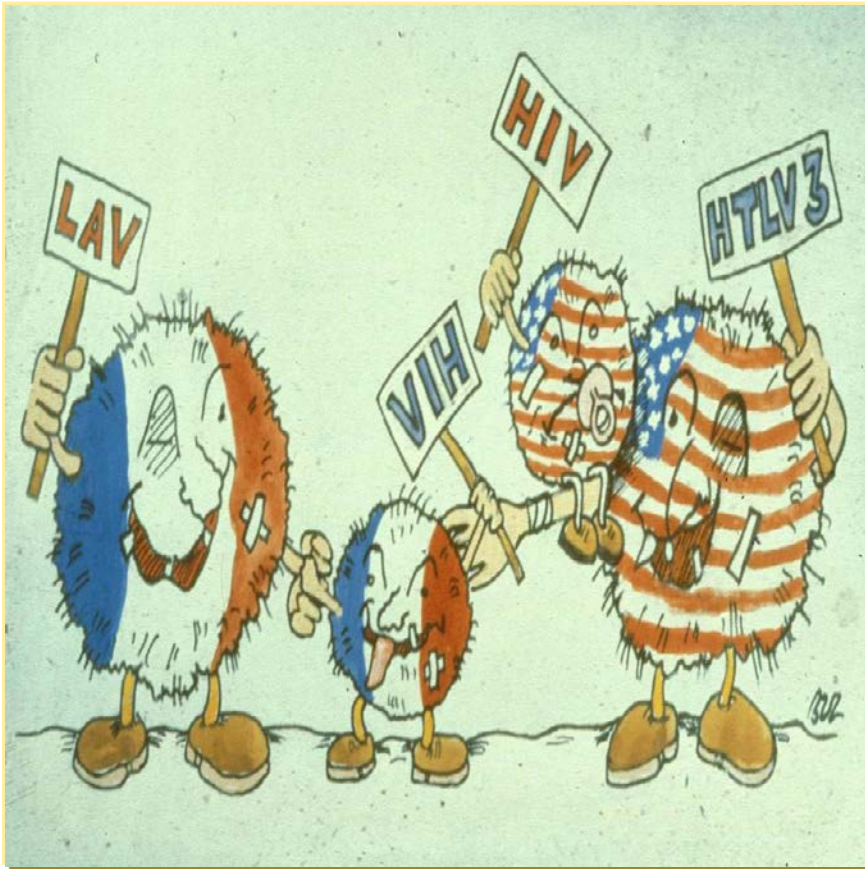
Charlie Dauguet

F. Barré-Sinoussi et al ; Nat.Med. 2003

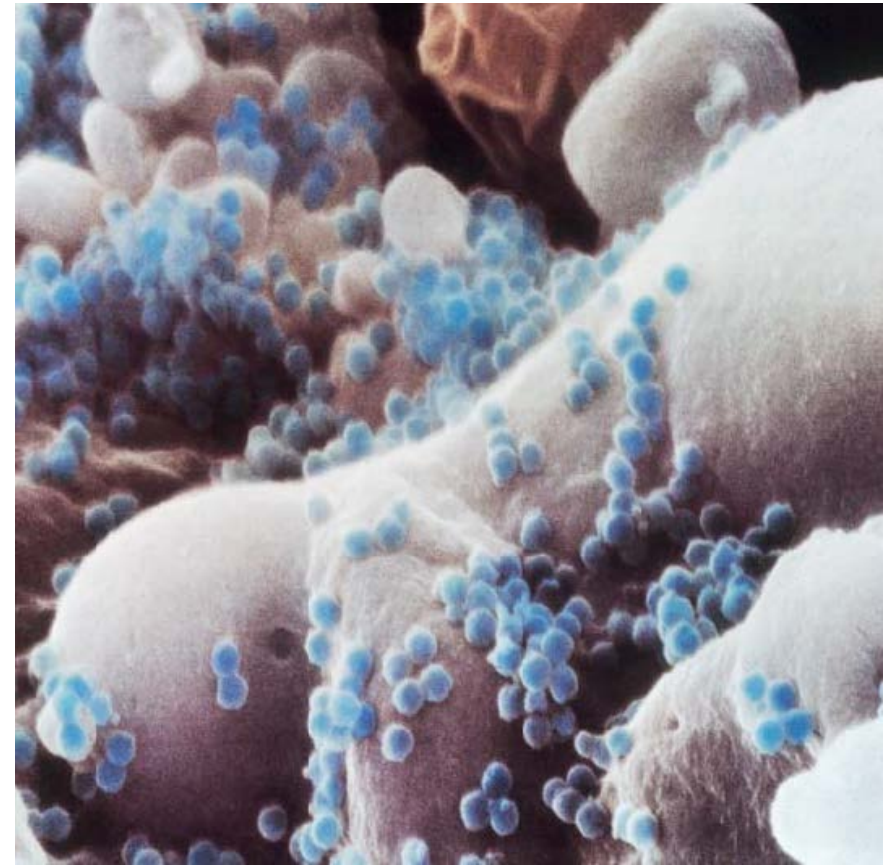
Nobel 2008



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



*NUCLEIC ACID AND PROTEINS ISOLATED FROM THE RAUSCHER MOUSE LEUKEMIA VIRUS (MLV)**

By **PETER H. DUESBERG** AND WILLIAM S. ROBINSON *PNAS 1966*



Differences between the Ribonucleic Acids of Transforming and Nontransforming Avian Tumor Viruses*

Peter H. Duesberg and Peter K. Vogt *PNAS 1970*

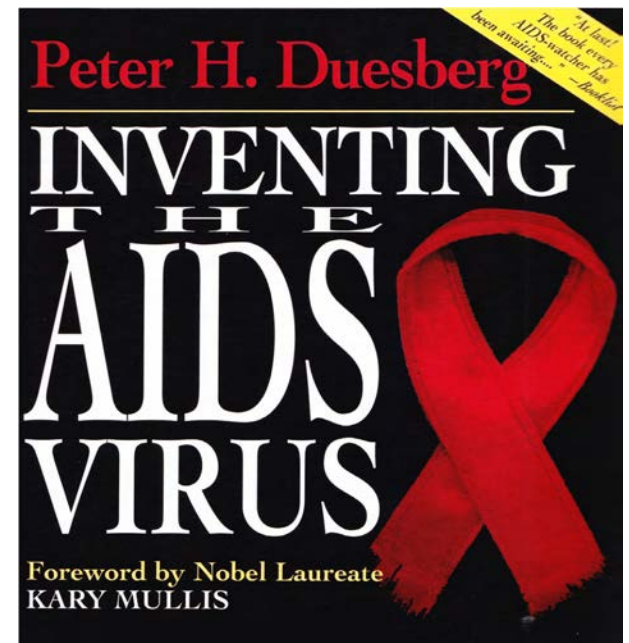


Is HIV the cause of AIDS?

Lancet 1995

HIV an illusion

Nature 1995

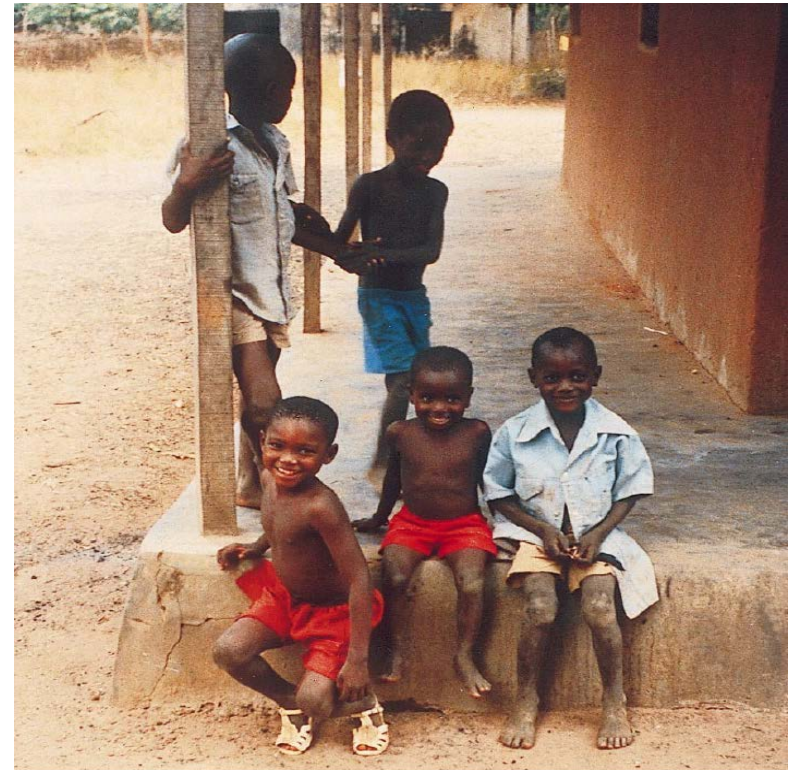


Ça n'existe pas



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 Wainberg

21 Avril 1945 – 11 Avril 2017

*Douglas D. Richman and Robert C. Gallo
Curr.Opin.HIV AIDS 2017*

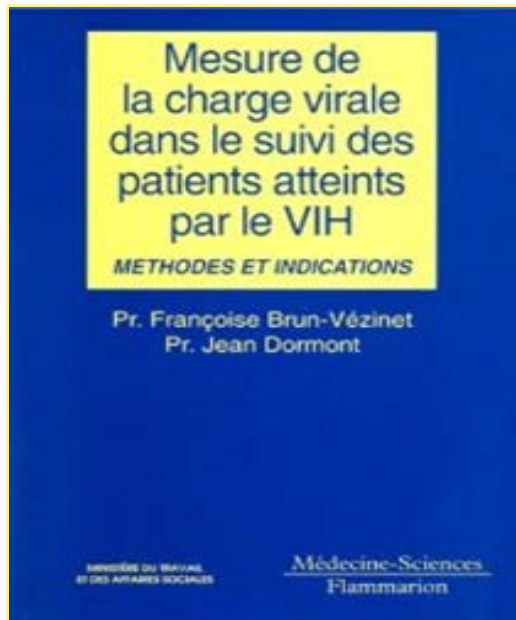
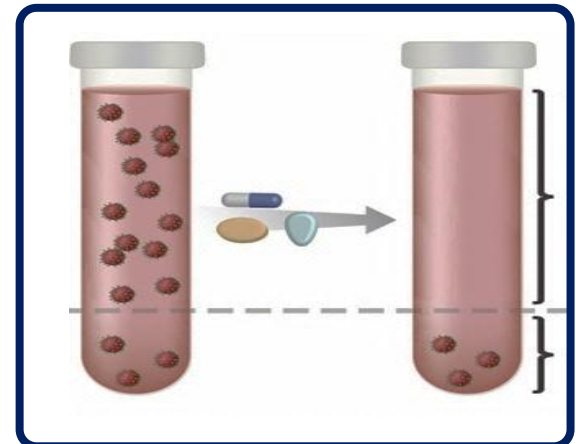
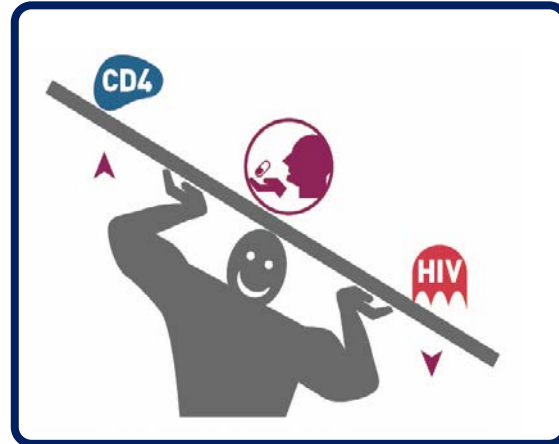
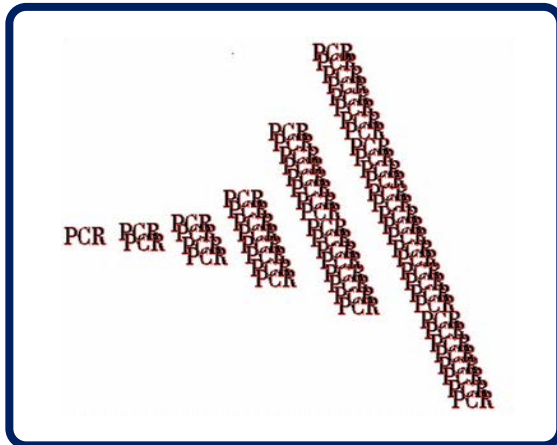
Mark made both important
scientific and policy contributions
to address the HIV pandemic.
We will miss him



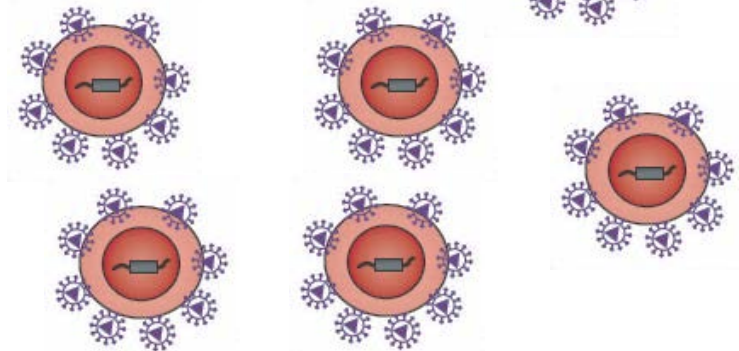
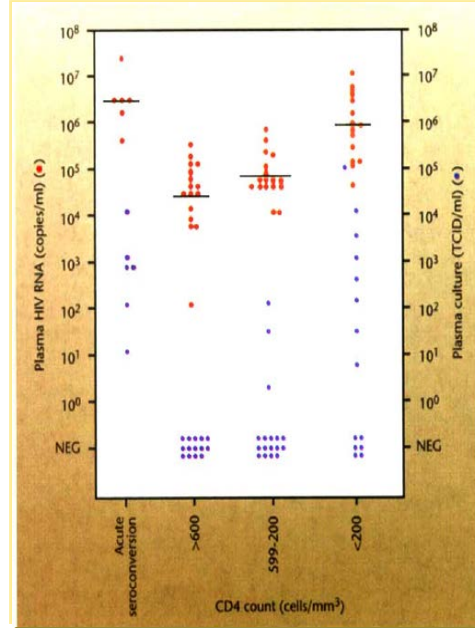
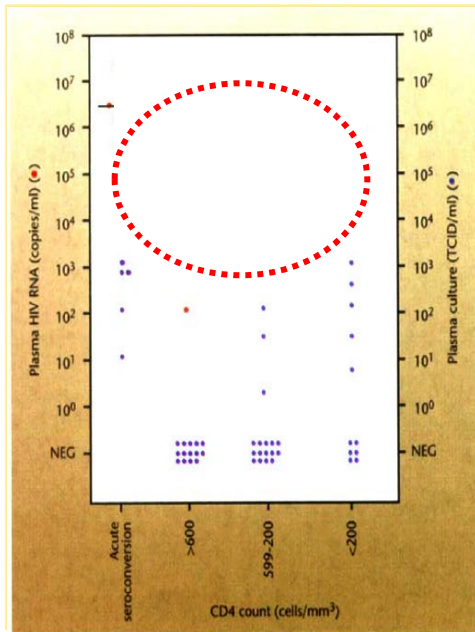
One World One Hope



Les ARV arrivent ... et les outils aussi



Les ARV arrivent ... et les outils aussi



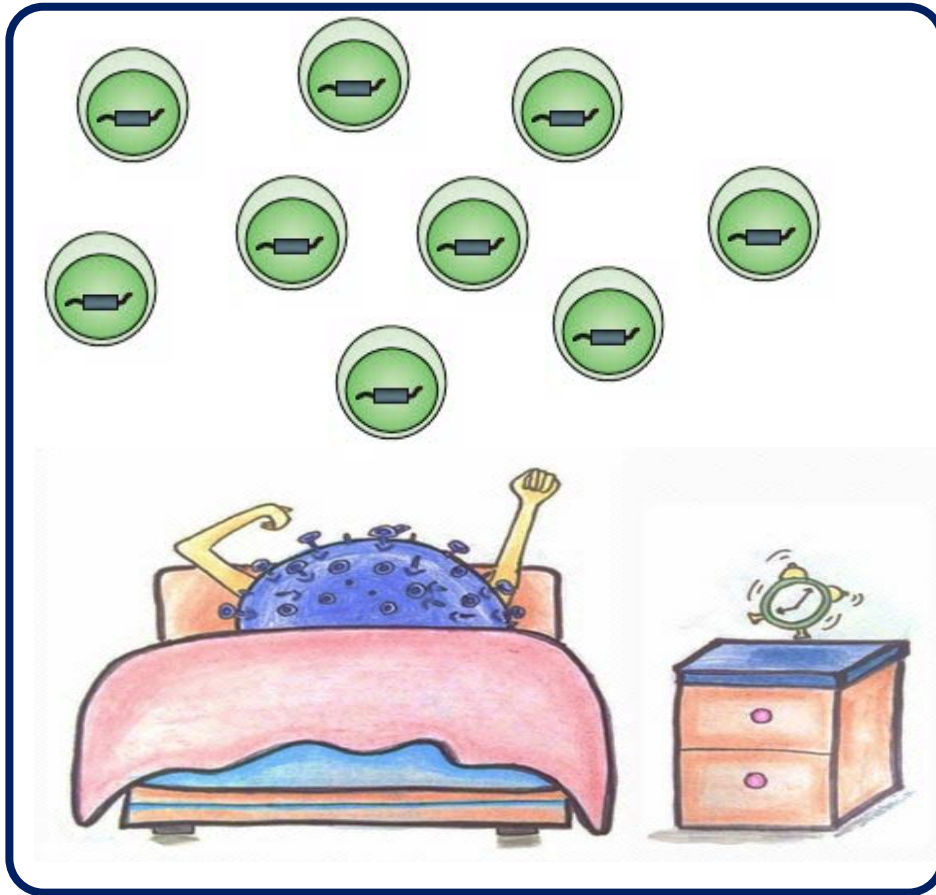
High Levels of HIV-1 in Plasma During All Stages of Infection Determined by Competitive PCR

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

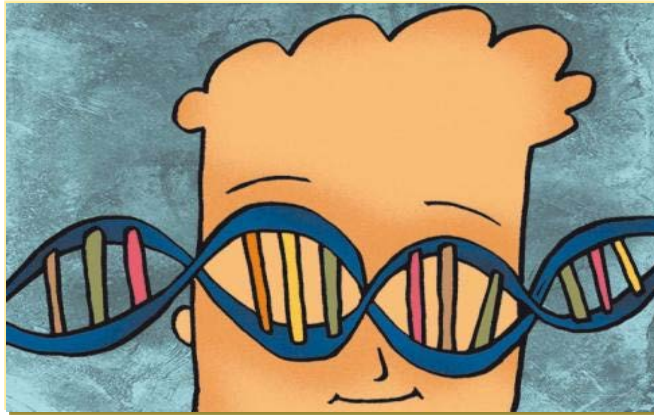
Les ARV arrivent ... et les outils aussi



T.W Chun et al ; PNAS 1998

« ... 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** »

Les ARV arrivent ... et les outils aussi

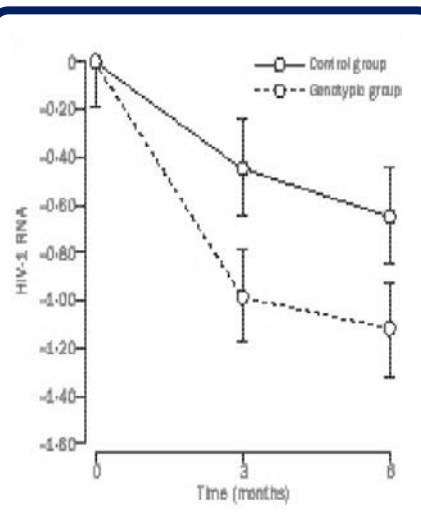


Drug-resistance genotyping in HIV-1 therapy: the **VIRADAPT** randomised controlled trial



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



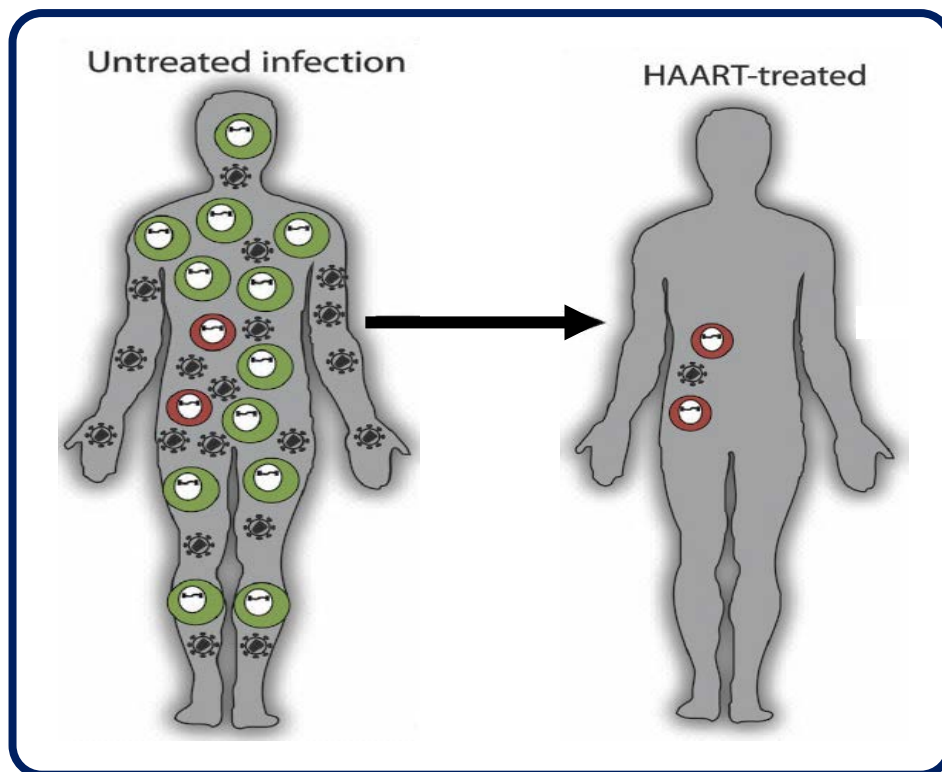
20 ans !



HIV-1 and HAART : A time to cure, a time to kill



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



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



L.Shen et al ; J.Aller.Clin.Immunol 2008

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

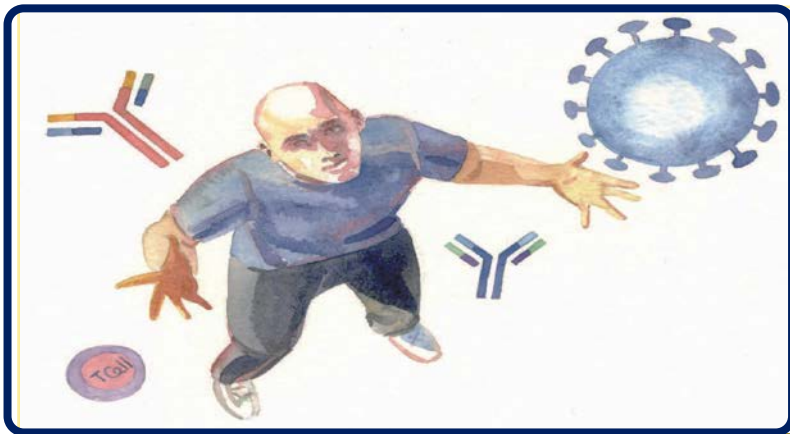
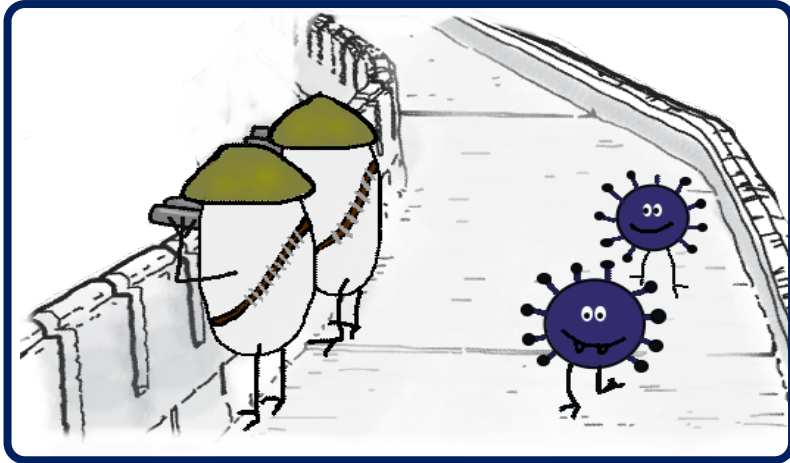


M.D Marsden et al ; Bioorg.Med.Chem.Let. 2013



D.D Richman et al ; Science 2009

Histoire extraordinaire ...mais pas terminée



CURE
HIV



Un grand MERCI... et une pensée

