

Invited Seminar

Estela Jacinto

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Title: **mTOR complex 2 in metabolism**



Research in my lab aims to understand how nutrients and growth factors control intracellular signaling pathways and how these pathways are coupled to cellular metabolism. We specifically focus on the mechanistic target of rapamycin (mTOR) signaling pathway and how it plays a role in cancer metabolism, diabetes and T cell biology. Our goal is to understand how cells rewire metabolic processes in response to genetic and environmental changes and how we can manipulate this reprogramming process to improve immunotherapy and develop more effective therapeutic strategies for cancer and other metabolic disorders. We use both mammalian cell and mouse models and employ techniques including proteomics/genomics, metabolomics, flow cytometry, biochemical and cell biology techniques.

When: June 21st at 15:00 Room H811 (top floor), MEM Murtenstrasse 35

Host: Marianna Kruihof-de Julio, DBMR (marianna.kruihofdejulio@dbmr.unibe.ch) – please get in touch if you would like to meet the Speaker.

Selected publications:

Moloughney, J.G., Kim, P.K., Vega-Cotto, N.M., Wu, C., Zhang, S., Adlam, M., Lynch, T., Chou, P.C., Rabinowitz, J.D., Werlen, G., and Jacinto, E. mTORC2 responds to glutamine catabolite levels to modulate the hexosamine biosynthesis enzyme GFAT1. *Molecular Cell* 2016; 63, 811-826

Chi, O.Z., Barsoum, S., Vega-Cotto, N.M., Jacinto, E., Liu, X., Mellender, S.J., and Weiss, H.R. Effects of rapamycin on cerebral oxygen supply and consumption during reperfusion after cerebral ischemia. *Neuroscience* 2016; 316,321-327.

Tobias, I., Kaulich, M., Kim, P.K., Simon, N., Jacinto, E., Dowdy, S., King, C.C., and Newton, A.C. Protein kinase Czeta exhibits constitutive phosphorylation and phosphatidylinositol-3,4,5-triphosphate-independent regulation. *J. Biol.Chem.* 2016; 473(4):509-523.

Lynch, T., Moloughney, J., and Jacinto, E. The mTOR complexes in cancer cell metabolism, in PI3-K-mTOR in cancer and cancer therapy 2016, Springer, p29-63, ed B. Leyland Jones, P.De, N.Dey.

Chi, O.Z., Wu, C.C., Liu, X., Rah, K.H., Jacinto E., and Weiss, H.R. Restoration of cerebral oxygen consumption with rapamycin treatment in a rat model of autism-tuberous sclerosis. *Neuromolecular Medicine* 2015; 17(3): 305-313.