

Evaluation Panel: NATURAL SCIENCES – Agricultural, Agro-food and Veterinary Sciences

R&D Unit: Centro de Ciência Animal e Veterinária (CECAV)

Coordinator: Cristina Vitória de Miranda Guedes

Integrated PhD Researchers: 39

Overall Quality Grade: VERY GOOD

Evaluation Criteria Ratings

- (A) Quality, merit, relevance and internationalization of the R&D activities of the Integrated Researchers in the R&D Unit Application: 4
- (B) Merit of the team of Integrated Researchers: 4
- (C) Appropriateness of objectives, strategy, plan of activities and organization: 3

Base Funding for (2020-2023): 573 K€

Recommended Programmatic Support

PhD Fellowships: 6

Programmatic Funding: 355 K€, including for 1 (Junior) New PhD Researcher Contract.

Justification, Comments and Recommendations

The Animal and Veterinary Research Centre (CECAV) is hosted by the University of Trás-os-Montes and Alto Douro at Vila Real. CECAV focused, during the period of 2013-2017 on: i) Animal Production, ii) Food Safety and Public Health, and iii) Animal Health. Following the departure of some members of the Animal Production group, the Unit reorganized itself quickly and is now focusing on two main topics namely: ii) Integrated meat quality – ‘Farm to Fork’ approach and ii) Veterinary public health serving the ‘One Health’ concept.

The CECAV team has performed innovative research of high quality and merit, contributing to the advancement of knowledge in respective disciplines. In particular, they implemented non-invasive techniques for estimating carcass composition and quality as well as the application of FITR-technology for meat quality evaluation paired with the use of natural additives and/or different packaging. CECAV aims to develop low cost strategies for the meat and meat products sector to cater the need of local industries but also to introduce innovation in the sector. This is expected to support the meat industry of Portugal and to increase the marketability of its products. These are the objectives of the integrated meat quality – farm to fork approach. The meat quality subject is a key characteristic of the talent of the integrated researchers and several members of the team are recognized specialists in this discipline at international level.

The Panel discussed in detail with CECAV members their response to the departure of team members that were experts in animal nutrition and antibiotic resistance, considering that these are important aspects of the farm to fork approach. CECAV informed the team that the expertise was still available in the groups since some of the integrated researchers pursue research in that area and maintain collaboration with other research units through common PhD programs; a fact that was also confirmed by PhD students.

During the presentation and the onsite visit, the Panel had the opportunity to discuss with various integrated researchers about R&D activities in Veterinary public health. It was stated by the Coordinator of the Unit and some members that the “one health concept” was a priority of their research following the reorganisation of the Unit. The latter was also confirmed and supported by the University representative that was attending the meeting and informed the Panel about the intentions of the University to distinguish the research activities of the R&D units that were based in that campus. Following the extensive discussion, it became apparent that the focus of the Unit will be comparative medicine and the use of biomaterials for tissue regeneration. A secondary focus was on studies of zoonosis affecting animals and on foodborne pathogens of animal origin and their mitigation. The former subject is relatively new for the Unit but considering the existing expertise and the available resources will become an important and promising area for research, subject to investments in equipment as well as manpower. The latter was communicated by the Unit and the Panel appreciated their explanations and statements considering that zoonotic diseases are very common, as it is estimated that more than 60% of the infectious diseases in people are spread from animals. The Panel also appreciated the fact that several members of CECAV have already made significant contributions and important publications in that area.

Another issue that was raised by the Panel was the creation in 2017, of a spin-off company by a member of CECAV and the anticipated strategies by the Unit to use it as a base to develop a "Centre for Pets". The Panel questioned such approach considering the needs for funding such activities. The Panel suggested that the Unit should focus on the expansion of international collaborations of the team and their abilities to prepare and submit competent research proposals. The existing participation of CECAV members in COST actions was appreciated but has to intensify in the future to increase the option for external funding.

Overall, the Panel agreed that CECAV is a very good unit that has the potential to excel in the near future through more focus on its research activities and the adoption of a more stringent strategy.

The Panel suggests the allocation of 6 PhD fellowships with 2 in Integrated meat quality and 4 in Veterinary public health (2 in Regenerative medicine and 2 in Zoonotic diseases).

The Unit requested 3 post doc researchers, one each for Regenerative medicine, Center for Pets, and Lab for Quality and Food Safety, respectively. The Panel recommends that one post doc position should be approved, working in the area of Regenerative medicine.

Although the Unit did not request a budget for internationalization, the Panel considers that a budget is needed for this item (20 K€).

Equipment: The Panel proposes the approval of funding for a 3D motion capture analysis system needed for the development of regenerative medicine with sheep as a model (100 K€). This equipment was mentioned by the Unit, at the visit, as priority number one. Another 100 K€ is allocated to the Laboratory of Technology, Quality and Food safety for the accreditation process.

Allocation of PhD fellowships has been undertaken with the intention of the Panel providing the most appropriate support for the RU requesting and benefiting most from this provision.

The Panel has made funds available following FCT guidelines to support purchases of critical importance and provide resources which can be shared within and between RU. The allocation provided has also been considered in a manner which addresses the requests made by the RU so that any prioritised item could be purchased.