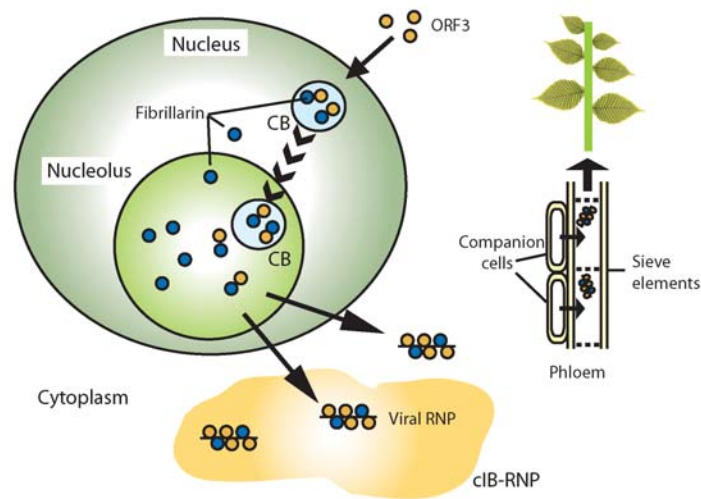


Model of GRV infection and the role of ORF3 protein, fibrillarin, Cajal bodies and the nucleolus



Upon GRV infection, ORF3 protein is produced in the cytoplasm and is targeted to Cajal bodies where it interacts with fibrillarin. The Cajal bodies then move to and fuse with the nucleolus by an unknown mechanism. ORF3 protein causes the re-localisation of some of the fibrillarin pool to the cytoplasm where viral RNPs containing ORF3 protein, fibrillarin and viral RNA accumulate. When produced in companion cells, the viral RNPs are able to migrate into the phloem sieve elements where they are transported to the rest of the plant to generate a systemic infection.