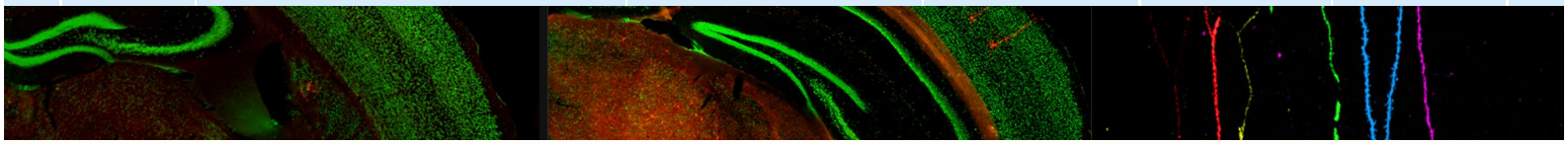

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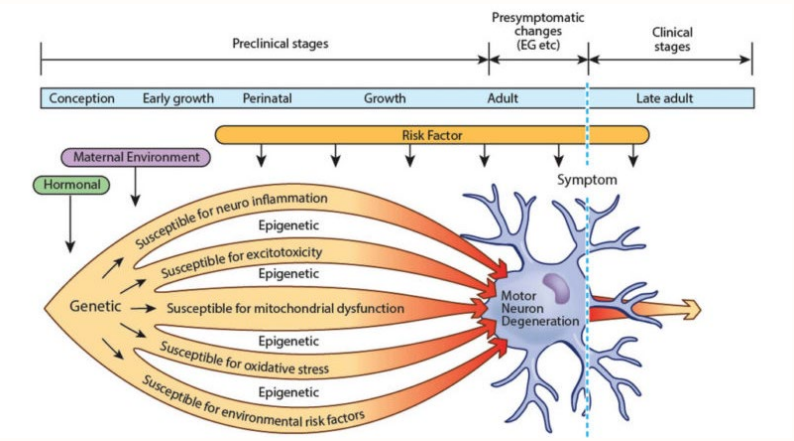
Identifying Environmental Risk Factors in ALS: Take Two?

August 7, 2018 News in Brief Michelle Pflumm

A new approach may help identify risk factors for ALS according to a new study. The report, led by University of Torino's Adriano Chiò in Italy, proposed that key environmental exposures and/or life choices that contribute to the onset of ALS may be easier to pinpoint by studying people with inherited forms of the disease.

The analysis, which evaluated the relationship between ALS incidence and age on the log scale, suggests that ALS develops in a 6-step process (see Armitage and Doll, 1954). And, inherited ALS-linked mutations explain at least some of these molecular events that lead to the disease. What's more, only two additional steps may be needed to trigger the onset of SOD1 ALS suggesting that changes in the gene encoding this enzyme could account for most of the etiology underlying the disease.



Watch Your Six. *The number of molecular events needed to trigger the onset of ALS is reduced in inherited forms of ALS compared to sporadic disease suggesting that the ALS develops through a multi-stage process that is both genetic and epigenetic in nature (Chiò et al, 2018). [Courtesy of Eisen et al., 2014, Journal of Neurology, Neurosurgery and Psychiatry. Reproduced with permission.]*

The study appeared on July 25 in *Neurology*.

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The strategy is in contrast with existing approaches, which often explore the role of the environment and/or lifestyle in sporadic ALS. The approach builds on a previous analysis, led by Ammar Al-Chalabi at King's College London in England, which suggests that ALS occurs due to a multi-stage process similar to many types of cancer (Al-Chalabi et al., 2014; see also Vogelstein and Kinzler, 1993).

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Further Reading

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