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Virus-induced RNA silencing

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RNA silencing processes result in the sequence-specific degradation of RNA and effective post-transcriptional gene silencing. In the May 17 *Science* Hongwei Li and colleagues from the University of California, Riverside report that Flock House Virus (FHV) is both an initiator and a target of RNA silencing (*Science* 2002, **296**:1319-1321). They noticed that *B2* gene of FHV resembles a plant virus gene encoding a silencing suppressor. Expression of the FHV B2 protein in plants prevented RNA silencing of a *GFP* transgene. FHV normally infects vertebrate and invertebrate animal hosts. Li *et al.* found that infection of *Drosophila* cells resulted in the production of FHV short-interfering RNA (siRNA). The RNA silencing machinery prevented FHV accumulation, indicating the FHV is also a target of RNA silencing. The FHV B2 protein suppresses RNA silencing and favours FHV accumulation. These results provide evidence that RNA silencing is part of the innate immune response to viral infection in animals.

References

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3. University of California, Riverside , [<http://www.ucr.edu>]