

SHORT TERM SCIENTIFIC MISSION (STSM)

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STSM Type: Standard

COST Action: FA1308

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STSM Applicant: Mr Wellington Coloma, Universidad Autónoma de Barcelona, Cerdanyola del Vallès (ES), wncg_100583@hotmail.com

HOST: Keelin O'Driscoll, Teagasc, Fermoy (IE), Keelin.ODriscoll@teagasc.ie

STSM Title: Training on behavior analysis as a novel sensitive tool for stress evaluation of dairy animals

Financial Support:

Amount for travel	350 Euro
Amount for subsistence	2150 Euro
Total amount	2500 Euro

Workplan summary:

To whom it may concern, I am writing this letter to apply for the Short-Term Scientific Mission (STSM) within the COST Action DairyCare (FA1308) which would allow me to collaborate with the Pig Development Department, Animal & Grassland Research and Innovation Centre of Teagasc (Fermoy, Cork, Ireland) with Dr. Keelin O'Driscoll from January to March 2018. At this time, I am pursuing my third year as PhD student in Animal Production at the Universitat Autònoma de Barcelona (UAB, Spain) under the supervision of Dr. Ahmed Salama and Dr. Xavier Such. I have been working during these two years in the Ruminant Research Group (G2R) where I have learned with a consolidated team of researchers and familiarize myself with animal management, experimental design and laboratory practice. The objective of my thesis is to study the effect of heat and cold stress responses in dairy goats and the effects of prenatal heat stress on emotional reactivity of the offspring. I have worked on three experiments under controlled climatic conditions, firstly with cold exposure on dairy goats and afterwards with heat stress exposure during the prenatal period and the further impact during the growing age of the goat kids. The parameters evaluated consisted in performance (feed and water consumption, milk production), physiological (respiration rate, rectal temperature) and metabolic (blood metabolites, hormones) responses and the gene expression on milk to help understand the resulting changes from subjecting animals to these stressors. Furthermore, I introduced the evaluation of behaviour of the offspring as a possible sensitive tool by collecting the data from two experiments (video recordings and observational registers) and at the same time blood samples were taken for the identification of different biomarkers. For this reason, I would like to delve into behavioural studies focusing on experimental designs and statistical model to deal with the data I have gathered and to better understand the relationship between the

different mechanisms evaluated (performance, physiology and metabolism) caused by stressors and the behavioural responses and the use of potential indicators of welfare with the support from the Dr. Keelin O'Driscoll and her group, which are recognized experts in this topic for a long time. Also, I will participate in the periodical seminars accessing to the most current research and discussions on the area. I am very interested in this opportunity and hope therefore, you will consider my application suitable for a profitable contribution to the Short-Term Scientific Mission program. I appreciate your time and consideration and look forward to hearing from you at your earliest convenience. Sincerely,
Wellington Coloma Garcia

STSM coordinator approval date: 2018-01-18