



IOANNIS S. PAPPAS

**Associate Professor of Veterinary Pharmacology and Toxicology
Faculty of Veterinary Medicine
University of Thessaly
GREECE**

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Name	IOANNIS
Father's name	SERAFEIM
Date of birth	JULY 21, 1962
Place of birth	KALLIFONI KARDITSAS, GREECE
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EDUCATION

1984 Pharm.D., Pharmaceutical Sciences, Aristotle University of Thessaloniki, Greece
1992 Ph.D. in Pharmacology, Pharmaceutical Sciences, Aristotle University of Thessaloniki, Greece
1993-1996 Research Fellow, Dept. of Anatomy and Developmental Biology, University College London, U.K.
1996-2001 Research Fellow, Pharmaceutical Sciences, Aristotle University of Thessaloniki, Greece
2005 Short visit, 1/7-31/8/2005, Lab. of Pharmacogenetics, Medical School, Tufts University, Boston, MA, USA.

PROFESSIONAL ACTIVITIES

Undergraduate teaching

1998-2001 Lecturer "Veterinary Pharmacology"
2001- Course coordinator and Lecturer "Veterinary Pharmacology"
2001- Course coordinator and Lecturer "Toxicology"
2006- (Co-teaching) laboratory practicals "Pharmacogenetics", Medical School, Univ. of Thessaly, Greece
2019- Courses in Cellular and Molecular Biology, Faculty of Veterinary Medicine, Univ. of Thessaly

Postgraduate teaching

2008- Lecturer "Laboratory methods in genetic analysis" in MSc program "AQUACULTURE"-
"AQUATIC ANIMAL HEALTH"

2006- Lecturer “Fish Pharmacology” in MSc program “AQUACULTURE”- “AQUATIC ANIMAL HEALTH”

Professional Appointments:

1993-1996 **Post-doctoral Research Fellow**, Dept. of Anatomy and Developmental Biology, University College London, U.K.

1996-2001 **Post-doctoral Research Fellow** Pharmaceutical Sciences, Aristotle University of Thessaloniki, Greece

2001-2008 **Assistant Prof. of Veterinary Pharmacology**, Faculty of Veterinary Medicine, University of Thessaly, Greece

2008- **Associate Prof. of Veterinary Pharmacology**, Faculty of Veterinary Medicine, University of Thessaly, Greece

ADMINISTRATIVE ACTIVITIES

2001- Member of the General Assembly of the Faculty of Veterinary Medicine, University of Thessaly

2001- Head of the Department of Pharmacology and Toxicology, Veterinary Medicine, University of Thessaly

2006- Scientific Coordinator of Practical training of students of Faculty of Veterinary Medicine, University of Thessaly

2006-2019 Member of Library committee of University of Thessaly

2009-2010 Member of the committee of Internal Evaluation of Faculty of Veterinary Medicine, University of Thessaly

2009-2010 Member of ISO committee of University of Thessaly

2005-2007 Member of Financial Development of University of Thessaly

2006- Member of the executive committee of MSc program “AQUACULTURE”- “AQUATIC ANIMAL HEALTH”

2009- Head of Lab. of Drug Development, Institute of Technology and Management of Agricultural Ecosystems, Centre for Research and Technology–Thessaly (CE.RE.TE.TH), Greece, <http://itema.cereteth.gr/?p=18>

PATENTS

1. ***Method for the development of a delivery platform to produce deliverable PTD-IVT-mRNA therapeutics***», REF: GR-9389, Application number 20190100504 (11-11-2019). Hellenic Industrial Property Organisation, Co-inventors: Lefkothea Papadopoulou (AUTH), Ioannis S. Pappas (UTH), Ioannis S. Vizirianakis (AUTH), Androulla Miliotou (AUTH). 2020: Application submitted for an International patent.

RESEARCH

Research interests

1. Design and development of new anticancer agents.
2. Study of molecular mechanisms of action of anticancer drugs and chemical inducers of differentiation of neoplastic cells.
3. Relationship of cell proliferation, differentiation and apoptosis and their role of gene expression in these processes
4. Structure, function and genetic basis of metabolism of drugs *via* cytochrome P450 in food producing and companion animals
5. Study of antibiotic resistance
6. Pharmacokinetic of veterinary drugs
7. Neurodegenerative diseases and potent targets
8. Evaluation of potency and safety of drugs and vaccines

9. Mechanism of control of cell growth, differentiation and survival of stem cells
10. Development of new methods of mRNA transfer in cells and application of this technology in clinical practice

Research grants

As member of the research team:

1. Development of chemical inducers (drugs) and cDNA molecules in differentiation and genetic analysis of human leukemias' Scientific Coordinator: A.S. Tsiftoglou, Aristotle University of Thessaloniki, 1988-1990. 1-2-88 till 31-1-90.
2. Development of drugs and cloned genes of diagnostic value for genetic analysis and chemotherapy of neoplasms using biotechnology methods'. Scientific Coordinator: A.S. Tsiftoglou, Aristotle University of Thessaloniki, 1992. 1-4-92 till 31-12-92.
3. Development of infrastructure for basic and clinical research in neurosciences', Scientific Coordinator: G. Pavlidis, Aristotle University of Thessaloniki, 1993. 1-1-93 μέχρι 30-6-1993
4. Development of laboratory infrastructure for primary culture in developing rat cerebral cortex' Scientific Coordinator: J.G. Parnavelas, Department of Anatomy and Developmental Biology, University College London, U.K., 1993. Wellcome Trust, Grant no. G038015, 1-6-1993 till 31-10-1993.
5. Epigenetic influences on cortical cell lineages' Scientific Coordinator: J.G. Parnavelas, Department of Anatomy and Developmental Biology, University College London, U.K., 1993-1996. 1-11-1993 till 31-5-1996.
6. Analysis of chemical inducers of differentiation of erythroleukemia MEL cells in methylation and stability of RNA molecules, Scientific Coordinator: A.S. Tsiftoglou, Aristotle University of Thessaloniki, 1995-1997.
7. Development of recombinant proteins and diagnostics' Scientific Coordinator: A.S. Tsiftoglou, Aristotle University of Thessaloniki, 1996-1998. 1-11-95 till 29-2-96 and 1-9-96 till 31-7-97.
8. Development and industrial production (Scale-up production) of human recombinant proteins of therapeutic interest as biotechnological products. Scientific Coordinator: A.S. Tsiftoglou, Aristotle University of Thessaloniki, 1999-2001. 1-1-1999 till 31-6-2001.
9. Analysis of immunopathogenic mechanisms in natural and experimental fish infections with Nodavirus: importance of infection in public health. Scientific coordinator: F. Athanassopoulou, University of Thessaly, 2012-2015.
10. Effectiveness of terrestrial and marine plant extracts for the prevention and treatment of parasite infections (*Microcotyle* spp, *Myxosporea*) and of myxobacteriosis in cultured Sea bream (*Sparus aurata* L.). Scientific Coordinator F. Athanassopoulou, Vice coordinator Ioannis S. Pappas, 2020-2023
11. Development of innovative approach of CAR technology in the context of oral cancer immunotherapy. Scientific Coordinator Lefkothea Papadopoulou (AUTH), Vice coordinator Ioannis S. Pappas (UTH), 2020-2022.

As scientific coordinator in research grants.

1. 'Study of drug metabolism in companion and food-producing animals', Research Committee of Univ. of Thessaly, 2,700 €, Grant no. 2769, 1/9/2002-1/9/2003
2. 'Study of drug metabolism in companion and food-producing animals', 33,500 €, Heracleitos I, EPEAEK I, Ministry of Education, 2003-2006.
3. 'Study of residues of three forms of CURPAN (tablet 250 mg, tablet 500 mg and 5% solution) in sheep'. 15,000 €, From Pharmaqua S.A. (pharmaceutical company), Greece. 2005-2006.
4. 'Study of residues of oxytetracycline in fish', 15,000 €, From Vethellas (pharmaceutical company), Greece. 2009-2010.

As scientific coordinator or team member in non research grants.

1. 'Practical training of students of Faculty of Veterinary Medicine, University of Thessaly, 42,000 €, EPEAEK II, Ministry of Education, Scientific coordinator, Prof. F. Athanassopoulou, 2002-2004.
2. 'Reforming of graduate studies courses, 142,000 €, EPEAEK II, Ministry of Education, Scientific coordinator, Prof. F. Athanassopoulou, 2002-2005.
3. Equipments for Reforming of graduate studies courses, 50,000 €, EPEAEK II, Ministry of Education, Scientific coordinator: Assoc. Prof. Ioannis Pappas, 2002-2005.
4. Educational Equipments for Faculty of Veterinary Medicine, University of Thessaly, 230,000 €, EPEAEK II, Ministry of Education, Scientific coordinator: Assoc. Prof. Ioannis Pappas, 2002-2005.
5. 'Laboratory scientific instruments for Faculty of Veterinary Medicine, University of Thessaly, 50,000 €, EPEAEK II, Ministry of Education, Scientific coordinator: Assoc. Prof. Ioannis Pappas, 2005.
6. 'Practical training of students of Faculty of Veterinary Medicine, University of Thessaly, 65,000 €, EPEAEK II, Ministry of Education, Scientific coordinator: Assoc. Prof. Ioannis Pappas, 2006-2008.
7. 'Practical training of students of Faculty of Veterinary Medicine, University of Thessaly, 87,000 €, EPEAEK II, Ministry of Education, Scientific coordinator: Assoc. Ioannis Pappas, 2009-2012.
8. 'Practical training of students of Faculty of Veterinary Medicine, University of Thessaly, Budget not available yet, ESPA, Ministry of Education, Scientific coordinator: Assoc. Ioannis Pappas, 2013-2015
9. 'Practical training of students of Faculty of Veterinary Medicine, University of Thessaly, Budget not available yet, ESPA, Ministry of Education, Scientific coordinator: Assoc. Ioannis Pappas, 2014-2020

Publications

1. Ioannis S. Pappas. "Development of ureido derivatives of pyridine as new chemical inducers of differentiation of neoplastic cells and analysis of molecular mechanism of their action". **Ph.D. Thesis**. Supervisor: Prof. Asterios S. Tsiftoglou, Dept. Pharmaceutical Sciences, Aristotle University of Thessaloniki, Greece. July 1992.
2. Tsipis C.A., Shakhathreh S.K., Bakalbassis E.G., Pappas I.S. and Tsiftoglou A.S. Magnetic properties and antineoplastic activity of novel phthalate-bridge Copper (II) complexes. In "**Platinum and other metal coordination compounds in cancer chemotherapy**" **Marino Nicolini (Ed.)**, Martinus Nijhoff Publishing, The Netherlands, p. 749-756, 1987.
3. Tsiftoglou A.S., Pappas I.S. and Niopas I. Structural, cellular and pharmacological implications of neoplastic cell differentiation induced by ureido-derivatives of pyridine (UDPs). In "**Chemistry and Properties of Biomolecular systems**" **E. Rizzarelli and T. Theophanides (Eds.)**. Kluwer Academic Publishers, Dordrecht, The Netherlands, p. 189-208, 1991.
4. Pappas I.S., Niopas I. and Tsiftoglou A.S. Ureido-derivatives of pyridine: a new class of inducers of murine erythroleukemia cell differentiation. **Anti-Cancer Drug Design 7**: 153-161, 1992.
5. Tsiftoglou A.S and Pappas I.S. Analysis of commitment of murine erythroleukemia cells to terminal maturation. In "**Molecular Biology of Haematopoiesis**", **N. Abraham et al., (eds.) Vol. 3**. Intercept Press Ltd., Andover, Hampshire, UK, pp. 169-176, 1993.
6. Pappas I.S. and A.S. Tsiftoglou. Inducer-receptor mediated processes in murine erythroleukemia cell differentiation. In "**Challenges of Modern Medicine**" **S. Waxman (ed.) Vol. 10**, pp. 269-273, 1995.

7. Pappas I.S., Sophianos D., Tzartos S. and Tsiftoglou A.S. Expression of memory, differentiation, and repression of c-myc and p53 genes in human RD/TE-671 cells induced by a ureido-derivative of pyridine (UDP-4). **Cell Growth and Differentiation**, **7**, 797-809, 1996.
8. Tsiftoglou A.S., Vizirianakis I.S. and I.S. Pappas. Regulation of murine erythroleukemia cell differentiation. In **"Regulation of Cell Growth, Differentiation and Genetics in Cancer"** Ed. by A.S. Tsiftoglou et al., Springer-Verlag, NATO ASI Series, 1996, **H99**: 295-307.
9. Mione M., Pappas I.S., Lavdas A. and Parnavelas J.G. Lineage analysis of β -galactosidase-positive neurons: Postembedding immunocytochemistry and double immunofluorescence. **Neuroscience Protocols**, **96-030-01**, 1-15, 1996.
10. I.S. Pappas and J.G. Parnavelas. Neurotrophins and Basic Fibroblast Growth Factor Induce the Differentiation of Calbindin-Containing Neurons in the Cerebral Cortex, **Exp. Neurol.** **114**: 302-314, 1997.
11. Antonopoulos J., Pappas I.S. and J.G. Parnavelas. Activation of the GABA_A receptor inhibits the effects of bFGF in the developing cerebral cortex in vitro. **Eur. J. Neurosci.** **9**: 291-298, 1997.
12. Cavanagh J.F.R., Mione M.C., Pappas I.S. and Parnavelas J.G. Basic fibroblast growth factor prolongs the proliferation of rat cortical progenitor cells *in vitro* without altering their cell cycle parameters. **Cerebral Cortex**, **7**: 293-302, 1997.
13. Dooley A.E., Pappas I.S., and J. G. Parnavelas. Serotonin promotes the survival of cortical glutamatergic neurons *in vitro*. **Exp. Neurol.** **148**: 205-214, 1997.
14. Pappas I.S. and J. G. Parnavelas. Basic fibroblast growth factor promotes the generation and differentiation of calretinin neurons in the rat cerebral cortex *in vitro*. **Eur. J. Neurosci.** **10**, 101-110, 1998.
15. Ali S.A., Pappas I.S. and Parnavelas J.G. Collagen type IV promotes the differentiation of neuronal progenitors and inhibits astroglial differentiation in cortical cell cultures. **Dev. Brain Res.** **110**: 31-38, 1998.
16. Vizirianakis I.S., Pappas I.S. and A.S. Tsiftoglou. Expression of ribosomal protein S5 cloned gene during differentiation and apoptosis in murine erythroleukemia (MEL) cells. **Oncol. Res.** **11**: 409-419. 1999.
17. Tsiftoglou A.S., Vizirianakis I.S., Pappas I.S. and Papadopoulou L.C. Mechanisms of differentiation and apoptosis of neoplastic cells. **Proceedings of 7th Postgraduate Conference in Clinical Oncology: Recent developments in Oncology in 1999** (Eds. V.A. Georgoulas) pp. 449-453, 2000.
18. Pappas I.S., Vizirianakis I.S. and A.S. Tsiftoglou. Cloning, sequencing and expression of a cDNA encoding the mouse L35a ribosomal protein during differentiation of murine erythroleukemia (MEL) cells. **Cell Biol. Int.** **25**: 629-634, 2001.
19. Tsiftoglou A.S., Pappas, I.S. and Vizirianakis, I.S. Pyridine and purine analogs as modulators of murine erythroleukemia (MEL) cell differentiation. In: **Advanced Course on "New fluoropyrimidines in cancer chemotherapy"**, European School of Oncology (ESO), Thessaloniki, March 8-10, 2001, pp. 35-39. 2001.
20. Vizirianakis I.S., Pappas I.S. and A.S. Tsiftoglou. Differentiation-dependent repression of c-myc, B22, COX II and COX IV gene in murine erythroleukemia (MEL) cells. **Biochem. Pharmacol.** **63**: 1009-1017. 2002.
21. Tsiftoglou AS, Pappas I.S, Vizirianakis I.S. The developmental program of murine erythroleukemia cells. **Oncol Res.** **13**(6-10), 339-346. 2003, review.
22. Pappas I.S. and Katsiabas D. (2003). Genetic polymorphism of canine cytochrome 2D15 gene. In **"Cytochromes P450, Biochemistry, Biophysics and Drug Metabolism"**, P. Anzenbacher and Hudecek J. (Eds.), Monduzzi Ed., Bologna, Italy, pp. 273-276, 2003.
23. Tsiftoglou AS, Pappas IS, Vizirianakis IS. Mechanisms involved in the induced differentiation of leukemia cells. **Pharmacol Ther.** **100**(3): 257-290. 2003, review.
24. Pappas I.S. and Katsiabas D. (2004). Genetic polymorphism of canine cytochrome 2D15 gene. **Rev. of Clin. Pharmacol. Pharmacokinetics**, Int. Ed. **18**: 161-163, 2004.

25. Pappas I.S., Lambris J., Vizirianakis I.S. Winters M.S. and Tsiftoglou A.S. Mechanisms of action of differentiation inducers: Detection of inducer-binding protein(s) in murine erythroleukemia cells. **Oncol Res.**, 15 (1), 21-37, 2005.
26. Xylouri E., Kotzamanis Y.P., Athanassopoulou F., Dong L., Pappas I.S., Argyrokastritis A., Fragiadaki E. Isolation, characterization, and sequencing of nodavirus in sturgeon (*Acipenser gueldenstaedi* L.) reared in freshwater facilities. **The Israeli J. Aquaculture-Bamidgeh** 59(1): 37-42, 2007.
27. Lyberopoulou A., Venieris E., Mylonis I., Chachami G., Pappas I., Simos G., Bonanou S., Georgatsou E. MgcRacGAP interacts with HIF-1alpha and regulates its transcriptional activity. **Cell Physiol Biochem.** 20: 995-1006, 2008.
28. Pitsikas N., Zisopoulou S., Pappas I., Sakellaridis N. The selective 5-HT(6) receptor antagonist Ro 04-6790 attenuates psychotomimetic effects of the NMDA receptor antagonist MK-801. **Behav. Brain Res.** 188: 304-309, 2008.
29. Athanassopoulou F., Pappas I. S., Bitchava K. An overview of the treatments for parasitic disease in Mediterranean aquaculture. **CIHEAM Journal Options Méditerranéennes A.** 86: 65-83, 2009. review.
29. Giannenas I., Pappas I.S., Mavridis S., Kontopidis G., Skoufos J. and Kyriazakis I. Performance and Antioxidant Status of Broiler Chicken Supplemented with Dried Mushrooms (*Agaricus bisporus*) in their Diet. **Poultry Science**, 89: 303-311, 2010.
30. Pappas. Development of a new series of aryl ureido derivatives as anticancer agents against breast cancer cells. **Review of Clinical Pharmacology and Pharmacokinetics, International Edition** 24 (2), pp. 190-192, 2010.
31. Mavridis S. K. and Pappas I.S. Regulation of Aromatase Expression by Hormones, Drugs, Pesticides and Environmental Pollutants in Canine Mammary CMT-U27 Cells. **Review of Clinical Pharmacology and Pharmacokinetics, International Edition** 24 (2), pp. 171-174, 2010.
32. Saridomichelakis M.N., Athanasiou L.V., Salame M., Chatzis M.K., Katsoudas V., Pappas I.S. Serum pharmacokinetics of clindamycin hydrochloride in normal dogs when administrated at two dosage regiments. **Vet. Dermatology**, 22(5): 429-435, 2011.
33. Saridomichelakis M.N., Athanasiou L.V., Chatzis M.K., Salame M., Katsoudas V., Pappas I.S. Concentrations of clindamycin hydrochloride in homogenates of normal dog skin when administered at two oral dosage regimens. **Vet. Q.** 33(1):7-12, 2013
34. Giannenas I, Papaneophytou CP, Tsalie E, Pappas I, Triantafillou E, Tontis D, Kontopidis GA. Dietary Supplementation of Benzoic Acid and Essential Oil Compounds Affects Buffering Capacity of the Feeds, Performance of Turkey Poults and Their Antioxidant Status, pH in the Digestive Tract, Intestinal Microbiota and Morphology. **Asian-Australas J Anim Sci.** 27(2):225-36, 2014. doi: 10.5713/ajas.2013.13376
35. Krania F, Dovolou E, Rekkas CA, Theodosiadou EK, Pappas I, Amiridis GS (2014): Effects of Addition of Tissue-Type Plasminogen Activator in In Vitro Fertilization Medium on Bovine Embryo Development and Quality. **Reprod. Domest. Anim.** Feb;50(1):112-120, 2015. doi: 10.1111/rda.12456
36. Krania F, Dovolou E, Rekkas CA, Heras S, Pappas I, Van Soom A, Amiridis GS. Urokinase-type plasminogen activator did not affect in vitro bovine embryo development and quality. **Acta Vet. Hung.** Jun;63(2):243-254. 2015, doi: 10.1556/004.2015.022.
37. Koutoulis Konstantinos C., Pappas Ioannis S., Filiouis George and Athanasiou Labrini. Pharmacokinetics And Clinical Assessment Of Amoxicillin For The Control Of Necrotic Enteritis In Broiler Breeders Under Field Conditions. **Avian Biology Research** 8(2): 89-96, 2015, DOI:10.3184/175815515X14292912200460
38. Giannenas Ilias, Karamaligas Ioannis, Margaroni Maritsa, Pappas Ioannis, Mayer Elisabeth, Pedro Encarnacao, Karagouni Evdokia. Effect of dietary incorporation of a multi-strain probiotic on growth performance and health status in rainbow trout (*Oncorhynchus mykiss*). **Fish Physiol Biochem** 41:119–128, 2015. DOI: 10.1007/s10695-014-0010-0.
39. Chouzouris Thomas-Markos, Dovolou Eleni , Krania Fotini Pappas, Ioannis S, Dafopoulos Konstantinos, Messinis Ioannis E, Anifandis George and Georgios S Amiridis. Effects of

- ghrelin on activation of Akt1 and ERK1/2 pathways during *in vitro* maturation of bovine oocytes. **Zygote**, 25(2):183-189, 2017. doi: 10.1017/S096719941700003X
40. Rovoli M., Pappas I., Lalas S., Gortzi O. and Kontopidis G. *In vitro* and *in vivo* assessment of vitamin A encapsulation in a liposome–protein delivery system. **Journal of Liposome Research**, p. 1-11, DOI: 10.1080/08982104.2018.1502314, Sept. 2018
 41. Kolygas M.N., Lambou E., Doukas D., Tontis D., Pappas I., Gourzioti E., Bakopoulos V., Kakava E. and Athanassopoulou F. (2020). Squamous Cell Carcinoma (SCC) in Brown meagre (*Sciaena umbra* Linnaeus,1758), a new candidate species for aquaculture in Mediterranean. **Journal of the Hellenic Veterinary Medical Society**,71(3), 2399-2406. doi:<https://doi.org/10.12681/jhvms.25104>
 42. Gouva E., Nathanailides C., Skoufos I., Paschos I., Athanassopoulou F. and Pappas I. Comparative study of the effects of Heavy metals on embryonic development of zebrafish. **Aquaculture Research**, 51 (8), 3255-3267, 2020, doi:10.1111/are.14660
 43. Gouva E., Nathanailides C., Skoufos I., Paschos I., Athanassopoulou F. and Pappas I. Reduced metabolic rate and increased heart beat as early signs of sub-lethal Copper toxicity in developing Zebrafish, **Asian Journal of Agriculture and Biology**, 8 (2), 119-128, 2020, DOI: 10.35495/ajab.2019.09.415
 44. Gouva E., Nathanailides C., Paschos I., Athanassopoulou F. and Pappas I. S. (2020). Acute and sub-lethal toxicity of aluminum on developing zebrafish embryos, **Book series: Environmental Science and Engineering**, Editions Springer.
 45. Lampou E., Chasalevris T., Margaroni M., Dovas C., Karagouni E., Pappas I., Athanassopoulou F., Bitchava K. (2020) Investigation of routes of entry and dispersal pattern of GNNV in European sea bass, *Dicentrarchus labrax*. **J Fish Dis**. 43:1363–1371, 2020. DOI: 10.1111/jfd.13215
 46. Miliotou N. Androulla, Pappas S. Ioannis, Spyroulias Georgios, Vlachaki Efthimia, Tsiftoglou S. Asterios, Vizirianakis S. Ioannis and Papadopoulou C. Lefkothea (2020). Novel IVT-mRNA Delivery platform, via Protein Transduction Domain Technology, as Protein Therapy for Genetic Disorders. **Molecular therapy-Nucleic acids** (under revision, 2020)

PRIZES AND DISTINCTIONS

Fellowship for postgraduate studies from the Ministry of Education (1985-1991).