UNIVERSITY OF MOLISE

DEPARTIMENT OF AGRICULTURAL,

ENVIRONMENTAL AND FOOD SCIENCES



SPANISH SCIENCE RESEARCH COUNCIL

INSTITUTE OF FOOD SCIENCE TECHNOLOGY AND NUTRITION



INTERNATIONAL Ph.D. in

"WELFARE, BIOTECHNOLOGY AND QUALITY OF ANIMAL PRODUCTION"

(XXVII CYCLE)

Related disciplinary scientific section: 07/G1 (Scienze e Tecnologie Animali)

General Coordinator: Prof. Giuseppe Maiorano

Doctorate Thesis Title

EFFECT OF DIETARY POLYPHENOL-RICH GRAPE BY-PRODUCTS ON GROWTH PERFORMANCE, SOME PHYSIOLOGICAL PARAMETERS, MEAT AND MEAT PRODUCTS QUALITY IN CHICKENS

Ph.D. Candidate: Dr. Maria Nardoia

Supervisors: Prof. Donato Casamassima Dr. Agustin Brenes Payà

Co-supervisor: Dr. Claudia Ruiz-Capillas

ACADEMIC YEAR 2014/2015

INTERNATIONAL Ph.D. in

"WELFARE, BIOTECHNOLOGY AND QUALITY OF ANIMAL PRODUCTION"

(XXVII CYCLE)

Related disciplinary scientific section: 07/G1 (Scienze e Tecnologie Animali)

General Coordinator: Prof. Giuseppe Maiorano

Doctorate Thesis Title

EFFECT OF DIETARY POLYPHENOL-RICH GRAPE BY-PRODUCTS ON GROWTH PERFORMANCE, SOME PHYSIOLOGICAL PARAMETERS, MEAT AND MEAT PRODUCTS QUALITY IN CHICKENS

Ph.D. Candidate: **Dr. Maria Nardoia**

Supervisors: Prof. Donato Casamassima

Dr. Agustin Brenes Payà

Co-supervisor: Dr. Claudia Ruiz Capillas

2

Academic year 2014/2015

DECLARATION

I hereby declare that the thesis is based on my original work except for citations which have been duly acknowledged. I also declare that this thesis has not been previously or concurrently submitted for any degree or any other institution.

Campobasso, 18/02/2016

Dr. Maria Nardoia



"Stay hungry. Stay foolish"

Steve Jobs (1955-2011)





SPANISH SCIENCE RESEARCH COUNCIL INSTITUTE OF FOOD SCIENCE TECHNOLOGY AND NUTRITION

The investigation of the present doctoral thesis was carried out at the Departament of Metabolism and Nutrition and the Department of Products at the Institute of Food Science Technology and Nutrition (ICTAN) of the Spanish Science Research Council (CSIC) of Madrid. The experimental trials of this work were part of the projects AGL2012-31355/GAN, S2013/AGR-2913 (MEDGAN) and the Intramural Project 2014470E073, financed by the Spanish Ministry of Economy and Competivitiness (MINECO, Spain), Comunidad Autónoma de Madrid (CAM) and CSIC, respectively, and coordinated by Dr. Agustin Brenes Payà and Dr. Claudia Ruiz-Capillas.



