

Training course on African swine fever (ASF) diagnostic techniques.

Organized by the
European Union Reference Laboratory (EURL)
for African swine fever (ASF)

Centro de Investigación en Sanidad Animal
CISA-INIA, Valdeolmos, Madrid, España



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Venue:

European Union Reference Laboratory (EURL)
for African swine fever (ASF)
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Objective:

Transfer of technology of the EURL and OIE prescribed-ASF diagnostic techniques.

First Day

Time Schedule: 9.15 -16.15

Opening session: *Dr. Marisa Arias*, Technical Director at CISA-INIA and Coordinator of the EURL for ASF.

Lectures:

- African swine fever (ASF): general overview.
- African swine fever diagnostic techniques; key points.

Procedure and instructions to access at the BSL-3 Laboratory Facilities: *D. Gonzalo Pascual*. Head of Biosafety at CISA-INIA

LABORATORY PRACTICES. HANDS-ON DIAGNOSTIC SIMULATION ON ASF SUSPICIOUS SAMPLES → *For the execution of the ASF training course a panel of blind samples is provided to the participants for performing the ASF serological and virological diagnosis.*

Virological diagnosis:

- **Laboratory practise I:** *ASFV genome detection by conventional PCR* → DNA extraction and PCR set up.
- **Laboratory practise II:** *ASFV and Classical swine fever (CSF) differential diagnosis by multiplex PCR* → DNA extraction and PCR set up.
- **Laboratory practise III:** *ASF virus isolation and haemadsorption (I)* → Obtention of porcine leucocyte primary cell culture from peripheral donor pig blood.

Location: CISA-INIA, BSL-3 Laboratory Facilities

Second Day

Time Schedule: 9.15 -16.15

LABORATORY PRACTICES. HANDS-ON DIAGNOSTIC SIMULATION ON ASF SUSPICIOUS SAMPLES

Virological diagnosis:

- **Laboratory practise IV:** *ASFV and Classical swine fever (CSF) differential diagnosis by multiplex PCR and ASF conventional PCR* → electrophoresis methods/analysis of the results.
- **Laboratory practise V:** *ASFV genome detection by real time PCR* → PCR set up/ analysis of the results.
- **Laboratory practise VI:** *ASF virus isolation and haemadsorption (II)* → sample inoculation.

Location: CISA-INIA, BSL-3 Laboratory Facilities

Third Day

Time Schedule: 9.15 -16.15

LABORATORY PRACTICES. HANDS-ON DIAGNOSTIC SIMULATION ON ASF SUSPICIOUS SAMPLES

Virological diagnosis:

- **Laboratory practise VII:** *ASFV antigen detection by antigen ELISA test → commercial antigen ELISA test of INGENASA (INGENASA PPA DAS K2) / analysis of the results.*

Serological diagnosis:

- **Laboratory practise I:** *ASF antibody detection by indirect ELISA test (OIE-ELISA) → ELISA set up/ analysis of the results.*
- **Laboratory practise II:** *ASF antibody detection by commercial blocking ELISA → commercial INGENASA (INGEZIM PPA COMPAC K3) ELISA set up/ / analysis of the results.*

Location: CISA-INIA, BSL-3 Laboratory Facilities

Fourth Day

Time Schedule: 9.15 -16.15

LABORATORY PRACTICES. HANDS-ON DIAGNOSTIC SIMULATION ON ASF SUSPICIOUS SAMPLES

Serological diagnosis: confirmatory tests

- **Laboratory practise III:** *ASF antibody detection by Immunoblotting (OIE IB)→ IB set up/ analysis of the results.*
- **Laboratory practise IV:** *ASF antibody detection by Indirect immunoperoxidase tests (IPT) → IPT set up/ analysis of the results.*

Location: CISA-INIA, BSL-3 Laboratory Facilities

Fifth Day

Time Schedule: 9.15 -16.15

LABORATORY PRACTICES. HANDS-ON DIAGNOSTIC SIMULATION ON ASF SUSPICIOUS SAMPLES.

Virological diagnosis:

- **Laboratory practise VII: ASF virus isolation and haemadsorption (III)** → analysis of the results.

Closing session: ASF hands-on diagnostic simulation results/ Discussion, Conclusions and Recommendations on ASF