

Dalhousie University, Faculty of Agriculture
AGRI5710 Graduate Module
“Gene-Nutrient Interactions”
Fall 2015
Schedule: Oct.-Nov. 2015 (4 weeks)

Instructor:

Dr. Chibuikwe Udenigwe, Office Cox 124, Phone (902) 893-6625, cudenigwe@dal.ca

Module Description:

Discussions, presentations and critical reviews will be focused on interactions between food components and physiological processes during normal or aberrant conditions. Module discussions will be focused on interaction of nutritional factors (proteins, dietary fibres, bioactive compounds, etc.) with gene expression, and the resulting effects on biochemical pathways and physiological processes. This module will involve discussions, presentations and critical reviews. The gene-nutrient interaction can be focused on metabolic diseases (e.g. metabolic syndrome), food allergies, inflammatory bowel disease, taste perception, aging, etc.

Requirements:

Students must have strong academic background in human nutrition, food science, chemistry, biochemistry or molecular biology.

Capacity: Five (5) graduate students

Email the Instructor by Friday October 11, 2015 if interested in taking the module.

Module Content:

Weekly meetings will involve discussions led by the instructor and students. Students are required to choose one particular nutrient or biopolymer of known structure and function, and study the interactions with a specific gene (or related genes) during normal or abnormal physiological conditions in humans or animal models. The final topic must be discussed with the instructor during the first day of class. The student will lead a 1 hour class discussion on the selected topic and will be evaluated by the instructor. The student is required to prepare a critical review focusing on relevant information reported in original (not review) articles published in peer-reviewed journals during the last 5 years. The paper should be written following a manuscript format of a particular journal. The paper should not exceed 20 pages in length and must be double line spaced with 12-pt Times New Roman font and 1-inch page margins.

Evaluation:

Contribution to discussion (30%), Paper (40%), Presentation (30%)

Materials:

Materials for module discussions will be derived from scientific journals.