

**CURRICULUM VITAE**  
**Katherine Maria Pappas**  
**2023**

**Date/Place of Birth** 20-07-1966, Athens, Greece  
**Citizenship** Greek, born to a Greek and a US citizen  
**Family status** Married, two children born in 2003 and 2004  
**Work details** Department of Genetics and Biotechnology, Faculty of Biology, National and Kapodistrian University of Athens, Panepistimiopolis, Athens 15701, Greece  
tel. +30-210-7274340, fax +30-210-7274318, e-mail [kmpappas@biol.uoa.gr](mailto:kmpappas@biol.uoa.gr)

### **Biographical Outline**

**1984-1990** BSc Degree, Faculty of Biology, School of Sciences, National and Kapodistrian University of Athens (NKUA) (honors, 9.1/10)  
**1989-1990** ‘ERASMUS’ exchange student at the School of Chemical and Life Sciences, University of Greenwich, and the Department of Microbiology, Division of Life Sciences, King’s College, University of London, London, UK (9 months)  
**1991-1997** PhD Thesis, Department of Genetics and Biotechnology, Faculty of Biology, NKUA (honors)  
**1998-1999** Postdoctoral Associate, Department of Genetics and Biotechnology, Faculty of Biology, NKUA  
**1999-2002** Postdoctoral Associate, Department of Microbiology, College of Agriculture and Life Sciences, Cornell University, Ithaca, NY, USA  
**2003-2010** Lecturer, Department of Genetics and Biotechnology, Faculty of Biology, NKUA  
**2008-** Principal Investigator at the US DOE joint Genome Institute  
**2010-2018** Assistant Professor, Department of Genetics and Biotechnology, Faculty of Biology, NKUA (tenured since Oct. 2014)  
**2019-** Associate Professor, Department of Genetics and Biotechnology, Faculty of Biology, NKUA  
**2018-2024** American Society for Microbiology (ASM) Country Ambassador to Greece  
**2020-** NKUA Center of Excellence in Basic Sciences Founding Member  
**2022-2023** Head of the Department of Genetics & Biotechnology  
**2023-** NKUA Research Center ‘Biotechnology, Bioeconomy, Biosustainability (Bio3)’ Founding Member  
**2023-** ASM International Future Leaders Mentorship Fellow  
**2023-2024** Fulbright Foundation Scholar

### **Awards, Scholarships & Stipends**

**1984** National Scholarships Foundation (IKY) award for top entry in NKUA  
**1989-1990** ‘ERASMUS-Free Mover’ undergraduate student scholarship to conduct research in the School of Chemical and Life Sciences, University of Greenwich (host: Prof. I. J. Bruce), and in the Department of Microbiology, Division of Life Sciences, King’s College (host: Prof. B. W. Bainbridge), London, UK (research topics: ‘Isolation and characterization of the

*Burkholderia cepacia* 2,4-D degrading plasmid pIJB1' and 'Mapping of the chromosomal rDNA repeat of *Aspergillus fumigatus*' respectively) (Oct. 1989 – Jun. 1990)

- 1992-1996** National Scholarships Foundation (IKY) scholarship to conduct doctoral dissertation in the field of Genetics (single national position; topic: 'Study of conjugative gene transfer in the ethanol-producing bacterium *Zymomonas mobilis*')
- 1992** EU Regional Development stipend for workshop 'Application of novel techniques in the Biochemical & Biomedical Sciences', University of Ioannina, School of Chemistry and School of Medicine, Ioannina, Greece (Nov. – Dec. 1992)
- 1999-2002** Post-doctoral research fellowship provided by the NIH grant GM42893 awarded to Prof. S. C. Winans, Dept. of Microbiology, College of Agriculture and Life Sciences, Cornell University, Ithaca NY (topic: 'Interactions between *Agrobacterium* and host plants')
- 2010** NKUA Dean's Office stipend (code 10812) to present at the 5<sup>th</sup> Annual US DOE-Joint Genome Institute User Meeting, Walnut Creek, CA, USA (see conferences)
- 2011** Greek/Latvian stipend for scientific bilateral exchange between the NKUA and the University of Latvia, Latvia (DPMA 2011/77; travel and stay in Riga Oct. 26-31, 2011)
- 2013** NKUA Dean's Office stipend (code 10812) to present at the FEMS 2013 International Conference, Leipzig, Germany (see conferences)
- 2014** As above, to present at the International Conference 'Plant Transformation Technologies (VISCEA)', Vienna, Austria (see conferences)
- 2016-2017** National Scholarships Foundation (IKY)/Siemens Award of Excellence for research proposal: 'Biotechnological and genomic study of a mutant strain of the ethanologenic bacterium *Zymomonas mobilis*, deficient for homologous recombination, aiming to optimize bioethanol production'
- 2020-** Member of the NKUA Board for Excellence in Sciences (STEM Division)
- 2023-2024** Fulbright Scholarship to visit the University of Wisconsin-Madison/Wisconsin Energy Institute (Prof. R. Landick) and Michigan State University/DOE Plant Research Laboratory (Prof. C. Kerfeld) (Dec. '23 – Apr. '24) (topic: 'Synthetic and Systems Biology applications for bioethanol and high added value compound production')

### **Principal Investigator in Research Programs**

- 2004-2005** NKUA Research Committee grant 'Kapodistrias' (70/4/7809) for the topic 'Study of quorum sensing in the ethanol-producing bacterium *Zymomonas mobilis*'
- 2006-2007** NKUA Research Committee grant 'Kapodistrias' (70/4/7809) for the topic 'Study of toxicity and other traits induced in high population densities of the ethanol-producing bacterium *Zymomonas mobilis*'
- 2006-2008** EU/GSRT co-sponsored grant 'R&T Collaborations between Greek and non-European Institutions – Program EPAN' for Greek - US bilateral collaboration between the University of Athens and Cornell University (18-months; GSRT no. 05-NONEU-273/RC no. 9324), on the topic 'Study of cell-cell communication in the ethanol-producing bacterium *Zymomonas mobilis*' (**proposal ranked 1<sup>st</sup> in Life Sciences**)
- 2008-2016** US Department of Energy - Joint Genome Institute and NKUA bilateral collaboration (FY2008\_CSP\_788284); topic: 'Sequencing of *Zymomonas mobilis* strains CP4, ATCC 10988 and ATCC 29191 (subsp. *mobilis* lectotype and phenotypic centrotypic), ATCC 29192 (subsp. *pomaceae* lectotype) and *Z. mobilis* sp. NCIB 11163. Sequencing of strain ZM4 (ATCC 31821) plasmids.' (**ranked among the three topmost proposals worldwide**)

<http://www.jgi.doe.gov/sequencing/cspseqplans2008.html>

<http://www.jgi.doe.gov/sequencing/why/CSP2008/zmobilis.html>

*Proposal supported by Prof. P.L. Rogers (University of New South Wales), Prof. H. Lawford (University of Toronto), Prof. H. Sahm (Juelich Research Centre), Prof. G. Stephanopoulos (MIT), Prof. T. Jeffries (University of Wisconsin), Prof. C. Drainas (University of Ioannina)*

**2008-2009** NKUA Research Committee grant ‘Kapodistrias’ (70/4/7809) awarding the topic ‘Genomic analysis in six strains of the ethanol-producing bacterium *Zymomonas mobilis*’

**2010-2018** US Department of Energy - Joint Genome Institute and NKUA bilateral collaboration (FY2010\_CSP\_52); topic: ‘Resequencing *Zymomonas mobilis* industrial strain ZM4. Sequencing *Zymomonas mobilis* transcriptomes’

<http://www.jgi.doe.gov/sequencing/cspseqplans2010.html>

*Proposal supported by Prof U. Kalnenieks (University of Latvia), Prof D. Eveleigh (Rutgers University)*

**2013-2015** 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 (network coordinator Prof. D. Kekos, NTUA); topic: ‘Sustainable Integrated Method for the Production of Lignocellulosic Ethanol - SIMPLE’. NKUA team co-Principal Investigator

**2016-2017** National Scholarships Foundation(IKY)/Siemens Award of Excellence for research proposal: ‘Biotechnological and genomic study of a mutant strain of the ethanologenic bacterium *Zymomonas mobilis*, deficient for homologous recombination, aiming to optimize bioethanol production’

**2016-2019** EU FP7 Framework, Program ERA-NET Industrial Biotechnology (ERA-IB), Proposal Era-IB-15-109/Z-FUELS. NKUA Principal Investigator, subcontracted by Perlemax Ltd (program details above)

*Shortlisted in proposals that did not receive funding*

**2007** ERC-StG (Young Investigators) EU framework call, topic ‘Genome-wide studies and metabolic engineering for the bioethanol-producing bacterium *Zymomonas mobilis*-ZYMOGEN07’

**2009-2011** National–EU joint Research Program ‘THALIS’ (network coordinator), title ‘Comparative genomics and the study of metabolic and energetic networks in the ethanol-producing bacterium *Zymomonas mobilis*: a Systems Biology approach for the optimization of ethanol and high-added-value compound production (ZYMOSES)’. Network of excellence between the NKUA, the University of Ioannina, the Aristotle University of Thessaloniki, the National Research Foundation, the National Technical University, the University of Latvia, and the Technical University/ EPFL-Switzerland.

### **Participation in Research Programs**

**1992-1994** Greek General Secretariat for Research & Technology (GSRT) PENED Program awarded to Prof. M. A. Typas on the topic ‘Conjugative gene transfer in the ethanol-producing bacterium *Zymomonas mobilis*’

**1995-1997** EU/GSRT/Greek Sugar Industry co-sponsored Program EPET II 323 awarded to Prof. M. A. Typas on the topic ‘Genetic enhancement of ethanol-producing organisms aiming to simultaneous ethanol and ice nucleation protein production’

**1997-1998** EU/GSRT co-sponsored Program PABE (collaborations with Industrial Partners) awarded to Prof. M. A. Typas on the topic ‘Molecular typing of sugar-degrading bacteria and fungi’

isolated in sugarcane fermentations’

- 1999-2002** US NIH grant GM42893 awarded to Prof. S. C. Winans, Dept. of Microbiology, College of Agriculture and Life Sciences, Cornell University, Ithaca, NY, on the topic ‘Interactions between *Agrobacterium* and host plants’
- 2002** EU-sponsored research program ‘RAFBCA: Risk Assessment of Biological Control Agents’ awarded to Prof. M. A. Typas on the topic ‘Molecular typing of insecticide fungi – risk assessment with the application of the Ames test’ (Aug. – Oct. 2002)
- 2011-2012** NKUA Research Committee grant ‘Kapodistrias’, awarding the Department of Genetics & Biotechnology cumulative research activity on the topic ‘Structure and function of genes of biotechnological importance’.
- 2012-2015** National–EU co-funded Research Program ‘THALIS’. Network of excellence between the NKUA, the National Technical University of Athens, the Agricultural University of Athens, Harokopeion University, and Lund University, Sweden (network coordinator Prof. M. A. Typas, NKUA); topic: ‘Metagenomics of ligninolytic microorganisms – Bioconversion of plant by-products into high-added value products’
- 2012-2015** National–EU co-funded Research Program ‘THALIS’. Network of excellence between the Agricultural University of Athens, the NKUA, the Aristotle University of Thessaloniki, and the South Carolina State University, USA (network coordinator Prof. G. J. Nychas, AUA); topic: ‘Biological Investigation Of the Forces that Influence the Life of pathogens having as Mission to Survive in various Lifestyles; BIOFILMS’
- 2013-2015** 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 (network coordinator Prof. D. Kekos, NTUA); topic: ‘Sustainable Integrated Method for the Production of Lignocellulosic Ethanol - SIMPLE’
- 2014-** Partnership in the BBSRC Network ‘Crossing biological membranes: Engineering the cell-environment interface to improve process efficiency (CBMNet)’, BBSRC Networks in Industrial Biotechnology and Bioenergy (UK). Coordinators: Prof. J. Green (University of Sheffield), Prof. G. Thomas (University of York)
- 2016-2019** EU FP7 Framework, Program ERA-NET Industrial Biotechnology (ERA-IB), Proposal Era-IB-15-109/Z-FUELS. Network of excellence coordinated by Perlemax Ltd (UK)/Innovate UK on the topic ‘A novel bacterial system with integrated micro-bubble distillation for the production of acetaldehyde. Participants: Prof. W. Zimmerman, G. Hitchens (University of Sheffield/Perlemax Ltd UK), Prof. R. Poole (University of Sheffield, contractor: University of Trondheim), Prof. U. Kalnenieks (University of Latvia), Prof. O. Sawodny, J. Rex (University of Stuttgart/Institute of Systems Dynamics), Dr. K. Bettenbrock (Max Planck Institute for Dynamics of Complex Systems, Magdeburg), Ass. Prof. Per Bruheim (Norwegian University of Science and Technology – Trondheim), Ass. Prof. K. M. Pappas (University of Athens, contractor: Perlemax Ltd)
- 2023-** US Department of Energy - Joint Genome Institute Community Sequencing Program (FY\_2023); collaboration between Greek, UK and US academic institutions on the topic: ‘Deciphering the genetic and metabolic plasticity of endophytic entomopathogens and fungicolous fungi of the order Hypocreales’. PI: Assist. Prof. V. N. Kouvelis

## **Other Research and Professional Activities**

### **I. Genomics research and NCBI GenBank submissions**

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- 1999-2004** Sequencing, primary annotation and GenBank submissions:
- *Z. mobilis* subsp. *mobilis* industrial strain CP4 plasmid pCP4.2, 32623 bp (EU709732)
  - *Z. mobilis* subsp. *mobilis* industrial strain CP4 *recA* gene, 1574 bp (AY101392)
  - *Z. mobilis* subsp. *mobilis* ATCC 10988 plasmid pZMO1, 1651 bp (AJ009975) (deposited by Prof. C. Drinas)
  - *Z. mobilis* subsp. *mobilis* industrial strain CP4 IS element IS*Zm1068*, 1100 bp (AF012441)
- 2010-2017** Joint submissions with the US DOE-Joint Genome Institute (Program CSP\_788284):
- *Z. mobilis* subsp. *mobilis* industrial strain ZM4 chromosome AE008692.2, 2056363 bp (joint submission with the US DOE - Oak Ridge National Laboratory)
  - *Z. mobilis* subsp. *mobilis* industrial strain ZM4 plasmids 37066 bp (CP001881.1), 33915 bp (CP001882.1), 32801 bp (CP001883.1), 32400 bp (CP001884.1), 30952 bp (CP001885.1)
  - *Z. mobilis* subsp. *mobilis* NCIMB 11163 chromosome, 2124771 bp (CP001722.1)
  - *Z. mobilis* subsp. *mobilis* NCIMB 11163 plasmids 53380 bp (CP001723.1), 40818 bp (CP001724.1), 4551 bp (CP001725.1)
  - *Z. mobilis* subsp. *pomaceae* ATCC 29192 chromosome, 1989865 bp (CP002865.1)
  - *Z. mobilis* subsp. *pomaceae* ATCC 29192 plasmids 37387 bp (CP002866.1), 34161 bp (CP002867.1)
  - *Z. mobilis* subsp. *mobilis* ATCC 10988 chromosome, 2021773 bp (CP002850.1)
  - *Z. mobilis* subsp. *mobilis* ATCC 10988 plasmids 32479 bp (CP002851.1), 32283 bp (CP002852.1), 1692 bp (CP002853.1), 18461 bp (CP002854.1), 4023 bp (CP002855.1), 2750 bp (CP002856.1)
  - *Z. mobilis* subsp. *mobilis* ATCC 29191 chromosome, 1961306 bp (CP003704)
  - *Z. mobilis* subsp. *mobilis* ATCC 29191 plasmids 18350 bp (CP003705), 14947 bp (CP003706), 13742 bp (CP003707)
  - *Z. mobilis* subsp. *mobilis* CP4 chromosome, 1998637 bp (CP006818)
  - *Z. mobilis* subsp. *mobilis* CP4 plasmids 36892 bp (CP006891), 33915 bp (CP006892), 32400 bp (CP006893), 30952 bp (CP006894), 30440 bp (CP006895)
- 2018** Joint submission with the University of Wisconsin/US DOE Great Lakes Bioenergy Research Centre/ US DOE National Renewable Energy Laboratory:
- *Z. mobilis* subsp. *mobilis* ZM4 substr. 8b chromosome, 2064754 bp (CP023682.1)
  - *Z. mobilis* subsp. *mobilis* ZM4 substr. 8b plasmids 40858 bp (CP023686.1), 39266 bp (CP023685.1), 33006 bp (CP023684.1), 32791 bp (CP023683.1)
  - *Z. mobilis* subsp. *mobilis* ZM4 substr. 2032 chromosome, 2072170 bp (CP023677.1)
  - *Z. mobilis* subsp. *mobilis* ZM4 substr. 2032 plasmids 39266 bp (CP023681.1), 36494 bp (CP023680.1), 33006 bp (CP023679.1), 32791 bp (CP023677.1)
- 2016 -**
- Sequencing of 70 transcriptsomes of *Z. mobilis* strains ZM4 (project ID 1020422), ZM401 (ID 1020425), CP4 (ID 1020428) and UA1 (ID 1020431) under different growth conditions, in collaboration with the US DOE JGI (Production Genome Facility – Program US DOE-JGI CSP\_52) and the University of Wisconsin-Madison/US DOE – Great Lakes Bioenergy Research Centre (US DOE-GLBRC). Submitted to the platform <http://genome.jgi.doe.gov> and in part to GenBank (specific sequences pertaining to 1020422).
- Under submission to GenBank are the plasmid genomic sequences obtained via plasmid-only samples sequenced in terms of Program US DOE-JGI CSP\_788284
- 2008-** Has provided US DOE-JGI web content regarding *Z. mobilis* (<http://genome.jgi-psf.org/>)
- Has provided information to the ATCC and NCIMB Type Culture Collections regarding *Z. mobilis* strain identity/taxonomy
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## **II. Journal Reviewer/Editor**

- 2008 -** Invited reviewer for the journals:  
Archives of Microbiology (Springer), Molecular Biology Reports (Springer), BMC Genomics (BioMed Central), Nucleic Acids Research (Oxford University Press), Molecular Microbiology (Blackwell), Journal of Applied Microbiology (Wiley), Plasmid (Elsevier), The ISME Journal (Nature Publishing Group), BMC Microbiology (BioMed Central), Biotechnology for Biofuels (BioMed Central), BioMed Research International (Hindawi Publishing Corporation), Applied Microbiology and Biotechnology (Springer), Antonie van Leeuwenhoek (Springer), PLoS (Public Library of Science), Scientific Reports (Nature Publishing Group), Frontiers in Microbiology (Nature Publishing Group), Applied & Environmental Microbiology (ASM Journal)  
<https://publons.com/author/374422/katherine-m-pappas#profile>  
(NKUA reviewer activity ranking #1, <https://publons.com/>)
- 2011-2015** Editorial board member in the ‘Journal of Biotechnology and Biomaterials’, OMICS Publishing Group
- 2013-2016** Guest Editor in the journal Frontiers in Microbiology (Nature Publishing Group), Research Topic, e-book and hard-copy book titled "Genetic and genome-wide insights into microbes studied for Bioenergy". Invited co-editors: Dr. Shane Yang (US DOE NREL), Prof. Nigel Minton (University of Nottingham/BSBEC), Prof. Ed Lewis (University of Leicester), Ass. Prof. Biswarup Mukhopadhyay (VirginiaTech). Authored the introductory note and provided cover figure deriving from own lab research.  
[http://www.frontiersin.org/microbial\\_physiology\\_and\\_metabolism/researchtopics/genetic\\_and\\_genome-wide\\_insigh/1807](http://www.frontiersin.org/microbial_physiology_and_metabolism/researchtopics/genetic_and_genome-wide_insigh/1807)
- 2018-** Editorial board member in ‘Systems Microbiology’, Frontiers Publishing Group
- 2021-2023** Guest Editor in ‘Microorganisms’ (MDPI) in Thematic Issue hosting full papers submitted to the ‘MikroBioKosmos’ 9<sup>th</sup> International Conference
- 2024** Editorial board member in ‘Microorganisms’(MDPI), Microbial Biotechnology Section

## **III. Proposal and Institutional Reviewer & Evaluator/ Program of Studies Evaluator**

- 2009** Invited proposal reviewer by the British Royal Society, UK (Dec. 2009)
- 2010** Invited proposal reviewer by the Greek General Secretariat for Research and Technology (GSRT), Ministry of Education (Framework ‘International Bilateral Proposals’, Jun. 2010)
- 2013** EU appointed evaluator by the Belgian Science Policy Office (BELSPO) for the University of Ghent BCCM/LMBP Plasmid and DNA Library Collection, March – April ‘13
- 2013-2016** Invited proposal reviewer by the Greek GSRT, Ministry of Education (Framework ‘Excellence’, Jul. 2013)
- 2021** EU appointed evaluator for the accreditation of the MSc Program ‘Biotechnology’ of the University of Cyprus/Cyprus Institute of Neurology & Genetics, Cyprus (Nov. 2021)

## **IV. Public Service Appointments – Scientific Society Appointments**

- 2010-2013** Appointed member of the Greek Food Safety Authority (EFET), Scientific Committee (ESET), Greek Ministry of Health
- 2010-** Appointed International Mentor by the American Society for Microbiology (Oct. 2010)

- 2017-2019** Elected Secretary for the Board of Directors of the Hellenic Scientific Society 'Mikrobiokosmos'. Board member 2019-2021.
- 2017** Summoned expert by the Institute of Educational Policy, Greek Ministry of Education and Religious Affairs, on educational reform (Sept. – Nov. 2017)
- 2018-2024** Elected Country Ambassador to Greece by the American Society of Microbiology (position evaluated and renewed in 2021)
- 2023-** Elected Future Leaders Mentorship Fellow for the American Society of Microbiology

#### **V. Invited Speaker & Conference Committee Member and Chair**

- 1999** Invited by Prof. C. M. Thomas, School of Biosciences, University of Birmingham, UK, to present on the topic 'The biology of *Zymomonas mobilis* plasmids', in terms of prospective postdoctoral appointment (April 1999)\*
- 2002** Invited by the organizers of the CCCB series of ASM meetings to give a talk on the topic 'Biochemical and Structural Analysis of a TraR-Pheromone-DNA Ternary Complex' (keynote lecture), ASM Conference on Cell-Cell Communication in Bacteria, Snowbird, Utah (July 2001)\*
- 2004** Invited by the organizers of the 24<sup>th</sup> Panhellenic Conference of the Hellenic Society for Biological Sciences (HSBS), to give a talk on the topic 'Chemical communication in bacteria: Structure and function of a transcription factor that responds to bacterial pheromones', Eretria, Evoia (May 2002)
- 2006** Invited by the organizers of the 26<sup>th</sup> Panhellenic Conference of the Hellenic Society for Biological Sciences (HSBS), to give a talk on the topic 'Copy number control of the oncogenic *Agrobacterium tumefaciens* Ti plasmid by inherent molecular regulators and extracellular signals', Ioannina (May 2006)
- 2007** Invited by the organizers of the 2005-2006 Seminar Series of the National Hellenic Research Foundation to give a talk on the topic 'Bacterial cross-talks' (January 2007)
- 2008** Organizing Committee member at the 1<sup>st</sup> Panhellenic Conference 'Microbiokosmos I: Our unexplored microbial treasure', December 12-14, NCSR 'Demokritos', Athens, Greece
- 2010** Invited Speaker at the US DOE Oak Ridge National Laboratory – Bioenergy Science Center, TN, USA, to present overall laboratory activities (March 24<sup>th</sup>, 2010) \*\*
- 2010** Scientific Committee member at the 3<sup>rd</sup> Panhellenic Conference 'Microbiokosmos III: microbes in health, nutrition and the environment', December 16-18, 'Noesis' Centre, Thessalonica, Greece
- 2011** Invited by the University of Latvia to present overall research laboratory activities under the auspices of Program DPMA 2011/77 between the University of Latvia and NKUA (host: Prof. U. Kalnenieks). Gave talks on: 'Current research on *Zymomonas mobilis*: state-of-the-art' (27/10) and 'Cell-cell signaling in alpha-proteobacteria' (28/10), Riga (Oct. 2011) \*\*
- 2011** Organizing Committee member at the 62<sup>nd</sup> Conference of the Hellenic Society for Biochemistry and Molecular Biology, December 9-11, Eugenides Foundation, Athens, Greece
- 2012** Organizing Committee member and Chair at the 3<sup>rd</sup> World Conference on Biotechnology 'Biotechnology-2012', September 13-15, Hyderabad National Convention Centre, Hyderabad, India \*
- 2013** Invited Speaker, Organizing Committee member, Scientific Advisor for Track 8 'Microbial Genetics' and Chair at the 'International Conference on Genetic Engineering & Genetically Modified Organisms (Genetic Engineering-2013)', August 12-14, Raleigh, NC, USA

- Invited Speaker: Prof. S. Kathariou, North Carolina State University \*
- 2013** Organizing Committee Member and Chair at the 6<sup>th</sup> International Scientific Conference on Climate Change and the Environment (Promitheas), October 9-11, NKUA (Kostis Palamas Building), Athens, Greece
- 2014** Invited Speaker at the International Symposium ‘Plant Transformation Technologies III (VISCEA)’, to present on the topic ‘*Escherichia coli* can act as an *in planta* gene donor for the creation of transgenic plants’, February 12-14, Vienna, Austria \*\*
- 2014** Invited Speaker at the University of Wisconsin-Madison, Department of Bacteriology / US DOE Great Lakes Bioenergy Research Center, WI, USA (September 25<sup>th</sup>, 2014) \*\*
- 2014** Organizing Committee Member and Chair at the 7<sup>th</sup> International Scientific Conference on Climate Change and the Environment (Promitheas), October 8-10, NKUA (Kostis Palamas Building), Athens, Greece
- 2014** Organizing and Scientific Committee member and Chair at the 9<sup>th</sup> Conference of the Hellenic Society for Computational Biology and Bioinformatics - HSCBB14, October 10-12, Agricultural University of Athens, Greece
- 2015** Organizing and Scientific Committee member and Chair at the 6<sup>th</sup> Panhellenic Conference ‘Microbiokosmos VI’, April 3-5, National Research Foundation, Athens, Greece
- Invited Speaker: Prof. Robert Landick, University of Wisconsin – Madison, Director of the US-DOE Great Lakes Bioenergy Research Centre
- 2015** Organizing Committee member and Chair at the 37<sup>th</sup> Symposium on Biotechnology for Fuels and Chemicals (37<sup>th</sup> SBFC) of the Society for Industrial Microbiology and Biotechnology (SIMB), April 27-30<sup>th</sup>, San Diego, CA, USA
- 2015** Organizing Committee Member and Chair at the 8<sup>th</sup> International Scientific Conference on Climate Change and the Environment (Promitheas), October 7-9, NKUA (Kostis Palamas Building), Athens, Greece
- 2016** As above, October 12-14
- 2017** Organizing and Scientific Committee member and Chair at the 7<sup>th</sup> Panhellenic Conference ‘Microbiokosmos VII’, April 7-9, National Research Foundation, Athens, Greece
- 2018** Invited Speaker at the Symposium ‘Horizons in Molecular Biology 2018’, Max Planck Institute for Biophysical Chemistry/Georg August Universitaet Goettingen, Goettingen, September 10-14 \*\*
- 2018** Organizing Committee Member and Chair at the 11<sup>th</sup> International Scientific Conference on Climate Change and the Environment (Promitheas), October 11-13, NKUA (Plaka Historical Premises), Athens, Greece
- 2019** Organizing and Scientific Committee member and Chair at the 8<sup>th</sup> Panhellenic Conference ‘Microbiokosmos VIII’, April 19-21, ICT-FORTH Patras
- Invited Speaker: Prof. Cheryl Kerfeld, Michigan State University, US DOE- Lawrence Berkeley National Laboratory
- 2019** Invited speaker in the 3<sup>rd</sup> International Conference on Synthetic Biology, 24-29 Sept. Nanjing, China \*\*
- 2021** Organizing and Scientific Committee member and Chair at the 9<sup>th</sup> Panhellenic Conference ‘Microbiokosmos IX’, December 16-18, AUA Athens, Greece
- 2023** Scientific Committee member and Chair at the 10<sup>th</sup> Panhellenic Conference ‘Microbiokosmos X’, November 30 - December 2, Larissa, Greece



*expenses covered in full \*\* or in part \**

*Has invited speakers to offer talks in the Faculty of Biology NKUA:*

- 2009** Dr. Kostas Mavrommatis, US DOE Joint Genome Institute, Production Genome Facility, topic: ‘Gold-mining bacterial genomes’ (May 2009)
- 2015** Prof. Robert Landick (Charles Yanofsky Professor of Biochemistry and Bacteriology), University of Wisconsin-Madison, US DOE Great Lakes Bioenergy Research Centre (Director), topic: ‘Bacteria in Bioenergy, an overview of UoW-M/GLBRC activities’ (May 2015)
- 2023** Prof. Joseph Nadeau, Research Director, Center for Molecular Medicine, Maine Medical Center Research Institute, topic: ‘Chance, more than genes and environment, dominate the origins of phenotypic variation and disease risk’

## **VI. Science Communication to the Public – International contest trainer**

- 2013 Presenter on ‘GMOs and sociopolitical implications’, invited by the editorial of the NKUA journal ‘Kaleidoscope’, Event Bookstore ‘Agyra’, 124 Solonos St., Athens, Feb. 2013
- 2013 Event coordinator and speaker on the topic ‘Microbes: friends or foes’, ‘Bio-café’ lecture series organized by the publishing company ‘People & Ideas’ in collaboration with the Panhellenic Association of Biologists, Free Thinking Zone, 64 Skoufa St., Athens, May 2013
- 2016 Lab research demonstrator for the topic ‘Biofuels from Bacteria’, Athens Science Festival, Technopolis, Athens, Apr. 2016 (week-length zone)
- 2018 Trainer for the National Team in the 2018 International Olympiad in Biology (Iran) – teaching and laboratory training on genetic engineering
- 2022 Educator on ‘Mendelian Genetics’, invited by the Panhellenic Association of Biologists (PEB), Dec. 2022

## **VII. Member of Societies and Associations**

Member of the: American Society for Microbiology (ASM), American Association for the Advancement of Science (AAAS), American Chemical Society (ACS), European Science Foundation (ESF), International Society for Plasmid Biology (ISPB), Society for Industrial Microbiology and Biotechnology (SIMB), Hellenic Society for Biological Sciences (HSBS), Hellenic Society of Biochemistry and Molecular Biology (HSBMB), Hellenic Society for Computational Biology and Bioinformatics (HSCBB), Hellenic Society for Microbiology ‘Mikrobiokosmos’(MBK)

## **Academic Responsibilities**

### **I. Administrative**

- 2005-** Member of the Faculty of Biology NKUA Executive Body (decision & counseling body)
- 2005-2007** Examiner for graduate students enrolling in the NKUA Faculties of Biology and Pharmacy (examined subject: Biology). Substitute examiner since 2007.
- 2006-2007** Elected member of the NKUA Administrative Council (Senate)
- 2007-2009** Member of the Faculty of Biology NKUA committees for Maintenance, Research & PR
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activities

- 2008 -** Responsible for Radiation Safety in the Dept. of Genetics and Biotechnology, Faculty of Biology NKUA
- 2009-** Member of the Faculty of Biology NKUA committees for Faculty Curriculum, Museums and Environmental Policies
- 2008-** Main Electoral Body member for faculty appointments in the following institutions:  
Faculty of Biology, NKUA (2008); Faculty of Agricultural Biotechnology, Agricultural University of Athens (2008, 2010); Faculty of Biology, University of Patras (2010); School of Sciences and Technologies, Department of Biological Applications and Technologies, University of Ioannina (2012); Faculty of Biology, University of Patras (2018, 2021); Faculty of Crop Sciences, Agricultural University of Athens (2021); Faculty of Biology, University of Athens (2019), Faculty of Biology, University of Athens (2020), Faculty of Biology, University of Crete (2023), Faculty of Biology, University of Athens (2023)
- 2012-** Provided English versions for the Faculty of Biology NKUA web pages and Diploma Supplement
- 2014-** Member of the Faculty of Biology NKUA committee for the coordination of the EU framework program 'ERASMUS' that administers international student exchanges
- 2018** Member of the Faculty of Biology NKUA committee for the upgrade of the faculty IT profile in terms of the NKUA Program of Studies' Accreditation
- 2019-** Member of the Faculty of Biology NKUA committees for Curriculum Affairs, Student Affairs, and Accreditation
- 2020-** Member of the NKUA Center of Excellence in Basic Sciences (founding)
- 2022** Member of the NKUA School of Sciences Committee for Gender Equality in Sciences
- 2023** Member of the NKUA Research Institute 'Biotechnology, Bioeconomy, Biosustainability (Bio3)' (founding member)

## **II. Teaching**

- 1990-1999** Post-graduate Teaching Assistant in the Faculty of Biology NKUA, in the undergraduate laboratory courses for 'Genetics' (2<sup>nd</sup> year; Mendelian Genetics: *Drosophila* and maize crosses - Human Genetics - Microbial Genetics - Population Genetics) and 'Biotechnology' (4<sup>th</sup> year; Molecular Cloning)
- 2003-** **Undergraduate Courses:**
- **Faculty of Biology NKUA**
    - 'Genetics' (2004-) (3<sup>rd</sup> semester), **Course Coordinator** (2020-), **Student Laboratories Coordinator** (2008-)  
Teaches: 'DNA Recombination', 'DNA Mutagenesis & Repair', 'Gene Regulation' (35 hrs) (taught 'Multiple Allele Inheritance' 2008-2010, 'Sex Determination' 2020-2022)  
Laboratory Courses: 'Microbial Genetics (Mutagenesis in *Aspergillus* and *Escherichia* as models – Mutant isolation and study – DNA repair – Use of antibiotic resistance traits to establish gene horizontal or vertical transfer and gene induction' (3-hrs per class, 4-7 classes per week, 4 weeks)
    - 'Biotechnology' (2004-2019) (8<sup>th</sup> semester), **Student Laboratories Coordinator** (2003-2019)  
Taught: 'Molecular Plant Biotechnology' (6 hrs)  
Laboratory Course: 'Molecular Cloning I-V' (3-hrs per class, 2-3 classes per week, 4 weeks)
    - 'Advanced Genetics' (2005-) / 'Molecular Genetics' (2020-) (5<sup>th</sup>/6<sup>th</sup> semester), **Course**

**Coordinator (2016-), Student Laboratories Coordinator (2020-)**

Teaches: 'Transposable Elements', 'Horizontal transfer and recombination', 'Plasmid Biology', 'Genetic Engineering and Genomics' (28 hrs), student seminars coordinator (4 hrs), Laboratory Courses (initiated in 2021): 'Molecular Cloning and Sequencing I - V' (3-hrs per class, 2-3 classes per week, 4 weeks), 'Regulation of gene expression in prokaryotes' (3-hrs per class, 2-3 classes per week, 1 week)

- **'Introduction to Biology'** (2007-2009) (1<sup>st</sup> semester course)

Taught: 'Recombinant DNA Technology' (6 hrs)

Laboratory course: 'The nature of the Gene' (3 hrs per class, 6 classes per week)

- **Faculty of Philosophy and History of Science NKUA**

- **'General Biology'** (2014-) (3<sup>rd</sup> semester course)

Teaches: 'Recombinant DNA Technology' (3 hrs), 'The Microbial World' (3 hrs)

**Postgraduate Courses:**

- **Faculty of Biology NKUA**

- **MSc Program 'Microbial Biotechnology'**, taught: 'Bacterial cell-cell signaling' (3 hrs) (2005-2010)

- **PhD Departmental teaching course**, as above (2005-)

- **MSc Program 'Bioinformatics'**, taught: 'Principles in genomics, transcriptomics and proteomics' (4 hrs) (2010-2020)

- **Department of Nutrition & Dietetics, School of Health Sciences, Harokopion University**

- **MSc Program 'Applied Nutrition and Dietetics'**, teaches: 'Bacterial signalling aspects in food technology and health' (3 hrs) (2016, 2019)

- **Faculty of Biology NKUA and Faculty of Economics, University of Piraeus Joint Postgraduate Course**

- **MSc Program 'Bioeconomics'**, taught: 'Bacteria in Health, Food and Fuel Economy', 'Recombinant DNA Technology', 'Bacterial Platforms for Biofuels' (9 hrs) (2017-2019)

- **Faculty of Biology NKUA and Institute of Chemical Biology NHRF Joint Postgraduate Course**

- **MSc Program 'Biotechnology'**, teaches in the course **'Basic Biology Toolbox'**: 'Mutagenesis & Repair', 'Genome Editing and Recombination', 'Forward & Reverse Genetics', 'Prokaryotic Transcriptomics' (12 hrs) (2021-)

**'Microbial Biotechnology' Course Coordinator (2021-)**, teaches: 'Introduction: Microorganisms in Biotechnology and Bioeconomy', 'Microbial platforms and tools', 'Host-pathogen interactions and molecular signaling' (8 hrs) (2021-)

- **Department of Molecular Biology and Genetics, Democritus University of Thrace**

- **MSc Program 'Translational Research in Biomedicine'**, teaches: 'Introduction to Prokaryotic Genomics' (2023-) (3 hrs)

*Has authored explicit content-rich ppt presentations for all lectures offered*

**Textbook chapter writing/editorial supervision**

**Author of chapter** 'Molecular Plant Biotechnology' for the 4<sup>th</sup> year 'Biotechnology' course hand-out (content: plant genomic analysis, plant transformation methods – direct or indirect)

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(*A. tumefaciens*-mediated), transgenic plant technology, GMOs: products, distribution and current state-of-the-art, genetic marker containment, plastid transformation and the generation of transplastomic plants) (2004, 2017 revision)

**Editorial supervision/greek translation of chapter** ‘Transcriptional Regulation’ for the book ‘Concepts of Genetics’ (11<sup>th</sup> Edition), Klug et al., (Pearson/Academic Editions)

**Editorial supervision/greek translation of chapter** ‘Genomes and Genomics’ for the book ‘Introduction to Genetic Analysis’ (11<sup>th</sup> edition), Griffiths et al., (Freeman/Broken Hill)

**Editorial supervision of chapter on DNA replication** for the book ‘Genetics: Analysis of Genes and Genomes’, Hartl. D. L. (Jones & Bartlett/Broken Hill Publishers)

### **III. Supervision of BSc Dissertations**

#### ***Faculty of Biology student supervision (35)***

- G. Villias (2004-2005) ‘Replication and stability regions in plasmid pCP4.2 of the industrial *Zymomonas mobilis* strain CP4’
- E. Stavrou (2004-2006) ‘Study of quorum sensing in *Zymomonas mobilis*’
- V. Koumpena (2006-2007) ‘Transformation of *Arabidopsis thaliana* by *Agrobacterium tumefaciens* - *Escherichia coli* mixed infection’ (in collaboration with Ass. Prof. K. Haralampidis, Dept. of Botany, Faculty of Biology, NKUA)
- E. Pappa (2006-2007) ‘Construction of biotechnologically important *recA* and *radA* knock-out strains for the ethanol producing bacterium *Zymomonas mobilis* CP4’
- A. Tsoupras (2008-2009) ‘Organic analysis of *Z. mobilis* supernatants – detection of signaling or toxicity-related compounds’ (in collaboration with Prof. C. Demopoulos, Dept. of Biochemistry, Faculty of Chemistry, NKUA)
- A. Damoulaki (2008-2009) ‘Genetic and physiological studies of pheromone production in *Zymomonas mobilis*’
- G. Savvakis (2008-2009) ‘Study of genes involved in homologous recombination in *Zymomonas mobilis*’
- N. Pantelaiou (2008-2010) ‘Construction of species-specific vectors for *Zymomonas mobilis* that express cellulose-degrading enzymes’ (in collaboration with Prof. A. Typas, Dept. of genetics & Biotechnology, Faculty of Biology, NKUA)
- A. Andrea (2010-2011) ‘Genetic and physiological study of the *Zymomonas mobilis* antagonism against other bacteria’
- E. Davidova (2011-2013) ‘Study of transformation in an ethanologenic bacterium’
- C. Skrekas (2012-2013) ‘Cloning and study of the LexA repressor from the ethanol-producing bacterium *Zymomonas mobilis*’
- N. Taliouras (2012-2013) ‘Study of plasmids of different *Zymomonas mobilis* strains via bioinformatic and molecular approaches’
- A. Zafeiri (2012-2013) ‘Genetic evolution of bacterial strains that exhibit complex phenotypes applying methods of biological chemistry’ (primary supervisor Dr G. Skrettas, National Hellenic Research Foundation, Athens)
- E. Derveni (2013-2014) ‘Cell-cell signaling dependent gene induction in proteobacteria’
- M. Papaggeli (2013-2014) ‘Development of mutagenesis tools in the ethanol-producing *Zymomonas mobilis*’
- P. Poulis (2014-2015) ‘Transcriptional regulation of SOS genes in *Z. mobilis*’
- K. Siaka (2014-2015) ‘Study of the antagonism of *Z. mobilis* against  $\alpha$ - and  $\gamma$ -proteobacteria’
- M. Roussou (2015-2016) ‘Metabolic enhancement in the ethanol-producing *Zymomonas mobilis*’ (in collaboration with Prof. M. A. Typas)
- J. Charamis (2015-2017) ‘Study of cloning and expression vectors suitable for  $\alpha$ -proteobacteria’
- C. Karydi (2016-2017) ‘Study of conjugative properties in *Zymomonas mobilis* NCIMB 11163’
- G. Niotis (2016-2017) ‘Study of replication inhibitors in *Flaviviridae* viruses and characterization of their activity via mutant isolation’ (primary supervisor Dr N. Vasilaki, Laboratory of Molecular

Virology, Pasteur Institute Athens

- M. Bousali (2016-2018) ‘Genetic modification of *Pleurotus ostreatus* with peroxidase genes aiming to increased ligninocellulolytic activity’ (in collaboration with Prof. M. A. Typas)
- D. Panagiotopoulou (2017-2018) ‘Quorum-sensing dependent circuits for gene expression’
- C. Caracostas (2017-2019) ‘Study of plant- or fungal-originating replication inhibitors in viruses of the *Flaviviridae* and characterization of their genetic basis in both the viral and host cell system’ (primary supervisor Dr N. Vasilaki, Laboratory of Molecular Virology, Pasteur Institute Athens)
- A. Bandounas (2017-2019) ‘Construction of overexpressing vectors for *Zymomonas mobilis*’
- K. Papaioanou (2018-2019) ‘Genomic engineering strategies for *Zymomonas mobilis* Z6’
- A. Litos (2019-2020) ‘ Study of toxin-antitoxin genes in an ethanol-producing bacterium’
- D. Moschopoulou (2020-2021) ‘Study of the powerful *Ppdc* promoter in *Zymomonas mobilis*’
- M. Vlachonicolou (2020-2021) ‘Engineering C5 source assimilation in an ethanol producer’
- S. Menelaou (2020-2021) ‘Characterization of conjugation and mobilization genes in *Zymomonas mobilis*’
- P. Gerantonis (2020-2022) ‘Curation of annotated genes for *Zymomonas mobilis* plasmids’
- F. Kefalas (2021-2022) ‘Mutagenesis and the isolation of ethanol overproducers in *Zymomonas mobilis*’
- D. Kalyvas (2022-2023) ‘Metabolic engineering in central pathways of *Zymomonas mobilis*’
- E. Apostolou (2022-2023) ‘Site specific recombination and genomic recombineering’
- P. Ktenas (2022-2023) ‘Genomic tagging by homologous recombination’

#### ***EU Erasmus Placement student supervision (3)***

- M. Vryonidou (2014-2015) ‘Transcriptional profiling in biofilms of common food pathogens’ (University of Surrey, UK)
- V. Pes (2017) ‘Metabolic broadening of a bioethanol producing organism’ (University of Sassari, Italy)
- C. Laforge (2020) ‘Isolation of ethanol overproducers via high-throughput analyses’ (University of Angeres, France)

#### ***Non-Erasmus EU BSc Thesis supervision, Blended Degree NKUA – University of Maastricht (1)***

- J. Bruck (2024) ‘Creating optimal C5/C6 assimilating *Zymomonas mobilis* strains’ (Maastricht University, Netherlands)

#### ***Coordination of undergraduate student placements in external institutions (3)***

- V. Diakogiannaki (2012) ‘Study of esterase enzyme reactions in the alga *Nannochloropsis*’ School of Chemical Engineering, Department of Synthesis and Development of Industrial Processes, NTUA (primary supervisor, Prof. F. Kolisis)
- E. Bouris (2016) ‘Study of genes decomposing L-(-) azetidine-2-carboxylic acid in the fungus *Aspegillus nidulans*’ NCSR ‘Democritos’ (primary supervisor, Dr. V. Sophianopoulou)
- D. Panagiotopoulou (2016) ‘Interactions between lactobacilli and intestinal epithelial cells’, Department of Nutrition and Dietetics, Harokopion University of Athens (primary supervisor, Prof. A. Kyriakou)

#### **IV. Supervision of MSc Theses - Primary supervisor (10)**

- M. Peternelji (2008-2009; recipient of the Greek Ministry of Education scholarship to conduct research in Greece), MSc Thesis in ‘Biotechnology’, University of Ljubljana, Slovenia, topic ‘Methods for *Arabidopsis thaliana* transformation using *Escherichia coli* as transgene donor’ (examined at the Biotechnological Faculty, University of Ljubljana, Ljubljana)
- A. Damoulaki (2010-2011), MSc Thesis in terms of the MSc course ‘Applications of Biology in the Biomedical Sciences’, co-administered by the Faculties of Biology and Medicine, NKUA, topic ‘Study of biofilm formation in a fermenting bacterium’
- G. Savvakis (2010-2011), MSc Thesis in terms of the MSc course ‘Bioinformatics’, Faculty of Biology, NKUA, topic ‘Study of DNA repair in the ethanol producing *Zymomonas mobilis*’
- A. Desiniotis (2012-2013), MSc Thesis in terms of the MSc course ‘Bioinformatics’, Faculty of

Biology, NKUA, topic 'Bioinformatic study of the genome sequence of the ethanol-producing bacterial strain *Zymomonas mobilis* ATCC 29191'

- V. Tampakopoulou (2013-2015), MSc Thesis in terms of the MSc course 'Bioinformatics', Faculty of Biology, NKUA, topic 'Bioinformatic search for genes implicated in cell-cell signaling networks in genome sequences of the biotechnological bacterium *Zymomonas mobilis*'
- P. Savranakis (2022-2023) MSc Thesis in terms of the MSc course 'Biotechnology', Faculty of Biology NKUA – Institute of Chemical Biology NHRF, topic 'Metabolic broadening of a platform organism for lignocellulosic decomposition'
- G. Zochios (2023-) (MSc as above), topic: 'Physiological and molecular studies of cellulose synthesizing bacteria'
- P. Gerantonis (2023-) (MSc as above), topic: 'Molecular tools for gene overexpression in an ethanologenic organism'
- M. Papameletiou (2023-) (MSc as above), topic: 'Plasmid curing via gene disruption or incompatibility'
- V. Kourkouva (2023-) (MSc as above), topic: 'Microbiome analysis and the recognition of probiotic strains of interest' (in collaboration with Prof. A. Kyriakou, Harokopeion University)

#### **V. External examiner in MSc Theses (3)**

- D. Kapasa (2009), MSc Thesis in terms of the MSc course 'Microbial Biotechnology', Faculty of Biology, NKUA, topic 'Study of protein interaction networks instigated by gene-fusions in selected microorganisms' (primary supervisor Dr. S. Kossida, BRFAA, Athens)
- M. Dertilis (2016), MSc Thesis in terms of the MSc course 'Bioinformatics', Faculty of Biology, NKUA, topic 'Bioinformatic analysis of mitochondrial genomes with special emphasis on the genetic elements that mediate in organization and transcription of the mtDNA of Pezizomycotina' (primary supervisor Assist. Prof. V. Kouvelis, Faculty of Biology NKUA)
- E. Pavlou (2023) MSc Thesis in terms of the MSc course 'Biotechnology', Faculty of Biology, NKUA/Institute of Chemical Biology NHRF, topic 'Study of genetic polymorphism and development of diagnostic techniques for biotechnologically important fungi' (primary supervisor Assist. Prof. V. Kouvelis, Faculty of Biology NKUA)

#### **VI. Supervision of PhD Theses – Primary supervisor (3)**

- G. Savvakis (2012-2018) 'Study of the SOS response in the ethanologenic bacterium *Zymomonas mobilis*', Faculty of Biology, NKUA
- S. Fragolaki (2014-2019) 'Evaluation of novel inhibitors of the hepatitis C virus as therapeutic biomarkers' (principal investigator Dr. N. Vasilaki, Hellenic Pasteur Institute, Athens)
- E. Herrera (2023- ) ' Study of cell density dependent cell-cell communication in the bioethanol producing *Zymomonas mobilis*', Faculty of Biology, NKUA

#### **VII. Supervision of PhD Theses – Counseling Committee & Examiner (5)**

- I. Papaioannou (2009-2014) 'Study of heterokaryosis in the plant-pathogen *Verticillium dahliae*', Faculty of Biology, NKUA (primary supervisor Prof. M. A. Typas)
- I. Loizou-Kotta (2009-2013) 'Molecular mechanisms controlling expression and function of the Hepatitis C virus polyprotein aminoterminal domain', Pasteur Institute, Athens (primary supervisor Dr. P. Mavromara)
- A. Athanasopoulos (2010-2015) 'Study of the genetic and biological role of isosomal proteins in the fungus *A. nidulans*', NCSR 'Democritos' (primary supervisor Dr. V. Sophianopoulou)
- M. Kalntremtziou (2016-2022) 'Metagenomic analysis of ligninocellulolytic organisms from selected soil samples: recognition and use of enzymes and bioactive molecules of importance', Faculty of Biology, NKUA (primary supervisor Prof. M. A. Typas)
- S. Varassas (2017-2023) 'Study of replication and recombination genes in mitochondria of *Metarhizium anisopliae* and *Beauveria bassiana*' (primary supervisor Assist. Prof. V. N. Kouvelis)

#### **VIII. External Examiner in PhD Theses (11)**

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- M. Kalamvoki (2005) ‘Study of the biological function of non-structural protein NS5A of the Hepatitis C virus’, Pasteur Institute, Athens (primary supervisor: Dr. P. Mavromara)
- D. Ghikas (2007) ‘Study of mitochondrial genomes of entomopathogenic fungi’, Faculty of Biology, NKUA (primary supervisor Prof. M. A. Typas)
- M. Billini (2008) ‘Study of Na<sup>+</sup>/H<sup>+</sup> antiporters in the cyanobacterium *Synechococcus* sp. 7942’, NCSR ‘Demokritos’, Athens (primary supervisor Dr. V. Sophianopoulou)
- A. Roumelioti (2009) ‘Genes coding for intracellular traffic and membrane localization of cationic amino acid transporters’, NCSR ‘Demokritos’, Athens (primary supervisor Dr. V. Sophianopoulou, NCSR ‘Democritos’)
- V. Kosti (2013) ‘Genetic, molecular, biochemical and biophysical studies of structure-function relations of transmembrane purine transporters’, Faculty of Biology, NKUA (primary supervisor Assoc. Prof. G. Diallinas)
- N. Arvanitis (2013) ‘Study of native plasmids of the ethanol-producing bacterium *Zymomonas mobilis*’, Faculty of Chemistry, University of Ioannina, Ioannina (primary supervisor: Prof. C. Drainas)
- A. Kirtzalidou (2014) ‘Study of probiotic properties of the human enteric microflora’, Harokopeion University, Athens (primary supervisor Assist. Prof. A. Kyriakou)
- M. F. Adegboye (2015) ‘Phylogenetic Screening for Possible Novel Antibiotic Producing Actinomycetes from Ngaka Modiri Molema District in North West Province’, Faculty of Agriculture, Science and Technology, North-West University, South Africa (primary supervisor Prof. B. B. Olubukola)
- A. Galanopoulou (2018) ‘Bacterial hydroalyses of thermophilic origin and their application in plant biomass valorization’ (primary supervisor Assoc. Prof. D. Hatzinikolaou)
- V. Vaggalis (2022) ‘Heterokaryosis in *Verticillium* as a genetic and cytological model’ (primary supervisor Prof. M. A. Typas)
- V. Frysouli (2024) ‘Biodiversity of saproxylic fungi in natural and artificial habitats: Taxonomic and phylogenetic analysis’ (primary supervisor Prof. G. Zervakis)

#### **IX. Research Program Employee Supervisor (14)**

- E. Stavrou (EU/GSRT Greece-USA Bilateral Program 05-NONEU-273, 2007), topic: ‘Study of AHL-dependent cell-cell communication in the ethanologenic bacterium *Zymomonas mobilis*’, post-graduate collaborator (3-month stipend, 1-month stay in the US)
- Dr. A. Desioniotis (EU/GSRT Program ‘Cooperation’ SIMPLE/11SYN-7-1579, 2014), topic: ‘Bioinformatic study of wild-type and mutant *Z. mobilis* strains for optimized fermentation capabilities’, post-doctoral researcher (7 months)
- Dr. N. Arvanitis (EU/GSRT Program ‘Cooperation’ SIMPLE/11SYN-7-1579, 2015), topic: ‘Study of gene transfer vehicles with the ability of autonomous expression or integration to the chromosome for *Z. mobilis*’ post-doctoral researcher (7 months)
- E. Emmanouilidou (EU/GSRT Program ‘Cooperation’ SIMPLE/11SYN-7-1579, 2014-2015), topic: ‘Genomic analysis in *Z. mobilis* towards metabolic broadening’, post-graduate collaborator (12 months)
- V. Tampakopoulou (EU/GSRT Program ‘Cooperation’ SIMPLE/11SYN-7-1579, 2014-2015), topic: ‘Study of mutagenesis and adaptive evolution in *Zymomonas mobilis* for strain optimization in lignocellulosic hydrolysates’, MSc collaborator (12 months)
- G. Savvakis (EU/GSRT Program ‘Cooperation’ SIMPLE/11SYN-7-1579, 2015), topic: ‘Sequencing *Z. mobilis* strains and study of stress’, MSc collaborator (7 months)
- I. Zinonos (EU/GSRT Program ‘Cooperation’ SIMPLE/11SYN-7-1579, 2015), topic: ‘Isolation and cloning of fungal cellulase and ligninase genes and heterologous expression in bacteria’, MSc collaborator (7 months)
- E. Pappa (EU/GSRT Program ‘Cooperation’ SIMPLE/11SYN-7-1579, 2015), topic: ‘Cloning of lignocellulosic genes in *Zymomonas mobilis*’, technician and post-graduate researcher (12 months)
- Dr. G. Efthimiou (EU/GSRT Program THALIS ‘Biofilms’, 2013-2015), topic: ‘Transcriptomic analysis of biofilm formation genes in food pathogens’, post-doctoral researcher (24 months)

- Dr. A. Athanasiou (EU/FP7 Program ERANET-IB ‘Z-Fuels’/ERA-IB-15-109, 2016-2017), topic: ‘Genetic improvement of *Z. mobilis* strains for the production of acetaldehyde’, post-doctoral researcher (12 months)
- D. Athanasiou (Collaboration with the Hellenic Cement Industry ‘TITAN’, 2016-2017), topic: ‘Study of bacilli sporulation for the purposes of cement healing’, MSc collaborator (6 months)
- G. Savvakis (Program of Excellence ‘IKY/Siemens’, 2016-2017), topic: ‘Biotechnological and genomic study of a homologous recombination deficient mutant strain of the ethanologenic bacterium *Zymomonas mobilis*, aiming to optimize bioethanol production’, MSc collaborator (24 months)
- D. Panagiotopoulou (EU/FP7 Program ERANET-IB ‘Z-Fuels’/ERA-IB-15-109, 2018-2019), topic: ‘Construction of high-expressing foreign gene vectors for *Z. mobilis*’ (3 months)
- A. Bantounas, as above

## **Publications**

### **I. Dissertations**

**Pappas K. M.** (1990) ‘Genetic and microscopic study of exopolysaccharide secretion for the obligate methylotrophic bacterium *Methylomonas methylavora*’, BSc Dissertation, Department of Genetics and Biotechnology and Department of Botany, Faculty of Biology, NKUA

**Pappas K. M.** (1997) ‘Study of conjugative gene transfer in the ethanol-producing bacterium *Zymomonas mobilis*’, PhD Thesis, Department of Genetics and Biotechnology, Faculty of Biology, NKUA

### **II. Book Chapter Author**

1. **Pappas K. M.** and Cevallos, M. A. (2011) ‘Plasmids of the *Rhizobiaceae* and their role in interbacterial and transkingdom interactions’. In ‘Biocommunication in Soil Microorganisms’ (ed. Günther Witzany), series ‘Soil Biology’ (vol. 23; Series ed. A. Varma), Springer, pp 295-338

2. **Pappas K. M.** (2011) ‘Mini-Mu transposon mutagenesis of ethanologenic *Zymomonas mobilis*’. In ‘Strain Engineering: Methods and Protocols’ (ed. J. Williams), series ‘Methods in Molecular Biology’ (vol. 765; series ed. J. Walker), Humana Press, pp. 415-434

3. Kalnenieks, U., **Pappas, K. M.**, and Bettenbrock, K. (2020) ‘*Zymomonas mobilis* metabolism: novel tools and targets for its rational engineering’ In ‘Advances in Microbial Physiology’ (ed. Robert Poole), vol. 77, Academic Press/Elsevier pp 37-88

### **III. Book Editor**

**Pappas K. M.** (Editor-in-chief), Yang, S., Minton, N., Lewis, E., and Mukhopadhyay, B. (invited co-editors) (2017) ‘Genetic and genome-wide insights into microbes studied for Bioenergy’. Frontiers Publishing Group, Frontiers Media SA ([provided book cover image](#))

### **IV. Peer-Reviewed Original Research Articles & Reviews**

1. **Pappas, K. M.**, Galani, I., and Typas, M. A. (1997) Transposon mutagenesis and strain construction in *Zymomonas mobilis*. *Journal of Applied Microbiology* **82**: 379-388
2. Arvanitis, N., **Pappas, K. M.**, Kolios, G., Afendra, A., Typas, M. A., and Drinas, C. (2000) Characterization and replication properties of the *Zymomonas mobilis* ATCC10988 plasmids pZMO1 and pZMO2. *Plasmid* **44**: 127-137
3. Galeros, M.\*, **Pappas, K. M.\***, Beletsiotis, V., and Typas, M. A. (2001) IS1068, an IS5-like insertion element from *Zymomonas mobilis*. *Archives of Microbiology* **175**: 323-333 \*: co-contributors
4. Zhang, R.-g., **Pappas, T.**, Brace, J. L., Miller, P. C., Oulmassov, T., Molyneaux, J. M., Anderson, J. C., Bashkin, J. K., Winans, S. C., and Joachimiak, A. (2002) Structure of a bacterial quorum-sensing transcription factor complexed with pheromone and DNA. *Nature* **417**: 971-974



5. Pappas, K. M., and Winans, S. C. (2003) A LuxR-type regulator from *Agrobacterium tumefaciens* elevates Ti plasmid copy number by activating transcription of plasmid replication genes. *Molecular Microbiology* **48**: 1059-1073
6. Pappas, K. M., and Winans, S. C. (2003) The RepA, RepB autorepressors and TraR play opposing roles in the regulation of a Ti plasmid *repABC* operon. *Molecular Microbiology* **49**: 441-455
7. Pappas, K. M., and Winans, S. C. (2003) Plant transformation by coinoculation with a disarmed *Agrobacterium tumefaciens* strain and an *Escherichia coli* strain carrying mobilizable transgenes. *Applied and Environmental Microbiology* **69**: 6731-6739
8. Pappas, K. M., Winegart C. L., and Winans, S. C. (2004) Chemical communication in proteobacteria: biochemical and structural studies of signal synthases and receptors required for intercellular signaling. *Molecular Microbiology* **53**: 755-769 (review)
9. Pappas, K. M. (2008) Cell-cell signaling and the *Agrobacterium tumefaciens* Ti plasmid copy number fluctuations. *Plasmid* **60**: 89-107 (review) **corresponding**
10. Yang, S., Pappas, K. M.\*, Hauser, L. J., Land, M. L., Chen, G.-L., Hurst, G. B., Pan, C., Kouvelis, V. N., Typas, M. A., Pelletier, D. A., Klingeman, D. L., Chang, Y.-J., Samatova, N. F., and Brown, S. D.\* (2009) Improved genome annotation for *Zymomonas mobilis*. *Nature Biotechnology* **27**: 893-894 (\*co-corresponding)
11. Kouvelis, V. N., Saunders, E., Brettin, T. S., Bruce, D., Detter, C., Han, C., Typas, M. A., and Pappas, K. M. (2009) Complete genome sequence of the ethanol producer *Zymomonas mobilis* NCIMB 11163. *Journal of Bacteriology* **191**: 7140-7141 **corresponding**
12. Kouvelis, V. N., Wang, C., Skrobek, A., Pappas, K. M., Typas, M. A., and Butt, T. M. (2011) Assessing the toxigenicity and mutagenicity effects of secondary metabolites produced by fungal Biological Control Agents employing the Ames assay and the Vitotox® test. *Mutation Research* **722**: 1-6
13. Kouvelis, V. N., Davenport, K., Brettin, T., Bruce, D., Detter, C., Tapia, R., Han, C., Damoulaki, A., Kyrpides, N. C., Typas, M. A., and Pappas, K. M. (2011) Genome sequence of the ethanol-producing *Zymomonas mobilis* subsp. *pomaceae* lectotype ATCC 29192. *Journal of Bacteriology* **193**: 5049-5050 **corresponding**
14. Pappas, K. M., Kouvelis, V. N., Saunders, E., Brettin, T. S., Bruce, D., Detter, C., Balakireva, M., Han, C., Savvakis, G., Kyrpides, N.C., and Typas, M.A. (2011) Genome sequence of the ethanol-producing *Zymomonas mobilis* subsp. *mobilis* lectotype ATCC 10988. *Journal of Bacteriology* **193**: 5051-5052 **corresponding**
15. Pappas K. M. and Cevallos, M. A. (2011) 'Plasmids of the Rhizobiaceae and their role in interbacterial and transkingdom interactions'. In 'Biocommunication in Soil Microorganisms' (ed. Günther Witzany), series 'Soil Biology' (vol. 23; Series ed. A. Varma), Springer, pp 295-338 **corresponding**
16. Pappas K. M. (2011) 'Mini-Mu transposon mutagenesis of ethanologenic *Zymomonas mobilis*'. In 'Strain Engineering: Methods and Protocols' (ed. J. Williams), series 'Methods in Molecular Biology' (vol. 765; series ed. J. Walker), Humana Press, pp. 415-434 **corresponding**
17. Tsoupras, A. B., Demopoulos, C. A., and Pappas, K. M. (2012) Platelet-activating factor (PAF) detection, metabolism and inhibitors, in the ethanologenic bacterium *Zymomonas mobilis*. *European Journal of Lipid Science and Technology* **114**: 123-133 **corresponding**
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19. Pinto, U., Pappas, K. M., and Winans, S. C. (2012) The ABCs of plasmid replication and segregation, *Nature Reviews Microbiology* **10**: 755-765
20. Kouvelis, V. N., Teshima, H., Bruce, D., Detter, C., Tapia, R., Han, C., Tampakopoulou, V. – O., Goodwin, L., Woyke, T., Kyrpides, N. C., Typas, M. A., and Pappas, K. M. (2014) Finished genome of *Zymomonas mobilis* subsp. *mobilis* strain CP4, an applied ethanol-producer. *Genome Announcements* **2**: e00845-13 **corresponding**

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22. Yang, S.\*, Vera, J. M., Grass, J., Savvakis, G., Moskvina, O. V., Yang, Y., McIlwain, S. J., Lyu, Y., Zinonos, I., Emmanouilidou, E., Hebert, A. S., Coon, J. J., Bates, D. M., Sato, T. K., Brown, S. D., Himmel, M. E., Zhang, M., Landick, R., **Pappas, K. M.\***, and Zhang, Y.\* (2018) The complete genome of the model ethanologen *Zymomonas mobilis* ZM4 and xylose-utilizing derivatives, and transcriptomic analysis of strain plasmids. *Biotechnology for Biofuels* **11**: 125 (doi: 10.1186/s13068-018-1116-x) **\*co-corresponding**
23. Efthimiou G.\*, Tsiamis, G., Typas, M. A., and **Pappas, K. M.\*** (2019) Transcriptomic adjustments of *Staphylococcus aureus* COL (MRSA) forming biofilms under acidic and alkaline conditions. *Frontiers in Microbiology* **10**, 2393 **\*co-corresponding**
24. Kalnenieks, U., Balodite, E., Strähler, S., Strazdina, I., Rex, J., Pentjuss, A., Fuchino, K., Bruheim, P., Rutkis, R., **Pappas, K. M.**, Poole, R. K., Sawodny, O., & Bettenbrock, K. (2019) Improvement of Acetaldehyde Production in *Zymomonas mobilis* by Engineering of Its Aerobic Metabolism. *Frontiers in Microbiology* **14**:2533.
25. Kalnenieks, U., **Pappas, K. M.**, and Bettenbrock, K. (2020) ‘*Zymomonas mobilis* metabolism: novel tools and targets for its rational engineering’. In ‘**Advances in Microbial Physiology**’ (ed. Robert K. Poole), vol. 77, Academic Press/Elsevier pp 37-88.
26. Tsoupras, A., **Pappas, K. M.**, Sotiroudis, T., and Demopoulos, C. (2021) ‘One-step separation system of bio-functional lipid compounds from natural sources’ *MethodsX* **8**: 101380 (doi: 10.1016/j.mex.2021.101380).
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29. Varassas, S., Amillis, S. Velentzas, A., **Pappas, K. M.**, and Kouvelis, V. (2024) The identification of the mitochondrial DNA polymerase  $\gamma$  (Mip1) of the entomopathogenic fungus *Metarhizium brunneum*, *Microorganisms* **12**: 1052.
30. Hug, L.A., Hatzenpichler, R., Moraru, C., Soares, A., Heyder, A., Meyer, F., **The Data Reuse Consortium\***, Probst, A.J. (2024) A road map for fair reuse of public microbiome data. *Nature Microbiology* (\*consortium co-author) **in press**
31. Herrera, E., and **Pappas, K. M.** (2024) Quorum sensing in industrial bacteria. *Microorganisms, in submission* (review) **corresponding**
32. Gerantonis, P., Panagiotopoulou, D., Charamis, J., Bantounas A., Vlachonicolou, M. and **Pappas, K. M.** (2024) Construction of shuttle vectors utilizing an endogenous *Zymomonas mobilis* cryptic plasmid. *Microorganisms, in submission* **corresponding**
33. Savvakis, G., Poulis, P., Beletsiotis, E., and **Pappas, K. M.** (2024) Construction and characterization of a *recA* strain and preliminary evidence for the SOS response in *Zymomonas mobilis*. *Biotechnology for Biofuels, in submission* **corresponding**
34. Savvakis, G., Poulis, P., Moskvina, O., Zhang, Y., and **Pappas, K. M.** (2024) Transcriptomic analysis of *Zymomonas mobilis* under SOS induction. *Journal of Bacteriology in submission* **corresponding**

#### ***In preparation:***

35. Peternelji, M., Koumpena, V., Haralampidis, K. and **Pappas, K. M.** (2024) *Arabidopsis thaliana* transformation with the use of *E. coli* as transgene donor. *BMC Biotechnology* **corresponding**
36. Moysi, K., Savvakis, G., Roussou, M., Zhang, M., Typas, M. A., Hatzinikolaou, D. G., and **Pappas, K. M.** (2024) Performance of *Zymomonas mobilis* C5/C6-sugar assimilating strains in ethanol production from Greek lignocellulosic biomass. *Biomass & Bioenergy* **corresponding**

**V. Peer-Reviewed Conference Presentations and Abstracts**

**Abstracts no. 25, 26, 34, 43, 45, 46, 53, 54, 56, 57, 63, 67, 73 are published in indexed conference abstract journals. HSCBB abstracts 34, 43, 46, 56, 57 are multi-page submissions.**

1. **Pappas, K. M.** and Typas, M. A. (1992) 'A comparative study of exopolysaccharide secretion between wild-type and mutants of the obligate methylotroph *Methylomonas methylovora*', National Conference of the Hellenic Society for Biological Sciences and the Biological Sciences Foundation of Cyprus, Nicosia, Cyprus (April 28- May 3), pp. 113
2. **Pappas, K. M.** and Typas M. A. (1995) 'Detection of the conjugal transfer properties of a 32 Kb *Zymomonas mobilis* plasmid', European Science Foundation (ESF) Network Workshop on Molecular Biology and Ecology of Plasmid - Mediated Gene Transfer, Birmingham, UK (May 12-15), attached abstract
3. **Pappas, K. M.**, Galani, I. and Typas, M. A. (1996) 'Transposon mutagenesis in *Zymomonas mobilis*', 5th International Symposium on Bacterial Genetics and Ecology (BAGECO 5), Nauplion, Greece (May 25-29), pp.186
4. Galeros, M., **Pappas, K. M.** and Typas, M. A. (1996) 'The detection of mobile elements on the 32.0-Kb conjugative plasmid of *Zymomonas mobilis*', 5th International Symposium on Bacterial Genetics and Ecology (BAGECO 5), Nauplion, Greece (May 25-29), pp. 32 – **oral presentation awarded**
5. **Pappas, K. M.** and Typas, M. A. (1996) 'Restriction and functional analysis of pZMO6, *Zymomonas mobilis* 32 Kb plasmid species', 'Plasmid Biology 1996' - International Symposium on Plasmid Molecular Biology, Graz, Austria (September 1-5), pp. 109-110
6. **Pappas, K. M.**, and Typas, M. A. (1999) 'The 32-Kb plasmid system of *Zymomonas mobilis*', First Symposium of the EU-concerted action 'Mobile elements' contribution to bacterial adaptability (MECBAD)', Strasbourg, France (April 23-27), pp. 119-120
7. Arvanitis, N., **Pappas, K. M.**, Kolios, G., Afendra, A., Typas, M. A. and Drainas, C. (1999) 'Nucleotide sequence analysis the *Zymomonas mobilis* ATCC 10988 plasmids pZMO1 and pZMO2', 48<sup>th</sup> Annual Conference of the Hellenic Society of Biochemistry and Molecular Biology (HSBMB), Athens, Greece (January 15-17), pp. 64-65
8. as in (7), 6<sup>th</sup> International Symposium on 'Bacterial Genetics and Ecology' (BAGECO 6), Florence, Italy (June 20-24), pp. 130
9. **Pappas, K. M.**, and Typas, M. A. (1999) 'The 32-kb plasmid family of *Zymomonas mobilis* strain CP4: study of plasmid pZMO6 as a representative', 6<sup>th</sup> International Symposium on Bacterial Genetics and Ecology (BAGECO 6), Florence, Italy (June 20-24), pp. 22-23
10. Beletsiotis, E. A., **Pappas, K. M.**, and Typas, M. A. (2000) 'Isolation and characterization of the *recA* gene of the ethanol producing bacterium *Zymomonas mobilis*', 22<sup>nd</sup> Annual Meeting of the Hellenic Society for Biological Sciences (EEBE), Skiathos, Greece, pp. 170
11. Zhu, J., **Pappas, T.**, Chai, Y and Winans, S. C. (1999) 'The *A. tumefaciens* TraR regulator requires its autoinducing ligand for protein folding, protease resistance and dimerization', Gordon Research Conferences (Transcription Factors), Salve Regina University, Newport RI (July 14-19)
12. **Pappas, T.**, and Winans, S. C. (2001) 'Structure and functions of TraR, the *Agrobacterium tumefaciens* quorum-sensing dependent transcriptional regulator', Infection and Pathobiology Forum (Cornell University), Auburn NY (April 23-27)
13. **Pappas, T.\***, and Winans, S. C. (2001) 'Biochemical and Structural Analysis of a TraR-Pheromone-DNA Ternary Complex', ASM Conference on Cell-Cell Communication in Bacteria, Snowbird, Utah (July 6-9), pp. 15
14. **Pappas, T.**, and Winans, S. C. (2001) 'Quorum-Dependent Transcriptional Regulator TraR Structure and Role in the Octopine-Type Ti Plasmid Replication', 22nd Crown Gall Conference, Atlanta, GA (November 16-18), pp. 9
15. **Pappas, K. M.\***, and Winans, S. C. (2002) 'Cell-cell communication in bacteria: Structure and function of a quorum sensing-dependent transcriptional regulator, 24<sup>th</sup> Symposium of the Hellenic Society for Biological Sciences (EEBE), Eretria, Euvoia (May 23-26), pp. 226

16. Cho, H., **Pappas K. M.**, and Winans S. C. (2004) 'Copy number control of Ti plasmid by intercellular signalling', ASM Conference on Cell-Cell Communication in Bacteria, Banff, Alberta, Canada (July 23-27), pp. 74
17. **Pappas T.**, and Winans S. C. (2004) 'Plant transformation by *Escherichia coli* – *Agrobacterium tumefaciens* co-infection', *Plasmid Biology 2004*, International Symposium on Plasmid Molecular Biology, Corfu, Greece (September 15-21), pp. 34 – **poster awarded**
18. **Pappas K. M.\*** (2006) 'Copy number control of the oncogenic Ti plasmid of *Agrobacterium tumefaciens* by plasmid repressors and extracellular signals', 28<sup>th</sup> Symposium of the Hellenic Society for Biological Sciences (EEBE), Ioannina, Greece (May 18-20), pp. 327-328
19. Villias G., and **Pappas K. M.** (2006) 'Identification of replication and partitioning regions on the 32-kb plasmid pCP42 of the industrial ethanol producer *Zymomonas mobilis* strain CP4', 28<sup>th</sup> Symposium of the Hellenic Society for Biological Sciences (EEBE), Ioannina, Greece (May 18-20), pp. 33-34
20. Stavrou, E. E., and **Pappas K. M.** (2006) 'Study of quorum sensing properties of the ethanol producing bacterium *Zymomonas mobilis*', 28<sup>th</sup> Symposium of the Hellenic Society for Biological Sciences (EEBE), Ioannina, Greece (May 18-20), pp. 385-386
21. **Pappas, K. M.**, Cho, H., and Winans, S. C. (2006) 'Plant-released and interbacterial signals co-regulate Ti plasmid copy number and *Agrobacterium*-mediated tumorigenesis of plants', ESF-EMBO International Symposium on 'Bacterial Networks: Joining the Strengths of Structure- and Systems Biology to Reach Synthetic Biology', St Feliu de Guixols, Costa Brava, Spain (October 14-19), pp. 17
22. same as above, (2007) 9<sup>th</sup> International Symposium on Bacterial Genetics and Ecology (*BAGECO 9*), Microbial Community Networks, Wernigerode, Germany (June 23-27), pp. 84
23. Stavrou E.E., and **Pappas K. M.** (2007) 'Investigating quorum sensing in the ethanol producing bacterium *Zymomonas mobilis*' ASM Conference on Cell-cell Communication in Bacteria, Austin TX (October 7-10), pp. 72
24. **Pappas K. M.** (2008) '*Zymomonas mobilis* – a model organism for bioethanol production', JGI-DOE Microbial Genomics and Metagenomics Workshop, Walnut Creek, CA (January 7-11)
25. Koumpena, V., Haralampidis, K., and **Pappas, K. M.** (2008) '*Arabidopsis thaliana* transformation using *Escherichia coli* transgene donors and *Agrobacterium tumefaciens* intermediates', 33<sup>d</sup> International FEBS Congress (11<sup>th</sup> IUBMB), Athens, Greece (June 28-July 3), pp. 364
26. Stavrou, E.E., and **Pappas, K. M.** (2008) 'Quorum sensing in *Zymomonas mobilis*', 33<sup>d</sup> International FEBS Congress (11<sup>th</sup> IUBMB), Athens, Greece (June 28-July 3), pp. 261
27. **Pappas, K. M.\*** (2008) 'Genomic analysis for the ethanol producer *Zymomonas mobilis*', 1<sup>st</sup> National Conference of the Hellenic Society for Microbiology 'Mikrobiokosmos': 'Our unexplored microbial environment', Nuclear Research Centre 'Demokritos', Athens (December 12-14), pp. 28-29
28. Tsoupras, A., Damoulaki, A., Stavrou, E., and **Pappas, K. M.** (2008) 'Cell-cell signaling in *Zymomonas mobilis*', 1<sup>st</sup> National Conference of the Hellenic Society for Microbiology 'Mikrobiokosmos: Our unexplored national microbial environment', Nuclear Research Centre 'Demokritos', Athens (December 12-14), pp.45-26.
29. Tsoupras, A., Demopoulos C. and **Pappas, K. M.** (2009) 'Detection of PAF and PAF-basic metabolic enzymes in the bacterium *Zymomonas mobilis*', 60<sup>th</sup> Conference of the Hellenic Society of Biochemistry and Molecular Biology (HSBMB), Zappeio Megaron, Athens (November 20-22), pp. 268
30. Savvakis, G., Beletsiotis, E., Typas, M. A., and **Pappas, K. M.** (2009) 'Construction of a *recA*<sup>-</sup> knock-out strain for the ethanol producer *Zymomonas mobilis* CP4', 2<sup>nd</sup> National Conference of the Hellenic Society for Microbiology 'Mikrobiokosmos' (MBK2), Caravel, Athens (December 4-6), pp. 112-113
31. **Pappas, K. M.** (2010) 'Genomics of the ethanol-producing *Zymomonas mobilis*', 5<sup>th</sup> Annual Joint Genome Institute User Meeting, Walnut Creek, CA (March 24-26), pp. 47
32. Savvakis, G., Beletsiotis, E., Typas, M. A., and **Pappas, K. M.** (2010) 'Construction of a *recA*<sup>-</sup> knock-out strain of the ethanol producing *Zymomonas mobilis* CP4', 32<sup>nd</sup> Conference of the Hellenic Society for Biological Sciences (EEBE), Karpenisi, Greece (May 20-22), pp. 330-331
33. Pappa, E., and **Pappas, K. M.** (2010) 'Isolation and characterization of the DNA-repair gene *radA* from the ethanol-producing bacterium *Zymomonas mobilis*', 32<sup>nd</sup> Conference of the Hellenic Society for Biological Sciences (EEBE), Karpenisi, Greece (May 20-22), pp. 306-307
34. Kouvelis, V. N., Typas, M. A., **Pappas, K. M. et al.** (2010) 'The complete genomes of three ethanol-

- producing *Zymomonas mobilis* strains: Insights in comparative genomics'. 5<sup>th</sup> Conference of the Hellenic Society for Computational Biology and Bioinformatics (HSCBB10), Alexandroupolis, Greece (October 17-19), pp 41 – **F1000 Poster Award**: <http://posters.f1000.com/P687>
35. (as before) 3<sup>d</sup> National Conference of the Hellenic Society for Microbiology 'Mikrobiokosmos' (MBK3), Thessaloniki, Greece (December 16-18), pp. 58-59
  36. **Pappas, K. M.\*** (2010) 'Interbacterial or transkingdom signaling and plasmid copy number in the *Rhizobiaceae*'. 3<sup>d</sup> National Conference of the Hellenic Society for Microbiology 'Mikrobiokosmos' (MBK3), Thessaloniki, Greece (December 16-18), pp. 110-111
  37. Tsoupras, A. B., Kouvelis, V. N., Demopoulos, C. A., **Pappas, K. M.**, and Typas, M. A. (2010) 'In vitro anti-inflammatory activities of *Beauveria bassiana* lipid molecules towards platelet activating factor (PAF)'. 3<sup>d</sup> National Conference of the Hellenic Society for Microbiology 'Mikrobiokosmos' (MBK3), Thessaloniki, Greece (December 16-18), pp. 138-139
  38. Damoulaki, A., Tsoupras, A., and **Pappas, K. M.** (2011) 'Quorum sensing in ethanol-producing *Zymomonas mobilis* strains'. 33<sup>rd</sup> Conference of the Hellenic Society for Biological Sciences (EEBE), Edessa, Greece (May 19-21), pp. 70-71
  39. Andrea, A., and **Pappas, K. M.** (2011) 'The antagonistic behavior of *Zymomonas mobilis* against other microorganisms'. 33<sup>rd</sup> Conference of the Hellenic Society for Biological Sciences (EEBE), Edessa, Greece (May 19-21), pp. 18-19
  40. As in 33. 11<sup>th</sup> International Conference on Bacterial Genetics and Ecology (*BAGECO 11*), Biotechnology of an Evolving Global Economy, Corfu, Greece (May 29- June 2), pp. 54
  41. Savvakis, G., and **Pappas K. M.** (2011) 'Study of DNA repair in the bioethanol-producer *Zymomonas mobilis*'. 11<sup>th</sup> International Conference on Bacterial Genetics and Ecology (*BAGECO 11*), Biotechnology of an Evolving Global Economy, Corfu, Greece (May 29- June 2), pp. 61
  42. **Pappas, K. M.** (2011) 'Genomics of a bioethanol-producing bacterium'. 5<sup>th</sup> European Conference on Prokaryotic and Fungal Genomics (ProkaGENOMICS 2011), Göttingen, Germany (September 18-21), pp. 45
  43. **Savvakis, G.**, and **Pappas K. M.** (2011) 'Study of SOS regulation in the ethanologenic *Zymomonas mobilis*'. 6<sup>th</sup> Conference of the Hellenic Society for Computational Biology and Bioinformatics (HSCBB10), Patras, Greece (October 14-16), pp. 29 – **oral/poster presentation awarded**
  44. (as above; oral presentation). 4<sup>th</sup> National Conference of the Hellenic Society for Microbiology 'Mikrobiokosmos' (MBK4), Ioannina, Greece (October 21-23), pp. 28-29 – **oral presentation awarded**
  45. **Pappas, K. M.\*** (2012) 'Comparative genomics of a bioethanol producer'. 3<sup>rd</sup> World Congress in Biotechnology (Biotechnology-2012), Hyderabad National Convention Centre, Hyderabad, India (September 13-15), pp. 115.
  46. **Desiniotis, A.**, Kouvelis, V. N., Davenport, K., Bruce, D., Detter, C., Tapia, R., Han, C., Goodwin, L. A., Woyke, T., Kyrpides, N. C., Typas, M. A., and **Pappas, K. M.** (2012) 'Analysis of the genome sequence of the ethanol-producing *Zymomonas mobilis* subsp. *mobilis* centrotpe ATCC 29191'. 7<sup>th</sup> Conference of the Hellenic Society for Computational Biology and Bioinformatics (HSCBB11), Herakleion, Crete (October 14-16), pp. 29 (oral presentation)
  47. **Tampakopoulou, V.**, Damoulaki, A., and **Pappas, K. M.** (2012) 'Study of biofilm formation in wild type strains and mutant derivatives of the ethanologenic bacterium *Zymomonas mobilis*'. 5<sup>th</sup> National Conference of the Hellenic Society for Microbiology 'Mikrobiokosmos' (MBK5), Agricultural University of Athens, Athens, pp. 54-55 (oral presentation)
  48. **Desiniotis, A.**, and **Pappas, K. M.** (2012) 'Genomic analysis of *Zymomonas mobilis* subsp. *mobilis* ATCC 29191: comparative, structural and functional insights', 5<sup>th</sup> National Conference of the Hellenic Society for Microbiology 'Mikrobiokosmos' (MBK5), Agricultural University of Athens, pp. 228-229
  49. (as above; 2013) 8<sup>th</sup> Annual Joint Genome Institute User Meeting, Walnut Creek, CA (March 26-28), pp. 19-20
  50. **Davydova, E.**, and **Pappas, K. M.** (2013) 'Study of transformation in different strains of the ethanol-producing bacterium *Zymomonas mobilis*'. 35<sup>th</sup> Conference of the Hellenic Society for Biological Sciences (EEBE), Nauplion, Greece (May 23-25), pp. 250-251
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51. Savvakis, G., and **Pappas, K. M.** (2013) 'Characteristics of a *recA* mutant and *in silico* analysis of SOS regulation in the ethanol-producing *Zymomonas mobilis*' FEMS-2013 International Congress, Leipzig, Germany, July 21-25
52. (as above) (2013) 64th Conference of the Hellenic Society of Biochemistry and Molecular Biology (HSBMB), Eugenides Foundation, Athens (December 5-8) Young Scientists Forum (oral presentation)
53. **Pappas, K. M.\*** (2013) '*Escherichia coli* as gene donor in transgenic plant technology', International Congress on Genetic Engineering & Genetically Modified Organisms, Raleigh-Brownstone University, Raleigh, North Carolina (August 12-14), pp 113
54. **Pappas, K. M.\*** (2014) '*Escherichia coli* can act as an *in planta* gene donor for the creation of transgenic plants', Plant Transformation Technologies III (VISCEA), Vienna, Austria (February 12-14), pp. 13
55. Emmanouilidou, E., Taliouras, N., Tampakopoulou, V., Davenport, K., Bruce, D., Detter, C., Tapia, R., Han, C., Land, M. L., Hauser, L., Chang, Y.-J., Pan, C., Kouvelis, V. N., Goodwin, L. A., Woyke, T., Kyripides, N. C., Typas, M. A., and **Pappas, K. M.** (2014) 'Insights into the *Zymomonas mobilis* plasmidome', Cold Spring Harbor Laboratory Meeting on 'Plasmids: History and Biology', Cold Spring Harbor, NY, September 21-23 (abstract distributed)
56. Emmanouilidou, E., Taliouras, N., Tampakopoulou, V., and **Pappas, K. M.** (2014), as above, 9th Conference of the Hellenic Society for Computational Biology and Bioinformatics - HSCBB14, Agricultural University of Athens, Greece (October 10-12), pp. 91-92
57. Efthimiou, G., **Pappas, K. M.**, and Typas, M. A. (2014) 'A bioinformatic and literature-based analysis of the molecular mechanisms involved in biofilm formation by *Salmonella enterica* subsp. *enterica* serovar Typhimurium and *Staphylococcus aureus* COL (MRSA)', 9th Conference of the Hellenic Society for Computational Biology and Bioinformatics - HSCBB14, Agricultural University of Athens, Greece (October 10-12), pp. 75-76
58. Efthimiou, G., Vryonidou, M. L., Typas, M. A., and **Pappas, K. M.** (2015) 'Study of biofilm formation by the food-borne pathogen *Salmonella enterica* subsp. *enterica* serovar Typhimurium ST4/74', 6<sup>th</sup> National Conference of the Hellenic Society for Microbiology 'Mikrobiokosmos' (MBK6), National Hellenic Research Foundation, Athens, Greece (April 3-5), pp. 70-71
59. Emmanouilidou, E., Taliouras, N., Tampakopoulou, V. O., and **Pappas, K. M.** (2015) 'Comparative genomic analysis of the *Zymomonas mobilis* plasmidome', 6th National Conference of the Hellenic Society for Microbiology 'Mikrobiokosmos' (MBK6), National Hellenic Research Foundation, Athens, Greece (April 3-5), pp. 72-73
60. Efthimiou, G., **Pappas, K. M.**, and Typas, M. A. (2015) 'Study of biofilm formation by the hospital-acquired and recently considered as food-borne pathogen *Staphylococcus aureus* subsp. *aureus* COL (MRSA)', 6th National Conference of the Hellenic Society for Microbiology 'Mikrobiokosmos' (MBK6), National Hellenic Research Foundation, Athens, Greece (April 3-5), pp. 100-101
61. Logotheti, M., Savvakis, G., Tampakopoulou, V. O., Pilalis, E., Typas, M. A., **Pappas, K. M.**, and Kolisis, F. (2015) '*In silico* aided metabolic engineering of *Zymomonas mobilis* for improved ethanol production', 6th National Conference of the Hellenic Society for Microbiology 'Mikrobiokosmos' (MBK6), National Hellenic Research Foundation, Athens, Greece (April 3-5), pp. 195-196
62. Tampakopoulou, V. O., Papaggeli, M., Davidova, E., and **Pappas, K. M.** (2015) 'Study of transformation in the ethanologenic bacterium *Zymomonas mobilis*', 6th National Conference of the Hellenic Society for Microbiology 'Mikrobiokosmos' (MBK6), National Hellenic Research Foundation, Athens, Greece (April 3-5), pp. 329-330
63. Desiniotis, A., Kouvelis, V. N., Typas, M. A., and **Pappas, K. M.** (2015) 'Comparative genomic analysis based on *Zymomonas mobilis* subsp. *mobilis* ATCC 29191 leads to insights regarding *Zymomonas*', 37th Symposium on Biotechnology for Fuels and Chemicals (Society for Industrial Microbiology), San Diego, CA (April 27-30), pp 27
64. Siaka, K., and **Pappas, K. M.** (2015) 'Genetic study of *Zymomonas mobilis* antagonism against  $\alpha$ - and  $\gamma$ -proteobacteria', 66th Congress of the Hellenic Society of Biochemistry and Molecular Biology (HSBMB), Eugenides Foundation, Athens, Greece (December 11-13), pp. 129
65. Derveni, E., Tampakopoulou, V. O., and **Pappas, K. M.** (2015) 'Study of AHL production in *Zymomonas mobilis* and the construction of a species-specific AHL-dependent gene expression

- switch', 66th Congress of the Hellenic Society of Biochemistry and Molecular Biology (HSBMB), Eugenides Foundation, Athens, Greece (December 11-13), pp. 222
66. Poulis, P., Savvakis, G., and **Pappas, K. M.** (2015) 'Preliminary study of *recA* and *lexA* regulation in *Zymomonas mobilis* using *in vivo* transcription assays', 66th Congress of the Hellenic Society of Biochemistry and Molecular Biology (HSBMB), Eugenides Foundation, Athens, Greece (December 11-13), pp. 250
  67. **Savvakis, G.**, and **Pappas, K. M.** (2016) 'Transcriptomic analysis of *Zymomonas mobilis* under SOS-induction', 5th International Conference on Microbial Physiology and Genomics, London, U.K. (September 29-30), pp. 43
  68. as in (69), 67th Panhellenic Conference of the Hellenic Society for Biochemistry and Molecular Biology (HSBMB), 'Karolos Papoulias' Conference Center, University of Ioannina, Ioannina, Greece (November 25-27), pp. 23, (**oral presentation**) and 4th Young Scientist Forum (YSF) (November 24), pp. 108
  69. Moysi, K., Savvakis, G., Roussou, M., Zhang, M., Typas, M. A., Hatzinikolaou, D. G., and **Pappas, K. M.** (2017) 'Performance of *Zymomonas mobilis* C5/C6-sugar assimilating strains in ethanol production from Greek lignocellulosic biomass', 7th National Conference of the Hellenic Society for Microbiology 'Mikrobiokosmos' (MBK7), National Hellenic Research Foundation, Athens, Greece (April 7-9) (e-abstract)
  70. **Poulis, P.**, Savvakis, G., Skrekas, C., and **Pappas, K. M.** (2017) 'Evidence for LexA-dependent regulation of the *Zymomonas mobilis recA* and *lexA* genes', 7th National Conference of the Hellenic Society for Microbiology 'Mikrobiokosmos' (MBK7), National Hellenic Research Foundation, Athens, Greece (April 7-9) (e-abstract)
  71. Athanasiou, D. K., Katsiotis, M. S., Koutsodontis, K., Giannakopoulos, I., Papageorgiou, D., and **Pappas, K. M.** (2017) Growth and sporulation of *Bacillus sphaericus* for cement bio-healing applications, 7th National Conference of the Hellenic Society for Microbiology 'Mikrobiokosmos' (MBK7), National Hellenic Research Foundation, Athens, Greece (April 7-9) (e-abstract)
  72. Kalntremtziou, M., Papaioannou, I. A., Vangalis, V., **Pappas K. M.**, Zervakis G. I., and Typas M. A. (2017) Metagenomic analysis of microorganisms and molecular characterization of ligninocellulose-degrading genes from Mediterranean soil habitats, 7th National Conference of the Hellenic Society for Microbiology 'Mikrobiokosmos' (MBK7), National Hellenic Research Foundation, Athens, Greece (April 7-9) (e-abstract)
  73. As above, EMBO Workshop, Dresden July 25-28, pp 42.
  74. Savvakis, G., Moysi, K., Roussou, M., Zhang, M., Typas, M., Hatzinikolaou, D., and **Pappas, K. M.** (2017) 'Performance of *Zymomonas mobilis* C5/C6-sugar assimilating strains in ethanol production from Greek lignocellulosic biomass', 39th Symposium on Biotechnology for Fuels and Chemicals (SBFC), San Francisco Marriott Marquis, San Francisco, CA, U.S.A. (May 1-4)
  75. Charamis, J., Panagiotopoulou, D., Bantounas, A., Arvanitis, N., and **Pappas, K. M.** (2018) 'Construction and study of a new shuttle vector for the bioethanol producing *Zymomonas mobilis*', 15<sup>th</sup> Symposium 'Horizons in Molecular Biology', Max Planck Institute for Biophysical Chemistry, Goettingen, Germany (September 10-13)
  76. **Pappas, K. M.\*** (2018) 'From tequila shots to chassis genomics: works and days of an ethanol producer' 15<sup>th</sup> Symposium 'Horizons in Molecular Biology', Max Planck Institute for Biophysical Chemistry, Goettingen, Germany (September 10-13)
  77. Panagiotopoulou, D., Bantounas, A., Charamis, J., and **Pappas, K. M.** (2019) 'Construction of a highly stable species-specific vector for the bioethanol producing *Zymomonas mobilis*' 8th National Conference of the Hellenic Society for Microbiology 'Mikrobiokosmos' (MBK8), ICT-FORTH, Patras, Greece (April 6-8) (e-abstract)
  78. **Pappas, K. M.\*** (2019) 'The SOS stimulon and regulon in *Zymomonas mobilis*', 3<sup>rd</sup> International Conference on Synthetic Biology, Nanjing, China (September 24-29), pp. 59
  79. Gerantonis, P., Taliouras, N., Wu, Y., Geng, B., Yang, S. and **Pappas, K. M.** (2021) 'Genetic and functional analysis of the *Zymomonas mobilis* strain CP4 plasmids', 9th International Conference of the Hellenic Society for Microbiology 'Mikrobiokosmos' (MBK9), Agricultural University of Athens (December 16-19)(e-abstract)
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80. Herrera, E. and **Pappas, K M.** (2021) Quorum sensing in non-pathogenic bacteria, 9th International Conference of the Hellenic Society for Microbiology ‘Mikrobiokosmos’ (MBK9), Agricultural University of Athens (December 16-19)(e-abstract)
81. **Pappas, K.M.\***, Gerantonis, P., Panagiotopoulou, D., and Poulis, P. (2022) ‘Holistic Genetic Study of a Microorganism Implicated in Bioethanol Production’, 1<sup>st</sup> Conference on Climate Crisis, Energy & the Environment’, NKUA Athens (June 15-17)
82. Gerantonis, P., Ktenas, P. Apostolou, E., Papaioannou, K., and **Pappas, K.M.** (2023) ‘Less is more’: study of genomic reduction in *Zymomonas mobilis*’, 42<sup>nd</sup> Conference of the Hellenic Society for Biological Sciences, Thessaloniki (May 18-20), e-abstract
83. as above, MikroBiokosmos 10<sup>th</sup> Conference (MBK10), Divani Palace, Larissa (Nov 30 - Dec2)
84. Doron, L., **Pappas, K.M.**, and Kerfeld, C. (2024) ‘Bacterial microcompartments as natural or artificial nanobioreactors’, 10<sup>th</sup> International Conference on Materials Science and Smart Materials (MSSM2024), NKUA Propylaia, Athens (May 15-17)
85. Zochios G., and **Pappas, K.M.** (2024) ‘Production of eco-friendly microbial biopaper’, 10<sup>th</sup> International Conference on Materials Science and Smart Materials (MSSM2024), NKUA Propylaia, Athens (May 15-17)

*Underlined are oral presentations (\* invited). Highlighted are awarded presentations.*

**Languages:** English (Cambridge Proficiency in English – Honours’ Degree), German (Mittelstufe)