

## CURRICULUM VITAE

**Name:** Angeliki Magklara

**Current position:** Lecturer of Clinical Chemistry, School of Medicine, University of Ioannina.

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### **EDUCATION-DEGREES**

*June 2003:*

**PhD in Clinical Biochemistry and Molecular Biology**

Department of Laboratory Medicine and Pathobiology, Faculty of Medicine, University of Toronto, Toronto, Canada.

Thesis: "Co-expression of human Kallikreins 2 and 3 in prostate and breast cancer: Clinical utility and mechanisms of steroid hormonal regulation".

*October 1997:*

**Master of Science in Clinical Chemistry-Clinical Biochemistry**

Department of Chemistry, National and Kapodistrian University of Athens, Athens, Greece.

Thesis: "Isolation and characterization of the 5'UTR of the novel Hepatitis G virus".

*November 1994:*

**Bachelor of Science in Biology**

Department of Biology, National and Kapodistrian University of Athens, Athens, Greece.

### **POSITIONS HELD**

*December 2013-*

**: Lecturer of Clinical Chemistry**

School of Medicine, University of Ioannina, Ioannina, Greece.

*September 2012-December 2013:* **Researcher at IMBB-BRI** (self-funded by a Marie Curie CIG grant)

*January 2008- August 2012* **: Post-doctoral research associate**

Department of Anatomy, University of California in San Francisco, San Francisco, CA, USA (laboratory of Dr. Stavros Lomvardas).

*April 2003- December 2007* **: Post-doctoral fellow**

Laboratory of Receptor Biology and Gene Expression, NCI/NIH, Bethesda, MD, USA (research advisor: Dr. Catharine L. Smith).

*September 1998-April 2003* **: PhD candidate**

Department of Laboratory Medicine and Pathobiology, University of Toronto, Toronto, Canada (research advisor: Dr. E. P. Diamandis)

## **OTHER RESEARCH TRAINING**

- Three-day workshop organized by the Epigenome project on the use of bioinformatics on the processing of epigenetics data. September 10-12, 2009, Baylor College of Medicine, Houston Texas USA.
- Five-day workshop organized by the Foundation for Advanced Education in Sciences (FAES-NIH) on "Stem Cells" (lectures and lab work) .October 15-19, 2007, Bethesda, MD, USA
- Various seminars organized by the National Center for Biotechnology Information (NCBI/NIH) on the use of bioinformatics tools developed by NCBI (2003-2007, NIH campus, Bethesda Maryland, USA).
- Three-week course (lectures and lab work) on “Eukaryotic Gene Expression” organized by the Cold Spring Harbor Laboratory, NY USA (27 July-16 August 2004).
- One month training on protein microarrays at the Genomics Institute of the Novartis Research Foundation, La Jolla CA, USA (November-December 2002).
- Three-day workshop on cDNA microarrays at the Microarray Center of Ontario Cancer Institute, Toronto, Canada, 2000.

## **FUNDING**

- FP7 Marie Curie Career Integration Grant PCIG10-GA-2011-303519 (2012-2016). *The Epigenome of Breast Cancer Stem Cells* (100.000 E).

## **PUBLICATIONS**

### **1. Original research papers**

1. Lyons DB, **Magklara A**, Goh T, Sampath S, Schaefer A, Schotta G, Lomvardas S. Heterochromatin-Mediated Gene Silencing Facilitates the Diversification of Olfactory Neurons. *Cell Rep*.2014;9:1-9.
2. Kougioumtzi A, Tsaparas P, **Magklara A**. Deep sequencing reveals new aspects of progesterone receptor signaling in breast cancer cells. *PLoS One*. 2014 Jun 4;9(6):e98404.

3. Johnson MA, Tsai L, Roy DS, Valenzuela DH, Mosley C, **Magklara A**, Lomvardas S, Liberles SD, Barnea G. Neurons expressing trace amine-associated receptors project to discrete glomeruli and constitute an olfactory subsystem. *Proc Natl Acad Sci U S A*. 2012 Aug 14;109(33):13410-5.
4. Clowney EJ, **Magklara A**, Colquitt BM, Pathak N, Lane RP, Lomvardas S. High-throughput mapping of the promoters of the mouse olfactory receptor genes reveals a new type of mammalian promoter and provides insight into olfactory receptor gene regulation. *Genome Res*. 2011 Aug;21(8):1249-59
5. **Magklara A**, Yen A, Colquitt BM, Clowney EJ, Allen W, Markenscoff-Papadimitriou E, Evans ZA, Kheradpour P, Mountoufaris G, Carey C, Barnea G, Kellis M, Lomvardas S. An epigenetic signature for monoallelic olfactory receptor expression. *Cell*. 2011 May 13;145(4):555-70.
6. Lee SC, **Magklara A**, Smith CL. HDAC activity is required for efficient core promoter function at the mouse mammary tumor virus promoter. *J Biomed Biotechnol*. 2011;2011:416905
7. **Magklara A**, Smith CL. A composite intronic element directs dynamic binding of the progesterone receptor and GATA-2. *Mol Endocrinol*. 2009;23:61-73.
8. Michael IP, Sotiropoulou G, Pampalakis G, **Magklara A**, Ghosh M, Wasney G, Diamandis EP. Biochemical and enzymatic characterization of human kallikrein 5 (hK5), a novel serine protease potentially involved in cancer progression. *J Biol Chem*. 2005;280:14628-35.
9. Sauter ER, Lininger J, **Magklara A**, Hewett JE, Diamandis EP. Association of kallikrein expression in nipple aspirate fluid with breast cancer risk. *Int J Cancer*. 2004;108:588-91.
10. Kapadia C, Yousef GM, Mellati AA, **Magklara A**, Wasney GA, Diamandis EP. Complex formation between human kallikrein 13 and serum protease inhibitors. *Clin Chim Acta* 2004;339:157-67.
11. **Magklara A**, Mellati AA, Wasney GA, Little SP, Sotiropoulou G, Becker GW, Diamandis EP. Characterization of the enzymatic activity of human kallikrein 6: Autoactivation, substrate specificity, and regulation by inhibitors. *Biochem Biophys Res Commun*. 2003;307:948-55.
12. Yousef GM, Scorilas A, **Magklara A**, Memari N, Ponzzone R, Sismondi P, Abd Ellatif M, and Diamandis EP. The androgen regulated gene human kallikrein 15 (KLK15) is an independent and favorable prognostic marker for breast cancer. *Br J Cancer* 2002;87:1294-300.
13. Sauter ER, Welch T, **Magklara A**, Klein G, Diamandis EP. Ethnic variation in kallikrein expression in nipple aspirate fluid. *Int J Cancer*. 2002 ;100:678-82.
14. **Magklara A**, Brown TJ and Diamandis EP. Characterization of androgen receptor and nuclear receptor co-regulator expression in human breast cancer cell lines exhibiting differential regulation of kallikreins 2 and 3. *Int J Cancer*.2002;100: 507-14.
15. **Magklara A**, Scorilas A, Katsaros D, Massobrio M, Yousef GM, Fracchioli S, Danese S, Diamandis EP. The human KLK8 (neuropsin/ovasin) gene: Identification of two novel slice variants and its prognostic value in ovarian cancer. *Clin Cancer Res*. 2001;7:806-11.

16. Scorilas A, **Magklara A**, Hoffman BR, Bromberg RM, Bjartell A and Diamandis EP. Highly sensitive array analysis using time resolved fluorescence and a novel streptavidin-based reagent. *Analytical Sciences* 2001;17(suppl):i547-i551.
17. Yousef GM, **Magklara A** and Diamandis EP. Cloning of a new member of the human kallikrein gene family, KLK14, which is down-regulated in different malignancies *Cancer Res.* 2001;61:3425-31.
18. Obiezu CV, Scorilas A, **Magklara A**, Thornton MH, Wang CY, Stanczyk FZ, Diamandis EP. Prostate-specific antigen and human glandular kallikrein 2 are markedly elevated in urine of patients with polycystic ovary syndrome. *J Clin Endocrinol Metab* 2001;86:1558-61.
19. Yousef GM, **Magklara A** and Diamandis EP. KLK12 is a novel serine protease and a new member of the human kallikrein gene family- Differential expression in breast cancer. *Genomics*, 2000;69:331-41.
20. Yousef GM, Scorilas A, **Magklara A**, Soosaipillai A, Diamandis EP. The PRSS6 gene, encoding for the stratum corneum chymolytic enzyme is a new member of the human kallikrein gene family-genomic characterization, mapping, tissue expression and hormonal regulation. *Gene*, 2000;254:119-128.
21. **Magklara A**, Scorilas A, Stephan C, Kristiansen GO, Hauptmann S, Jung K and Diamandis EP. Decreased concentrations of prostate specific antigen (PSA) and human glandular kallikrein 2 (hK2) in malignant vs non-malignant prostatic tissue. *Urology*, 2000;56:527-32.
22. **Magklara A**, Cheung CC, Asa SL, Diamandis EP. Expression of prostate-specific antigen and human glandular kallikrein 2 in the thyroid gland. *Clinica Chimica Acta*, 2000;300:171-80.
23. Obiezu CV, Giltay EJ, **Magklara A**, Scorilas A, Gooren L, Yu H, Diamandis EP. Dramatic suppression of plasma and urinary prostate specific antigen and human glandular kallikrein by antiandrogens in male-to-female transsexuals. *J Urol* 2000;163:802-5.
24. Obiezu CV, Giltay EJ, **Magklara A**, Scorilas A, Gooren L, Yu H, Howarth DJC and Diamandis EP. Serum and urinary prostate specific antigen and urinary human glandular kallikrein concentration are significantly elevated after testosterone administration in female to male transsexuals. *Clinical Chemistry* 2000;46:859-862.
25. Zand Rosenberg RS, Grass L, **Magklara A**, Jenkins DJA and Diamandis EP. Is ICI 182-780 an anti-progestin in addition to being an anti-estrogen? *Breast Cancer Res Treat* 2000;60:1-8.
26. **Magklara A**, Grass L, Diamandis EP. Differential steroid hormone regulation of human glandular kallikrein (hK2) and prostate specific antigen (PSA) in breast cancer cell lines. *Breast Cancer Res Treat* 2000;59:263-70.
27. Nam RK, Diamandis EP, Toi A, Trachtenberg J, **Magklara A**, Scorilas A, Papanastasiou PA, Jewett MAS and Narod SA. Serum human glandular kallikrein (hK2) protease levels predict the

presence of prostate cancer among men with elevated prostate specific-antigen. *Journal of Clinical Oncology* 2000;18:1036-42.

28. Black MH, **Magklara A**, Obiezu CV, Levesque MA, Sutherland DJA, Tindall DJ, Young CYF, Sauter ER, Diamandis EP. Expression of a prostate associated protein, human glandular kallikrein (hK2) in breast tumors and in normal breast secretions. *Br J Cancer* 2000;82:361-7.
29. **Magklara A**, Scorilas A, Catalona WJ, Diamandis EP. The combination of human glandular kallikrein (hK2) and free PSA enhances the discrimination between prostate cancer and benign prostatic hyperplasia in patients with moderately elevated total PSA levels. *Clinical Chemistry* 1999;45:1960-6.
30. **Magklara A**, Scorilas A, López-Otín C, Diamandis EP. Human glandular kallikrein (hK2) in breast milk, amniotic fluid and breast cyst fluid. *Clinical Chemistry*, 1999;45:1774-80.
31. Black MH, **Magklara A**, Obiezu CV, Melegos DN, Diamandis EP. Development of an ultrasensitive immunoassay for human glandular kallikrein (hK2) with no cross reactivity from prostate specific antigen (PSA). *Clinical Chemistry* 1999;45:790-9.

## **2. Reviews**

1. **Magklara A** and Lomvardas S: Stochastic gene expression in mammals: Lessons from Olfaction. *Trends in Cell Biology* 2013 Sep;23(9):449-56.
2. Yousef GM, Obiezu CV, Luo LY, **Magklara A**, Borgoño CA, Kishi K, Memari N, Michael IP, Sidiropoulos M, Kurlender L, Economopoulou K, Kapadia C, Komatsu N, Petraki C, Elliott M, Scorilas A, Katsaros D, Levesque MA, Diamandis EP. Human Tissue Kallikreins: From Gene Structure to Function and Clinical Applications. *Adv Clin Chem* 2005;39:11-79
3. Diamandis EP, Yousef GM, Luo LY, **Magklara A** and Obiezu CV. The new human kallikrein gene family-implications in carcinogenesis. *Trend Endocrinol Metab* 2000;11:54-60.

## **3. Book chapters**

1. **Angeliki Magklara** and Stavros Lomvardas: Epigenetics and Human Disease. "Gene Regulatory Sequences and Human Disease", editor Nadav Ahituv, Springer New York 2012.

**PRESENTATIONS AT SCIENTIFIC MEETINGS**

1. **Magklara A**, Colquitt BM, Clowney EJ, Yen A, Allen W, Markenscoff-Papadimitriou E, Kheradpour P, Mountoufaris G, Carey C, Barnea G, Kellis M and Lomvardas S. Developmental regulation of the epigenetic silencing of the olfactory receptor genes in the olfactory epithelium. Poster session at the Miami Winter Symposium Epigenetics in development and Disease, February 2011.
2. Yen, A., **Magklara, A.**, Clowney, E., Lomvardas, S. Kellis, M. Computational analysis of epigenomic modifications associated with Olfactory Receptor genes in *Mus musculus*. Poster Presentation, RECOMB Satellite Conference on Regulatory Genomics, NYC, November 2010
3. Smith, C.L., **Magklara, A.**, Jackson, J., and Hardwick, R. Progesterone receptor cooperates with GATA2 at an intronic element to activate the FKBP5 gene. Poster session at the FASEB Summer Conference on Extra-Nuclear Steroid Receptors: Integration with Multiple Signaling Pathways, 2008 (poster award).
4. **Magklara A**, Smith CL. GATA-2 binding to a downstream region is necessary for the progesterone receptor regulation of *Fkbp5*, a natural target gene. Poster session at the Endocrine Society Meeting, Toronto, Canada, June 2007.
5. **Magklara A**, Smith CL. Progesterone receptor action on a natural target promoter. Poster session at the FASEB meeting “Chromatin and transcription” Snowmass CO, July 9-14, 2005.
6. **Magklara A**, Mellati AA, Wasney GA, Little SP, Sotiropoulou G, and Diamandis EP. Characterization of the enzymatic activity of human kallikrein 6 (hK6/zyme) and regulation by inhibitors. Poster session at the American Association for Cancer Research, Washington DC, July 2004.
7. Yousef GM, **Magklara A**, Borgono C, Memari N, Abd-Ellatif M, Grass L and Diamandis EP. Regulation of the human kallikrein gene 15 (KLK15) by steroids in breast cancer cell lines. Poster Session at the American Association for Cancer Research, San Francisco, CA, April 2002.
8. **Magklara A**, Brown TJ and Diamandis EP. Characterization of androgen receptor and co-factor expression in human breast cancer cell lines. Poster Session at the Endocrine Society's annual meeting, Denver, CO, June 2001.
9. **Magklara A**, Scorilas A, Katsaros D, Fracchioli S, Rigault de la Longrais I, Piccino R, Yousef GM and Diamandis EP. The prognostic value of human KLK8 (neuropsin/ovasin) in ovarian cancer and evidence of alternative splicing. Poster Session at the American Association for Cancer Research, New Orleans, LO, March 2001.
10. Yousef GM, **Magklara A**, Chang A, Jung K, Katsaros D and Diamandis EP. Down regulation of a novel human kallikrein gene KLK14, in endocrine related cancers. Poster Session at the American Association for Cancer Research, New Orleans, LO, March 2001.

11. Diamandis EP, **Magklara A**, Scorilas A, Catalona WJ. Prostate specific antigen (PSA) and human glandular kallikrein 2 (hK2): two hormonally regulated kallikreins with applications in breast and prostate cancer. Poster Session at the 11<sup>th</sup> International Congress of Endocrinology, Sydney 2000.
12. Yousef GM, **Magklara A**, Diamandis EP. KLK-L5 is a new, hormonally regulated, member of the kallikrein gene family. Poster Session at the Endocrine Society's annual meeting, Toronto, ON, June 2000.
13. Chang A, Yousef GM, **Magklara A**, Diamandis EP. Hormonal regulation of a novel kallikrein-like gene, KLK-L4, in breast cancer. Poster Session at the Endocrine Society's annual meeting, Toronto, ON, June 2000.
14. **Magklara A**, Cheung CC, Asa SL, Diamandis EP. Expression of prostate-specific antigen and human glandular kallikrein 2 in the thyroid gland. Poster Session at the Endocrine Society's annual meeting, Toronto, ON, June 2000.
15. Yousef GM, Foussias G, **Magklara A**, Grass L, Diamandis EP. Cloning of KLK-L5, a new member of the kallikrein gene family and its hormonal regulation in breast cancer cell lines. Poster Session at the symposium of the American Association for Cancer Research, San Francisco, CA, April 2000.
16. **Magklara A**, Scorilas A, Catalona WJ, Diamandis EP. Human glandular kallikrein (hK2) and prostate specific antigen (PSA) in prostate and breast cancer. Poster Session at the symposium of the American Association for Cancer Research, San Francisco, CA, April 2000.
17. **Magklara A**, Scorilas A, Catalona WJ, Diamandis EP. The ratio of human glandular kallikrein (hK2) to free PSA improves the discrimination between prostate cancer and benign prostatic hyperplasia in patients with moderately elevated total PSA levels. Poster Session at the symposium of Molecular targets and Cancer therapeutics, AACR-NCI-EORTC International Conference, Washington, DC, November 1999.
18. Obiezu CV, Giltay EJ, **Magklara A**, Scorilas A, Gooren L, Yu H and Diamandis EP. Dramatic suppression of serum prostate specific antigen and human glandular kallikrein by antiandrogens in male to female transsexuals. Poster session at the third annual symposium on advances in Laboratory Medicine, The Dept. of paediatric laboratory Medicine, The Hospital for Sick Children, Toronto, June 1999.
19. **Magklara A**, Scorilas A, Catalona WJ and Diamandis EP. The ratio of human glandular kallikrein (hK2) to free PSA as a new potent marker for the discrimination between prostate cancer and benign prostatic hyperplasia in patients with moderately elevated total PSA levels. Poster session at the third annual symposium on advances in Laboratory Medicine, The Dept. of paediatric laboratory Medicine, The Hospital for Sick Children, Toronto, June 1999.
20. Obiezu CV, Black MH, **Magklara A**, Levesque MA, Sutherland DJA, Tindall DJ, Young CYF, Sauter ER, and Diamandis EP. Expression of a prostate-associated protein, human glandular kallikrein 2 (hK2), in breast tumors and in normal breast secretions. Poster session at the symposium of the American Association for Cancer Research, Philadelphia PA, April 1999.

21. **Magklara A**, Black MH, Obiezu CV, Melegos DN, Diamandis EP. Development of an ultrasensitive immunoassay for human glandular kallikrein (hK2) with no cross reactivity from prostate specific antigen (PSA). Poster discussion at the symposium of the American Association for Cancer Research, Philadelphia PA, April 1999.

### **SCIENTIFIC SOCIETIES**

- Member of the Greek Society of Clinical Chemistry and Clinical Biochemistry.
- Member of the Greek Society of Biochemistry and Molecular Biology.
- Member of the Greek Society of Biologists (1994-1998).

### **REFEREE IN SCIENTIFIC JOURNALS**

- BMC Cancer
- Tumor biology