

# CURRICULUM VITAE

**NAME:** Dimitris Mossialos

**DATE OF BIRTH:** 1-11-1970

**ADDRESS:** Department of Biochemistry & Biotechnology, Mezourlo  
Post Code GR- 41500, Larissa

**PHONE:** ++30 2410 565270

**FAX:** ++30 2410 565290

**Email:** [mosial@bio.uth.gr](mailto:mosial@bio.uth.gr)

## EDUCATION

1989-1994 BSc in Biology Aristotle University of Thessaloniki, Greece

1994-1995 MSc in Molecular Biology and Biotechnology with Distinction, Vrije  
Universiteit Brussel, Belgium

1996-2000 PhD with Greatest Distinction, Vrije Universiteit Brussel, Belgium.

Dissertation title: Endogenous and Exogenous Siderophore Uptake Systems in  
*Pseudomonas fluorescens* and *Pseudomonas aeruginosa*.

1999-2000 Postgraduate Diploma in Management with Distinction, Vrije Universiteit  
Brussel, Belgium.

Spoken Languages: Greek (Mother Tongue) English (Excellent), Italian (Fluently),  
French (Basic Knowledge).

## ACADEMIC AND PROFESSIONAL EXPERIENCE

1996-2000 Member of Flanders Interuniversity Institute of Biotechnology (VIB)

2000-2003 Postdoctoral Research Associate, Imperial College London, UK

2003-2004 Military Service (Microbiologist)

2005-2006 Postdoctoral Research Associate, Universite de Lausanne (UNIL),  
Switzerland

April 2007-August 2011 Lecturer in Microbial Biotechnology. Department of  
Biochemistry & Biotechnology, University of Thessaly

August 2011- Assistant Professor in Microbial Biotechnology. Department of  
Biochemistry & Biotechnology, University of Thessaly

## TEACHING EXPERIENCE

Academic years 1998-2000 Vrije Universiteit Brussel, Belgium . Teaching of Practical Course in Molecular Microbiology (MSc level)

Academic year 2001-2002 Imperial College London, UK. Supervision of Diploma thesis (1 undergraduate and 1 MSc )

Academic years since 2007 Department of Biochemistry & Biotechnology, University of Thessaly. Teaching of General Biology and Immunology in academic year 2007-2008. Teaching of Microbiology-Virology and Animal Biotechnology since 2007. Teaching of Postgraduate courses (MSc):1) Environmental and Food Microbiology 2) Infectious Diseases since 2007. **Supervisor** of **11** undergraduate Diploma theses and **18** MSc theses.

## **RESEARCH ACTIVITY**

1. **Research interests:** Molecular microbiology with emphasis on pseudomonad biology (High-affinity iron uptake systems, oxidative stress, cyanogenesis, gene regulation, antibiotic resistance) Biotechnological Application of pseudomonads in Agriculture and Environment. Microbial diversity of biodeteriorated cultural objects. Antimicrobial properties of Greek honey.

### **Member of:**

- General Society of Microbiology (UK)
- European Federation of Biotechnology
- Greek scientific society Microbiocosmos
- Society for Invertebrate Pathology
- COST Action 862 “Bacterial toxins for Insect control”

### **Reviewer**

- Journal of Antimicrobial Chemotherapy
- Journal of Biological Chemistry
- Journal of Microbiology and Biotechnology
- Journal of Medicinal Food
- Annals of Microbiology
- Journal of Biological Research
- New Biotechnology
- BioMed Research International
- PLOS ONE

- Letters in Applied Microbiology
- Marine Drugs
- Current Medicinal Chemistry
- BMC Microbiology
- Future Microbiology
- Natural Product Research
- Current Protein & Peptide Science
- Microbiological Research
- International Journal of Molecular Sciences
- Foods
- Nucleic Acids Research
- Symbiosis
- Journal of Agricultural and Food Chemistry
- **Editorial Board Member of Biotechnology Letters (since 2012)**

#### **Invited lectures**

**National: 6, International: 2 (Since 2007)**

#### **Research Grants (2007-today)**

- University of Thessaly Research Committee 2007-2008: Principal Investigator of the Project entitled “ Investigation of *Pseudomonas entomophila* pathogenicity against *Ceratitidis capitata*” Code No 3551 (Budget 5,788 Euros)
- Prefecture of Thessaly 2016-2018: Principal Investigator of the Project entitled “ Antibacterial properties of Olympus region honeys against human pathogens” Code No 4954 (Budget 20,000 Euros)
- Postgraduate Programs “Biotechnology-Quality assessment in Nutrition and Environment”, “Molecular Biology and Genetics Applications-Diagnostic Markers” and “Toxicology” Department of Biochemistry and Biotechnology UTH (Total funding 52,400 Euros )

#### **PUBLICATIONS**

- 1) Tsavea, E., **Mossialos, D\***. (2019) Antibacterial activity of honeys produced in Mount Olympus area against nosocomial and foodborne pathogens is

- mainly attributed to hydrogen peroxide and proteinaceous compounds. *J. Apic. Res.* **58(5): 756–763** <https://doi.org/10.1080/00218839.2019.1649570>
- 2) Ntountoumi, C., Vlastaridis, P., **Mossialos, D.**, Stathopoulos, C., Iliopoulos, I., Promponas, V., Oliver, S.G., Amoutzias, G.D. (2019) Low complexity regions in proteins of prokaryotes perform important functional roles and are highly conserved. *Nucleic Acids Res.* doi: 10.1093/nar/gkz730
  - 3) Daskou, M., Tsakogiannis, D., Dimitriou, T.G., Amoutzias, G.D., **Mossialos, D.** Kottaridi, C., Gartzonika, C., Markoulatos, P. (2019) WarmStart colorimetric LAMP for the specific and rapid detection of HPV16 and HPV18 DNA. *J. Virol. Methods* **270: 87-94**
  - 4) Daskou, M., Tsakogiannis, D., Dimitriou, T.G., Manali, M., Aпти, C., Amoutzias, G.D., **Mossialos, D.**, Kottaridi, C., Markoulatos, P. (2019) A 2-stage, nested-like nucleic acid amplification method (IsoPCR) for the highly sensitive detection of HPV16 and HPV18 DNA. *Mol. Cell. Probes* **45:1-7.**
  - 5) Chaliotis, A., Vlastaridis, P., Ntountoumi, C., Botou, M., Yalelis, V., Lazou, P., Tatsaki, E., **Mossialos, D.**, Frillingos, S., Amoutzias, G.D. (2018) NAT/NCS2-hound: a webserver for the detection and evolutionary classification of prokaryotic and eukaryotic nucleobase-cation symporters of the NAT/NCS2 family *GigaScience* **7 (Issue 12) December 2018.**
  - 6) Stagos D, Soultisiotis N, Tsadila C, Papaeconomou S, Arvanitis C, Ntontos A, Karkanta F, Adamou-Androulaki S, Petrotos K, Spandidos DA, Kouretas D, **Mossialos D\*** (2018) Antibacterial and antioxidant activity of different types of honey derived from Mount Olympus in Greece. *Int J Mol Med.* **42(2):726-734.** doi: 10.3892/ijmm.2018.3656. Epub 2018 May 4.
  - 7) Kyriakopoulou Z, Amoutzias GD, Dimitriou TG, Tsakogiannis D, **Mossialos D**, Markoulatos P. (2018) Intra- and inter-serotypic recombinations in the 5' UTR-VP4 region of Echovirus 30 strains. *Arch. Virol.* **163(2):365-375.** doi: 10.1007/s00705-017-3600-1. Epub 2017 Oct 30.
  - 8) Karakasidou K., Nikolouli K., Amoutzias G., Pournou A., Manassis C., Tsiamis G. and **D. Mossialos\*** Microbial diversity in biodeteriorated Greek historical documents dating back to the 19th and 20<sup>th</sup> century: a case study. *MicrobiologyOpen.* 2018 **Oct;7(5):e00596.** doi: 10.1002/mbo3.596. Epub 2018 Feb 27.

- 9) Fikatas A., Dimitriou T.G., Kyriakopoulou Z., Moschonas G.D., Amoutzias G.D., **Mossialos D.**, Gartzonika C., Levidiotou-Stefanou S. and P. Markoulatos (2017) Detection of negative and positive RNA strand of poliovirus Sabin 1 and echovirus E19 by a stem-loop reverse transcription PCR. *Lett. Appl. Microbiol.* **65:234-240**
- 10) Chaliotis A., Vlastaridis P., **Mossialos D.**, Ibba M., Becker H.D., SAthathopoulos C. and G.D. Amoutzias (2017) The complex evolutionary history of aminoacyl-tRNA synthetases. *Nucleic Acids Res.* **45(3): 1059-1068**
- 11) Amoutzias G., A. Chaliotis and **D. Mossialos\*** (2016) Discovery strategies of bioactive compounds synthesized by nonribosomal peptide synthetases and type-I polyketide synthases derived from marine microbiomes. *Mar. Drugs* **14(4).pii:E80**
- 12) Nikolouli K., A. Pournou, G. McConnachie, G. Tsiamis and **D. Mossialos\*** (2016) Prokaryotic diversity in biodeteriorated wood coming from the Bukkabrany fossil forest. *International Biodeterioration & Biodegradation* **108: 181-190**
- 13) Nikolouli K. and **D. Mossialos\*** (2016) Functional characterization of TtgABC efflux pump of the RND family in the entomopathogenic bacterium *Pseudomonas entomophila*. *Ann. Microbiol.* **66: 499-503**
- 14) Mathioudakis M.M., R.S. Veiga, T. Canto, V. Medina, **D. Mossialos**, A.M. Makris and I. Livieratos (2013) Pepino mosaic virus triple gene block protein 1 (TGBp1) interacts with and increases tomato catalase 1 activity to enhance virus accumulation. *Mol. Plant Pathol.* **14(6): 589-601**
- 15) Pournaras S., R. Kock, **D. Mossialos**, A. Mellmann, V. Sakellaris, C. Stathopoulos, A.W. Friedrich and A. Tsakris (2013) Detection of a phylogenetically distinct IMP-type metallo- $\beta$ -lactamase, IMP-35, in CC235 *Pseudomonas aeruginosa* from Dutch-German border region (Euregio). *J. Antimicrob. Chemother.* **68(6): 1271-1276**
- 16) Anthimidou E. and **D. Mossialos\*** (2013) Antibacterial activity of Greek and Cypriot honeys against *Staphylococcus aureus* and *Pseudomonas aeruginosa* in comparison to manuka honey. *J. Med. Food* **16(1): 42-47**

- 17) Stagos D., N. Portesis, C. Spanou, **D. Mossialos**, N. Aligiannis, E. Chaita, C. Panagoulis, E. Reri, L. Skaltsounis, A.M. Tsatsakis and D. Kouretas (2012) Correlation of total polyphenolic content with antioxidant and antibacterial activity of 24 extracts from Greek domestic Lamiaceae species. *Food Chem Toxicol.* **50(11): 4115-4124**
- 18) Nikolouli K. and **D. Mossialos\*** (2012) Bioactive compounds synthesized by non-ribosomal peptide synthetases and type-I polyketide synthases discovered through genome-mining and metagenomics. *Biotechnol. Lett.* **34(8): 1393-1403**
- 19) Amoutzias, G.D., Y. He, J. Gordon, **D. Mossialos**, S.G. Oliver and Y. Van De Peer (2010) Posttranslational regulation impacts the fate of duplicated genes. *Proc. Natl. Acad. Sci USA* **107(7): 2967-2971**
- 20) Papagiannoulis A., K.D. Mathiopoulos and **D. Mossialos\*** (2010) Molecular detection of the entomopathogenic bacterium *Pseudomonas entomophila* using Polymerase Chain Reaction (PCR). *Lett. Appl. Microbiol* **50(3): 241-245.**
- 21) Ryall, B., H. Mitchell, **D. Mossialos\*** and H.D. Williams (2009) Cyanogenesis by the entomopathogenic bacterium *Pseudomonas entomophila*. *Lett. Appl. Microbiol.* **49(1): 131-135**
- 22) Humair, B., N. Gonzalez, **D. Mossialos**, C. Reimann and D. Haas (2009) Temperature-responsive sensing regulates biocontrol factor expression in *Pseudomonas fluorescens* CHA0. *ISME J.* **3(8): 955-965**
- 23) **Mossialos, D.\*** and G.D. Amoutzias (2009) Role of siderophores in cystic fibrosis pathogenesis: foes or friends? *Int. J. Med. Microbiol.* **299 (2): 87-98.**
- 24) Amoutzias, G., Y., Van de Peer, and **D. Mossialos\***. (2008) Evolution and taxonomic distribution of nonribosomal peptide and polyketide synthases. *Future Microbiol.* **3: 361-370.**
- 25) **Mossialos, D.\*** and Amoutzias G. (2007) Siderophores in fluorescent pseudomonads: new tricks from an old dog. *Future Microbiol.* **2:387-395.**
- 26) Ramstedt, M., R., Houriet, **D., Mossialos**, D., Haas, and HJ Mathieu. (2007) Wet chemical silver treatment of endotracheal tubes to produce antibacterial surfaces. *J. Biomed. Mater. Res. B Appl. Biomater.* **83(1): 169-180**
- 27) Ramstedt, M., N., Cheng, O., Azzaroni, **D., Mossialos**, H.J., Mathieu and W.T. Huck. (2007) Synthesis and characterization of Poly (3-

sulfopropylethacrylate) brushes for potential antibacterial applications.

Langmuir: **23(6): 3314-3321**.

- 28)** Zlosnik, J., G.R., Tavankar, J.G., Bundy, **D.**, **Mossialos**, R., O'Toole and H.D. Williams. (2006) Investigation of the physiological relationship between the cyanide insensitive oxidase and cyanide production in *Pseudomonas aeruginosa*. Microbiology SGM **152(5): 1407-1415**.
- 29)** **Mossialos, D.**, G.R., Tavankar, J., Zlosnik and H.D. Williams. (2006) Defects in a quinol oxidase lead to loss of KatC activity in *Pseudomonas aeruginosa*: KatC activity is temperature dependent and it requires an intact disulphide bond formation system. Biochem. Biophys. Res. Commun. **341: 697-702**.
- 30)** Tavankar, G.R., **D.**, **Mossialos** and H.D. Williams. (2003) Mutation or overexpression of a terminal oxidase leads to a cell division defect and multiple antibiotic sensitivity in *Pseudomonas aeruginosa*. J. Biol. Chem. **278: 4524-4530**.
- 31)** Pirnay, J.P., De Vos, **D.**, **Mossialos**, A., Vanderkelen, P. Cornelis and M., Zizi. (2002) Analysis of the *Pseudomonas aeruginosa oprD* gene from clinical and environmental isolates. Environ. Microbiol. **4: 872-882**.
- 32)** **Mossialos, D.**, U., Ochsner, C., Baysse, P., Chablain, J.P., Pirnay, N., Koedam, H., Budzikiewicz, D.U., Fernandez, M., Schafer, J., Ravel and P. Cornelis. (2002). Identification of new, conserved, non-ribosomal peptide synthetases from fluorescent pseudomonads involved in the biosynthesis of the siderophore pyoverdine. Mol. Microbiol. **45: 1673-1685**.
- 33)** **Mossialos, D.**, J.M., Meyer, H., Budzikiewicz, U., Wolff, N., Koedam, C., Baysse, V., Anjaiah and P. Cornelis. (2000) Quinolobactin, a new siderophore of *Pseudomonas fluorescens* ATCC 17400, the production of which is repressed by the cognate pyoverdine. Appl. Environ. Microbiol. **66: 487-492**.
- 34)** Lim, A., D., De Vos, M., Brauns, **D.**, **Mossialos**, A., Gaballa, D., Ding and P., Cornelis. (1997) Molecular and immunological characterization of OprL, the 18 kDa, outer-membrane peptidoglycan-associated lipoprotein (PAL) of *Pseudomonas aeruginosa*. Microbiology SGM **143: 1709-1716**.

- \* Corresponding author
- Total IF >130
- Citations >850 (Scopus)
- h-index 16