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Degree: BSc Biochemistry and Minor in Psychology

Year of Study: 4th Year

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Research Program: Independent Study

Title: “ Assessing Xenoestrogen Exposure in Canadian Women using standardized questionnaires

In the modern world, we are continuously exposed to environmental chemicals, natural substances, and medications that mimic our hormones. One group of such molecules called xenoestrogens are of particular interest given their ability to disrupt human physiology. Examples of common xenoestrogens include isoflavones (found in soy), bisphenol A (BPA), and phthalates. Xenoestrogens have been shown to impact reproductive functions, development, and to a lesser extent cognitive functions; however, to this date there are no standardized questionnaires assessing exposure to xenoestrogens. This research project aims to develop and validate a xenoestrogen exposure measurement tool. Specifically, this project consists of establishing the most common types of xenoestrogens in North America, their route & frequency of exposure, and metabolization rate. This information will then serve as evidence for the development of questions used to assess xenoestrogen exposure. Finally, the questionnaire will be validated with xenoestrogen biomonitoring. In the future, this information could be used to warn Canadians away from certain sources of exposure, or even in the creation of laws which would help keep us safer.