

## **“Characterization of regulators of PTP1B oxidation in cells”**

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### **Abstract:**

Reversible protein phosphorylation is a dynamic process that is widely involved in cell signaling. Based on the latest numbers, it is estimated that 30-65% of the proteome is phosphorylated in cells in physiological conditions. While kinases add phosphoryl groups onto proteins, phosphatases remove phosphoryl groups to regulate signal transduction in cells. The work that I will talk about revolves around the regulation of phosphatases by cellular oxidants. I will present how our work sheds light on how they become inactivated and novel work on molecular tools to turn them back ON in order to stop signaling in diseased cells.