



UNIVERSITY OF
TORONTO

“Neuronal Redox Balance: from Nuclear Integrity to Widespread Neurodegeneration



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Monday November 27, 2023 4:00pm

Red Room, Donnelly Centre

160 College Street, U of Toronto

Redox balance is identified by the efficacy of cellular thiols in buffering the oxidizing reactive oxygen species, but it is compromised in aging. Thioredoxin-1 (Trx1) is a small protein in the micromolar range concentration that is responsible for reduction of oxidized proteins and it is decreased in aging and in neurodegenerative diseases. Our work focuses on nuclear and cytoplasmic events that have been overshadowed by the dominant Amyloid and Tau hypotheses in the field. We propose a mechanistic link between redox imbalance and neurodegeneration that may be used for therapeutic purposes.