

# A Commentary on a Possible Predisposition to Tuberculosis through the Consumption of an Immunosuppressive Food Material of Plant Origin

SN Arseculeratne\*<sup>1</sup>

*Emeritus Professor of Microbiology, Faculty of Medicine, University of Peradeniya, Sri Lanka*

**Corresponding author:** Arseculeratne, Emeritus Professor of Microbiology, Faculty of Medicine, University of Peradeniya, Sri Lanka, **E-mail:** [chubby@sltnet.lk](mailto:chubby@sltnet.lk)

**Received date:** 31 August 2015; **Accepted date:** 21 Dec 2015; **Published date:** 26 Dec 2015.

**Citation:** Arseculeratne SN (2015) A commentary on a possible predisposition to tuberculosis through the consumption of an immunosuppressive food material of plant origin. *J Infect Pulm Dis* 1 (2): doi <http://dx.doi.org/10.16966/2470-3176.107>

**Copyright:** © 2015 Arseculeratne SN. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

**Keywords:** Palmyrah palm; Immunosuppression; avirulent BCG

During research on the hepatotoxic properties of plant materials as foods and medicines, we discovered that the flour from the boiled, dried, young shoot of the Palmyrah palm (*Borassus flabellifer* L) [1], produced immunosuppressive effects in mice and rats affecting both the humoral and cell-mediated adaptive immune systems [2,3]. These effects were transferable to syngeneic mice through splenic T-cells probably of the Suppressor Sub-class.

These results were communicated to European scientists who wrote to me confirming our findings of immune suppression.

These results prompted the question- could the consumption of this plant material in South Indian and in Sri Lanka where this palm is grown and the young shoot eaten, predispose consumers to tuberculosis through immune-depression? As far as I am aware there is only one *Tuberculosis Research Centre*, in South India, in Chennai, Tamil Nadu, South India, but I am unaware of whether they have investigated this problem.

A preliminary experiment was done with mice fed on this flour, and then when Immunosuppression was evident through the foot pad

response to sheep red blood cells, avirulent BCG was administered systemically. There was however no evidence after 2 weeks feeding of 40 % flour-pellet mixtures, of the dissemination of the BCG. Further experiments with higher doses of the flour and longer periods of feeding are planned.

## References

1. Arseculeratne S N (1992) The Toxicology of palmyrah (*Borassus flabellifer*) flour. *Ceylon Med J* 36: 137-140.
2. Devi S, Arseculeratne SN, Pathmanathan R, McKenzie IF, Pang T (1985) Suppression of cell mediated immunity following feeding of mice with Palmyrah (*Borassus flabellifer*) flour. *Aust J Exp Biol Med Sci* 63: 371-379.
3. Arseculeratne SN, Panabokke RG, Tennekoon GE, Bandunatha CH (1971) Toxic effects of *Borassus flabellifer* (palmyrah palm) in rats. *Br J Exp Pathol* 52: 524-537.