

Supplementary Material to:

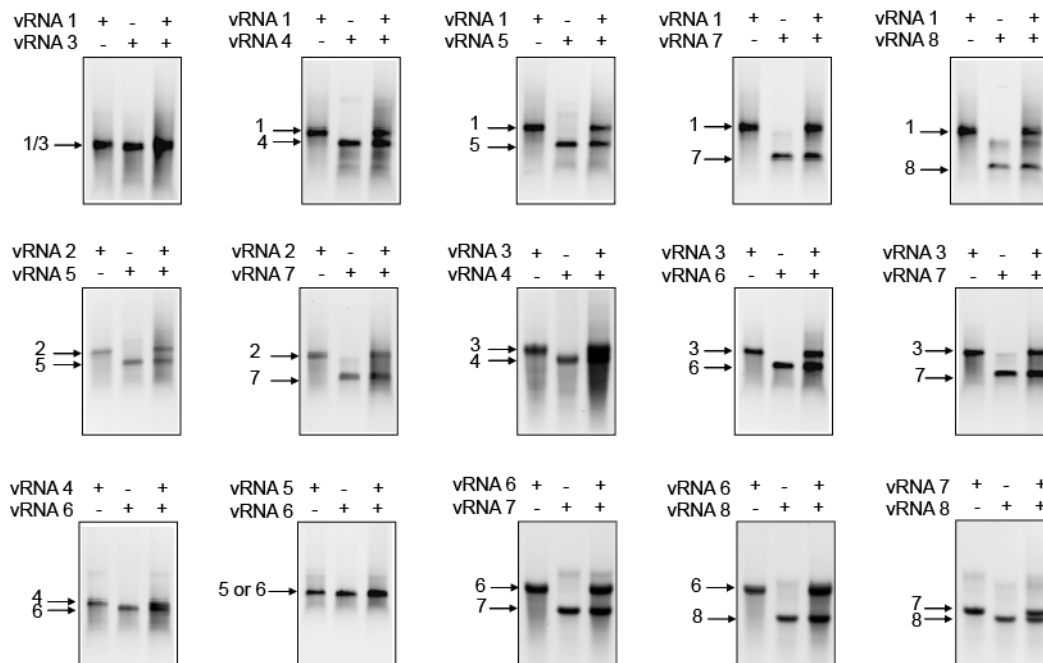
An *in vitro* network of intermolecular interactions between viral RNA segments of an avian H5N2 influenza A virus: comparison with a human H3N2 virus

Cyrille Gavazzi¹, Catherine Isel¹, Emilie Fournier¹, Vincent Moules², Annie Cavalier³, Daniel Thomas³, Bruno Lina² and Roland Marquet^{1,*}

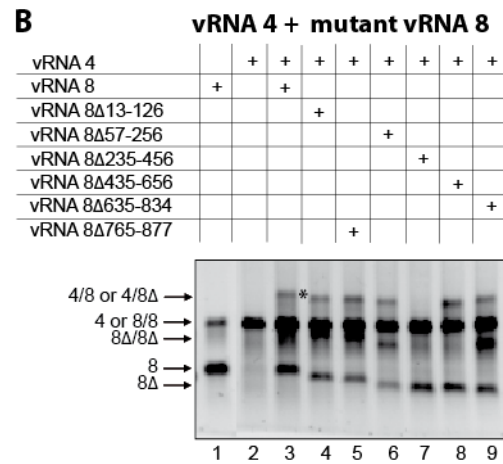
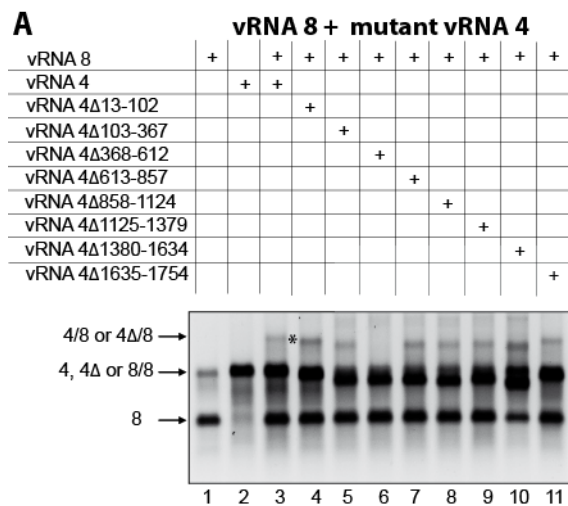
¹ Architecture et Réactivité de l'ARN, Université de Strasbourg, CNRS, IBMC, 15 rue René Descartes, 67084 Strasbourg, France

² Virologie et Pathologie Humaine, Université Lyon 1, EA4610, Faculté de Médecine RTH Laennec, 69008 Lyon, France

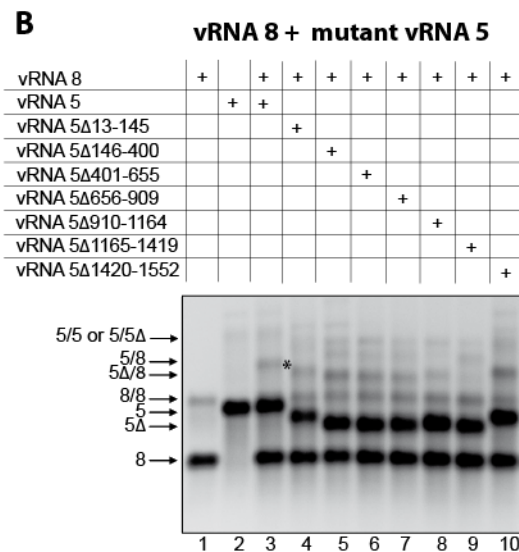
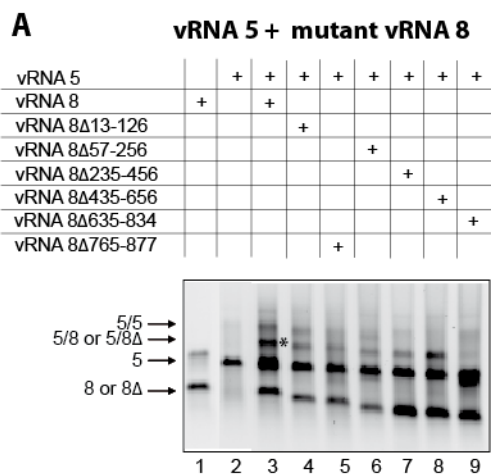
³ Team "Translation and Folding", Université Rennes 1, UMR CNRS 6290 IGDR, Campus de Beaulieu, bâtiment 13, 35042 Rennes, France



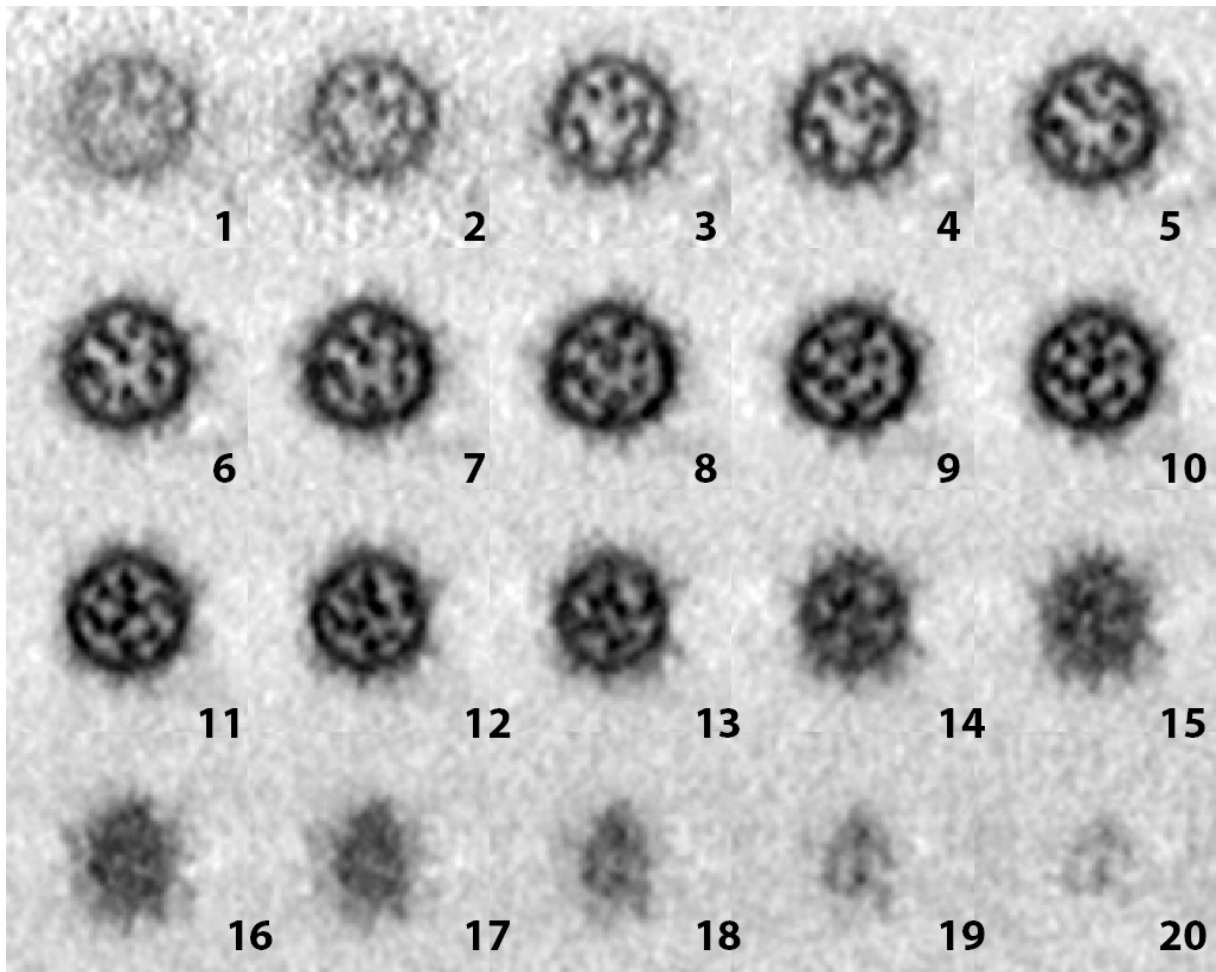
Supplementary Figure 1: Agarose gel electrophoresis of pairs of vRNAs that don't significantly interact *in vitro*.



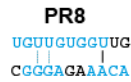
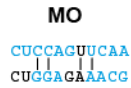
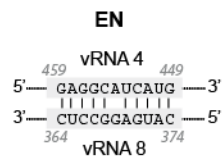
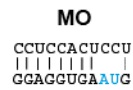
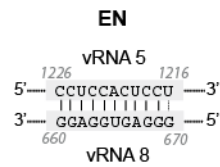
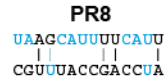
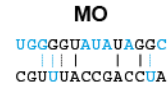
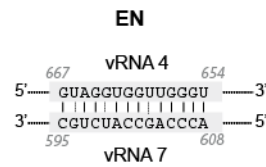
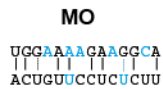
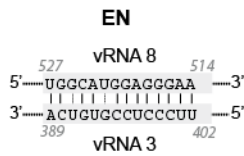
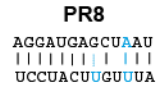
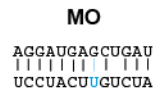
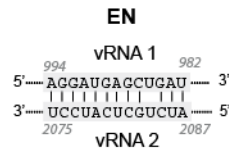
Supplementary Figure 2: Regions 368-612 of vRNA 4 and 256-435 of vRNA 8 are required for optimal interaction between these vRNAs. Deletions were introduced in vRNA 4 (A) or vRNA 8 (B) and formation of the intermolecular complex (marked by a black asterisk) was monitored by agarose gel electrophoresis.



Supplementary Figure 3: Regions 656-765 of vRNA 8 and 1165-1419 of vRNA 5 are required for optimal interaction between these vRNAs. Deletions were introduced in vRNA 8 (A) or vRNA 5 (B) and formation of the intermolecular complex was monitored by agarose gel electrophoresis.



Supplementary Figure 4: Successive virtual cross-sections obtained by electron tomography of an EN virion budding from MDCK cells, from the bottom to the budding tip of the viral particle.

A vRNA 4/vRNA 8**B vRNA 5/vRNA 8****C vRNA 4/vRNA 7****D vRNA 3/vRNA 8****E vRNA 1/vRNA 2**

Supplementary Figure 5: Interacting sequences are not conserved. Comparison of the sequences involved in the interactions between vRNAs 4 and 8 (A), 5 and 8 (B), 4 and 7 (C), 3 and 8 (D) and 1 and 2 (E) amongst the EN, MO and PR8 AIV strains.