



**Name:** Dr. Ioanna Maroulakou

**Current Position :** Professor of Genetics

**Education /Training**

INSTITUTION AND LOCATION	DEGREE (if applicable)	YEAR(s)	FIELD OF STUDY
University of Athens, Athens Greece	B.S.	1984	Biology
University of Athens, Athens Greece	Ph.D.	1990	Biology
National Cancer Institute, NIH, USA	Postdoc	1991-1996	Molecular Oncology

**Positions and Honors**

- 1984-1990 Graduate Student, Laboratory of Biology, School of Health Sciences, University of Athens, Athens, Greece
- 1988 Guest Investigator Fellowship, Laboratory of Cell Biology, Rockefeller University, New York, USA
- 1991-1996 Post-doctoral Fellow, Laboratory of Molecular Oncology, National Cancer Institute, USA
- 1996-2003 Assistant Professor, Dept. of Medicine, Medical University of South Carolina, Charleston, USA
- 2003-2009 Assistant Professor, Dept. of Medicine, Tuft University School of Medicine, Boston, USA
- 2003-2009 Investigator, Molecular Oncology Research Institute, Tufts-NEMC, Boston, USA
- 2009 Associate Professor, Dept. of Pharmacology and Toxicology, Cancer Institute, UMMC, Jackson, USA
- 2010 - today Professor of Genetics, Dept. of Molecular Biology and Genetics, Democritus University of Thrace, Greece

**Professional Memberships**

- Member, American Association for Cancer Research
- Member, American Association for the Advancement of Science
- Member, European Association for Cancer Research
- Member, Hellenic Society of Biochemistry and Molecular Biology
- Member, Hellenic Association of Medical Geneticists

**Other Experience and Professional Activities**

- 2010- today Head of “Population Genetics and Evolution” Laboratory
- 2013- 2018 Director of the MscProgramme “Translational Research in Biomedicine”

**Honors and Awards**

- 9/86-9/90 National Graduate Fellowship, University of Athens, Greece
- 9/87 Grant from European Training Programme (ETP) in Italy
- 6/88-12/88 Guest Investigator Fellowship, Laboratory of Cell Biology, Rockefeller University, USA
- 6/91-6/93 Fogarty Fellowship, Laboratory of Molecular Oncology, National Cancer Institute (NCI), NIH, USA
- 6/93-5/96 Renewal of Fogarty Fellowship, Laboratory of Molecular Oncology, NCI, NIH, USA

**Selected Peer-reviewed Publications**

**Maroulakou, I. G.,** Papas, T. S., and Green, J. E.: Differential expression of ets-1 and ets-2 proto oncogenes during murine embryogenesis. *Oncogene* 9: 1551-1565, 1994.

**Maroulakou, I. G.,** Anver, M., Garrett, L., and Green, J. E.: Prostate and breast cancer in transgenic mice carrying a rat C3(1) SV40 TAG fusion gene. *Proc. Natl. Acad. Sci. USA* 91: 11236-11240, 1994.

**Maroulakou, I. G.,** Pokholok, D. K., Cuprash, D. V., Alimzhanov, M. B., Kozlov, S. V., Novobrantseva, T. I., Turetskaya, R. L., Green, J. E., and Nedospasov, S. A.: Cloning and in situ transcriptional analysis of the murine lymphotoxin-b (Ltb) gene. *Proc. Natl. Acad. Sci. USA* 92: 674-678, 1995. (Note: In this paper Maroulakou and Pokholok are equal first authors)

Shibata, M.-A., **Maroulakou, I. G.,** Jorcyk, C. L., Gold, L. G., Ward, J. M., and Green, J. E.: p-53 independent apoptosis during mammary tumor progression in C3(1)/SV40 large T antigen transgenic mice: Suppression of apoptosis during the transition from preneoplasia to carcinoma. *Cancer Research* 56(13): 2998-3003, 1996.

Jorcyk, C. L., Garrett, L. J., **Maroulakou, I. G.,** Watson, D. K., and Green J. E.: Multiple regulatory regions control the expression of the Ets-1 proto-oncogene in the developing mouse. *Cellular and Molecular Biology* 43: 211-225, 1997.

**Maroulakou, I.,** Shibata, M.-A., Jorcyk, C. L., Chen, X. X. and Green, J. E.: Reduced p53 dosage associated with mammary tumor metastases in C3(1)TAG transgenic mice. *Molecular Carcinogenesis* 20: 168-174, 1997.

Jorcyk CL, Liu ML, Shibata MA, **Maroulakou IG,** Komschlies KL, McPhaul MJ, Resau JH, Green JE. Development and characterization of a mouse prostate adenocarcinoma cell line: ductal formation determined by extracellular matrix. *Prostate*. 1998 Jan 1;34(1):10-22.

**Maroulakou, I. G.,** Shibata, M.-A., Anver, M. R., Roberts, A., Tsarfaty, I., Resau, J., Ward, J. M. and Green, J. E.: Heterotopic endochondral ossification associated with mixed tumor formation in C3(1)/Tag transgenic mice is associated with elevated TGF-beta1 and BMP-2 expression. *Oncogene* 18(39): 5435-5447, 1999.

- Maroulakou IG**, Bowe DB. Expression and function of Ets transcription factors in mammalian development: a regulatory network. *Oncogene*. 2000 Dec 18;19(55):6432-42.
- Bowe, D. B., Kenney, N. J., Adereth Y. and **Maroulakou, I. G.**: Suppression of her2/neu mammary tumor growth in Cyclin D1-deficient mice is compensated for by cyclin E. *Oncogene*, 21:291-298, 2002 (corresponding author).
- Highlighted in The New England Journal of Medicine, section Clinical Implications of Basic Research, entitled "The Reciprocal Dance between Cancer and Development" by Lewis A. Chodosh. 2002.Vol.347 (2):134-136.*
- Tomczak MF, Gadjeva M, Wang YY, Brown K, **Maroulakou I**, Tschlis PN, Erdman SE, Fox JG, Horwitz BH. Defective activation of ERK in macrophages lacking the p50/p105 subunit of NF-kappaB is responsible for elevated expression of IL-12 p40 observed after challenge with Helicobacter hepaticus. *J Immunol*. 2006 Jan 15;176(2):1244-51.
- Maroulakou IG**, Oemler W, Naber SP, Tschlis PN. Akt1 ablation inhibits, whereas Akt2 ablation accelerates, the development of mammary adenocarcinomas in Mouse Mammary Tumor Virus (MMTV)-ErbB2/Neu and Polyoma Middle T mice. *Cancer Res* 2007; 67(1): 167-77. (Corresponding Author).
- Highlighted in the front page of " Cancer Research" as selected article from the January1, 2007 issue.*
- Mao C, Tili EG, Dose M, Haks MC, Bear SE, **Maroulakou I**, Horie K, Gaitantris G, Ludwig T, Wiest DL, Gounari F, Tschlis PN. Unequal contribution of akt isoforms in the double-negative to double-positive thymocyte transition. *J Immunol*. 2007 May 1;178(9):5443-53.
- Maroulakou IG**, Oemler W, Naber SP, Tschlis PN. Distinct roles of the three Akt isoforms in lactogenic differentiation and involution. *J Cell Physiol*, 2008 Nov;217(2):468-77. (Corresponding Author)
- Wright, G., **Maroulakou, I.**, Vijayalakshmi, S., Eldridge, J., Tschlis, P., and Muise-Helmericks, R.C. VEGF Stimulation of Mitochondrial Biogenesis: Requirement of Akt3 kinase. *FASEB J*. 2008 Sep 22(9):3264-75
- Iliopoulos D, Polytarchou C, Hatziapostolou M, Kottakis F, **Maroulakou IG**, Struhl K, Tschlis PN. MicroRNAs differentially regulated by Akt isoforms control EMT and stem cell renewal in cancer cells. *Science Signal*. 2009 Oct 13;2(92):ra62.
- Polytarchou C., Iliopoulos D., Hatziapostolou M., Kottakis F, **Maroulakou, I.**, Kevin Struhl K., and Tschlis P. Akt2 functions as a master regulator of all Akt isoforms and promotes resistance to hypoxia by regulating the induction of miR-21 upon oxygen deprivation. *Cancer Research*. 2011 Jul 1;71(13):4720-31.
- Hebron E, Hope C, Kim J, Jensen JL, Flanagan C, Bhatia N, **Maroulakou I**, Mitsiades C, Miyamoto S, Callander N, Hematti P, Asimakopoulos F. MAP3K8 kinase regulates myeloma growth by cell-autonomous and non-autonomous mechanisms involving myeloma-associated monocytes/macrophages. *Br J Haematol*. 2013 Mar;160(6):779-84.
- Hope C, Ollar SJ, Heninger E, Hebron E, Jensen JL, Kim J, **Maroulakou I**, Miyamoto S, Leith C, Yang DT, Callander N, Hematti P, Chesi M, Bergsagel PL, Asimakopoulos F. TPL2 kinase regulates the inflammatory milieu of the myeloma niche. *Blood*. 2014 May 22;123(21):3305-15.
- Jensen JL, Rakhmilevich A, Heninger E, Broman AT, Hope C, Phan F, Miyamoto S, **Maroulakou I**, Callander N, Hematti P, Chesi M, Bergsagel PL, Sondel P, Asimakopoulos F. Tumorcidal Effects of Macrophage-Activating Immunotherapy in a Murine Model of Relapsed/Refractory Multiple Myeloma. *Cancer Immunol Res*, 2015 Aug;3(8):881-90.
- Arelaki S, Arampatzioglou A, Kambas K, Papagoras C, Miltiades P, Angelidou I, Mitsios A, Kotsianidis I, Skendros P, Sivridis E, **Maroulakou I**, Giatromanolaki A, Ritis K. Gradient Infiltration of Neutrophil Extracellular Traps in Colon Cancer and Evidence for Their Involvement in Tumour Growth. *PLoS One*. 2016 May 2;11(5):e0154484.
- Hope C, Foulcer S, Jagodinsky J, Chen SX, Jensen JL, Patel S, Leith C, **Maroulakou I**, Callander N, Miyamoto S, Hematti P, Apte SS, Asimakopoulos F. Immunoregulatory roles of versican proteolysis in the myeloma microenvironment. *Blood*. 2016 Aug 4;128(5):680-5.
- Dovrolis N, Kolios G, Spyrou G, **Maroulakou I**. Laying in silico pipelines for drug repositioning: a paradigm in ensemble analysis for neurodegenerative diseases. *Drug Discov Today*. 2017 May;22(5):805-813.
- Arampatzioglou A, Papazoglou D, Konstantinidis T, Chrysanthopoulou A, Mitsios A, Angelidou I, **Maroulakou I**, Ritis K, Skendros P. Clarithromycin Enhances the Antibacterial Activity and Wound Healing Capacity in Type 2 Diabetes Mellitus by Increasing LL-37 Load on Neutrophil Extracellular Traps. *Front Immunol*. 2018 Sept. 10; Vol. 9:2064