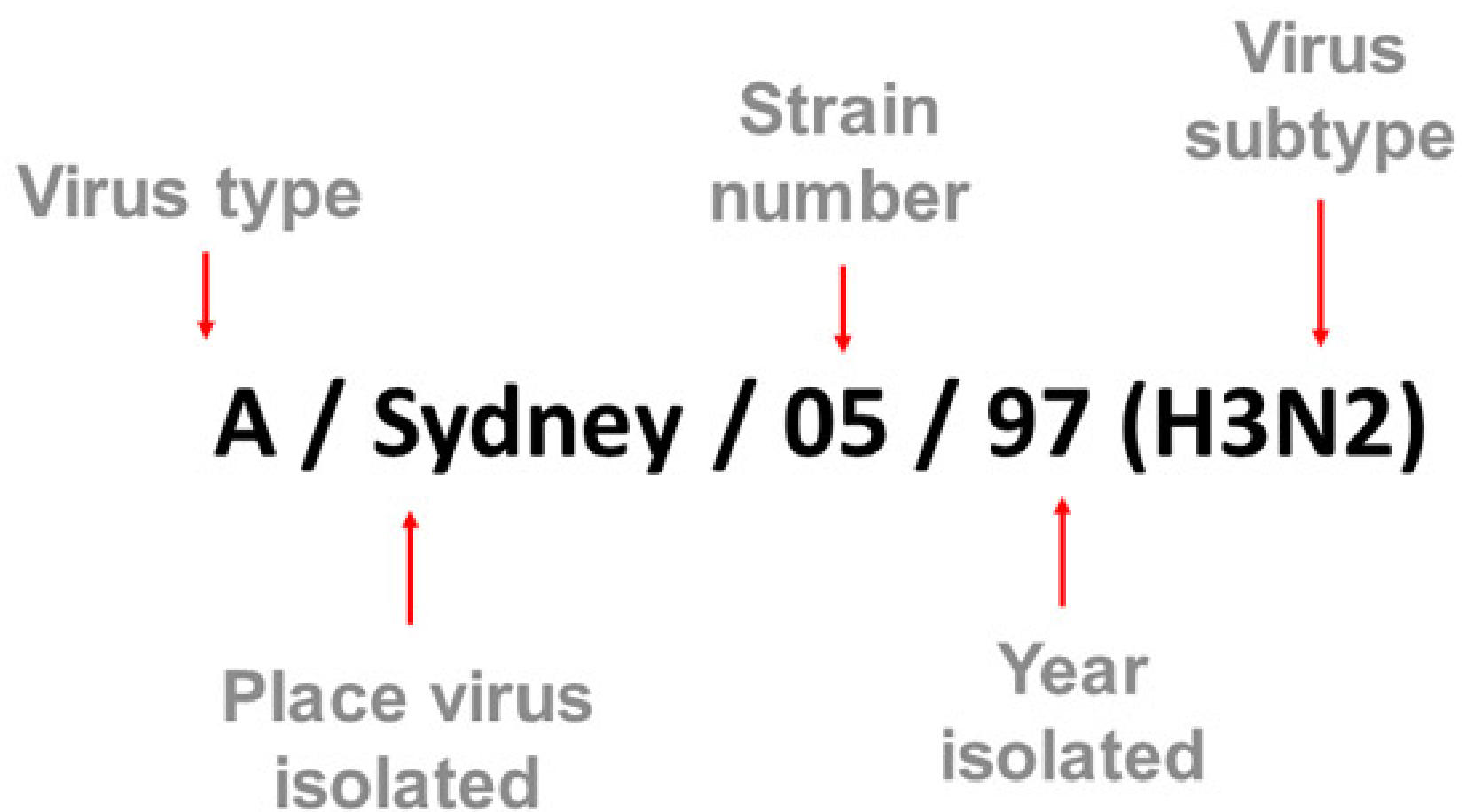


Highlights in the History of Avian Influenza (Bird Flu)

[Background](#) | [1880s – 1950s](#) | [1960s – 1990s](#) | [2000s](#) | [2010s](#) | [2020s](#) | [References](#)

This page provides a brief background, timeline, and summary of significant past outbreaks of bird flu in wild birds, domestic poultry, and people.

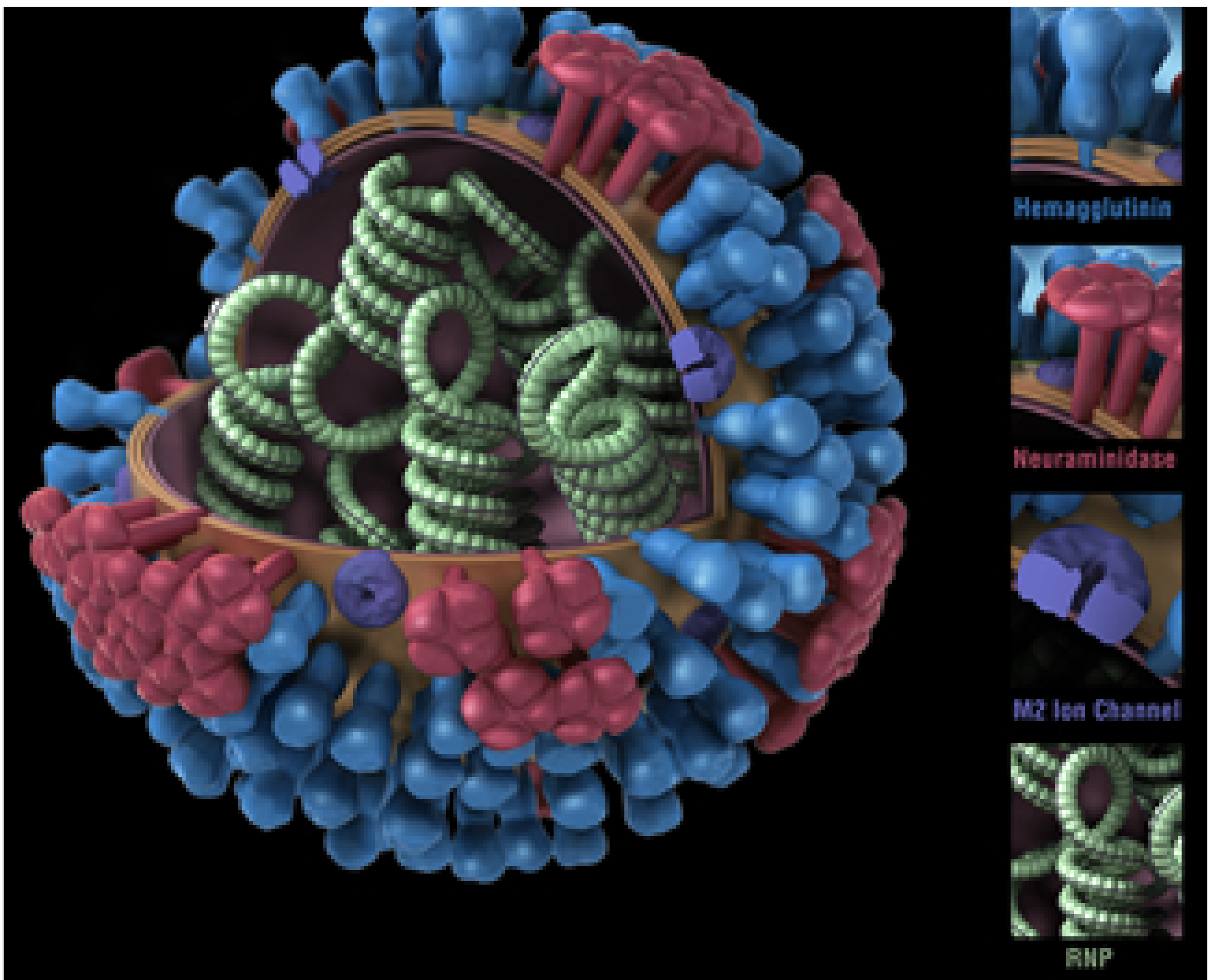
Understanding the naming of flu viruses



Flu A viruses are divided into subtypes based on two proteins on the surface of the virus: hemagglutinin (HA) and neuraminidase (NA). There are 18 different HA subtypes (H1 through H18) and 11 different NA subtypes (N1 through N11).

Background

The first description of avian influenza (bird flu) dates to 1878 in northern Italy, when it was described as a contagious disease of poultry associated with high mortality, referred to as “fowl plague.” At the turn of the 20th century, it was determined that “fowl plague” was caused by a virus; however, it was not until 1955 that the virus was shown to be a type A influenza virus. In 1971, influenza viruses were first classified based on the antigenic properties of their structural and surface proteins: the nucleoprotein (NP) [type] and hemagglutinin (HA) and neuraminidase (NA) [subtype] proteins, as well as the species of origin. By 1980, researchers were using this system to classify influenza viruses regardless of the species of origin. This naming tradition is still used today. By 1981, the term “fowl plague” was substituted by the more appropriate term, avian influenza, at the First International Symposium on Avian Influenza.



Flu virus surface proteins (HA and NA) can change in two ways. These changes are referred to as antigenic drift and shift. Flu viruses change all the time due to antigenic drift, but antigenic shift happens less frequently.

Avian influenza A viruses are further classified into two categories: highly pathogenic avian influenza (HPAI) and low pathogenic avian influenza (LPAI) A viruses based on [specific criteria](#) (viral characteristics and mortality in experimentally infected chickens¹). Most bird flu viruses are low pathogenic and cause few or no signs of disease in infected wild birds. LPAI viruses also cause either no signs of disease or mild disease in chickens and other domestic poultry. In contrast, HPAI viruses can cause severe disease and high mortality in infected poultry yet cause little to no disease signs in certain wild aquatic bird species. While classification as an LPAI or HPAI virus refers to the severity of disease in infected poultry, both kinds of avian influenza A viruses have caused severe disease in infected humans.