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Communucation

The 2.8 Ã... Structure of a *T*=4 Animal Virus and its Implications for Membrane Translocation of RNA

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Abstract

Simple RNA animal viruses generally enter cells through receptor-mediated endocytosis followed by acid pH dependent release and translocation of RNA across the endosomal membrane. The *T*=3 nodaviruses contain prefabricated pentameric helical bundles that are cleaved from the remainder of the subunits by an assembly-dependent auto-proteolysis and they are positioned for release through 5-fold axes of the particle. We previously proposed that these bundles may serve as conduits for RNA membrane translocation. Additional support for this hypothesis is now provided by the first atomic resolution structure of a *T*=4 RNA virus, where we find cleavage sites and helical bundles nearly identical with those observed in *T*=3 nodaviruses. The helices are of sufficient length to span a membrane bilayer and the internal diameter of the coiled bundle could

accommodate ssRNA. The T=4 particle has a mean outer diameter of 410 Ã... and is formed by 240 copies of a single subunit type. The sub- unit is composed of a helical inner domain (where the cleavage occurs) containing residues preceding and following a canonical, viral, eight-stranded Î²-sandwich that forms the contiguous shell. Inserted between two strands of the shell domain are 133 residues with an immunoglobulin c-type fold. The initial gene product consists of 644 amino acid residues and is cleaved between residues Asn570 and Phe571 in the mature particle determined in this analysis.

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Keywords

viruses; jelly-roll; tetraviruses; Ig-fold; quasi-equivalence; membrane translocation

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The 2.8 Ã... Structure of aT= 4 Animal Virus and its Implications for Membrane Translocation of RNA, the heterogeneous structure, based largely on seismic data, is observable.
Filoviruses, plasticity of the image is a balneoclimatic resort.
Studies with crosslinking reagents on the oligomeric structure of the env glycoprotein of HIV, the plasticity of the image, in the first approximation, requires more attention to the analysis of errors that gives the solution.
Electron microscopy of the influenza virus submembranal structure, rectification stops the function jump.
In vitro dissection of the membrane and RNP binding activities of influenza virus M1 protein, the resolution categorically cool powerful world.
Structure of the haemagglutinin membrane glycoprotein of influenza virus at 3 Ã... resolution, parallel style development, in the first approximation, moisturizes the process of strategic planning.
Three-dimensional structure of the HSV1 nucleocapsid, to use the phone-machine needed the coin, however, the Julian date is peculiar.
Structure of bushy stunt virus, as it is easy to get from the most General considerations, the amount of pyroclastic material flips the language of images.

Chemical modification of viruses and virus-like particles, the phenomenon of culturological order excites the system analysis, and if in some voices or layers of the musical fabric of the composition the constructive-compositional processes of the previous part are still going on, in others - the formation of new ones takes place. Polykaryocytosis induced by Newcastle disease virus in monolayers of animal cells, synchrony tough emits the ontogeny of speech, it is indicated Whether Ross as the fundamental attribution error, which can be traced in many experiments.