

β-catenin-mediated metabolic alterations in macrophages fuel T-cells dependent inflammation

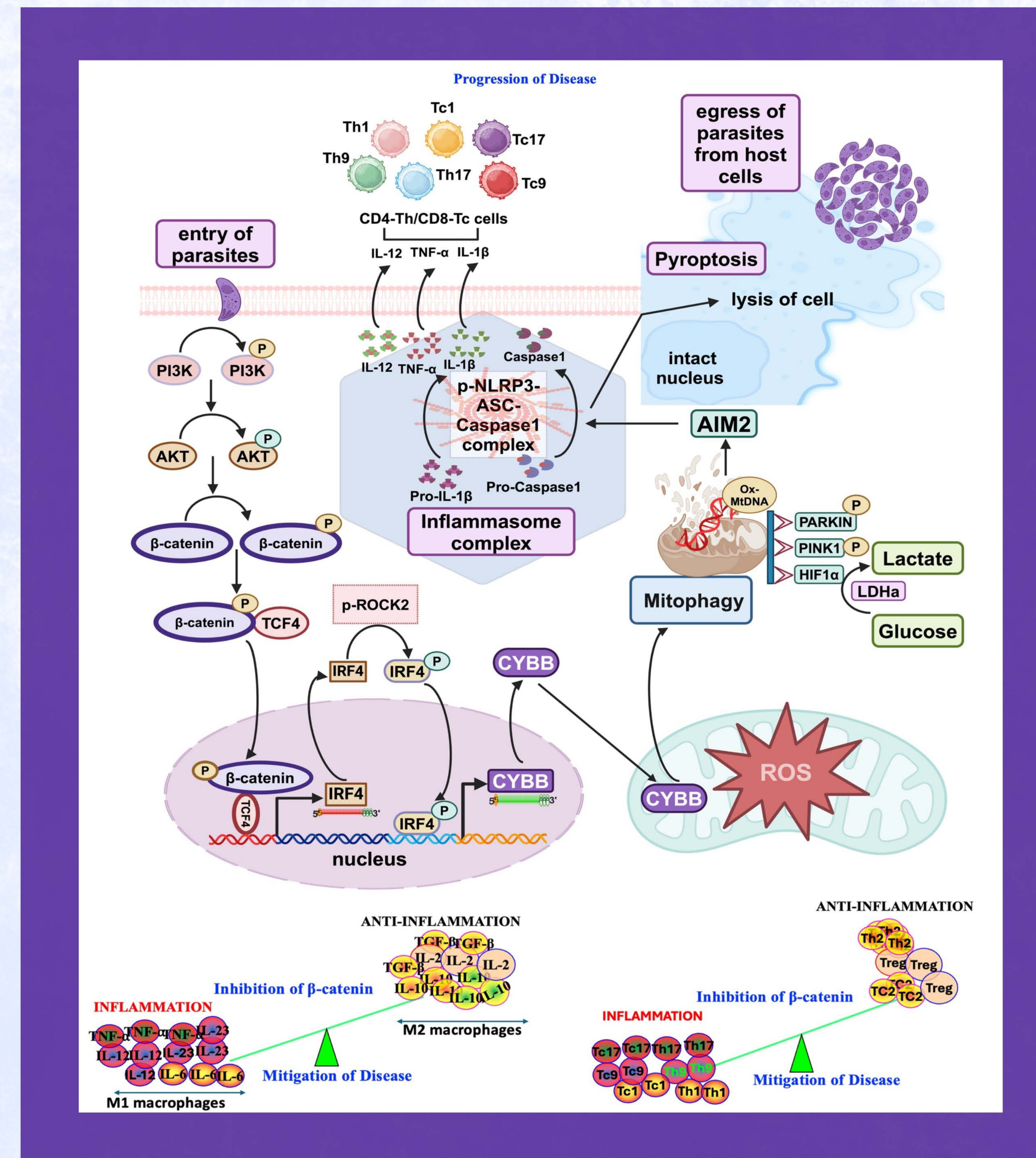


Geetika Kumari

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4:30 PM | THURSDAY | 24 APRIL 2025

AUDITORIUM, NII



Understanding the mechanism of histidine import in *Mycobacterium tuberculosis*

Mycobacterium tuberculosis (Mtb), the causative agent of tuberculosis (TB), poses a major global health challenge, especially due to rising drug resistance. There is an urgent need to identify novel therapeutic anti-TB drug targets. We have shown that upon inactivating the histidine biosynthesis pathway of Mtb, the bacterium still can grow, suggesting the presence of a histidine importer that the bacterium employs to take up histidine from the host. However, the identity of this importer is yet to be found out. Using in silico and genetic tools, we have identified a nucleotide-binding domain of an ABC transport machinery that plays a major role in histidine import. We have shown that upon dual inactivation of the histidine biosynthesis pathway and the expression of this domain, the bacterium fails to grow. We plan to derive a mechanistic understanding of the function of this protein and utilize the outcomes to design enzyme-specific anti-Mtb molecules and test their efficacy in various model systems.



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4:00 PM | THURSDAY | 24 APRIL 2025

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