Emilio HIRSCH

Emilio Hirsch is Professor of Biology at the Medical School of the University of Torino. He provided seminal contributions in the characterization of phosphoinositide 3-kinases (PI3K) as drug targets in inflammation (Science 2000, Immunity 2002), cancer (Science Signaling 2008, Cancer Cell 2011 and 2014), heart failure (Cell 2004, Molecular Cell 2011, Circulation 2011 and 2012), obesity (Science Signaling 2014). He produced the first knock-out mice for a PI3K catalytic subunit and demonstrated the role of PI3Kgamma in chemotaxis of leukocytes (Science 2000; PNAS 2007, Blood 2012). He developed, together with Merck-Serono, the first isoform selective PI3Kgamma inhibitor (Nat Med 2005) and recently launched an academic spin off exploiting his patented PI3K inhibitors for topical treatment. He was the first to demonstrate that PI3K are not only enzymes but also scaffold proteins (Cell 2004, Mol Cell 2011), showing that knock-in of a catalytically inactive mutant better models drug targeting than knock-out-mediated elimination of the protein. He demonstrated that PI3Kbeta is a scaffold controlling receptor endocytosis (Sci Signal 2008) and that PI3Kgamma interacts with PKA to integrate PI3K and cAMP signaling (Cell 2004; Mol Cell 2011; Circulation 2012). More recently, he shifted his attention to class II PI3Ks and defined the role of PI3KC2alpha in endocytosis (Nature 2013) and primary cilium function (Dev Cell 2014). He is author of 202 publications, his works received around 12000 citations and his h-index (Harzing's Publish or Perish) is 61.

Key publication:

Kaneda MM, Cappello P, Nguyen AV, Ralainirina N, Hardamon CR, Foubert P, Schmid MC, Sun P, Mose E, Bouvet M, Lowy AM, Valasek MA, Sasik R, Novelli F, Hirsch E, Varner JA. *Macrophage PI3Kγ Drives Pancreatic Ductal Adenocarcinoma Progression.* Cancer Discov. 2016 Aug;6(8):870-85. doi: 10.1158/2159-8290.CD-15-1346. Epub 2016 May 13.

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Costa C, Ebi H, Martini M, Beausoleil SA, Faber AC, Jakubik CT, Huang A, Wang Y, Nishtala M, Hall B, Rikova K, Zhao J, Hirsch E, Benes CH, Engelman JA. *Measurement of PIP3 levels reveals an unexpected role for p110β in early adaptive responses to p110α-specific inhibitors in luminal breast cancer*. Cancer Cell. 2015 Jan 12;27(1):97-108. doi: 10.1016/j.ccell.2014.11.007. Epub 2014 Dec 24.