

## CURRICULUM VITAE

Sophia Havaki

### 1. CONTACT DETAILS

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### 2. CURRENT POSITION

Assistant Professor, Dept. of Histology and Embryology, School of Medicine, National and Kapodistrian University of Athens, Greece.

### 3. EDUCATION

- A. Undergraduate Studies: BSc in Biology, Department of Biology, University of Crete, Greece  
(CI: 07.17 in scale of 10, “*very good*”) (October 1993)
- B. Post-Graduate Studies:  
*PhD thesis*: School of Medicine, National and Kapodistrian University of Athens, Greece  
(CI: 10.00 in a scale of 10, “*excellent*”) (July 2004)

### 4. SPECIAL TRAINING

- a. Cell Biology
- b. Electron Microscopy Expertise (Conventional, Cryo-electron microscopy and specific methods for chromatin studies)

### 5. RESEARCH INTERESTS

The last 4 years, as a member of the Molecular Carcinogenesis Group of Dept. of Histology and Embryology of School of Medicine, NKUA, my research interests are focused on:

- a. the role of autophagy in cancer dormancy in vivo and in vitro
- b. the study of cellular factors which control the cell cycle and lead to the development of genomic instability and carcinogenesis and also contribute to the tumor induced immunosuppression.
- c. the study of replication DNA intermediates of cancer cells with transmission electron microscopy after oncogene-induced replication stress, genomic instability and cancer development.

Previously, my research interests were also focused on:

- d. the role of transmembrane cell adhesion receptors in correlation with cytoskeletal molecules in the metastatic potential of breast cancer cells.
- e. the study of noradrenaline-storing organelles in human catecholamine neurons in neurologic and psychiatric diseases.
- f. the study of chromatin alterations in peripheral blood cells of patients with neurologic and psychiatric diseases.

## **6. PUBLICATIONS – CITATIONS - COMMUNICATIONS**

- 27 publications in international peer reviewed journals (1<sup>st</sup> author in 4 publications; 2<sup>nd</sup> author in 10 publications; equal-contributing author in 1 publication)
- 362 citations
- 51 communications at international conferences and meetings (posters and oral announcements).
- 29 communications at Greek conferences and meetings (posters and oral announcements).

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## **7. TEACHING AND SUPERVISING RESPONSABILITIES**

- Undergraduate teaching:* Lectures and practical tutorials in a) Histology and Embryology I and II to 2<sup>nd</sup> year students of School of Medicine, NKUA, Greece and b) in General Histology and Embryology to 1<sup>st</sup> year students of Faculty of Dentistry, NKUA, Greece
- Postgraduate teaching:* Lectures and practical tutorials in MSc programme of Medical School in collaboration with the Biology Department, entitled “Applications of Biology in Medicine” on topics of “Histology-Immunohistochemistry-Immunocytochemistry” and “Senescence and Related Diseases”.
- Postgraduate Supervising:* i) Supervisor or member of the supervising committee for 20 PhD students over the last 7 years; ii) Supervisor or member of the supervising committee of 5 students for MSc thesis over the last 7 years.

## **8. INTERNATIONAL COLLABORATIONS**

- Institute of Molecular Cancer Research, University of Zurich, Switzerland. *Group Leader:* Massimo Lopes
- Department of Molecular Cell Biology, Weizmann Institute of Science, Israel. *Group Leader:* Valeri Krizhanovsky
- Department of Molecular Cell Biology, Weizmann Institute of Science, Rehovot, Israel. *Group Leader:* Moshe Oren
- Department of Medical Biochemistry, Department Group of Basic Medical Sciences, University of Oslo, Norway. *Group Leader:* Anne Carine Østvold.
- Department of Gastroenterology, University of São Paulo, School of Medicine, Brazil. *Collaborator:* Claudia P.M.S. Oliveira.

## **9. MEMBERSHIP IN SCIENTIFIC ASSOCIATIONS**

- Royal Microscopical Society
- Electron Microscopy Society
- Association of Clinical Electron Microscopists
- International Brain Research Organization
- Hellenic Society for Neuroscience

## **10. FELLOWSHIPS and AWARDS**

- 1 EMBO Short-term fellowship. Collaboration with the Institute of Molecular Cancer Research, University of Zurich, Switzerland (1-30 July 2014)
- 3 awards for scientific announcements in international conferences

## 11. ORGANIZATIONAL-ADMINISTRATIVE EXPERIENCE

1. Member of the Organizing Committee of 2 International Meetings organized by the Neurobiology Research Institute of Theodor Theohari Cozzika Foundation:
  - “Personality Disorders: Current aspects of diagnosis and therapy”, 11 November 1995, Athens, Greece
  - “Dialogue of Psychoanalysis and Neurobiology: theoretical and therapeutic aspects”, 6 November 2004, Athens, Greece
2. Responsible for the Unit of Electron Microscopy services and collaborations of Laboratory of Histology and Embryology, School of Medicine, National and Kapodistrian University of Athens, Greece (2012- to date).
3. Technical Expert for Electron Microscopy Laboratories of the Cyprus Organization for the Promotion of Quality/Cyprus Accreditation Body (October 2015-to date).

## 12. PUBLICATIONS

<https://www.ncbi.nlm.nih.gov/pubmed/?term=Havaki+S>

1. Galanos P, Vougas K, Walter D, Polyzos A, Maya-Mendoza A, Haagensen EJ, Kokkalis A, Roumelioti FM, Gagos S, Tzetis M, Canovas B, Igea A, Ahuja AK, Zellweger R, **Havaki S**, Kanavakis E, Kletsas D, Roninson IB, Garbis SD, Lopes M, Nebreda A, Thanos D, Blow JJ, Townsend P, Sørensen CS, Bartek J, Gorgoulis VG. Chronic p53-independent p21 expression causes genomic instability by deregulating replication licensing. **Nat Cell Biol.** 2016 Jul;18(7):777-89.  
*Highlighted on journal cover page and in:*  
*p21 shapes cancer evolution. [Nat Cell Biol. 2016]*  
*Tumour suppressors: The dark side of p21. [Nat Rev Cancer. 2016]*  
*Cancer biology: The dark side of p21. [Nat Rev Mol Cell Biol. 2016]*
2. Georgakopoulou E, Evangelou K, **Havaki S**, Townsend P, Kanavaros P, Gorgoulis VG. Apoptosis or senescence? Which exit route do epithelial cells and fibroblasts preferentially
3. Pateras IS, **Havaki S**, Nikitopoulou X, Vougas K, Townsend PA, Panayiotidis MI, Georgakilas AG, Gorgoulis VG. The DNA damage response and immune signaling alliance: Is it good or bad? Nature decides when and where. **Pharmacol Ther.** 2015 Oct;154:36-56.
4. **Havaki S**, Kotsinas A, Chronopoulos E, Kletsas D, Georgakilas A, Gorgoulis VG. The role of oxidative DNA damage in radiation induced bystander effect. **Cancer Lett.** 2015 Jan 1;356(1):43-51.
5. Evangelou K, **Havaki S**, Kotsinas A. E2F transcription factors and digestive system malignancies: how much do we know? **World J Gastroenterol.** 2014;20(29):10212-10216.
6. Kakepis M, **Havaki S**, Katoulis A, Katsambas A, Stavrianeas N, Troupis TG. Idiopathic guttate hypomelanosis: an electron microscopy study. **J Eur Acad Dermatol Venereol.** 2014;doi: 10.1111/jdv.12646.
7. Piterou MC, Pantazidou IK, **Havaki S**, Liappas J, Radovitch MI. Structural chromatin alterations in peripheral blood leukocytes of alcohol-dependent individuals during detoxification therapy. **In Vivo.** 2014;28(4):529-39.

8. Drosos Y, Kouloukoussa M, Ostvold AC, **Havaki S**, Katsantoni E, Marinos E, Aleporou-Marinou V. Dynamic expression of the vertebrate-specific protein Nucks during rodent embryonic development. **Gene Expr Patterns**. 2014;14(1):19-29.
9. Marinou I, **Havaki S**, Goutas N, Vlachodimitropoulos D, Baltatzis G, Konstantakou EG, Stravopodis DJ, Koudoumas DG, Marinos E, Kouloukoussa M. Action of the disintegrin Contortrostatin on breast cancer cell primary cultures. **Adv Breast Cancer Res**. 2013;2:161-169.
10. Kloukina-Pantazidou I, Chrysanthou-Piterou M, **Havaki S**, Issidorides MR. Chromogranine A and Vesicular Monoamine Transporter-2 (VMAT-2) immunolocalization in protein bodies of human locus coeruleus neurons. **Ultrastruct Pathol**. 2013;37(2):102-109.
11. Georgoulis A, **Havaki S**, Drosos Y, Goutas N, Vlachodimitropoulos D, Aleporou-Marinou V, Kittas C, Marinos E, Kouloukoussa M. RGD binding to integrin alphavbeta3 affects cell motility and adhesion in primary human breast cancer cultures. **Ultrastruct Pathol**. 2012;36(6):387-399.
12. Mavrakis AG, **Havaki S**, Marinos E, Chroni E, Konstantinou D. Occludin dislocation in brain capillary endothelium of rats with bile duct ligation induced cholestasis. **Neurosci Lett**. 2012;528(2):180-184.
13. Kloukina-Pantazidou I, **Havaki S**, Chrysanthou-Piterou M, Kontaxakis VP, Papadimitriou GN, Issidorides MR. Chromatin alterations in leukocytes of first-episode schizophrenic patients. **Ultrastruct Pathol**. 2010;34(3):106-116.
14. Chrysanthou-Piterou M, **Havaki S**, Alevizos V, Papadimitriou GN, Issidorides MR. Chromatin ultrastructural abnormalities in leukocytes, as peripheral markers of bipolar patients. **Ultrastruct Pathol**. 2009;33(5):197-208.
15. Drosos Y, Kouloukoussa M, Ostvold AC, Grundt K, Goutas N, Vlachodimitropoulos D, **Havaki S**, Kollia P, Kittas C, Marinos E, Aleporou-Marinou V. NUCKS overexpression in breast cancer. **Cancer Cell Int**. 2009;9(1):19.
16. Konstantinidou AE, Anninos H, Dertinger S, Nonni A, Petersen M, Karadimas C, **Havaki S**, Marinos E, Akman HO, DiMauro S, Patsouris E. Placental involvement in glycogen storage disease type IV. **Placenta**. 2008;29:378-381.
17. **Havaki S**, Kouloukoussa M, Amawi K, Drosos Y, Katsantoni EZ, Voloudakis-Baltatzis I, Aleporou-Marinou V, Goutas N, Vlachodimitropoulos D, Vassilaros SD, Arvanitis DL, Kittas C, Marinos E. Altered expression pattern of integrin alphavbeta3 correlates with actin cytoskeleton in primary cultures of human breast cancer. **Cancer Cell Int**. 2007; 7:16
18. Oliveira CP, Alves VA, Lima VM, Stefano JT, Debbas V, Sa SV, Wakamatsu A, Correa-Giannella ML, de Mello ES, **Havaki S**, Tiniakos DG, Marinos E, de Oliveira MG, Giannella-Neto D, Laurindo FR, Caldwell S, Carrilho FJ. Modulation of hepatic microsomal triglyceride transfer protein (MTP) induced by S-nitroso-N-acetylcysteine in ob/ob mice. **Biochem Pharmacol**. 2007;74(2):290-297.
19. Sgantzios MN, Galini V, Arvanitis LD, Charchanti A, Psathas P, Nakou M, **Havaki S**, Kallioras V, Marinos E, Vamvakopoulos NC, Kittas C. Expression of the O-linked N-acetylglucosamine containing epitope H in normal myometrium and uterine smooth muscle cell tumors. **Pathol Res Pract**. 2007;203:31-37.
20. Politi PK, **Havaki S**, Manta P, Lyritis G. Bupivacaine-induced regeneration of rat soleus muscle: ultrastructural and immunohistochemical aspects. **Ultrastruct Pathol**. 2006;30(6):461-469.
21. Polyzos PT, Arvanitis LD, Charchanti A, Galani V, **Havaki S**, Kallioras VA, Nakou M, Faros EG, Marinos E, Sgantzios MN, Kittas C. Decidualized and pre-decidualized normal endometrial stromal cells produce more O-linked N-acetylglucosamine containing epitope

- H than non-decidualized normal endometrial stromal cells. **Histol Histopathol.** 2006;21:1193-1198.
22. **Havaki S**, Voloudakis-Baltatzis I, Goutas N, Arvanitis LD, Vassilaros SD, Arvanitis DL, Kittas C, Marinos E. Nuclear localization of cytokeratin 8 and the O-linked N-acetylglucosamine containing epitope H in epithelial cells of infiltrating ductal breast carcinomas. A combination of immunogold and EDTA regressive staining methods. **Ultrastruct Pathol.** 2006;30:177-186.
  23. Issidorides MR, **Havaki S**, Arvanitis DL, Chrysanthou-Piterou M. Noradrenaline storage function of species-specific protein bodies, markers of monoamine neurons in human locus coeruleus demonstrated by dopamine- $\beta$ -hydroxylase immunogold localization. **Prog Neuropsychopharmacol Biol Psychiatry.** 2004;28:829-847.
  24. Traka M, Goutebroze L, Denisenko N, Bessa M, Nifli A, **Havaki S**, Iwakura Y, Fukamauchi F, Watanabe K, Soliven B, Girault JA, Karagogeos D. Association of TAG-1 with Caspr2 is essential for the molecular organization of juxtaparanodal regions of myelinated fibers. **J Cell Biol.** 2003;162:1161-1172.
  25. **Havaki S**, Dafni U, Sotiropoulou C, Voloudakis-Baltatzis I, Goutas N, Vassilaros SD, Athanasiou E, Arvanitis DL, Kittas C, Marinos E. Ultrastructural immunostaining of infiltrating ductal breast carcinomas with the monoclonal antibody H: a comparative study with cytokeratin 8. **Ultrastruct Pathol.** 2003;27(6):393-407.
  26. Issidorides MR, **Havaki S**, Chrysanthou-Piterou M, Arvanitis DL. Ultrastructural identification of protein bodies, cellular markers of human catecholamine neurons, in a temporal lobe ganglioglioma. **Ultrastructural Pathol.** 2000;24: 399-405.
  27. Sourlingas TG, Issidorides MR, **Havaki S**, Trikkas G, Sekeri-Pataryas KE. Peripheral blood lymphocytes of bipolar affective patients have a histone synthetic profile indicative of an active cell state. **Prog Neuropsychopharmacol Biol Psychiatry** 1998;22(1): 81-96.