



The impact of synthetic mRNA on health

Karina Acevedo-Whitehouse, BVMS MSc PhD

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People with vicious personalities cannot resist hurting others, even when it is not in their interests.

People do not necessarily behave rationally according to circumstances.

A metaphor for psychopaths, whose impulsive and vicious personalities often hurt the people they depend on.

The scorpion **could not resist its natural urge to sting**, but it also chose to be honest about it to the frog (*"certain charm and tragic dignity"*)

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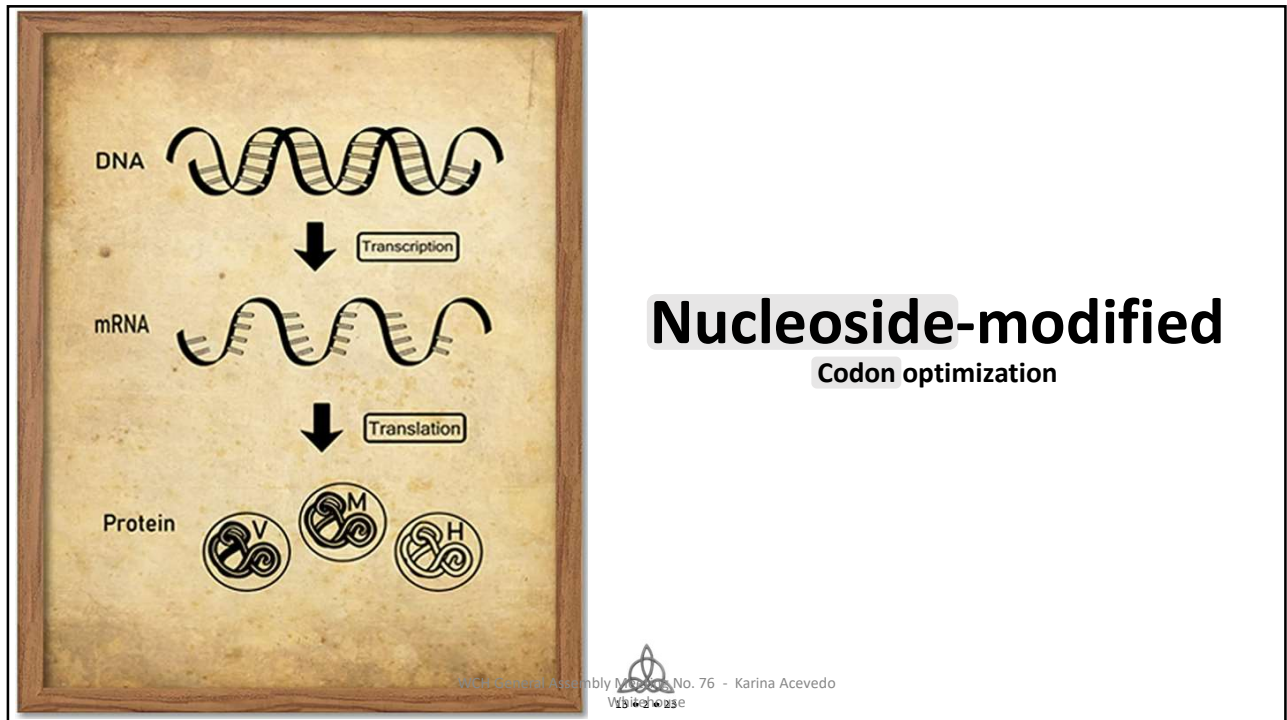


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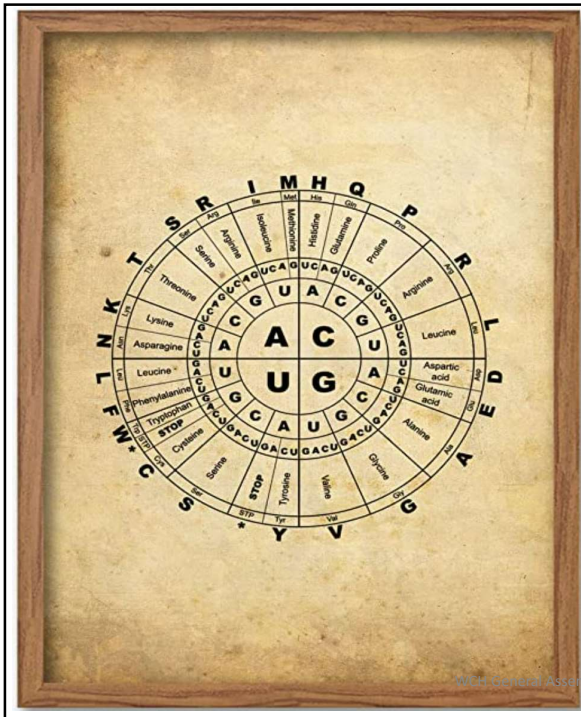
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The impact of synthetic mRNA on health

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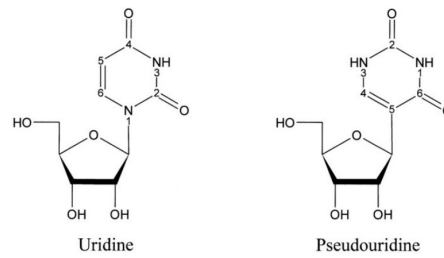
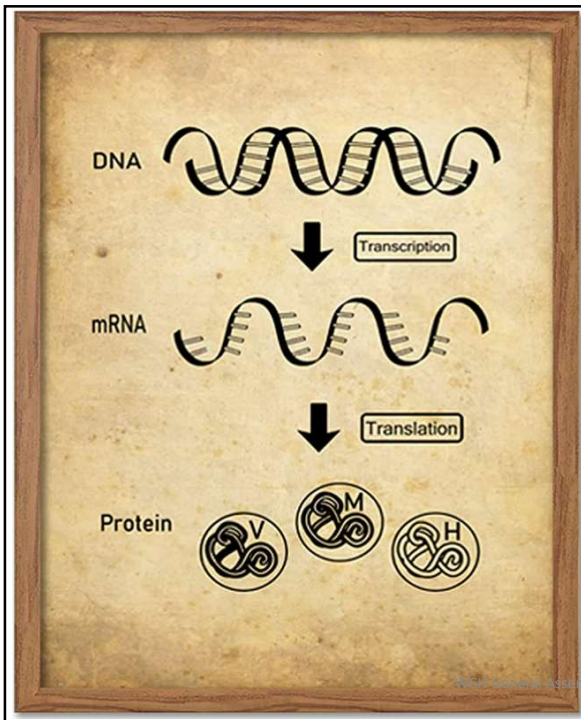
Nucleoside-modified

Codon optimization



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 Video case

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Nucleoside-modified

Codon optimization

Replacement of nucleosides: pseudouridine, **1-methylpseudouridine** and 5-methylcytosine

Xia X. 2021. Detailed Dissection and Critical Evaluation of the Pfizer/BioNTech and Moderna mRNA Vaccines. 9:734.
<https://doi.org/10.3390/vaccines9070734>

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DNA

Transcription

Don't stop!

Just keep going!

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Vibrio

Nucleoside-modified

Codon optimization
Replacement of nucleosides

Encased in LNP

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Effects on health

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Vibrio

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“High levels of safety” 🦋

- Biodistribution
- Cellular uptake
- Translation rates
- Functional half-life
- Endosomal escape
- Inactivation kinetics
- Rates/duration of antigen expression
- Interactions with sensors of foreign RNA
- Interactions with host genome

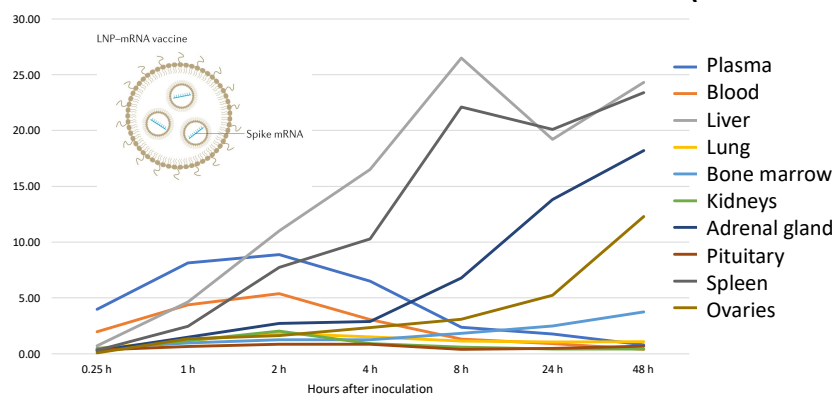
“We really do not know”

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VirusBase

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EMA/707383/2020. Committee for Medicinal Products for Human Use (CHMP)

Biodistribution of mRNA of Pfizer vaccine (BNT162b2)

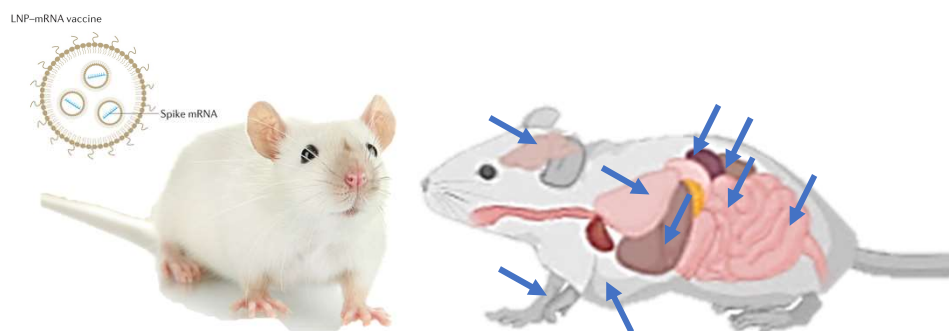


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 Wikidose

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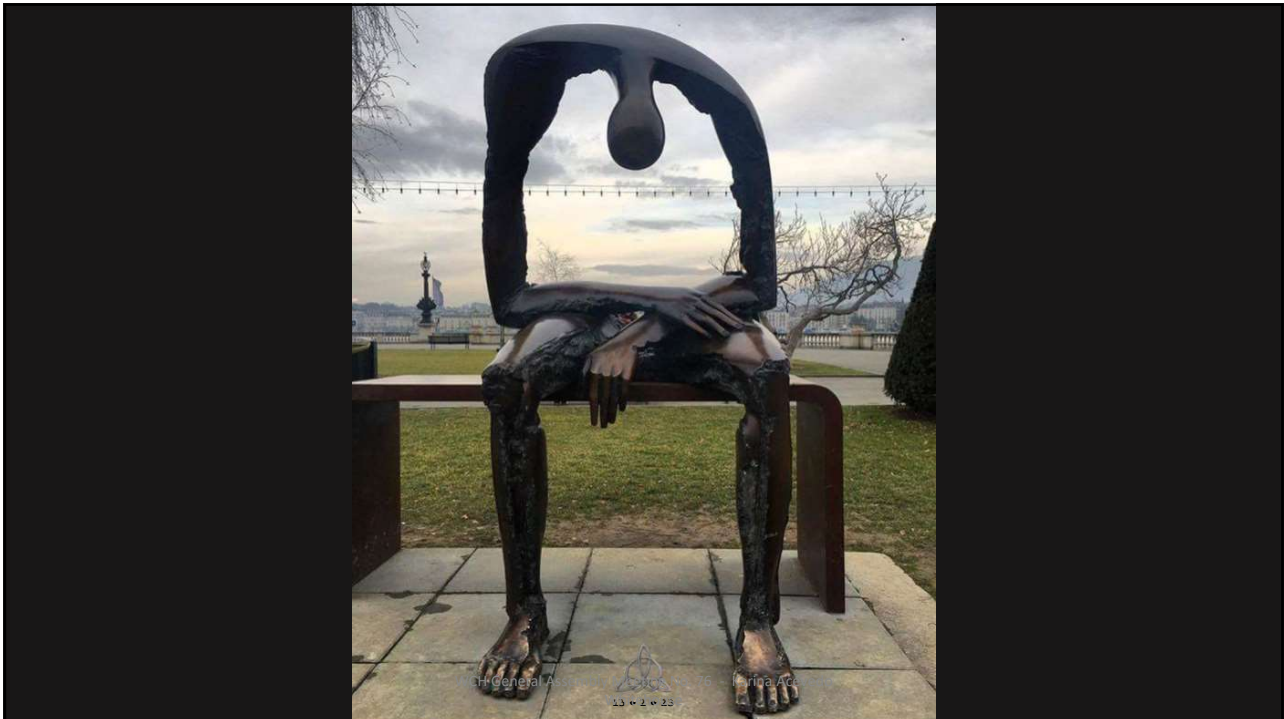
Bahl K. et al. 2017. Preclinical and Clinical Demonstration of Immunogenicity by mRNA Vaccines against H10N8 and H7N9 Influenza Viruses. Mol. Therapy 25:1316-1327. doi: 10.1016/j.ymthe.2017.03.035

Biodistribution of mRNA in vaccine prototype against Influenza



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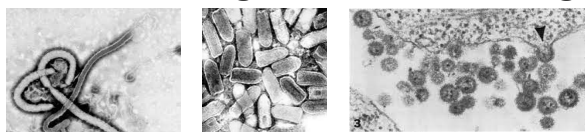


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Zhang L. et al. 2021. Reverse-transcribed SARS-CoV-2 RNA can integrate into the genome of cultured human cells and can be expressed in patient-derived tissues. Proc. Nat. Acad. Sci. 118. <https://doi.org/10.1073/pnas.2105968118>

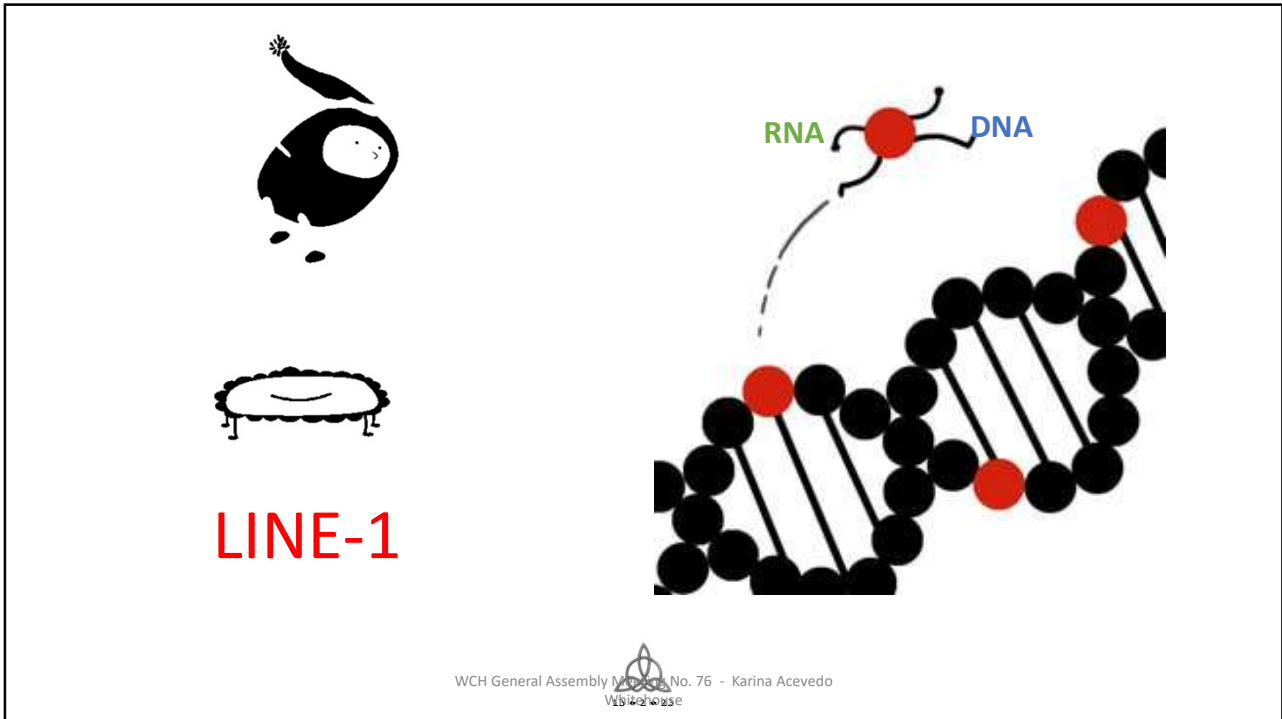
Evidence of viral subgenomic RNA integration into host genome

- Ebola virus
- Marburg virus
- Vesicular stomatitis virus
- Lymphocytic choriomeningitis virus

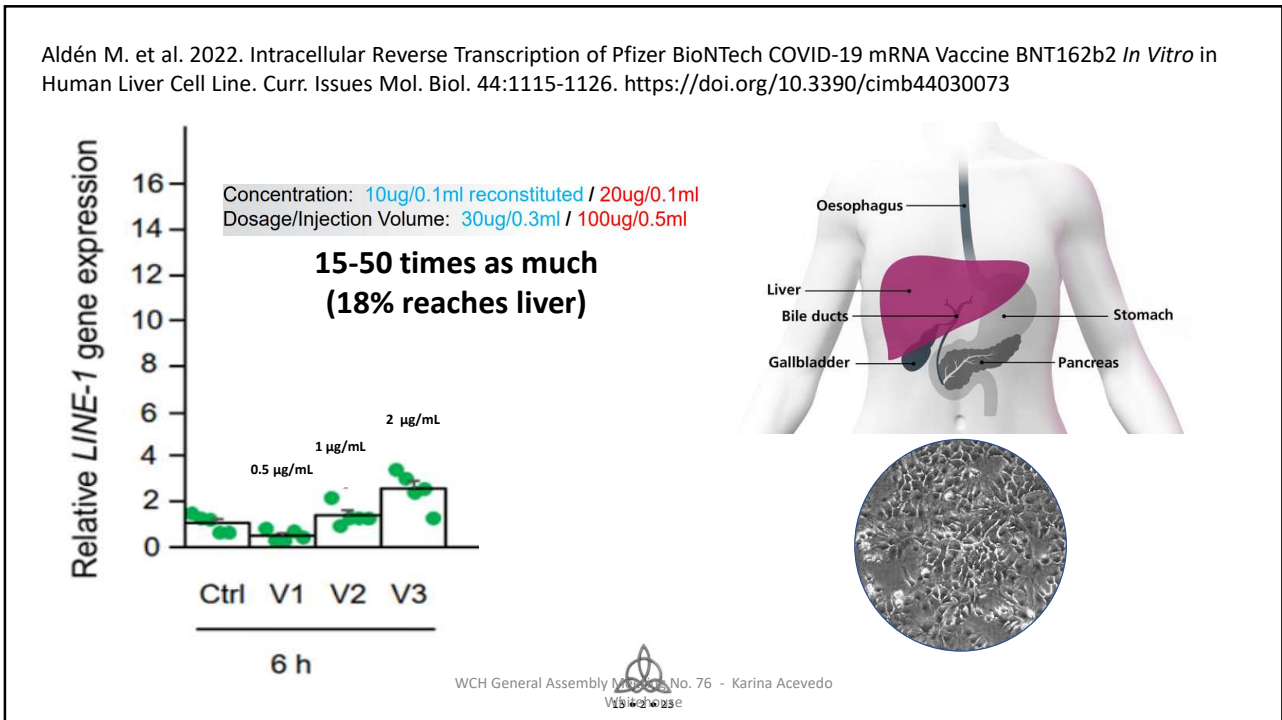


Activation of human retrotransposons (**LINE-1**)

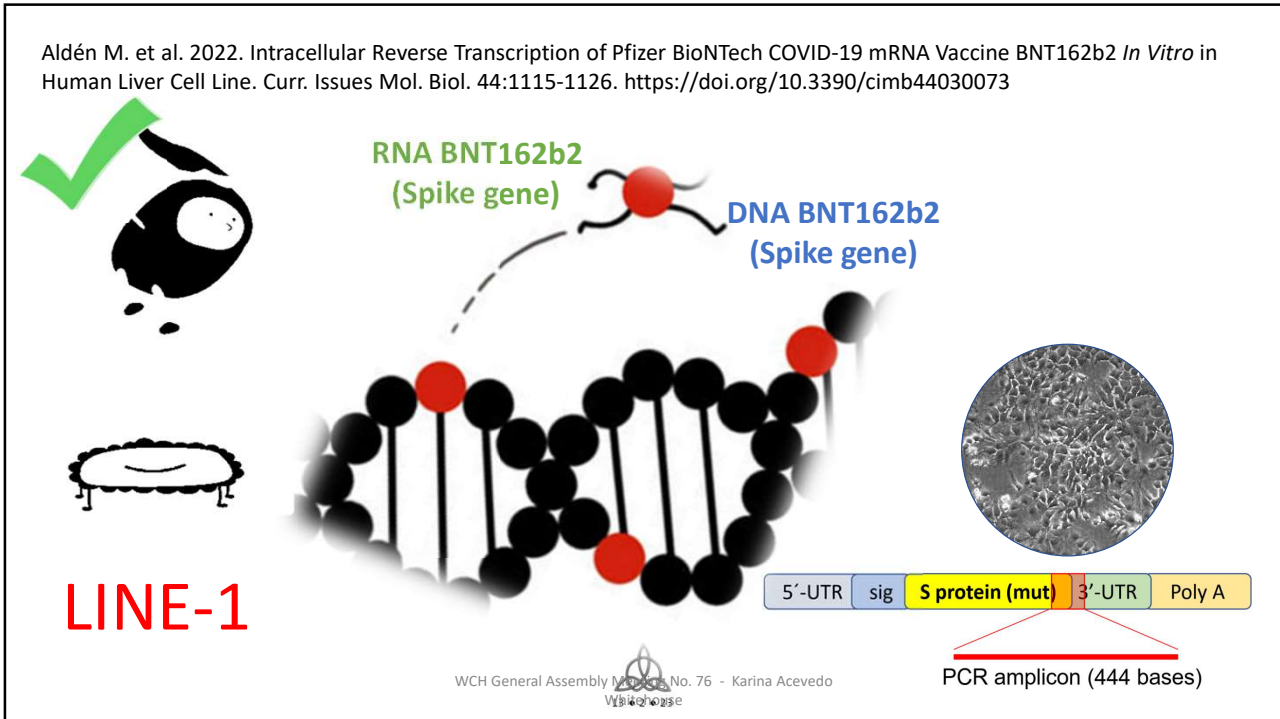
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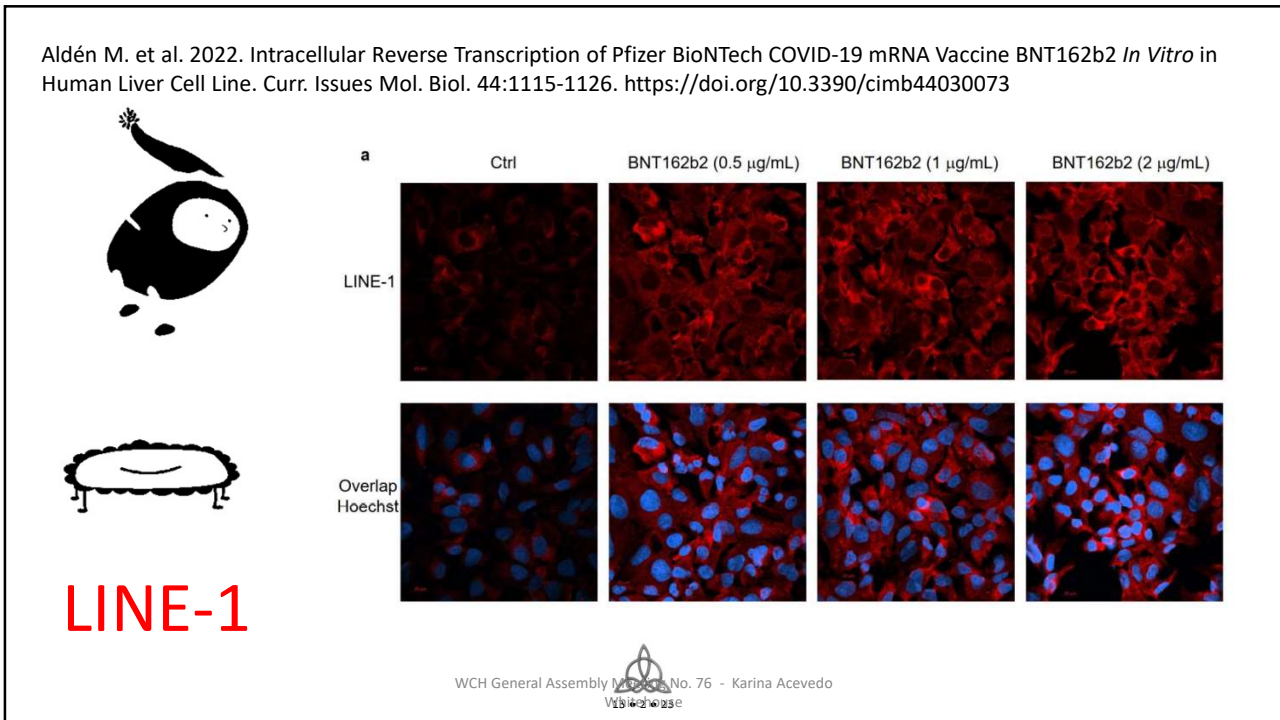
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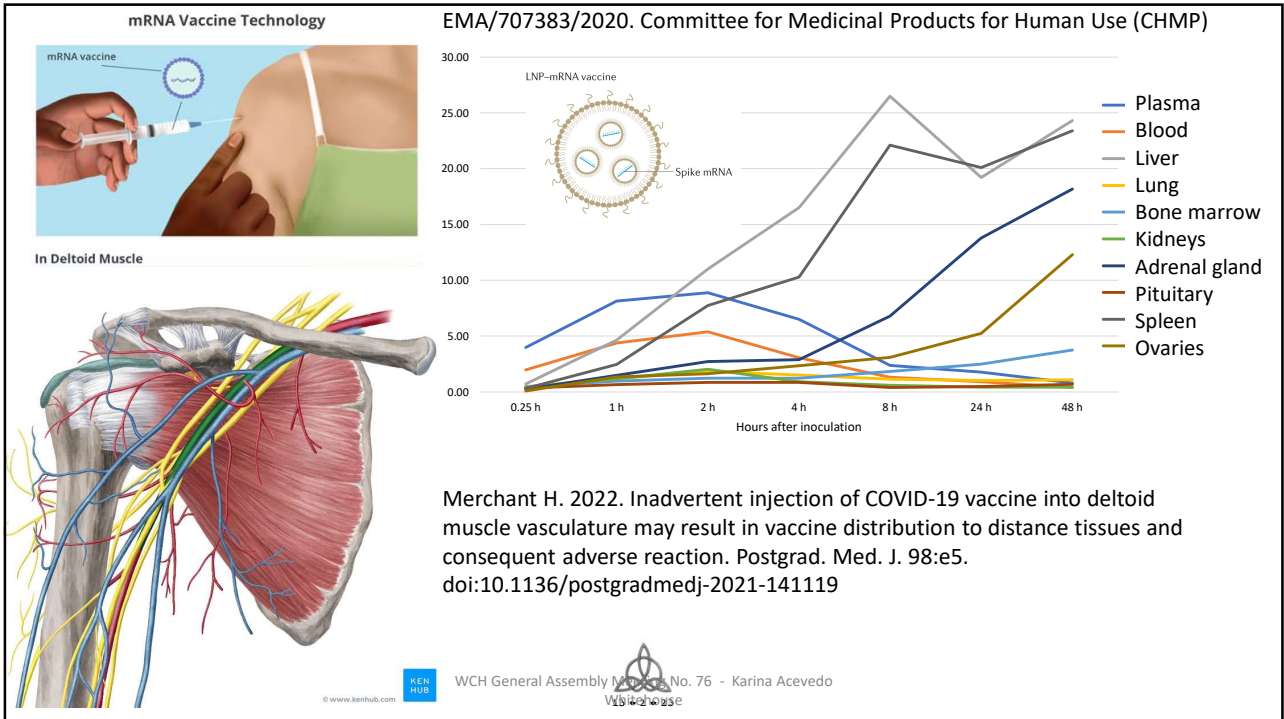
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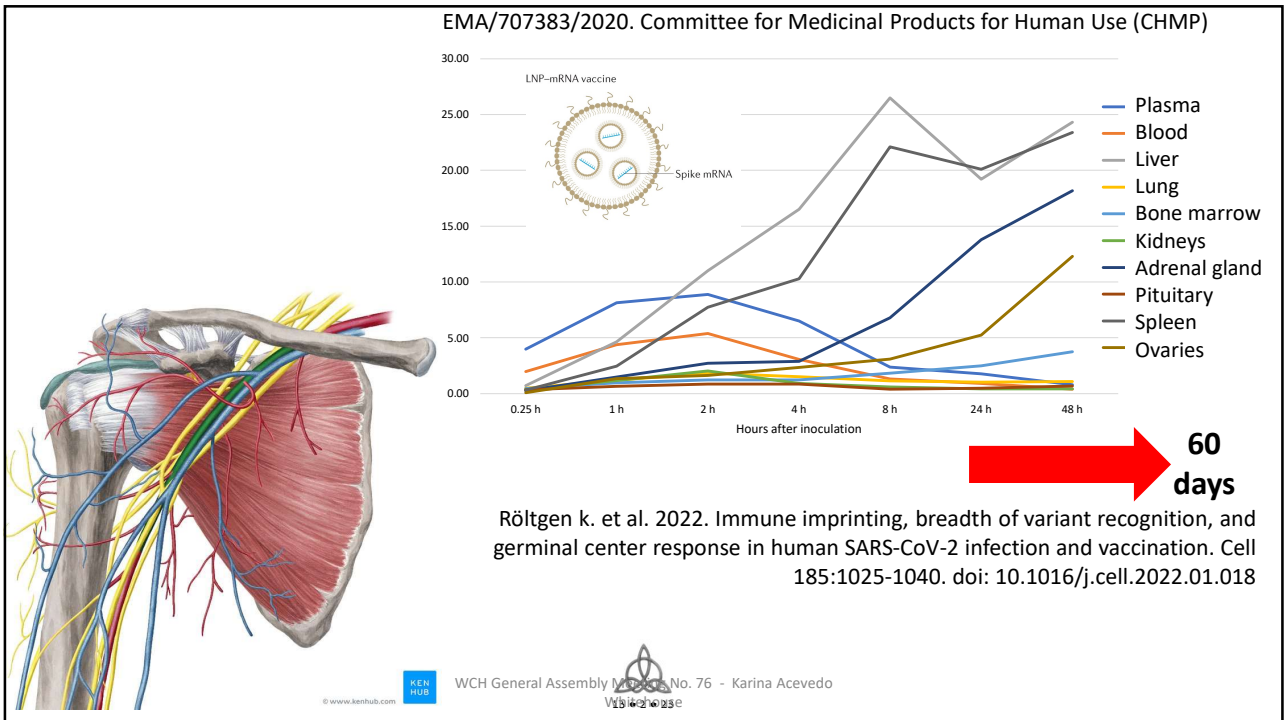
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Merchant H. 2022. Comment on Aldén et al. Intracellular Reverse Transcription of Pfizer BioNTech COVID-19 mRNA Vaccine BNT162b2 *In Vitro* in Human Liver Cell Line. *Curr. Issues Mol. Biol.* 44:1661-1663. doi: 10.3390/cimb44040113

In vitro in hepatic
cancer cell line

≠

In vivo in
healthy human

mRNA concentration
that reaches liver is
likely to be lower
than used in study

We really do not
know this

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Merchant H. 2022. Comment on Aldén et al. Intracellular Reverse Transcription of Pfizer BioNTech COVID-19 mRNA Vaccine BNT162b2 *In Vitro* in Human Liver Cell Line. *Curr. Issues Mol. Biol.* 44:1661-1663. doi: 10.3390/cimb44040113

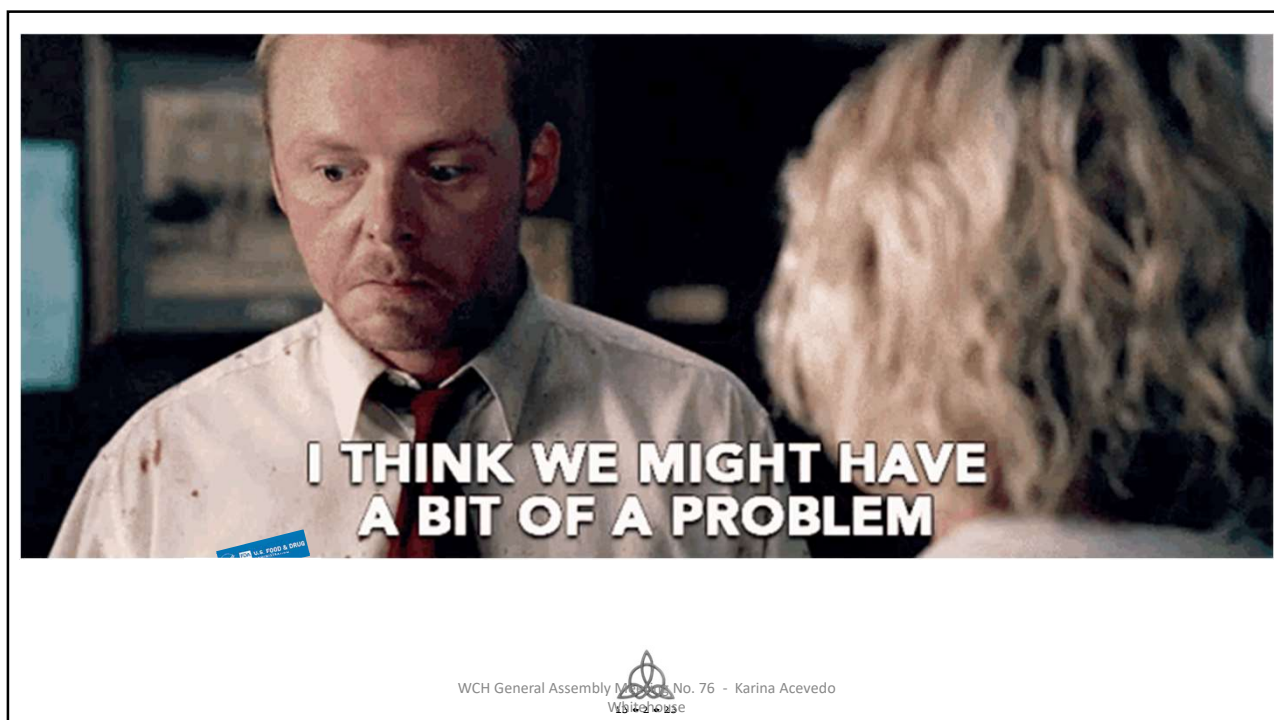
The *in vitro* data presented by Aldén et al. [1] without any *in vivo* validation in an appropriate animal model (for instance, the transgenic Fischer 344 Big Blue[®] rats *in vivo* mutation assay) can lead to misleading inferences. The current findings from Aldén et al. [1] may be detrimental to public confidence in mRNA therapeutics in general if not proven *in vivo*.

Aldén M. et al. 2022. Intracellular Reverse Transcription of Pfizer BioNTech COVID-19 mRNA Vaccine BNT162b2 *In Vitro* in Human Liver Cell Line. *Curr. Issues Mol. Biol.* 44:1115-1126. <https://doi.org/10.3390/cimb44030073>

In the current study, we employed a human liver cell line for *in vitro* investigation. It is worth investigating if the liver cells also present the vaccine-derived SARS-CoV-2 spike protein, which could potentially make the liver cells targets for previously primed spike protein reactive cytotoxic T cells. There has been case reports on individuals who developed autoimmune hepatitis [39] after BNT162b2 vaccination. To obtain better understanding of the potential effects of BNT162b2 on liver function, *in vivo* models are desired for future studies.

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https://www.pfizer.com/science/coronavirus/vaccine/working-to-reach-everyone-everywhere

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Working To Reach Everyone, Everywhere

Our commitment to equitable access

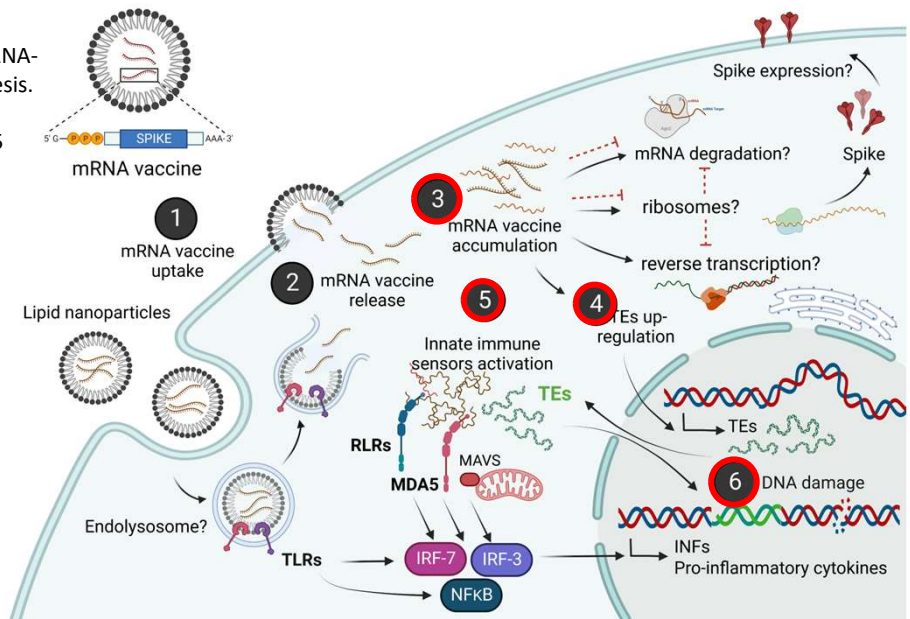
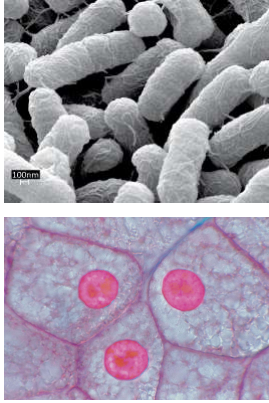
Pfizer is firmly committed to equitable and affordable access to the Pfizer-BioNTech COVID-19 vaccine to help bring an end to the pandemic for everyone, everywhere.

As of December 11, 2022, more than 4,3 billion Pfizer-BioNTech COVID-19 vaccines were shipped to 181 countries in every region of the world.

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Videwise

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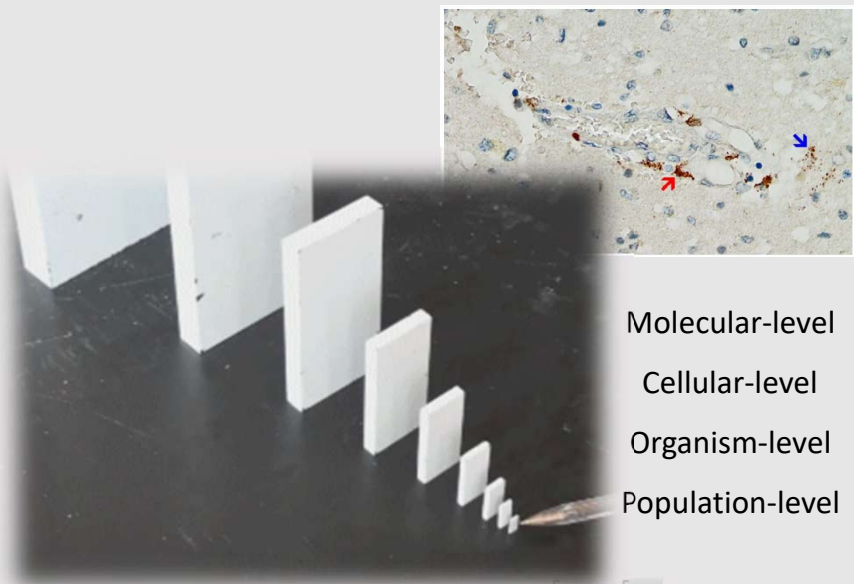
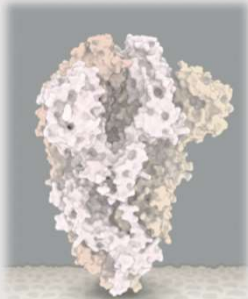
Acevedo-Whitehouse K, Bruno R. 2023. Potential health risks of mRNA-based vaccine therapy: A hypothesis. Med. Hypotheses 171:111015. doi: 10.1016/j.mehy.2023.111015



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Endothelial deregulation
 Increased cell death
 Mitochondrial dysfunction
 Hypercoagulability states
 Pro-inflammatory status



Molecular-level
 Cellular-level
 Organism-level
 Population-level

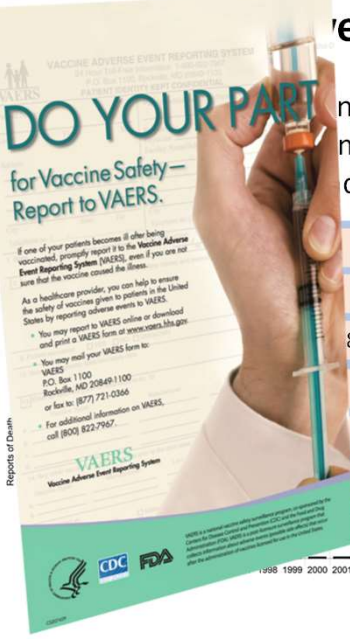
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What do we expect to see if our hypothesis is correct?

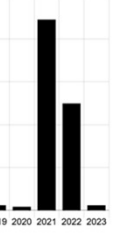
...in, immune alterations [\downarrow \uparrow] of innate and adaptive mechanisms (e.g., impaired immune responses), hampered DNA-damage repair, and fast progression, miscarriages, low fertility... higher death rates




DO YOUR PART
for Vaccine Safety—
Report to VAERS.

VAERS
Vaccine Adverse Event Reporting System

96% thrombosis – 27,417/28,514	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>2 vx. 26 months</p> <p style="background-color: red; color: white; padding: 5px;">62.6%</p> </div> <div style="text-align: center;"> <p>93 vx. 385 months</p> <p style="background-color: red; color: white; padding: 5px;">58,376 per month</p> <p style="background-color: yellow; color: black; padding: 5px;">2,353 per month</p> </div> </div>
95% myocarditis – 18,256/19,045	
80% lymphadenopathy – 42,883/53,669	
40% Guillain Barré – 3,863/9,535	
27% shingles – 10,702/39,792	
20% meningitis – 1,148/5,619	

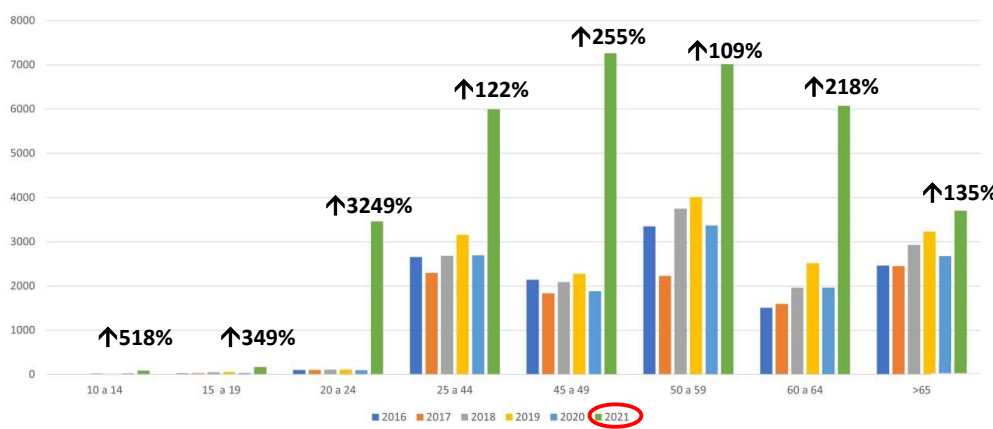




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Data from Mexican Health Ministry, obtained via FOI request, april 2022

New breast cancer cases in females in México



Age Group	2016	2017	2018	2019	2020	2021	% Change (2021 vs 2016)
10 a 14	~100	~150	~200	~300	~400	~600	↑518%
15 a 19	~100	~150	~200	~300	~400	~600	↑349%
20 a 24	~100	~150	~200	~300	~400	~600	↑3249%
25 a 44	~2500	~2800	~3200	~3500	~3800	~6000	↑122%
45 a 49	~2000	~2200	~2400	~2600	~2800	~7000	↑255%
50 a 59	~3200	~3500	~3800	~4000	~4200	~7000	↑109%
60 a 64	~1500	~1800	~2000	~2200	~2400	~6000	↑218%
>65	~2500	~2800	~3000	~3200	~3400	~4500	↑135%

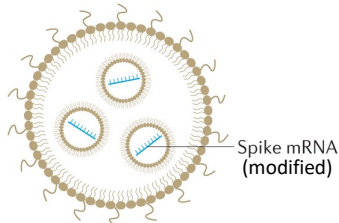
- 12/20 Health professionals
- 02/21 ≥60 ys.
- 04/21 50-59 ys.
- 05/21 40-49 ys.
- 06/21 ≥18 ys.



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Would the same be expected for SARS-CoV-2 infections?

LNP-mRNA vaccine



- Immune regulation is different between infected and injected

Gray-Gaillard SL et al. 2022. Molecularly distinct memory CD4+ T cells are induced by SARS-CoV-2 infection and mRNA vaccination. Preprint doi: 10.1101/2022.11.15.516351

Ivanova EN et al. 2021. SARS-CoV-2 mRNA vaccine elicits a potent adaptive immune response in the absence of IFN-mediated inflammation observed in COVID-19. Preprint doi: 10.1101/2021.04.20.21255677

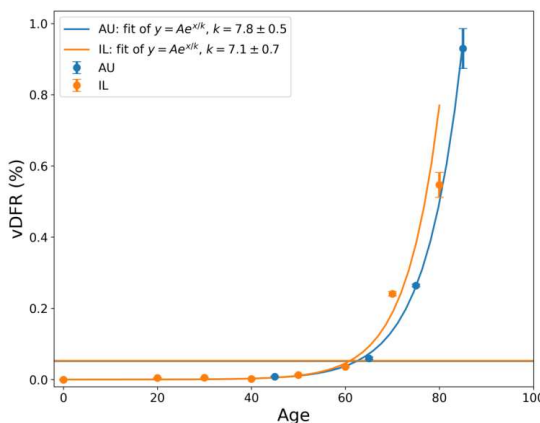
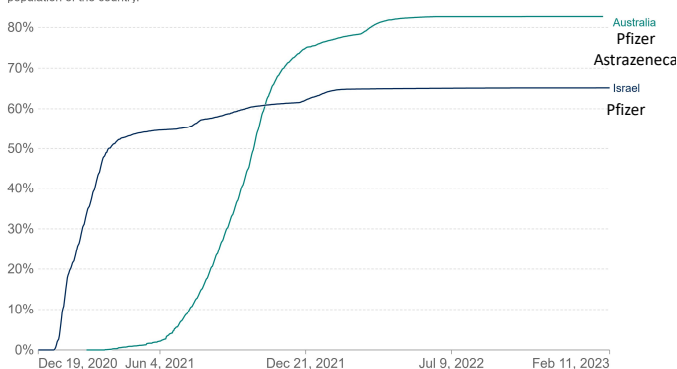
Sureshchandra S et al. 2021. Single-cell profiling of T and B cell repertoires following SARS-CoV-2 mRNA vaccine. JCI Insight 6:e153201. doi: 10.1172/jci.insight.153201

Seneff S. et al. 2022. Innate immune suppression by SARS-CoV-2 mRNA vaccinations: The role of G-quadruplexes, exosomes, and MicroRNAs. Food Chem. Toxicol 164:113008. <https://doi.org/10.1016/j.fct.2022.113008>

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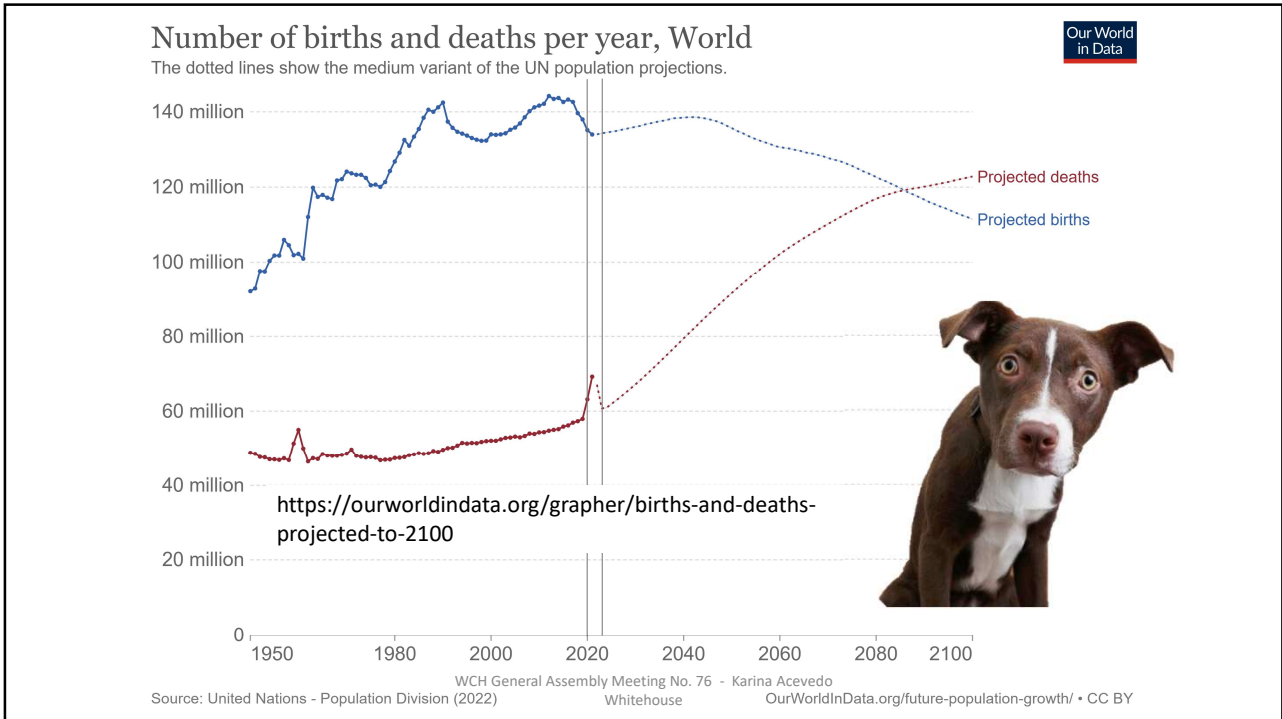
Rancourt D. et al. 2023. Age-stratified COVID-19 vaccine-dose fatality rate for Israel and Australia. Preprint doi:10.13140/RG.2.2.15017.47209

Share of people who completed the initial COVID-19 vaccination protocol
 Total number of people who received all doses prescribed by the initial vaccination protocol, divided by the total population of the country.



Source: Official data collated by Our World in Data
 Note: Alternative definitions of a full vaccination, e.g. having been infected with SARS-CoV-2 and having 1 dose of a 2-dose protocol, are ignored to maximize comparability between countries.

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It is the nature of synthetic, nucleoside-modified mRNA to be foreign to our cells and dysregulate biochemical cascades.

It is the nature of products based on this technology to be potentially damaging to our health.

It is the nature of those who make a profit to keep wanting to make a profit, regardless of the impact on others.

It is the nature of tyrants to strive to control the lives of others.

Is being compliant, fearful and submissive the true nature of humans?

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<https://t.me/akashacomunidad>

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