

Assistant Professor
Department of Agriculture
School of Agricultural Sciences
University of Western Macedonia
abasioura@uowm.gr

Athina Basioura

Education

- **Ph.D.**, Unit of Biotechnology of Reproduction and Sperm Technology, Farm Animals Clinic, School of Veterinary Medicine, Faculty of Health Sciences, Aristotle University of Thessaloniki, November 2018.
- **DVM**, Graduate of Department of Veterinary Medicine, Faculty of Health Science, Aristotle University of Thessaloniki, March 2012.

Training

- Swine biotechnology of reproduction, flow cytometry analysis of sperm parameters, semen cryopreservation. Department of Animal Medicine and Surgery, University of Murcia, Spain (mobility within the frame of ERASMUS+ Programme for studies). Certificatified user of flow cytometer, September 2016-April 2017.
- Training course: “Sheep Artificial Insemination”. Farm Animals Clinic, School of Veterinary Medicine, Faculty of Health Sciences, Aristotle University of Thessaloniki, sponsorship: Zoetis Company, 22-23 November 2014.
- Training course: Sperm Class Analyzer[®]. Unit of Biotechnology of Reproduction and Sperm Technology, Farm Animals Clinic, School of Veterinary Medicine, Faculty of Health Sciences, Aristotle University of Thessaloniki, sponsorship: MICROPTIC S.L., Barcelona-Spain, 19-20 March 2012.
- Internship in the Unit of Biotechnology of Reproduction and Sperm Technology, Farm Animals Clinic, School of Veterinary Medicine, Faculty of Health Sciences, Aristotle University of Thessaloniki. Trained in veterinary clinical practice, artificial insemination, techniques for sperm quality and function evaluation, CASA system, proteomics, *in vitro* maturation/fertilization/embryo culture, micro manipulator. February 2012-January 2014.

Scholarships

- Investigation of nanotechnology applications on farm animals’ semen processing. Funding entity: European Social Fund and Greek National Resources. Call: Operational Programme Human Resources Development, Education and Lifelong Learning 2014-2020, Scholarship for Young Researchers. School of Veterinary Medicine, Aristotle University of Thessaloniki. June 2018-March 2020.

- Ph.D. Theses Scholarship. Funding entity: State Scholarships Foundation (IKY). Call: Scholarship Programmes for Doctoral Studies within the National Strategic Reference Framework (2014-2020) cofounded by the Operational Programme "Education and Life Long Learning", the European Social Fund and the Public Investments Programme. May 2017-June2018.

Work experience

- **Post-doctoral Researcher.** Unit of Biotechnology of Reproduction, Farm Animals Clinic, School of Veterinary Medicine, Aristotle University of Thessaloniki, Greece. Biomedicine applications (infrared thermography, sensors), development of possible biomarkers for an objective prognosis of fertilizing capacity, February 2020-until now.
- **Young Researcher.** Geotechnical Chamber of Greece-Branch of West Macedonia and Aristotle University of Thessaloniki, Greece. Biotechnological applications for genetics preservation and protection of autochthonous populations of sheep breed which is under danger of extinction. March 2020-March 2021.
- **Young Researcher.** School of Veterinary Medicine, Aristotle University of Thessaloniki, Greece. Nanotechnology applications on semen processing. June 2018-March 2020.
- **Veterinary practitioner,** reproduction services and management of rabbit farm, Cyprus, November 2018.
- **Senior consultant** (training projects, veterinary services, pig farm management), DANAG AGRITECH CONSULTING (Zhengzhou) CO., LTD, China, 24th of June-11th of July 2018.

Teaching experience

- Teaching assistant on laboratory and clinical courses (farm animals' reproduction), Farm Animals Clinic, School of Veterinary Medicine, Faculty of Health Sciences, Aristotle University of Thessaloniki, February 2014-present.
- Teaching in Master Science of post-graduate studies, Alexander Technological Educational Institute of Thessaloniki, School of Agricultural Technology, Department of Animal Production, Scientific Field: Biotechnology of Reproduction, Academic year: 2018-2019, 2019-2020 and 2020-2021.
- Teacher in training courses for pig farm management, DANAG AGRITECH CONSULTING (Zhengzhou) CO., LTD, Jinan-China, 24th of June-11th of July 2018.

Qualifications and extra skills

- Qualified user of flow cytometer, 2017.
- Qualified user of micro manipulator, 2012.
- Qualified user of Computer Assisted Sperm Analysis (CASA), 2012.

- Certificate of Proficiency in English, University of Michigan, 2009.
- Certificate of Chinese language (level A1), Confucius Institution, Aristotle University of Thessaloniki, 2009.

Peer-Reviewed Articles

- **Basioura, A.**, Tsousis, G., Boscós, C. M., & Tsakmakidis, I. A. Efficiency of three boar sperm enrichment techniques (2021). *Reprod Domest Anim*, 00, 1–4.
- Michos, I., Tsantarliotou, M., Boscós, C.M., Tsousis, G., **Basioura, A.**, Tzika, E.D., Tassis, P.D., Lymberopoulos, A.G., Tsakmakidis, I.A. (2021). Effect of Boar Sperm Proteins and Quality Changes on Field Fertility. *Animals*, 11, 1813
- Tsakmakidis, I. A., Samaras, T., Anastasiadou, S., **Basioura, A.**, Ntemka, A., Michos, I., ... & Boscós, C. M. Toxic and Microbiological Effects of Iron Oxide and Silver Nanoparticles as Additives on Extended Ram Semen (2021). *Animals*, 11(4), 1011.
- Tassis, P. D., Tsakmakidis, I. A., Nagl, V., Reisinger, ..., **Basioura, A.** & Schatzmayr, D. Individual and combined in vitro effects of deoxynivalenol and zearalenone on boar semen (2020). *Toxins*, 12(8), 495.
- **Athina Basioura**, Georgios Tsousis, Constantin M. Boscós, Aristotelis Lymberopoulos, Ioannis A. Tsakmakidis. Method agreement between three different chambers for comparative bull semen computer assisted sperm motility analysis (2020). *Pol. J. Vet. Sci.*, 23(3), 325–331.
- Tsakmakidis, I. A., Samaras, T., Anastasiadou, S., **Basioura, A.**, Ntemka, A., Michos, I., ... & Boscós, C. M. Iron oxide nanoparticles as an alternative to antibiotics additive on extended boar semen (2020). *Nanomaterials*, 10(8), 1568.
- **A. Basioura**, I.A. Tsakmakidis, E.A. Martinez, J. Roca, J. Li, M.F. Molina, A. Theodoridis, C.M. Boscós, I. Parrilla. Effect of astaxanthin in extenders on sperm quality and functional variables of frozen-thawed boar semen (2020). *Anim Reprod Sci* 218, 106478.
- **Basioura A**, Michos I, Ntemka A, Karagiannis I, Boscós CM. Effect of iron oxide and silver nanoparticles on boar semen CASA motility and kinetics (2019). *J Hell Vet Medical Soc* 71(3), 2331-2338.
- **A. Basioura**, G. Tsousis, C. Boscós, A. Lymberopoulos, I. Tsakmakidis. Method agreement between three different chambers for comparative boar semen CASA analysis (2019). *Reprod Domest Anim* 54 (Suppl. 4), 41-45.
- **A. Basioura**, C.M. Boscós, I. Parrilla, G. Tsousis, I.A. Tsakmakidis (2018). Effect of astaxanthin on quality of boar semen stored at 17° C, incubated at 37° C or under *in vitro* conditions. *Reprod Domest Anim* 53(2), 463-471.

- I.A. Tsakmakidis, M. Tsantarliotou, I.A. Michos, **A.G. Basioura**, G. Tsousis, C.M. Boscós (2017). Selected steps of swine ICSI method to overcome seasonal effect and achieve acceptable early embryonic development, a preliminary study. Polish Journal of Veterinary Sciences 20 (3), 607-609.
- Vasiliki Alexiou, **Athina G. Basioura**, Georgios Tsousis, Eleni D. Tzika, Constantin M. Boscós, Georgios Vatzias, Ioannis A. Tsakmakidis (2016). The effect of dilution temperature by two extenders with different specifications on boar semen quality. Veterinarski Arhiv. 87 (2), 197-208.
- Michos I.A., **Basioura A.G.**, Boscós C.M., Tsakmakidis I.A. (2013). Proper use and impact of “Computer Assisted Semen Analysis” technique on semen evaluation of farm animals. Journal of the Hellenic Veterinary Medical Society 64(4), 267-274.

Contributions to national and international conferences (poster/oral presentation)

- A. Tsakmakidis, P.D. Tassis, V. Nagl, N. Reisinger, E. Tzika, G. Schatzmayr, **A. Basioura**, I. Michos, D. Schatzmayr. *In vitro* effects of de-epoxy deoxynivalenol and hydrolyzed zearalenone on boar. Poster presentation in European Society for Domestic Animal Reproduction (ESDAR) Online Conference, 11-16 October 2021.
- **A. Basioura**, G. Tsousis, C. Boscós, A. Lymberopoulos, I. Tsakmakidis. A comparative study of three different chambers for bull semen computer assisted sperm motility analysis. Poster presentation in European Society for Domestic Animal Reproduction (ESDAR) Online Conference, 11-16 October 2021.
- **A. Basioura**, G. Tsousis, C. Boscós, A. Lymberopoulos, I. Tsakmakidis. Method agreement between three different chambers for comparative boar semen CASA analysis. Oral presentation in 15th International Conference of Asociación Española De Reproducción Animal (AERA), 7-9 November 2019, Toledo, Spain.
- V. Stravogianni, **A. Basioura**, D. Loukovitis, I.A. Tsakmakidis, G. Tsousis, D. Chatziplis, A.G. Lymberopoulos. Determination of semen quality and genetic parameters in boars of high and low field fertility. Poster presentation in 23rd European Society for Domestic Animal Reproduction (ESDAR) Conference, St. Petersburg, Russia, 19-22 September 2019.
- **A. Basioura**, I. Michos, A. Ntemka, I. Karagiannis, C.M. Boscós. Effect of iron and silver nanoparticles on boar semen kinetics. Poster presentation in 23rd European Society for Domestic Animal Reproduction (ESDAR) Conference, St. Petersburg, Russia, 19-22 September 2019.
- I.A. Tsakmakidis, T. Samaras, V. Stravogianni, **A. Basioura**, C.M. Boscós. Biomedical applications to support boar’s selection and fertility. Oral presentation, 17th Symposium, Health care, Selection and Reproduction of Swine, Silver Lake Veliko Gradiste Serbia, 30 May-1 June 2019.

- V. Stravogianni, **A. Basioura**, D. Loukovitis, G. Tsousis, D. Chatziplis, I. Tsakmakidis, A.G. Lymberopoulos. Determination of semen quality and genetic parameters in boars of high and low field fertility. Oral presentation, 7th Pan-Hellenic Congress: Technology of Animal Production, Thessaloniki-Greece, 1 February 2019.
- **Basioura A.**, Parrilla I., Martinez E., Roca J., Li J., Molina M., Boscós C., Tsakmakidis I. Effect of astaxanthin on frozen-thawed boar semen. A preliminary study. Poster presentation, 22nd European Society for Domestic Animal Reproduction (ESDAR) Conference, Cordoba-Spain, 27-29 September 2018.
- **Basioura A.**, Brellou G., Tsakmakidis I., Vlemmas I., Boscós C., Giadinis N. Effect of varicocele on fertility capacity of ram (case report). Poster presentation, 14th Pan-Hellenic Veterinary Congress, Thessaloniki-Greece, 11-13 May 2018.
- **Basioura A.**, Parrilla I., Martinez E., Roca J., Li J., Molina M., Boscós C., Tsakmakidis I. Effect of astaxanthin on frozen-thawed boar semen. A preliminary study. Poster presentation, 14th Pan-Hellenic Veterinary Congress, Thessaloniki-Greece, 11-13 May 2018.
- K. Mavropoulou, Th. Menka, C.M. Douga, **A. Basioura**, G. Tsousis, E. Tzika, P. Tassis, C. Boscós, I. Tsakmakidis. Season effect in relation with methods of fertilization on the reproductive outcome of a pig farm. Poster presentation, 14th Pan-Hellenic Veterinary Congress, Thessaloniki-Greece, 11-13 May 2018.
- **Basioura A.**, Boscós C., Parrilla I., Tsousis G., Tsakmakidis I., Effect of astaxanthin on boar semen incubated at 37° C and under *in vitro* conditions for 1 h. Poster presentation, 14th Congreso Internacional de la Asociación Española de Reproducción Animal (AERA), Barcelona-Spain, 9-11 November 2017.
- **Basioura A.**, Boscós C., Parrilla I., Tsousis G., Tsakmakidis I., Effect of astaxanthin on extended boar semen stored at 17° C for 48 h. Poster presentation, 21st European Society for Domestic Animal Reproduction (ESDAR) Conference, Bern-Switzerland, 24-26 August 2017.
- **Basioura A.**, Boscós C., Parrilla I., Tsousis G., Tsakmakidis I., Effect of astaxanthin on boar semen stored at 17° C for 48 h and incubated at 37° C or under *in vitro* conditions. Oral presentation, 4th Pan-Hellenic Congress on Veterinary Science of Farm Animals and Food Hygiene, Volos-Greece, 12-14 May 2017.
- **Basioura A.**, Boscós C., Parrilla I., Tsousis G., Tsakmakidis I., Effect of astaxanthin on boar semen stored at 17° C for 48 h and incubated at 37° C or under *in vitro* conditions. Oral presentation, 1st Workshop, Department of Animal Medicine and Surgery, Faculty of Veterinary Medicine, University of Murcia, Murcia-Spain, 14 December 2016.
- Tsakmakidis I., Tsantarliotou M., Michos I., **Basioura A.**, Boscós K., ICSI as method to overcome season effect on swine gametes' quality for in vitro embryo production.

Oral presentation, 19th International Congress on Biotechnology in Animal Reproduction (ICBAR), Novisad-Serbia, 9-11 September 2015.

- Tsakmakidis I., Tsandarliotou M., Michos I., **Basioura A.**, Boscoc C., ICSI as method to overcome season effect on swine gametes' quality for in vitro embryo production. Oral presentation, 13th Pan-Hellenic Veterinary Congress, Athens-Greece, 8-10 May 2015.
- **Basioura A.**, Michos I., Tsousis G., Boscoc C., Tsakmakidis I., Comparative study of boar semen enrichment methods. Oral presentation, 13th Pan-Hellenic Veterinary Congress, Athens-Greece, 8-10 May 2015.
- **Basioura A.**, Michos I., Tsousis G., Boscoc C., Tsakmakidis I., Comparative study of boar semen enrichment methods. Poster presentation, 17th European Society for Domestic Animal Reproduction (ESDAR) Conference, Bologna-Italy, 12-14 September 2013.
- **Basioura A.**, Michos I., Tsakmakidis I., Contribution of sperm DNA integrity to boar fertility. Oral presentation, 4th Pan-Hellenic Congress: Technology Animal Production, Thessaloniki-Greece, 8 February 2013.
- Michos I., **Basioura A.**, Tsakmakidis I., Proper use and impact of "Computer Assisted Semen Analysis" technique on semen evaluation of farm animals. Oral presentation, 4th Pan-Hellenic Congress: Technology of Animal Production, Thessaloniki-Greece, 8 February 2013.

Invited speaker

- I.A. Tsakmakidis, T. Samaras, S. Anastasiadou, **A. Basioura**, A. Ntemka, I. Michos, K. Simeonidis, I. Karagiannis, G. Tsousis, M. Angelakeris, C.M. Boscoc. Effect of iron oxide nanoparticles as alternative to antibiotics on boar semen. 17th Symposium, Health Care, Selection and Reproduction of Swine, Silver Lake-Veliko Gradiste-Serbia, 30 May-1 June 2019.

Research projects, grants and contracts with companies

- Investigation of boar semen fertilizing capacity changes applying biomedical techniques. Funding entity: Hellenic Foundation for Research and Innovation (H.F.R.I.), ELIDEK. Call: 1st Call for the support through research projects for Faculty members and Researchers working in the Greek Universities and Research Centers along with the procurement for acquiring strategic research equipment, phase II. Research Committee of Aristotle University of Thessaloniki, Research Committee code (RCC): 96385.
- Protection of autochthonous populations Pelagonia Sheep breed in the crossSheep breed. Funding entity: European Union and National Funds of Greece, Interreg IPA-

CBC Programme CCI 2014TC1615CB009. Geotechnical Chamber of Greece-Branch of West Macedonia. Research code: MIS 5032716

- “Effect of deoxynivalenol, zearalenone, and fumonisin on boar semen quality parameters”. Project financed by Biomin GmbH, Austria. Research Committee of Aristotle University of Thessaloniki, RCC: 92520.
- “Investigation of nanotechnology applications on farm animals’ semen processing”. Funding entity: European Social Fund and Greek National Resources. Call: Operational Programme Human Resources Development, Education and Lifelong Learning 2014-2020, Scholarship for Young Researchers. Research Committee of Aristotle University of Thessaloniki, RCC: 95342.
- “Comparative study of boar semen enrichment methods”. Project financed by NUEVO. Research Committee of Aristotle University of Thessaloniki, RCC: 90481.
- “Seasonal effect in swine oocyte’s efficiency for in vitro embryo production by intracytoplasmic sperm injection (ICSI)”. Project financed by Research Committee of Aristotle University of Thessaloniki, RCC: 87918.

Professional activities

- **Ad hoc reviewer** for Animal Reproduction Science (ELSEVIER), Canadian Journal of Animal Science (CANADIAN SCIENCE PUBLISHING), Czech Academy of Agricultural Sciences, Journal of Hellenic Veterinary Medical Society, Livestock science (ELSEVIER), Open Journal of Animal Sciences (Scientific Research), Reproduction in Domestic Animals (WILEY), Small Ruminant Research (ELSEVIER), Systems Biology in Reproductive Medicine (TAYLOR & FRANCIS), Theriogenology (ELSEVIER), Toxicology *in vitro* (ELSEVIER), Tropical Animal Health and Production (SPRINGER), Veterinary Sciences (MDPI).
- Member of European Society for Domestic Animal Reproduction (since 2013).
- Member of Geotechnical Chamber of Greece (since 2012).