LIST OF PUBLICATIONS (Date: November 16, 2010)

A. Books (*1 in preparation)*

1. Mario Jolicoeur, Michel Perrier, Henry Olivier, **Maria I. Klapa**, Mathieu Cloutier. *Applied Metabolic Engineering. Theory and Practical Applications*. John Wiley and Sons, Inc (in preparation, submission deadline: August 1st, 2011)

B. Chapters in Books (*Total 4)*

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

1. **M.I. Klapa**#. 2009. Metabolic Flux Analysis (Volume 1, Chapter 3). In *Metabolic Pathway Engineering Handbook Volume 1, Christina Smolke (ed.), CRC Press*

2. H. Kanani, B. Dutta, J. Quackenbush and **M.I. Klapa**#. 2007. Time-series integrated high-throughput transcriptomic and metabolomic profiling analyses; Short-term effect of elevated CO_2 levels on *Arabidopsis thaliana* primary metabolism: A case-study (Chapter 7), in *Concepts in Plant Metabolomics, Nikolau B. and Wurtele E. (eds), Springer-Verlag*

3. **M.I. Klapa** and Gregory Stephanopoulos#. 2000. Metabolic Engineering: A Framework for the Integration of Genomic and Physiological Data. In: Barbotin/Portais (eds) NMR in Microbiology: Theory and Applications. Horizon Scientific Press, UK, pp. 453-477

4. **Klapa M.I.** and Stephanopoulos Gregory#. 2000. Metabolic Flux Analysis. In: Schugerl/Bellgardt (eds) Bioreaction Engineering: Modeling and Control, Springer, Berlin Heidelberg New York

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

1. K. Spagou, G.Theodoridis, I. Wilson, N. Raikos, P. Greaves, R.Edwards, B. Nolan and **M.I. Klapa**#. 2010. A GC-MS metabolomic profiling study of plasma samples from mice on low- and high- fat diets. *J. Chromatogr. B*, special issue "Derivatization Techniques in Analysis" (accepted for publication)

2. H. Kanani, B. Dutta, **Klapa MI**#. 2010. Individual vs. combinatorial effect of elevated CO_2 and salinity stresses on *Arabidopsis thaliana* liquid cultures: Comparing the early molecular response using time-series transcriptomic and metabolomic analyses. *BMC Systems Biology* (In Press)

3. C.Constantinou, PK Chrysanthopoulos, M Margarity, MI Klapa. 2010. GC-MS metabolic analysis reveals significant alterations in cerebellar metabolic physiology in a mouse model of adult onset hypothyroidism. *J. Proteome Res.* Epub Oct 28, 2010, doi:10.1021/pr100699m

4. P. K. Chrysanthopoulos, C. T. Goudar, **M.I. Klapa**#. 2009. Metabolomics for High-Resolution Monitoring of the Cellular Physiological State in Cell Culture Engineering. *Metabolic Engineering*. doi:10.1016/j.ymben.2009.11.001 (published online November 2, 2009)

5. B. Dutta, H. Kanani, J. Quackenbush and **M.I. Klapa**#. 2009. Time-series integrated "omic" analyses to elucidate short-term stress-induced responses in plant liquid cultures. *Biotechnol. Bioeng.* **102**: 264-79 (published online: July 15, 2008)

6. C. Syriopoulos, A. Panayotarou, K. Lai and **M. I. Klapa**#. 2008. Transcriptomic analysis of *Saccharomyces cerevisiae* physiology in the context of galactose assimilation perturbations. *RSC Mol. BioSyst.* **4**:937-949 (published online: July 4, 2008)

7. H. Kanani, P. K. Chrysanthopoulos and **M.I. Klapa**#. 2008. Standardizing GC-MS metabolomics. *J. Chromatogr. B* **871**: 191-201 (published online: May 21, 2008 in the special issue "Hyphenated Techniques for Global Metabolite Profiling")

8. B. Dutta, P. Snyder and **M.I. Klapa**[#]. 2007. Significance analysis of time-series transcriptomic data: A methodology that enables the identification and further exploration of the differentially expressed genes at each time-point. *Biotech. Bioeng.* **98**: 668-78 (published online: March 29, 2007)

9. I.C.Tsandili, M.N. Karim, **M. I. Klapa**[#]. 2007. Quantifying the Metabolic Capabilities of the Engineered *Zymomonas mobilis* using Linear Programming Analysis. *Microbial Cell Factories* **6**:8 (published online: March 9, 2007)

10. H. Kanani and **M.I. Klapa** [#]. 2007. Data Correction Strategy for Metabolomics Analysis using Gas Chromatography-Mass Spectrometry, *Metabolic Engineering* **9**: 39-51 (published online: August 18, 2006)

11. K. Lai and **M.I Klapa**[#]**.** 2004. Alternative pathways of galactose assimilation: Could Inverse Metabolic Engineering provide an alternative for galactosemic patients? *Metabolic Eng*. **6**:239-44

12. **M.I. Klapa** [#] and J. Quackenbush 2003. The Quest for the Mechanisms of Life. *Biotechol. .Bioeng*. **84**:739-42

13. **M.I. Klapa**., J.C. Aon and Gregory Stephanopoulos[#]. 2003. Systematic quantification of complex metabolic flux networks using stable isotopes and mass spectrometry. *Eur J Biochem* **270**: 3525-42

14. **Klapa, MI**, Aon, J.C. and Stephanopoulos, Gregory[#]. 2003. Using ion trap Mass Spectrometry in combination with gas chromatography for high resolution metabolic flux determination. *Biotechniques* **34**: 832-849

15. Saeed A.I., Sharov V., White J., Li J., Liang W., Bhagabati N., Braisted J., **Klapa M**., Currier T., Thiagarajan M., Sturn A., Snuffin M., Rezantsev A., Popov D., Ryltsov A., Kostukovich E., Borisovsky I., Liu Z., Vinsavich A., Trush V, and Quackenbush J[#]. 2003. TM4: A Free, Open Source System for Microarray Data Management and Analysis. *BioTechniques* **34**:374-378

16. Cristian Varela, Eduardo Agosin[#], Mauricio Baez, **Maria Klapa** and Gregory Stephanopoulos. 2003. Metabolic flux redistribution in *Corynebacterium glutamicum* in response to osmotic stress. *Appl Microbiol Biotechnol* **60**: 547-555

17. **Klapa MI**, Park SM, Sinskey AJ, Stephanopoulos GN[#]. 1999. Metabolite and isotopomer balancing in the analysis of metabolic cylces: I. Theory. *Biotechnol Bioeng*. **62**: 375-391

18. Park SM, **Klapa MI**, Sinskey AJ, Stephanopoulos GN[#]. 1999. Metabolite and isotopomer balancing in the analysis of metabolic cylces: II. Applications. *Biotechnol Bioeng*. **62**: 392-401

D. Papers in Peer-Reviewed Conference Proceedings

D.1 INTERNATIONAL CONFERENCES (Total 3)

(first two in biosciences, third is in transport phenomena: diploma thesis subject)

1. S. Vernardis, P.K. Chrysanthopoulos, C.T. Goudar and **M. I. Klapa**[#]. 2009. Metabolic Profiling is sensitive to cell age-dependent changes in the metabolic physiology of industrial-scale perfusion cell culture. Proceedings of the Conference "Computer Applications in Biotechnology (CAB) 2010", Leuven, Belgium, July 7-9, 2009

2. I.C.Tsandili, M.N. Karim, **M. I. Klapa**[#]. 2007. Quantifying the Metabolic Capabilities of *Zymomonas mobilis* using Linear Programming Analysis. Proceedings of the Conference "Foundations of Systems Biology in Engineering (FOSBE) 2007", September 9-12, 2007, Stuttgart, Germany.

3. **Klapa, M. I.**, Papathanasiou, A.G., Boudouvis, A.G[#] 1998. Equilibrium of Rotating Ferromagnetic Liquid Drops. In Computational Fluid Dynamics '98 - Proceedings of the 4th ECCOMAS Computational Fluid Dynamics Conference, K. D. Papailiou, D. Tsahalis, J. Periaux, C. Hirsch, M. Pandolfi, (Eds.), Athens, Greece, September 1998. J. Wiley & Sons, New York, 1998, pp. 809-814

D.2 GREEK CONFERENCES (Total 6)

1. H. Syriopoulos, A. Panayotarou, C. Katsikani, P. Patiou, B. Pesheva, K. Lai and **M.I. Klapa**[#]. 2007. *In vivo* analysis of galactosemia using yeast as the model system. Proceedings of the 6th Hellenic Conference in Chemical Engineering, Volume B, pp.1109-1112

2. M.A. Kostourou, G.N. Koumoundouros, C.N. Flytzanis and **M.I. Klapa**[#]. 2007. Metabolomic analysis of adult male and female zebrafish for the identification of sex-determining metabolic biomarkers using gas chromatography-mass spectrometry. Proceedings of the 6th Hellenic Conference in Chemical Engineering, Volume B, pp.1121-1124 (in Greek)

3. I.C.Tsandili, M.N. Karim, **M. I. Klapa**[#]. 2007. Evaluating the Metabolic Boundaries of the Genetically Engineered *Zymomonas mobilis* using Linear Programming. Proceedings of the 6th Hellenic Conference in Chemical Engineering, Volume B, pp.1153-1156

4. Kanani, H., Dutta, B., Vantoai, T., Moy, L., Linford, L., Hasseman, J., Quackenbush, J. and **Klapa, M. I**.[#] 2005. High-throughput time-series analysis of the short-term *Arabidopsis thaliana* response to environmental stresses: a quantitative systems biology approach. 5th Conference of the Greek Chemical Engineers, March 25-27, Thessaloniki, Greece

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)

6. Spathis A.D.**,** Antonopoulos I., Panagopoulos N., Matsokis N., Angelatou F., Episkopou V., **Klapa M.I.** [#] and Margarity M. [#] 2004. In search of the etiology of Parkinson's disease using full genomic DNA microarrays of weaver mutant mice. 56th Meeting of the Hellenic Society of Biochemistry and Molecular Biology, November 25-27, Larissa, Greece

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)

2. Dutta B. and **Klapa M.I.**[#]. 2006. International Patent Application # PCT/US2006/044536 "*Method and System for Analysis of Time-Series Molecular Quantities*" (submitted November 16, 2006 based on the US Provisional Patent Application listed below as 4) [University of Maryland]

3. Kanani H.H and **Klapa M.I**[#]. 2006. U.S. Patent Application No. 11/362,717**.** Publication No.: US-2006-0200316-A1 Publication Date: September 7, 2006 "*Data Correction, Normalization and Validation for Quantitative High-Throughput Metabolomic Profiling*" (submitted February 28, 2006 based on the US Provisional Patent Applications listed below as 5,6) [University of Maryland]

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)

2. Dutta B. and **Klapa M.I.**[#]. 2007. US Provisional Patent Application UMD #LS-2007-034 "*Identifying Gene Targets and Strategies for Engineering Plants with Desired Traits based on High-Throughput Transcriptomic Analysis of a Systematically Perturbed Plant System*" (submitted April 5, 2007) [University of Maryland]

3. Kanani HH. and **Klapa M.I.**[#]. 2007. US Provisional Patent Application UMD #LS-2007-033 "*Identifying Molecular Targets and Strategies for Engineering Plants with Desired Traits based on High-Throughput Metabolomic Analysis of a Systematically Perturbed Plant System*" (submitted April 4, 2007) [University of Maryland]

4. Dutta B. and **Klapa M.I.**[#]. 2005. US provisional Patent Application 60/737,585 UMD-#IS-2005-101, "*Significance analysis methodology for time-series transcriptomic data*" (submitted November 17, 2005) [University of Maryland]

5. Kanani H.H and **Klapa M.I.**[#]. 2005. US provisional Patent Application 60/698,051 "*Data Normalization strategy for quantitative high-throughput metabolomic profiling analysis using Gas Chromatography-Mass Spectrometry*" (an enhancement of the application listed as 6th) (submitted June 2005) [University of Maryland]

6. Kanani H.H and **Klapa M.I.**[#] 2005. US Provisional Patent Application 60/657,605. "*Data normalization strategy for quantitative high-throughput metabolomic profiling analysis using Gas Chromatography-Mass Spectrometry*" (submitted March 1, 2005) [University of Maryland]

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

A. Conferences/Scientific Symposia (Total 13)

1. **Maria I. Klapa**. Making sense of metabolic complexity: Metabolomics as a key analytical platform of Systems Biology**,** 5th Meeting of the Spanish Network of Systems Biology: Fostering Systems and Synthetic Biology in Southern Europe, Madrid, Spain, December 13-15, 2009
2. **Maria I. Klapa**. *New Technologies of High – Throughput Biomolecular Analysis:* When Molecular Diagnostics meets Systems Biology, 8th Hellenic Conference of Clinical Chemistry, Patras, October 2-3, 2009
3. **Maria I. Klapa.** Standardizing GC-MS Metabolomics. International Workshop on Holistic Analytical Technologies for Systems Biology Studies, University of Thessaloniki Teloglion Foundation, October 30-31, 2008
4. **Maria I. Klapa**. Time-Series Integrated Metabolomic and Transcriptomic Analysis for Identifying Metabolic Engineering Targets in Plant Systems. Metabolic Engineering Conference VII: Health and Sustainability, Puerto Vallarta, Mexico, September 14-19, 2008
5. **Maria I. Klapa**. Establishing Metabolomics as Tool in Cell Culture Engineering. Cell Culture Engineering XI, Sunshine Coast, Australia, April 13-18, 2008
6. **Maria I. Klapa**. Novel GC-MS Metabolomic Data Correction and Normalization Strategy. Select Biosciences 3rd annual Advances in Metabolic Profiling Conference, Boston, USA, November 13-14, 2007 (*www.selectbiosciences.com/conferences/AMP2007/*)
7. **Maria I. Klapa**. Integration of High-Throughput "omics" Platforms: A Mandatory but still Challenging Task for Personalized Medicine. ITAB 06 Preconference Workshop, Ioannina, Greece, October 25, 2006 (*medlab.cs.uoi.gr/itab2006/preconference.htm*)
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
10. **Maria I. Klapa**. Quantitative Systems Biology: New Perspectives, Challenges and Directions. Workshop on Intelligent Technologies for Gene-Expression-Based Individualized Medicine of EUNITE (the European Network of Excellence on Intelligent Technologies for Smart Adaptive Systems), Jena, Germany, May, 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
12. **Maria I. Klapa**. The Quest for the Mechanisms of Life: Perspectives, Challenges and Directions. Interdisciplinary Symposium: *'Mathematical Modeling in Modern Technologies and Economics*', May 16-18, 2003, National Technical University of Athens, Athens, Greece
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)

1. **Maria I. Klapa**. Metabolic Network Analysis using Metabolomics and Metabolic Flux Analysis. Nano2Life Summer School on Methods in Nano-Micro-Technology and NanoBiotechnology Summer School, National Center for Scientific Research, Demokritos, Athens, June 25-July 6, 2007
2. **Maria I. Klapa**. High-throughput Metabolomics. Nano2Life Summer School on Methods in Nano-Micro-Technology and NanoBiotechnology Summer School, National Center for Scientific Research, Demokritos, Athens, June 26-July 7, 2006
3. **Maria I. Klapa**. Quantitative Systems Biology: Integrating Biology with Engineering. 3rd Summer School on Emerging Technologies in Biomedicine, Patras, July 2-7, 2006
4. **Maria I. Klapa**. Metabolic Flux Analysis. Summer School of the Interdepartmental Graduate program of "Mathematical Modeling in New technologies and Finance" of the School of Applied Mathematics and Physical Sciences, N.T.U. Athens, July 4, 2005.

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
2. **Maria I. Klapa**. Data Correction Strategy for Metabolomics Analysis using Gas Chromatography-Mass Spectrometry. Bayer HealthCare LLC, Berkeley, CA, USA, November 16, 2006.
3. **Maria I. Klapa**. Metabolomics: The Most Recent High-throughput Platform for the Analysis of Biological Systems. Department of Chemical Engineering, NY Polytechnic, New York City, NY USA, November 10, 2006.
4. **Maria I. Klapa**. Metabolic Engineering in the Postgenomic Era. Department of Chemical Engineering, Texas Tech University, Lubbock, TX, January 24, 2005.
5. **Maria I. Klapa**. Quantitative Systems Biology: New Perspectives, Challenges and Directions. *Biomarin* Pharmaceuticals Inc., Novato, CA, U.S.A., September 24, 2004.
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
3. **Maria I. Klapa**. Significance Analysis for Time-Series Transcriptomic Data. Seminar Series of the Interdepartmental Graduate Program of "Mathematical Modeling in New technologies and Finance" of the School of Applied Mathematics and Physical Sciences, N.T.U. Athens, November 30, 2005.

4. **Maria I. Klapa**. Quantitative Systems Biology: Integrating Biology with Engineering. Institute of Physical Chemistry, Demokritos Research Center, Athens, December 16, 2005.
5. **Maria I. Klapa**. Significance Analysis for Time-Series Transcriptomic Data. Seminar Series of the Interdepartmental Graduate program of “Mathematical Modeling in New technologies and Finance” of the School of Applied Mathematics and Physical Sciences, N.T.U. Athens, May 15, 2005.
6. **Maria I. Klapa**. Metabolic Engineering: Metabolic Flux Analysis using stable isotopes and Mass Spectrometry. Department of Chemical Engineering, National Technical University of Athens, Athens, Greece, January 7, 2003

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)

1. S. Vernardis, P.K. Chrysanthopoulos, C.T. Goudar and **M. I. Klapa**#. 2009. Metabolic Profiling is sensitive to cell age-dependent changes in the metabolic physiology of industrial-scale perfusion cell culture. Computer Applications in Biotechnology (CAB) 2010, Leuven, Belgium, July 7-9, 2009

2. S. Vernardis, C.T. Goudar and **M.I. Klapa**#. Characterizing time-dependent changes in mammalian cell culture physiology through metabolite profiling. Spring 2010 National Meeting and Exposition of the American Chemical Society (ACS), San Francisco, CA, USA, March 21-25, 2010

3. S. Vernardis, P. Chrysanthopoulos, C.T. Goudar and **M.I. Klapa**#. Metabolomics in Industrial-Scale Cell Culture Engineering. 5th Meeting of the Spanish Network of Systems Biology: Fostering Systems and Synthetic Biology in Southern Europe, Madrid, Spain, December 13-15, 2009

4. Tsafou K., Theodoridis E., Makris C., **Klapa M.I**., Tsakalidis A. and Moschonas N.K#. PICKLE_DB: Developing a knowledge base for the human protein interactome. 5th Meeting of the Spanish Network of Systems Biology: Fostering Systems and Synthetic Biology in Southern Europe, Madrid, Spain, December 13-15, 2009

5. K. Spagou, **M.I. Klapa**#, C. Constantinou, H. Gika, G. Theodoridis, H. Tsoukali, N. Raikos, I. Wilson. Gas Chromatography- Mass Spectrometry Metabolite Profiling of Plasma from Low and High Fat Diet Mice. 6th International Conference "Instrumental Methods of Analysis-IMA", Athens, Greece, October 4-8, 2009

6. K. Spagou, **M.I. Klapa**#, C. Constantinou, H. Gika, G. Theodoridis, H. Tsoukali, N. Raikos, I. Wilson. Gas Chromatography- Mass Spectrometry Metabolite Profiling of Plasma from Low and High Fat Diet Mice. 18th International Reid Bioanalytical Forum, Guilford, UK, July 06-09, 2009

7. P. K. Chrysanthopoulos, C.T. Goudar, **M. I. Klapa**#. Metabolomics as Molecular Analysis Tool in Cell Culture Engineering. Metabolic Engineering Conference VII: Health and Sustainability, Puerto Vallarta, Mexico, September 14-19, 2008

8. M. A. Kostourou, C.N. Flytzanis, G. Koumoundouros and **M. I. Klapa**#. Metabolomic analysis of sex-specific pathways in adult zebrafish. Metabolic Engineering Conference VII: Health and Sustainability, Puerto Vallarta, Mexico, September 14-19, 2008

9. Myxaki A., Syriopoulos C., Lai K., **Klapa M.I**#. Transcriptomic analysis of *Saccharomyces cerevisiae* physiology in the context of galactose assimilation defects. 33rd FEBS Congress and 11th IUBMB Conference, Athens, Greece, June 28 - July3, 2008

   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)

10. Constantinou C., Chrysanthopoulos P., Margarity M., **Klapa M**#. Identifying the effects of adult-onset hypothyroidism on mouse cerebral cortex using quantitative gas chromatography-mass spectrometry metabolomics. 33rd FEBS Congress and 11th IUBMB Conference, Athens, Greece, June 28 - July3, 2008

11. B. Dutta, H. Kanani, J. Quackenbush and **M.I. Klapa**#. Comparison Of Multiple Stress Responses Of a Systematically Perturbed System in "Genomic Approaches to Systems Biology" session, AIChE Annual Meeting 2007, Salt Lake City, Utah, November 4-11, 2007

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

13. H. Kanani and **M. I. Klapa**[#]. Identifying New Biochemical Pathways and Regulatory Elements using Time-Series Metabolomic Analysis in "Proteomics and Metabolomics Approaches to Systems Biology" session, AIChE Annual Meeting 2007, Salt Lake City, Utah, November 4-11, 2007

14. I.C.Tsandili, M.N. Karim, **M. I. Klapa**[#]. Estimating the Metabolic Boundaries of *Zymomonas mobilis* using Linear Programming Analysis. "Foundations of Systems Biology in Engineering (FOSBE) 2007", Stuttgart, Germany, September 9-12, 2007

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

15. H. Kanani and **M.I. Klapa**[#]. Integrated Time-Series Metabolomic and Transcriptional Profiling Analyses of *Arabidopsis thaliana* Response to Elevated CO_2 and Osmotic Stress. Metabolomics Society 3rd Annual Conference, Manchester, UK, June 11-14, 2007

16. P. Chrysanthopoulos, C. Constantinou and **M. I. Klapa**[#]. Metabolomic Analysis of Adult Hypothyroidism Effects On Different Brain Regions. Metabolomics Society 3rd Annual Conference, Manchester, UK, June 11-14, 2007

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

18. C. Syriopoulos, A. Panayotarou, B. Pesheva, P. Patiou, K. Lai and **M. I. Klapa**[#] (the study was presented by C. Constantinou). Metabolomic Analysis of Galactose Assimilation Defects Using Yeast as the Model System. Metabolomics Society 3rd Annual Conference, Manchester, UK, June 11-14, 2007

19. Dutta B, Kanani H, Quackenbush J. and **Klapa MI**[#]. Comparison of system response to individual and combined stresses using integrated OMICS approach. RECOMB Satellite Conference on Systems Biology, San Diego, CA, USA, December 1-3, 2006

20. Bhaskar Dutta, Harin H. Kanani, John Quackenbush, **Maria I. Klapa**[#]. Integrated Time-Series Metabolomic and Transcriptional Profiling Analyses of *Arabidopsis thaliana* response to elevated CO_2 and osmotic stress. AIChE Annual Meeting, San Francisco, CA, USA, November 12-17, 2006

21. I. Tsandili, M.N. Karim, **M. I. Klapa**[#]. Quantifying the Metabolic Capabilities of Engineered *Zymomonas Mobilis* for Ethanol Production from Hexoses and Pentoses Using Linear Programming Analysis. AIChE Annual Meeting, San Francisco, CA, USA, November 12-17, 2006

22. Kanani H. and **M. I. Klapa**[#]. Data Correction, Normalization and Validation for Enhanced Accuracy of GC-MS Metabolomic Analysis: Time Series Metabolomic Analysis of *Arabidopsis thaliana* Response to Elevated CO_2 a Case Study. AIChE Annual Meeting, San Francisco, CA, USA, November 12-17, 2006

23. Dutta B., Snyder R. and **M.I. Klapa**[#]. 2006. Significance Analysis of Time-Series High-Throughput Transcriptional Profiling Data: Applied to *Arabidopsis Thaliana* Liquid Cultures Subjected to Environmental Stresses. AIChE Annual Meeting, San Francisco, CA, USA, November 12-17, 2006

24. Kanani H and **Klapa MI**[#]. 2006. Accurate Time-Series Metabolomic Analysis of a Systematically Perturbed *Arabidopsis thaliana* liquid culture system for Studying Regulation of Plant Primary Metabolism. AIChE Annual Meeting, San Francisco, CA, USA, November 12-17, 2006

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

25. Bhaskar Dutta, Harin H. Kanani, John Quackenbush, **Maria I. Klapa#.** Can We Predict Combined Stress Response from Individual Responses? AIChE Annual Meeting, San Francisco, CA, USA, November 12-17, 2006

26. Bostantjopoulou S., Spathis A.D., Luchini A., Dolcetti L., Chatzizisi O., Gerasimou G., Mandruzzato S., Bicciato S., **Klapa M.I.**#, Margarity M.#. 10th International Congress of Parkinson's Disease and Movement Disorders, Kyoto, Japan, October 28-November 2, 2006

27. **M.I. Klapa**# and Kanani H. Data Correction, Normalization and Validation for Enhanced Accuracy of Metabolomic Analysis using Gas Chromatography-Mass Spectrometry. *Metabolic Engineering VI: From recDNA towards Engineering Biological Systems,* NH Leeuwenhorst, Noordwijkerhout, The Netherlands, October 1-5, 2006

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

28. Syriopoulos C., Panayotarou A., Lai K. and **Klapa M.I**#. Metabolomic Analysis of Galactosemia using Yeast as the Model System. *Metabolic Engineering VI: From recDNA towards Engineering Biological Systems,* Noordwijkerhout, The Netherlands, October 1-5, 2006

29. Kanani H. and **M. I. Klapa**#. Unraveling regulatory mechanisms governing the primary metabolism of *Arabidopsis thaliana* liquid culture system through time-series metabolomics analysis of its short-term response to systematic perturbations. *Metabolic Engineering VI: From recDNA towards Engineering Biological Systems,* Noordwijkerhout, The Netherlands, October 1-5, 2006

30. Dutta B., Snyder R. and M.I. Klapa#. 2006. MiTimeS: A framework for time-series significance analysis of transcriptomic data. Metabolic Engineering VI: From recDNA towards Engineering Biological Systems October 1-5, Noordwijkerhout, The Netherlands

31. Constantinou C., Chrysanthopoulos P., Margarity M. and **Klapa M.I.#** Unraveling Adult Hypothyroid Mouse Brain using GC-MS Metabolomics, Short Call Presentation, Annual Meeting of the American Thyroid Association, Phoenix, AZ USA, October 10-14, 2006

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

32. Chrysanthopoulos P., Linardaki Z, Constantinou C., Margarity M and **Klapa M.I.**# Metabolomics Analysis of Adult Mouse Hypothyroid Brain, FENS, Vienna, Austria, July 8-14,2006

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

34. Kanani, H. and **Klapa, M. I#.** *Data Correction Strategy for Metabolomics Analysis using Gas Chromatography-Mass Spectrometry,* 2nd Scientific Meeting of the Metabolomics Society, Boston, MA USA, June 24-29, 2006

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

35. Chrysanthopoulos P., Linardaki Z, Constantinou C., Margarity M and **Klapa M.I.**# 2006. GC-MS Metabolomics and Brain Regional Variation, 2nd Scientific Meeting of the Metabolomics Society, Boston, MA USA, June 24-29, 2006

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

36. Chrysanthopoulos P., Linardaki Z, Constantinou C., Margarity M and **Klapa M.I.**# Cerebral Cortex vs. Cerebellum: Metabolomic Profiling Analysis of Brain Tissue, 1st International Symposium on Systems Biology, Murcia, Spain, June 1-2, 2006

37. B. Dutta, H.H. Kanani, J. Quackenbush, **M. I. Klapa**[#]. Integrated Time-Series Metabolomic and Transcriptional Profiling Analyses of *Arabidopsis thaliana* response to Elevated CO_2 and Osmotic Stress, 4th International Conference on Plant Metabolomics, Reading, UK, April 7-10, 2006

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

38. Kanani, H. and **Klapa, M. I**[#]**.** *Data Correction Strategy for Metabolomics Analysis using Gas Chromatography-Mass Spectrometry* 4th International Conference on Plant Metabolomics, Reading, UK, April 7-10, 2006

39. Bhaskar Dutta, Harin Kanani, John Quackenbush and **Maria I Klapa**[#]. 'High-Throughput Time-Series Transcriptional Profiling Analysis of a Biological System Subjected to Multiple Perturbations: a Case Study in Systems Biology'. *Sackler Colloquia of National Academy of Sciences*, Washington DC, April 3-5, 2006

40. B. Dutta, R.W. Snyder and **M.I.Klapa**[#]. Significance Analysis Of Time-Series High-throughput Transcriptional Profiling Data: Applied to *Arabidopsis thaliana* Liquid Cultures Subjected to Environmental Stresses, XIV Plant and Animal Genome Conference, San Diego, CA, USA, January 14-18, 2006

41. B. Dutta, H.H. Kanani, J. Quackenbush, **M. I. Klapa**[#]. Dynamic Transcriptional Profiling Analysis of *Arabidopsis Thaliana* under CO_2 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 CO_2 by Sugar Signaling, Annual Meeting of the American Institute of Chemical Engineers (AIChE), Cincinnati, OH, USA, October 30-November 4, 2005

43. Kanani, H., Dutta, B., Vantoai, T., Moy, L., Linford, L., Hasseman, J., Quackenbush, J. and **Klapa, M. I**[#]. *Time-series integrated high-throughput genomic and metabolomic time-course analysis of a systematically perturbed plant system. 7th* World Congress in Chemical Engineering, Glasgow, UK, July 10-14, 2005

44. Kanani, H. and **Klapa, M. I**[#]. *Data Correction Strategy for Metabolomics Analysis using Gas Chromatography-Mass Spectrometry.* Plant Metabolic Engineering Gordon Research Conference, Tilton, NH, USA, July 10-14, 2005

45. Kanani, H., Dutta, B., Vantoai, T., Moy, L., Linford, L., Hasseman, J., Quackenbush, J. and **Klapa, M. I**[#]**.** *Integrated high-throughput genomic and metabolomic time-course analysis of a systematically perturbed plant system.* Arabidopsis Mini Symposium, College Park, MD, March 2005

46. Kanani, H., Dutta, B., Vantoai, T., Moy, L., Linford, L., Hasseman, J., Quackenbush, J. and **Klapa, M. I**[#]**.** *Integrated high-throughput genomic and metabolomic time-course analysis of a systematically perturbed plant system.* Mid-Atlantic Biochemical Engineering Consortium, Rutgers, NJ, March 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)

47. Dutta B., Kanani H., Vantoai T., Linford L., Moy L., Hasseman J., Quackenbush J. and **Klapa M.I.**[#] Holistic Analysis of systematically perturbed *Arabidopsis thaliana* physiology: A Quantitative Systems Biotechnology Approach in Session [428] - Systems Engineering Approaches in Biology II, Annual Meeting of the American Institute of Chemical Engineers (AIChE), Austin, TX, November 7-12, 2004

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 "Omics" Technology Application I, Annual Meeting of the American Institute of Chemical Engineers (AIChE), Austin, TX, November 7-12, 2004

49. Kanani, H., Dutta, B., Vantoai, T., Moy, L., Linford, L., Hasseman, J., Quackenbush, J. and Klapa, M. I.# Integrated high-throughput genomic and metabolomic time-course analysis of a systematically perturbed plant system. Maryland Technology Review Day, College Park, MD, November 2004

50. Klapa, M.I.,#, Dutta B., Kanani H., Vantoai T., Linford L., Moy L., Hasseman J., and John Quackenbush. High-throughput time-series analysis of the short-term Arabidopsis thaliana response to environmental stresses: a quantitative systems biology approach, Metabolic Engineering Conference V, Squaw Creek Valley, CA, USA, September 2004

51. Kanani H., Dutta B., Vantoai T., Linford L., Moy L., Hasseman J., Quackenbush J. &Klapa M.I. # Metabolic Profiling Analysis of the short- term Arabidopsis thaliana response to environmental stresses, 3rd International Congress on Plant Metabolomics, Iowa State University, Ames, Iowa, June 3-6, 2004

52. **Klapa, M.I.** [#], Dutta B., Kanani H., Vantoai T., Linford L., Moy L., Hasseman J., and John Quackenbush. Integrated Genomic and Metabolic Analyses of *Arabidopsis thaliana* Physiology. Annual Meeting of the American Institute of Chemical Engineers (AIChE), San Francisco, CA, November 17-21, 2003

53. Dutta B, Kanani H., Vantoai T., Linford L., Moy L., Hasseman J., John Quackenbush and **Klapa M.I.** [#]. Transcriptional profiling of the short-term *Arabidopsis thaliana* response to increased CO_2 levels using full genome DNA microarrays Mid-Atlantic Plant Molecular Biology Society, Laurel, MD, USA, August 7-8, 2003

54. Kanani H., Dutta B., Vantoai T., Linford L., Moy L., Hasseman J., John Quackenbush and **Klapa M.I.** [#]. Metabolic profiling of the short-term *Arabidopsis thaliana* response to increased CO_2 levels using Gas Chromatography-Mass Spectrometry, Mid-Atlantic Plant Molecular Biology Society, Laurel, MD, USA, August 7-8, 2003

55. **Klapa M** [#], Kanani H, Dutta B, Sushak K, Vantoai T., Linford L., Moy L., Hasseman J., and John Quackenbush. Integrated genomic and metabolic analyses of *Arabidopsis thaliana,* Mid-Atlantic Biochemical Engineering Consortium, College Park, MD, USA, March 15, 2003

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

57. **M.I. Klapa**, J.C. Aon and Gregory Stephanopoulos[#]. Quantifying the effect of different carbon sources on the *Corynebacterium glutamicum* physiology using flux analysis and mass spectrometry, 2002 ACS Annual Meeting, Session: Bioinformatics, Genomics and Proteomics, Boston, MA, August 18-25, 2002

58. **M.I. Klapa**, J.C. Aon and Gregory Stephanopoulos[#]. Measurement of Mass Isotopomer Fractions by Gas Chromatography- Mass Spectrometry for High Resolution Metabolic Flux Quantification, AIChE Annual Meeting, Session: Advances in Metabolic Engineering: From Genomics to Pathways, Reno, NV, November 4-9, 2001

59. **M.I.Klapa**, J.C.Aon and Gregory Stephanopoulos[#]. Quantification of *Corynebacterium glutamicum* metabolic flux network using stable isotopes and Mass Spectrometry, AIChE Annual Meeting, Session: Advances in Bioinformatics, Los Angeles, CA, November 12-17, 2000

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*, IXth International conference on bacteriology and Applied Microbiology, IUMS, Sydney, Australia, August 16-20, 1999

62. **M.I.Klapa**, S.K. Rijhwani and Gregory Stephanopoulos[#]. Design of Isotopic-Tracer Experiments for Flux Quantification, AIChE Annual Meeting, Session: Advances in Metabolic Engineering, Miami, Florida,

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

65. **Klapa, M. I.**, Papathanasiou, A.G., Boudouvis, A.G[#] Equilibrium of Rotating Ferromagnetic Liquid Drops. 4th ECCOMAS Computational Fluid Dynamics Conference, Athens, Greece, September 1998.

66. **M.I.Klapa** and A.G.Boudouvis[#]. Free Boundary Problem Computations in Capillary Magnetohydrostatics, Workshop on Numerical and Computational Methods for Free Boundary Problems, Freiburg, Germany, September 4-5, 1995

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

3. K. Tsafou, E. Theodoridis, C. Makris, **M. I. Klapa**, A. Tsakalidis and N.K. Moschonas[#]. Development and Analysis of an Integrated Human PPI Local Database from Three Major Literature-Curated Public Datasets. 5th Conference of the Hellenic Society for Computational Biology and Bioinformatics, Alexandroupoli, Greece, October 17-19, 2010

4. K. Spagou, G.Theodoridis, I. Wilson, N. Raikos, P. Greaves, R.Edwards, B. Nolan and **M.I. Klapa[#]**. A GC-MS metabolomic profiling study of plasma samples from mice on low- and high- fat diets. 61st Annual Meeting of the Hellenic Society of Biochemistry and Molecular Biology, Alexandroupoli, Greece, October 15-17, 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

6. K. Tsafou, E. Theodoridis, C. Makris, **M. I. Klapa**, A. Tsakalidis and N.K. Moschonas[#]. PICKLE_ DB: Towards the development of a knowledge base for the human protein interactome, 60th Annual Meeting of the Hellenic Society of Biochemistry and Molecular Biology, Athens, Greece, November 20-22, 2009

7. S. Vernardis, P. K. Chrysanthopoulos, C. T. Goudar and **Maria I. Klapa[#]**. Metabolomics as a tool for high-resolution biomolecular analysis in industrial cell culture engineering, 8th Panhellenic Conference of Clinical Chemistry, Patra, Greece, October 2-3, 2009

8. Kliment Zanov, Lubov Yotova and **Maria I. Klapa[#]**. Development of metabolomic protocol for tissue analysis of thyroid hormones and their metabolites using Liquid Chromatography-Mass Spectrometry, 8th Panhellenic Conference of Clinical Chemistry, Patra, Greece, October 2-3, 2009

9. C. H. Syriopoulos, A. Panayotarou, C. Katsikani, P. Patiou, B. Pesheva, K. Lai and **M. I. Klapa[#]**. *In vivo* analysis of galactosemia using yeast as the model system. 6th Panhellenic Conference in Chemical Engineering, Athens, Greece, June 2007

10. I. Tsandili, M.N. Karim, **M. I. Klapa**[#]. Evaluating the Metabolic Capabilities of the Genetically Engineered *Zymomonas mobilis* using Linear Programming Analysis. 6th Panhellenic Conference in Chemical Engineering, Athens, Greece, June 2007

11. M. Kostourou, G. Koumoundouros, K. Flytzanis and **M. I. Klapa**[#]**.** 2007. Metabolomic analysis of adult male and female zebrafish for the identification of sex-determining metabolic biomarkers using gas chromatography-mass spectrometry. 6th Panhellenic Conference in Chemical Engineering, Athens, Greece, June 2007

12. Chrysanthopoulos P., Linardaki Z, Constantinou C., Margarity M and **Klapa M.I.**[#] Studying Brain Regional Variation using GC-MS Metabolomics, Annual Meeting of the Hellenic Society of Neurosciences, Heraklion, September 29-October 1, 2006

13. 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. 19th Annual Meeting of the Hellenic Society of Neuroscience, Patras, Greece, September 30-October 2, 2005

    It received a Best Poster Presentation Award

14. Kanani, H., Dutta, B., Vantoai, T., Moy, L., Linford, L., Hasseman, J., Quackenbush, J. and **Klapa, MI**.[#] High-throughput time-series analysis of the short-term *Arabidopsis thaliana* response to environmental stresses: a quantitative systems biology approach. 5th Panhellenic Conference in Chemical Engineering, Thessaloniki, Greece, March 25-27, 2005

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

17. Syriopoulos C.H., Lai K. and **Klapa M.I**.[#] *In vivo* analysis of the alternative pathways of galactose assimilation in yeast. First Bioscience Conference of the University of Patras, Patras, Greece, May 19-20, 2005

18. Spathis A.D.**,** Antonopoulos I., Panagopoulos N., Matsokis N., Angelatou F., Episkopou V., **Klapa M.I.**[#] and Margarity M.[#] In search of the etiology of Parkinson's disease using full genomic DNA microarrays of weaver mutant mice. 56th Meeting of the Hellenic Society of Biochemistry and Molecular Biology, Larissa, Greece, November 25-27, 2004

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
2. GSRT ESPA-Collaboration Project: PHYTOALATOTITA – Optimization of environmental control of covered plant hydroponic cultures for better management of the salinity stress using “omic” technologies, PI: P. Kalaitzis, MAICH, Crete; Partners: M. I. Klapa, FORTH/ICE-HT; C. Kittas, CERETETH/ITEMA, Volos, Thessaly; AGRITEX S.A, Thessaly; 1/12/2010-30/11/2013
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
4. EU-FP7-Cooperation-HEALTH Large-Scale Project: Genotype To Phenotype Database : A Holistic Solution (GEN2PHEN), PI: A. Brookes, U. Leicester, UK; FORTH PI: G. Potamias, ICS; 1/11/2007-31/10/2012
5. EU-FP6-Cooperation-ICT Integrated Project: Advancing Clinico-Genomic Tools on Cancer (ACGT), PI: M. Tsiknakis, FORTH/ICS; 1/2/2006-01/08/2010
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
8. US NSF-Quantitative Systems Biology(QSB) Program funded project: Integrated Genomic and Metabolic Analyses of *Arabidopsis thaliana* physiology, PI: M.I. Klapa (U. Maryland), co-PI: J. Quackenbush (TIGR); 15/10/2003-14/09/2007