

# Redox Signaling, Oxidative Eustress and Distress

IST1-07

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This presentation discusses redox signaling and its role in stress responses to endogenous (metabolic) and exogenous (exposome) challenges. Redox reactions are linked to fundamental life processes, requiring constant monitoring of the flow-equilibria in the open metabolic system. Consequently, a physiological level of reactive signaling molecules addresses specific targets to initiate adaptive responses, "eustress", whereas high (supraphysiological) or low (subphysiological) exposure leads to disrupted redox signaling and unspecific molecular damage, "distress". Current knowledge on major concepts in redox organization, molecular players (focus on protein thiols and hydrogen peroxide) and of some life processes is presented.