CV of ASSMN 2024 Invited Faculty	
	***Mitsuhiro Watanabe***
Country	Japan
Position & Organization	*Professor, Keio University*
Major Field	NAFLD, Diabetes, Bile Acid
Short Bio (in 300 words)	Mitsuhiro Watanabe is Professor at Keio University in Japan. Dr. Watanabe has been using molecular physiology and systems genetics to elucidate metabolism in health, aging and disease. Much of his research focuses on understanding how diet, exercise, functional natural products, and bile acids alter gene expression and control metabolism by altering the activity of transcription factors and their associated cofactors. He is especially known for his research on bile acid metabolism, and is one of the researchers who proposed the new concept of bile acids as signaling molecules. Since his work was published, it has influenced many research projects around the world. He is currently conducting research to clarify the relationship between intestinal bacteria and bile acids. This research is very important and is expected to have a major impact on research into lifestyle-related diseases and aging. His research has played a key role in developing agonists of nuclear receptors and GPCRs into drugs and supplements that are now used to treat high blood lipid levels, fatty liver and type 2 diabetes. Dr. Watanabe received his PhD in Molecular Biology at the Louis Pasteur University, Department of Molecular Biology, in France. He was a post-doctoral research fellow in the Harvard Medical School in Boston and CNRS (Centre national de la recherche scient fique) in Strasbourg.

NAFLD

Mitsuhiro Watanabe

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Bile acids (BAs), a group of structurally diverse molecules that are primarily synthesized in the liver from cholesterol, are the chief components of bile. Recent studies have revealed that BAs are not only facilitators of cholesterol homeostasis and dietary lipid absorption but also important signaling molecules exerting multiple physiological functions. Three major signaling pathways, including the mitogen activated protein kinase (MAPK) pathways, the nuclear hormone receptor farnesoid X receptor (FXR) mediated pathways and the G protein-coupled receptor TGR5/M-BAR mediated pathways, have been identified to be the targets of BAs. Through activation of these diverse signaling pathways, BAs can regulate their own enterohepatic circulation, but also triglyceride, energy, and glucose homeostasis. Thus, BA-controlled signaling pathways are promising novel drug targets to treat common metabolic diseases, such as NAFLD, obesity, type II diabetes, hyperlipidemia, and atherosclerosis. I would also like to talk about the relationship between intestinal bacteria and bile acids.