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Professor of Biochemistry

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Professional History

2019: Professor of Biochemistry, School of Medicine, University of Crete, Heraklion, Greece
2009: Associate Professor of Biochemistry, School of Medicine, University of Crete, Heraklion, Greece
1999: Assistant Professor of Biochemistry, School of Medicine, University of Crete, Heraklion, Greece
1993: Lecturer of Biochemistry, School of Medicine, University of Crete, Heraklion, Greece
1990-1993: Visiting Assistant Professor of Biochemistry, School of Medicine, University of Crete, Heraklion, Greece
1986-1989: Research Associate, Institute of Molecular Biology and Biotechnology, (I.M.B.B.), Heraklion, Crete, Greece
1984-1986: Tutor in Biochemistry, Conservatoire National des Arts et Metiers - CNAM, Lille, France

Research Interests

1. Nuclear plasticity. Structure and function of the nuclear envelope. Dynamics of nuclear envelope in mitosis.
Nucleo-cytoplasmic transport and sub-cellular distribution of cytoplasmic and plasma membrane proteins.

2. Microtubule - tubulin dynamics, effect of antimitotic drugs.

3. Characterization of circulating tumor cells and exosomes in the blood of cancer patients. Establishment of new markers for the identification of circulating tumor stem cells.

Representative Publications

1. Polioudaki H., A. Chantziou, K. Kalyvianaki, P. Malamos, G. Notas, D. Mavroudis, M. Kampa, E. Castanas and P.A. Theodoropoulos (2019). Nuclear localization of PD-L1: artifact or reality? Cellular Oncol., 42(2): 237-242

2. Polioudaki H., S. Agelaki, R. Chiotaki, E. Politaki, D. Mavroudis, A. Matikas, V. Georgoulias and P.A. Theodoropoulos (2015). Variable expression of keratin and vimentin reveal differential EMT status of circulating tumor cells and correlation with clinical characteristics and outcome of patients with metastatic breast cancer. BMC cancer, 15:399

3. Chiotaki R., H. Polioudaki and P.A. Theodoropoulos (2014). Differential nuclear shape dynamics of invasive and non-invasive breast cancer cells are associated with actin cytoskeleton organization and stability. Biochem. Cell. Biol., 92(4): 287-295.

4. Theodoropoulos P.A., H. Polioudaki, S. Agelaki, G. Kallergi, Z. Saridaki, D. Mavroudis and V. Georgoulias (2010). Circulating tumor cells with a putative stem-like cell phenotype in peripheral blood of patients with breast cancer. Cancer Lett., 288(1): 99-106.

5. Akoumianaki T., D. Kardassis, H. Polioudaki, S.D. Georgatos and P.A. Theodoropoulos (2009). Nucleo-cytoplasmic shuttling of soluble tubulin in mammalian cells. J. Cell Sci., 122:1111-18.

6. Michalakis I., S.D. Georgatos, E. deBree, H. Polioudaki, J. Romanos, V. Georgoulias, D. Tsiftsis and P.A. Theodoropoulos (2007). Short-term exposure of cancer cells to micromolar doses of paclitaxel, with or without hyperthermia, induces long term inhibition of cell proliferation and cell death in vitro. Ann. Surg. Oncol., 14: 1220-1208.

7. Kourmouli, N., G. Dialynas, C. Petraki, A. Pyrpasopoulou, P.B. Singh, S.D. Georgatos and P.A. Theodoropoulos (2001). Binding of heterochromatin protein 1 to the nuclear envelope is regulated by a soluble form of tubulin. J. Biol. Chem., 276: 13007-13014.

8. Theodoropoulos, P.A., H. Polioudaki, M. Koulentaki, E. Kouroumalis and S.D. Georgatos (1999). PBC68: A nuclear pore complex protein that associates reversibly with the mitotic spindle. J. Cell Sci., 112: 3049-3059.

9. Theodoropoulos, P.A., H. Polioudaki, O. Kostaki, S.P. Derdas, V. Georgoulias, C. Dargemont and S.D. Georgatos (1999). Taxol affects nuclear lamina and pore complex organization and inhibits import of karyophilic proteins into the cell nucleus. Cancer Res., 59: 4625-4633.

10. Georgatos, S.D. A. Pyrpasopoulou and P.A. Theodoropoulos (1997). Nuclear envelope breakdown in mammalian cells involves stepwise lamina disassembly and microtubule-driven deformation of the nuclear membrane. J. Cell Sci., 110: 2129-2140. ..