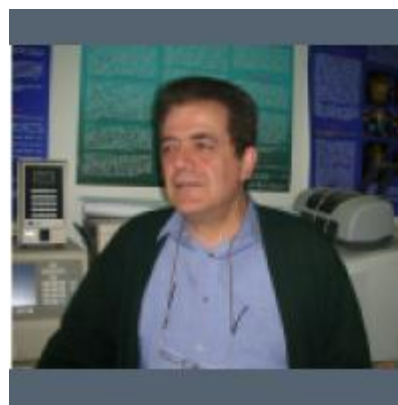


DIMITRIOS KALPAXIS
SHORT CURRICULUM VITAE
AND
SCIENTIFIC PUBLICATIONS



Dimitrios Kalpaxis was born in Moulki of Corinth in 1951. He is married and has two children. He studied Biology (1970-1974) and Chemistry (1975-1979) in University of Patras. He was a post-graduate student in the School of Sciences of University of Patras and received his PhD in 1981. He worked as a Research Fellow (1980-1982), Lecturer (1982-1986), Assistant Professor (1986-1996), Associate Professor (1996-2003) and Professor (2003-today) at the School of Medicine of University of Patras. He has been a Visiting Scholar at the School of Medicine of Nurnberg University (1988, 1989) and Visiting Research Fellow at the Max-Plank Institute of Berlin (2000). He has given a series of lectures and seminars in Academic and Research Centers of Europe.

His research interests are focused on the Biochemistry field, in particular on the structural analysis of cartilage components, the kinetic analysis of dehydrogenases, the structure and function of the protein-synthesizing machine and the mechanism of action of antibiotics. He has published extensively in international journals of high impact factor and books, and has presented his research in various international conferences and workshops. He is a member of the editorial board of the journal *Open Enzyme Inhibition Journal* and *Community Medicine & Health Education*, reviewer in 18 international journals, reviewer of research proposals submitted in national and international financial agencies, and member of 6 scientific societies.

He has been director of the post-graduate Programme in Basic Medicinal Sciences of University of Patras (2006-2010), member of the Committee for Post-Graduate Studies (2006-2008), and member of the Research Committee (2007-2010) of University of Patras. In 2010, he was elected to be Vice Rector in University of Patras, for Strategic Research Planning and Development (2010-2014).

Scholarships-Fellowships-Awards

- Scholarship I.K.Y. (1972-1973)
- Fellowship E.I.E. (1976-1978)
- Fellowship E.M.B.O. (1988-1989)
- Fellowship E.E.C. (1988-1989)
- Award for excellent research activity (Symeonidis-Award)
- Award for excellent oral presentation: 33rd FEBS Congress on “Biochemistry of Cell Regulation”, Athens, Greece, June 28-July 3, 2008
- 1st Award of poster presentation: 11th Medical Chemistry Congress on “Drug Discovery and Design”, Patras, Greece, April 25-April 28, 2010

Teaching

- **Under-Graduate teaching**

1980-1982: Laboratory training of medical students in Chemistry and Biochemistry

1982-1996: Teaching medical students in Chemistry and Biochemistry; teaching students of Pharmacy in Clinical Chemistry

1996-today: Teaching medical students in Chemistry and Biochemistry.

Supervision of 27 undergraduate dissertations of students of the Polytechnic School and the School of Natural Sciences

Μεταπτυχιακή Εκπαίδευση

1982-1986: Teaching residents Microbiologists in Clinical Chemistry

1996-today: Teaching of postgraduate students in: Research Methodology, Research Topics, Analysis of Current Literature, Molecular Basis of Transcription and Translation, Introduction in Molecular Biology, and Clinical-Biochemistry, within the Post-Graduate Programme “Applications of Medicinal Basic Sciences”

1996-1997: Teaching of junior doctors in Prevention and Early Diagnosis of Diabetic Retinopathy, Programme 94005E1 «Health and Welfare».

2000-2002: Teaching of postgraduate students in Special Topics in Biochemistry, within the Post-Graduate Programme of Biology Department, School of Natural Sciences

Supervision of 8 postgraduate dissertations and 8 doctoral theses.

Participation in funded projects as principal investigator

- “Influence of polyamines on the mechanism of protein synthesis”, Research Committee of Patras University, 1992
- “Structure-function relationships on polyamine analogues with anticancer activity”, E/530, Y3a/1210/Greek Ministry of Health, 1994
- “Influence of polyamines on the structure and function of ribosomes”, 178 (95ED) EPET II, Hellenic General Secretariat of Research & Technology, (GSRT), 1996
- “The fate of ribosomes in clinical and laboratory strains in *Escherichia coli*, cultivated for prolonged time in sea salts medium”, TRNS 030203/GRE-147 (IV) W.H.O., 1997
- “Establishment of analytical methods for biological-effects pollution monitoring”, ME/1100-98-022207, United Nations, MED. POL. Research Programme, 1999.
- “Structural and functional properties of ribosomes from prokaryotic and eukaryotic organisms of high biotechnological significance”, 99 ED605, EPETII/PENED 99, GSRT & European Social Fund, 1999.
- “Monitoring of biological effects of pollution along the Patraikos gulf of Greece”, ME/1100-98-022208, United Nations, MED. POL. Research Programme, 1999.
- Regulatory mechanisms of ribosomal elongation cycle”, IKYDA 2000/6, Bilateral Research Programme Greece-Germany, 2000.

- “Monitoring of biological effects of pollution along the Patraikos gulf of Greece”, ME/6030-00-04BL2207, United Nations, MED. POL. Research Programme, 2001.
- “Effect of polyamines on the mechanism of action of antibiotics which inhibit protein synthesis”, E/018, DY2b/178, Greek Ministry of Health, 2001.
- “Monitoring of biological effects of pollution along the Patraikos gulf of Greece”, XM/6030-00-70 BL2208 United Nations, MED. POL. Research Programme, 2003.
- “Monitoring the environmental quality in Greek seas”, Greek Ministry of Environment, 2004-2005.
- “Effect of polyamines on the mechanism of action of antibiotics of the MLS family”, Programme “Karatheodori”, University of Patras, 2003-2006.
- “Monitoring of biological effects of pollution along the Patraikos gulf of Greece”, MEL-2322-2732-2664 BL2208 United Nations, MED. POL. Research Programme, 2004-2010
- “Research and Innovation Policies in University of Patras”, NSRF Programme for Development, Regional Government of Western Greece, 2011-2014.

Participation in R/D programmes

- Programme for Computerization of Administrative Services in University of Patras, member of the Steering Committee (2010-2012)
- Programme for Safekeeping of Scientific Infrastructures in University of Patras, Scientific Director of the project (2010-2012)
- “Research and Innovation Policies in University of Patras”, NSRF Programme for Development, Regional Government of Western Greece, 2011-2014, Scientific Director of the project.

Collaboration with International Research Centers and Institutes

- Institute of Biochemistry, School of Medicine, University of Nurnberg, Erlangen, Germany (Prof. T. Dingermann).
- Max-Plank-Gesellschaft, MPI fur Molekulare Genetik, Berlin, Germany (Prof. K.H.Nierhaus).
- Centro Inreruniversitario di Chimica e Biologia dei Metalli in Traccia, Universita di Genova; Dipartimento di Scienze e Techologie Avanzate, Universita del Piemonte Orientate (Prof. A. Viarengo).
- Gene Center & Department of Chemistry and Biochemistry, Ludwig-Maximilians University of Munich, Munich, Germany (Dr. D.N. Wilson).

Member of Scientific Societies

- Hellenic Society of Biochemistry & Molecular Biology
- Hellenic Society of Biological Sciences

- Association of Greek Chemists
- Hellenic Society of Clinical Chemistry & Clinical Biochemistry
- Association of Greek Biologists
- American Society for Biochemistry and Molecular Biology

Brief presentation of research activity

- Full articles in International Peer-Reviewing Scientific Journals : 66
- Full articles in Books: 4
- Editorial: 1
- Abstracts in International Scientific Journals: 6
- Publications in Greek Journals: 19
- Presentations in International Scientific Conferences: 27
- Invited speaker in International Scientific Conferences and Workshops: 12
- Presentations in Greek Scientific Conferences: 43
- Participation in articles as first author: 16
- Participation in articles as corresponding author: 41
- Publications during the last three years: 7
- Sum Impact Factor: 297,562
- Average Impact Factor: 4,65 (2012)
- h-index: 17 (Google Scholar)
- Citations: 908 (Google Scholar, Scopus)

Personal Website:

http://biochemistry.med.upatras.gr/lang_en/humanResources/viewCV/5

LIST OF PUBLICATIONS

Articles in International Peer-Reviewing Journals and Books

1. D. L. Kalpaxis, D. H. Vynios and C. P. Tsiganos* (1985). Immobilization of hyaluronate on cellulose fibres and its use for the isolation of cartilage components. *Int. J. Biochem.*, 17 (1), 61-66.
2. D. A. Theocharis, D. L. Kalpaxis and C. P. Tsiganos* (1985). Cartilage keratan-sulphate: Changes in chain length with ageing. *Biochim. Biophys. Acta*, 841, 131-134.
3. D. L. Kalpaxis* (1985). Comparative study of affinity chromatography of components of the hyaluronate-proteoglycan complex to immobilized hyaluronate. *J. Chromatogr.*, 350, 227-236.

4. D. L. Kalpaxis, D. A. Theocharis and C. Coutsogeorgopoulos* (1986). Kinetic studies on ribosomal peptidyltransferase. The behaviour of the inhibitor blasticidin S. *Eur. J. Biochem.*, 154, 267-271.
5. C. P. Tsiganos,* D. H. Vynios and D. L. Kalpaxis (1986). Rooster comb hyaluronate-protein: A noncovalently linked complex. *Biochem. J.*, 235, 117-123.
6. D. A. Theocharis, D. L. Kalpaxis and C. Coutsogeorgopoulos* (1986). Aminoacylamino nucleoside inhibitors of protein synthesis. A new approach for evaluating their potency. *Eur. J. Biochem.*, 159, 479-483.
7. D. Drinas, D. L. Kalpaxis and C. Coutsogeorgopoulos* (1987). Inhibition of ribosomal peptidyltransferase by chloramphenicol. *Eur. J. Biochem.*, 164, 53-58.
8. F. Kalfarentzos*, J. Spiliotis, D. Christopoulos, D. Theocharis, D. L. Kalpaxis, M. Williams and J. Androulakis (1988). Total parenteral nutrition by intraperitoneal feeding in rabbits. *Eur. Surg. Res.*, 20, 352-357.
9. E. Karvountzi, G. Goulielmos, D. L. Kalpaxis and S. N. Alahiotis* (1989). Adaptation of *Drosophila* enzymes to temperature. VI: Acclimation studies using the Malate Dehydrogenase (MDH) and Lactate Dehydrogenase (LDH) systems. *J. Therm. Biol.*, 14 (2), 55-61.
10. E. Giannoulaki, D. L. Kalpaxis*, C. Tentas and F. Fessas (1989). Lactate dehydrogenase isoenzyme pattern in sera of patients with malignant diseases. *Clin. Chem.*, 35 (3), 396-399.
11. D. L. Kalpaxis* and E. Giannoulaki (1989). Partial characterization of an abnormal lactate dehydrogenase isoenzyme, LDH-1ex, in serum from a patient with hepatocellular carcinoma. *Clin. Chem.*, 35 (5), 844-848.
12. D. L. Kalpaxis and C. Coutsogeorgopoulos* (1989). Type of inhibition of peptide bond formation by chloramphenicol depends on the temperature and the concentration of ammonium ions. *Mol. Pharmacol.*, 36, 615-619.
13. R. Marschalek, D. L. Kalpaxis, T. Dingermann* (1990). Temperature sensitive synthesis of transfer RNAs *in vivo* in *Saccharomyces cerevisiae*. *EMBO J.*, 9 (4), 1253-1258.
14. D. L. Kalpaxis, H. Werner, E. B. Marcotte, M. Jaquet and T. Dingermann* (1990). Positive selection for *Dictyostelium* mutants lacking uridine monophosphate synthase activity based on resistance to 5-fluoro-orotic acid. *Dev. Genet.*, 11, 396-402.
15. D. L. Kalpaxis, I. Zundorf, H. Werner, N. Reidl, E.B. Marcotte, M. Jaquet and T. Dingermann* (1991). Positive selection for *Dictyostelium descoideum* mutants

- lacking UMP synthase activity based on resistance to 5-fluorototic acid. *Mol. Gen. Genet.*, 225, 492-500.
16. D. A. Theocharis, D. Synetos, D. L. Kalpaxis, D. Drainas and C. Coutsogeorgopoulos* (1992). Kinetics on inhibition of peptide bond formation on bacterial ribosomes. *Arch. Biochem. Biophys.*, 292 (1), 266-272.
 17. D. L. Kalpaxis*, D. Drainas (1992). Effect of spermine on peptide-bond formation catalyzed by ribosomal peptidyltransferase. *Mol. Cell Biochem.*, 1115, 19-26.
 18. S. Kallia-Raftopoulos, D. L. Kalpaxis and C. Coutsogeorgopoulos* (1992). Slow-onset inhibition of ribosomal peptidyltransferase by lincomycin. *Arch. Biochem. Biophys.*, 298, 332-339.
 19. D. L. Kalpaxis* and D. Drainas (1993). Inhibitory effect of spermine on ribosomal peptidyltransferase. *Arch. Biochem. Biophys.*, 300, 629-634.
 20. D. Drainas and D. L. Kalpaxis* (1994). Bimodal action of spermine on ribosomal peptidyltransferase at low concentration of magnesium ions. *Biochim. Biophys. Acta*, 1208, 55-64.
 21. S. Kallia-Raftopoulos, D. L. Kalpaxis and C. Coutsogeorgopoulos* (1994). New aspects of the kinetics of inhibition by lincomycin of peptide bond formation. *Mol. Pharmacol.*, 46, 1009-1014.
 22. P. Mamos, G. Karigiannis, C. Athanassopoulos, S. Bichta, D. L. Kalpaxis and D. Papaioannou* (1995). Simple total synthesis of *N*-substituted polyamine derivatives using *N*-tritylamino acids. *Tetrahedron Lett.*, 36 (26), 5187-5190.
 23. C. Stathopoulos, D. L. Kalpaxis and D. Drainas* (1995). Partial purification and characterization of RNase P from *D. discoideum*. *Eur. J. Biochem.*, 228, 976-980.
 24. D. L. Kalpaxis*, P. Karahalios, and M. Papapetropoulou (1995). Growth phase and growth rate dependence of ribosomal peptidyltransferase activity status in *E. coli*. *Biochimie*, 77, 963-971.
 25. M. Michelinaki, P. Mamos, C. Coutsogeorgopoulos, and D. L. Kalpaxis* (1997). Aminoacyl and peptidyl analogs of chloramphenicol as slow-binding inhibitors of ribosomal peptidyltransferase. A new approach for evaluating their potency. *Mol. Pharmacol.* 51, 139-146.
 26. G. P. Dinos, and D. L. Kalpaxis* (1997). Heat and ionic limitations do not change the inhibition pattern of ribosomal peptidyltransferase by aminohexosyl-cytosine nucleoside antibiotics. *Pharmazie* 52, 875-877.

27. M. Michelinaki, A. Spanos, C. Coutsogeorgopoulos, and D. L. Kalpaxis* (1997). New aspects on the kinetics of activation of ribosomal peptidyltransferase-catalyzed peptide bond formation by monovalent ions and spermine. *Biochim. Biophys. Acta*, 1342, 182-190.
28. P. Karahalios, P. Mamos, D. H. Vynios, D. Papaioannou, and D. L. Kalpaxis* (1998). The effect of acylated polyamine derivatives on polyamine uptake mechanism, cell growth, and polyamine pools in *Escherichia coli*, and the pursuit of structure/activity relationships. *Eur. J. Biochem.*, 251, 998-1004.
29. D. L. Kalpaxis*, P. Karahalios, and M. Papapetropoulou (1998). Changes in ribosomal activity of *Escherichia coli* cells during prolonged culture in sea salts medium. *J. Bacteriol.*, 180, 3114-3119.
30. D. H. Vynios, S. S. Vamvacas, D. L. Kalpaxis, and C. P. Tsiganos* (1998). Aggrecan immobilization onto polystyrene plates through electrostatic interactions with spermine. *Anal. Biochem.* 260, 64-70.
31. P. Karahalios, P. Mamos, G. Karigiannis, and D. L. Kalpaxis* (1998). Structure-function correlation of spermine analogue-induced modulation of peptidyltransferase activity. *Eur. J. Biochem.*, 258, 437-444.
32. P. Karahalios, I. Amarantos, P. Mamos, D. Papaioannou, and D. L. Kalpaxis* (1999). Effects of ethyl and benzyl analogues of spermine on *Escherichia coli* peptidyltransferase activity, polyamine transport and cellular growth. *J. Bacteriol.*, 181, 3904-3911.
33. S. Kallia-Raftopoulos, and D. L. Kalpaxis* (1999). Slow sequential conformational changes in *Escherichia coli* ribosomes induced by lincomycin: Kinetic evidence. *Mol. Pharmacol.*, 56, 1042-1046.
34. G. P. Dinos*, and D. L. Kalpaxis (2000). Kinetic studies on the interaction between a ribosomal complex active in peptide bond formation and the macrolide antibiotics tylosin and erythromycin. *Biochemistry*, 39, 11621-11628.
35. I. Amarantos, and D. L. Kalpaxis* (2000). Photoaffinity polyamines: interactions with AcPhe-tRNA free in solution or bound at the P-site of *Escherichia coli* ribosomes. *Nucleic Acids Res.*, 28, 3733-3742.
36. G. P. Dinos, M. Michelinaki, and D. L. Kalpaxis* (2001). Insights into the mechanism of azithromycin interaction with an *Escherichia coli* functional ribosomal complex. *Mol. Pharmacol.*, 59, 1-5.
37. I. Amarantos, M. A. Xaplanteri, T. Choli-Papadopoulou and D. L. Kalpaxis* (2001). Effects of two photoreactive spermine analogues on peptide-bond

formation and their application for labeling proteins in *Escherichia coli* functional ribosomal complexes. *Biochemistry*, 40, 7641-7650.

38. I. Amarantos, I. K. Zarkadis and D. L. Kalpaxis* (2002). The identification of spermine binding sites in 16S rRNA allows interpretation of the spermine effect on ribosomal 30S subunit functions. *Nucleic Acids Res.*, 30, 2832-2843.
39. G. Dinos*, S. R. Connell, K. H. Nierhaus and D. L. Kalpaxis (2003). Erythromycin, roxithromycin, and clarithromycin: Use of slow-binding kinetics to compare their *in vitro* interaction with a bacterial ribosomal complex active in peptide bond formation. *Mol. Pharmacol.*, 63, 617-623.
40. D. L. Kalpaxis*, I. Amarantos, A. Tsibouxi and M. Papapetropoulou (2003). Regulation of translation initiation in mussels (*Mytilus galloprovincialis*, Lam.), following contamination stress. *J. Toxicol. Environ. Health*, 66, 481-494.
41. D. L. Kalpaxis*, M. A. Xaplanteri, I. Amarantos, F. Leontiadou and T. Choli-Papadopoulou (2003). Probing ribosomal proteins, capable of interacting with polyamines. In *Proteome and Protein Analysis* (Kamp, R. M., Calvete, J. J., Choli-Papadopoulou, T., eds), Springer Verlag, Berlin, Heidelberg, pp. 125-132.
42. F. Leontiadou, C. Matragou, P. Kottakis, D. L. Kalpaxis, I. S. Vizirianakis, S. Kouidou, A. S. Tsiftoglou and T. Choli-Papadopoulou* (2003). Genetic engineering of bacterial and eukaryotic ribosomal proteins for investigation on elongation arrest of nascent polypeptides and cell differentiation. In *Proteome and Protein Analysis* (Kamp, R. M., Calvete, J. J., Choli-Papadopoulou, T., eds), Springer Verlag, Berlin, Heidelberg, pp. 251-260.
43. F. Leontiadou, M. A. Xaplanteri, G. Papadopoulos, C. Gerassimou, D. L. Kalpaxis* and T. Choli-Papadopoulou* (2003). On the structural and functional importance of the highly conserved Glu56 of the *Thermus thermophilus* L4 ribosomal protein. *J. Mol. Biol.*, 332, 73-84.
44. M. A. Xaplanteri, A. Andreou, G. P. Dinos and D. L. Kalpaxis* (2003). Effect of polyamines on the inhibition of peptidyltransferase by antibiotics: Revisiting the mechanism of chloramphenicol action. *Nucleic Acids Res*, 31, 5074-5083.
45. G. Dinos, D. Wilson, Y. Teraoka, W. Szaflarski, P. Fucini, D. L. Kalpaxis and K. H. Nierhaus* (2004). Dissecting the inhibition mechanisms of edeine and pactamycin: Antagonistic interplay on the ribosome between these translational inhibitors. *Mol. Cell*, 13, 113-124
46. D. L. Kalpaxis*, C. Theos, M. A. Xaplanteri, G. P. Dinos, A. V. Catsiki and M. Leotsinidis (2004). Biomonitoring of Patraikos gulf, N. Peloponnese, Greece. Application of a biomarker suite including evaluation of translation efficiency in *Mytilus galloprovincialis* cells. *Environ. Res.*, 94, 211-220.

47. A. Petropoulos, M. A. Xaplanteri, G. P. Dinos, D. N. Wilson and D. L. Kalpaxis* (2004). Polyamines affect diversely the antibiotic potency: insight gained from kinetic studies of the blasticidin S and spiramycin with functional ribosomes. *J. Biol. Chem.*, 279, 26518-26525.
48. M. A. Xaplanteri, A. D. Petropoulos, G. P. Dinos and D. L. Kalpaxis* (2005). Localization of spermine binding sites in 23S rRNA by photoaffinity labeling: parsing the spermine contribution to ribosomal 50S subunit functions. *Nucleic Acids Res.*, 33, 2792-2805.
49. G. P. Dinos, D. L. Kalpaxis, D. N. Wilson and K. H. Nierhaus* (2005). Deacylated tRNA is released from the E site upon A site occupation but before GTP is hydrolysed by EF-Tu. *Nucleic Acids Res.*, 33, 5291-5296
50. A. Tsagkalia, F. Leontiadou, M. A. Xaplanteri, G. Papadopoulos, D. L. Kalpaxis* and T. Choli-Papadopoulou* (2005). Ribosomes containing mutants of L4 ribosomal protein from *Thermus thermophilus* display multiple defects in ribosomal functions and sensitivity against erythromycin. *RNA*, 11, 1633-1639.
51. E. Kouvela, A. D. Petropoulos and D. L. Kalpaxis* (2006). Unravelling new features of clindamycin interaction with functional ribosomes and dependence of the drug potency on polyamines. *J. Biol. Chem.*, 281, 23103-23110
52. S. Pytheropoulou, E. C. Kouvela, E. Sazakli, M. Leotsinidis and D. L. Kalpaxis* (2006) Evaluation of the global protein synthesis in *Mytilus galloprovincialis* in marine pollution monitoring: Seasonal variability and correlations with other biomarkers. *Aquat. Toxicol.*, 80, 33-41
53. G. Papadopoulos*, S. Grudinin, D. L. Kalpaxis and T. Choli-Papadopoulou (2006). Changes in the level of poly(Phe) synthesis in *Escherichia coli* ribosomes containing mutants of L4 ribosomal protein from *Thermus thermophilus* can be explained by structural changes in the peptidyltransferase center: a molecular dynamics simulation analysis. *Eur. Biophys. J.*, 35, 675-683
54. P. Karahalios, D. L. Kalpaxis, H. Fu, L. Katz, D. N. Wilson and G. P. Dinos* (2006). On the mechanism of action of 9-O-arylalkyloxime derivatives of 6-O-mycaminosyltyloanolide, a new class of 16-membered macrolide. *Mol. Pharmacol.*, 70, 1271-1280.
55. M. A. Xaplanteri, G. Papadopoulos, F. Leontiadou, T. Choli-Papadopoulou and D. L. Kalpaxis* (2007) The contribution of the zinc-finger motif to the function of *Thermus thermophilus* ribosomal protein S14. *J. Mol. Biol.*, 369(2):489-97.

56. E. C. Kouvela, G. V. Gerbanas, M. A. Xaplanteri, A. D. Petropoulos, G. P. Dinos and D. L. Kalpaxis* (2007) Changes in the conformation of 5S rRNA cause alterations in principal functions of the ribosomal nanomachine. *Nucleic Acids Res.*, 35, 5108-5119.
57. D. L. Kalpaxis*, S. Pytharopoulou, E. K. Kouvela, E. Sazakli and M. Leotsinidis (2007). Biomonitoring of the Gulf of Patras (Greece) using caged mussels. *MAP Tech. Rep. Ser.*, 166, 110-126
58. A. D. Petropoulos, E. C. Kouvela, G. P. Dinos and D. L. Kalpaxis* (2008). Step-wise binding of tylosin and erythromycin to *Escherichia coli* ribosomes, characterized by kinetic and footprinting analysis. *J. Biol. Chem.*, 283, 4756-4765
59. S. Pytharopoulou, E. Sazakli, K. Grintzalis, C. D. Georgiou, M. Leotsinidis, D. L. Kalpaxis* (2008). Translational responses of *Mytilus galloprovincialis* to environmental pollution: integrating the responses of oxidative stress and other biomarkers into a general stress index. *Aquat. Toxicol.*, 89, 18-27
60. A. D. Petropoulos, E. C. Kouvela, A. L. Starosta, D. N. Wilson, G. P. Dinos and D. L. Kalpaxis* (2009). Time-resolved binding of azithromycin to *Escherichia coli* ribosomes. *J. Mol. Biol.*, 385, 1179-1192
61. E. C. Kouvela, D.L. Kalpaxis, D.N. Wilson and G.P. Dinos* (2009). A distinct mode of interaction of a novel ketolide antibiotic that displays enhanced antimicrobial activity. *Antimicrob. Agents Chemother.*, 53, 1411-1419.
62. M. G. Krokidis, O. N. Kostopoulou, D. L. Kalpaxis and G. P. Dinos* (2010). Dissecting the ribosomal inhibition mechanism of a new ketolide carrying an aryl-alkyl group at C-13 of its lactone-ring. *Int. J. Antimicrob. Agents*, 35, 235-239.
63. S. Kouyanou-Koutsoukou, D. L. Kalpaxis, S. Pytharopoulou, R. M. Kolaiti, A. Baier, and R. Szyszka (2010). Translational control of gene expression in the mussel *Mytilus Galloprovincialis*: The impact of cellular stress on protein synthesis, the ribosomal stalk and the protein kinase CK2 activity. In *Mussels: Anatomy, Habitat and Environmental Impact* (L. E. McGevin, ed), Chapter 4, pp. 1-31, Nova Science Publishers, Inc.
64. O. N. Kostopoulou, T. G. Kourelis. P. Mamos, G. E. Magoulas and D. L. Kalpaxis* (2011). Insights into the Chloramphenicol inhibition effect on peptidyl transferase activity, using two new analogs of the drugs. *Open Enz. Inhibition J.*, 4, 1-10.
65. S. Pytharopoulou, K. Grintzalis, E. Sazakli, M. Leotsinidis, C. D. Georgiou, and D. L. Kalpaxis* (2011). Translational responses and oxidative stress of mussels

- experimentally exposed to Hg, Cu and Cd: One pattern does not fit at all. *Aquat. Toxicol.*, 105, 157-165.
66. O.N. Kostopoulou, A.D. Petropoulos, G.P. Dinos, T. Choli-Papadopoulou, D.L. Kalpaxis* (2012). Investigating the entire course of telithromycin binding to *Escherichia coli* ribosomes. *Nucleic Acids Res.*, 40, 5078-5087.
 67. D.L. Kalpaxis* (2013). The complexity of molecular targeting by antibiotics acting on the ribosome. *J. Commun Med. Health Edu.*, doi: <http://dx.doi.org/10.4172/2161-0711.1000e114>
 68. S. Pytharopoulou, G.G. Kournoutou, M. Leotsinidis, C.D. Georgiou, and D.L. Kalpaxis* (2013) Dysfunctions of the translational machinery in digestive glands of mussels exposed to mercury ions. *Aquat. Toxicol.*, 134-135, 23-33.
 69. S. Pytharopoulou, G.G. Kournoutou, M. Leotsinidis, C.D. Georgiou, D.L. Kalpaxis* (2013) Cadmium versus copper toxicity: Insights from an integrated dissection of protein synthesis pathway in the digestive glands of mussel *Mytilus galloprovincialis*. *J. Hazard.Mater.*, 260C, 263-271.
 70. P. Mamos, M.G. Krokidis, A. Papadas, P. Karahalios, A.L. Starosta, D.N. Wilson, D.L. Kalpaxis, G.P. Dinos* (2013) On the use of the antibiotic chloramphenicol to target polypeptide chain mimics to the ribosomal exit tunnel. *Biochimie*, 95, 1765-1772.

Abstracts in International Journals

1. F. Kalfarentzos*, J. Spiliotis, D. Theocharis, D. L. Kalpaxis and J. Androulakis (1984). Intraperitoneal parenteral nutrition in rabbits. *Clinical Nutrition*, 4, 12.
2. C. Coutsogeorgopoulos*, D. L. Kalpaxis, D. A. Theocharis and D. Drainas (1986). A novel approach for evaluating inhibitors of ribosomal peptidyltransferase. *Biol. Chem. Hoppe -Seyler*, 367, 131.
3. C. E. Kouvela, A. D. Petropoulos and D. L. Kalpaxis* (2006) One molecule of azithromycin binds to *Escherichia coli* ribosomes via a two-step mechanism. *FEBS J.*, 273, p. 286.
4. A. D. Petropoulos, C. E. Kouvela and D. L. Kalpaxis* (2006) Interaction of erythromycin with *E. coli* ribosomes under physiological ionic conditions. *FEBS J.*, 273, p. 285.
5. M. Krokidis, M. Stavropoulou, V. Marquez, D. N. Wilson, D. L. Kalpaxis and G. P. Dinos (2011). Mode of action of new fluoroketolides, strong inhibitors of protein synthesis. *FEBS J.*, 278, S 1, p. 169.
6. O. N. Kostopoulou, G. P. Dinos, T. Choli-Papadopoulou and D. L. Kalpaxis (2011). Ribosomal proteins L22 and L4 affect diversely the binding of

telithromycin to *Escherichia coli* ribosomes: Insights from mutagenesis and kinetic studies. *FEBS J.*, 278, S 1, 168-169.

Invited speaker in International Conferences and Workshops

1. Institut für Biochimie der Medizinischen Fakultät, Universität Erlangen-Nürnberg, Germany, 1989.
“Gene disruption of UMP-synthase and complementation in *D. discoideum*”.
2. International Dictyostelium Workshop, Ringberg Castle, Germany, 10-13 September, 1989.
“Selection system for mutants lacking UMP-synthase activity in *D. discoideum* cells”.
3. Max-Planck Institut für Molekulare Genetik, Berlin, Germany, November 14, 1997.
“New aspects on the inhibition of peptidyl-transferase by antibiotics”.
4. 7th Workshop on “Experimental Strategies for Ribosomal Research, Schloss Ringberg, Germany, April 16-20, 2001.
“Kinetic analysis of macrolide interaction with functional ribosomal complexes”.
5. Max-Planck Institut für Molekulare Genetik, Berlin, Germany, July 12, 2001.
“Effects of polyamines on ribosomal functions: Kinetic and structural approaches”.
6. Max-Planck Institut für Molekulare Genetik, Berlin, Germany, September 24, 2002.
“ Insights into the mechanism of polyamine action on the function of the large ribosomal subunit using photoaffinity labeling techniques”
7. 8th Workshop on “Experimental Strategies for Ribosomal Research, Schloss Ringberg, Germany, November 17-21, 2003.
“The role of polyamine environment on the mechanism of action of chloramphenicol”.
8. 9th Workshop on “Experimental Strategies for Ribosomal Research”, Patras, Greece, March 2005, 2006.
“One or two molecules of azithromycin bind to *E. coli* ribosomes? Kinetic studies and chemical footprinting analysis under various ionic conditions”.
9. Workshop on the MED POL Biological Effects: Achievements and Future Orientations, Alessandria, Italy, December 20-21, 2006
“Biomonitoring the Gulf of Patras (Greece) using caged mussels”
10. 10th Workshop on “Experimental Strategies for Ribosomal Research, Schloss Ringberg, Germany, April 19-22, 2009.

“Rules in ribosome accessibility: Most of antibiotics act as slow binding inhibitors”.

11. 3rd SEE--DRUG Workshop, Patras, Greece, September 19-20, 2013.

“Emerging analytical techniques in Protein Characterization Binding of antibiotics to the ribosome revisited: Kinetics, time-resolved footprinting and NMR analysis reveal a time-dependent mechanism of ribosome-ligand interaction”.

Articles in Greek Scientific Journals

1. D. L. Kalpaxis and C. P. Tsiganos* (1981). Affinity chromatography of proteoglycans on immobilized hyaluronic acid. *Biochemistry & Biophysics Newsletter*, 16, 18-19.
2. D. L. Kalpaxis, D. A. Theocharis and C. Coutsogeorgopoulos* (1985). On the mechanism of action of the antibiotic blasticidin S in protein synthesis. *Biochemistry & Biophysics Newsletter*, 22, 2-3.
3. D. Drainas, D. L. Kalpaxis and C. Coutsogeorgopoulos* (1986). Chloramphenicol lowers the catalytic rate constant of ribosomal peptidyltransferase. *Biochemistry & Biophysics Newsletter*, 24, 58-60.
4. D. A. Theocharis, D. L. Kalpaxis and C. Coutsogeorgopoulos* (1986). The K_i alone cannot express the potency of the amino-acylamino nucleoside antibiotics as inhibitors of peptide bond formation. *Biochemistry & Biophysics Newsletter*, 24, 8-10.
5. D. L. Kalpaxis and C. Coutsogeorgopoulos* (1988). Effect of temperature on the type of inhibition of peptide bond formation by chloramphenicol. *Biochemistry & Biophysics Newsletter*, 27, 8-10.
6. D. Synetos, D. A. Theocharis, D. L. Kalpaxis, D. Drainas and C. Coutsogeorgopoulos* (1989). The kinetics of inhibition of ribosomal peptidyltransferase: Comparison between ribosomes adsorbed on cellulose nitrate and ribosomes in solution. *Biochemistry & Biophysics Newsletter*, 28, 37-40.
7. S. Kallia-Raftopoulos, G. Dinos, D. L. Kalpaxis and C. Coutsogeorgopoulos* (1989). On the mechanism of action of lincomycin in protein synthesis. *Biochemistry & Biophysics Newsletter*, 29, 45-48.
8. S. Kallia-Raftopoulos, D. L. Kalpaxis and C. Coutsogeorgopoulos* (1990). Isomerization of a ribosomal complex induced by the antibiotic lincomycin. *Biochemistry & Biophysics Newsletter*, 31, 21-24.
9. C. Stathopoulos, D. L. Kalpaxis and D. Drainas* (1993). Partial purification of a 5-tRNA processing nuclease from *Dictyostelium discoideum*. *Biochemistry & Biophysics Newsletter*, 35, 84-86.

10. D. L. Kalpaxis* and D. Drainas (1993). Effect of spermine on peptide-bond formation at low concentration of Mg^{++} . *Biochemistry & Biophysics Newsletter*, 35, 77-79.
11. P. Karahalios, P. Mamos, D. Papaioannou and D. L. Kalpaxis* (1995). N^1 -monoacetylation reduces the inhibitory and stimulatory effect of spermine on peptide-bond formation. *Biochemistry & Biophysics Newsletter*, 39, 48-49.
12. D. L. Kalpaxis,* P. Karahalios and M. Papapetropoulou (1995). Alterations in ribosomal peptidyltransferase activity during the growth cycle of *E. coli*. *Biochemistry & Biophysics Newsletter*, 39, 43-44.
13. P. Karahalios, P. Mamos, D. Papaioannou, and D. L. Kalpaxis* (1996). Acetyl analogs evidence the functional role of the charged amino nitrogens of spermine, during its action on peptide bond formation. *Biochemistry & Biophysics Newsletter*, 41, 27-28.
14. D. L. Kalpaxis,* P. Karahalios, and M. Papapetropoulou (1997). Structural and functional alterations in ribosomes from *E. coli* cells cultivated for prolonged time in sea salts medium. *Biochemistry & Biophysics Newsletter*, 42, 65-66.
15. D. L. Kalpaxis* (1998). New aspects on the inhibition of peptidyltransferase by antibiotics. *Biochemistry & Biophysics Newsletter*, 43, 36-37.
16. F. Leontiadou, M. Xaplanteri, D. L. Kalpaxis, and T. Choli-Papadopoulou* (2000). On the function of L4 ribosomal protein from *Thermus thermophilus*. *Hellenic Society of Biochemistry & Molecular Biology Newsletter*, 47, 269-272.
17. A. D. Petropoulos, E. Koubela and D. L. Kalpaxis (2005). Kinetic and footprinting analysis reveal the clindamycin mode of action in protein synthesis and its regulation by polyamines, *Hellenic Society of Biochemistry & Molecular Biology, Newsletter*, 52, 569-572.
18. E. Kouvela, P. Karahalios, D. L. Kalpaxis, H. Fu, L. Katz and G. Dinos (2006). In vitro studies with new macrolide effective against macrolide resistant strains, *Hellenic Society of Biochemistry & Molecular Biology, Newsletter*, 53, 413-416.
19. D. L. Kalpaxis, G. V. Gerbanas, E. C. Kouvela and G. Dinos (2006). Changes in the tertiary structure of 5S rRNA cause alterations in principal ribosomal functions, *Hellenic Society of Biochemistry & Molecular Biology, Newsletter*, 53, 287-290.