



Discovery Science
Emerging Scholars Lecture

“Obesity-Induced Mesenchymal Stem Cell Senescence and Dysfunction”



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Endogenous mesenchymal stem cells (MSC) mediate tissue repair, but obesity might potentially impair their regenerative potency. The adipose tissue microenvironment in obesity stimulates cellular senescence (CS), an irreversible cell cycle arrest that prompts an inflammatory, senescent-associated secretory phenotype (SASP). To test the hypothesis that obesity induces CS and dysfunction in MSC from obese patients, we harvested and evaluated MSC from fat tissue collected from obese and non-obese patients undergoing surgery at Mayo Clinic. Obese-MSC demonstrated increased CS and SASP and lower proliferation than non-obese-MSC. Therefore, human obesity induces senescence in adipose tissue-derived MSC, which might interfere with their repair capacity.

Tuesday
October 22, 2019
4:00 p.m.

512 Light Hall

Refreshments will be served!

This lecture series features the most promising young scientists who are making notable discoveries as postdoctoral fellows or early career faculty.

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