Evangelia Papakonstanti
Associate Professor of Biochemistry

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Professional History

2019- :Assoc. Professor of Biochemistry, Faculty of Medicine, University of Crete, Greece.

2015-2019: Tenure Ast Professor of Biochemistry, Faculty of Medicine, University of Crete, Greece.

2011-2015: Ast Professor of Biochemistry, Faculty of Medicine, University of Crete, Greece.

2006-2010: Lecturer in Biochemistry, Faculty of Medicine, University of Crete, Greece.

2003-2007: Senior Researcher - Cell Signalling in Cancer Group, Ludwig Institute for Cancer Research, London, UK.

Achievements

The most important achievement of her current research activity is that her scientific results underlie the start up of the first clinical trials (second semester of 2019) of a selective p110δ inhibitor for the treatment of breast cancer by a pharmaceutical company in Switzerland with which Dr Papakonstanti has developed a scientific collaboration.

Research Group: Cell signalling in cancer & metastasis.

Current target signalling pathways:

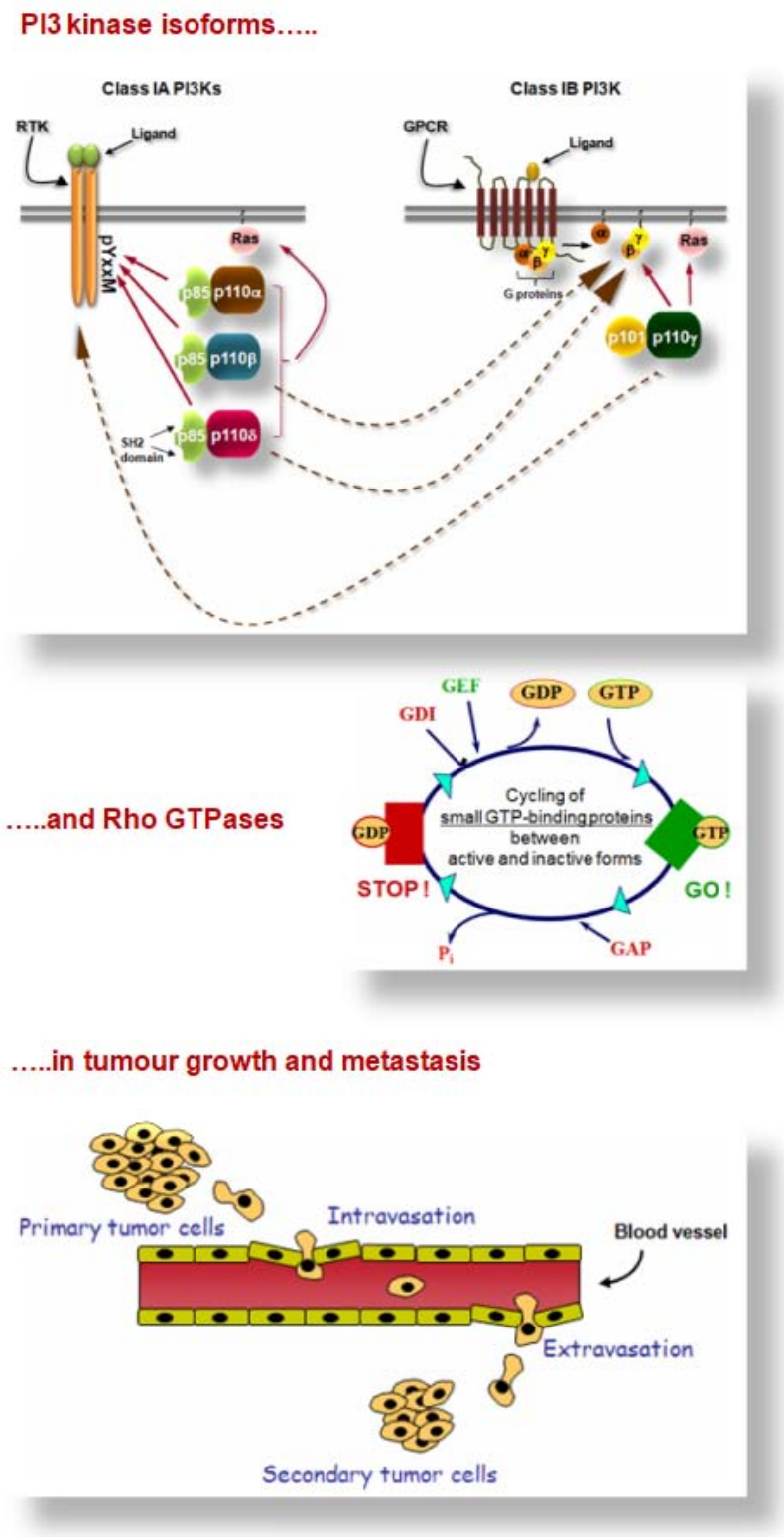
PI3-kinase isoform specific- and Rho GTPases- regulated pathways in tumour growth and cancer cells migration.

Research Interests:

Studying signalling pathways triggered by or regulate oncoproteins.

Understanding the molecular and cellular mechanisms underlie tumour growth and metastasis using animal models.

Investigating approaches for combination therapy targeting both, cancer cells and cells of the tumour microenvironment, aiming at development of promising drugs which will effectively prevent cancer progression.



Representative Publications

- Goulielmaki, E., Bermudez-Brito, M., Andreou, M., Tzenaki, N., Tzardi, M., De Bree, E., Tsentelierou, E., Makrigiannakis, A. and **Papakonstanti, E.A.** Pharmacological inactivation of the PI3K p110δ prevents breast tumour progression by targeting cancer cells and macrophages. *Cell Death & Disease* (2018), 9(6):678

- Tzenaki, N., Aivaliotis, M., **Papakonstanti E.A.** Focal adhesion kinase phosphorylates the phosphatase and tensin homolog deleted on chromosome 10 under the control of p110δ phosphoinositide-3 kinase. *FASEB J* (2015), 29(12), 4840-52.
- Goulielmaki, E., Bermudez-Brito, M., **Papakonstanti E.A.** Focus on PTEN regulation *Frontiers in Oncology* (2015), 5:166.
- Tzenaki, N. and **Papakonstanti E.A.** p110δ PI3 kinase pathway: emerging roles in cancer. *Frontiers in Oncology* (2013) 3:40.
- Velegraki, M., **Papakonstanti, E.A.,** Mavroudi, I., Psyllaki, M., Tsatsanis, C., and Papadaki, E.A. Impaired clearance of apoptotic cells leads to HMGB1 release in the bone-marrow of MDS patients and induces TLR4-mediated cytokine production. *Hematologica* (2013), 98(8):1206-15.
- Tzenaki, N., Andreou, M., Stratigi, K., Vergetaki, A., Makrigiannakis, A., Vanhaesebroeck, B., **Papakonstanti, E.A.** High levels of p110δ PI3K expression in solid tumour cancer cells suppresses PTEN activity, generating cellular sensitivity to p110δ inhibitors through PTEN activation. *FASEB J* (2012) 26(6), 2498-2508.
- Zwaenepoel O., Tzenaki, N., Vergetaki, A., Makrigiannakis, A., Vanhaesebroeck B., **Papakonstanti E.A.** Functional CSF-1 receptors are located at the nuclear envelope and activated via the p110δ isoform of PI 3-kinase. *FASEB J* (*2012*) 26 (2), 691-706.
- **Papakonstanti E.A.**, Zwaenepoel O., Bilancio A., Burns E., Houseman B., Shokat K., Ridley A.J., Vanhaesebroeck B. Distinct roles of class IA PI 3-kinase isoforms in primary and immortalised macrophages. *J Cell Science* (2008) 121, 4124-33.
- **Papakonstanti E.A.**, Ridley A.J., Vanhaesebroeck B. The p110δ isoform of PI 3-kinase negatively controls RhoA and PTEN. *EMBO J* (2007) 26, 3050-61.
- Eickholt B.J., Ahmed A.I., Davies M., **Papakonstanti E.A.,** Pearce W., Starkley M.L., Bilancio A., Need A.C., Smith A.J.H., Hall S.M., Hamers F.P., Giese K.P., Bradbury E.J., Vanhaesebroeck B. Control of axonal growth and regeneration of sensory neurons by p110δ PI 3-kinase. *PLoS ONE* (2007) 2, e869.

Representative participations in Conferences

- **Papakonstanti, E.A.** p110δ PI3K: an emerging promising target for the treatment of solid tumours. Biochem Society Meeting: The PI3K/PTEN pathway: from basic science to clinical translation. Buxton, UK, 18-20 July 2019 (Invited speaker).
- Ewings, K., MacQueen, A., Shah, P., Tsapara, A., **Papakonstanti, E.,** van der Veen, L., Lahn, M., Johnson, Z. Preclinical development of a novel, highly selective PI3Kδ inhibitor for the treatment of solid malignancies. American Association for Cancer Research Annual Meeting – Session: Novel Therapeutic Agents and Screening Approaches. Atlanta, Georgia, USA, 29th March to 3rd April 2019.
- **Papakonstanti, E.A.** p110δ PI3K: a novel target in breast cancer treatment. Workshop: The cell biology behind the ONCOGENIC PIP3 LIPIDS. Baeza, Spain, 15-17 October 2018 (Invited speaker).
- Tzenaki, N., **Papakonstanti, E.A.** Combined opposite targeting of RhoA and p110δ PI3K suppresses melanoma tumour progression. Συνέδριο κλινικής και μεταφραστικής ογκολογίας, 23-26 Νοεμβρίου 2017, Ηράκλειο Κρήτης (Προσκεκλημένη ομιλήτρια).
- M. Lourou, **E. Papakonstanti**, M. Pesmatzoglou, E. Stiakaki. Expression of phosphorylated akt and pi3k kinases isoforms in childhood acute lymphoblastic leukemia. 48th Congress of the International Society of Paediatric Oncology. Dublin, Ireland. October 19-22, 2016
- **Papakonstanti, E.A.** p110δ PI3 kinase pathway: an emerging signaling cascade in cancer therapy. Συνέδριο κλινικής και μεταφραστικής ογκολογίας, 17-20 Νοεμβρίου 2016, Ηράκλειο Κρήτης (Προσκεκλημένη ομιλήτρια).

- Tzenaki, N., Aivaliotis, M., **Papakonstanti E.A**. PTEN is phosphorylated by FAK under the control of p110δ PI3 kinase. 66th Meeting of Hellenic Society of Biochemistry and Molecular Biology, (11-13 December 2015), Athens, Greece.
- Bermudez-Brito, M., Goulielmaki, E., **Papakonstanti, E. A.** Inhibition of p110δ PI3K prevents tumor growth and promotes apoptosis *in vivo.* 65th Meeting of Hellenic Society of Biochemistry and Molecular Biology, (28-30 November 2014) Athens, Greece.
- Goulielmaki, Tzardi, M., **Papakonstani, E.A.** Correlation of p110δ expression levels in the course of breast tumour development with the degree of PTEN activity. 65th Meeting of Hellenic Society of Biochemistry and Molecular Biology, (28-30 November 2014) Athens, Greece.
- Velegraki, M., **Papakonstanti, E.A.,** Mavroudi, I., Psyllaki, M., Tsatsanis, C., and Papadaki, E.A. High Mobility Group Box 1 protein, released in the bone marrow of patients with myelodysplastic syndromes due to impaired clearance of apoptotic cells by macrophages, leads to cytokine production through activation of toll-like receptor 4. Keystone Symposia, The Role of Inflammation during Carcinogenesis (E2), Royal Dublin Society, Dublin, Ireland, May 20 - May 25, 2012
- Vergetaki, A., Jeschke, U., Taliouri, E., Christoforaki, V., **Papakonstanti, E.A**., Makrigiannakis, A.Galectin-1 is overexpressed in endometriotic tissue and upregulated by CRH, UCN and CSF-1. Mediterranean Society for Reproductive Medicine, Controversies in Human reproduction, Ag. Nikolas, Crete, Greece, 28-30 September 2012.
- Zwaenepoel O., Tzenaki, N., Vanhaesebroeck B., **Papakonstanti E.A.** Functional CSF-1 receptors are located at the nuclear envelope and activated via the p110δ isoform of PI 3-kinase. AICR 30th Anniversary Conference: "Today's Research-Tomorrow's Therapies". Fairmont Hotel, St Andrews, UK, 7-9 April 2010.
- Cell Shape and Polarity: Lymphocytes and Beyond, mini-symposium. Chicago, Illinois, USA, 29th of September 2008. (Invited to attend the meeting).
- **Papakonstanti, E.A.,** and Vanhaesebroeck B. p110δ needs to block PTEN to function properly. 3rd Focused Meeting on PI3K signalling and disease. Bath, UK, 6th – 8th of November 2006.
- **Papakonstanti, E.A.,** Ridley, A.J., and Vanhaesebroeck B. Dissection of the isoform-specific functions of PI3Ks in primary mouse macrophages. Identification of defective RhoGTP regulation as a key feature upon p110δ PI3K inactivation. Conference of the EU Framework V consortium MAIN, Migration and Inflammation. Peschiera del Garda, Italy, 6th – 8th of Oct, 2006.
- **Papakonstanti, E.A.,** and Vanhaesebroeck B. PI 3-kinase isoform-specific signalling. London Cell Migration Consortium. February 24th, 2006, Cancer Research UK, London Research Institute, Lincoln's Inn Fields Laboratories (Invited speaker).
- **LICR SCIENCE DAY.** December 9th, 2005, St Mary's Hospital Medical School,Imperial College, Norfolk Place, London
- **Papakonstanti, E.A.,** and Vanhaesebroeck B. The preferential recruitment of p110δ to the CSF-1R triggers the signal leading to p110δ-dependent chemotaxis and cell proliferation in BMMs. First MAIN Annual Conference, in Milan, Italy, September 30th-October 2nd, 2005.
- **Papakonstanti, E.A.,** and Vanhaesebroeck B. PI 3-kinase isoform-specific signalling in macrophages. London Cell Migration Consortium. November 5th, 2004, Cancer Research UK, London Research Institute, Lincoln's Inn Fields Laboratories (Invited speaker).