

par **Benoît Arragain**

Institut de Biologie Structurale

Groupe de Microscopie Electronique et Méthodes

Structural and functional analysis of *Bunyvirales* replication and transcription

Thèse de Doctorat de l'Université Grenoble Alpes

Many viruses are public health threats. The *Bunyvirales* order includes several important and/or emerging human pathogens that cause hemorrhagic fevers, such as Hantaan virus, or encephalitis, such as La Crosse virus.

Bunyvirales also show similarities with influenza viruses, an infectious agent responsible for seasonal epidemics. Although vaccines against influenza are available, there is currently no treatment against *Bunyvirales* infection, which is why understanding the functioning mechanisms of these viruses is fundamentally important.

This thesis focuses on the structural and functional analysis of two major viral players responsible for the multiplication of the viral genome and viral proteins within an infected cell: nucleocapsids, which protect the viral genetic information, and viral polymerases, which allow to replicate and transcribe the viral genome.