

Epigenetic Regulation of T Cell Development and Function

Abstract

Epigenetic control of gene expression is an important regulatory process in many biological systems. In preliminary results we could show that Histone deacetylase (HDAC)1, an epigenetic modification enzyme that removes acetyl-groups from histones, has an important role in T lymphocytes, a white blood cell population that controls and coordinates immune responses.

In our proposed research, we want to identify and characterize in detail the functions of T lymphocytes that are regulated by HDAC1 (and the related protein HDAC2). Furthermore, we want to understand the molecular details of how HDAC1 and HDAC2 control T cell functions. We expect that the results of our study will provide a detailed picture of how HDAC1 and HDAC2 regulate T cell function as well indicate potential medical applications for the treatment of immunological diseases.

Keywords:

Effector T lymphocytes, histone deacetylase, chromatin, knockout

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Further links about the involved persons and regarding the project you can find at

https://archiv.wwtf.at/programmes/life_sciences/LS09-031