

DENIS DRAINAS
CURRICULUM VITAE

Personal data

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Place and date of birth: November 8, 1951 Athens, Greece

Studies

- B.Sc. Biology, University of Athens Greece, 1975
- Ph.D. Biochemistry, University of Glasgow, Scotland U.K., 1978

Academic Positions

- Lecturer, Department of Biochemistry, School of Medicine, University of Patras Greece, 1981-1986
- Assistant Professor, Department of Biochemistry, School of Medicine, University of Patras Greece, 1986-1996
- Visiting Assistant Professor, Yale University, New Haven USA, 1987-1988
- Associate Professor, Department of Biochemistry, School of Medicine, University of Patras Greece, 1996
- Professor, Department of Biochemistry, School of Medicine, University of Patras Greece, 2003-today
- Head of the Department of Biochemistry, School of Medicine, University of Patras Greece, 2006-today
- Director of the Unit of Special Biochemical Analyses, Department of Biochemistry, School of Medicine, University of Patras Greece, 2009-today

Selected Research Projects

- Clone and characterization of genes that code the RNA subunit and proteins subunits of the ribonucleoprotein complex of ribonuclease P from the slime mold *Dictyostelium discoideum*.
- RNase P as a target for novel inhibitors.
- Research and Development of Polyamine-Acidic Retinoid Conjugates for Use as Antipsoriatic Drugs
- Activation of the ribozyme RNase P for applications in the specialized silencing of gene expression.

Funded research projects

- University of Patras, Research Committee 1990
- General Secretariat of Research and Technology GR, PENED 1991
- General Secretariat of Research and Technology GR, PENED 1994
- General Secretariat of Research and Technology GR, YPER 1997
- University of Patras, Research Committee 1998, programme "K. Karatheodoris"
- Embirikion Foundation 2001
- University of Patras, Research Committee 2003, programme "K. Karatheodoris"
- European Social Fund (ESF), Operational Program for Educational and Vocational Training II (EPEAEK II), HERAKLITOS 2002
- European Social Fund (ESF), Operational Program for Educational and Vocational Training II

(EPEAEK II), Pythagoras 2003

- University of Patras, Research Committee 2003, programme “K. Karatheodoris”
- General Secretariat of Research and Technology GR, Joint Research and Technology Programme, Greece-Spain, 2005

Supervision of Diploma, Master and Ph.D theses

- 9 Diploma theses
- 9 Master theses
- 10 Ph.D. Thesis

Reviewer in international journals

- *European Journal of Biochemistry.*
- *Journal of Molecular Biology.*
- *Biochimica et Biophysica Acta*
- *Molecular Microbiology*
- *Cell Biochemistry and Biophysics*
- *Journal of Medicinal Chemistry*

Editorial Board Member

- Editorial Board Member of the Journal “The Open Enzyme Inhibition Journal”

Evaluator for research grants

- Evaluator of BIOTECHNOLOGY RTD proposals in the area of Cell Factory, E.C.Biotechnology 1994-1998.
- Evaluator of the post-doctoral research proposals, Foundation of National Scholarships, 1997-2008

Fellowships - Awards

- Fellowship Fulbright 1987
- Awards for oral and poster presentations in 5 National Conferences

International and National Collaborations

- Instituto de Bioquímica Vegetal y Fotosíntesis, Universidad de Sevilla-C.S.I.C, Spain
- Laboratory of Organic Chemistry, Department of Chemistry, University of Ioannina, Greece
- Department of Pharmaceutical Sciences, Aristotle University of Thessaloniki, Greece

Memberships

- Member of the Hellenic Society of Biochemistry and Molecular Biology
- Member of the Hellenic Society of Biological Sciences
- Member of the Hellenic National Society of MikroBioKosmos
- Member of the RNA Society, USA
- Member of the organising committee of the 34th National Conference of the Hellenic Society of Biochemistry and Molecular Biology, Patras, June 1-2, 1990
- Member of the organising committee of the 45th National Conference of the Hellenic Society of Biochemistry and Molecular Biology, Patras, May 10-11, 1996
- Member of the organising committee of the International Conference “Modern Trends in Skin Pharmacology, Molecular and Clinical Aspects”. Athens, June 8-11, 2000.
- President of the organising committee of the 58th National Conference of the Hellenic Society of Biochemistry and Molecular Biology, Patras, November 9-11, 2006

- Organizer of the Scientific Symposium “Catalytic RNA” in the frames of the 33rd Congress 11th IUBMB Conference” Athens June 28- July 3, 2008.

Invited Lectures

- 34th National Conference of the Hellenic Society of Biochemistry and Molecular Biology, Patras, June 1-2, 1990
- Minisymposium on Antisense and RNA enzymes. Wien, June 1, 1995
- 3rd European RNA Workshop, August 23-26, 1995, Sandhamn, Sweden.
- 11th BBBB. Balkan Biochemical Biophysical Days. Thessalonica, Greece, May 15-17, 1997
- International Conference “Modern Trends in Skin Pharmacology, Molecular and Clinical Aspects”. Athens, June 8-11, 2000.
- 6th Biomedical Conference of International Hellenism, Athens, October 11-14, 2000
- National Conference “50 Years o DNA. The present and the future” Athens, December 4-7, 2003
- International Workshop “Structure and Function of Ribosome” Patras, Greece, March 2006
- Natinal conference “Biosciences in 21st Century”, Athens, April 13-15, 2006
- Instituto de Bioquímica Vegetal y Fotosíntesis, Universidad de Sevilla-C.S.I.C, Spain, September 7, 2007
- Joint Workshop, “Biotechnology, Drug Discovery and Novel Therapeutic Approaches”, Camerino Italy, October 28-30, 2010

Publications

50 In peer reviewed international journals.

Total Impact Factor: **150.799**

Mean Impact Factor: **3.078**

Citations: **395**

h-index: **12**

13 Abstracts in International Journals

26 Abstracts in International Conferences

42 Abstracts in National Conferences

Patent

- PCT/GR2002/000045, WO 2004/018001 A1, 4 March 2004 – US 7,517,913 B2 April 4 2009. Title: Polyamine conjugates with acidic retinoids and preparation thereof.

List of publications in peer reviewed international journals

1. **D. Drainas**, G.R. Moores and A.J. Lawrence (1978). The Preparation of Activated Bee Venom Phospholipase A₂. FEBS Lett., 86 (1), 49-52. IF: 3.264, Citations: 12
2. **D. Drainas** and A.J. Lawrence (1978). Activation of Bee Venom Phospholipase A₂ by Oleoyl Imidazolide. Eur. J. Biochem., 91, 131-138. IF: 3.139, Citations: 20
3. **D. Drainas** and A.J. Lawrence (1980). Albumin Mediated Lysis of Erythrocytes by Bee Venom Phospholipase A₂ Activated with Oleoyl Imidazolide. FEBS Lett., 114 (1), 93-97. IF: 3.264, Citations: 9
4. **D. Drainas**, E. Harvey, A.J. Lawrence and A. Thomas (1981). Mechanisms for Albumin-Mediated Membrane Damage. Eur. J. Biochem., 114, 239-245. IF: 3.139, Citations: 25

5. **D. Drainas** and C. Drainas (1985). A Conductimetric Method for Assaying Asparaginase Activity in *Aspergillus Nidulans*. Eur. J. Biochem. 151, 591-593. IF: 3.139, Citations: 6
6. **D. Drainas**, D.L. Kalpaxis and C. Coutsogeorgopoulos (1987). Inhibition of Ribosomal Peptidyltransferase by Chloramphenicol. Kinetic Studies. Eur. J. Biochem., 164, 53-58. IF: 3.139, Citations: 26
7. **D. Drainas**, S. Zimmerly, I. Willis and D. Soll (1989). Substrate Structural Requirements of *Schizosaccharomyces Pombe* RNase P. FEBS Lett., 251, 84-88. IF: 3.264, Citations: 26
8. C.A. Panagiotidis, **D. Drainas** and S. Huang (1992). Modulation of Ribonuclease P Expression in *Escherichia coli* by Polyamines. Int. J. Biochem. 24 (10), 1625-1631. IF: 4.178, Citations: 6
9. D.A, Theocharis, D. Synetos, D.L. Kalpaxis, **D. Drainas** and C.Coutsogeorgopoulos (1992). Kinetics of Inhibition of Peptide Bond Formation on Bacterial Ribosomes. Arch. Biochem. Biophys. 292, 266-272. IF: 2.626, Citations: 14
10. D.A. Theocharis and **D. Drainas** (1992). Kinetic Studies on Activation of Peptide Bond Formation by Hyaluronic Acid. Int. J. Biochem. 24 (8), 1341-1345. IF: 4.178, Citations: 1
11. D.L. Kalpaxis and **D. Drainas** (1992). Effect of Spermine on Peptide-Bond Formation, Catalyzed by Ribosomal Peptidyltransferase. Mol. Cell Biochemistry, 115, 19-26. IF: 1.764, Citations: 12
12. D.L. Kalpaxis and **D. Drainas** (1993). Inhibitory Effect of Spermine on Ribosomal Peptidyltransferase. Arch. Biochem. Biophys. 300 (1), 629-634. IF: 2.626, Citations: 8
13. S. Zimmerly, **D. Drainas**, L. Sylvers and D. Soll (1993). Identification of a 100-kDa Protein Associated with Nuclear Ribonuclease P Activity in *Schizosaccharomyces pombe*. Eur. J. Biochem. 217, 501-507. IF: 3.139, Citations: 29
14. **D. Drainas**, P. Mamos and C. Coutsogeorgopoulos (1993). Aminoacyl Analogs of Chloramphenicol: Examination of the Kinetics of inhibition of peptide bond formation. J. Med. Chemistry, 36 (23), 3542-3545. IF: 4.898, Citations: 6
15. **D. Drainas** and D.L. Kalpaxis (1994). Bimodal Action of Spermine on Ribosomal Peptidyl-transferase at Low Concentration of Magnesium Ions. Biochem. Biophys. Acta, 1208, 55-64. IF: 2.713, Citations: 11
16. M. Menza, T. Ahmad, S. Chetibbi, **D. Drainas** and A.J. Lawrence (1994). Zinc and Barium Inhibit a Phospholipase A₂ from *Naja naja atra* by Different Mechanisms. Biochem. J., 301, 503-508. IF: 4.371, Citations: 12
17. C. Stathopoulos, D.L. Kalpaxis and **D. Drainas** (1995). Partial Purification and Characterization of RNase P from *Dictyostelium discoideum*. Eur. J. Biochem., 228, 976-980. IF: 3.139, Citations: 29
18. **D. Drainas** (1996). The RNase P of *Dictyostelium discoideum*. Mol. Biol. Rep., 22, 135-138. (Invited review). IF: 1.750, Citations: 7
19. **D. Drainas** and G. Krupp (1996). Design and Preparation of Sequence Specific of RNase P Ribozymes. Methods in Molecular Biology, 74, 179-185.
20. M. Ioannou, C. Coutsogeorgopoulos and **D. Drainas** (1997). Determination of Eukaryotic Peptidyltransferase Activity by Pseudo-First-Order Kinetic Analysis. Anal. Biochem. 247, 115-122. IF: 3.088, Citations: 3
21. E. Papadimou, S. Georgiou, D. Tsambaos and **D. Drainas** (1998). Inhibition of Ribonuclease P Activity by Retinoids. J. Biol. Chem., 38, 24375-8. IF: 5.52, Citations: 14
22. A. Tekos, C. Stathopoulos and **D. Drainas** (1998). Bimodal Action of Alkaline Earth Cations on *Dictyostelium discoideum* Ribonuclease P Activity. Biochemistry, 37, 15474-15480. IF: 3.379, Citations: 6
23. **D. Drainas**, E. Papadimou, A. Monastirli, D. Tsambaos and H.F. Merk (2000). Dose-Dependent Inhibition of Ribonuclease P Activity by Anthralin. Skin Pharmacol. Appl. Skin Physiol. 13, 128-132. IF: 2.388, Citations: 7
24. E. Papadimou, A. Monastirli, D. Tsambaos and **D. Drainas** (2000). Modulation of RNase P Activity by Calcipotriol. Eur. J. Biochem. 267, 1173-1177. IF: 3.139, Citations: 7

25. E. Papadimou, A. Monastirli, D. Tsambaos and **D. Drainas** (2000). Additive Inhibitory Effect of Calcipotriol and Anthralin on Ribonuclease P Activity. *Biochem. Pharmacol.* 60, 91-94. IF: 4.838, Citations: 9
26. T. Pfeiffer, A. Tekos, J.M. Warnecke, **D. Drainas**, D. Engelke, B. Séraphin and R.L. Hartmann (2000). Effects of Phosphorothioate Modifications on Precursor tRNA Processing by Eukaryotic RNase P Enzymes. *J. Mol. Biol.* 298, 559-565. IF: 4.146, Citations: 19
27. C. Stathopoulos, A. Tsagla, A. Tekos and **D. Drainas** (2000). Effect of Peptidyltransferase Inhibitors on Ribonuclease P Activity from *Dictyostelium discoideum*. *Mol. Biol. Reports* 27, 107-111. IF: 1.750, Citations: 6
28. A. Tekos, A. Tsagla, C. Stathopoulos and **D. Drainas** (2000). Inhibition of Eucaryotic Ribonuclease P Activity by Aminoglycosides. *Kinetic Studies. FEBS Letters* 485, 71-75. IF: 3.264, Citations: 13
29. E. Papadimou, A. Monastirli, D. Tsambaos and **D. Drainas** (2000). Inhibitory Effects of Arotinoids on tRNA Biogenesis. *Skin Pharmacol. Appl. Skin Physiol.* 13, 345-351. IF: 2.388, Citations: 7
30. C. Stathopoulos, A. Tekos and **D. Drainas** (2001). Extensive Deproteinization of *Dictyostelium discoideum* RNase P Reveals a New Catalytic Activity. *Eur. J. Biochem.* 268, 1-8. IF: 3.139, Citations: 7
31. A. Monastirli, Ch. Zografakis, H. Braum, E. Pasmatzis, S. Georgiou, Th. Sakkis, A. Sagriotis, **D. Drainas** and D. Tsambaos (2000). Calcipotriol vs. anthralin in the treatment of chronic plaque psoriasis. *Zeitschrift für Hautkrankheiten H+G* 11 (75) 626-629.
32. A. Monastirli, S. Georgiou, E. Pasmatzis, T. Sakkis, G. Badavanis, **D. Drainas**, A. Sagriotis and D. Tsambaos (2002). Calcipotriol plus short-contact dithranol: A novel topical combination therapy for chronic plaque psoriasis. *Skin Pharmacol. Appl. Skin Physiol.* 15, 246-51. IF: 2.388, Citations: 4
33. E. Papadimou, D. Pavlidou, B. Séraphin, D. Tsambaos and **D. Drainas** (2003). Retinoids Inhibit Human Epidermal Keratinocytes RNase P Activity. *Biological Chemistry* 384(3), 457-457. IF: 3.035, Citations: 5
34. D. Kalavrizioti, A. Vourekas, A. Tekos, C. Stathopoulos and **D. Drainas** (2003). Kinetics of Ribonuclease P Inhibition by Peptidyltransferase Inhibitors. *Mol. Biol. Reports* 30(1), 9-14. IF: 1.750, Citations: 4
35. A. Tekos, E. Prodromaki, E. Papadimou, D. Pavlidou and **D. Drainas** (2003). Aminoglycosides suppress tRNA processing in human epidermal keratinocytes in vitro. *Skin Pharmacol Appl Skin Physiol.* 16, 252-8. IF: 1.750, Citations: 7
36. A. Tekos, C. Stathopoulos, D. Tsambaos and **D. Drainas** (2004). RNase P: A promising molecular target for the development of new drugs. *Curr Med Chem.* 22:2979-89. (Invited review). IF: 4.823, Citations: 3
37. A. Monastirli, A. Vourekas, G. Badavanis, E. Pasmatzis, A. Sagriotis, **D. Drainas**, D. Pavlidou, S. Georgiou, T. Sakkis, S. Mantagos, G. Kourounis, J. Varakis, G. Stamatiou and D. Tsambaos (2005). Hsp27 Expression Coincides with Epidermal Stratification during Human Epidermal Morphogenesis. *Acta Derm. Venereol.* 85(5):389-93. IF: 2.456, Citations: 3
38. D. Pavlidou, A. Vourekas, A. Monastirli, D. Kalavrizioti, D. Tsambaos and **D. Drainas**. (2006). Isolation of ribonuclease P activity from human epidermis and its regulation by retinoids in vitro. *Acta Derm. Venereol.* 82 (2) 114-118. IF: 2.456, Citations: 1
39. A. Vourekas, D. Kalavrizioti C. Stathopoulos and **D. Drainas**. (2006). Modulation of catalytic RNA biological activity by small molecule effectors. *Mini Rev. Med. Chem.* 6, 971-978. (Invited review). IF: 3.132, Citations: 3
40. D. Kalavrizioti, A. Vourekas, V. Stamatopoulou, C. Toumpeki, S. Giannouli, C. Stathopoulos and **D. Drainas**. (2006) RNA-mediated therapeutics: from gene inactivation to clinical application. *Current Topics in Med. Chem.* 6, 1737-1758. (Invited review). IF: 4.268, Citations: 4
41. A. Vourekas, D. Kalavrizioti, I. K. Zarkadis, G. A. Spyroulias, C. Stathopoulos and **D. Drainas** (2007). A 40.7 kDa Rpp30/Rpp1 homologue is a protein subunit of *Dictyostelium discoideum* RNase P holoenzyme *Biochimie*, 89, 301-310. IF: 3.3071, Citations: 3
42. D. Kalavrizioti, A. Vourekas and **D. Drainas**. (2007) DRpp20 and DRpp40, two protein subunits of ribonuclease P from *Dictyostelium discoideum*. *Gene* 400, 52-59. IF: 2.578, Citations: 2

43. C. Toumpeki, A. Vourekas, D. Kalavrizioti, V. Stamatopoulou and **D. Drainas**. (2008) Activation of bacterial Ribonuclease P by macrolides. *Biochemistry* 47(13), 4112-4118. IF: 3.379, Citations: 2
44. A. Vourekas, V. Stamatopoulou, C. Toumpeki, M. Tsilaidou, and **D. Drainas**. (2008) Insights into functional modulation of catalytic RNA activity. *IUBMB Life* 60(10), 669-83 (invited review). IF: 2.364, Citations: 2
45. A. Vourekas, E. Vryzaki, C. Toumpeki, V. Stamatopoulou, A. Monastirli, D. Tsambaos, and D. Drainas (2008) Partial purification and characterization of RNase P from human peripheral lymphocytes. *Exp. Dermatology*, 18(2), 130-133. IF: 3.259, Citations: 1
46. G. Magoulas, D. Papaioannou, E. Papadimou and **D. Drainas** (2009) Preparation of spermine conjugates with acidic retinoids with potent ribonuclease P inhibitory activity. *Eur. J. Med. Chem.* 2009 Jun;44(6):2689-95. IF: 2.882, Citations: 2
47. Sadikoglou E, Magoulas G, Theodoropoulou C, Athanassopoulos CM, Giannopoulou E, Theodorakopoulou O, **Drainas D**, Papaioannou D, Papadimitriou E. (2009) Effect of conjugates of all-trans-retinoic acid and shorter polyene chain analogues with amino acids on prostate cancer cell growth. *Eur J Med Chem.* Aug;44(8):3175-87. IF: 2.882, Citations: 1
48. Faropoulos K, Chroni E, Assimakopoulos SF, Mavrakis A, Stamatopoulou V, Toumpeki C, **Drainas D**, Grintzalis K, Papapostolou I, Georgiou CD, Konstantinou D. (2010) Altered occludin expression in brain capillaries induced by obstructive jaundice in rats. *Brain Res.* 1325, 121-127. IF: 2.494, Citations: 1
49. D. Hadjipavlou-Litina, G. E. Magoulas, S. E. Bariamis, **D. Drainas**, K. Avgoustakis, Dionissios Papaioannou (2010) Does conjugation of antioxidants improve their antioxidative/anti-inflammatory potential? *Bioorganic and Medicinal Chemistry*, Oct 30. [Epub ahead of print]. IF: 3.046, Citations: 0
50. V. Stamatopoulou, C. Toumpeki, A. Tzakos, A. Vourekas, and **D. Drainas** (2010) Domain architecture of the DRpp29 protein and its interaction with the RNA subunit of *Dictyostelium discoideum* RNase P. *Biochemistry*, in press. IF: 3.379, Citations: 0