

Exploring the Metabolic Role of B-Vitamins



Jesse Gregory

Professor, Food Science and Human Nutrition Appointed as Assistant Professor at University of Florida in 1977

CURRENT RESEARCH

Identifying the roles of B-vitamins as they relate to human health and disease

Dr. Jesse Gregory, Professor of Food Science and Human Nutrition at the University of Florida, is at the cutting-edge of research directed at understanding how variables of B-vitamin status (deficiency and/or excess) affect the rates of key metabolic processes and the resulting patterns of metabolites. What remains is to complete the connections between these outcomes, human health, and disease processes. The ultimate impact of his research is to provide a better understanding of how vitamins from the diet and supplements facilitate metabolic processes that can govern the development of disease at all stages of life. For example, it is believed that altered levels of vitamin B6 may have impacts on certain cancers, diabetes, inflammatory conditions like arthritis, and a number of cardiovascular diseases. Dr. Gregory is exploring what specific roles vitamins have in order to devise treatments for normalizing vitamin statuses. Such work can lead to refined nutritional recommendations, more effective development and use of dietary supplements, improved understanding of nutrient-disease interactions, and more effective diagnostic techniques for nutritional assessment by evaluating metabolic function. His research is novel in that it frequently works directly with human subjects in controlled studies. Further, his lab is among the first to evaluate the "big picture" of the effects of vitamin insufficiency and excess using metabolic methods.

Dr. Jesse Gregory, is researching the vitamins folate, B6, B12 and their interactions with one another, specifically as they function in one-carbon metabolism, which leads to the creation of nucleotides (DNA building blocks) and single-carbon units, which are involved in...

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AFFILIATION



EDUCATION

- Ph.D. in Food Science 1977, Michigan State University
- M.S. in Food Science 1974, Cornell University
- B.S. in Food Science 1972, Cornell University

AWARDS

- USDA Secretary's Award for Superior Service (for folate research), 1996
- University of Florida Research Foundation Professorship, 1999-2002 and 2008-2011
- Centrum Award for Human Nutrition Research, 2001

RESEARCH AREAS

Life Science, Metabolic / Diabetes, Cardiovascular, Diagnostics

FUNDING REQUEST

Your contributions will assist in moving Dr. Gregory's basic research into clinical trials to test his hypotheses in human subjects, which are costly but necessary for translating his research into real benefits for all people. Further donations will allow for the acquisition of advanced technical equipment enabling state-of-the-art quantitative analysis and metabolite profiling studies. There are still many questions about the role of vitamins in health: Dr. Gregory is poised to test these.