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**[PAB(T7)]Poster Abstract Presentation**

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**[PAB(T7)-67]Influence of a long-term diet including Tsuyama-grown apios on gastrointestinal function**

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**[Background and objectives]** Apios americana Medikus is a member of the legume family Apios fortune, containing isoflavones and DDMP saponins, and also showing a weak alpha-glucosidase inhibitory effect as its functional activities. The activities of these functional components have been reported to indicate biological defense, anti-cancer, anti-inflammatory and anti-hyperglycemic effects. However, detailed mechanistic understanding and evidence for efficacy and safety of Apios components are limited. In this study, wild mice were fed Apios powder-containing diets in order to evaluate the effects and safety of Apios.

**[Methods/Results]** Apios and potato (as a control) were freeze-dried, powdered and admixed with a standard powdered feed at a final concentration of 20% (w/w). Wild mice (C57BL/6, 8 weeks old) were fed 20% Apios or potato powder-containing diets ad libitum for 62 weeks. Compared to the potato group, the Apios group tended to increase food intake, while its body weight significantly decreased. In the Apios group, AST and ALT values decreased, and HDL value significantly increased compared to the potato group. The Apios diet reduced sizes of lipid droplets in liver, suggesting Apios decreases fat accumulation in the livers of 70-week-old aged mice. The number of goblet cells in intestinal villus and the thickness of the circular and longitudinal muscle layers in the small intestine increased in the Apios group, suggesting increases in mucin secretion and peristaltic movements in the small intestine of the Apios group. **[Conclusions]** Apios-containing diet might be associated with anti-aging effects.