THE WINIFRED MASTERS
BURKE MEDICAL
RESEARCH INSTITUTE

WEEKLY COLLOQUIUM

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ROSEDALE CONFERENCE ROOM
BILLINGS BUILDING

UNDERSTANDING AGING AND REDOX CONTROL THROUGH
GENOME ANALYSIS

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Research Abstract

The Gladyshev lab is interested in redox biology, trace elements and comparative genomics as applied to aging and cancer.

Research is focused on understanding basic mechanisms of redox regulation of cellular processes by studying reactive oxygen species and oxidoreductase functions of cellular components. Little is known how oxidant and antioxidant signals are specifically transmitted in the cell. To understand mechanisms of redox control, they identify functions of participants in the redox process. They are developing various bioinformatics approaches and carrying out genome sequencing, proteomics and functional genomics studies, which are followed with in vitro and in vivo tests of identified targets. The Gladyshev lab is particularly interested in the redox control that involves specific and stochastic oxidation of cysteine and methionine residues in proteins.

References
