

## The Hedgehog Pathway and Pancreatic Cancer

**Madrid, 19<sup>th</sup> November 2009** - Dr. Manuel Hidalgo (Acting Director of the CNIO's Clinical Research Programme and Head of the Gastrointestinal Cancer Clinical Research Unit) and Dr. Anirban Maitra, (Johns Hopkins University) publish a review article on the Hedgehog signaling pathway and its implications for pancreatic cancer therapeutic in the prestigious journal *New England Journal of Medicine* this week.

Dr. Hidalgo and Dr. Maitra discuss different therapeutic opportunities derived from the inhibition of the Hedgehog pathway in human pancreatic cancer taking into consideration a recent article published in *Science* by Dr. Tuveson's group (Cambridge University). In Spain, pancreatic cancer causes more than 4,000 deaths a year with no real progress on its treatment. Recent findings from these scientists showed that the Hedgehog pathway could be a good candidate for therapeutic targets involved in this disease. Nearly all malignant pancreatic cells have this pathway activated and it has been observed that it is also altered in the so-called pancreatic cancer stem cells. These stem cells are believed to be responsible for the maintenance and progression of pancreatic cancer. Recent data pinpoint that the Hedgehog pathway has a relevant role also in the tumoural stroma. Pancreatic cancer is characterized by a dense fibrotic stroma, which is a barrier for drug distribution, resulting on a poor treatment outcome. The inhibition of the Hedgehog pathway strikingly reduces the dense fibrotic stroma and increases pancreatic tumour neo-vascularization enhancing drug delivery and therefore increasing its therapeutic effects. Shortly, the CNIO will take part in new clinical trials using these drugs.

To download the article please go to:

<http://www.ncbi.nlm.nih.gov/pubmed/19923581?dopt=Abstract>