

# 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	<b>Metabolic control of regulatory T cell stability and function by MondoA in colorectal cancer microenvironment</b>		
报告摘要	<p>Treg cells are functionally and phenotypically heterogeneous in diverse metabolic environment. the metabolic reprogramming of tumor-associated regulatory T cells (Treg) in the glucose-restricted tumor microenvironment is emerging as key factor governing tumor growth and response to therapies including immune checkpoint inhibitors. MondoA is a glucose-responsive transcription factor and shows an unexpected high expression in Treg cells. However, the role of MondoA in Treg cells remains to be elucidated. Here we report that glucose starvation condition inhibits the shutting of MondoA and potently inhibits TXNIP expression. We also demonstrate that silencing MondoA expression improves glucose uptake in Treg cells thereby inhibits suppressive function of Treg cells. Furthermore, we found Treg-specific MondoA knockout mice were susceptible to development of colonic inflammation and colon cancer. MondoA deficiency in Treg cells increased pro-inflammatory cytokine IL17A production in tumor microenvironment. Moreover, IL17A elevation inhibited CD8 T cells proliferation and up-regulated PD-1 expression, thereby contributing to tumor infiltrated CD8 T cells exhaustion. Taken together, our data reveal for the first time the MondoA-TXNIP axis as the regulator of regulatory T cell metabolism and function in colon cancer microenvironment.</p>		
论文发表情况 (近三年)	<p>Transketolase Deficiency Protects the Liver from DNA Damage by Increasing Levels of Ribose 5-Phosphate and Nucleotides. Minle Li, <b>Ying Lu</b>, Yakui Li, Lingfeng Tong, Xiaochuan Gu, Jian Meng, Yemin Zhu, Lifang Wu, Ming Feng, Na Tian, PingZhang, Tianle Xu, Shu-Hai Lin and Xuemei Tong. (共同第一作者) Cancer Res July 15 2019 79 (14) 3689-3701; DOI:10.1158/0008-5472.CAN-18-3776</p>		

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](mailto:ssbmb@sibs.ac.cn)。  
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