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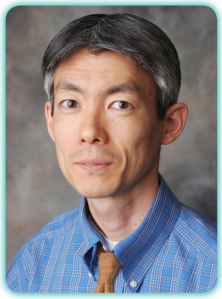

## Michi Umetani
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## Modulation of estrogen receptor activity by 27-hydroxycholesterol and its mechanisms of action

27-Hydroxycholesterol (27HC) is one of the most abundant oxysterols in human circulation, and its levels correlate with that of cholesterol. Previously, we found that 27HC directly binds to estrogen receptors (ER) and works as a selective estrogen receptor modulator (SERM). 27HC is the first identified, endogenous SERM, and in addition to blocking the cardiovascular protective effects by estrogen, it induces vascular inflammation and augments atherosclerosis independently of estrogen action. Thus, 27HC is an important factor involved in the atherosclerosis development in hypercholesterolemia. Using synthetic biological approach, we investigated the mechanism by which 27HC modulates ER activity. This project has the potential to develop a novel therapeutic intervention to prevent hypercholesterolemia-derived cardiovascular dysfunction.

### Biography

Michi Umetani has completed his PhD at the University of Tokyo and postdoctoral studies from University of Texas Southwestern Medical Center. He is Assistant Professor of the Center for Nuclear Receptors and Cell Signaling, University of Houson. He has been working on the impact of cholesterol metabolites in cardiovascular and metabolic health and disease.

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