

Pantelis G Bagos

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Current Appointment

- 2014-to date: Associate Professor at the Department of Computer Science and Biomedical Informatics, University of Thessaly
- 2010-2011, 2012-to date: Visiting Lecturer at the Hellenic Open University

Past Appointments

- 2008-2014: Assistant Professor at the Department of Computer Science and Biomedical Informatics, University of Thessaly (tenured)
- 2006-2008: Visiting Assistant Professor at the Department of Computer Science and Biomedical Informatics, University of Central Greece (now University of Thessaly).
- 2006-2007: Visiting Lecturer at the Department of Computer Science and Technology, University of Peloponnese.
- 2005-2008: Post-doctoral Research Fellow at the Department of Cell Biology and Biophysics, Faculty of Biology, University of Athens.

Education:

- 2001-2005: Ph.D in Bioinformatics, Department of Cell Biology and Biophysics, Faculty of Biology, University of Athens, Greece
- 2001-2002: Postgraduate Certificate of Education (PGCE) in Adults Learning, Hellenic Open University, Greece
- 1999-2001 : M.Sc in Biostatistics, Department of Mathematics and Medical School of Athens, University of Athens, Greece
- 1992-1997: B.Sc. in Biology, Faculty of Biology, University of Athens, Greece

Journal Publications:

83 publications in peer-reviewed journals (<http://www.compngen.org/publications/>)

Conference Proceedings and Book Chapters:

6 publications in peer-reviewed conference proceedings, 2 book chapters, 16 presentations in international conferences, > 100 presentations in national conferences.

Total ISI Impact Factor:

261.636 (3.152/paper)

Citations (<http://www.compngen.org/people/pbagos/citations/>):

Scopus: citations= 1738, h-index=25, m-index=1.92

Google Scholar: citations= 2506, h-index=29, m-index=2.23

Teaching experience at the under-graduate level (semester courses):

- Biology I, Biology II, Bioinformatics I, Bioinformatics II, Special Topics on Bioinformatics and Bioethics at the Department of Computer Science and Biomedical Informatics, University of Central Greece (now, University of Thessaly)
- Bioinformatics, at the Department of Computer Science and Technology, University of Peloponnese.
- Genetics (module including the semester courses Genetics, Physiology and Evolution), at the Hellenic Open University (BSc Programme in «Physical Sciences»)

Teaching experience at the post-graduate level (semester courses):

- Principles and methods of Bioinformatics, Statistics in Bioinformatics, Computational Sequence Analysis, Methodology of Research, Programming in Perl, at the University of Athens (MSc Programme in «Bioinformatics»)
- Research Methodology, Special Topics in Bioinformatics, at University of Thessaly (MSc Programme in «Computational Medicine and Biology»)
- Advanced Biology, at the Hellenic Open University (MSc Programme in «Specialization in Science for High-School Teachers»)

Research Interests:

■ **Bioinformatics**

- Prediction of structure and function of membrane proteins
- Prediction of protein sorting signals
- Development of algorithms for Hidden Markov Models
- Biological Databases
- Complex Biological Networks

■ **Biostatistics**

- Methodology of meta-analysis
- Genetic Epidemiology
- Multifactorial diseases
- Gene expression
- Biostatistics software

Supervision:

G. Braliou, K. Pantavou, A. Pavlopoulou (current Post-Doctoral Fellows), G. Pavlopoulos (Post-Doctoral Fellow, 2010-2011), S. Bonovas (Post-Doctoral Fellow, 2011-2012), N. Dimou (current PhD student, MSc 2011), P. Kontou (current PhD student, MSc 2011), T. Liakopoulos (current PhD student, MSc 2006), G. Tsaousis (PhD student co-supervision 2014, MSc 2010), M. Theodoropolou (PhD student co-supervision 2014, MSc 2010), V. Manioti (MSc 2011), H. Assimakis (MSc 2010), M. Hatzou (MSc 2010), S. Chatzi (MSc 2010), F. Mantzari (MSc 2010), K. Spyridopoulou (MSc 2010), S. Stoubos (MSc 2010), P. Anthopoulos (MSc 2009), A. Blika (MSc 2009), P. Kalovyryna (MSc 2009), O. Limitsiou (MSc 2009), S. Mavridis (MSc 2009), Ch. Mavropoulos (MSc 2009), N. Tsoukalas (MSc 2009).

Supervision of the Diploma Thesis of more than 20 undergraduate students (B.Sc).

Awards:

- "NRW Undergraduate Science Award", 2007, from the German State of North Rhine-Westphalia to Nikolaos Sgourakis (BSc student) for the best undergraduate student publication in the area of Bioinformatics.
- Best student poster award, 2010, to Maria Hatzou (MSc student) and, 2012 to Theodosia Charitou (2012), for poster presentations in the HSCBB10 and HSCBB12.

Meeting and conference organization:

MIND Workshop (Mining Complex Entities from Network and Biomedical Data), Co-located with ECML/PKDD 2011, European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases; 8th IEEE International Conference on Bioinformatics and BioEngineering (BIBE), Athens (2008); 29th Conference of HSBS, Kavala (2007); 30th Conference of HSBS, Thessaloniki (2008); 3rd Conference of HSCBB, Thessaloniki (2008); 4th Conference of HSCBB, Athens (2009); 5th Conference of HSCBB, Alexandroupolis

(2010);); 6th Conference of HSCBB, Patras (2011), 7th Conference of HSCBB, Heraklion (2012), 8th Conference of HSCBB, Lamia (2013, Chair), 9th Conference of HSCBB, Athens (2014), 10th Conference of HSCBB, Athens (2015, Chair)

Editorial Board member:

BMC Research Notes, Plos ONE, The Open Bioinformatics Journal, Journal of integrated OMICS, Dataset Papers (Medicine, Biology)

Reviewer:

Reviewer for 43 international journals (BMC Bioinformatics, Nucleic Acids Research, Bioinformatics, FEBS Letters, Proteins: Structure, Function and Bioinformatics, BMC Cell Biology, Protein Science, BMC Research Notes, PLoS ONE, Molecular Simulation, Journal of Proteome Research, BBA - Proteins and Proteomics, Chest, Journal of Hypertension, American Journal of Hypertension, Hypertension Research, European Journal of Neurology, European Journal of Endocrinology, International Journal of Immunogenetics, Journal of Applied Oral Science, Journal of Clinical Laboratory Analysis, Physiological Genomics, Pharmacogenetics and Genomics, The Breast, The Open Bioinformatics Journal Human Molecular Genetics, Journal of Medical Genetics, Disease Markers, Journal of Medical Microbiology, Bioorganic & Medicinal Chemistry, Yonsei Medical Journal, Archives of Oral Biology, Amino acids, Computers in Biology and Medicine, Journal of Clinical Epidemiology, International Journal of Biostatistics, Statistical Applications in Genetics and Molecular Biology, Statistics in Medicine, American Journal of Epidemiology, Genetic Epidemiology, BMC Medical Research Methodology, BMC Medical Genetics, Research Synthesis Methods)

Professional activities:

Founding member and member of the board of directors (2009-to date) of the Hellenic Society for Computational Biology and Bioinformatics (<http://www.hscbb.gr/>). Member of ASA, AMS, ISCB, HSBS.

Invited Lectures:

1. **Bioinformatics Education in Greece**, presented at the *Conference of the Hellenic Society for Computational Biology and Bioinformatics (HSCBB)*, 2015
2. **Integration of data from multiple sources: meta-analysis and synthesis analysis**, presented at the *Athens University of Economics and Business*, 2015
3. **Specialized Protein Databases in Greece**, presented at the *Protein Bioinformatics and Community Resources retreat, Wellcome Trust Conference Centre*, 2014
4. **Hidden Markov Models for the prediction of bacterial signal peptides and other sorting signals**, presented at the *SciLifeLab, Stockholms University*, 2014
5. **Markov models and Hidden Markov Models in Bioinformatics**, presented at the *Department of Biochemistry and Biotechnology, University of Thessaly*, 2013
6. **Multivariate meta-analysis**, presented at *New York University School of Medicine*, 2012
7. **Meta-analysis of correlated data**, presented at the *Department of Mathematics, University of Athens*, 2011
8. **Bioinformatics and Computational Biology in Greece: a bibliometric study**, presented at the *Conference of the Hellenic Society for Computational Biology and Bioinformatics (HSCBB)*, 2010
9. **Computational and Statistical Genetics**, presented at the *32nd Conference of the Hellenic Society of Biological Sciences (HSBS)*, 2010
10. **Computational Biology and Bioinformatics at the University of Central Greece**, presented at the *Athens ELIXIR meeting*, 2009
11. **Computational analysis of G-protein coupled receptors**, presented at the *4th Hellenic Crystallographic Association (HeCrA) Conference*, 2008

12. **Hidden Markov Models and applications in Bioinformatics: Prediction of transmembrane topology and signal peptides**, presented at the *Conference of the Hellenic Society for Computational Biology and Bioinformatics (HSCBB)*, 2008
13. **Prediction of β -barrel outer membrane proteins: application to complete genomes**, presented at the *Hellenic Bioinformatics Forum (HBF)*, 2007
14. **Genetic polymorphisms and diseases: meta-analysis of genetic association studies**, presented at the *29th Conference of the Hellenic Society of Biological Sciences (HSBS)*, 2007
15. **Hidden Markov Models and applications in biology**, presented at the *Athens University of Economics and Business*, 2006
16. **Algorithms for structure prediction of bacterial β -barrel outer membrane proteins**, presented at the *International Greek Biotechnology Forum (IGBF)*, 2005

Publications:

Bioinformatics

1. Pavlopoulou A, Savva I, Louka M, Bagos PG, Vorgias CE, Michalopoulos I, Georgakilas AG. **Unraveling the mechanisms of extreme radioresistance in prokaryotes: Lessons from nature**. *Mutation Reviews* 2015 (in press)
2. Georgakilas AG, Pavlopoulou A, Louka M, Nikitaki Z, Vorgias CE, Bagos PG, Michalopoulos I. **Emerging molecular networks common in ionizing radiation, immune and inflammatory responses by employing bioinformatics approaches**. *Cancer Lett.* 2015
3. Holliday GL, Bairoch A, Bagos PG, Chatonnet A, Craik DJ, Flinn RD, Henrissat B, Landsman D, Manning G, Nagano N, O'Donovan C, Pruitt KD, Rawlings ND, Saier M, Sowdhamini R, Spedding M, Srinivasan N, Vriend G, Babbitt PC, Bateman A. Key challenges for the creation and maintenance of specialist protein resources. *Proteins*. 2015
4. Babbitt PC, Bagos PG, Bairoch A, Bateman A, Chatonnet A, Chen MJ, Craik DJ, Flinn RD, Gloriam D, Haft DH, Henrissat B, Holliday GL, Isberg V, Landsman D, Lenfant N, Manning G, Nagano N, Srinivasan N, O'Donovan C, Pruitt KD, Sowdhamini R, Rawlings ND, Saier M, Sharman JL, Spedding M, Tsirigos KD, Vastermark A, Vriend G. **Creating a Specialist Protein Resource Network: A meeting report for the Protein Bioinformatics and Community Resources Retreat**. *Database*, 2015
5. Tsaousis GN, Bagos PG, Hamodrakas SJ. **HMMpTM: Improving transmembrane protein topology prediction using phosphorylation and glycosylation site prediction** *Biochimica et Biophysica Acta (BBA)-Proteins and Proteomics* 2013 (in press)
6. Pavlopoulos GA, Secrier M, Moschopoulos CN, Soldatos TG, Kossida S, Aerts J, Schneider R, Bagos PG. **Using graph theory to analyze biological networks**. 2011, *BioData Mining*, 4:10
7. Tsirigos KD, Bagos PG, Hamodrakas SJ. **OMPdb: A database of beta-barrel outer membrane proteins from Gram-negative bacteria**, 2011, *Nucleic Acids Research* 39(Database issue):D324-31
8. Bagos PG, Nikolaou EP, Liakopoulos TD, Tsirigos KD. **Combined prediction of Tat and Sec signal peptides with Hidden Markov Models**, 2010, *Bioinformatics*, 26: 2811-2817
9. Satagopam VP, Theodoropoulou MC, Stampolakis CK, Pavlopoulos GA, Papandreou NC, Bagos PG, Schneider R, Hamodrakas SJ. **GPCRs, G-proteins, Effectors and their interactions: Human-gpDB, a database employing advanced visualization tools and data integration techniques**. *Database*, 2010
10. Tsaousis GN, Tsirigos KD, Andrianou XD, Liakopoulos TD, Bagos PG, Hamodrakas SJ. **ExTopoDB: A database of experimentally derived topological models of transmembrane proteins**. 2010, *Bioinformatics*, 26(19):2490-2
11. Bagos PG, Tsirigos KD, Plessas SK, Liakopoulos TD, Hamodrakas SJ. **Prediction of signal peptides in Archaea**, *Protein Engineering Design and Selection*, 2009, 22(1): 27-35

12. Bagos PG, Tsaousis GN, Hamodrakas SJ. **How many 3D structures do we need to train a predictor?** 2009, *Genomics Proteomics and Bioinformatics* 7(3): 128-137
13. Bagos PG, Tsirigos KD, Liakopoulos TD, Hamodrakas SJ. **Prediction of lipoprotein signal peptides in Gram-positive bacteria with a Hidden Markov Model**, 2008, *J Proteome Research*, 7(12):5082-93
14. Theodoropoulou MC, Bagos PG, Spyropoulos IC, Hamodrakas SJ. **gpDB: a database of G-proteins, GPCRs, Effectors and their interactions**. *Bioinformatics*. 2008, 24(12):1471-2
15. Litou ZI, Bagos PG, Tsirigos KD, Liakopoulos TD, Hamodrakas SJ. **Prediction of Cell Wall sorting signals in Gram-positive bacteria with a Hidden Markov Model: application to complete genomes**. *Journal of Bioinformatics and Computational Biology*, 2008 6(2):387-401
16. Valavanis IK, Bagos PG, Emiris IZ. **β -barrel Transmembrane Proteins: Geometric Modelling, Detection of Transmembrane Region, and Structural Properties**. *Computational Biology and Chemistry*, 2006, 30(6):416-24
17. Bagos PG, Liakopoulos TD, Hamodrakas SJ. **Algorithms for incorporating prior topological information in HMMs: Application to transmembrane proteins**. 2006, *BMC Bioinformatics*; 7:189
18. Petsalaki EI, Bagos PG, Litou ZI, Hamodrakas SJ. **PredSL: A tool for the N-terminal sequence-based prediction of subcellular location**. 2006, *Genomics Proteomics and Bioinformatics*, 4(1); 48-55
19. Sgourakis NG, Bagos PG, Hamodrakas SJ. **Prediction of the coupling specificity of GPCRs to four families of G-proteins using Hidden Markov Models and Artificial Neural Networks**. *Bioinformatics*, 2005, 21(22): 4101-6.
20. Sgourakis NG, Bagos PG, Papasaikas PK, Hamodrakas SJ. **Prediction of GPCRs coupling specificity to G-proteins using refined profile hidden Markov models**. *BMC Bioinformatics*, 2005, 6:104.
21. Bagos PG, Liakopoulos TD, Hamodrakas SJ. **Evaluation of methods for predicting the topology of β -barrel outer membrane proteins and a consensus prediction method**. *BMC Bioinformatics*, 2005, 6:7.
22. Elefsinioti AL, Bagos PG, Spyropoulos IC, Hamodrakas SJ. **A database for G Proteins and their interaction with GPCRs**. *BMC Bioinformatics*, 2004, 5:208.
23. Bagos PG, Liakopoulos TD, Promponas VJ, Hamodrakas SJ. **Topology prediction of β -barrel outer membrane proteins**. *PINSA-B*, 2005, B71 (1): 19-41.
24. Bagos PG, Liakopoulos TD, Hamodrakas SJ. **Finding beta-barrel outer membrane proteins with a Markov chain model**. *WSEAS Transactions on Biology and Biomedicine*, 2004, 2(1) 186-189.
25. Spyropoulos IC, Liakopoulos TD, Bagos PG, Hamodrakas SJ. **TMRPres2D - High quality depictions of transmembrane protein subunits**. *Bioinformatics*, 2004, 20(17) 3258-3260.
26. Papasaikas PK, Bagos PG, Litou ZI, Promponas VJ, Hamodrakas SJ. **PRED-GPCR: GPCR recognition and family classification server**. *Nucleic Acids Res*, 2004, 32(Web Server Issue):W380-382.
27. Bagos PG, Liakopoulos TD, Spyropoulos IC, Hamodrakas SJ. **PRED-TMBB: A web server for predicting the topology of β -barrel outer membrane proteins**. *Nucleic Acids Res*, 2004, 32(Web Server Issue). W400-404.
28. Bagos PG, Liakopoulos TD, Spyropoulos IC, Hamodrakas SJ. **A Hidden Markov Model capable of predicting and discriminating β -barrel outer membrane proteins**. *BMC Bioinformatics*, 2004, 5:29.
29. Papasaikas PK, Bagos PG, Litou ZI, Hamodrakas SJ. **A novel method for GPCR recognition and family classification, using fingerprints derived from profile Hidden Markov Models**. *SAR QSAR Environ Res*, 2003, 14(5-6): 413-420.

Biostatistics

30. Bagos PG. **Meta-analysis in Stata using gllamm**. *Research Synthesis Methods* 2015 (in press)
31. Bagos PG, Adam M. **On the Covariance of Regression Coefficients**. *Open Journal of Statistics*. 2015 (in press)
32. Braliou GG, Pantavou KG, Kontou PI, Bagos PG. **Polymorphisms of the CD24 Gene Are Associated with Risk of Multiple Sclerosis: A Meta-Analysis**. *International Journal of Molecular Sciences*. 2015, 16(6): 12368-12381
33. Braliou GG, Grigoriadou AM, Kontou PI, Bagos PG. **The role of genetic polymorphisms of the Renin-Angiotensin System in renal diseases: A meta-analysis**. *Comput Struct Biotechnol J*. 2014 Jun 11;10(16):1-7
34. Nikolopoulos G, Bagos P, Tsangaris I, Tsiara C, Kopterides P, Vaiopoulos A, Kapsimali V, Bonovas S, Tsantes A. **The association between Plasminogen Activator Inhibitor type 1 (PAI-1) levels, PAI-1 4G/5G polymorphism, and myocardial infarction: a Mendelian Randomization meta-analysis** *Clinical Chemistry and Laboratory Medicine*, 2014
35. Pereira TV, Kimura L, Suwazono Y, Nakagawa H, Daimon M, Oizumi T, Kayama T, Kato T, Li L, Chen S, Gu D, Renner W, März W, Yamada Y, Bagos PG, Mingroni-Netto RC. **Multivariate meta-analysis of the association of G-protein beta 3 gene (GNB3) haplotypes with cardiovascular phenotypes**. *Mol Biol Rep*. 2014
36. Efthimiou O, Mavridis D, Cipriani A, Leucht S, Bagos P, Salanti G. **An approach for modelling multiple correlated outcomes in a network of interventions using odds ratios**. *Stat Med* 2014
37. Koletsi D, Fleming PSS, Sheera J, Bagos P, Pandis N. **Are sample sizes clear and justified in RCTs published in dental journals?** *PLoS ONE*, 2013
38. Ioannidou V, Ioannidis A, Magiorkinis E, Bagos P, Nicolaou C, Legakis N, Chatzipanagiotou S **Multilocus sequence typing (and phylogenetic analysis) of Campylobacter jejuni and Campylobacter coli strains isolated from clinical cases in Greece** 2013 *BMC research notes* 6 (1), 359
39. Tsantes AE, Kopterides P, Bonovas S, Bagos P, Antonakos G, Nikolopoulos GK, Gialeraki A, Kapsimali V, Kyriakou E, Kokori S, Dima K, Armaganidis A, Tsangaris I. **Effect of angiotensin converting enzyme gene I/D polymorphism and its expression on clinical outcome in acute respiratory distress syndrome**. *Minerva Anesthesiol*. 2013;79(8):861-70.
40. Bonovas S, Nikolopoulos GK, Bagos PG. **Bisphosphonate Use and Risk of Colorectal Cancer: A Systematic Review and Meta-analysis**. *British Journal of Clinical Pharmacology*, 2013 76(3):329-337
41. Bagos PG. **Genetic model selection in genome-wide association studies: robust methods and the use of meta-analysis**. *Statistical Applications in Genetic and Molecular Biology*, 2013 12(3):285-308
42. Tsiara C, Nikolopoulos GK, Dimou N, Bagos P, Saroglou G, Velonakis E, Hatzakis A. **Effect of Hepatitis C Virus on Immunologic and Virologic Response in HIV Infected Patients Initiating Highly Active Antiretroviral Therapy: a Meta-Analysis** *Journal of Viral Hepatitis* 2013, 20(10) 715-724
43. Bangalore S, Pursnani S, Kumar S, Bagos PG. **Percutaneous Coronary Intervention versus Optimal Medical Therapy for Prevention of Spontaneous Myocardial Infarction in Subjects with Stable Ischemic Heart Disease**. *Circulation*. 2013 127 (7), 769-781
44. Rabe GL, Wellmann J, Bagos P, Busch MA, Hense HW, Spies C, Weiss-Gerlach E, McCarthy W, Gareca Arizaga MJ, Neuner B. **Efficacy of Emergency Department-Initiated Tobacco Control--Systematic Review and Meta-analysis of Randomized Controlled Trials**. *Nicotine Tob Res*. 2013 15 (3), 643-655
45. Bonovas S, Nikolopoulos GK, Bagos PG **Use of fibrates and cancer risk: a systematic review and meta-analysis of 17 long-term randomized placebo-controlled trials** 2012 *PLoS ONE* 7 (9), e45259

46. Stoubos S, Anthopoulos PG, Hamodrakas SJ, Bagos PG. **The association between apolipoprotein E gene polymorphisms and essential hypertension: a meta-analysis of 45 studies including 13940 cases and 16364 controls.** *Journal of Human Hypertension*, 2012 27 (4), 245-255
47. Bagos PG. **On the covariance of two correlated log-Odds Ratios.** *Statistics in Medicine*. 2012 31(14):1418-31
48. Spyridopoulou K, Dimou NL, Hamodrakas SJ, Bagos PG. **Methylene Tetrahydrofolate Reductase gene polymorphisms and their association with methotrexate toxicity: A meta-analysis.** *Pharmacogenetics and Genomics*, 2012, 22 (2), 117-33
49. Tsiara CG, Nikolopoulos GK, Bagos PG, Goujard C, Katzenstein TL, Minga AK, Rouzioux C, Hatzakis A. **Impact of HIV Type 1 DNA Levels on Spontaneous Disease Progression: A Meta-Analysis.** *AIDS Res Hum Retroviruses*. 2012, 28(4): 366-373
50. Chatzigeorgiou KS, Sergentanis TN, Tsiodras S, Hamodrakas SJ, Bagos PG. **Phoenix 100 versus Vitek 2 in the identification of Gram positive and Gram negative bacteria: a comprehensive meta-analysis.** *J Clin Microbiol*. 2011 49(9):3284-91
51. Bagos PG, Dimou NL, Liakopoulos TD, Nikolopoulos GK. **Meta-analysis of Family-based and Case-control Genetic Association Studies That Use the Same Cases**, 2011 *Statistical Applications in Genetics and Molecular Biology*, 10(1):Article 19
52. Bagos PG, Liakopoulos TD. **A multipoint method for meta-analysis of genetic association studies.** 2010, *Genetic Epidemiology*, 34(7):702-15
53. Nikolopoulos GK, Bagos PG, Lytras T, Bonovas S. **An Ecological Study of the Determinants of Differences in 2009 Pandemic Influenza Mortality Rates between Countries in Europe**, 2011, *PLoS One*. 2011;6(5):e19432
54. Bagos PG. **Meta-analysis of haplotype-association studies: Comparison of methods and an empirical evaluation of the literature**, *BMC Genetics* 2011, 12:8
55. Nikolopoulos GK, Bagos PG, Bonovas S. **Developing the Evidence Base for Cancer Chemoprevention: Use of Meta-Analysis.** *Current Drug Targets*, 2011, 12(13):1989-97
56. Nikolopoulos GK, Masgala A, Tsiara C, Limitsiou OK, Karnaouri AC, Dimou NL, Bagos PG. **Cytokine gene polymorphisms in multiple sclerosis: a meta-analysis of 45 studies including 7,379 cases and 8,131 controls.** 2011 *European Journal of Neurology*, in 18(7):944-51
57. Bagos PG. **A unification of multivariate methods for meta-analysis of genetic association studies.** *Statistical Applications in Genetics and Molecular Biology*, 2008, 7(1), Article 13
58. Tsantes A, Tsangaris I, Nikolopoulos G, Bagos P, Kopterides P, Antonakos G, Dimopoulou I, Vrioni G, Kapsimali V, Dima K, Armaganidis A, Travlou A. **The effect of homocysteine on the clinical outcomes of ventilated patients with severe sepsis.** *Minerva Anesthesiologia*, 2010, 76(10):787-94
59. Anthopoulos PG, Hamodrakas SJ, Bagos PG. **Apolipoprotein E polymorphisms and type 2 Diabetes: a meta-analysis of 30 studies including 5423 cases and 8197 controls.** 2010, *Molecular Genetics and Metabolism*, 100(3):283-91
60. Dimou NL, Nikolopoulos GK, Hamodrakas SJ, Bagos PG. **Fcγ receptor polymorphisms and their association with periodontal disease: A meta-analysis.** 2010 *Journal of Clinical Periodontology*, 37(3):255-65
61. Bonovas S, Nikolopoulos GK, Filioussi K, Peponi E, Bagos PG, Sitaras NM. **Can statin therapy reduce the risk of melanoma? A meta-analysis of randomized controlled trials.** *European Journal of Epidemiology*, 2010;25(1):29-35
62. Ioannidis A, Ikonomi E, Dimou NL, Douma L, Bagos PG. **Polymorphisms of the Insulin Receptor and the Insulin Receptor Substrates genes in Polycystic Ovary Syndrome: a mendelian randomization meta-analysis.** 2010, *Molecular Genetics and Metabolism*, 99(2):174–183
63. Tsangaris I, Tsantes A, Bagos P, Nikolopoulos G, Kroupis C, Kopterides P, Dimopoulou I, Orfanos S, Kardoulaki A, Chideriotis S, Travlou A, Armaganidis A. **The effect of plasma**

- homocysteine levels on clinical outcomes of patients with Acute Lung Injury/Acute Respiratory Distress syndrome. *The American Journal of the Medical Sciences*. 2009, **338**(6):474-477.
64. Bagos PG, Nikolopoulos GK. **Mixed-effects Poisson regression models for meta-analysis of follow-up studies with constant or varying durations**. 2009, *The International Journal of Biostatistics*, **5**(1), Article 21.
 65. Bagos PG, Nikolopoulos GK. **Generalized least squares for assessing trends in cumulative meta-analysis with applications in genetic epidemiology**. 2009, *Journal of Clinical Epidemiology*, **62** (10): 1037-1044
 66. Bagos PG. **Plasminogen Activator Inhibitor-1 4G/5G and 5,10-methylene-tetrahydrofolate reductase C677T polymorphisms in Polycystic Ovary Syndrome**. 2009, *Molecular Human Reproduction*, **15**(1):19-26
 67. Nikolopoulos GK, Dimou NL, Hamodrakas SJ, Bagos PG. **Cytokine gene polymorphisms in periodontal disease: A meta-analysis of 53 studies including 4178 cases and 4590 controls**. *Journal of Clinical Periodontology*, 2008,**35**(9):754-67
 68. Tsantes AE, Nikolopoulos GK, Bagos PG, Bonovas S, Kopterides P, Vaiopoulos G. **The effect of the plasminogen activator inhibitor-1 4G/5G polymorphism on the thrombotic risk**. *Thromb Res*. 2008;**122**(6):736-42
 69. Bagos PG, Nikolopoulos GK. **A method for meta-analysis of case-control genetic association studies using logistic regression**. 2007, *Statistical Applications in Genetics and Molecular Biology*, **6**(1): Article 17
 70. Liappas IA, Nicolaou C, Chatzipanagiotou S, Tzavellas EO, Piperi C, Papageorgiou C, Boufidou F, Bagos P, Soldatos CR. **Vitamin B12 and hepatic enzyme serum levels correlate with interleukin-6 in alcohol-dependent individuals without liver disease**. *Clin Biochem*. 2007, **40** (11): 781-786
 71. Tsantes AE, Nikolopoulos GK, Bagos PG, Tsiara C, Travlou A, Vaiopoulos G. **Plasminogen Activator Inhibitor-1 4G/5G Polymorphism and Risk of Ischemic Stroke: a Meta-Analysis**. 2007, *Blood Coagulation & Fibrinolysis*, **18** (5):497-504
 72. Tsantes AE, Nikolopoulos GK, Bagos PG, Rapti E, Mantzios G, Kapsimali V, Travlou A. **Association between the Plasminogen Activator Inhibitor-1 4G/5G Polymorphism and Venous Thrombosis: a Meta-Analysis**. 2007, *Thrombosis and Haemostasis*, **97** (6): 907-13
 73. Tsantes AE, Nikolopoulos GK, Bagos PG, Vaiopoulos G, Travlou A. **Lack of association between the platelet glycoprotein Ia C807T gene polymorphism and coronary artery disease: a meta-analysis**. 2007, *International Journal of Cardiology*, **118** (2):189-196
 74. Bagos PG, Karnaouri AC, Nikolopoulos GK, Hamodrakas SJ. **No evidence for association of CTLA-4 gene polymorphisms with the risk of developing Multiple Sclerosis: a meta-analysis**. 2007, *Multiple Sclerosis*, **13**(2): 156-168
 75. Bagos PG, Elefsinioti AL, Nikolopoulos GK, Hamodrakas SJ. **The GNB3 C825T polymorphism and Essential Hypertension: a meta-analysis of 34 studies including 14094 cases and 17760 controls**, 2007, *Journal of Hypertension*, **25**(3):487-500
 76. Nikolopoulos GK, Tsantes AE, Bagos PG, Travlou A, Vaiopoulos G. **Integrin, alpha 2 gene C807T Polymorphism and Risk of Ischemic Stroke: a Meta-Analysis**. 2007, *Thrombosis Research*; **119** (4): 501-510
 77. Liappas I, Chatzipanagiotou S, Nicolaou C, Tzavellas E, Bagos P, Soldatos CR. **Interrelation of Hepatic Function, Thyroid Activity and Mood Status of Alcohol-dependent Individuals**. *In Vivo*. 2006; **20**(2): 293-300.
 78. Liappas I, Piperi C, Malitas PN, Tzavellas E, Liappas AI, Boufidou F, Kalofoutis CA, Bagos P, Rabavilas A, Kalofoutis A. **Correlation of liver dysfunction biological markers to the mood status of alcohol -dependent individuals**, 2006, *The International Journal of Psychiatry in Clinical Practice*, **10** (3): 166-173.
 79. Bagos PG, Nikolopoulos G, Ioannidis A. **Chlamydia pneumoniae infection and the risk of multiple sclerosis: a meta-analysis**. *Multiple Sclerosis* 2006, **12**(4), 397-411

80. Tsirpanlis G, Bagos P, Ioannou D, Bleta A, Marinou I, Lagouranis A, Chatzipanagiotou S, Nicolaou C. **Serum albumin: a late reacting negative acute phase protein in clinically evident inflammation in dialysis patients.** *Nephrol Dial Transplant.* 2005, 20:658-659
81. Tsirpanlis G, Bagos P, Ioannou D, Bleta A, Marinou I, Lagouranis A, Chatzipanagiotou S, Nicolaou C. **The variability and accurate assessment of microinflammation in haemodialysis patients.** *Nephrol Dial Transplant.* 2004, **19**(1): 150-157.
82. Tsirpanlis G, Bagos P, Ioannou D, Bleta A, Marinou I, Lagouranis A, Chatzipanagiotou S, Nicolaou C. **Exploring Inflammation in Hemodialysis patients: Persistent and Superimposed Inflammation - a longitudinal study.** *Kidney Blood Press Res,* 2004, 27:63-70.
83. Tsirpanlis G, Chatzipanagiotou S, Ioannidis A, Ifanti K, Bagos P, Lagouranis A, Pouloupoulou C, Nicolaou C. **The effect of viable Chlamydia pneumoniae on serum cytokines and adhesion molecules in hemodialysis patients.** *Kidney Int Suppl.* 2003, 84: S72-5.

Bioinformatics and Biostatistics software tools (<http://www.compgen.org/tools>):

1. **PRED-TMBB:** Prediction of transmembrane beta-strands of outer membrane proteins (<http://bioinformatics.biol.uoa.gr/PRED-TMBB>)
2. **HMM-TM:** Prediction of transmembrane alpha-helices with the incorporation of experimental information (<http://bioinformatics.biol.uoa.gr/HMM-TM>)
3. **MCMBB:** Discrimination of transmembrane beta-barrels from water soluble proteins (<http://bioinformatics.biol.uoa.gr/mcmbb>)
4. **ConBBPRED:** Consensus method for prediction of transmembrane beta-strands (<http://bioinformatics.biol.uoa.gr/ConBBPRED>)
5. **PRED-GPCR:** Classification of GPCRs into families (<http://bioinformatics.biol.uoa.gr/PRED-GPCR>)
6. **PRED-COUPLE:** Prediction of GPCRs coupling specificity to G-proteins (<http://bioinformatics.biol.uoa.gr/PRED-COUPLE>)
7. **PRED-COUPLE2:** Prediction of GPCRs coupling specificity to G-proteins, including promiscuous coupling and coupling to G12/13 (<http://bioinformatics.biol.uoa.gr/PRED-COUPLE2>)
8. **CWPRED:** Prediction of cell-wall anchored proteins of GRAM positive bacteria (<http://bioinformatics.biol.uoa.gr/CWPRED>)
9. **PredSL:** Prediction of subcellular localization of eukaryotic proteins (<http://bioinformatics.biol.uoa.gr/PredSL/>)
10. **gpDB:** Database of GPCRs and their interaction with G-proteins (<http://bioinformatics.biol.uoa.gr/gpDB>)
11. **TMRpres2D:** Two-dimensional depiction of transmembrane protein models (<http://bioinformatics.biol.uoa.gr/TMRPres2D>)
12. **NON-RED:** Creation of non-redundant sequence datasets using the algorithm #2 of Hobohm et al, (<http://bioinformatics.biol.uoa.gr/NON-RED/>)
13. **PRED-LIPO:** Prediction of lipoprotein signal peptides in Gram-positive Bacteria (<http://bioinformatics.biol.uoa.gr/PRED-LIPO/>)
14. **PRED-SIGNAL:** Prediction of signal peptides in Archaea (<http://bioinformatics.biol.uoa.gr/PRED-SIGNAL/>)
15. **PRED-TAT:** Prediction of Twin Arginine signal peptides in Bacteria (<http://www.compgen.org/tools/PRED-TAT/>)
16. **metagen:** STATA program for meta-analysis of genetic association studies (<http://www.compgen.org/tools/metagen>)
17. **metatrend:** STATA program for estimating trends in cumulative meta-analysis (<http://www.compgen.org/tools/metatrend>)

18. **STATA programs for multivariate meta-analysis of genetic association studies** including models for continuous and discrete outcomes, prospective and retrospective likelihood, and the genetic model-free approach (<http://www.compgen.org/tools/multivariate-genetic>)
19. **Poisson meta-analysis:** Mixed-Effects Poisson Regression Models for Meta-Analysis of Follow-Up Studies with Constant or Varying Durations (<http://www.compgen.org/tools/poisson-meta-analysis>)
20. **Haplotype meta-analysis:** STATA programs for meta-analysis of haplotype association studies (<http://www.compgen.org/tools/haplotype>)
21. **meta-tdt:** Meta-analysis of Family-based and Case-control Genetic Association Studies That Use the Same Cases (<http://www.compgen.org/tools/meta-tdt>)
22. **Robust meta-analysis:** robust methods for analysis and meta-analysis of GAS and GWAS (<http://www.compgen.org/tools/robust-meta-analysis>)

Research Grants and Funding (as scientific coordinator)

- 8/2015-7/2016, «**Information System for Patient Monitoring**», *Private Funding* (donation) (11.250 €)
- 2/2014-10/2015, «**Integration of data from multiple sources (IntDaMuS): a fusion of epidemiology and bioinformatics with applications to complex diseases**», ARISTEIA II project, funded by the *General Secretariat of Research and Technology* (180.000 €)
- 3/2012-2/2015, «**Bioinformatics approaches for studying membrane proteins and their implications in disease (MEBIO)**», SYNERGASIA 2009 project, funded by the *General Secretariat of Research and Technology* (67.300 €)
- 10/2009 – 10/2010, «**Genetic epidemiology of metabolic syndrome: identification of genes predisposing to hypertension, diabetes and obesity**», project funded by the *Ministry of Health* (9.000 €)
- 10/2009 – 10/2010, «**Algorithms for clustering and visualization in systems biology**», project for post-doctoral research (G. Pavlopoulos) awarded by the *National Scholarship Foundation*, (7.200 €)

Research Grants and Funding (as researcher)

- 01/2006-12/2006: "**PYTHAGORAS II: Mathematical models for Bioinformatics**" (EPEAEK)
- 06/2005-08/2006: "**PYTHAGORAS: Development of original methodology and software for constructing multiple alignments of biological sequences and their objective evaluation**" (EPEAEK)
- 5/2005- 8/2006: "**Postgraduate program in Bioinformatics**" (EPEAEK)
- 11/2002-05/2005: "**IRAKLEITOS: Prediction of structure and function of membrane proteins**" (EPEAEK)
- 4/2001-12/2003: "**Development of an integrated framework for studying transmembrane receptors and their ligands through the Internet**"
- 4/2000- 8/2000: "**Biostatistics action**" (EPEAEK)