PRESS RELEASE Date: 10/12/2017

SWINOSTICS – Swine diseases field diagnostics toolbox

The increased population density in modern animal production systems has made them vulnerable to various transboundary infectious agents that threaten productivity of the meat industry.

Even though more effective drugs and vaccines have reduced the direct burden of livestock diseases, the total impact of animal health threats may actually be increasing, because in a globalized and highly interconnected world, the effects of diseases extend far beyond animal sickness and mortality. Therefore, early diagnosis and establishment of reliable countermeasures to infectious disease outbreaks is essential to limit severe biophysical and socio-economic consequences.

To date, the time between initial disease outbreak, sample transportation and laboratory confirmation of the etiologic infectious agent **can be up to several weeks or months**. Thus, the need for the development of mobile diagnostic units has been recently recognized. Reliable and simple diagnostic testing directly on site would enable rapid local decision making which is crucial to prevent further spreading of the disease.

SWINOSTICS addresses these challenges and needs, by developing a novel field diagnostic device, based on advanced, proven, bio-sensing and photonics technologies to tackle emerging and endemic viruses causing epidemics in **swine farms** in Europe that lead to relevant economic damages. The diagnostic device will allow immediate threat assessment at the farm level, with the analytical quality of commercial and institutional laboratories. The device will be portable and will provide results in 10 minutes for 5 samples simultaneously, making it highly suitable for use in the field. The modular construction of the device would allow future upgrades to increase capacity if so desired.

SWINOSTICS is being developed by a multi-disciplinary team, coordinated by CyRIC, Cyprus Research and Innovation Center Ltd, in the framework of EU's Horizon 2020 Programme. The project has just been launched (1st November 2017) and will run for three and a half years, to allow enough time for the development and real-world validation of the technology.

The overall concept underpinning the project is that of a device for early, field-based, detection of important swine diseases (ASFV, PRRSV, H1N1, PPV, PCV2 and CSF). The device will use swine oral fluid samples as its main input, even though, it will be compatible with the use of other types of samples, such as faeces, blood or nasal swabs. The use of oral fluids as the main input diminishes the time needed for the analysis and simplifies the sample collection, allowing also the collection of wild boar samples.

The project is funded by Horizon 2020, the EU Framework Programme for Research and Innovation for 2014-2020 under grant agreement No 771649. Project partners include: CyRIC - Cyprus Research and Innovation Centre (Cyprus), Agricultural University of Athens (Greece), Kontor 46 SaS (Italy), National Research Council (Italy), ISS BioSense S.r.l. (Italy), Lumensia Sensors S.L. (Spain), Universitat Politècnica de València - Nanophotonics Technology Center (Spain), National Veterinary Research Institute (Poland), University of Veterinary Medicine Budapest (Hungary), University of Florence – School of Agriculture (Italy)

- ENDS -

Notes for editors:

1. Horizon 2020 is the biggest EU Research and Innovation programme ever with nearly €80 billion of funding available over 7 years (2014 to 2020) – in addition to the private investment that this money will attract. It promises more breakthroughs, discoveries and world-firsts by taking great ideas from the lab to the market.
2. For media enquiries, please contact CyRIC on +357 22 777200 or e-mail info@cyric.eu