

Curriculum Vitae
Charalampos G. Spilianakis, MSc, PhD

Place & Date of birth Athens (Greece), April 13th 1972
Marital status Married
Nationality Greek
Address (institute) Section of Immunobiology, Yale University School of Medicine, 300 Cedar Street, TAC S-560, New Haven, CT 06520
(203) 785-5383 (phone), (203) 737-2958 (Fax)
Address (home) 745 Orange street, Apt:304, New Haven, CT 06511
(203) 624-9369 (phone)
Email charalampos.spilianakis@yale.edu

Education & Training

1990 Graduation from Senior High School with grade 19.5/20 (Excellent)
1992-1996 Undergraduate student in the Department of Biology, University of Crete
1994 Summer training at the School of Biological Sciences in Manchester (UK). Project title: “*Polymorphism analysis of promoter HLA-DRB1*0301 in HLA-DR3 related autoimmune diseases.*” (Laboratory of Rheumatoid Arthritis), Advisors: Dr. Richard Kay and Prof. Ian Hutchinson. (ERASMUS PROGRAM)
1994-1996 Undergraduate training in the laboratory of Molecular Biology (Biology department, University of Crete). Advisor: Prof. Joseph Papamatheakis. Diploma thesis: “*Analysis of the cis regulatory elements of the Major Histocompatibility complex gene Ea required for the induction of the transactivator CIITA, and primary characterization of its functional domains.*”
1996 Diploma in Biology (V.good)
1996-1998 Graduate student in the Department of Biology, University of Crete and Institute of Molecular Biology & Biotechnology, IMBB-FORTH (Greece). Master’s degree in Molecular Biology (Excellent 9.14/10).
Master thesis: “*Investigating the mode of action of CIITA, the transcriptional activator of the Major Histocompatibility class II antigens*”. Advisor: Prof. Joseph Papamatheakis
1998-2002 Student in the postgraduate program “Biomedicine” at the Biology Department of the University of Crete and Institute of Molecular Biology & Biotechnology, IMBB-FORTH.
PhD thesis: “*Transcriptional regulation of MHC class II genes via CIITA. The class II enhanceosome and posttranscriptional modification of transcription factors and chromatin during DRA transcription*”. Advisor: Prof. Joseph Papamatheakis
2003 July- Postdoctoral Fellow in the Section of Immunobiology, Yale University School of Medicine (P.I.: Richard A. Flavell)

Languages

Greek, English, Italian, German.

Research Experience

- Chromosome Conformation Capture assay (3C) developed in mammalian systems.
- Fluorescence in Situ Hybridization (FISH)-[DNA-FISH, Immuno-DNA FISH, RNA-FISH, chromosome paints].
- Basic techniques in Immunology (T helper cell differentiation, cell-sorting).
- Basic molecular biology techniques: gene cloning, sequencing, PCR, Real-time PCR, DNA&RNA manipulation, Northern and Southern blot analysis, protein expression and purification from bacteria and human cell lines, Western blot analysis, phosphorylation assays, GFP/YFP/BFP/CFP construction, expression and visualization, nuclear import-export assays. Six months in the laboratory of Dimitris Thanos at Columbia University reconstituting the MHC Class II Enhanceosome (2001-02).
- Gene promoter analysis techniques/assays: preparation of whole cell, nuclear and cytoplasmic extracts from tissues or tissue culture cells, in vitro DNase I footprinting, EMSA, CAT assays, luciferase assays, in vitro transcription assays, in vitro protein-protein interactions, CHIP (chromatin immunoprecipitation), in vitro mutagenesis, *in vitro* recruitment of proteins on DNA fragments, Rapid Amplification of cDNA Ends (RACE), in vitro site- directed mutagenesis.

- Cell culture techniques: maintenance and growth of cell lines, transient transfection assays.
- Transgenic mice manipulation: design and cloning of transgenic constructs, analysis of transgenic mice, staining and visualization of sections from transgenic mice (collaboration with Clio Mamalaki, in CIITA transgenic mice).

Teaching Experience

- Supervising undergraduate students in the laboratory courses of Biochemistry and Molecular Biology (as a graduate student).
- Supervising and training undergraduate students.
- Supervision and training of graduate students in the laboratory of Dr R.A.Flavell. Student: Cornelia Zorca. Project title: “Unraveling the functional significance of homologous association of gene loci in CD4⁺ T cells”. January 2006-present.

Meetings attended

- 1999 Poster presentation at the 64th Cold Spring Harbor Symposium on quantitative Biology, “*Signaling and gene expression in the immune system*”. June 2-7, 1999. Title of abstract: “CBP and PCAF modulate the action of CIITA on MHC class II gene Transcription”, C.Spilianakis, J.Papamatheakis, A.Kretsovali.
- 1999 EPEAEK Congress, “*New Insights in Molecular Biology and Biomedicine*”, August 4-12, 1999 Kolymbari, Crete, Greece.
- 1999 Oral presentation at the 51st meeting of the Hellenic society of Biochemistry and Molecular Biology, December 1999.
- 2000 International Summer School Spetses 2000, “*Molecular Mechanisms of Development and Disease*”, September 4-14, 2000. Title of abstract: “Structure-function analysis of the Class II transactivator- CIITA”. C.Spilianakis, A.Dimakopoulos, A.Kretsovali, J.Papamatheakis.
- 2002 “*Gene expression and Signaling in the Immune System*”, April 24-28, 2002. Cold Spring Harbor Laboratory. Poster presentation. Title of abstract: The Class II Enhanceosome and ordered recruitment of the basal transcription machinery factors to the MHC class II DR promoter”. C.Spilianakis , T.Agalioti , A.Kretsovali , T.Makatounakis , D.Thanos , J.Papamatheakis.
- 2002 12th IMP Spring Conference- “*Epigenetic Programming of the Genome*”, May 23-25, 2002, Hofburg Vienna. Title of abstract: “The role of SRC-1 in MHC class II gene expression”, E. Tzortzakaki, C. Spilianakis, E. Zika, A. Kretsovali, J. Papamatheakis.
- 2004 “*Gene expression and signaling in the Immune System*”, April 28-May 3, 2004. Cold Spring Harbor Laboratory. Poster presentation. Title of abstract: “Long-range intrachromosomal interactions in the T helper type 2 cytokine locus”.
- 2005 CANCER VACCINES 2005—*Barriers, Endpoints & Opportunities*, Oct 5-7, 2005, Manhattan Conference Center, NY.
- 2006 BioImaging: Capturing Cell Dynamics, September 29, 2006, Whitehead Symposium XXIV, Cambridge, Massachusetts.
- 2006 HHMI Science Meeting, October 8-11, 2006, Janelia Farm Research Campus (JFRC), Ashburn, Virginia.

Fellowships, Awards

- 1996-1998 Fellowship from the Foundation of Research and Technology of Greece
- 1998 First Award from Greek Fellowship Foundation (IKY) for excellence as a postgraduate student
- 1999 EPEAEK Fellowship from the postgraduate program for Molecular Biology and Biomedicine
- 2000 Fellowship from PENED programme entitled, “Molecular study of osteosarcomas”
- 2001 Award from Greek Secretariat for Research and Technology, for excellent scientific work in postgraduate studies
- 2003-2006 Postdoctoral Fellowship from the Cancer Research Institute

Publication list

Number of citations as of October 1 2006 for the representative publications indicated as underlined.

1. Spilianakis C.G., Town T., Flavell R.A. Dynamic modulation of interchromosomal interactions during T cell differentiation. Cell. 2006, CELL-D-06-00247R1, under 2nd revision.

2. Spilianakis C.G., Flavell R.A. T helper cell differentiation: a prototypic system for studying interchromosomal interactions with functional consequences. *J.Leukocyte Biol.* 2006, MR1105-670R, under 2nd revision. (*Review*)
3. Spilianakis C.G., Flavell, R.A. Molecular biology. Managing associations between different chromosomes. *Science.* 2006, 312(5771):207-8. (*Commentary*)
4. Lee G.R., Kim S.T., Spilianakis C.G., Fields P.E., Flavell R.A. T helper cell differentiation: Regulation by cis-elements and epigenetics. *Immunity.*2006, 4:369-379. (*Review*)
5. Gialitakis M., Kretsovali A., Spilianakis C.G., Kravariti, L., Mages J., Hoffmann R., Hatzopoulos A.K., Papamatheakis J. Coordinated changes of histone modifications and HDAC mobilization regulate the induction of MHC class II genes by Trichostatin A. *Nucleic Acids Res.* 2006, 34:765-72.
6. Spilianakis C.G., Lee G.R., Flavell R.A. Twisting the Th1/Th2 immune response via the retinoid X receptor: Lessons from a genetic approach. *Eur J Immunol.* 2005, 35(12):3400-4. (*Commentary*)
7. Spilianakis C., Lalioti M., Town T., Lee GR., Flavell RA. Interchromosomal associations between alternatively expressed loci. *Nature (Research Article).* 2005,435:637-645. *Times Cited: 45*
8. Lee GR, Spilianakis C., Flavell RA. Hypersensitive site 7 of the TH2 locus control region is essential for expressing TH2 cytokine genes and for long-range intrachromosomal interactions. *Nat Immunol.* 2005, 6(1):42-8. *Times cited: 19*
9. Spilianakis C., Flavell RA. Long-range intrachromosomal interactions in the T helper type 2 cytokine locus. *Nat Immunol.* 2004, 5(10):1017-27. *Times cited: 37*
10. Muhlethaler-Mottet A, Krawczyk M, Masternak K, Spilianakis C., Kretsovali A, Papamatheakis J, Reith W. The S box of major histocompatibility complex class II promoters is a key determinant for recruitment of the transcriptional co-activator CIITA. *J Biol Chem.* 2004 24;279(39):40529-35.
11. Spilianakis C., Kretsovali A, Agalioti T, Makatounakis T, Thanos D, Papamatheakis J. CIITA regulates transcription onset via Ser5-phosphorylation of RNA Pol II. *EMBO J.* 2003, 22(19):5125-36. *Times cited: 25*
12. Tzortzakaki E, Spilianakis C., Zika E, Kretsovali A, Papamatheakis J. Steroid receptor coactivator 1 links the steroid and interferon gamma response pathways. *Mol Endocrinol.* 2003, 12:2509-18.
13. Spilianakis C., Kretsovali A, Dimakopoulos A, Makatounakis T, Papamatheakis J. "Self-association of class II transactivator correlates with its intracellular localization and transactivation." *J Biol Chem.* 2001 Aug 24;276(34):32191-7. (Equal first authorship with Kretsovali A.)
14. Spilianakis C., Papamatheakis J, Kretsovali A. "Acetylation by PCAF enhances CIITA nuclear accumulation and transactivation of major histocompatibility complex class II genes." *Mol Cell Biol.* 2000 Nov;20(22):8489-98. *Times cited: 68*
15. Kretsovali A, Agalioti T, Spilianakis C., Tzortzakaki E, Merika M, Papamatheakis J. "Involvement of CREB binding protein in expression of major histocompatibility complex class II genes via interaction with the class II transactivator." *Mol Cell Biol.* 1998 Nov; 18(11):6777-83.