

Curriculum Vitae

Eleni G Dovolou *DDS, DVM, PhD*

Associate Professor

Department of Animal Science

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Education:

1989: DDS, Faculty of Dental Medicine, School of Health Sciences, University of Athens

2000: DVM, Veterinary Faculty, School of Health Sciences, University of Thessaly.

2014: PhD. Department of Obstetrics and Gynaecology, Faculty of Medicine, School of Health Sciences, University of Thessaly. Dissertation title: *'In vitro bovine embryo production in media modified with the addition of guaiazulene or Ghrelin'*, supervised by Prof IE Messinis.

Foreign languages

English: thorough knowledge

Italian: adequate knowledge

Fellowships

2014-2015. Postdoctoral fellowship (AGROETAK, Ministry of Agriculture). Research conducted at ELGO Demetra, Thessaloniki Greece. Title of the project. "In vivo sheep embryo production after incorporation of seminal plasma in the superovulatory regime". Supervisor Dr F Samartzi, project ref ΚΥΠΕ 3525/156, MIS 453350, ESPA 2007-2013.

2008. INIA, Madrid, Spain Fellowship from COST Action FAO702-GEMINI – *'Maternal interactions with gametes and embryos'*. Supervised by Dr A Rizos and Dr A Gutierrez -Adan

Teaching duties

Since 2020 Dept of Animal Science, UTh

Physiology of farm animals

Physiology of nutrition and metabolism

Reproduction of farm animals I

Reproduction of farm animals II

Lecturer at the Postgraduate Study Program (PSP) ANIMAL PRODUCTION AND ENVIRONMENTAL MANAGEMENT, Department of Animal Science, University of Thessaly.

As adjunct lecturer at the Clinic of Obstetrics & Reproduction Vet. Faculty, UTh.

Visiting Lecturer, Faculty of Veterinary Medicine, University of Thessaly.

Since 2020 Lectures and practicals in

Artificial insemination, assisted reproductive technologies, reproductive medicine of the bull

2017-2020 Reproductive endocrinology, Assisted reproduction

2014-2017 Practicals in assisted reproduction and artificial insemination

Research skills

Assisted Reproductive Technologies (ART)

In vitro embryo production in ruminants

- Oocyte maturation
- In vitro fertilization
- In vitro embryo culture
- Quality evaluation of gametes and embryos
- Oocyte and embryo slow freezing and vitrification

Laboratory techniques

- RNA transcription
- Quantification of mRNA by RT-PCR
- Hormone quantification by ELISA

Clinical skills

- Obstetrical surgery in small ruminants
- Abdominal Laparoscopy in Small ruminants
- Laparoscopic Embryo collection and transfer
- Conventional intracervical insemination and laparoscopic Insemination in small ruminants

Participation in research projects (as member of the research group)

1. Increasing dairy cows fertility through identification and exploitation of genetically tolerant individuals 'THE SUMMER COW' Coordinator and Scientific Responsible Prof GS Amiridis [2018 -2021 Research Create Innovate, National Strategic Reference Framework (in Greek: ΕΣΠΑ/ΕΣΠΑ) GSRT – EU]
2. Research studies on the use of alternative proteinaceous feeds livestock production aiming to reduce production cost and to apply innovative processes for the production of traditional product with superior quality characteristics GREEN FEEDS. Scientific Responsible Prof GS Amiridis [2018 -2021 Research Create Innovate, National Strategic Reference Framework (in Greek: ΕΣΠΑ/ΕΣΠΑ) GSRT – EU]
3. Development and application of state of the art method of sex preselection in sheep aiming at the maintenance and increase of genetic base and productivity of high genetic value indigenous sheep breeds – AMNOSELECT. Scientific Responsible Prof GS Amiridis [2018 -2021 Research Create Innovate, National Strategic Reference Framework (in Greek: ΕΣΠΑ/ΕΣΠΑ) GSRT – EU]
4. 2014-2015. Postdoc fellow AGROETAK, Ministry of Agriculture. Research conducted at ELGO Demetra, Thessaloniki Greece Title of the project. "In vivo sheep embryo production after incorporation of seminal plasma in the superovulatory regime". Postdoctoral research grant, Supervisor Dr F Samartzi, project ref ΚΥΠΕ 3525/156, MIS 453350, ΕΣΠΑ 2007-2013.
5. 2009-2011 Bilateral research cooperation between Greece and France. Title: The role of three glycosidases in oocyte maturation and fertilization. Work financed by GSRT and ERDF (Greece, grand number 09FR73) and French Ministry of Foreign Affairs (France, grand number 23442XA).
6. 2011-2012 Investigations on the interactions between fertility and feeding methods in Karagouniko sheep. Univ of Thessaly Project number 3994. Sponsored by the Prefecture of Karditsa (ref Number 3913)
7. Bilateral research cooperation between Greece and Hungary. Title: In vitro embryo production after melatonin administration in sheep of indigenous breeds of Greece and Hungary. GSRT grand number 2000ΣΕ01330005
8. 2008. COST Action FA0702-GEMINI – '*Maternal interactions with gametes and embryos*' Research scholarship, (contract JA00047030). Host Institute INIA Madrid, Department of Animal Reproduction, Supervisor Dr D. Rizos.
9. 2014-2015 Early pregnancy diagnosis in cows by serological detection of specific embryonic proteins. Univ of Thessaly Project number 5053. Sponsored by the Campus SA.
10. 2015-2016 Improvement of pregnancy rate in dairy cows after intensive pregnancy diagnosis by serological methods. Univ of Thessaly Project number 4861. Sponsored by Campus SA

Publication list

Full papers in peer reviewed international journals

1. Dokou S, Athanasoulas A, Vasilopoulos S, Basdagianni Z, **Dovolou E**, Nanas I, Grigoriadou K, Amiridis GS, Giannenas I. Composition, Organoleptic Characteristics, Fatty Acid Profile and Oxidative Status of Cow's Milk and White Cheese after Dietary

- Partial Replacement of Soybean Meal with Flaxseed and Lupin. *Animals*. 2023; 13(7):1159. <https://doi.org/10.3390/ani13071159>
2. Kalemkeridou M, Nanas I, Moutou K, Amiridis GS, Tshipourlianos A, **Dovolou E**, Mamuris Z, Giannoulis T. (2023) Genetic diversity and thermotolerance in Holstein cows: Pathway analysis and marker development using Whole Genome Sequencing. *Reproduction in Domestic Animals*, 58, 146-157.
 3. B Kotsampasi, D Kalogiannis, **E Dovolou**, S Chadio. Reproductive characteristics of Pelagonia sheep breed 2022 *Reproduction in domestic animals* 57, 102-102
 4. Stamperna K, Giannoulis T, Cañon-Beltrán K, **Dovolou E**, Kalemkeridou M, Nanas I, Rizos D, Moutou KA, Mamuris Z, Amiridis GS. (2022): Oviductal epithelial cells transcriptome and extracellular vesicles characterization during thermoneutral and heat stress conditions in dairy cows. *Theriogenology*, **187**:152-163.
 5. Stamperna K, Giannoulis T, **Dovolou E**, Kalemkeridou M, Nanas I, Dadouli K, Moutou K, Mamuris Z, Amiridis GS. (2021): Heat Shock Protein 70 Improves In Vitro Embryo Yield and Quality from Heat Stressed Bovine Oocytes. *Animals*, **11**:1794.
 6. Stamperna K, **Dovolou E**, Giannoulis T, Kalemkeridou M, Nanas I, Dadouli K, Moutou K, Mamuris Z, Amiridis GS. (2021): Developmental competence of heat stressed oocytes from Holstein and Limousine cows matured in vitro. *Reproduction of Domestic Animals*, **56**:1302-1314.
 7. Stamperna K, Giannoulis T, **Dovolou E**, Kalemkeridou M, Nanas I, Dadouli K, Moutou K, Mamuris Z, Amiridis GS. (2021): The Effects of Heat Shock Protein 70 Addition in the Culture Medium on the Development and Quality of In Vitro Produced Heat Shocked Bovine Embryos. *Animals*, **11**:3347.
 8. Nanas I, Chouzouris TM, **Dovolou E**, Dadouli K, Stamperna K, Kateri I, Barbagianni M, Amiridis GS. (2021) Early embryo losses, progesterone and pregnancy associated glycoproteins levels during summer heat stress in dairy cows. *J Thermal Biol* 98, 102951
 9. Nanas I, **Dovolou E**, Psimadas D, Dadouli K, Chouzouris TM, Satra M, Georgoulis P, Amiridis GS (2021). Age, gestational and heat stress effects on ghrelin secretion in dairy cattle. *Theriogenology* 176 (2021) 82-93.
 10. Nanas I, Barbagianni M, Dadouli K, **Dovolou E** and Amiridis GS. (2021) Ultrasonographic findings of the corpus luteum and the gravid uterus during heat stress in dairy cattle. *Reprod Dom Anim* 56, 1329-1341
 11. Nanas I, Chouzouris TM, Dadouli K, **Dovolou E**, Stamperna K, Barbagianni M, Valasi I, Tsiaras A, GS Amiridis (2020) A study on stress response and fertility parameters in phenotypically thermotolerant and thermosensitive dairy cows during summer heat stress. *Reprod Domest Anim*
 12. Stamperna K, Giannoulis T, Nanas I, Kalemkeridou M, Dadouli K, Moutou K, Amiridis GS, **Dovolou E**. (2020) Short term temperature elevation during IVM affects embryo yield and alters gene expression pattern in oocytes, cumulus cells and blastocysts in cattle. *Theriogenology* 156,36-45
 13. Ioannidi KS, Vasileiou NGC, Barbagianni MS, Orfanou DC, Chouzouris TM, **Dovolou E**, Chatzopoulos DC, Karavanis E, Papadopoulos N, Fthenakis GC, Amiridis GS, Mavrogianni VS (2020) Clinical, ultrasonographic, bacteriological, cytological and

- histological findings during uterine involution in ewes with pregnancy toxemia and subsequent reproductive efficiency. *Animal Reproduction Science*, 218, 106460.
14. KS Ioannidi, NGC Vasileiou, MS Barbagianni, DC Orfanou, G Mantziaras, TM Chouzouris, **E Dovolou**, DC Chatzopoulos, E Karavanis, N Papadopoulos, AI Katsafadou, IA Fragkou, NG Kordalis, GS Amiridis, GC. Fthenakis, VS. Mavrogianni(2020) Clinical, ultrasonographic, bacteriological, cytological and histopathological findings of uterine involution in ewes with uterine infection. *Pathogens* 9,54
 15. Chouzouris TM, **Dovolou E**, Rekkas CA, Georgoulas P, Athanasiou LV, Amiridis GS (2019). A study on ghrelin and LH secretion after short fasting and on ghrelin levels at perioestral period in dairy cattle. *Rep Dom Anim* 54, 91-99.
 16. Chouzouris TM, **Dovolou E**, Georgoulas P, Rekkas A, Dafopoulos K, Athanasiou L, Fthenakis GC, Amiridis GS (2018) Effects of pregnancy and short lasting acute feed restriction on total ghrelin concentration and metabolic parameters in dairy cows. *Theriogenology* 106;141-148.
 17. Anifandis G, Amiridis GS, Dafopoulos K, Daponte A, **Dovolou E**, Gavriil E, et al. (2018) The in vitro impact of the herbicide Roundup on human sperm motility and mitochondria. *Toxics* 6,2,*;doi:10.3390/toxics6010002.
 18. Chouzouris TM, **Dovolou E**, Krania F, Pappas IS, Dafopoulos K, Messinis IE, Anifandis G and Amiridis GS (2017) Effects of ghrelin on activation of Akt1 and ERK1/2 pathways during in vitro maturation of bovine oocytes. *Zygote* 25,183-1892.
 19. Chouzouris TM, **Dovolou E**, Dafopoulos K, Georgoulas P, Vasileiou NG, Fthenakis GC, Anifandis G and Amiridis GS (2016) Ghrelin suppresses the GnRH-induced preovulatory gonadotropin surge in dairy heifers. *Theriogenology* 86, 1615-21.
 20. Cordova A, Samartzi F, **Dovolou E**, Perreau C, Rekkas K, Mermillod P, Tsiligianni Th (2016). Association between three glycosidases activity [α -mannosidase (α -MAN), β -N-acetylglucosaminidase (NAGASE) and β -galactosidase (β -GAL)] and in vitro fertilization of bovine oocytes collected from different-sized follicles. *Animal Reproduction* 13, 772-778.
 21. **Dovolou E**, Samartzi F, Perreau C, Krania F, Cordova A, et al (2016) The activity of three glycosidases (β -N-acetylglucosaminidase, α -mannosidase, and β -galactosidase) in the follicular fluid and in the maturation medium affects bovine oocyte maturation. *Therio* 85,1468-75.
 22. Krania F, **Dovolou E**, Rekkas CA, Heras S, Pappas I, Van Soom A, Amiridis GS (2015): Urokinase-type plasminogen activator does not affect in vitro bovine embryo development and quality. *Acta Vet. Hung.* 63 (issue 2), 243-254.
 23. Krania F, **Dovolou E**, Rekkas CA, Theodosiadou EK, Pappas I, Amiridis GS (2015): Effects of Addition of Tissue-Type Plasminogen Activator in In Vitro Fertilization Medium on Bovine Embryo Development and Quality. *Reprod. Domest. Anim.* 50 (issue 1), 112-120.
 24. **Dovolou E**, Messinis IE, Periquesta E, Dafopoulos K, Gutierrez-Adan A, and Amiridis GS (2014) Ghrelin accelerates in vitro maturation of bovine oocytes. *Reprod Dom Anim* 49,665-672.
 25. **Dovolou E**, Periquesta E, Messinis IE, Tsiligianni Th, Dafopoulos K, Gutierrez-Adan A, and Amiridis GS. (2014) Daily supplementation with ghrelin improves in vitro bovine blastocysts formation rate and alters gene expression related to embryo quality. *Theriogenology* 81, 565-571.
 26. **Dovolou E**, Chadio S, Messinis IE, Rekkas CA, Deligiannis C, Kalogiannis D, Amiridis GS (2013). Human ghrelin decreases pituitary response to GnRH in superovulated ewes. *Theriogenology* 80, 262-8.

27. Tsiligianni Th, **Dovolou E**, Amiridis GS (2012) Efficacy of feeding cow colostrums to newborn labs . Livestock Sci 194, 305-309.
28. Tsiligianni Th, Amiridis GS, **Dovolou E**, Menegatos I, Chadio S, Rizos D and Gutierrez-Adan A (2011) Association between physical properties of cervical mucus and ovulation rate in superovulated cows. The Canad. J. Vet.Res 75(4)248-253.
29. **Dovolou E**, Clemente M, Amiridis GS, Messinis I, Kallitsaris A, Gutierrez-Adan A, Rizos D (2011) Effects of guaiazulene on in vitro bovine embryo production and on mRNA transcripts related to embryo quality. Reprod Dom Anim 46: 862-869.
30. **Dovolou E.**, Tsiligianni Th., Vouzaras D., Amiridis G.S.(2011) Prevalence of Coxiella burnetii antibodies in bulk milk and blood serum and associations with reproductive indices in cow dairy herds of Central and Northern Greece. J Hel Vet Med Soc 62(4): 314-319
31. Amiridis GS, Tsiligianni Th, **Dovolou E**, Rekkas C , Vouzaras D Menegatos I. (2009) Combined administration of GnRH, progesterone, and meloxicam is an effective treatment for the repeat-breeder cow. Theriogenology 72: 542-548.
32. Tsiligianni Th, Valasi I, Cseh S, Vainas E, Faigl V, Samartzi F, Papanikolaou T , **Dovolou E** and Amiridis GS.(2009) Effects of melatonin treatment on follicular development and oocyte quality in Chios ewes. Acta Vet Hung 57:331-5.
33. Tsiligianni T, **Ntovolou E**, Amiridis GS (2008) Synchronisation of lambing with low doses of dexamethasone in Chios ewes. Acta Vet Hung 56: 393-397.
34. Kantas D., Valasi E., Tsiligianni T., **Ntovolou E.**, Rigas G. (2008) Annual concentrations of thyroxin and progesterone in Karagouniko and Chios ewes J Hel Vet Med Soc 59(1):46-51.
35. Kantas D., **Ntovolou E.**, Tsiligianni T., Vaiasi E., Goulas P. (2008). The effect of thiamazole in thyroid and ovarian activity of Karagouniko breed ewes. J Hel Vet Med Soc 59(1): 40-45

Abstracts presented in International Conferences

1. **Dovolou E**, Clemente M, Amiridis GS, Messinis I, Kalitsaris A , Gutierrez-Adan A, D Rizos. Effects of guaiazulene on in vitro maturation of bovine zygotes, and on mRNA transcripts related to embryo quality. 2008 GEMINI- maternal Interactions with gametes & Embryos 9-11 October, Volos , GREECE
2. Tsiligianni TH, Amiridis GS, **Ntovolou E**, et al .Relationship between Certain Physical Properties of Cervical Mucus and Ovulation in Superovulated Cows . REPRODUCTION IN DOMESTIC ANIMALS 43 85-85 : Suppl. 5 NOV 2008
3. **Dovolou E**, Clemente M, Amiridis GS, Messinis I, Kalitsaris A, Gutierrez-Adan A, Rizos D.2009 .Effects of guaiazulene on in vitro culture of bovine zygotes, and on mRNA transcripts related to embryo quality. IETS 2009, San Diego,USA. Reprod. Fertile Devel. 21 (1) 156
4. **Dovolou E.**, Clemente M., Amiridis G.S., Messinis I., Gutierrez-Adan A., Rizos D. 2010. Effects of an exogenous antioxidant on the in vitro bovine embryo production. Proc of the 8th International Ruminant Reproduction Symposium. Anchorage Alaska, USA. P. 72
5. **Dovolou E**, Chadio S, Rekkas CA, Deligiannis C, Goulas P, Menegatos J, Amiridis GS (2011) ghrelin decreases pituitary response to GnRH in superovulated ewes. Proceedings of the 4th COST –Gemini- meeting Gijon Spain.
6. **Dovolou E**, Dafopoulos I, Kalitsaris A, Messinis I, Amiridis GS (2011). Ghrelin affects in vitro maturation of bovine oocytes in a time depended manner Proceedings of the AETE Annual meeting, Chester UK

7. Tsiligianni Th, **Dovolou E**, Samartzi F, Vainas E, Amiridis GS, Perreu C, Mermillod P. (2012) Associations between two glycosidases activity and in vitro fertilizing capacity of bovine oocytes. 28th AETE meeting Sant Malo, France.
8. **Dovolou E**, Chadio S, Messinis IE, Rekkas C, Deligiannis C, Kalogiannis D and Amiridis GS (2013). Ghrelin decreases pituitary response to GnRH in superovulated ewes 17th ESDAR Bologna ITALY
9. **Dovolou E**, Krania F, Dafopoulos C, Messinis I, Guttierrez- Adan A, Amiridis GS (2013).: Daily supplementation with ghrelin improves in vitro bovine blastocysts formation rate and alters gene expression related to embryo quality (29th AETE Istanbul Turkey)
10. Krania F, **Dovolou E**, Rekkas CA, Theodosiadou EK, Pappas I, Amiridis GS (2013): Inclusion of tissue type plasminogen activator (t-PA) in IVF medium induces alterations in gene expression and affects blastocyst formation rate in bovine IVP. (29th AETE Istanbul Turkey)
11. Amiridis GS, **Dovolou E**, Messinis I, Guttierrez-Adan A, Periquesta E, Dafopoulos K (2014) Ghrelin accelerates in vitro maturation of bovine oocytes 18th ESDAR Helsinki, Finland.
12. Chouzouris TM, **Dovolou E**, Dafopoulos K, Georgoulas P, Vasileiou NG, Fthenakis GC, Anifandis G and Amiridis GS. Effects of acylated ghrelin on GnRH-induced preovulatory gonadotropin surge in dairy heifers. 18th ICAR 2016 Tours France
13. Chouzouris TM, **Dovolou E**, Krania F, Pappas I, Dafopoulos K, Anifandis G, Amiridis GS. Effects of Ghrelin on activation of Akt and Erk ½ pathways during in vitro maturation of bovine oocytes. 32th AETE 2016, Barcelona Spain.
14. Anifandis G, Amiridis GS, Gavriil L, Gorgogetas V, Dafopoulos K, Daponte A, **Dovolou E**, Kachani E, Mamouris Z, Messini CI, Psarra AM. The in vitro impact of the herbicide Roundup on humane sperm motility and sperm mitochondrial functionality. 32th AETE 2016, Barcelona Spain.
15. **E Dovolou**, A Ntemka, F Krania, IA Tsakmakidis, and GS Amiridis. Effects of short exposure of bull semen to Roundup® on sperm kinetics and on in vitro embryo production. 33th AETE 2017, Bath, UK, 2017
16. C Stamperna, **E Dovolou**, Th Giannoulis, K Dadouli, Z Mamuris, GS Amiridis. Short term temperature elevation during IVM affects embryo yield and alters gene expression pattern in oocytes, cumulus cells and blastocysts in cattle. 35th AETE 2019 Murcia Spain
17. Ioannis Nanas, Thomas Markos Chouzouris, Constantina Stamperna, Eleni Dovolou, Georgios S Amiridis. Fertility characteristics of phenotypically thermotolerant dairy cows.. *24th annual ESDAR Conference 2020*.
18. Marianna Barbagianni, Ioannis Nanas, Katerina Dadouli, Eleni Dovolou, Georgios S. Amoiridis. Multilevel Summer heat stress affects hemodynamic parameters, tissue density, and alters secreting ability of the corpus luteum in dairy cows. *25th annual ESDAR Conference 2020, Greece*
19. Leda Oikononopoulou, Ioannis Nanas, Thomas Markos Chouzouris, Constantina Stamperna, Katerina Dadouli, Georgios S Amiridis, Eleni Dovolou. Effects of long-term ghrelin administration on metabolism and estrous characteristics in sheep. *24th annual ESDAR Conference 2020*.
20. Eleni Dovolou, Leda Oikononopoulou, Ioannis Nanas, Constantina Stamperna, Thomas Markos Chouzouris, Georgios S Amiridis, Ghrelin infusion attenuates gonadotropin secretion in ewes. *24th annual ESDAR Conference 2020*..
21. Stamperna K, Dovolou E, Giannoulis T, Kalemkeridou M, Moutou K, Amiridis GS. (2021): Effects of HSP70 addition in the IVM medium of heat stressed oocytes. *1st European Society for Domestic Animal Reproduction (ESDAR-ECAR) Online Conference*.

22. Stamperna K, Giannoulis T, Nanas I, Chouzouris T-M, Dadouli K, Amiridis GS, Dovolou E. (2022): Effects of temperature rise during in vitro maturation on embryo production in dairy and beef cattle. *19th International congress on animal reproduction (ICAR)*, Bologna, Italy.
23. Ioannis Nanas, Katerina Dadouli, Thomas-Markos Chouzouris, Konstantina Stamperna, Gerorgios S. Amoiridis. Effects of thermal stress on pregnancy characteristics in dairy cows. *31st World Buiatrics*, Madrid 2022
24. Stamperna K, Giannoulis T, Canon-Beltran K, Kalemkeridou M, Nanas I, Rizos D, Mamuris Z, Amiridis GS. (2022): Multilevel Effects of Summer heat stress on oviductal characteristics in dairy cows. *19th International Congress on Animal Reproduction (ICAR)*, Bologna, Italy.

Publication Records

- 35 papers published in International peer reviewed Journals (474 citations, h index 12, i10-index : 16)
- 19 presentations in International conferences
- More than 20 presentation in national conferences