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The immune response contribution to pancreatic tumorigenesis in animal models by Reg3g treatment

Ming Xiang, Qi Cheng, Qian-qian Xu and Hui Cao
Huazhong University of Science and Technology, China

Regenerating islet-derived protein 3, regulates a variety of important pathologic physiology processes including inflammation, cancer control and cell proliferation. RegIII and IL-6 share the same pathway to accentuate inflammation, and suppressor of cytokine signaling 3 (SOCS3) is a negative regulator of this pathway to bear tumor suppressor function. We studied the immunological mechanisms of Reg3g for promoting the pancreatic cancer. We successfully established subcutaneous transplantation tumor model and pancreatic carcinoma in situ model in C57/BL6j mice. Firstly, we determined critical target cells of Reg3g such as dendritic cells (DC), and CD8+ T cells and CD4+ CD25+ Foxp3+ T cells (Treg); Secondly, we found that Reg3g upregulated key genes in pancreatic tissue such as STAT3, Ki67, Caspase3 gene and downregulated SOCS3 gene, which being collaborative with Th2 type cytokines inhibited tumor immune response, and promoted malignant tumor cell proliferation; Lastly, we confirmed Reg3g inhibited DC migration and phagocytosis, attenuated CD8+ T cells infiltration, decreased negative regulatory factors such as CD152 and PD-1, PD-L1, interfered interaction between CD8+ T cells and DC, inhibited CD8+ T to cells cytotoxicity tumor, and promoted pancreatic cancer formation.

Biography

Ming Xiang has completed her PhD from Tongji Medical College, Huazhong University of Science and Technology. She is the Vice Director of School of Pharmacy, Tongji Medical College. She is a qualified Professor with track record not only within the pathogenesis of autoimmune diseases and chronic inflammation, the mechanism of regulation and induction of antigen-specific immune tolerance by Treg and DC for the therapy of autoimmune disease, but also the mechanism of pancreatic oncogenesis. She has published more than 25 papers in reputed journals and has been serving as an Editorial Board Member of repute, obtained 2 patents, an Academic Award and hosted several NSFC projects.

xiangming@mails.tjmu.edu.cn

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