REASONS NOT TO BE CHEERFUL
Yet another reason to be grateful for registries in the Nordics (Denmark, Finland, Iceland, Norway and Sweden). Of over 4.5 million children that they could identify 38,661 as having a mother with epilepsy, 42.6% took an antiseizure medication when pregnant. Unsurprisingly valproate exposure increased the risk of having a psychiatric diagnosis by the age of 18 years; this was predominantly a neurodevelopmental diagnosis (adjusted HR, aHR 1.80, which equates to 11% more - 42% in exposed vs 31% unexposed). What is novel, and a cause for concern were the risks associated with other epilepsy drugs. Prenatal exposure to topiramate was associated with attention-deficit/hyperactivity disorder (aHR 2.38; 95% CI 1.40 to 4.06) and exposure to levetiracetam was associated with anxiety (aHR 2.17; 95% CI 1.26 to 3.72) and attention-deficit/hyperactivity disorder (aHR 1.78; 95% CI 1.03 to 3.07).

JAMA Neurol. 2023 Apr 17:e230674.

DISTRESSED GENES
Casual observers of the biopsychosocial model overlook the ‘bio’ bit at their peril. An intriguing new study aiming to look at the metabolic consequences of being a trauma survivor report ‘methylome’ changes associated with functional neurological disorder (FND). This is a genome wide study of epigenetic changes, here methylation of DNA, in 57 patients with FND and 47 controls. They found a common epigenetic ‘signature’ enriched for biological pathways implicated in chronic stress and chronic pain. There was no single common pathway; methylation levels of genes included in the top two shared pathways hardly overlapped (immune response and neuronal function related pathways).

Prog Neuropsychopharmacol Biol Psychiatry. 2023;125:110756.

AFB relishes nothing more than the noise of a sacred cow who is meeting the abattoir staff. Spare a thought for Santiago Ramón y Cajal when he reads about the neurones that connect without synapses in Science. We have to step away from human neuroscience to consider the ctenophore (marine comb jellies) nerve-net which suggests a complex evolutionary history of the animal nervous system (figure 1). They used high-resolution three-dimensional electron microscopy, to reveal that nerve-net neurones are not separate entities, but rather are interconnected through continuous neurite plasma membranes without evidence of synapses.


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