

Associating Markers of Intake of Fermented Foods with Cardiometabolic Factors in a Real-Life Observational Cohort: The *Cardioferment* Project

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Fermented foods and fermented dairy products are commonly consumed in diets worldwide and have been associated with beneficial effects on cardiometabolic health outcomes. Traditional dietary assessment tools are subjective and may not accurately capture dietary intake of these foods; therefore, establishing validated dietary biomarkers of intake for fermented foods is warranted. Short-term human intervention studies conducted previously at Agroscope have revealed several candidate dietary biomarkers of intake for fermented and non-fermented dairy products (e.g., lactose and galactonate for milk intake, galactose for yoghurt intake, and 3-phenyllactic acid for cheese intake). The *Cardioferment* project aims to validate these candidate dietary biomarkers using a real-life prospective cohort study in the Netherlands, “Nutritional Questionnaire plus” (NQplus), comprising 2,048 men and women aged 20 to 77 years, in which multiple dietary assessments tools (i.e. food frequency questionnaires, 24-hour recalls) as well as anthropometric, cardiometabolic, blood and urine measurements have been collected. The dietary patterns of the NQplus participants will be analyzed and grouped according to their level of consumption (low or high) of fermented foods and fermented dairy products. Moreover, associations with anthropometric measures and cardiometabolic markers of these groups will be analyzed. The urine and serum metabolomes of a selected number of participants in the low and high consumer groups will be measured by gas chromatography-mass spectrometry and liquid chromatography-mass spectrometry. Identification and validation of dietary biomarkers for fermented foods is important to objectively measure dietary intake of these foods in future trials, and to provide more reliable approximations of diet-health relationships in epidemiological assessments.