

PXR: A stepping stone from environmental chemical to cancer?

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Several chemicals that can accumulate to high levels in our body (for example BPA and some pesticides) have been recently linked to an increased risk of cancer and/or impaired responsiveness to anticancer drugs. A team of researchers, led by Sridhar Mani, at Albert Einstein College of Medicine, New York, has now identified a potential mechanistic link between environmental exposure to these foreign chemicals (xenogens) and cancer drug therapy response and survival.

PXR is one protein by which cells (including tumor cells) can sense xenogens. In their study, Mani and colleagues determined that activation of PXR was sufficient to enhance the cancerous characteristics of human <u>colon tumor</u> cell lines and primary human colon <u>cancer tissue</u> xenografted into immune system–deficient mice. Further analysis indicated FXR activation leads to colon cancer growth through the induction of the growth factor FGF19. The authors therefore suggest that it will be important to investigate further the extent to which the environment might play a role in tumor recurrence through PXR activation.

More information: View this article at: www.jci.org/articles/view/4151 ... d5f620785644dd3ba8e6

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