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BRAIN MAPS

What do you get if you aggregate 123 984 MRI scans, across more than 100 studies, from 101 457 people between 115 days post-conception to 100 years of age? A comprehensive ‘brain chart for the human lifespan’ and a paper in *Nature*. The authors report new neurodevelopmental milestones, inflection points of the tissue-specific volumetric trajectories. This work creates foundations for brain charts analogous to the paediatric growth charts, but like those charts, these MRIs were heavily biased in favour of people of European ancestry.

Nature. 2022;604(7906):525-533.

BIRDS DO IT, BEES DO IT

Somatic mutation—the process by which tissues collect changes over your lifetime—can cause cancer. Not much is known about this process outside of humans. To study the landscape of somatic mutation researchers sequenced the genome from 208 intestinal crypts (56 individuals) across 16 different mammals. The paper is chock-full of insights, including the inverse relationship between somatic mutagenesis and lifespan (figure 1). Put together, these data suggest a common mutational processes across mammals, and that somatic mutation rates are evolutionarily constrained.

Nature. 2022;604(7906):517–524.

LITHI-YUM

People with bipolar disease are at increased risk of hospitalisation and serious complications of COVID-19 infection. There is evidence for lithium having

antiviral properties. Are people who take lithium at lesser risk? Electronic health records linked to 26 554 known to be taking lithium. The COVID-19 infection incidence not only was lower among matched patients with ‘therapeutic’ compared with ‘subtherapeutic’ lithium levels—but also was lower for patients with ‘therapeutic’ lithium levels versus matched patients using valproate (HR=0.79, 95% CI 0.67 to 0.92, $p=0.0023$). Is this telling us something important about good care of people with chronic disease, or is there something more to the lithium story?

Br J Psychiatry. 2022;1–3.

MRI-ROBOT

Are highly sophisticated drones going to prescribing monoclonal antibodies anytime soon? How worried should we be that our clinical duties will be subcontracted out to dreary automatons? Who among your colleagues do you secretly suspect

have been robotised already? The lot of medical secretaries (0.65), neuro diagnostic folk (0.62) and porters (0.72) may be more vulnerable to/ amenable to automation (figure 2).

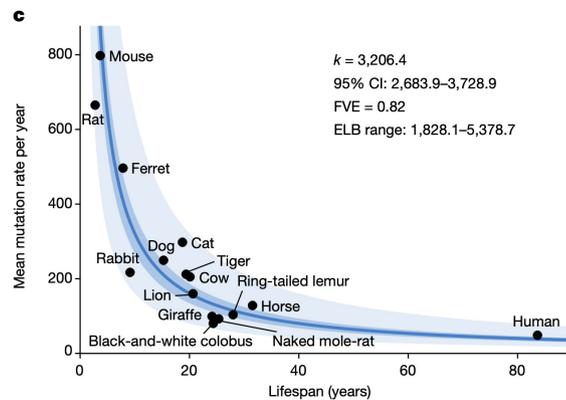


Figure 1 Somatic mutation rate on inverse lifespan. Reproduced under Creative Commons CC BY license from Cagan *et al*. *Nature*. 2022;604(7906):517–524. ELB, expected end-of-lifespan mutation burden; FVE, fraction of inter-species variance explained.

Neurologists

Healthcare Practitioners and Technical Occupations

Automation risk index



Your job has an automation risk index of

0.48

In our computations the automation risk index spans from 0.43 to 0.78. Learn how the automation risk is computed.

Figure 2 From robots, jobs and resilience <https://lis2.epfl.ch/resiliencetorobots/#/>.

Competing interests None declared.

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