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PROCEEDINGS

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Innovative and sustainable strategies to control Cystic echinococcosis in the Mediterranean area

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Cystic echinococcosis (CE) is a severe zoonosis, caused by the larval stage of the tapeworm *Echinococcus granulosus*. This helminth infection is of increasing public health and socio-economic concern due to the considerable morbidity rates that give rise to high economic losses in the public health sector and in the livestock industry. Control programmes against *E. granulosus* are considered long-term measures that require an integrated approach [1]. Usually, they included a combination of several strategies: (*i*) regulation of slaughter activity and disposal of offal; (*ii*) prevention of dogs accessing offal; (*iii*) regularly de-worming of dogs; (*iv*) public health education and recently (*v*) the introduction of EG95 recombinant vaccine for protection of lambs against infection with *E. granulosus* [2; 3]. However, despite such control initiatives have been implemented in several countries and regions, resulting in a marked decrease in the incidence of the disease, CE still remains a major health problem worldwide especially in Mediterranean areas [4].

In this context, ECHINO-SAFE-MED (New sustainable tools and innovative actions to control cystic ECHINOcoccosis in sheep farms in the MEDiterranean area: improvement of diagnosis and SAFEty in response to climatic changes) project aiming to implement pasture-based livestock farming systems by delivering sustainable and cost-effective tools, as well as innovative strategies to control cystic echinococcosis (CE) in sheep farms in the Mediterranean regions. This will be obtained by the use of high throughput diagnostic, surveillance and control strategies in order to establish guidelines for sustainable CE control to be further extended to other endemic Mediterranean areas. With this as the

main tenet, ECHINO-SAFE-MED has three macro-objectives: *i*) to develop novel diagnostic tools for early detection of cystic echinococcosis in sheep in Mediterannean countries of Europe (i.e. France, Greece and Italy) and transfer these methodologies to Mediterranean areas in North Africa (i.e. Algeria and Tunisia); *ii*) to improve surveillance and control activities for CE in Mediterranean areas through the use of innovative sustainable strategies to be applied in highly endemic areas; *iii*) to strengthen capacity for CE diagnosis, surveillance and control in both Africa and Europe through training and stakeholders' engagements.

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