



Dr. Nikolaos Arvanitis

Chemist, PhD

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I. PERSONAL INFORMATION

Name	: Nikolaos Arvanitis
Date of birth	: 2 October 1966
Place of birth	: Lamia
Family status	: Married, 2 children
Residence	: Efterpis 27, 155 61 Holargos, Athens
Current contact address	: National and Kapodistrian University of Athens, Faculty of Biology, Department of Biochemistry and Molecular Biology, Athens 157 84 (Tel. 210-7274507, E-mail: narvan@biol.uoa.gr)
Education Sept. 1985 - Oct. 1989 Jan. 1990 -1996	: (a) Degree in Chemistry, Faculty of Chemistry, School of Science, University of Ioannina. Grade: "Very Good" (7 και 9/58). : (b) PhD in the Laboratory of Biochemistry of the Faculty of Chemistry of the University of Ioannina, entitled: "Study of natural plasmids of the ethanol-producing bacterium <i>Zymomonas mobilis</i> ", supervised by Prof. Drinas C. Grade: Excellent
Foreign languages	: English
Employment history	: As of December 2001, Scientific Associate at the Department of Biochemistry and Molecular Biology, Faculty of Biology, National and Kapodistrian University of Athens (Greece).

II. TEACHING ACTIVITIES (current)

- Teaching and technical assistance in laboratory practice for the undergraduate courses of "Biochemistry" (NKUA, Faculty of Biology) and "Biochemistry" (NKUA, Faculty of Pharmacy).

- Technical assistance in laboratory practice for the undergraduate courses of “Molecular Biology” (NKUA, Faculty of Biology) and “Clinical Chemistry” (NKUA, Faculty of Biology).
- Invited speaker in the context of the course "Lab Administration" of the Interdepartmental Postgraduate Program "Clinical Biochemistry-Molecular Diagnostics" of the Faculty of Biology of the NKUA. Lecture topic: "Laboratory Safety".

II. SCIENTIFIC ACTIVITIES

A. Original publications in peer-reviewed journals

1. **Arvanitis, N., Afendra, A.S. and Drainas, C. (1995).** *Zymomonas mobilis* ATCC 10988 Plasmid pZMO3 Expresses Mobilisation Functions in *Escherichia coli* JM83 and RR1. *Biotechnology Letters* **17(7)** : 681-686.
2. **Arvanitis, N., Vargas, C., Tegos, G., Perysinakis, A., Nieto, J.J., Ventosa, A. and Drainas, C. (1995).** Development of a Gene Reporter System in Moderately Halophilic Bacteria by Employing the Ice Nucleation Gene of *Pseudomonas syringae*. *Applied and Environmental Microbiology* **61(11)** : 3821-3825.
3. **Afendra, A.S., Vartholomatos, G., Arvanitis, N. and Drainas, C. (1999).** Characterization of the mobilization region of the *Zymomonas mobilis* ATCC10988 plasmid pZMO3. *Plasmid* **41(1)** : 73-77.
4. **Arvanitis, N., Pappas, K.M., Kolios, G., Afendra, A.S., Typas, M.A. and Dainas, C. (2000).** Characterization and Replication Properties of the *Zymomonas mobilis* ATCC 10988 Plasmids pZMO1 and pZMO2. *Plasmid* **44(2)** : 127-137.
5. **Arvanitis, N., Kotzamanidis, C.Z., Skaracis, G.N. and Karagouni, A.D. (2004).** The effectiveness of commercial antimicrobial compounds against saccharolytic microorganisms isolated from a beet sugar production line. *World Journal of Microbiology and Biotechnology* **20(3)**: 291-296.

6. **Arvanitis, N., Katsifas, E.A., Chalkou, K.I., Meintanis, C. and Karagouni, A.D. (2008).**
A refinery sludge deposition site: presence of *nahH* and *alkJ* genes and crude oil biodegradation ability of bacterial isolates. *Biotechnology Letters* **30(12)**: 2105-2110.
7. **Chalatsa, I., Arvanitis, N., Arvanitis, D., Tsakou, A.C., Kalantzis, E.C., Vassiliou, G.A., Sideris, D.C., Frakolaki, E., Vassilaki, N. and Vassilacopoulou, D. (2020).** Human L-Dopa decarboxylase interaction with annexin V and expression during apoptosis. *Biochimie* **177**: 78-86.

B. Presentations in International and National Conferences

1. **Afendra, A.S., Vartholomatos, G., Arvanitis, N., Skordaki, A., and Drainas, C.** *Chromosome-plasmid DNA Interactions in Zymomonas mobilis*. 37th Meeting of the Hellenic Biochemical and Biophysical Society, Athens, December 13 -15, 1991.
2. **Koukkou, A.I., Vartholomatos, G., Perysinakis, A., Arvanitis, N., Douka, E., and Drainas, C.** Squalostatin toxicity and squalane synthase activity in extremophilic eubacteria. 2nd Meeting on Biotechnology of Extremophiles, Capri (Naples), Italy, May 8 – 11, 1994.
3. **Arvanitis, N., and Drainas, C.** Maxi-cells Applications for the Analysis of Plasmid Coded Proteins in *Zymomonas mobilis*. 10th Balkan Biochemical and Biophysical Days, Varna, Bulgaria, May 22 – 25, 1994.
4. **Afendra, A.S., Vartholomatos, G., Arvanitis, N., Scordaki, A., and Drainas, C.** Integration of Recombinant Plasmid in the *Zymomonas mobilis* Chromosome. 10th Balkan Biochemical and Biophysical Days, Varna, Bulgaria, May 22 – 25, 1994.
5. **Arvanitis, N., Tegos, G., Perysinakis, A., Vargas, C., Nieto, J., Ventosa, A., and Drainas, C.** Heterologous Expression of an Ice Nucleation Gene in Moderately Halophilic Bacteria. 42nd Meeting of the Hellenic Biochemical and Biophysical Society, Athens, January 13-14, 1995.
6. **Arvanitis, N., Vargas, C., Tegos, G., Perysinakis, A., Nieto, J., Ventosa, A., and Drainas, C.** The Ice Nucleation Gene as a Reporter Gene in Moderately Halophilic

- Bacteria. 3rd Meeting on Biotechnology of Extremophiles, Sevilla, Spain, May 14 – 17, 1995.
7. **Arvanitis, N., Afendra, A.S., and Drainas, C.** Detection of Mobilization Functions of *Zymomonas mobilis* Cryptic Plasmid in *Escherichia coli* Cells. 43rd Conference of the Hellenic Biochemical and Biophysical Society, Ioannina, May 26 – 27, 1995.
 8. **Arvanitis, N., Vargas, C., Tegos, G., Perisynakis, A., Nieto, J.J., Ventosa, A. και Drainas, C.** The Ice Nucleation Gene *inaZ* as a Reporter Gene in Moderately Halophilic Bacteria. 2nd Conference of the Department of Chemistry, Ioannina, June 2-3, 1995.
 9. **Arvanitis, N., Afendra, A.S., Vartholomatos, G., and Drainas, C.** The *Zymomonas mobilis* Cryptic Plasmid pZMO3 Expresses Mobilisation Functions in *Escherichia coli*. 5th International Symposium on Bacterial genetics and Ecology (BAGECO 5), Nafplion, Greece, May 25 – 29, 1996.
 10. **Vargas, C., Tegos, G., Arvanitis, N., Vartholomatos, G., Ventosa, A., Drainas, C., and Nieto, J.** Nucleotide sequence of the Cryptic Plasmid pHE1 of the Moderately Halophilic Bacterium *Halomonas elongata*. 1st International Congress on Extremophiles, Estoril, Portugal, June 2 – 6, 1996.
 11. **Koraki, D., Arvanitis, N. and Karagouni, A.D.** Diversity among natural plasmids from indigenous soil Streptomyces isolates. 3rd ESF Workshop, Cuenca, Spain, September 12 - 16, 1997.
 12. **Afendra, A.S., Vartholomatos, G., Arvanitis, N. and Drainas, C.** Identification of the mobilization function of the *Zymomonas mobilis* ATCC 10988 cryptic plasmid pZMO3. 3rd ESF Workshop, Cuenca, Spain, September 12 - 16, 1997.
 13. **Afendra, A.S., Vartholomatos, G., Arvanitis, N. and Drainas, C.** Molecular Analysis of *mob* Region of the *Zymomonas mobilis* ATCC 10988 Cryptic Plasmid pZMO3. 48th Meeting of the Hellenic Biochemical and Biophysical Society, Athens, December 12 – 13, 1997.

- 14. Koraki, D., Arvanitis, N. and Karagouni, A.D.** New Naturally Occurring Streptomyces Plasmids. 20th Panhellenic Conference of the Hellenic Society of Biological Sciences, Samos, May 28- 31, 1998.
- 15. Koraki, D., Arvanitis, N. and Karagouni, A.D.** Naturally Occurring Streptomyces Plasmids in Greek Terrestrial Ecosystems. 8th International Symposium on Microbial Ecology (ISME-8), Halifax, Canada, August 9 - 14, 1998.
- 16. Arvanitis, N., Pappas, K.M., Kolios, G., Afendra, A.S., Typas, M.A., and Dainas, C.** Nucleotide sequence analysis of the *Zymomonas mobilis* ATCC 10988 plasmids pZMO1 and pZMO2. 50th Meeting of the Hellenic Biochemical and Biophysical Society, Athens, January 15 – 16, 1999.
- 17. Arvanitis, N., Pappas, K.M., Kolios, G., Afendra, A.S., Typas, M.A., and Dainas, C.** Nucleotide sequence analysis of the *Zymomonas mobilis* ATCC 10988 plasmids pZMO1 and pZMO2. 6th International Symposium on Bacterial genetics and Ecology (BAGECO 6), Florence, Italy, June 20 – 24, 1999.
- 18. Nikolakopoulou, T., Arvanitis, N., Koraki, D. And Karagouni, A.D.** Detection of oxytetracycline resistance genes *otrA* & *otrB* in marine actinomycetes species. 11th International Symposium on the Biology of Actinomycetes (ISBA 11), Sissi-Heraklion, Crete-Greece, October 24-28, 1999.
- 19. Charamis J., Panagiotopoulou D., Bantounas A., Arvanitis N. and Pappas K.M.** Construction and study of a new species-specific shuttle vector for the biofuel-producing *Zymomonas mobilis*. 15th Horizons in Molecular Biology: International PhD Student Symposium for Life Sciences, Göttingen, Germany, September 10-13, 2018.
- 20. Panagiotopoulou D., Bantounas A., Charamis J., Arvanitis N. and Pappas K.M.** Construction and study of a new species-specific shuttle vector for the biofuel-producing *Zymomonas mobilis*. 8th Conference of the Hellenic Scientific Society "MikroBioKosmos", Patra, Greece, April 18-20, 2019.
- 21. Arvanitis D., Tsakou A., Kalantzis E., Chalatsa I., Vassiliou A.G., Arvanitis N. and Vassilacopoulou D.** Evidence for L-Dopa decarboxylase involvement in apoptosis.

69th Panhellenic Conference of the Hellenic Society for Biochemistry and Molecular Biology (HSBMB), Larissa, Greece, November 23-25, 2018.

22. Lotsios N., Arvanitis N., Charonitakis A., Sideris D.C., Frakolaki E., Vassilaki N and Vassilacopoulou D. L-Dopa decarboxylase protein expression under oxidative stress conditions. 70th Panhellenic Conference of the Hellenic Society of Biochemistry and Molecular Biology (HSBMB), Athens, Greece, 29th November – 1st December, 2019.

23. Mastora E., Ntalla Ch., Charonitakis A., Arvanitis N. and Vassilacopoulou D. L-Dopa Decarboxylase (DDC) inhibitor NSD-1015 alters the proteolytic processing of Amyloid Precursor Protein (APP). 70th Panhellenic Conference of the Hellenic Society of Biochemistry and Molecular Biology (HSBMB), Athens, Greece, 29th November – 1st December, 2019.

C. Participation in workshops

1. 18-11-1991 to 20-12-1991: "Exploitation of Biosystems Knowledge" from GSRT, held at the University of Ioannina.
2. 2-9-1990 to 14-9-1990: "Global Regulation of Gene Expression in Microorganisms", sponsored by NATO and EMBO/FEBS, held in Spetses (Spetsai Summer School).
3. 12-9-1997 to 16-9-1997: "Molecular Biology and Ecology of Plasmid-mediated Gene Transfer", subsidised by the ESF, held in Cuenca, Spain.
4. 6-10-1998 to 10-10-1998: 5th International Symposium on "The Biosafety Results of Field Tests of Genetically Modified Plants and Microorganisms", held in Braunschweig, Germany.
5. 23-4-1999 to 27-4-1999: 1st Symposium of the EU-concerted action on "Mobile elements' contribute to bacterial adaptability and diversity" (MECBAD), held in Strasbourg, France.
6. 20-9-2000 to 21-9-2000: Participation in a practical course on "Real-time Cooperative PCR" held in Applied Biosystems Laboratories in Switzerland.
7. 2-10-2000 to 6-10-2000: Participation in Theoretical and practical course: "Detection of Genetically Modified Organizations in food and feed" held in Trieste, Italy.

D. Participation in Research projects

I have participated as a researcher in the following projects funded by EU or National Sources

- GSRT sponsored Program titled: “Genetic recombination systems for genetic mechanization of the ethanol-producing bacterium *Zymomonas mobilis* and exploitation of agricultural products” 1991-1993.
- EU-Biotechnology project titled: “STRIDE HELLAS 33- Cellular damage and defense mechanisms: Molecular characterization” 1992 and 1993-1994.
- EU-Biotechnology project “BIOTECH” (BIO2-CT93-0274) titled: “Studies on isoprenoid biosynthesis in extremophilic bacteria” 1993-1995.
- EU/GSRT co-sponsored Program “PABE” (collaboration with the Hellenic Sugar Industry) titled: “Reduction of losses of sugar mills by controlling microbial activity on production lines” 1997 - 1999.
- EU-Biotechnology Project (SMT4-CT96-2072) titled: “Development of methods to identify foods produced by means of genetic engineering (DMIF-GEN)”, 1996-1999. Participation in this program enabled the laboratory to perform the methods that have been established for the detection of GMO (European Committee for Standardization CEN/TC 275 ‘Food analysis. Horizontal Methods’).
- EU-Biotechnology project “RESERVOIR” (BIO4 CT980053) titled: “Antibiotic resistance genes in the environment. A comprehensive, multi-phasic survey of prevalence and transfer” 1998-2000.
- EU/GSRT co-sponsored Research Program “COOPERATION”. Academic–industrial collaboration framework between the National Technical University of Athens, the NKUA, the University of Thessaly, the Centre for Research and Technology Hellas (CERTH), AgrosBiosystems, Motor Oil Hellas, and Planning MC; topic: “Sustainable Integrated Method for the Production of Lignocellulosic Ethanol -SIMPLE” 2015.