This review article focuses on the molecular mechanisms involved in virus/vector interactions. The authors describe in detail the interactions that require a non-structural compound - the helper component- to establish a molecular bridge between the capsid and a receptor in the vector. The helper strategy refers to a wide variety of proteins that have long been seen as an example of convergent evolution with an identical mode of action. Recent work based on the study of viruses with multipartite genomes has highlighted more diverse modes of action, particularly in virus/vector systems involving circulatives modes of transmission.
This review places the discoveries of the HC strategy in a historical context with the seminal studies of the theory and describes the limitations of these theories highlighted by the most recent works to which the authors have made a significant contribution.
In an extensive conclusion, the authors present the evolutionary relevance of these strategies in both "circulative" and "non-circulative" transmission models, taking into account single and multi-partite genomic structures.

The text describes in a synthetic and clear manner the scientific approaches that led to the discovery of the mechanisms presented. The presentation of an unsolved and counter-intuitive issue in relation to the working model (L467 - 485) is particularly appreciated and allows the reader to take a critical look. The whole is completed by a bibliography of quality which allowed me to discover very interesting references. In conclusion, it was a real pleasure to read this work, which I support for publication and which I hope will be published in Peer Community Journal.

I have a few minor comments which I think could improve the manuscript slightly if taken into account:

Comments:

- The sentence in lines 445/446 suggests that Figure 2 will present the new elements that are incompatible with the theory commonly accepted so far but it does not really do that: the form of the figure, with unnecessarily large and/or numerous cell ultrastructures drawing attention and important proteins being small and represented by squiggles confuses the message which is very well explained in the text of the manuscript. I suggest that either this Figure 2 be thoroughly modified and simplified or deleted.

- Ligne 470: An additional (small) sentence to introduce the role of the U4 segment in the text would be appreciated. As it stands, the reader needs to consult the references to get the point.

- §5.2: I do not understand why the authors limit themselves to proposing persistence of the virus in the lumen. Is there any experimental evidence that the virus is not internalised via a direct interaction with the capsid and that the NSP only intervenes later in the virus circuit through the vector, in the salivary glands for example?

Typos:

- L99: inappropriate format of the bibliographic reference (placement of brackets).
- Fig1: Change “Aceostyle” to “Acrostyle”
- Check references throughout the manuscript. For many references, the first two authors are cited in the text:
  Ex:
  - Franz et al. 1999” instead.
  - Leh, et al. 1999).
  - Di Mattia 2020
  - Li et al. 2019

        - Froissard et al. 2002
        - Ji et al. 2019
        - Grigoras et al… 2018…
- L379 – L383: Add the reference Lu et al. 2019 in the text.
- L 506 : change e.i. into i.e. (?)