

Proposal Acronym	Pyrocycle
Proposal Title:	The role of inositol pyrophosphates in the regulation of the cell cycle
Surname:	Banfic
First name(s):	Hrvoje
Research area:	Life sciences LIF
Sub-discipline of research area:	Cell differentiation-physiology and dynamics, Signal transduction Physiology, pathophysiology and Endocrinology, Metabolism
Category of research:	basic
[REDACTED]	[REDACTED]
Abstract:	<p>Our recent study provided genetic, metabolic and biochemical evidence that synthesis of inositol pyrophosphates through activation of Plc1 and Kcs1 play an important role in the signaling response required for cell cycle progression after mating pheromone arrest in <i>Saccharomyces cerevisiae</i> (Banfic et. al. J. Biol. Chem. 288: 1717-1725, 2013). This is a proposal that aims to define the mechanism of inositol pyrophosphates-mediated regulation of cell cycle progression. We will use a set of yeasts deletion mutants to define the particular pyrophosphate responsible for S phase-associated effects , to identify which proteins are pyrophosphorylated by inositol pyrophosphates in alpha-factor synchronized cells, and to determine the changes in metabolism in alpha-factor synchronized cells and to correlate them with the changes in the level of inositol pyrophosphates and protein pyrophosphorylation.</p>
Does this proposal possess any of the sensitive ethical issues detailed in ethical issues table?:	No