

Xavier Roucou, PhD

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Canada Research Chair in Functional Proteomics and Discovery of Novel Proteins

Bio: Dr Roucou is a biochemist who initially trained in the field of mitochondrial bioenergetics (PhD, Bordeaux, France / Posdoc 1, Melbourne, Australia). Intrigued by the novel finding (at that time) that, in addition to its key function in oxidative phosphorylation, mitochondria could also play a major role in apoptosis by releasing cytochrome c in the cytoplasm, he decided to help investigate how the pro-apoptotic protein Bax permeabilizes the outer mitochondrial membrane (Postdoc 2, University of Geneva, Switzerland). When a connection was found between Bax and the prion protein in Andrea Leblanc's lab at the LDI in Montreal, he moved there to investigate the anti-apoptotic function of the prion protein (Postdoc 3). He established his lab in Sherbrooke in 2004 and serendipitously discovered that the prion protein gene actually produces two completely different proteins; this gene is dual-coding and researchers had been expressing two proteins in cell cultures and animal models without knowing it. Since then, his lab has been using proteogenomics approaches to finding unannotated proteins. He is professor and chair in the department of Biochemistry and functional genomics at Université de Sherbrooke. He holds a Canada research chair in functional proteomics and discovery of novel proteins. His team was awarded the Discovery of the year 2013, Quebec Science magazine, for the discovery of "ghost proteins".