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Analysis of pancreatic cancer-infiltrating T-lymphocytes reveals that ENO-specific Tregs inhibit the effector T-cells

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Pancreatic cancer (PC) is an aggressive disease with dismal prognosis. Surgical resection is the recommended treatment for long-term survival, but patients with resectable PC are in the minority (with a 5-year survival rate of 20%). Therefore, development of novel therapeutic strategies, such as anti-PC immunotherapy, is crucial. α -Enolase (ENO1) is an enzyme expressed on the surface of pancreatic cancer cells and is able to promote cell migration and cancer metastasis. The capacity of ENO1 to induce an immune response in PC patients renders its true tumor-associated antigen. We have characterized the effector functions of ENO1-specific T cells isolated from PC patients, and we specifically evaluated the successful role of intra-tumoral T-helper 17 (Th17) cells and the inhibitory role of regulatory T (Tregs) cells in respectively promoting or reducing the cancer-specific immune response. For the first time we have demonstrated that ENO1-specific Th17 cells have a specific anti-cancer effector function in PC patients, and that there are decreased levels of these cells in cancer compared to healthy mucosa. Conversely, there are elevated levels of ENO1-specific Tregs in PC patients which lead to inhibition of the antigen-specific effector T cells, thus highlighting a possible role in promoting PC progression.

Biography

Amedeo Amedei has done her Diploma of Biologist Qualification from University of Florence, Italy. She completed her thesis on "*Helicobacter pylori* infection: Model of Th1 immune response". She was designated as Immunology Researcher in Department of Internal Medicine, University of Florence and Indentured Researcher in Department of Internal Medicine. She was the Contractor of Nurex Company 'Development and production of reagents for monitoring immune sheep'. She has published 94 papers in reputed journals, 6 chapters in the books and she holds 45 congress participations. Her research interest includes, Role of immune response versus *Helicobacter pylori* on pathogenesis diseases correlate with human bacterium infection: Ulcer-gastritis, gastric cancer, MALT-lymphoma.

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