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Notable in *Neurology* this week

This issue features an article that investigates the relationship of chronic symptoms and candidate blood biomarkers' exosomal and plasma levels in veterans with a history of mild traumatic brain injury; another evaluates the frequency of asymptomatic optic nerve lesions and their function in asymptomatic retinal neuroaxonal loss in patients with multiple sclerosis. A featured Historical Neurology article reviews the portrayal and treatment of soldiers with functional neurology in 2 films after World War II.

Articles

Effect of ApoE isoforms on mitochondria in Alzheimer disease

APOE ϵ 4 and mitochondrial dysfunction are risk factors for late-onset Alzheimer disease. In a postmortem study of the brain, *APOE* ϵ 4 was associated with impaired mitochondrial structure and function, oxidative stress, and synaptic integrity. Mitochondrial proteins and synaptic protein were strongly associated with cognitive performance.

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From editorialists Qin et al.: "These data provide the most compelling evidence to date that directly links *ApoE4* to mitochondrial alterations in the human brain and confirm the importance of mitochondrial homeostasis, thereby providing clues for future mechanistic studies."

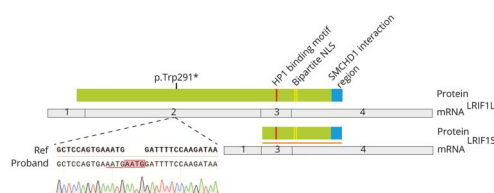
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The CLN3 Disease Staging System: A new tool for clinical research in Batten disease

Natural history data from 108 participants in an 18-year-long study were used to develop the CLN3 Disease Staging System to categorize disease stages in patients with juvenile neuronal ceroid lipofuscinoses. This staging system has potential utility for staging clinical research.

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Homozygous nonsense variant in *LRIF1* associated with facioscapulohumeral muscular dystrophy



The authors identified a patient with facioscapulohumeral muscular dystrophy (FSHD) and biallelic truncating variants in *LRIF1*, demonstrating that *LRIF1* is required for *DUX4* repression in skeletal muscle, and reinforcing the current hypothesis that

FSHD is caused by D4Z4 chromatin relaxation resulting in inappropriate *DUX4* expression.

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From editorialists Johnson and Ankala: "While it is appropriate that early clinical developments focus on the most common form of FSHD, FSHD1, we would encourage investigators to expand as rapidly as possible to these other causes of FSHD."

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COVID-19 Resources

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[NPub.org/COVID19](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7092034/)

Continued

Plasma neurofilament light levels are associated with risk of disability in multiple sclerosis

Plasma neurofilament light chain (NfL), a marker of axonal damage, was measured in 4,385 patients during the early stages of multiple sclerosis (MS), and was found to be predictive of future Expanded Disability Status Scale score worsening. Plasma NfL can serve as a reliable biomarker to assess risk of long-term disability worsening in MS.

Page 1022; Editorial, page 1013

NB: "Pearls & Oysters: Contrast-induced encephalopathy following coronary angiography: A rare stroke mimic," p. e2491. To check out other Resident & Fellow Section Pearls & Oysters articles, point your browser to [Neurology.org/N](https://www.neurology.org/N) and click on the link to the Resident & Fellow Section. At the end of the issue, check out the NeuroImage illustrating intramural patchy gadolinium enhancement in the subcortical and leptomeningeal arteries and veins of a patient with cerebral autosomal dominant arteriopathy with subcortical infarcts and leukoencephalopathy. This week also includes a Humanities in Neurology piece titled "Space traveler."

NEW EPISODE



June 9, 2020

CME Opportunity: Listen to this week's *Neurology* Podcast and earn 0.5 AMA PRA Category 1 CME Credits™ by answering the multiple-choice questions in the online Podcast quiz.

Exosomal neurofilament light: A prognostic biomarker for remote symptoms after mild traumatic brain injury? (see p. 1016)

1. Exosomal neurofilament light: A prognostic biomarker for remote symptoms after mild traumatic brain injury?
2. What's Trending: Managing migraine, part 2

In the first segment, Dr. David Lapidus talks with Dr. Kimbra Kenney about her paper on exosomal neurofilament light as a biomarker following traumatic brain injury. In the second part of the podcast, Dr. Jason Crowell continues his talk with Dr. David Watson on managing migraine.

Disclosures can be found at [Neurology.org](https://www.neurology.org).

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In Focus

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