Qeios

Peer Review

Review of: "Neurodegeneration: A Convergence Hypothesis Linking Chronic Low-Dose Diagnostic Radiation to Accelerated Decline"

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1. Independent researcher

I greatly appreciated the originality of the author's hypothesis. It involves considering a variety of etiopathogenetic factors in causing neurodegeneration. Some of them are subtle and still poorly understood. I found the description of the three main biological mechanisms of neuroprotection to be well described and documented, as are the epidemiological data supporting the proposed hypothesis, although these data would merit further integration with analyses of populations specifically exposed to each pathogenic factor. However, I recognise that conducting causal epidemiological studies for each interfering factor with a cumulative effect over long periods of time is extremely difficult. Therefore, it would be interesting to explore the possibility of corroborating the proposed hypothesis by conducting or citing, in connection with any previous publications, experimental studies involving human cerebral organoids exposed to the individual pathogenic factors described by the author and at low cumulative doses. Such experimental studies should absolutely be based on animal-free methods given the unique nature of the human brain.

Declarations

Potential competing interests: No potential competing interests to declare.

doi.org/10.32388/KBSJ1A