

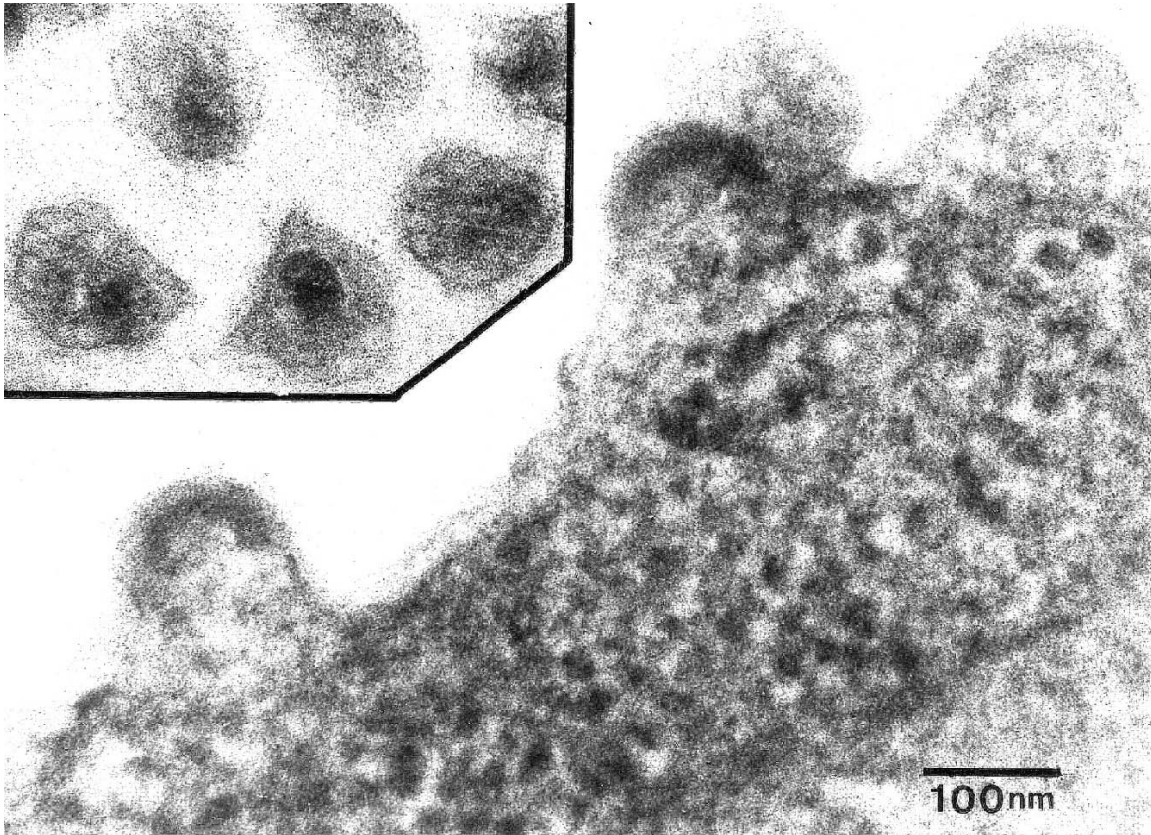
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What are the particles Montagnier presented as HIV in his Nobel Lecture?

In 1997 Djamel Tahi asked Montagnier if electron micrographs of purified HIV had been published. Montagnier replied “I couldn't tell you...we have some somewhere .. but it is not of interest, not of any interest”.¹ Although he accepts it is absolutely necessary to purify the virus particles in order to prove the existence of a new virus,¹ in his [Nobel lecture](#) Montagnier did not produce such evidence. Nonetheless, he showed an electron micrograph of particles and said “thanks to the electron microscopy, made by Charles Dautet, we could see very characteristic particles, of course budding particles like retroviruses, but also particles with a dense core which also differentiated [them] from the HTLV-I virus”*. For a Nobel lecture one assumes Montagnier would select the best EM he had on offer, one showing particles in which all the defining morphological features of lentiviruses are clearly visible. (All Montagnier's slides are [HERE](#) (6.23 MB pdf)).

*In 1983 Montagnier classified his particles as a “typical type-C RNA tumor virus”.² That is, under the retroviral taxonomy that existed in 1983, Montagnier's particles are a type C retrovirus particle, the same taxonomy as HTLV-I.³

Montagnier's EM of HIV from his Nobel Lecture



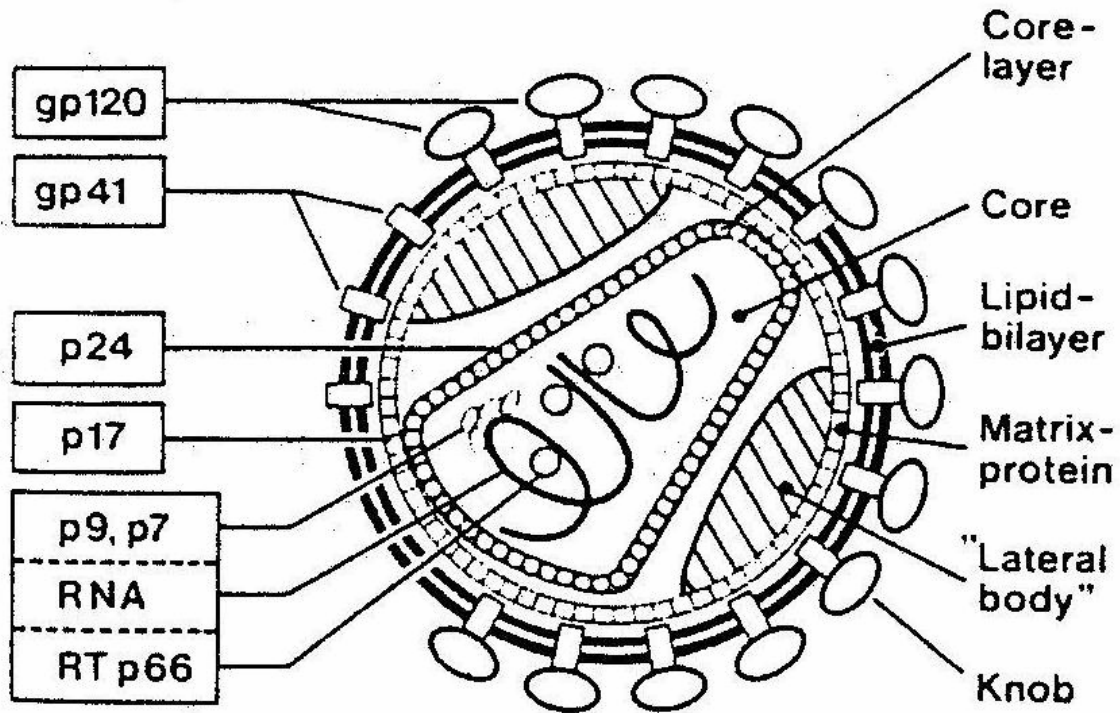
Note that unlike all EMs of HIV at the [website](#) linked to the National Institutes of Allergy and Infectious Diseases "[Focus on the HIV/AIDS Connection](#)", Montagnier's EM has a size bar. A size bar is essential because without it the viewer cannot measure the size of particles and other morphological features.

Viruses are particles classified into orders, families, species and genera. HIV is classified as a Lentivirus. The question is: What is the taxonomy of the particles in the Montagnier EM? To assist answering this question below are six morphological definitions of Retroviruses, Lentiviruses and HIV. We invite readers to submit their classifications with reasons to us at vturner@iinet.net.au Some readers may also like to consider emailing their interpretations to the Nobel Committee secr@mednobel.ki.se

1. Hans Gelderblom (Koch Institute Berlin)⁴

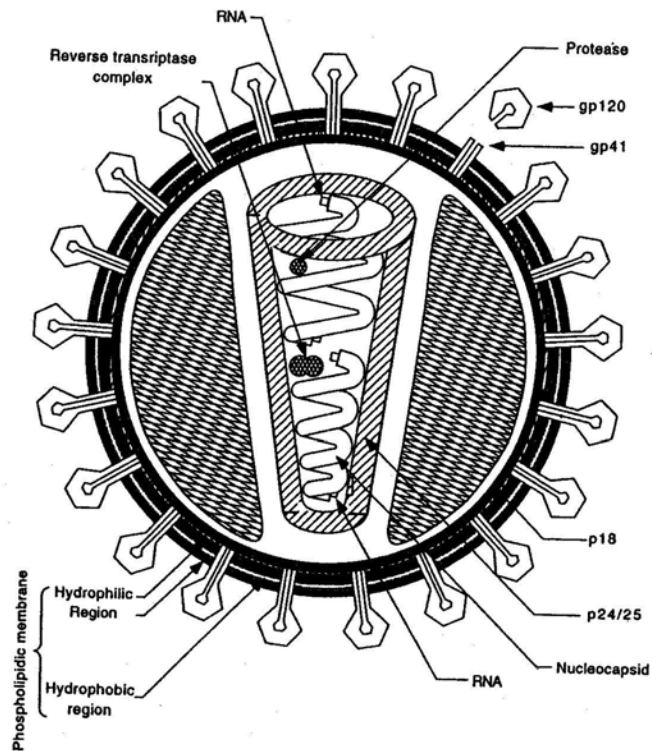
"Retroviruses are enveloped viruses with a diameter of 100 to 120 nm budding at cellular membranes. Cell released virions contain condensed inner bodies (cores) and are studded with projections (spikes, knobs)...On the 'ideal', intact HIV particle 72 knobs can be determined. They are made up of gp120...Parallel to the long axis the core, protein accumulations ('lateral

bodies') typical of Lentivirinae are visible. Morphologically, the lentivirus nature of HIV is reflected most clearly by the elongated, cone-shaped inner body..[core]".



2. Montagnier⁵

"The AIDS virus belongs to this group [lentivirus]...Particles of HIV are shaped like little spheres, each with roughly eighty little rounded projections shaped like pegs (see the accompanying figure). Each peg contains three of four molecules of a large protein, pg120, which has a strong affinity for the receptors (now called CD4) of T₄ lymphocytes" (diagram confirms cone-shaped core and lateral bodies).



HIV Structure
(According to C. Dauguet and
J.L. Moreau Institut Pasteur)

3. Pablo Gluschankoff** and Hans Gelderblom⁶

“The same vesicles can be seen in the preparations from the HIV-infected cells along with HIV-1 particles. The majority of the virus particles have the classical morphology, i.e., they can be identified by the relatively homogeneous diameter of about 110 nm, the dense cone-shaped core, and the “lateral bodies””.

**Centre d’Immunologie de Marseille-Luminy, Case 906, 13288 Marseille, France

4. Elizabeth Dax⁷, Head of the National Serology Reference Laboratory, Australia.

“Classification...

The retroviruses are enveloped spherical virions that are 80-120 nm in diameter...HIV has a type D cylindrical nucleocapsid core”. There are “72 knobs or spikes of the external envelope of HIV”. (No mention of a cone-shaped core or lateral bodies).

5. [The International Committee on the Taxonomy of Viruses](#)

Navigate to “Catalog” then “Families and Genera” and locate Lentivirus):

“00.061.1.06. *Lentivirus*”

Morphology

Virions consist of an envelope, a nucleocapsid, and a nucleoid. Virus capsid is enveloped. Virions are spherical to pleomorphic. Virions measure 80-100 nm in diameter. Surface projections are densely dispersed, small or inconspicuous spikes that cover evenly the surface. Surface projections are 8 nm long. The nucleoid is concentric. The core is rod-shaped, or is truncated cone-shaped”. (The “Surface projections” are “small or inconspicuous” yet their length is fixed at approximately 10% of the particle diameter).

6. [Virus Taxonomy Online](#)

“Introduction

Taxonomic Structure of the Family

Family	<i>Retroviridae</i>
Genus	<u><i>Alpharetrovirus</i></u>
Genus	<u><i>Betaretrovirus</i></u>
Genus	<u><i>Gammaretrovirus</i></u>
Genus	<u><i>Deltaretrovirus</i></u>
Genus	<u><i>Epsilonretrovirus</i></u>
Genus	<u><i>Lentivirus</i></u>
Genus	<u><i>Spumavirus</i></u>

Virion Properties

“Morphology

Virions are spherical, enveloped and 80–100 nm in diameter. Glycoprotein surface projections are about 8 nm in length. The internal core encapsidates the viral nucleocapsid. The apparently spherical nucleocapsid (nucleoid) is eccentric for members of the genus *Betaretrovirus*, concentric for members of the genera *Alpharetrovirus*, *Gammaretrovirus*, *Deltaretrovirus*, and *Spumavirus*, and rod or truncated cone-shape for members of the genus *Lentivirus*”

<http://www.virustaxonomyonline.com/virtax/lpext.dll/vtax/agp-0013/rtr03/rtr03-sec1-0001?f=templates&fn=document-frame.htm&2.0#rtr03-sec1-0001>

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7. Constantine NT, Saville R, Dax E. *Retroviral testing and quality assurance. Essentials for laboratory diagnosis*. Halifax: MedMira Laboratories, 2005.

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