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Histological examination of a Yorkshire pig line for SCID-like occurring individuals**Raita Stefania Mariana**

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The severe combined immunodeficiency (SCID) in pigs has been recently reported beneficial for development of animal model for human research, especially for preclinical testing of potential cancer treatment. Immuno-compromised animal models can be used for successfully hosting the growth of xenografted human tumors, and serve as effective animal model for cancer therapy. Spontaneous occurrence of SCID-like defects has been reported as common in intensively selected breed lines. This study aimed to screen a population of Yorkshire pigs selected for feed efficiency, from a private holding with reported increased morbidity and mortality, in order to assess the SCID-like occurrence rate. SCID animals are valuable biomedical models and can be used for scientific purposes. In total, 20 randomly selected piglets from 15 litters were processed for blood sampling, as well as thymus and lymph node tissue samples collection. Blood samples were analyzed for lymphocyte number, while the thymus and lymph node samples were histologically examined for atrophy signs. Six piglets (30%) tested positive for low lymphocyte count, atrophied thymus and lymph nodes, while five piglets (25%) tested positive for either one/two of the three considered examinations. Based on these results it can be hypothesized that the immunodeficiency phenotype is affecting the selected line of pigs in the population. The identification of spontaneously occurring SCID-like defects in pigs is beneficial for research institutes and for the owner of the holding, who can find a destination for affected individuals and redirect animal selection to obtain defect-free individuals.

Biography

Raita Stefania Mariana has completed her PhD from University of Agronomic Sciences and Veterinary Medicine of Bucharest, Romania. She is Lecturer within the Veterinary Medicine Faculty of Bucharest and the Coordinator of the Histology and Embryology Discipline for the Veterinary Medicine Romanian Program and the Veterinary Medicine French Program. She has published over 60 scientific papers in reputed journals and has been involved as member of the research team, or project coordinator in numerous research grants. Her research interests lies in animal and human histology and embryology, histopathology and cytology.

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