

Chemical and Biological Approaches to Investigate Protein S-Glutathionylation

ABSTRACT: The reactive oxygen species (ROS) are important signaling molecules that control diverse biological processes, including cancer cell migration. It is well-established that ROS can induce various oxidations of protein cysteines, including S-glutathionylation. Despite the advance in identifying glutathionylated proteins, the identification of glutathionylated cysteines that regulate a specific biological process has been limited. In this talk, 1) I will present our clickable glutathione-based chemical proteomic approaches that enable the identification of functionally important redox regulatory cysteine glutathionylation. Subsequently, 2) I will introduce our integrative strategy, combining our chemical proteomic platform with functional biological analyses and streamlining the identification of glutathionylated cysteines that control specific biological processes. The talk will highlight our chemical approaches and biological analyses of newly identified redox regulatory cysteine glutathionylation potentially associated with cancer cell migration and invasion.

Wednesday, February 5th

2:00 - 3:15 p.m.

Science Hall 126 & [Zoom](#)

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