

Tuberculosis avoids and subverts host immunity

December 23 2014

An ancient disease, tuberculosis (TB) continues to be one of the major causes of disability and death worldwide. The recent TB cases in Quebec among the Inuit community has underscored the need to find new avenues to eradicate this illness.

TB is highly contagious, is spread by bacteria called [mycobacterium tuberculosis](#), (Mtb) which attacks the lungs. But because Mtb is able to persist in individuals with apparently normal immune systems, scientists suspect that Mtb has developed strategies to avoid, evade and even subvert innate and adaptive immunity.

Researchers at McGill University, led by professor Maziar Divangahi, Faculty of Medicine, (Dept. of Microbiology and Immunology) focussed their efforts on the route of entry of Mtb, which is mainly via the respiratory tract. Here, the bacteria encounter the first line of defense - [alveolar macrophages](#) or dust cells - which reside in the lungs and play a vital role in host defense and immunity.

Divangahi, who is also a member of the Research Institute of the McGill University Health Centre (RI-MUHC), discovered that the [bacteria](#) that causes TB not only survives but replicates in the naturally hostile environment of the dust cells eventually wearing down the defenses of the body, killing the immunity cells and replicating.

More information: "Annexin1 regulates DC efferocytosis and cross-presentation during Mycobacterium tuberculosis infection." *Journal of*

Clinical Investigation, 2014 [DOI: 10.1172/JCI77014](https://doi.org/10.1172/JCI77014)

Provided by McGill University

Citation: Tuberculosis avoids and subverts host immunity (2014, December 23) retrieved 25 April 2024 from

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