



The Department of Nutritional Sciences Fall 2021 Seminar Series

" Modulation of Metabolic Health by Cellular Lipids"

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Host: Joshua W. Miller, Ph.D.
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Wednesday, September 22, 2:15 PM

Zoom Registration: <https://rutgers.zoom.us/meeting/register/tJlpf-6uqjwqE9OFr0qxZiVZEF-P21sgCnd>

The intestine is emerging as a regulatory and signaling organ, enabling diet-derived nutrients to perform essential actions. A better understanding of intestinal regulation of systemic lipid metabolism has direct implications to multiple human metabolic pathologies, including cardiovascular disease, fatty liver, and insulin resistance. The delta-9 desaturase, stearoyl-CoA desaturase-1 (SCD1), converts saturated fatty acids to monounsaturated products and has been shown to regulate lipid esterification in liver and skin. However, virtually nothing is known about the role of SCD1 in the intestine, where lipid esterification is crucial for its eventual absorption and secretion into chylomicrons (CMs). To address this gap in knowledge, we have generated mice with a targeted deletion of SCD1 only in intestinal epithelial cells (iKO mice). In this seminar, I will report novel findings demonstrating that intestinal SCD1 plays an important role in modulating circulating lipid levels, as well as systemic energy metabolism, via alterations in bile acid signaling.



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