

## **Man from the Moon: Viruses as Active Foreign Bio-Principles- An Exploration to the Origins of Classical Modern Cellular Life**

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Viruses in particle state, lack the yolk-like cellular lipids & down-stream productive metabolism; they have active genetic materials & proteins & effector carbohydrates- they are the active principles that may integrate with their counterparts with complementary contents & functions e.g. the modern cells. Their combination might have been the Adam & Eve of cellular origins. There is a definition of life that defines life as the integration of active virus-like entities (capsid coding systems) & their productive counterparts (ribosome i.e. expression machinery, coding systems) [Forterre, 2010].

The trans-capsid molecules in the viruses are different as they are adapted to span protein coat rather than the cell membranes of phospho-lipids. The internal enzymes present occasionally, however, seem likely more similar to classical life. Their genome could also show exclusive linguistics & phenotypes of foreign varieties integrated with the classical in a mosaic or uniformly. Their foreign characteristics might indicate merging of protein world virus-type life & classical RNA to DNA world life. The both kinds of life likely are siblings as they share nucleic acid genetic materials, protein & carbohydrate effectors. The rod-shaped viruses have protein – genome interaction that might indicate the origin of the histones & other epigenetic systems from them into the modern chromosomes & the nucleus.

The virus-like proteinaceous life merging with the classical, parsimoniously, could only replace the down-stream central dogma. Ribosomes have ribosomal proteins-RNAs complexes that may still exhibit the ancient merging evidences at the retained or inferable interactions, interfaces. Their integration in modern life represents successful co-ordination & interaction between two Genotype × Environment → Phenotype maps established in the course of evolution.

The processes of merging of the classical life & virus-type life could have likely succeeded the change to DNA as the genetic material as higher stability of the genome should have been a selective pressure *ab initio*. Various stages in this RNA to DNA genetic material transition could have been footprinted in the varied virus replication classes- the merging & RNA to DNA genome transition could have been simultaneous to some degree for the emerging virus classes to capture the intermediate genomic & replication characteristics.

The evolution of the originating virus classes & classical cellular life would include incorporation of lipid membranes with membrane proteins, in some virus species. The recent discoveries of plasma-membrane bound externally facing nucleic acids could be an example of innovation integrating both the kinds of life. The linguistic-phenotypic nature of the molecules should allude to their original source in addition to modern phylogenetics.

Virus-type organism(s) have likely existed as contributor(s) to the First Universal Common Ancestor to the Classical Modern Life as the Prime Active Principles spanning the Tree of Life.

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## References

Forterre, P., 2010. Defining Life: The Virus Viewpoint. *Orig Life Evol Biosph* 40, 151–160.  
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