Title of the PhD project
Increasing legumes intake through changing the hedonic factors in meals throughout lifespan

Disciplines: Nutrition and Eating Behaviour

Laboratory: P2S Parcours Santé Systémique. Dir. C. Dussart

Doctoral school: Interdisciplinary Doctoral program in health-sciences (EDISS) - ED 205

Description

Scientific background and rationale:
Along the increasing global population growth comes the challenge to ensure quality food, in sufficient quantity and with respect to the environment (1). Despite the well-documented health benefits of legume consumption, the actual intake of legumes remains low owing to people's preferences for tasty foods (2). The differences in food values between countries highlight the peculiarities across populations, and the need for understanding perceptions and preferences within the context of the culture. Barriers of incorporating legumes into diets include people's unfamiliarity with cooking and incorporating them into diet, personal taste experiences etc. (3) There is a need to take up the challenge to incorporate legumes in novel, convenient, tasty and healthy food products.

Aim:
1) To systematically review the published literature on interventions on increasing legumes 2) To identify barriers and motivators of legumes consumption 3) To develop recipes, facilitate the preparation and optimize the cooking procedure to enhance sensory perceptions of meals based on legumes 4) To measure the impact of improved legume based meals on appetite and food intake in a real context ecological environment

Description of the project methodology:
This project will explore the strategies increasing the legume intake via alterations or use of hedonic components using three research approaches including 1) Understanding perceptions and preferences within the context of the culture (focus group discussions in both France and in Mexico in collaboration with Dr. Nahieli Greaves Fernández) 2) Developing novel recipes and facilitating preparation and cooking procedures 3) Assessing the sensory perceptions of the meals, appetite and energy intake in an ecological setting (Living lab)

Expected results:
Novel strategies will be identified to motivate French and Mexican adults/children to adapt their food choices into healthier ones within their cultural and sensory acceptability. It will also provide the necessary knowledge, skills, appropriate instructions and support in order to increase overall acceptance and consumption of legumes of the diet in France and Mexico without sacrificing taste, pleasure or tradition in the pursuit of healthier legume-based food choices.

Perspectives:
The technical innovations will provide guidance for industry for the development of foods that modify dietary habits. It is anticipated to provide useful public health nutrition messages and the knowledge required for the development of innovative food products to help consumers deal with difficulties achieving successful legumes incorporation in their diets.

Skills required:
Master2's degree (or equivalent training) in sensory/hedonics, consumer behaviour, nutrition, public health or life sciences related field. Excellent communication and writing skills; good organizational and time management skills (ability to complete projects on time); statistics and experiments in hedonic/sensory tests

Bibliography:

Key-words:
Legumes, hedonics, recipe development, motivations and barriers, satiety, ecological context, Living Lab

Contact agnes.giboreau@institutpaulbocuse.com