

Accepted Manuscript

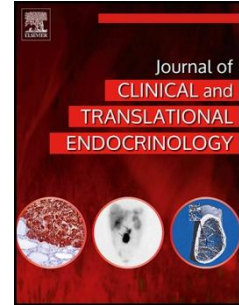
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PII: S2214-6237(16)30025-4
DOI: <http://dx.doi.org/doi: 10.1016/j.jcte.2016.08.005>
Reference: JCTE 94

To appear in: *Journal of Clinical & Translational Endocrinology*

Received date: 7-7-2016
Revised date: 29-8-2016
Accepted date: 30-8-2016



Please cite this article as: Supavit Chesdachai, Susu M. Zughaier, Li Hao, Russell R. Kempker, Henry M. Blumberg, Thomas R. Ziegler, Vin Tangpricha, The effects of first-line anti-tuberculosis drugs on the actions of vitamin D in human macrophages, *Journal of Clinical & Translational Endocrinology* (2016), <http://dx.doi.org/doi: 10.1016/j.jcte.2016.08.005>.

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The Effects of First-Line Anti-Tuberculosis Drugs on the Actions of Vitamin D in Human Macrophages

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The authors have no conflicts of interest to declare

Research Highlights

- Vitamin D has a stimulatory effect on the mRNA expression of cathelicidin *in vitro*
- Anti-TB drugs abolish the vitamin D stimulatory effect of cathelicidin *in vitro*
- Subjects taking anti-TB drugs have no enhanced cathelicidin response to vitamin D
- Anti-TB drugs may alter the vitamin D stimulatory effect on anti-microbial peptides

Abstract

Tuberculosis (TB) is a major global health problem. Patients with TB have a high rate of vitamin D deficiency, both at diagnosis and during the course of treatment with anti-tuberculosis drugs. Although data on the efficacy of vitamin D supplementation on *Mycobacterium tuberculosis* (*Mtb*) clearance is uncertain from randomized controlled trials (RCTs), vitamin D enhances the expression of the anti-microbial peptide human cathelicidin (hCAP18) in cultured macrophages *in vitro*. One possible explanation for the

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