Association between Essential Fatty Acid Status and Breast Cancer

PROJECT DESCRIPTION

Breast cancer is the most common type of cancer diagnosed in women from Western countries. Despite ongoing advances in screening, prevention, diagnosis, and treatment; breast cancer remains the second-leading cause of cancer-related death. Animal studies and laboratory studies using human breast tumours suggest that the omega-3 polyunsaturated fatty acids, found mostly in fish, can reduce the risk of developing breast cancer. Unfortunately, the studies on human populations have only been able to use approximate estimates of dietary intake to try and confirm this relationship. Measuring blood levels of the different omega-3 fatty acids is a more precise way to determine intake and status. We propose to look at participants from Alberta’s Tomorrow Project, a province-wide study which included more than 55,000 volunteers who provided information about their lifestyle habits and health; 30,000 of these participants also gave a blood sample. Using a sample of women diagnosed with breast cancer and matched controls (the number will depend on time available) the student will perform the laboratory work to measure blood fatty acids levels and determine if there is an association with breast cancer risk. They will have guidance in the laboratory by a senior technician and guidance with the statistical analysis by a nutritional epidemiologist. This work will provide pilot evidence as to whether there is an association between fatty acid status and a reduced the risk of breast cancer.

FACULTY-DEPARTMENT

Agriculture, Life, Environmental Sciences-

OPEN TO STUDENTS FROM THE FOLLOWING INSTITUTIONS

Some laboratory experience and background in any of the science disciplines

DESIRED FIELD OF (STUDENT) STUDY

Some laboratory experience and background in any of the science disciplines

INTERNSHIP LOCATION

University of Alberta Main Campus - Edmonton

NUMBER OF INTERNSHIP POSITIONS

1

Contact: Brendan Cavanagh, Internship Coordinator (Inbound)
University of Alberta International
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<thead>
<tr>
<th><strong>INTERNSHIP START DATE</strong></th>
<th>January 2, 2018</th>
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<tbody>
<tr>
<td><strong>INTERNSHIP END DATE</strong></td>
<td>12 weeks after start date</td>
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<tr>
<td><strong>ARE THE DATES FLEXIBLE?</strong></td>
<td>Yes</td>
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