

上海市生物化学与分子生物学学会 2019 年青年学术论坛

优秀青年报告 推荐表

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报告题目	REGγ Ablation Impedes Dedifferentiation of Anaplastic Thyroid Carcinoma and Accentuates Radio-therapeutic Response by regulating Smad7-TGF-β pathway		
报告摘要	<p>Anaplastic thyroid cancer (ATC) is the most aggressive human thyroid malignancy, characterized by dedifferentiation and resistance to radioiodine therapy. The underlying mechanisms regulating ATC dedifferentiation are largely unknown. Here, we show that REGγ, a non-canonical proteasome activator highly expressed in ATC, is an important regulator of differentiation in ATC cells. Ablation of REGγ significantly restored expression of thyroid specific genes, enhanced iodine uptake, and improved the efficacy of ¹³¹I therapy in ATC xenograft models. Mechanistically, REGγ directly binds to the TGF-β signaling antagonist Smad7 and promotes its degradation, leading to the activation of TGF-β signal pathway. With gain- and loss-of-function studies, we demonstrate that Smad7 is <u>an important</u> mediator for the REGγ function in ATC cell dedifferentiation and metastasis, which is supported by expression profiles in human ATC tissues. <u>It seems that</u> REGγ impinges on repression of thyroid-specific genes and promotion of tumor malignancy in ATC cells by activating TGF-β signal pathway via degradation of Smad7. Thus, REGγ may serve as a novel therapeutic target for allowing radioiodine therapy in anaplastic thyroid cancer patients with poor prognosis.</p>		
论文发表情况 (近三年)	<ol style="list-style-type: none"> 1. Chan Jiao, Lin Li, Pei Zhang, Li Zhang, Ke Li, Riqun Fang, Lei Yuan, Kaixuan Shi, Linian Pan, Qiannan Guo, Xiao Gao, Geng Chen, Shichen Xu, Qingwei Wang, Di Zuo, Wei Wu, Shanlou Qiao, Xiaoshuang Wang, Robb Moses, Jianru Xiao, Lei Li, Yongyan Dang, Xiaotao Li. REGγ ablation impedes dedifferentiation of anaplastic thyroid carcinoma and accentuates radio-therapeutic response by regulating the Smad7-TGF-beta pathway. Cell Death and Differentiation.2019. 2. Qingwei Wang, Xiao Gao, Tong Yu, Lei Yuan, Jie Dai, Weicang Wang, Geng Chen, Chan Jiao, Wang Zhou, Quan Huang, Long Cui, Pei Zhang, Robb E. Moses, Jianhua Yang, Fengyuan Chen, Junjiang Fu, Jianru Xiao, Lei Li, Yongyan Dang, and Xiaotao Li. REGγ Controls Hippo Signaling and Reciprocal NF-kappaB-YAP Regulation to Promote Colon Cancer. Clinical Cancer Research. 2018,24(8):2015-25. 3. Hui Chen, Xiao Gao, Zhengwang Sun, Qingwei Wang, Di Zuo, Linian Pan, Kun Li, Jiwei Chen, Geng Chen, Kewen Hu, Ke Li, Abdus Saboor Shah, Tingmei Huang, Bhatti Muhammad Zeeshan, Lu Tong, Chan Jiao, Jian Liu, Tenghui Chen, Liangfang Yao, Yongyan Dang, Tielong Liu, Lei Li. REG γ accelerates melanoma formation by regulating Wnt/β - catenin signalling pathway. Experimental Dermatology, 2017, 26(11):1118. 		

请在 **2019 年 8 月 29 日** 之前提交推荐表至学会办公室 ssbmb@sibs.ac.cn。
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