

[Novel Negative Sense Genes in the RNA Genome of ...](https://europepmc.org/article/MED/33689070)

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Mar 10, 2021 · At the same time, the genome of coronaviruses is currently considered to be positive-polar, since all known genes of coronaviruses (approximately 25 genes for the nonstructural proteins...

[Structures and exoribonuclease activity functions in ...](https://www.ncbi.nlm.nih.gov/pubmed/31910588)

<https://www.ncbi.nlm.nih.gov/pubmed/31910588>

Author: Mickaël Bouvet, Isabelle Imbert, Fran... Publish Year: 2013

Oct 01, 2013 · Some viral enzyme activities are however unique to some viral families. This is the case of two 3'-5' exoribonuclease activities identified in arenavirus and coronavirus proteomes. Arenaviruses...



Images of Ambisense Polarity of genome RNA of Orthomyxo...

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[PDF] [Survey of RNA-Containing Viruses](#)

<https://ruc.edu.iq/wp-content/uploads/2021/05/lec.-10-Survey-of-RNA-2.pdf>

Coronaviruses 1. Enveloped 120- to 160-nm particles containing an unsegmented genome of positive-sense, single-stranded RNA, 27–32 kb in size; the nucleocapsid is helical, 9–11 nm in diameter. 2. Coronaviruses resemble orthomyxoviruses but have petal-shaped surface projections arranged in a fringe, like a solar corona. 3.

[Characterization of Wild-Type and Alternate Transcription ...](#)

<https://pubmed.ncbi.nlm.nih.gov/21917943>

RFV virus (RVFV) possesses a single-stranded tripartite RNA genome of negative/ambisense polarity. The S segment utilizes the ambisense strategy and codes for two proteins, the N nucleoprotein and the nonstructural NSs protein, in opposite orientations. The two open reading frames (ORFs) are separated by an intergenic region (IGR) highly ...

Cited by: 24 Author: Estelle Lara, Agnès Billecocq, Psylvia Le...  
Publish Year: 2011

[Images of Ambisense Polarity of genome RNA of Orthomyxo...](#)  
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**RNA viruses**

- Polarity (+ sense or ± sense)
- Size of genome
- Segmented or not
- Site of replication

- These are enveloped viruses with a helical nucleocapsid.
- Single-stranded, linear, nonsegmented, negative polarity RNA.
- They are highly pleomorphic, long filaments that are 80 nm in diameter but can be thousands of nanometers long.
- The term "filo" means "thread" and refers to these long filaments.
- The two human pathogens are Ebola virus and Marburg virus.

The diagram illustrates the ambisense strategy. It shows 'parental RNA' at the top, which is a single strand with two different reading frames. Below it, 'complementary RNA' is synthesized. From the complementary RNA, two types of 'progeny RNA' are produced: one in the same orientation as the complementary RNA and another in the opposite orientation. The final 'progeny virus' is shown at the bottom.

See all images >

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Name of Journal: *World Journal of Virology*

Manuscript NO: 65819

Manuscript Type: MINIREVIEWS

**Ambisense polarity of genome RNA of orthomyxoviruses and coronaviruses**

Zhirnov O. Ambisense strategy of viruses

Oleg Zhirnov

**Abstract**

Influenza viruses and coronaviruses have linear single-stranded RNA genomes with negative and positive sense polarities and genes encoded in viral genomes are expressed in these viruses as positive and negative genes, respectively. Here we consider a novel genes identified in viral genomes in opposite direction, as positive in

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### Characterization of Wild-Type and Alternate Transcription ...

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### Novel Negative Sense Genes in the RNA Genome of ...

<https://pubmed.ncbi.nlm.nih.gov/33689070>

The coronavirus family consists of lipid-containing envelope viruses that have a single-stranded RNA genome that encodes 25-30 proteins in different viruses by the mechanism of positive-polarity strategy. In addition, extended open reading translation frames (ORFs, genes) located in a negative-sense ...

Author: O P Zhirnov, S V Poyarkov Publish Year: 2021

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