Development of a birch sap with extended shelf life for prevention and treatment of birch pollen allergy - DTU Orbit (27/05/2018)

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The prevalence of allergic diseases is rising dramatically in both developed and developing countries, representing a major health problem and a burden to society. In particular, tree pollen allergies are estimated to affect approximately 40% of the population in the Northern Hemisphere, where birch pollen displays the greatest allergic potency. Moreover, 50-75% of birch pollen allergic patients also experience allergic symptoms upon consuming foods containing cross-reactive allergens. Current options to change the course of the disease and restore allergen-specific immune tolerance may be associated with adverse side effects. Therefore, innovative therapies to enhance the therapeutic efficacy and safety are needed. Across Scandinavia, many birch pollen allergy suffers have reported mitigation of their symptoms after drinking birch sap. However, there is no scientific evidence supporting the use of birch sap as a treatment of pollen allergy. The aim of this project is to develop new commercially available birch sap products to induce tolerance in birch pollen allergic individuals. These products could be used as natural medicine/functional foods in the treatment of birch pollen allergy. To achieve this objective, we will:

(1) Identify immune reactive allergens in birch sap and cross-reactive allergens in birch pollen and related foods.
(2) Investigate the potential induction of oral tolerance to birch pollen by birch sap and consequently, the prophylactic efficacy against birch pollen allergy and cross-reactive food allergies.
(3) The safety and efficacy of birch sap for the treatment of birch pollen allergy and related food allergies.

The outcome of this project could provide the foundation for developing new ways to treat millions of people worldwide suffering from birch pollen allergy in a safe and efficient manner.

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Tapperiet
Period: 01/01/2018 → 31/12/2019
Number of participants: 3
Birch Sap, Pollen Allergy, Treatment, Prevention, Shelf life
Acronym: Birch Sap
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Project