

Centenario de la Gripe Española de 1918. La peor pandemia en la historia contemporánea mundial: lecciones para el futuro

Centenary of the 1918 Spanish Influenza, the Worst Pandemic in the Recent History of the World: Lessons for the future

Madrid, 27 y 28 de septiembre / September 27-28 2018

ABSTRACT

The search for the origin of “the monster” known as Spanish influenza

Robert G. Webster

The first wave of the 1918 influenza pandemic was mild. Historical records indicate that it arose in United States and was carried to the trenches in France by American doughboys. It is unknown when and how the mild strain became a monster virus that caused healthy young adults to hemorrhage from the nose and ears and drown in their own blood. Conditions in the trenches with crowding, mutagenic gases and abysmal hygiene provided optimal conditions for the genesis of the monster virus. In retrospect it is probable that America unintentionally used biological warfare to win World War 1. The German commander Erich von Ludendorff claimed that the virus caused the collapse of the German army.

The causative agent of pandemic influenza was identified as a virus, but the source was unknown. Speculation was that hypermutation of circulating influenza strains or domestic animals including the pig or poultry were possible sources. Studies with the late Graeme Laver on migratory seabirds on the Great Barrier Reef of Australia provided some of the first evidence that the wild aquatic birds of the world are one of the ultimate reservoirs of influenza viruses. The segmented nature of the influenza genome permits reassortment between influenza viruses from different hosts and contribute to the generation of pandemic influenza viruses. There is a vast reservoir of influenza viruses in aquatic birds and in bats; the challenge is to predict which influenza viruses have the capacity for host range jumping, and which combinations have the potential to be monsters.