LIST OF PUBLICATIONS  (Date: November 16, 2010)

A. **Books** *(1 in preparation)*


B. **Chapters in Books** *(Total 4)*

*(the corresponding author is marked with #; Dr. Klapa’s name is shown in bold)*


C. **Articles in Refereed Journals** *(16 + 2 in Press)*


D. Papers in Peer-Reviewed Conference Proceedings

D.1 INTERNATIONAL CONFERENCES (Total 3)


D.2 GREEK CONFERENCES (Total 6)


5. Tsantili I., Dimitriou D. and Klapa M.I.# 2005. Linear Programming Analysis of Zymomonas mobilis for optimized ethanol production. 5th Conference of the Greek Chemical Engineers, March 25-27, Thessaloniki, Greece (in Greek)


**E. Patents/Patent Applications (Total 9)**

(all are based on research results of my laboratory either at FORTH/ICE-HT or U. Maryland)

**H.1 US or International Patent Applications (Total 3)**

1. **Klapa M.I. and C. Goudar. 2010.** US Patent Application “Metabolomics as High-Resolution Molecular Analysis Tool in Cell Culture Engineering” (submitted March 9, 2010 by the legal office of Bayer HealthCare, USA on behalf of both FORTH/ICE-HT (50%) and Bayer (50%) based on the first mentioned US Provisional Patent Application below)


**H.2 US Provisional Patent Applications (Total 6)**

1. **Klapa M.I.# and C. Goudar. 2009.** US provisional Patent Application 61/158,954. “Metabolomics as High-Resolution Molecular Analysis Tool in Cell Culture Engineering” (submitted March 10, 2009 by Bayer HealthCare, USA on behalf of both FORTH/ICE-HT and Bayer HealthCare, USA)


LIST OF INVITED TALKS  (Date: November 16, 2010)

A. Conferences/Scientific Symposia (Total 13)


5. **Maria I. Klapa.** Establishing Metabolomics as Tool in Cell Culture Engineering. Cell Culture Engineering XI, Sunshine Coast, Australia, April 13-18, 2008


8. **Maria I. Klapa.** Integrated Time-Series Metabolomic and Transcriptional Profiling Analyses of *Arabidopsis thaliana* response to Elevated CO$_2$ and Osmotic Stress. Workshop on Top-down Approaches in Systems Biology, Jena, Germany, May 5, 2006

9. **Maria I. Klapa.** Integrated Trascriptional and Metabolic Profiling Analyses of *Arabidopsis thaliana* physiology. *Plenary speaker* in the session on New Technologies and Techniques, 3rd International Congress on Plant Metabolomics, Iowa State University, Ames, Iowa, June 3-6, 2004


11. **Maria I. Klapa.** Invited Panelist in the round-table on the differences between “conventional” and systems biology. Annual Meeting of the Association of Greek Biochemists and Molecular Biologists (EEBMB), Athens, Greece, November 14, 2003


13. **Maria I. Klapa.** Quantitative Systems Biology of *Arabidopsis thaliana*. In the 4th *Arabidopsis Annual MiniSymposium*, April 12, 2003, University of Maryland, College Park, MD
B. Summer Schools (Total 4)


3. **Maria I. Klapa.** Quantitative Systems Biology: Integrating Biology with Engineering. 3rd Summer School on Emerging Technologies in Biomedicine, Patras, July 2-7, 2006


C. Lectures at Universities/Research Centers/Companies outside Greece (Total 7)

1. **Maria I. Klapa.** Metabolomics: The newest High-Throughput Platform for the Analysis of the Cellular Metabolic Fingerprint. Codexis Bioindustrials, Redwood City, CA, USA, September 12, 2008


4. **Maria I. Klapa.** Metabolic Engineering in the Postgenomic Era. Department of Chemical Engineering, Texas Tech University, Lubbock, TX, January 24, 2005.


6. **Maria I. Klapa.** The Quest for the Mechanisms of Life: New Perspectives, Challenges and Directions. Department of Chemical Engineering, Ecole Polytechnique de Montreal, Montreal, Canada, April 5, 2004

   *This was the first invited seminar of the then recently founded seminar series of the Canadian Chair for the Development of Metabolic Engineering Tools. The objective of the seminar series was to invite junior principal investigators (i.e. heading a laboratory for less than 5 years), who had made a significant contribution to the field of Metabolic Engineering*

7. **Maria I. Klapa.** The Quest for the Mechanisms of Life: New Perspectives, Challenges and Directions. University of Maryland Biotechnology Institute (UMBI), University of Maryland, College Park, MD, October 3, 2003

D. Lectures at Universities/Research Centers/Companies in Greece (Total 6)

1. **Maria I. Klapa.** Metabolomics in Biomedical Research. Medical School, University of Athens, November 21, 2008

2. **Maria I. Klapa.** Metabolomics: The newest High-Throughput Platform for the Analysis of the Cellular Metabolic Fingerprint. Medical School, University of Patras, November 13, 2008


LIST OF ORAL OR POSTER PRESENTATIONS AT CONFERENCES (Date: November 16, 2010)

(the name of the group member who made the presentation is underlined – the corresponding author is indicated with # - my name is shown in bold – the presentations are shown in reverse chronological order)

A. International Conferences (66 total – invited talks are not included)


It was among the few submitted abstracts that were selected for oral presentation at the conference (sessions included mainly invited presentations and 2-3 oral presentations from submitted abstracts)


12. H. Kanani and M. I. Klapa#. Time-Series Metabolomic Analysis for Identifying Metabolic Engineering
Targets in Plant System in “Quantitative Metabolic Phenotyping in Plant and Animal Systems” session, AIChE Annual Meeting 2007, Salt Lake City, Utah, November 4-11, 2007


It was one of the 14 out of more than 100 submitted abstracts that were selected for oral presentation at the conference


17. M. Kostourou, G. Koumoundouros, K. Flytzanis and M.I. Klapa# (the study was presented by C. Constantinou). GC-MS metabolomic Analysis of adult male and female zebrafish for the study of sex-determination metabolic markers. Metabolomics Society 3rd Annual Conference, Manchester, UK, June 11-14, 2007


It received the “Best Poster Presentation Award” in the session of Systems Biology


   It was among the few submitted abstracts that were selected for oral presentations (most presentations at this conference are invited)


   It was among the 35 short call poster presentations; it was also the first reported presentation of applications of metabolic analysis to brain tissue


33. Spathis A.D., Antonopoulos I., Panagopoulos N., Matsokis N., Angelatou F., Episkopou V., Klapa M.I.# and Margarity M#. Identification of Candidate Genes Involved in the Initiation of Nigrostriatal Degeneration in the Weaver Mouse using Full-Genome DNA Microarrays, FENS, Vienna, Austria, July 8-14,2006


   It was among the 10% of submitted abstracts that was selected for oral presentation


   It was among the 10% of submitted abstracts that was selected for oral presentation


It was among the 10% of submitted abstracts that was selected for oral presentation


41. B. Dutta, H.H. Kanani, J. Quackenbush, M. I. Klapa#. Dynamic Transcriptional Profiling Analysis of Arabidopsis Thaliana under CO2 and NaCl Stress, Annual Meeting of the American Institute of Chemical Engineers (AIChE), Cincinnati, OH, USA, October 30-November 4, 2005

42. H.H. Kanani, B. Dutta, J. Quackenbush, M. I. Klapa#. High-Throughput Time-Series Metabolomic Analysis to Identify Regulation of Arabidopsis thaliana Response to Elevated CO2 by Sugar Signaling, Annual Meeting of the American Institute of Chemical Engineers (AIChE), Cincinnati, OH, USA, October 30-November 4, 2005


This presentation was selected to be the representative oral presentation for the Department of Chemical and Biomolecular Engineering of University of Maryland at this conference (the conference involved only one oral presentation per department)


48. Klapa M.I. # and Lai K. Alternative pathways of galactose assimilation: Could Inverse Metabolic Engineering provide an alternative to galactosemic patients? Session [490] - Systems Biology "Omits" Technology Application I, Annual Meeting of the American Institute of Chemical Engineers (AIChE), Austin, TX, November 7-12, 2004


56. Maria I. Klapa. J.C. Aon, Gregory Stephanopoulos#. Elucidation of the Corynebacterium glutamicum physiology using stable isotopes and mass isotopomer measurements of biomass hydrolysates, Metabolic Engineering Conference IV, Tuscany, Italy, October, 2002


60. M.I. Klapa and Gregory Stephanopoulos#. Observability and Redundancy Classification in Complex Metabolic Networks, ASBMB/ASPET joint Satellite and Annual Meeting, Session: Modeling of Cellular Networks, Boston, MA, June 3-8, 2000

61. Eduardo Agosin#, Maria I. Klapa, Cristian Varela and Gregory Stephanopoulos. Metabolic Flux Redistribution in Response to Osmotic Stress in Corynebacterium glutamicum, 9th International conference on bacteriology and Applied Microbiology, IUMS, Sydney, Australia, August 16-20, 1999

November 15-20, 1998

63. Eduardo Agosin, Maria I. Klapa and Gregory Stephanopoulos#. Metabolic Flux Redistribution in Response to Osmotic Stress in Corynebacterium glutamicum, Metabolic Engineering Conference, Elmau, Germany, October 25-30, 1998

64. M.I.Klapa and Gregory Stephanopoulos#. Design of Isotopic-Tracer Experiments for Flux Quantification, Metabolic Engineering Conference, Elmau, Germany, October 25-30, 1998


B. Greek Conferences (18 total – The invited talks are not included)

1. D. Symeonidi, G. Koumoundouros, C. Flytzanis and M.I. Klapa#. Full-genome transcriptomic analysis of thermally induced gene expression in zebrafish larvae. 5th Conference of the Hellenic Society for Computational Biology and Bioinformatics, Alexandroupoli, Greece, October 17-19, 2010

   It received a Best Poster Presentation Award

2. Ch. Maga-Nteve, C. Constantinou, M. Margarity and M.I. Klapa#. Cortex vs Cerebellum: GC-MS metabolomic analysis reveals differences in their metabolic regulation. 5th Conference of the Hellenic Society for Computational Biology and Bioinformatics, Alexandroupoli, Greece, October 17-19, 2010


5. S. Vernardis, C. T. Goudar and Maria I. Klapa#. Metabolomics: A high-resolution biomolecular analysis tool in cell culture engineering. 61st Annual Meeting of the Hellenic Society of Biochemistry and Molecular Biology, Alexandroupoli, Greece, October 15-17, 2010


   It received a Best Poster Presentation Award


15. Tsantili I., Dimitriou D. and Klapa M.I. #. Linear Programming Analysis of *Zymomonas mobilis* for optimized ethanol production. 5th Panhellenic Conference in Chemical Engineering, Thessaloniki, Greece, March 25-27, 2005

16. Chrysanthopoulos P., Arvaniti E., Klapa M.I.#. Metabolomics: The High-Throughput Technique for the Acquisition of the Metabolic Fingerprint of a Biological System. 1st Bioscience Conference of the University of Patras, Patras, Greece, May 19-20, 2005


LIST OF FUNDED RESEARCH PROJECTS

1. Contract with Bayer HealthCare, Berkeley, CA, USA (Dr. C. Goudar, Head of Cell Culture Development Dept.), for the investigation of the application of metabolomics as a tool for high-resolution physiological analysis in industrial-scale cell culture engineering, PI: M. Klapa, 11/2006-Present


3. External Collaborator of the U.Patras Interdepartmental University Network on Medical Molecular Genetics Research and Development (Chair: Prof. N. Moschonas, Head of the Laboratory of General Biology, U. Patras Medical School), 1/9/2009 - Present


6. EU-FP6-Life Long Learning Project: European Biotechnology Project (EUROBIOTECH), PI: Mariapia Viola Magni, Medical School, University of Perugia; 1/10/2007-30/09/2010

7. EU-FP6-European Network of Excellence in Nanobiotechnology: A network for bringing NANOtechnologies TO LIFE (Nano2Life) –FP6-NMP-500057 (PI: P. Boisseau, CEA, France; FORTH PI: D. Kafetzopoulos, IMBB); 01/02/2004-31/08/2008