ESFLU
European Swine Influenza Network

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EUROPEAN COOPERATION IN SCIENCE & TECHNOLOGY

Overview on ESFLU
“European Swine Influenza Network”

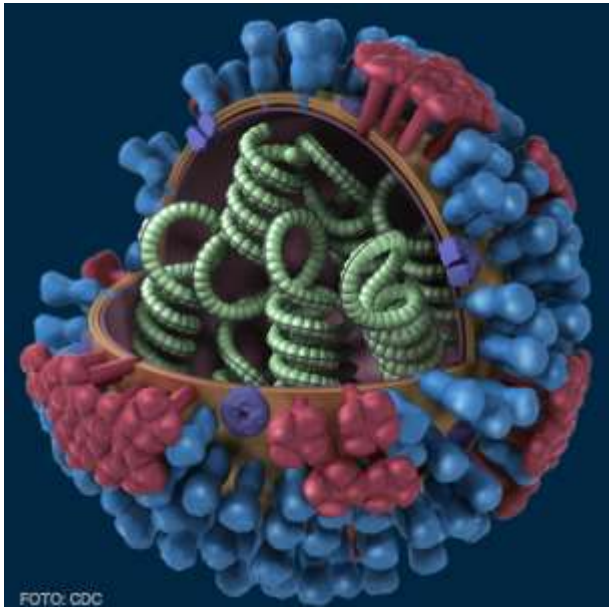
COST Action CA21132

EPP Congress 2023
Resilience of the European Pig industry
Seville, Spain (17-19 May 2023)

EUROPEAN PIG PRODUCERS

Funded by
the European Union

Swine influenza (SwIAV)



- Swine influenza is a highly contagious respiratory disease caused by influenza A virus in pigs that leads to production losses.
- Intensification of pork production and free movement of animals across borders fosters the spread of the virus in Europe.

swIAV subtypes

- The most prevalent circulating enzootic subtypes in the swine population are:

- **H1N1** (avian-like swine)
- **H1N2** (human-like reassortant swine)
- **H3N2** (human-like reassortant swine)
- **H1N1pdm** (pandemic A/H1N1 2009)

Facts

- Pigs can be infected with different IAV strains at the same time → genomic reassortment → new genotypes.
- Humans can infect pigs with seasonal IAVs - reverse zoonosis.
- When an influenza virus that normally circulates in swine is detected in a person, it is called a “variant influenza virus”.
- New variants are constantly emerging, some of which have zoonotic potential and pose a major threat to animal welfare, the pig industry and human health.

Challenges

- Disease awareness is low in some European countries.
- Inadequate capabilities for disease surveillance and management.
- Diagnostic protocols are not harmonized.
- Standardized procedures do not exist in most countries and vaccine coverage is inconsistent.

An interdisciplinary expert network is needed to develop a comprehensive view of the disease and its impacts to better manage swine influenza in Europe.

ESFLU- European Swine Influenza Network

- 57 experts in vet medicine
- 37 virologists (microbiologists)
- 9 epidemiologists (biostatisticians, databases experts)
- 3 bioinformaticians – experts in genomics
- 1 social anthropologist

- The main aim of ESFLU is to establish an interdisciplinary European network on swine influenza A virus (swIAV), to improve information exchange, awareness and pandemic preparedness.

Geographic coverage of participants (April 2023)

- 30 participating countries with 135 working group members
- 24 countries in the Management Committee (43 members)

Challenges

- The main challenge is to control the spread of swIAV in order to protect both animal and human health in an interdisciplinary One Health approach.

Objectives

- To improve information sharing, awareness and preparedness concerning swIAV in Europe.
- Strengthen capability in Europe to detect, identify and characterize swIAV virus.
- Establish guidelines for swIAV management and control in pig herds.
- Promote dialog between stakeholders and inform policymakers and the general public on swine flu disease burden and the risks to public health.

Goals

- Facilitate data sharing and analysis for swIAV surveillance with national and international agencies
- Establish the network as the European OFFLU counterpart and support global surveillance and pandemic preparedness
- Strengthen capability in Europe to detect, identify and characterize swIAV virus

Experts involved in 4 Working Groups

- **WG 1 -** Strengthen the capability in Europe for the **identification and characterization** of swine influenza virus.
- **WG 2 -** Increase **sharing and analyses of surveillance and virology data.**
- **WG 3 -** Foster knowledge exchange on **surveillance and management measures** to improve control of swIAV in pig herds.
- **WG 4 -** Dissemination, **communication** and awareness.

1st meeting in Brussels (November 2022)

European
Swine Influenza
Network

The Main Aim

Swine influenza is a highly contagious respiratory disease in pigs caused by influenza A viruses (swIAV) which leads to production losses. The intensification of pork production systems and free livestock movement across borders fosters the spread of the virus in Europe. New variants, some with zoonotic potential, constantly emerge. Recent human pandemics have highlighted the zoonotic and reverse zoonotic potential of swine influenza and its risks for both animal and public health. Despite the burdens caused by swine influenza, surveillance across Europe is scanty and fragmented. Disease awareness is low in some European countries, diagnostic protocols are not harmonized, most countries lack standardised procedures and vaccinecoverage is inconsistent. An interdisciplinary expert network is needed to develop a comprehensive view of the disease and its impacts to better manage swine influenza in Europe. ESFLU will:

2nd Scientific Meeting in Barcelona (April 2023)

- Management Comitee Meeting.
- Presentations:

✓3 PhD thesis

✓4 Research projects

✓5 Surveillance programs

✓10 Scientific presentations on general swine flu topics and scientific results

- 4 Working Group sessions

https://swineflu.eu

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European Swine Influenza Network

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ESFLU Scientific Meeting in Barcelona / ABSTRACT BOOK

25-27th April 2023
UAB Casa Convalescència
Barcelona

READ MORE

What is ESFLU looking for from EPP?

- To have our results ‘land’ in the community of swine producers. That guidelines eventually get used (this is what EU and COST aim for). EPP is a nice platform that reaches out to many producers in many countries.
- To ask them to distribute results further among their members/national EPP communities
- To interact with ESFLU about their problem perception of swine influenza. Do they agree with our impressions we use, or do they disagree
- To help raise awareness for the challenges of swine flu in EU countries / EPP members.
- Them to understand that swine flu is still something the industry can influence themselves in most countries without yet much governmental interference. This may change in case the zoonotic potential changes. ESFLU provides EPP access to knowledge and experts.

Thank you for the attention!