

# CURRICULUM VITAE

Vassili N. Kouvelis

June 2014

## 1. PERSONAL INFORMATION

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*Place and date of birth:* Athens, 5 November 1970  
*Citizenship:* Greek  
*Work Address:* University of Athens,  
Faculty of Biology,  
Dept. Genetics & Biotechnology  
Panepistimiopolis, Athens 15701  
Greece  
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## 2. EDUCATION

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- 9/2008 **Joint Genome Institute (JGI), U.S. Dept. of Energy (DOE), Walnut Creek, CA, USA**  
**POSTDOCTORAL VISITOR**  
Research in Genome Analysis and Bionformatics  
Advisor: Dr. N. Kyrpides  
*Research Scope:* Complete genome analyses of bacteria with interactive internet based-implemented programs designed on a Linux platform (IMG-ER).
- 6/2007 **University of Cyprus, Faculty of Pure & Applied Sciences, Dept. of Biological Sciences, Nicosia, Cyprus**  
**POSTODOCTORAL VISITOR**  
Research in Genome Analysis  
Advisor: Dr. Vasilis J. Promponas  
*Research Scope:* Study of mitochondrial genomes with programs designed on UNIX and Linux platforms.
- 2002-2005 **National & Kapodistrian University of Athens, Faculty of Biology, Dept. of Genetics & Biotechnology, Laboratory of Genetics**  
**POSTODOCTORAL STUDIES**  
Research in Microbial Molecular Genetics.  
Advisor: Prof. Milton A. Typas  
*Research Goals:* Genetic identification of entomopathogenic fungi of interest, establishing genetic transformation and inactivation of toxic genes of fungal strains intended to be used for biological control of insects (pests), risk assessment of possible mutagenic activity of secondary metabolites.

- 10/2004-11/2004 **Eidgenössische Technische Hochschule (ETH), Institute of Plant Sciences, Phytopathology, Zurich, Switzerland**  
**POSTDOCTORAL VISITOR**  
 Research in Molecular Microbiology and Biotechnology.  
 Advisor: Prof. Geneviève Défago.  
*Research Goal:* Molecular discrimination and identification of fungal strains of the genus *Stagonospora* (used as biological control agents of weeds).
- 1995-1999 &  
 2001-2002 **National & Kapodistrian University of Athens, Faculty of Biology, Dept. of Genetics & Biotechnology, Laboratory of Genetics**  
**Ph. D. in Microbial Genetics and Biotechnology**  
 Advisor: Prof. Milton A. Typas  
*Dissertation:* A study of the mitochondrial genome of the entomopathogenic fungus *Verticillium lecanii*.  
 Grade: “Excellent” (10/10).
- 9/1996-12/1996 **L’ Institute National de la Recherche Agronomique (INRA), Laboratoire de la lutte biologique, La Miniere, France**  
 A study of the entomopathogenic fungus *Beauveria bassiana*  
 Advisor: Dr. Yvonne Couteaudieur.  
*Research Goal:* The construction of a mitochondrial gene bank of the fungus *Beauveria bassiana* and analysis of its chromosomal organization with the use of the technique of Pulse Field Gel Electrophoresis (PFGE).
- 1994 **National & Kapodistrian University of Athens, Faculty of Biology**  
**B. Sc. in Biology**  
 Grade: “Very Good” (7.18/10).
- 6/1993 -10/1993 **University of Greenwich, Greenwich, UK**  
**ERASMUS fellow**  
 Advisor: Dr. Ian Bruce.  
*Research Goal:* Identification of a restriction endonuclease from a thermophile bacterium (*Thermophilus aquaticus*).

### 3. EMPLOYMENT HISTORY

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- 2009-today **National & Kapodistrian University of Athens, Faculty of Biology, Dept. of Genetics & Biotechnology**  
**Lecturer of Genetics and Biotechnology**

- 2007-2009 **National & Kapodistrian University of Athens, Faculty of Biology, Dept. of Genetics & Biotechnology**  
**RESEARCH ASSOCIATE**, University employee  
 This position covers a) Teaching in the laboratory classes of undergraduate students and b) participation in research activities of the Genetics Laboratory.
- 1995-2007 **National & Kapodistrian University of Athens, Faculty of Biology, Dept. of Genetics & Biotechnology, Laboratory of Genetics**  
**POSTDOCTORAL FELLOW**  
 Participation in Research Programmes of the Genetics Laboratory.  
 In detail:
- “Sequencing of the ethanol-producing strains of the bacterium *Zymomonas mobilis* CP4, ATCC 10988 και ATCC 29191 (subsp. *mobilis* lectotype and phenotypic centrotpe), ATCC 29192 (subsp. *pomaceae* lectotype) and *Z. mobilis* sp. NCIB 11163. Sequencing of the plasmids of ZM4 (ATCC 31821) (subsp. *mobilis* lectotype and phenotypic centrotpe)” **Code name: CSP\_788284** in cooperation with the Joint Genome Institute (JGI) of Department of Energy (DOE), U.S.A. [2007-today].
  - “Biological process and exploitation of liquid oil waste: Mechanisms and complete implementation” **Code name: FP-66, 3<sup>rd</sup> Community Support Programme - General Secretariat of Research and Technology** [2007].
  - “Development of a web-based system for the management and analysis of complete sequences of mitochondrial fungal genomes” **Code name: 70/4/8804** [2006-today].
  - “Risk Assessment of Fungal Biological Control Agents - RAFBCA” **Code name: QLK1-CT-2001-01391** [2002-2005].
  - “Ethanol Fermentation during vinification. Selection and evaluation of yeast strains” **Code name: EPET 98 BI-5** [2000-2001].
  - “Biocontrol of important soil dwelling pests by improving the efficacy of insect pathogenic fungi - BIPESCO” **Code name: FAIR6-CT98-4105** [1999].
  - “Insect pathogenic fungi for economic, environmentally friendly pest control in the glasshouse” **Code name: AIR-CT94-1352** [1995-1997].

## RESEARCH ACTIVITY

Participation in research programs, symposiums and meetings (not mentioned in previous Section):

- “Co-operation” under the title: “A complete fermentation procedure for the production of bio-ethanol from Greek lignocellulosic biomass”. **Ref. No: 11Συv\_7\_1579**. In cooperation with Prof. M.A. Typas and Asst. Prof. K.M. Pappas from UoA. Athens, March 2013 - today.
- “Thalis” under the title: “Metagenomics of lignolytic microorganisms - Bioconversion of plant by-products into high added value products” **Ref. No: MIS 377062**. In cooperation with Prof. M.A. Typas and Asst. Prof. K.M. Pappas from UoA. Athens, October 2012 - today.

- **Mohamed bin Zayed Fund:** Title of the Grant: “Conservation of the vanishing *Stachys virgata* (Lamiaceae)”. In cooperation with Asst. Prof. T. Constantinidis. **Ref. No: 11252135.** Athens, August 2011 - today.
- **Mohamed bin Zayed Fund:** Title of the Grant: “Assessment of the critically endangered fungal populations of *Pleurotus nebrodensis* in Greece and its in situ and ex situ conservation». **Ref. No: 12253422.** In cooperation with Lecturer Z. Gonou-Zagou. Athens, August 2012 - today.
- Construction of a web-based mitochondrial genome data bank, named “MitoFun”, in cooperation with Prof. S. Hamodrakas (Dept. of Cell Biology and Biophysics, Faculty of Biology, University of Athens) and Dr. Vasilis Promponas (Dept. of Biological Sciences, Faculty of Pure & Applied Sciences, University of Cyprus), aiming to provide all available information and exploitation of fungal mitochondrial genomes to the scientific community. Athens, March 2007 - today.
- **REBECA:** Current Risk Assessment and Regulation Practice. Kiel, Germany, September 18-22, 2006.
- International Symposium on the Closing Meeting of Biocontrol of Important Soil Dwelling Pests by Improving the Efficacy of Insect Pathogenic Fungi (**BIPESCO**): Experiences on Biocontrol of Cockchafer Larvae and Weevils with Entomopathogenic Fungi. University of Vienna, Austria, January 24, 2002.

#### 4. TEACHING EXPERIENCE

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05/2014-today	<p><b><i>National &amp; Kapodistrian University of Athens, Faculty of Biology, Bioinformatics Postgraduate Programme</i></b></p> <p>Courses and lab courses taught: (a) “Computational Analysis of Biomacromolecular Sequences” (2<sup>nd</sup> semester)</p>
09/2009-today	<p><b><i>National &amp; Kapodistrian University of Athens, Faculty of Biology, Dept. of Genetics &amp; Biotechnology</i></b></p> <p>Courses and lab courses taught: (a) “Introduction to Biology” (1<sup>st</sup> semester), (b) “Introduction to Biology” (2<sup>nd</sup> semester at the School of Pharmacy), (c) “Genetics” (4<sup>th</sup> semester), (d) “Advanced Genetics” (5<sup>th</sup> semester) and (e) “Biotechnology” (8<sup>th</sup> semester)</p>
1995-2008	<p><b><i>National &amp; Kapodistrian University of Athens, Faculty of Biology, Dept. of Genetics &amp; Biotechnology</i></b></p> <p>Participation at the preparation and teaching of the laboratory courses of: (a) compulsory courses of “Genetics”, and “Introduction to Biology” (b) optional courses of “Biotechnology” and “Human Genetics”</p>
2002-2006	<p><b><i>National &amp; Kapodistrian University of Athens, Faculty of Biology, Dept. of Genetics &amp; Biotechnology, Laboratory of Genetics</i></b></p> <p>Participation in the supervision of the undergraduate students for their final B. Sc. dissertations (7<sup>th</sup> - 8<sup>th</sup> semesters):</p>

2002 - Mrs Afroditi Sialakouma - Title: “A population study of the entomopathogenic fungus *Verticillium lecanii* based on the nuclear region ITS1-5.8S-ITS2 and the mitochondrial genes *nad1*, *nad3* και *rns*”.

2004 - Mr. Christos Belos - Title: “A study of the *mat* genes of phytopathogenic fungi of the genus *Verticillium*»”

2006 - Mrs Athina Papandreou - Title: “Structure and organization of transposable elements found in the genome of the phytopathogenic fungus *Verticillium dahliae*»”

#### Supervision of B.Sc. Final Year Dissertations

2013 - today	Elisavet Avgerinou (A.M. 220007), “A study of introns located in mitochondrial genes of Fungi”
2013 - today	George Nikolopoulos (A.M. 1113201000060), “The genetic variability of the plant <i>Stachys virgata</i> (Labiatae) studied with molecular methods”
2012 - today	Stylios Varassas (A.M. 1113200900009), “A study of nuclear encoded genes involved in the replication and transcription of the mitochondrial genomes of the entomopathogenic fungi <i>Beauveria bassiana</i> and <i>Metarhizium anisopliae</i> ”
2011-2013	Mrs Aimilia Stavrou - Title: “Molecular study of strains belonging to the mycetophilous fungus <i>Cladobotryum</i> ” in co-supervision with Dr. Zacharoula Gonou-Zagou
2010-2011	Mrs Maria Dertili - Title: “Studying mitochondrial genes for the molecular discrimination of fungi belonging mostly to Ascomycetes”

### **5. ADMINISTRATIVE CONTRIBUTION - RESPONSIBILITIES IN THE UNIVERSITY**

2010-2011 & 2013-today 2011-today	Member of the NKUA Faculty of Biology Administrative Board Member of the Committees of (a) “Economic Affairs”, (b) “Student Affairs - Education & Syllabus” and (c) “on the Organization of Joint Laboratory Infrastructure” of the Faculty of Biology
2009-2010	Member of the NKUA Faculty of Biology committee for “Buildings & Daily Routine - Electronic Communication”

### **6. MILITARY SERVICE**

**5/1999 - 4/2001: Greek Army Second Lieutenant (Reserve Officer)**

Specialty: Army Quartermaster

Units where I served as “General Logistics Officer”: 88 Anti-Tank Company (Limnos), 11<sup>o</sup> Army Regiment (Tripoli).

## 7. ADDITIONAL INFORMATION

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### FOREIGN LANGUAGES

	<u>Speak</u>	<u>Write</u>
English	Excellent	Excellent
French	Very good	Very good

### COMPUTERS

Excellent knowledge of PC's applications: MS Windows - based programmes for text editing and presentations (MS Office: Word, Excel, PowerPoint), biological (DNASTAR) and phylogenetic (PAUP, PHYLIP, PAML, CONSEL, MrBayes) applications, Internet (Explorer, Mozilla). Good knowledge of programmes designed on UNIX and Linux platforms.

### PROFESSIONAL SOCIETIES AND ACTIVITIES

- Member of the Panhellenic Society of Biosciences (1995-today)
- Member of the Hellenic Society for Biological Sciences (1995-today)
- Member of the Hellenic National Initiative "Mikrobiokosmos" (2007-today)
- Founding member of the Hellenic Society for Computational Biology and Bioinformatics (2007-today)
- Member of the European Mycological Association (EMA; 2011-today)

### REVIEWER TO SCIENTIFIC JOURNALS AND RESEARCH PROGRAMMES

- Editor (in the Editorial Board) of the scientific journals "ISRN Genetics" (2012-today) and "New Journal of Science" (2013-today).
- Reviewer to scientific journals: "Journal in Applied Microbiology" (2007, 2014), "Letters in Applied Microbiology" (2007, 2010-11, 2013), "Mycological Research" (2008), "Dendrobiology" (2011), "Journal of Food Science" (2012), "Fungal Biology" (2011, 2014), "International Journal of Medicinal Mushrooms - IJMM" (2013), "Annals of Microbiology" (2013-2014), "Biomed Research International" (2013), "PLOS one" (2013-2014).
- Evaluator of research programmes for the Pest Management Center, Agriculture and Agri-Food, Ministry of Agriculture, Canada (2007)

## 8. PUBLICATIONS

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### 8.1. MONOGRAPHS

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- 8.1.1. Kouvelis V. N. (2002). "A study of the mitochondrial genome of the entomopathogenic fungus *Verticillium lecanii*." Thesis Dissertation, Laboratory of Genetics, Dept. of Genetics & Biotechnology, Faculty of Biology, National & Kapodistrian University of Athens.

### 8.2. ARTICLES IN INTERNATIONAL SCIENTIFIC JOURNALS

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- 8.2.1. 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.,

- Pappas, K.M. (2014). Finished genome of *Zymomonas mobilis* subsp. *mobilis* strain CP4, an applied ethanol producer. *Genome Announcements* 2: e00845-13.
- 8.2.2. Krimitzas A., Pyrri I., **Kouvelis V.N.**, Kapsanaki-Gotsi E., Typas M.A. (2013). A phylogenetic analysis of Greek isolates of *Aspergillus* species based on morphology, nuclear and mitochondrial gene sequences. *Biomed Research International* 2013:260395. doi: 10.1155/2013/260395.
  - 8.2.3. 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., Pappas, K.M. (2012). Complete genome sequence of the ethanol-producing *Zymomonas mobilis* subsp. *mobilis* centrotpe ATCC 29191. *Journal of Bacteriology* 194: 5966-5967.
  - 8.2.4. **Kouvelis V.N.**, Davenport K.W., Brettin T.S., Bruce D., Detter C., Han C.S., Nolan M., Tapia R., Damoulaki A., Kyrpides N.C., Typas M.A. and Pappas K.M. (2011). Genome Sequence of the Ethanol-Producing *Zymomonas mobilis* subsp. *pomaceae* Lectotype Strain ATCC 29192. *Journal of Bacteriology* 193: 5049-5050.
  - 8.2.5. Pappas K. M., **Kouvelis V.N.**, Saunders E., Brettin T.S., Bruce D., Detter C., Balakireva M., Han C.S., Savvakis G., Kyrpides N.C. and M.A. Typas (2011). Genome Sequence of the Ethanol-Producing *Zymomonas mobilis* subsp. *mobilis* Lectotype Strain ATCC 10988. *Journal of Bacteriology* 193: 5051-5052.
  - 8.2.6. **Kouvelis V.N.**, Wang C., Skrobek A., Pappas, M.A., Typas M.A., Butt T.M. (2011). Assessing the cytotoxic and mutagenic effects of secondary metabolites produced by several fungal biological control agents with the Ames assay and the VITOTOX<sup>®</sup> test. *Mutation Research: Genetic Toxicology and Environmental Mutagenesis* 722: 1-6.
  - 8.2.7. Ghikas\* D.V., **Kouvelis\* V.N.** and Typas M.A. (2010). Phylogenetic and biogeographic implications inferred by mitochondrial intergenic region analyses and ITS1-5.8S-ITS2 of the entomopathogenic fungi *Beauveria bassiana* and *B. brongniartii*. *BMC Microbiology*: 10: 174.  
\* = authors contributed equally
  - 8.2.8. 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.M., Chang Y.-J., Samatova N.F., and Brown S.D. (2009). Improved genome annotation for *Zymomonas mobilis*. *Nature Biotechnology*: 27: 893-894.
  - 8.2.9. **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.
  - 8.2.10. Pantou\* M.P., **Kouvelis\* V.N.** and Typas M.A. (2008). The complete mitochondrial genome of *Fusarium oxysporum*: insights into fungal mitochondrial evolution. *Gene* 419: 7-15  
\* = authors contributed equally
  - 8.2.11. **Kouvelis V.N.**, Sialakouma A. and Typas M.A. (2008). Mitochondrial gene sequences alone or combined with ITS region sequences provide firm molecular criteria for the classification of *Lecanicillium* species. *Mycological Research* 112: 829-844.
  - 8.2.12. **Kouvelis V.N.**, Ghikas D.V., Edgington S., Typas M.A., and Moore D. (2008). *Molecular characterisation of isolates of Beauveria bassiana obtained from*

- 8.2.13. Pramateftaki P.V., **Kouvelis V.N.**, Lanaridis P. and Typas M.A. (2008). The complete mitochondrial genome sequence of the wine yeast *Candida stellata*: intra-species distribution of a novel group-IIB1 intron with eubacterial affiliations. *FEMS Yeast Research* 8: 311-317.
- 8.2.14. Pantou M.P., **Kouvelis V.N.** and Typas M.A. (2006). The complete mitochondrial genome of the vascular wilt fungus *Verticillium dahliae*: a novel gene order for *Verticillium* and a diagnostic tool for species identification. *Current Genetics* 50: 125-136.
- 8.2.15. Ghikas D.V., **Kouvelis V.N.** and Typas M.A. (2006). The complete mitochondrial genome of the entomopathogenic fungus *Metarhizium anisopliae* var. *anisopliae*: gene order and *trn* gene clusters reveal a common evolutionary course for all Sordariomycetes, while intergenic regions show variation. *Archives of Microbiology* 185 (5): 393-401.
- 8.2.16. Pramateftaki P.V., **Kouvelis V.N.**, Lanaridis P. and Typas M.A. (2006). The mitochondrial genome of the wine yeast *Hanseniaspora uvarum*: a unique genome organization among yeast/fungal counterparts. *FEMS Yeast Research* 6: 77-90.
- 8.2.17. **Kouvelis V.N.**, Ghikas D.V. and Typas M.A. (2004). The analysis of the complete mitochondrial genome of *Lecanicillium muscarium* (synonym *Verticillium lecanii*) suggests a minimum common gene organization in mtDNAs of Sordariomycetes: phylogenetic implications. *Fungal Genetics and Biology* 41: 930-940.
- 8.2.18. Zare R, **Kouvelis V.N.**, Typas M.A. and Bridge P.D. (1999). Presence of a 20 bp insertion/deletion in the ITS1 region of *Verticillium lecanii*. *Letters in Applied Microbiology* 28: 258-262.
- 8.2.19. **Kouvelis V.N.**, Zare R, Bridge P.D. and Typas M.A. (1999). Differentiation of mitochondrial subgroups in the *Verticillium lecanii* species complex. *Letters in Applied Microbiology* 28: 263-268.

### 8.3. ARTICLES IN INTERNATIONAL CONFERENCES/SYMPOSIUMS

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- 8.3.1. Ntertili M., Kirmizoglou I., Promponas V.J., Typas M.A., **Kouvelis V.N.** (2013). MitoFun: a curated web-based database of complete mitochondrial genomes offers comparative genome analysis of Fungi. EMBO Conference - Comparative Genomics of Eukaryotic Microorganisms: Complexity Patterns in Eukaryotic Genomes, San Feliu de Quixols, Spain October 19-24, p. 118-119.
- 8.3.2. Constantinidis T., Kalpoutzakis E., **Kouvelis V.N.** (2013). A new species of *Euphorbia* L. (*Euphorbiaceae*) from Greece and its phylogenetic placement within *E. sect. Patellares*. XIV OPTIMA Meeting, Palermo, Italy, September 9-15, p. 111.
- 8.3.3. Pyrri I., **Kouvelis V.N.**, Krimitzas A., Kapsanaki-Gotsi E., Typas M.A. (2013). New insights into phylogenetic affinities within the genus *Aspergillus* based on morphological and multi-gene sequence analysis. ECCO XXXII Athens, June 12-14, pp. 45-46.



- 8.3.4. Gonou-Zagou Z. and **Kouvelis V.N.** (2013). *Inonotus levis*: an emerging alien fungal pathogen of *Populus* spp. in Europe. IUFRO Foliage, shoot and stem diseases, May 20-25, 2013, Brno and Cerna Hora, Czech Republic, pp. 23.
- 8.3.5. Milic N., Kostidis S., Stavrou A., Gonou-Zagou Z., **Kouvelis V.N.**, Fokialakis N. (2012). A polyphasic approach (metabolomics, morphological and molecular analyses) in the systematics of *Cladobotryum* species in Greece. International Congress on Natural Products Research, New York, USA, July 28-August 1.

The Abstract of this work was published in scientific journal "*Planta Medica*" as follows:

Milic et al., (2012). *Planta Med* 78: PG14, DOI: 10.1055/s-0032-1320657

- 8.3.6. Kapsanaki-Gotsi E., Gonou-Zagou Z., Pyrri I., Sergentani A., Angelopoulos A., Delivorias P., Hatzinikolaou D., Fokialakis N., **Kouvelis V.N.**, Krimitzas A., Typas M.A. (2012). Exploring fungal diversity in Greece by morphological, biochemical and molecular tools. In "ECCO XXXI Meeting - Biological Resource Centers: Closing the gap between science and society" Abstracts book (Eds. R. Paterson, M.F. Simões, L. Pereira, C. Santos, N. Lima), Braga, Portugal, June 14-15, p. 87.
- 8.3.7. Ntertilis M., Typas M.A., **Kouvelis V.N.** (2012). Fungal Mitochondrial Genomes: an Excellent Source for Phylogenetic and Species Identification Studies. FEBS/EMBO Course: Mitochondria in Life, Death and Disease, Heraklion, Greece, May 9-13, p. 160.
- 8.3.8. Desiniotis A., **Kouvelis V.N.**, Davenport K., Bruce D., Detter C., Tapia R., Han C., Land M., Hauser L., Chang Y.-J., Pan C., Goodwin L., Woyke T., Kyripides N., Typas M.A., Pappas K.M (2012). Genomic analysis of *Zymomonas mobilis* subsp. *mobilis* ATCC 29191: comparative structural and functional insights. JGI, Walnut Creek, CA, March 22-24.
- 8.3.9. Gonou-Zagou Z., **Kouvelis V.N.**, Krimitzas A., Floudas D., Typas M.A (2011). Morphological and molecular characterization of *Inonotus levis*: a new fungal invasive pathogen for Europe. XVI European Mycological Congress Chalkidiki, Greece p. 137.
- 8.3.10. Angelopoulos A., **Kouvelis V.N.**, Typas M.A., Kapsanaki-Gotsi E. (2011). A morphological and molecular study of *Seiridium* associated with stem-canker disease on *Cupressaceae* in Greece. XVI European Mycological Congress Chalkidiki, Greece, p. 211.
- 8.3.11. **Kouvelis V.N.** (2011). Genetic Identification of the entomopathogenic fungi and its contribution to their selection as Biological Control Agents. BIT 1<sup>st</sup> International Symposium of Mycology, Beijing 29 July - 1 August 2011, p. 259 (Invited speaker).
- 8.3.12. Pappas K.M., **Kouvelis V.N.** and Typas M.A. (2010). Genomics of the ethanol-producing *Zymomonas mobilis*. JGI, Walnut Creek, CA, March 22-24.
- 8.3.13. **Kouvelis V.N.** and Typas M.A. (2008). Mitogenomics: a tool for genetic fingerprinting and fungal phylogeny. JGI, Walnut Creek, CA, September 15-19.
- 8.3.14. **Kouvelis V.N.**, Wang C.S., Skrobek A., Tavoularis S.N., Butt T.M. and Typas M.A. (2004). Ames and Vitotox tests: an ideal combination to determine mutagenicity and cytotoxicity. EC - RAFBCA - IBMA - IOBC Workshop: New

- Insights into Risk Assessment and Registration of Fungal Biocontrol Agents in Europe, Brussels 30 September 2004.
- 8.3.15. **Kouvelis V.N.**, Tavoularis S.N., Pantou M.P., Ghikas D.V. and Typas M.A. (2004). Genetic fingerprinting of fungal BCAs and risk assessment of their metabolites. ETH Zurich 20 November 2004.
  - 8.3.16. **Kouvelis, V.N.**, and Typas, M.A. (2004). Risk assessment of fungal BCAs: What Bbr-Pr1 gene reveals. Cost Action Meeting 842: Biological Control of Pest Insects and Mites with Special Interest to Entomophthorales. Cambridge, U.K., September 2004.
  - 8.3.17. Typas M.A., **Kouvelis V.N.**, Tavoularis S.N., Pantou M.P., and Ghikas D.V. (2004). New methodologies and tools for assessing risks of metabolites. EC - RAFBCA - IBMA - IOBC Workshop: New Insights into Risk Assessment and Registration of Fungal Biocontrol Agents in Europe, Brussels 30 September 2004
  - 8.3.18. **Kouvelis V.N.**, Tavoularis S.N., Pantou M.P., Ghikas D.V. and Typas M.A. (2004). Genetic fingerprinting of BCAs. EC - RAFBCA - IBMA - IOBC Workshop: New Insights into Risk Assessment and Registration of Fungal Biocontrol Agents in Europe, Brussels 30 September 2004.
  - 8.3.19. **Kouvelis V.N.** and Typas M.A. (1997). The use of mt DNA gene probes for the molecular typing and differentiation of *Verticillium lecanii* isolates. 7<sup>th</sup> International *Verticillium* Symposium, Cape Sounion, Athens 6-10 October, 1997 p. 20.
  - 8.3.20. **Kouvelis V.N.** and Typas M.A. (1997). The organization of mitochondrial DNA in *Verticillium lecanii* species. 7<sup>th</sup> International *Verticillium* Symposium, Cape Sounion, Athens 6-10 October, 1997 p. 25, (poster).
  - 8.3.21. **Kouvelis V.N.** and Typas M.A. (1997). Molecular typing of *Verticillium lecanii* isolates based on mitochondrial DNA polymorphisms. IOBC/WPRS Bulletin 20(4): 268 - 273.

#### **8.4. ARTICLES IN PROCEEDINGS OF GREEK CONFERENCES/SYMPOSIUMS**

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- 8.4.1. Ntertilis M., Kirmizoglou I., Promponas V.J., **Kouvelis V.N.**, and Typas M.A. (2013). MiToFun: a curated web-based database of complete fungal mitochondrial genomes. Proceedings of the 8th conference of the Hellenic Society for Computational Biology & Bioinformatics, Lamia, November 22-24, p. 39.
- 8.4.2. Varassas S. and **Kouvelis V.N.** (2013). A study of nuclear encoded genes involved in the replication and transcription of the mitochondrial genomes of the entomopathogenic fungi *Metarhizium anisopliae* and *Beauveria bassiana*. Proceedings of the 35<sup>th</sup> Scientific Conference of Hellenic Association for Biological Sciences, Nafplio, May 23-25, 2013, p. 40-41.
- 8.4.3. Milic N., Stavrou A., Karagiannis I., Gonou-Zagou Z., **Kouvelis V.N.** (2012). Implementation of morphological and molecular data for species determination within the mycetophilous genus *Cladobotryum* in Greece. Ελλάδα. 5<sup>th</sup> Congress of MIKROBIOKOSMOS, Athens, December 13-15, pp 30-31.
- 8.4.4. Desiniotis A., **Kouvelis V.N.**, Davenport K., Bruce D., Detter Ch., Tapia R., Han C., Goodwin L., Woyke T., Kyrpides N.C., Typas M.A., Pappas K.M. (2012). Analysis of the Genome Sequence of the Ethanol-Producing *Zymomonas mobilis*

- subsp. mobilis centrotpe ATCC 29121. 7th Conference of the Hellenic Society for Computational Biology and Bioinformatics (HSCBB), Heraklion, Greece (October 4-6), Session 7 p. 2-3.
- 8.4.5. Stavrou A., Karagiannis I., Gonou-Zagou Z., **Kouvelis V.N.** (2012). Molecular and morphological analyses of strains of the fungicolous genus *Cladobotryum*. Proceedings of the 34<sup>th</sup> Scientific Conference of Hellenic Association for Biological Sciences, Trikala, May 17-19 2012, p. 266-267.
  - 8.4.6. **Kouvelis V.N.**, Ntertilis M. and Typas M.A. (2011). Developing universal primers for the analysis of mitochondrial genomes within the kingdom of fungi. 6th Conference of the Hellenic Society for Computational Biology and Bioinformatics (HSCBB), Patras, Greece (October 7-9), pp. 50.
  - 8.4.7. Kirmitzoglou I., Ntertili M., Tamana S., Kalvari I., Vasiliadis M., **Kouvelis V.N.**, Promponas V.J., and Typas M.A. (2011). MiToFun: a curated database of fungal mitochondrial genomes. 6th Conference of the Hellenic Society for Computational Biology and Bioinformatics (HSCBB), Patras, Greece (October 7-9), pp. 47.
  - 8.4.8. Ntertili M., Typas M.A. and **Kouvelis V.N.** (2011). Analysing mitochondrial genomes: designing and using universal primers within the kingdom of fungi. 4<sup>th</sup> Congress of MIKROBIOKOSMOS, Ioannina, October 21-23, pp 26-27.
  - 8.4.9. Gonou-Zagou Z., **Kouvelis V.N.**, Krimitzas A., Floudas D., Typas M.A. (2011). Morphological and molecular characterisation of *Inonotus levis*: a new fungal invasive pathogen from Europe. 4<sup>th</sup> Congress of MIKROBIOKOSMOS, Ioannina, October 21-23, pp 36-37.
  - 8.4.10. Constantinidis Th. and **Kouvelis V.N.** (2011). Molecular phylogenetics of *Consolida* L. (*Ranunculaceae*). 12<sup>th</sup> Panhellenic Scientific Convention - Hellenic Botanical Society, Rethymno September 29 - October 2, pp. 108-109.
  - 8.4.11. Ntertili M., Typas M.A. and Kouvelis V.N. (2011). Designing and using universal primers for the amplification of mitochondrial genes within the kingdom of fungi. 33<sup>th</sup> Annual Meeting of the Greek Biological Society, Edessa, May 19-21 2011, p. 224-225.
  - 8.4.12. **Kouvelis V.N.**, Saunders E., Brettin T.S., Detter C., Han C., Davenport K., Tapia R., Bruce D., Kyrpides N., Typas M.A., Pappa K.M. (2010). The complete genomes of three ethanol-producing *Zymomonas mobilis* strains: Insights in comparative genomics. 3<sup>rd</sup> Congress of MIKROBIOKOSMOS, Thessaloniki, December 16-18, pp. 58-59.
  - 8.4.13. Tsoupras A.B., **Kouvelis V.N.**, Demopoulos C.N., Pappas K.M., Typas M.A. (2010). *In vitro* anti-inflammatory activities of *Beauveria bassiana* lipid molecules towards platelet activating factor (PAF). 3<sup>rd</sup> Congress of MIKROBIOKOSMOS, Thessaloniki, December 16-18, pp. 138-139.
  - 8.4.14. **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 (HSCBB), Alexandroupolis, Greece (October 17-19), pp. 41.
  - 8.4.15. **Kouvelis V.N.**, Krimitzas A. and Typas M.A. (2009). Phylogenetic discrimination of *Aspergillus* and *Penicillium* species with nuclear and mitochondrial genes. 2<sup>nd</sup> Annual Conference of the Greek National Initiative "Mikrobiokosmos", Athens, 12-14 December 2009, pp. 32-33.

- 8.4.16. **Kouvelis V.N.** and Typas M.A. (2008). Fungal mitochondrial genomes: comparative analysis and genetic identification of species - strains. 1<sup>st</sup> Annual Conference of the Greek National Initiative "Mikrobiokosmos", Athens, 12-14 December 2008, pp. 110-112.
- 8.4.17. **Kouvelis V.N.** and Typas M.A. (2008). Molecular analysis and comparative study of the mitochondrial genomes of Ascomycetes. 30<sup>th</sup> Annual Meeting of the Greek Biological Society, Thessaloniki, May 22-24 2008, p. 228-229.
- 8.4.18. **Kouvelis V.N.** and Typas M.A. (2006). qPCR and fungi of biotechnological interest. 1<sup>st</sup> National Meeting of Real-Time qPCR Users of Stratagene. Pasteur Institute, Athens, 22 November 2006.
- 8.4.19. Ghikas D.V., **Kouvelis V.N.** and Typas M.A. (2006). The mitochondrial genome of fungi *Beauveria bassiana* και *Beauveria brongniartii*: Gene order conservation, phylogenetic analysis and functional organization. 29<sup>th</sup> Annual Meeting of the Greek Biological Society, Ioannina, 17-20 May 2006, p. 49-50.
- 8.4.20. **Kouvelis V.N.** and Typas M.A. (1998). Approaching the structure and organization of the mtDNA of the entomopathogenic fungus *Verticillium lecanii*. 20<sup>th</sup> Annual Meeting of the Greek Biological Society, Samos, 28-31 May 1998, p. 141-142.

## 8.5. BOOK CHAPTERS

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- 8.5.1. Typas M.A. and **Kouvelis V.N.** (2012) Assessing genotoxic effects of microbial products. In "Beneficial Microorganisms in Agriculture, Food and the Environment: Safety Assessment and Regulation" (Sundh I., Wilcks A. and Goettel M.S, eds.) CABI Publications, pp. 256-274.
- 8.5.2. Typas M.A. and **Kouvelis V.N.** (2011). Phylogenetic Analysis of the entomopathogenic fungi. In "Microbial insecticides: Principles and Applications" (Borgio F.J. and Kwar N.S., eds.). Nova Science Publications, pp. 121-148.
- 8.5.3. Typas M.A., Pantou M.P. and **Kouvelis V.N.** (2011). MtDNA and rDNA: Two different evolutionary lines combined for genetic differentiation, taxonomy and phylogeny in ascomycetes. XVI European Mycological Congress Chalkidiki, Greece pp. 170-188
- 8.5.4. **Kouvelis V.N.** and Typas M.A. (2000). The use of mt DNA gene probes for the molecular typing and differentiation of *Verticillium lecanii* isolates. In "Advances in *Verticillium*. Research and disease management" (Tjamos E.C., Rowe R.C., Heale J.B. and Fravel D.R., eds.) pp. 63-68, APS Press, Minnesota USA.
- 8.5.5. Typas M.A., Mavridou A. and **Kouvelis V.N.** (1998). Mitochondrial DNA differences provide maximum intraspecific polymorphism in the entomopathogenic fungi *Verticillium lecanii* and *Metarhizium anisopliae*, and allow isolate detection/identification. In "Molecular Variability of Fungal Pathogens" (Bridge P., Couteaudier Y. and Clarkson J, eds.) pp.: 227-237. CAB International Wallingford Oxon, UK.

## 8.6. GENOME - GENE SUBMISSIONS

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### GENOMES

- 8.6.1.1. Lucas S., Copeland A., Lapidus A., Glavina del Rio T., Tice H., Bruce D., Goodwin L., Pitluck S., Saunders E., Brettin T., Detter J.C., Han C., Larimer F., Land M., Hauser L., Kyrpides N., Ovchinnikova G., Kouvelis V., Typas M.A. and Pappas K.M. (2012). *Zymomonas mobilis* subsp. *mobilis* NCIMB 11163 chromosome, complete (and its plasmids). Κατατέθηκε στη διεθνή γονιδιακή τράπεζα δεδομένων GenBank - Accession Number: NC\_013355 (NC\_013357, NC\_013356, NC\_013358).
- 8.6.1.2. Huntemann M., Wei C.-L., Han J., Detter J.C., Han C., Tapia R., Davenport K., Bruce D., Chen A., Krypides N., Mavromatis K., Markowitz V., Szeto E., Ivanova N., Mikhailova N., Ovchinnikova G., Pagani I., Pati A., Goodwin L., Peters L., Pitluck S., Woyke T., Desiniotis A., Kouvelis V., Typas M. and Pappas K. (2012). *Zymomonas mobilis* subsp. *mobilis* ATCC 29191 chromosome, complete genome (and its plasmids). Κατατέθηκε στη διεθνή γονιδιακή τράπεζα δεδομένων GenBank - Accession Number: NC\_018145 (NC\_018146, NC\_018147, NC\_018148).
- 8.6.1.3. Lucas S., Copeland A., Lapidus A., Cheng J.-F., Goodwin L., Pitluck S., Davenport K., Brettin T., Detter J.C., Han C., Tapia R., Land M., Hauser L., Kyrpides N., Ivanova N., Mikhailova N., Pagani I., Kouvelis V.N., Typas M.A., Pappas K.M. and Woyke T. (2012). *Zymomonas mobilis* subsp. *pomaceae* ATCC 29192 chromosome, complete genome (and its plasmids). Κατατέθηκε στη διεθνή γονιδιακή τράπεζα δεδομένων GenBank - Accession Number: NC\_015709 (NC\_015715, NC\_015716).
- 8.6.1.4. Lucas S., Han J., Lapidus A., Cheng J.-F., Goodwin L., Pitluck S., Saunders E., Detter J.C., Han C., Tapia R., Land M., Hauser L., Kyrpides N., Ivanova N., Mikhailova N., Pagani I., Kouvelis V.N., Typas M.A., Pappas, K.M. and Woyke, T. (2012). *Zymomonas mobilis* subsp. *mobilis* ATCC 10988 chromosome, complete genome (and its plasmids). Κατατέθηκε στη διεθνή γονιδιακή τράπεζα δεδομένων GenBank - Accession Number: NC\_017262 (NC\_017180, NC\_017183, NC\_017181, NC\_017184, NC\_017182, NC\_017185).
- 8.6.1.5. Ghikas D.V., Kouvelis V.N. and Typas M.A. (2007). *Beauveria bassiana* strain Bb147 mitochondrion, complete genome. Submitted to GenBank - Accession Number: EU100742.
- 8.6.1.6. Ghikas D.V., Kouvelis V.N. and Typas M.A. (2007). *Beauveria brongniartii* strain IMBST95031 mitochondrion, complete genome. Submitted to GenBank - Accession Number: EU100743.
- 8.6.1.7. Pantou M.P., Kouvelis V.N. and Typas M.A. (2006). *Verticillium dahliae* mitochondrion, complete genome. Submitted to GenBank - Accession Number: DQ351941.
- 8.6.1.8. Pramateftaki P.V., Kouvelis V.N., Lanaridis P. and Typas M.A. (2006). *Hanseniaspora uvarum* mitochondrion, complete genome. Submitted to GenBank - Accession Number: DQ058142.
- 8.6.1.9. Ghikas D.V., Kouvelis V.N. and Typas M.A. (2005). *Metarhizium anisopliae* strain ME1 mitochondrion, complete genome. Submitted to GenBank - Accession Number: AF884128.

- 8.6.1.10. **Kouvelis V.N.**, Ghikas D.V. and Typas M.A. (2004). *Lecanicillium muscarium* mitochondrion, complete genome. Submitted to GenBank - Accession Number: AF487277.

## GENES

- 8.6.2.1. Krimitzas A., **Kouvelis V.N.** and Typas M.A. (2011). Sequences of (α) nuclear regions ITS1-5.8S-ITS2 and IGS, (b) nuclear genes *benA* and *rpb2* and (c) mitochondrial genes *nms* and *cox1* from *Aspergillus* and *Penicillium* species. Submitted to GenBank - Accession Numbers: EU982008 - EU982182, FJ004276 - FJ004623
- 8.6.2.2. Ghikas D.V., **Kouvelis V.N.**, and Typas M.A. (2009). Sequences of (α) nuclear region ITS1-5.8S-ITS2 and intergenic mitochondrial regions (b) *nad3-atp9* (c) *atp6-rns* of *Beauveria* species with an emphasis at *B. bassiana* strains. Submitted to GenBank - Accession Numbers: FJ972862 - FJ973076.
- 8.6.2.3. **Kouvelis V.N.**, Ghikas D.V. and Typas M.A. (2007). Sequences of (α) nuclear region ITS1-5.8S-ITS2 and intergenic mitochondrial regions (b) *nad3-atp9* (c) *atp6-rns* of *Beauveria* strains. Submitted to GenBank - Accession Numbers: EU086396 - EU086455.
- 8.6.2.4. **Kouvelis V.N.**, Sialakouma A. and Typas M.A. (2007). Sequences of (α) nuclear regions ITS1-5.8S-ITS2 and (b) mitochondrial genes *nad1*, *nad3* and *rns* from *Lecanicillium* and *Simplicillium* species. Submitted to GenBank- Accession Numbers: EF512850 - EF513080.
- 8.6.2.5. Pramateftaki P.V., **Kouvelis V.N.**, Lanaridis P. and Typas M.A. (2007). Sequences of (α) nuclear regions ITS1-5.8S-ITS2 and (b) *rnl* with introns from strains of the yeast *Candida zemplinina*. Submitted to GenBank- Accession Numbers: EU183506-EU183529 και EU047747 - EU047748.
- 8.6.2.6. Pantou M.P., **Kouvelis V.N.** and Typas M.A. (2006). Sequences from mitochondrial intergenic regions (a) *nad3-nad1* (b) *nad1-nad4* from strains of *Verticillium dahliae* and *Verticillium longisporum*. Submitted to GenBank- Accession Numbers: DQ351942 - DQ351957.
- 8.6.2.7. Ghikas D.V., **Kouvelis V.N.** and Typas M.A. (2005). Sequences from mitochondrial intergenic regions (a) *nad1-nad4*, (b) *nad3-atp9* and (c) *atp9-cox2* from strains of the entomopathogenic genus *Metarhizium*. Submitted to GenBank - Accession Numbers: DQ243837 - DQ243889.

## 8.7. INVITED SPEAKER IN INTERNATIONAL CONFERENCES

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- 8.7.1 Kouvelis V.N. (2011). Genetic Identification of the entomopathogenic fungi and its contribution to their selection as Biological Control Agents. BIT 1<sup>st</sup> International Symposium of Mycology, Beijing 29 July - 1 August 2011, p. 259.
- 8.7.2 Typas M.A., Pantou M.P., Kouvelis V.N. (2011). MtDNA and rDNA: Two different evolutionary lines combined for genetic differentiation, taxonomy and phylogeny in ascomycetes. XVI European Mycological Congress Chalkidiki, Greece pp. 170-188.
- 8.7.3 Kouvelis V.N., Tavoularis S.N., Pantou M.P., Ghikas D.V. and Typas M.A. (2004). Genetic fingerprinting of fungal BCAs and risk assessment of their metabolites. ETH Zurich 20 November 2004.