Translational research in endocrinology

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Journal Title: Journal of Clinical and Translational Endocrinology
Volume: Volume 1, Number 1
Publisher: Elsevier | 2014-01-01, Pages e1-e1
Type of Work: Article | Final Publisher PDF
Publisher DOI: 10.1016/j.jcte.2013.11.001
Permanent URL: https://pid.emory.edu/ark:/25593/s7rbx

Final published version: http://dx.doi.org/10.1016/j.jcte.2013.11.001

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Accessed August 8, 2019 6:49 AM EDT
The term “translational research” first appeared on Pubmed in 1993 in a review by authors from the NIH calling for investigation of biomarkers for the early detection of cancer [1]. Since that publication, over 7,000 manuscripts on Pubmed use the search term “translational research.” Traditionally, translational research has been used to describe research discoveries initiated at the bench and then applied to human diseases aimed at improving health. With the launch of the NIH Clinical and Translational Science awards in 2006, the NIH further defined translational research under two major categories: 1) Studies that are generated in the laboratory leading to development of clinical trials in humans and 2) Research aimed at improving the adoption of evidence based medicine in the population [2].

An example of translational research in endocrinology that was spawned by discoveries at the bench was a study published in Science in 2006 proposing vitamin D as a potential mediator of the antimicrobial response [3]. Following a series of in vitro experiments, Liu and colleagues established that blood from vitamin D deficient African-American subjects did not induce an antimicrobial response in cultured macrophages in vitro. However, after replacement of vitamin D in the blood, the antimicrobial response could be restored. This important discovery spawned several early pilot clinical studies to further evaluate vitamin D for prevention and treatment of infections. These early translational studies have demonstrated mixed results presumably due to timing and dose of the vitamin D administration and the type of infection under study. However, all of these studies continue to add to the body of knowledge of the potential role of vitamin D as a therapeutic target to help address infections in humans.

Publication of translational research is often challenging since many early discoveries involve smaller pilot studies in which endpoints to establish clinical benefit have not been adopted or defined. For example, in the above paper discussed, how does one define optimal “anti-microbial response?” Additionally, larger epidemiologic cross-sectional studies may examine biomarkers established at the bench but that have not been validated in longitudinal human trials. Moreover, research tools aimed at measuring the successful adoption of evidence based medicine have yet to be standardized.

Given these barriers to publication, Elsevier has created a new journal entitled “Journal of Clinical and Translational Endocrinology” or JCTE. The purpose of JCTE is to create a home for manuscripts focused on translational and clinical endocrinology research. The team of associate editors and editorial board are members of the endocrinology research community who are heavily engaged in clinical and translational research studies. We hope that researchers consider this new journal for publication of their translational and clinical studies. For our readers, we hope that these studies stimulate new ideas and provide new evidence to support preclinical studies for improved human health. We welcome submissions to our new journal at http://www.jctejournal.com/.

Sincerely,
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Available online 23 January 2014

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