

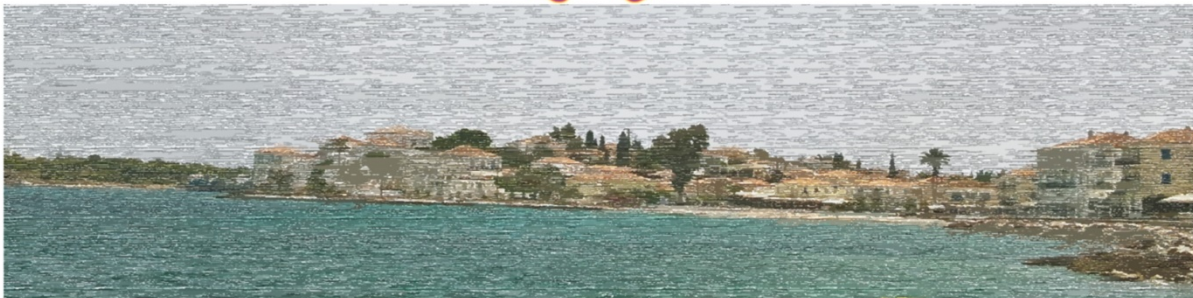
# Book of Abstracts



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**Molecular targets for anti-aging interventions**  
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# Protective role of fermented food in LPS-induced inflammation in C57BL/6 mice

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Non-transmittable chronic diseases are largely driven by chronic inflammation, which can be connected to poor diet and toxic products of commensal gut microbiome. Diet intervention can influence gut microbiota function and composition. Fermented foods are specifically known to have anti-inflammatory and immunomodulatory properties, attributed to their high antioxidant content and lactic acid-producing bacteria (LAB)

In this study we examined the effects of sauerkraut brine (SB) on physiological and behavioral responses to systemic inflammation induced by lipopolysaccharides (LPS) in a mouse model. C57BL/6 mice 90 postnatal days old were used in this study. They were divided into 2 groups and treated with either 150 ml of sauerkraut brine and pasteurized sauerkraut brine (PSB) for 5 weeks (via oral gavage). Control animals (CON) were receiving an equivalent amount of water. During the final week of treatment, animals received 5 injections of LPS (0.5 mg/kg, i.p.). Behavior of animals was assessed before and after LPS administration, using the open field test, light-dark box, Y-maze, tail-suspension and rota-rod test. Analysis of pro-inflammatory brain cytokines has been performed subsequently via Western blot and PCR. Food consumption and body weight were measured throughout the experiment.

SB and PSB treatments did not influence body weights and behavior compared to CON mice. LPS treatment led to the weight loss and decreased food intake in all experimental groups. The fastest recovery and a reduced inflammatory response was detected in the SB group. Behavioral analysis revealed differences between three groups in responses to the LPS challenge.

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