CONSEQUENCES OF MRNA TECHNOLOGY: LESSONS LEARNED JESSICA ROSE, PHD

INTERNATIONAL CONFERENCE ON THE COVID PANDEMIC

JANUARY 21-22, 2022





mRNA Vaccines

Facts About mRNA COVID-19 Vaccines

mRNA COVID-19 vaccines cannot give someone COVID-19 or other illnesses.

- mRNA vaccines do not use any live virus.
- mRNA vaccines cannot cause infection with the virus that causes COVID-19 or other viruses.

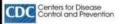
They do not affect or interact with our DNA.

 mRNA from these vaccines do not enter the nucleus of the cell where our DNA (genetic material) is located, so it cannot change or influence our genes.

The mRNA and the spike protein do not last long in the body.

- Our cells break down mRNA from these vaccines and get rid of it within a few days after vaccination.
- Scientists estimate that the spike protein, like other proteins our bodies create, may stay in the body up to a few weeks.





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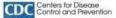
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CDC Centers for Disease Control and Prevention

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ABSTRACT

The Moderna and Pfizer COVID-19 injectable products utilize two novel technologies for introduction of foreign genetic material (modified mMRA) as the coding template for SARS-CoV-2 spike protein. The intention behind this methodology involves utilization of the host's cellular protein production machinery to synthesize spike proteins from the modified mRNA templates. Due to the presence of foreign spike proteins, a targeted immune response against these proteins would ensue, aimed to provide protective immunity against SARS-CoV-2 thus preventing severe COVID-19 from developing. Both of these novel technologies: the modified mRNA and the lipid nanoparticle carriers, are novel in the context of demographically comprehensive distribution administration, and in the context of viral pandemics. These products were not safety tested for a sufficient amount of time - having been rushed to EUA use on accelerated timelines - to warrant deeming them safe for global administration.

As we are forced into our 3rd year of COVID-19 life, the efficacy profile of these injectable products has proven deplorable, with the majority of COVID-19 cases now attributable to multiply-injected individuals. With COVID-19 being one of the top reported adverse events in the vaccine adverse events reporting system (VAERS), it appears as though susceptibility to SARS-CoV-2 and subsequent development of COVID-19, increases with shot frequency. Terrible public health decisions have been made with regard to COVID-19 involving even entirely by-passing safety monitoring stop gaps, and it is estimated that millions of people are suffering as a result. Recent reports of sudden deaths and increases in all-cause mortality are not being investigated, and the COVID-19 injections are not being discussed as an etiology for these deaths, or the thousands of other adverse event reports being made around the world in the context of the COVID-19 injectable products. The way forward from this ongoing tragedy is with transparency via admission, prosecution, and aid for those who require it. Let's help doctors get back to being doctors, put an end to censorship, and reclaim our humanity. Together. Dr. Jessica Rose



A WORD ON LESSONS

never rush through preliminary clinical trials especially when testing novel technologies/products

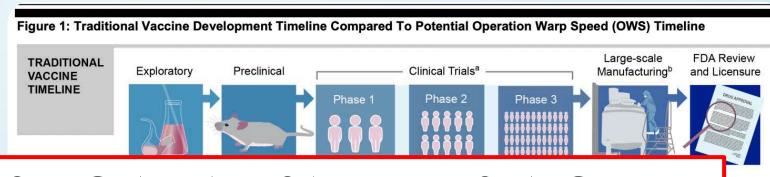
never ignore the precautionary principle



CONSEQUENCES

can lead to injury and death at the population level

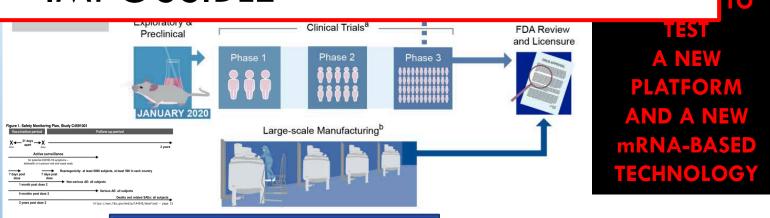
BACKGROUND: PFIZER CLINICAL TRIAL NCT04368728



RUSHED TRIALS – GENUINE SAFETY TESTING IMPOSSIBLE

study completion date: January 31, 2023)

- Included pregnancy, age requirements and health-related associations
- ~42,086 participants in their 'landmark' trial
- Safety data did not look good*



Source: GAO Analysis of Food and Drug Administration (FDA), Pharmaceutical Research and Manufacturers of America, and Operation Warp Speed Information, | GAO-21-319

Approximately 10 months (as of November 2020)

PFIZER/BIONTECH: https://clinicaltrials.gov/ct2/show/NCT04368728?term=nct04368728&draw=2&rank=1 https://www.documentcloud.org/documents/7212814-C4591001-Clinical-Protocol.html

*https://phmpt.org/wp-content/uploads/2022/03/125742_S1_M2_26_pharmkin-tabulated-summary.pdf

BACKGROUND: PFIZER CLINICAL TRIAL NCT04368728

Figure 1. Safety Monitoring Plan, Study C4591001

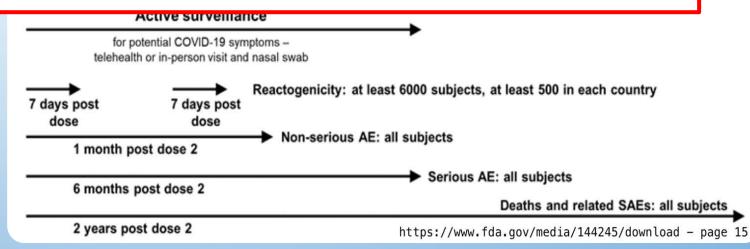
Vaccination period

Follow-up period

THE PLACEBO GROUP WAS INTENTIONALLY LOST

years

- The toral amount of time taken for ritzer/biotytech phase III trial was 6 months
- Following 2 month follow up, participants were unblinded and placebo participants injected – the control group was lost
- "Thank you for listening and for changing your study protocol to allow for speedy vaccination of your placebo arm," Tovar wrote. "You have made this New Year so much brighter for the 22,000 placebo volunteers that stepped up for this vaccine."*



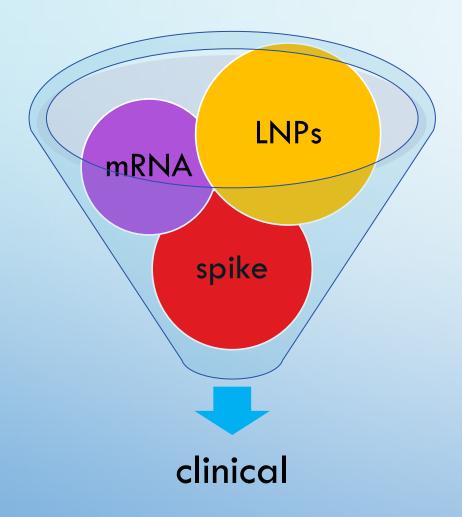
https://clinicaltrials.gov/ct2/show/NCT04368728?term=nct04368728&draw=2&rank=1
https://coronavirus.jhu.edu/vaccines/timeline
https://www.documentcloud.org/documents/7212814-C4591001-Clinical-Protocol.html

WHAT CAN HAPPEN IF YOU ACCELERATE THE TESTING AND EFFICACY TIMELINE OF BIOLOGICAL PRODUCTS?

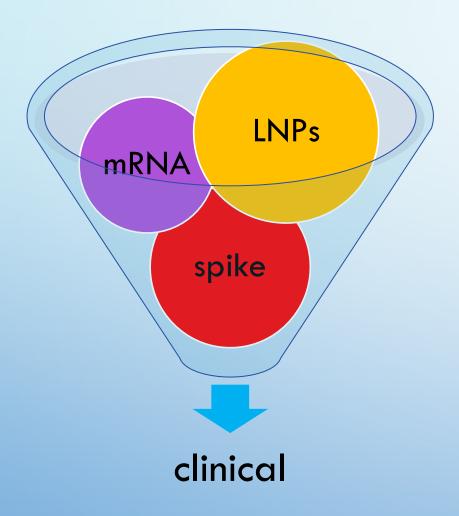
A WORD ON THE PRECAUTIONARY PRINCIPLE

The **precautionary principle** in its simplest form states: "when an activity raises threats of harm to human health or the environment, **precautionary** measures should be taken **even if some cause-and-effect relationships are not fully established scientifically**".

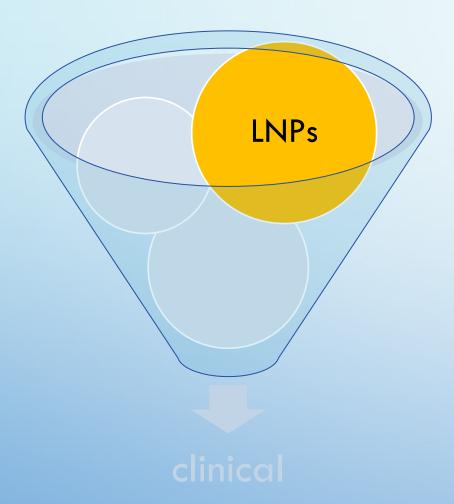
Let's ignore the precautionary principle and find out what can happen with you rush the unrushable.



- 4 faceted approach to today's talk
- LNPs
- mRNA
- spike
- clinical (well, VAERS data)



We can't talk about modified mRNA technology without talking about the LNPs.



Cationic lipid used by Pfizer: ALC-0315 Cationic lipid used by Moderna: SM-102

LNPs

mRNA LNP formulation

Cationic/ionizable lipids e.g., DOTMA, DOTAP

22

"Stealth" PEG lipids e.g., DSPE-PEG,

CATIONIC LIPIDS HAVE DOCUMENTED TOXICITY PROFILE PEG HAS DOCUMENTED ALLERGENIC PROFILE



ucibei ubias

e.g., DSPC, DPPC

bilayer support

Cholesterol

- integrity
- endosomal release

lipid bilayer structure inverted hexagonal structure

Non-bilayer forming lipids

e.g., DOPE

 endosome destabilization

clinical

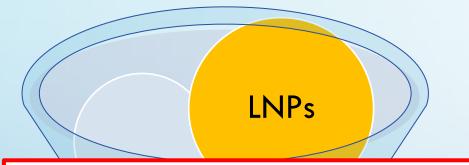
Lv H, Zhang S, Wang B, Cui S, Yan J. Toxicity of cationic lipids and cationic polymers in gene delivery. **J Control Release.** 2006 Aug 10;114(1):100-9. doi: 10.1016/j.jconrel.2006.04.014. Epub 2006 May 13. PMID: 16831482. Soenen SJ, Brisson AR, De Cuyper M. Addressing the problem of cationic lipid-mediated toxicity: the magnetoliposome model. Biomaterials. 2009 Aug;30(22):3691-701. doi: 10.1016/j.biomaterials.2009.03.040. Epub 2009 Apr 15. PMID: 19371948.

Cui S, et al., Correlation of the cytotoxic effects of cationic lipids with their headgroups. **Toxicol Res (Camb)**. 2018 Mar 22;7(3):473-479. doi: 10.1039/c8tx00005k. PMID: 30090597; PMCID: PMC6062336. Wong-On-Wing A, et al., Severe Polyethylene Glycol Allergy Considerations for Perioperative Management: A Case Report. **A A Pract**. 2022 Oct 11;16(10):e01619. doi: 10.1213. PMID: 36219725. McSweeney MD, Mohan M, Commins SP, Lai SK. Anaphylaxis to Pfizer/BioNTech mRNA COVID-19 Vaccine in a Patient With Clinically Confirmed PEG Allergy. **Front Allergy**. 2021 Sep 29;2:715844. doi: 10.3389/falgy.2021.715844. PMID: 35387046; PMCID: PMC8974707.

: A Scop-

Cationic lipid used by Pfizer: ALC-0315

Cationic lipid used by Moderna: SM-102



2. Qualitative and quantitative composition

This is a multidose vial that contains 10 doses of 0.5 mL each or a maximum of 20 doses of 0.25mL each.

One dose (0.5 mL) contains 100 micrograms of elasomeran, a COVID-19 mRNA Vaccine (embedded in SM-102 lipid nanoparticles).

One dose (0.25 mL) contains 50 micrograms of of elasomeran, a COVID-19 mRNA Vaccine (embedded in SM-102 lipid nanoparticles).



SM-102 IS NOT FOR HUMAN OR VET USE

clinical







GASOLINE



DIESEL

Danger!

Matthew T.J. Halma 1,2*, Jessica Rose3†, Alan Jenks2,4† and Theresa Lawrie

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- The Netherlands
 Correspondence: m.t.j.halma@vu.nl
- † These authors contributed equally to this work

Abstract: Pharmacovigilance databases are showing evidence of injury in the content of the COVIDp modified mRNA shots. According to recent publications, adverse event reports linked to the mRNA COVID-19 products largely point to the spike protein as an aetiological agent of adverse events, but we propose that the platform itself may be captable. To assess he safety of current and future mRNA vaccines, further analysis on the risks due to the platform itself, and not specifically the expressed antigen. If harm can be exclusively and condustively attributed to the spike protein, then it is possible that future mRNA vaccines expressing other antigens will be safe. If harms are attributable to the platform itself, them regardless of the toxicity, or lack thereof, of the chosen payload therein, the platform may be inherently unsafe, pending modification. In this work, we examine previous studies of RNA-based delivery by a lipid nanoparticle (LNP) and break down the possible ediological dements of harm.

Keywords: COVID-19 vaccination; mRNA vaccines; Clinical Trials; Safety Assessment; Novel Tech nologies; Spike protein

• Trade name: <u>SM-102</u>

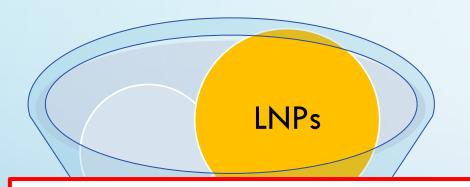
• Article number: 33474

Application of the substance / the mixture



Safety Data Sheet acc. to OSHA HCS

This product is for research use – Not for human or veterinary diagnostic or therapeutic use.

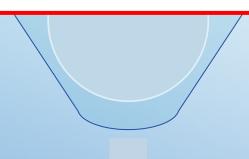


PEG may have a role in RBC agglutination by lowering zeta potential

Unacceptable Jessica

Is the 0.05 mg PEG in a 0.3 ml Pfizer injection enough to lower RBC zeta potential and potentially induce agglutination of RBCs? ²⁵ We can do some calculating to make an educated guess as to the ratio of PEG molecules per RBC, and then

PEG MIGHT ENHANCE HEMAGGLUTINATION



clinical

PEG molecules to RBCs since there are 5,000,000 RBCs in 1 cubic millimeter of blood. ²⁶ Assuming a concentration of molecules at the injection site, for example, this ratio would be even higher.

	MOLAR MASS (g/mol))	mass_per_injection	n (mol)	AvoC	Molarity (concentration) - g/L	N (mol)	volume of injection (ml)	per 5 L blood
ALC-0315	766.29	0.00005	6.52494E-08	6.02E+23	1.308	-08 3.93E+16	0.3	
SM-102	710.182	0.00005	7.04045E-08	6.02E+23	1.418	-08 4.24E+16	0.5	
herefore, I	have 3.93*10^16 molecule	es of ALC-0315 in 5	L of blood.		1 mm^3 = 0.000001 L		0.000001	1000000000
And I have 4.24*10^16 molecules of SM-102 in 5 L of blood.							RBCs	5000000
So now I ne	ed to figure out what conc	entration is able to	disrupt zeta p	potential.	In 5 L of blood, I have 3.93*10^16 molecu	les, so in 1000 L, multiply you	r number of molecules by	200.
How many r	molecules per m^3 (or 100	0 L) of blood?			So in 1000 L, there are	7.86E+18	molecules.	
low many F	RBCs in blood?				So in 1 mm^3 (0.000001 L), there are	7.86E+09	molecules.	
low many F	PEGs per blood cell?				There are 7.86*10^9 molecules of ALC-0315 in 1 mm^3 of blood.			
				There are 5,000,000 RBCs per 1 mm^3 of blood.				
					Therefore there are	1571.77	molecules of ALC-0315 po	er RBC.
							Number of PEGs/LNP	
There are 10,000,000 LNP particles in each dose of Pf			fizer product.		3.93E+06			

Figure 11: There are 1572 molecules of ALC-0315 per RBC.

Scheim, D.E. A Deadly Embrace: Hemagglutination Mediated by SARS-CoV-2 Spike Protein at Its 22 N-Glycosylation Sites, Red Blood Cell Surface Sialoglycoproteins, and Antibody. Int. J. Mol. Sci. 2022, 23, 2558.

https://doi.org/10.3390/ijms23052558.

The thrombotic bus: Are red blood cells agglutinating in injected people because of zeta potential disruption by spike? Is PEG in the COVID shots aiding and abetting agglutination?

https://jessicar.substack.com/p/are-red-blood-cells-agglutinating

PEG may also have role in AE frequency based on homogeneity of coating

LNPs

06.07.2022 Working Group for COVID Vaccine Analysis

This summary is a preliminary, continuously evolving presentation of our research and findings on the so-called COVID-19 vaccines, as well as the effects we found on the human body and the blood in particular. The summary is intended for the public interest and to encourage further

SUMMARY OF PRELIMINARY FINDINGS

PEG MIGHT NEED TO HOMOGENEOUSLY COAT THE LNP FOR IT TO BIODISTRIBUTE

clinical

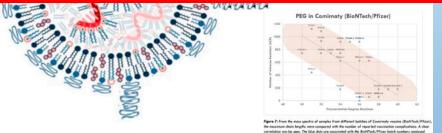
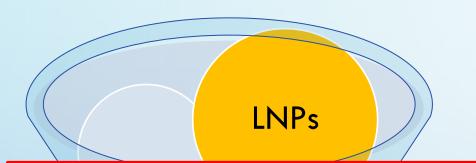


Figure 6: Schematic structure of a defective nanolipid particle with mRNA inside. This shell cannot safely protect the mRNA from decay. The mRNA is able to escape and is subsequently destroyed rapidly due to its instability before it has penetrated into the interior of the body cell to modify cell function and induce the production of the spike proteins which are suspected of being toxic, Image source: doi:10.3390/vaccines9010065 and modified by our author.

PEG is formed from chains of different lengths and affects the homogeneity of LNP coating



LNPs traffic to many organs $\Rightarrow \Box$ biodistribution and bioaccumulation

SARS-CoV-2 mRNA Vaccine (BNT162, PF-07302048)

2.6.5 薬物動態試験の概要表

2.6.5.5B. PHARMACOKINETICS: ORGAN **DISTRIBUTION CONTINUED**

マスキング箇所:調整中

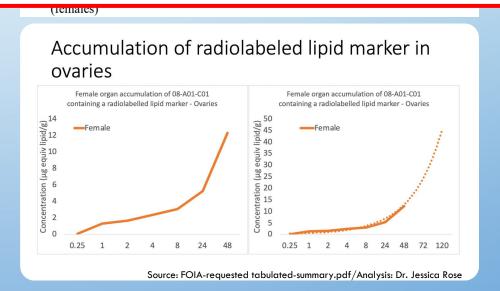
Test Article: [3H]-Labelled LNPmRNA formulation containing ALC-0315 and ALC-0159 Report

Sample

Total Lipid concentration (µg lipid equivalent/g [or mL])

LNPS GO EVERYWHERE AND CROSS BLOOD BRAIN **BARRIER**

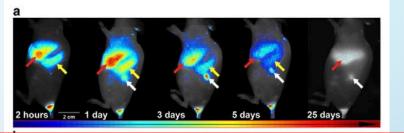




Pfizer/Comirnaty- 125742_S1_M2_24_nonclinical-overview.pdf/125742_S1_M2_26_pharmkin-written/tabulated-summary.pdf; Jan; Feb 2021 JAPANESE FOIA-requested study (Many thanks to Byram Bridle)

Accumulation of nanocarriers in the ovary: a neglected toxicity risk?

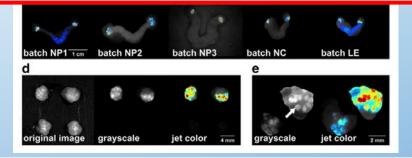




NANOPARTICLES TRAFFIC TO OVARIES IN MICE AND WISTAR RATS

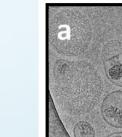


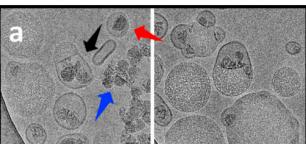
LNPs



"Studies in different mouse species and wistar rats were conducted and a high local accumulation of nanoparticles, nanocapsules and nanoemulsions in specific locations of the ovaries was found in all animals."

Handling: Multiple freeze-thaws can lead to LNP degradation, aggregation and liberated mRNA





IMPROPER HANDLING CORRUPTS LNPS



LNPs

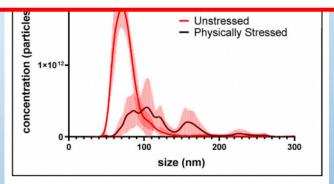
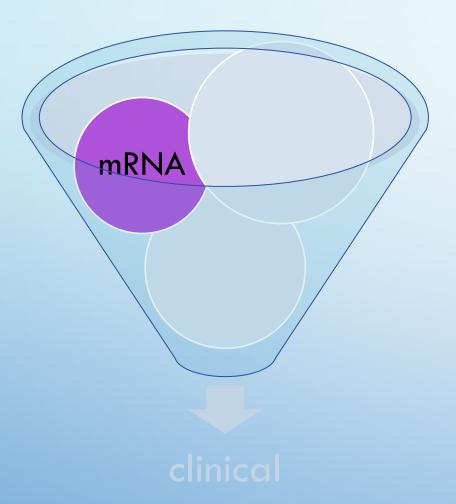


FIGURE 4 LNP physical degradation pathways. (a) Effects of physical stress on the LNP highlighted by dye. A dye-stained mRNA-LNP sample was subjected to multiple freeze-thaws. The resulting effects of this physical stress are evident, revealing aggregation (right), liberated mRNA (blue arrow),

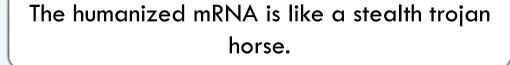
Encapsulation state of messenger RNA inside lipid nanoparticles

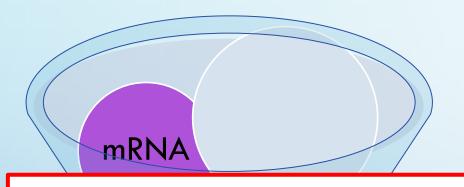
I WILL RETURN TO ISSUE OF HANDLING AND %RNA INTEGRITY











mRNA Structural Elements

UTR's regulatory elements modulate the translation efficiency with their length and structure

MRNA STABLE AND STEALTHY



5' cap capping efficiency, cap structure innate sensing, protein synthesis

STABILITY 1

ORF Codon optimization, sequence modifications increased protein expression

PROTEIN EXPRESSION

poly(A) tail tail elongation (length) impacts the stability and translational efficiency

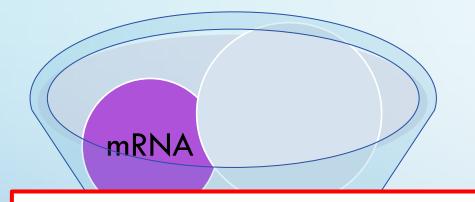
STABILITY 1

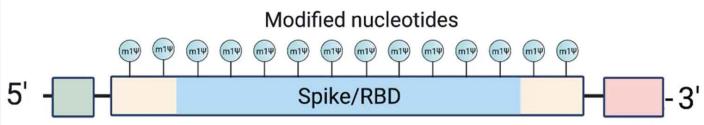
mRNA structural elements and their effect of modifications

Structural Element	Modification	Effect	
Untranslated regions (UTR's)	Length and structure	Modulate translation efficiency	
5' Capping	Cap structure	Increase protein synthesis, stability	
Open reading frame (ORF)	Codon optimization, sequence modification	Enhance protein expression	
Poly(A) tail	Tail elongation	Increase Stability, translational efficienc	

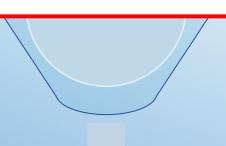
tail

Potential for ribosomal pausing very real with introduction of Ψs





MRNA EVADES INNATE IMMUNE DETECTION



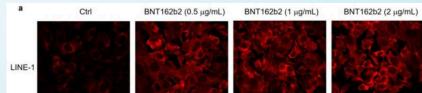
- The RNA is carefully engineered to resist breakdown
 - All of the uridines are replaced with 1-methyl-pseudouridine (m1Ψ)
- The mRNA is incorporated into a lipid particle along with polyethylene glycol (PEG)
- A synthetic cationic (positively charged) lipid is added as an adjuvant very toxic to the cells
- The "humanized" mRNA is a stealth entry system for massive production of spike protein



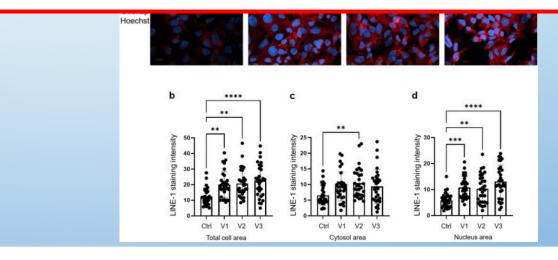
*S Seneff et al. Food and Chemical Toxicology 2022; 164: 113008.

"We show that RNA signals through human TLR3, TLR7, and TLR8, but incorporation of pseudouridine ablates this activity."

Intracellular reverse transcription of Pfizer
BioNTech COVID-19 mRNA vaccine
BNT162b2 in vitro in human liver cell line



MRNA REVERSE TRANSCRIBES USING LINE-1



clinical

mRNA

Line-1 is an endogenous RT implicated in reverse transcription of the mRNA to DNA

If Line-1 expression is altered during embryogenesis, the implications for the

embryo are bad

Fast uptake of BNT162b2 into human liver cells leads to changes in Line-1 expression and distribution

a

TALE-L1-VP64

LINE-1 EXPRESSION LEVEL ALTERATIONS INDUCE DEVELOPMENTAL ARREST

Relative Lime

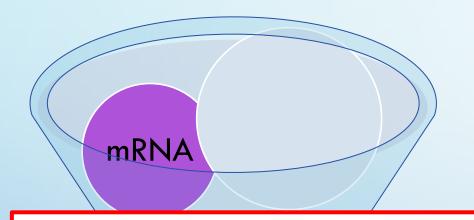
clinical

mPN

"We found that too much or too little Line-1 expression caused development to come to a halt. This means that the precise timing and level of retrotransposon expression is critical for the development of the embryo."

"Embryos with sustained Line-1 transcription display developmental arrest."

Generation of Biologically Active Retrogenes Upon Interaction of Mouse Spermatozoa With Exogenous DNA



Sperm can insert DNA (from RNA) into the fertilized embryo and transfer it to offspring*

CDNA DNA

Exon Intron Exon Intron Exon

Transcription

Poly A tail

MRNA

Reverse Transcription

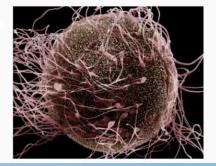
"We recently discovered a reverse transcriptase (RT) activity [e.g., LINE-1] in mouse spermatozoa that can reverse-

TRANSFER TO OFFSPRING?



- Sperm release DNA-containing plasmids that are taken up by the fertilized egg
- Sperm-mediated "reverse" gene transfer happens "when these cells are incubated with exogenous RNA molecules"

**newly retrotranscribed cDNA (from RNA)...



"Here we have taken a step further and show that the RT-mediated process is not only triggered when spermatozoa are exposed to exogenous RNA molecules, but is also activated when they interact with DNA molecules."

clinical

Nuclear translocation of spike and spike mRNAs

DNA

Dr. Jessica Rose

merged



S1

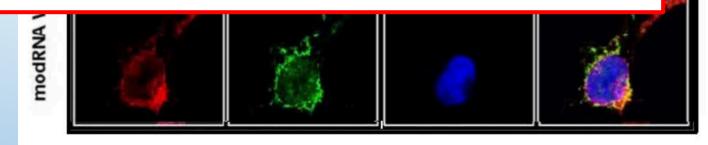
THIS WAS KNOWN - INTEGRATION? EFFECTS ON dsDNA REPAIR MECHANISMS?

ER

They do not affect or interact with our DNA.

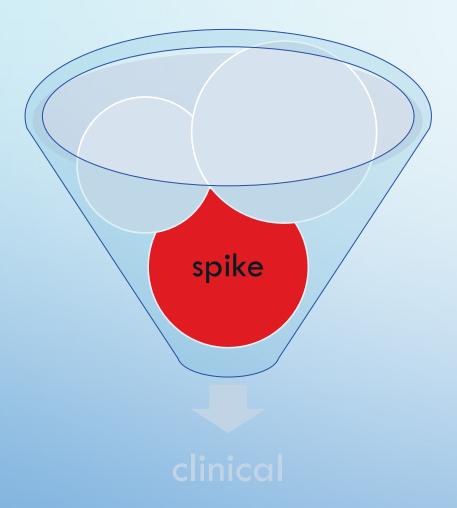
 mRNA from these vaccines do not enter the nucleus of the cell where our DNA (genetic material) is located, so it cannot change or influence our genes

clinical



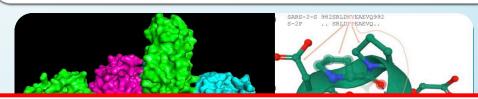
"Indeed, S[pike] proteins translocate into the nucleus in SARS-CoV-2-infected cells. To our surprise, S mRNAs also translocate into the nucleus. S mRNA colocalizes with S protein, aiding the nuclear translocation of S mRNA."

Sarah Sattar, Juraj Kabat, Kailey Jerome, Friederike Feldmann, Kristina Bailey, Masfique Mehedi. Nuclear translocation of spike mRNA and protein is a novel pathogenic feature of SARS-CoV-2. bioRxiv preprint doi: https://doi.org/10.1101/2022.09.27.509633

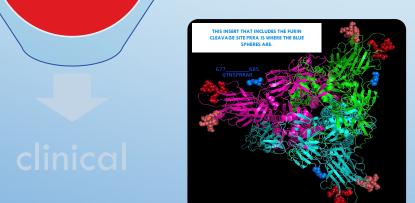


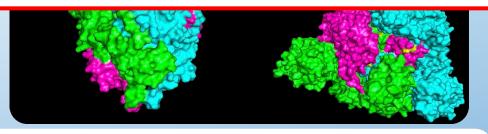


Spike protein was made in the image of the Wuhan spike (Wuhan-Hu-1 (GenBank: MN908947)) maintained in pre-fusion state



SPIKE IS A FOREIGN SYNTHETIC PROTEIN – NO MATTER HOW YOU 'CUT IT'





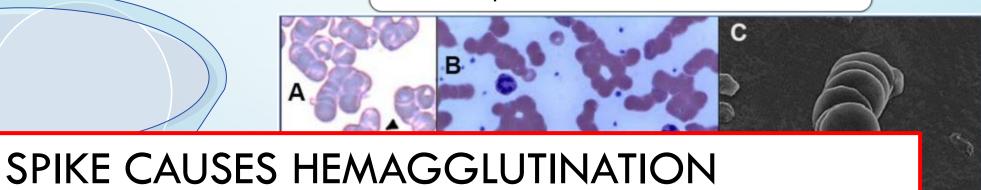
Insertions? →□ peptides (ie: the PRRAR site)
enhances infectiousness + 2 proline substitutions
ensures stability of spike

Dai, L., Gao, G.F. Viral targets for vaccines against COVID-19. Nat Rev Immunol 21, 73–82 (2021). https://doi.org/10.1038/s41577-020-00480-0.

Renee I. Hajnik et al., Dual spike and nucleocapsid mRNA vaccination confer protection against SARS-CoV-2 Omicron and Delta variants in preclinical models. Science translational medicine. 14 Sep 2022.

Vol 14, Issue 662. DOI: 10.1126/scitranslmed.abg1945

Hemagglutination Mediated by SARS-CoV-2 Spike Protein - Thromboses



spike

clinical

Figure 2 Images of RBC rouleaux (clumps) from the blood of COVID-19 patients, obtained using light ((A) [112], (B) [113]) and electron microscopy ((C) [114]). The first study (A) found huge rouleaux formation by RBCs in 85% of COVID-19 patients studied [112]; the second (B) found these in 33% of patients [113]; and the third (C) found these prevalent in its series of 31 patients, all with mild COVID-19 [114]. Reproduced with permission from (A) SIMTIPRO SrI; (B) CC-BY 4.0; (C) Georg Thieme Verlag KG.

"SARS-CoV-2 [spike protein] binds to RBCs in vitro and also in the blood of COVID-19 patients"

"SARS-CoV-2 [spike protein] initially attaches to sialic acid (SA) terminal moieties on [RBC] host cell membranes via glycans"

Scheim, D.E. A Deadly Embrace: Hemagglutination Mediated by SARS-CoV-2 Spike Protein at Its 22 N-Glycosylation Sites, Red Blood Cell Surface Sialoglycoproteins, and Antibody. Int. J. Mol. Sci. 2022, 23, 2558.

https://doi.org/10.3390/ijms23052558.

https://jessicar.substack.com/p/are-red-blood-cells-agglutinating

Stratton, F., Rawlinson, V. I., Gunson, H. H., & Phillips, P. K. (1973). The Role of Zeta Potential in Rh Agglutination. Vox Sanguinis, 24(3), 273–279. doi:10.1111/j.1423-0410.1973.tb02641.x

Boschi C, Scheim DE, Bancod A, Militello M, Bideau ML, Colson P, Fantini J, Scola BL. SARS-CoV-2 Spike Protein Induces Hemagglutination: Implications for COVID-19 Morbidities and Therapeutics and for Vaccine

Adverse Effects. International Journal of Molecular Sciences. 2022; 23(24):15480. https://doi.org/10.3390/ijms232415480

Spike protein contains peptides that can induce autoimmunity via molecular mimicry



Table 1. 3D-mimics found for S	SARS-CoV-2 Spike.
--------------------------------	-------------------

Motif	Protein	Species	RMSD (Å)	Z-Score	EpiScore	PDB_Chain
TQLPP	Thrombopoietin	Human	0.46	-1.34	10.87	1V7N_X
QLPPA	SMYD3 protein	Human	0.38	-1.42	13.16	5CCL_A
KNLRE	Toll-like receptor 8	Human	0.87	-0.92	5.75	6WML_D
FTVEKG	Pollen allergen Phl p2	Phleum pratense	0.76	-1.03	7.89	1WHP_A
GEVFN	Integrin beta 1	Human	0.63	-1.16	7.94	7NWL_B

MOLECULAR MIMICRY IS A POSSIBLE MECHANISM OF ACTION FOR SPIKE-INDUCED AUTOIMMUNITY



GNCDV Iryptophan-tKNA ligase Human -0.885.49 105T_A Small subunit processome component SFKEE Human 0.32 -1.4815.62 7MQA_SP 20 homolog **EELDK** 0.22 -1.58Kynureninase Human 22.73 2HZP_A Respiratory **ELDKY** Fusion glycoprotein F0 0.12 -1.6841.67 6EAE F syncytial virus DKYFK Cytoplasmic FMR1-interacting protein 1 0.14 -1.6635.71 4N78_A

clinical

"Molecular mimicry between viral antigens and host proteins can produce cross-reacting antibodies leading to autoimmunity."

"Our findings illuminate COVID-19 pathogenesis and highlight the importance of considering autoimmune potential when developing therapeutic interventions to reduce adverse reactions."

Angileri F, Légaré S, et al.,. Is molecular mimicry the culprit in the autoimmune haemolytic anaemia affecting patients with COVID-19? Br J Haematol. 2020 Jul;190(2):e92-e93. doi: 10.1111/bjh.16883. Epub 2020 Jun 8. PMID: 32453861; PMCID: PMC7283741.

Nunez-Castilla, J. et al. Potential Autoimmunity Resulting from Molecular Mimicry between SARS-CoV-2 Spike and Human Proteins. Viruses. 2022, 14, 1415. https://doi.org/10.3390/v14071415 https://jessicar.substack.com/p/molecular-mimicry-of-sars-ncov-2

Dotan A, Kanduc D, Muller S, Makatsariya A, Shoenfeld Y. Molecular mimicry between SARS-CoV-2 and the female reproductive system. Am J Reprod Immunology 2021 Dec;86(6):e13494. doi: 10.1111/aji.13494. Epub 2021 Sep 17. PMID: 34407240; PMCID: PMC8420155.

Spike protein contains peptides that can induce molecular mimicry

TABLE 1 (Continued)		
Shared Peptides ^a	Human proteins and associated function(s)/pathologies ^{b,c}	Refs
PLVSS	PAQR5. Membrane progestin receptor gamma. Plasma membrane progesterone (P4) receptor coupled to G proteins and implicated in oocyte maturation.	57
IITTD	PCSK5. Proprotein convertase subtilisin/kexin type 5 Essential for the differentiation of uterine stromal fibroblasts into decidual cells (decidualization)	58

IMPLICATIONS FOR FERTILITY?

spike

clinical

FGGFN, IVNNT	SRC. Proto-oncogene tyrosine-protein kinase Src. Protein tyrosine kinase that plays a role during oocyte maturation and fertilization.	63,64
LSSTA	SYCY2. Syncytin-2 precursor Participates in trophoblast fusion and the formation of a syncytium during placenta morphogenesis; correlates with the risk of severe preeclampsia	65,66
TESNK	TDRD6. Tudor domain-containing protein 6. Transcription factor that balances sexually dimorphic gene expression in postnatal oocytes.	34
GDSSS	VDR. Vitamin D3 receptor Recurrent pregnancy loss	67
LEPLV, ANLAA	YTDC2. 3'-5' RNA helicase YTHDC2. Plays a key role in the male and female germline by promoting transition from mitotic to meiotic divisions in stem cells	68

^cFunctions and/or associated pathologies: data from Uniprot, Pubmed, and OMIM public databases

Pentapeptide sharing between SARS-CoV-2 spike glycoprotein and **27** human proteins linked to oogenesis, placentation, or decidualization"

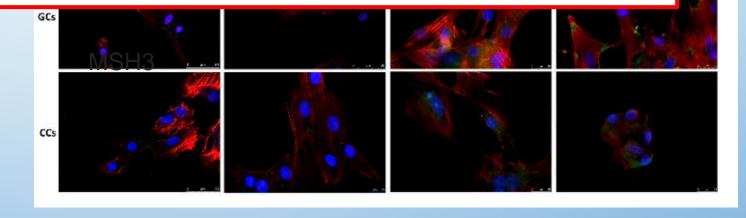
Our findings suggest potential cross-reactivity between the homologous peptides that may result in the development of autoantibodies and new-onset of related autoimmune manifestations."

HUMAN OVARIAN CELLS INFECTABLE BY SARS VIA SPIKE/ACE-2

IMPLICATIONS FOR INJECTION-PRODUCED SPIKE?

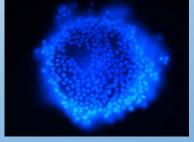
susceptibility of human ovarian cells to SARS-CoV-2 infection, suggesting a potential detrimental effect of COVID-19 infection on female human fertility

 Particular granulosa (GCs) and cumulus cells (CCs) are infectable via ACE-2





Cumulus
oophorus
coordinates of
follicular
development
and oocyte
maturation



A granulosa cell or follicular cell is a somatic cell of the sex cord that is closely associated with the developing female gamete (called an oocyte or egg) in the ovary of mammals.

1/22/23

- · Our cells break down mRNA from these vaccines and get rid of it within a few days after vaccination.
- Scientists estimate that the spike protein, like other proteins our bodies create, may stay in the body up to a few weeks.

BOTH MRNA AND SPIKE ARE PERSISTENT



SPIKE IS DURABLE

60 days post injection

"mRNA vaccination stimulates robust GCs containing vaccine mRNA and spike antigen up to 8 weeks postvaccination in some cases"

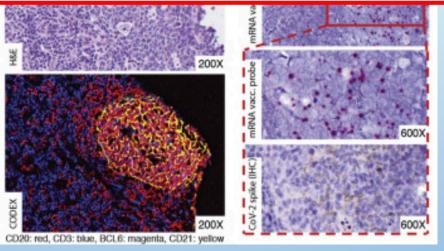
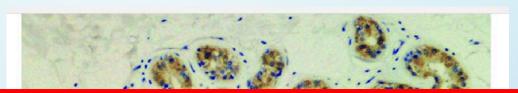
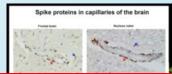


Figure 7A: Localization of SARS-CoV-2 proteins and vaccine mRNA in LNs. DOI: 10.1016/j.cell.2022.01.018



BOTH MRNA AND SPIKE ARE PERSISTENT

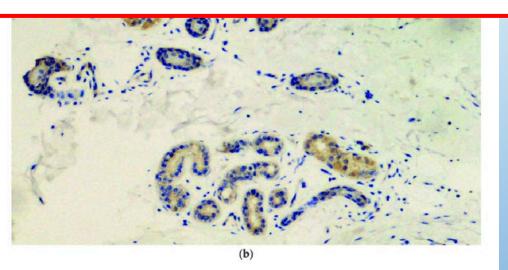




SPIKE IS BEING FOUND IN MANY TISSUES

possible covid-19 sneaky manifestation?

 Histological findings of chronic immunemediated inflammation and immunohistochemical evidence of SARS-CoV-2 spike glycoproteins in endothelial cells and eccrine sweat glands



(a) Presence of viral spike proteins in the cytoplasm of epithelial cells of the secretory portion of eccrine sweat glands (brown color). Immunostaining for SARS-CoV-2, spike proteins. Original magnification 200×. (b) Presence of viral spike proteins in the eccrine sweat glands (brown stain). Immunostaining for SARS-CoV-2, spike proteins. Original magnification 400×.

Spike proteins in the small vessels of the Myocardium

Spike-induced vasculitis in heart, vessel walls, brain inducing scarring in all of these locations. Leaky vessels allow LHPs and spike into issues to cause even more damage.



Source: Better Way Conference Vienna – live attendance; Analysis: Dr. Jessica Rose



SPIKE PERSISTENCE IN HEPATOCYTES

 Detection of RNA encoding the spike protein within hepatocytes



SPIKE IS FREE

dose of the vaccine, suggesting that previous exposure could enhance the severity of hepatocyte targeting by cytotoxic T lymphocytes"

 "...free spike antigen was detected in the blood of adolescents and young adults who developed post-mRNA vaccine myocarditis, advancing insight into its potential underlying cause."*

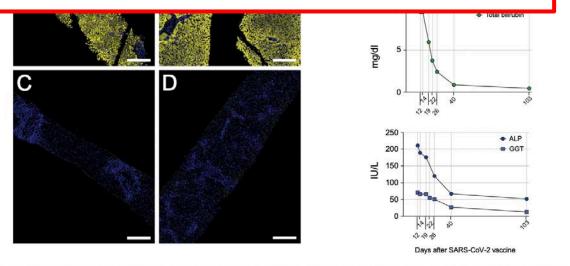


Fig. 1. In situ SARS-CoV-2 mRNA measurement using quantitative fluorescence and patient's biochemical tests. SARS-CoV-2 mRNA transcripts (yellow channel) were detected using in situ hybridization in (A) the liver of an individual with hepatitis after the second dose of the Pfizer-BioNTech (BNT162b2) vaccine, (B) a post-mortem liver tissue from an individual diagnosed with severe COVID-19 (as a positive control). (C and D) No SARS-CoV-2 mRNA transcripts were detected in the liver tissues from individuals with autoimmune hepatitis unrelated to COVID-19. Nuclei are highlighted with blue. Scale bars represent 200 μm (A-D). (E) Patient's course of AST, ALT, total bilirubin, ALP and GGT activity. ALP, alkaline phosphatase; ALT, alanine aminotransferase; AST, aspartate aminotransferase; GGT, gamma glutamyltransferase.

Martin-Navarro L, de Andrea C, Sangro B, Argemi J. In situ detection of vaccine mRNA in the cytoplasm of hepatocytes during COVID-19 vaccine-related hepatitis. J Hepatol. 2023 Jan;78(1):e20-e22. doi: 10.1016/j.jhep.2022.08.039. Epub 2022 Sep 15. PMID: 36116717; PMCID: PMC9474959.

PROBLEMS RELATING TO TRANSLATION OF MRNA TO 'SPIKE' PROTEIN

Are we being injected with full-length spike?

THE RISK OF TRANSLATING/TRANSLATED PROTEINS/PEPTIDES OTHER THAN THE INTENDED SPIKE PROTEIN IS UNKNOWN

TRANSLATION: WE HAVE NO IDEA WHAT PEOPLE'S CELLS ARE MAKING OR THE EFFECTS ON HUMAN PHYSIOLOGY

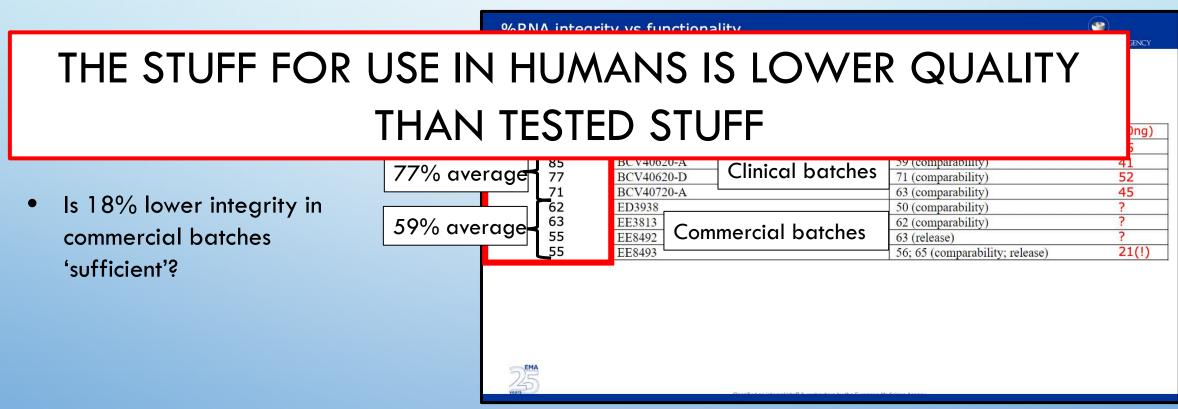
mRNA of the COVID-19 injectable products was assessed by the EMA (European Medicines Agency)

Impact: The potential implications of this RNA integrity loss in commercial batches compared to clinical ones in terms of both safety and efficacy are yet to be defined. Whether or not the observed comparability issues could be a blocking point will depend on the relevance of these observations to safety and efficacy and the company will be requested to fully justify the lower %RNA integrity (and other differences noted).



Tinari Serena. The EMA COVID-19 data leak, and what it tells us about mRNA instability BMJ 2021; 372 :n627 doi:10.1136/bmj.n627 https://www.ema.europa.eu/en/documents/assessment-report/comirnaty-epar-public-assessment-report_en.pdf https://jessicar.substack.com/p/evidence-of-connection-between-severe Crommelin DJA, Anchordoquy TJ, Volkin DB, Jiskoot W, Mastrobattista E. Addressing the Cold Reality of mRNA Vaccine Stability. J Pharm Sci. 2021

EMA QUALITY OFFICE CMC OBSERVATIONS OF BIONTECH COVID-19 MRNA INJECTABLE PRODUCTS



Credit: BNT CMC Peer Reviewers Ton der Stappen and Brian Dooley https://www.ema.europa.eu/en/documents/assessment-report/comirnaty-epar-public-assessment-report_en.pdf

PFIZER ADMITS THAT EFFICACY OF PRODUCT IS DEPENDENT ON %MRNA INTEGRITY

What's concerning is that the



INTACT MRNA IS REQUIRED FOR TRANSLATION OF APPROPRIATE PROTEIN

expression of the delivered RNA, which requires a sufficiently intact RNA molecule."

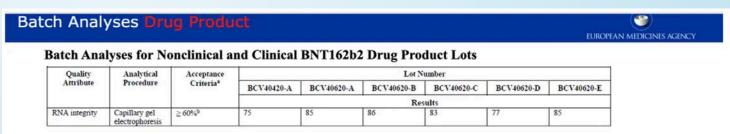
Sufficiently?

Transparency

Every clinical trial is built on trust. We honor that trust by sharing our policies and ensuring every clinical trial is planned, conducted, and reviewed according to the highest scientific, ethical, and clinical standards.

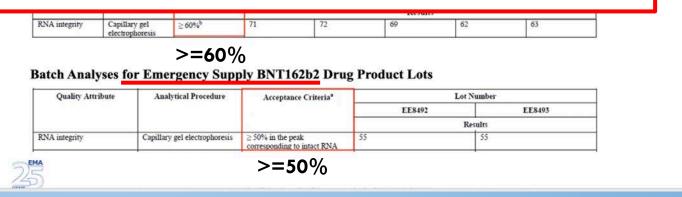
THEY LOWERED THE THRESHOLD FOR ACCEPTABLE %RNA INTEGRITY FOR EU COMMERCIAL PRODUCTS TO GET AROUND THE LOW %RNA INTEGRITY ISSUE

 The stuff being injected into people likely has ~50% RNA integrity



IF IT DOESN'T PASS, JUST LOWER THE THRESHOLD

"However, when present in the cell there is a possibility that aberrant proteins will be expressed with possibilities for unwanted immunological events."*



Credit: BNT CMC Peer Reviewers Ton der Stappen and Brian Dooley*

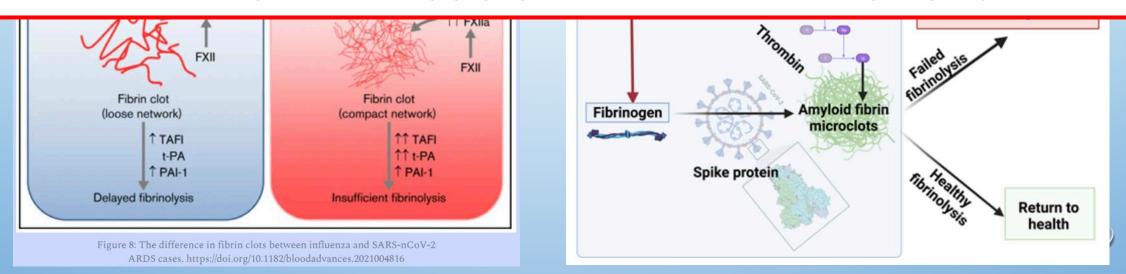
*BioNTech COVID19 mRNA vaccine (nucleoside modified) EMA Quality Office CMC observations. BWP 24th November. Ton van der Stappen and Brian Dooley https://childrenshealthdefense.eu/eu-issues/a-further-investigation-into-the-leaked-ema-emails-confidential-pfizer-biontech-covid-19-vaccine-related-docs/

https://www.ema.europa.eu/en/documents/assessment-report/comirnaty-epar-public-assessment-report_en.pdf

WHAT KINDS OF UNWANTED (IMMUNOLOGICAL) EVENTS, YOU ASK?

AMYLOID FIBRIN MICROCLOTS ASSOCIATED WITH SARS-COV-2

AMYLOID PRODUCTION/FIBRINOLYSIS DEFECTS APPEAR TO BE A PROBLEM ASSOCIATED WITH THE SHOTS



Malgorzata Wygrecka, et al., Altered fibrin clot structure and dysregulated fibrinolysis contribute to thrombosis risk in severe COVID-19. Blood Adv 2022; 6 (3): 1074–1087.

Dr. Jessica Rose

THE MOST SERIOUS PATHOLOGY TO ME IS MISFOLDING OF PROTEINS

 "COVID mRNA vaccine sequences contain gguadruplexes that can interact with alveine

quadruplexes that can interact with alycine

AMYLOIDOGENIC PEPTIDES HAVE BEEN SHOWN TO BE PRESENT IN SARS-COV-2 SPIKE

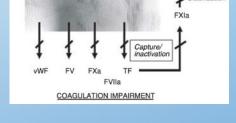
the mRNA that is still present. Not one regulatory body has assessed this risk."

car

 "Our data propose a molecular mechanism for potential amyloidogenesis of SARS-CoV-2 S-protein in humans."



I. Am. Chem. Soc. 2022, 144, 20, 8945-8950



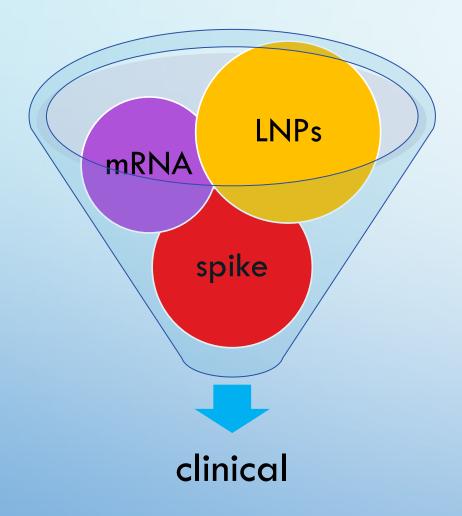
Nyström S, Hammarström P. Amyloidogenesis of SARS-CoV-2 Spike Protein. Journal of the American Chemical Society. 2022 May 25;144(20):8945-8950. doi: 10.1021/jacs.2c03925. Epub 2022 May 17. PMID: 35579205: PMCID: PMC9136918.

Seneff S, Nigh G, Kyriakopoulos AM, McCullough PA. Innate immune suppression by SARS-CoV-2 mRNA vaccinations: The role of G-quadruplexes, exosomes, and MicroRNAs. Food Chem Toxicol. 2022

Jun;164:113008. doi: 10.1016/j.fct.2022.113008. Epub 2022 Apr 15. PMID: 35436552; PMCID: PMC9012513.

https://jessicar.substack.com/p/is-the-spike-protein-acting-as-a https://jessicar.substack.com/p/i-dont-think-its-myocarditis-i-think https://jessicar.substack.com/p/rsfiedllfnkv-are-we-looking-at-weaponized https://jessicar.substack.com/p/modified-spike-protein-rna-injection https://jessicar.substack.com/p/is-sars-ncov-2-associated-systemic

https://jessica5b3.substack.com/p/a-paper-published-in-2017-provides

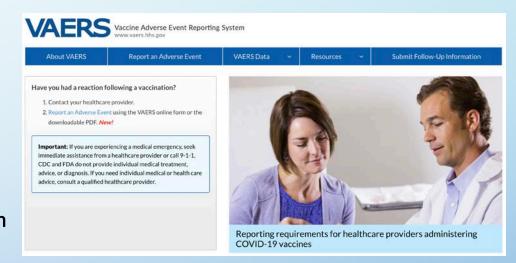


Clinical leaves rustling in the wind – what is VAERS saying?

WHAT IS VAERS?

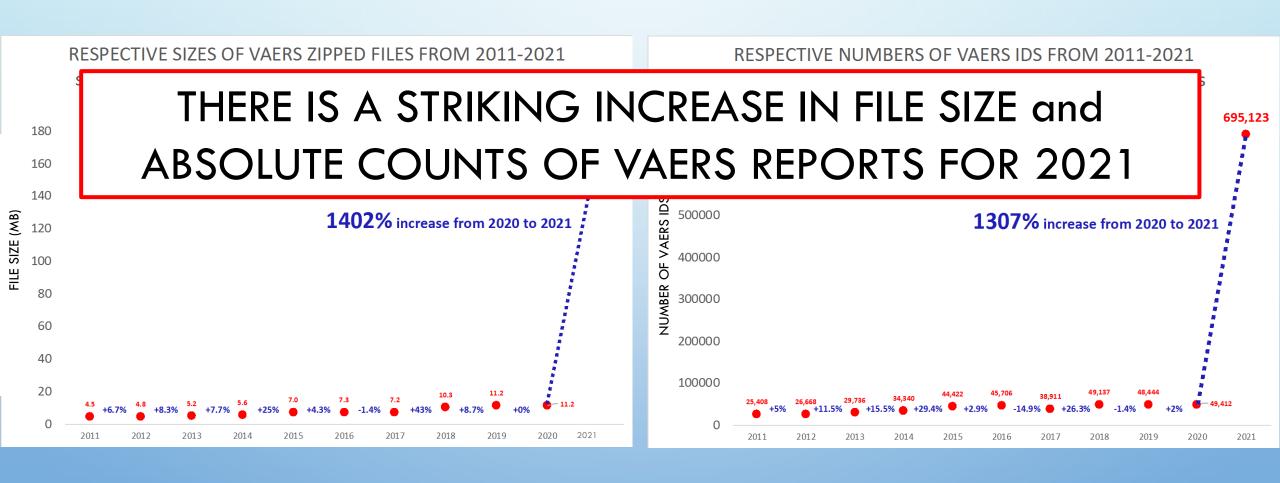
VACCINE ADVERSE EVENT REPORTING SYSTEM

- VAERS was created in 1990 by the Food and Drug Administration (FDA) and Centers for Disease Control and Prevention (CDC) to receive reports of AEs that may be associated with vaccines.
- The primary purpose for maintaining the database is to serve as an early warning or signaling system for adverse events not detected during pre-market testing and clinical trials.
- In spite of the fact that the National Childhood Vaccine Injury Act of 1986 (NCVIA) requires health care providers and vaccine manufacturers to report to the DHHS specific AEs following the administration of vaccines outlined in the Act, under-reporting is a known imperfection of the VAERS system.

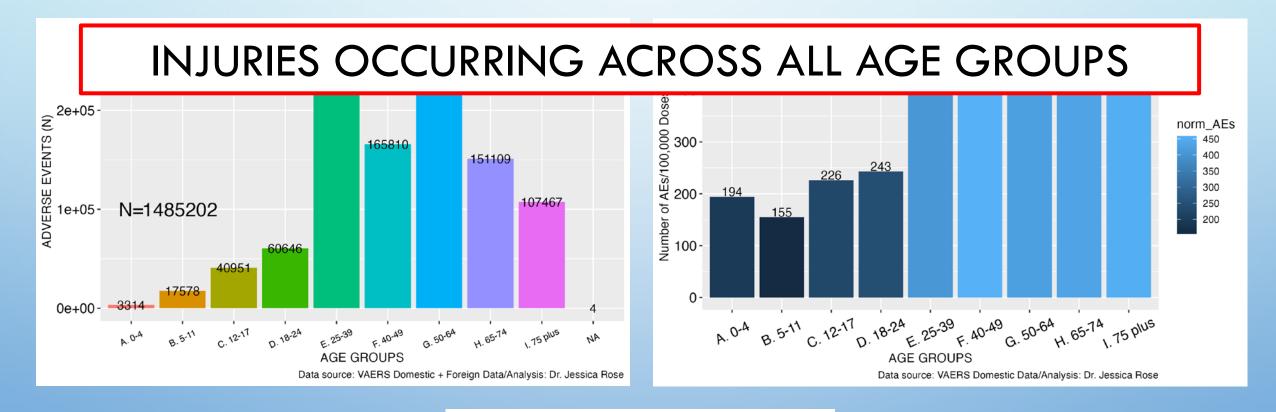


NUMBER OF VAERS REPORTS FOR THE PAST 10 YEARS

COMPARED WITH 2021



VAERS AES: ABSOLUTE COUNTS AND NORMALIZED DATA ACCORDING TO CDC AGE GROUP

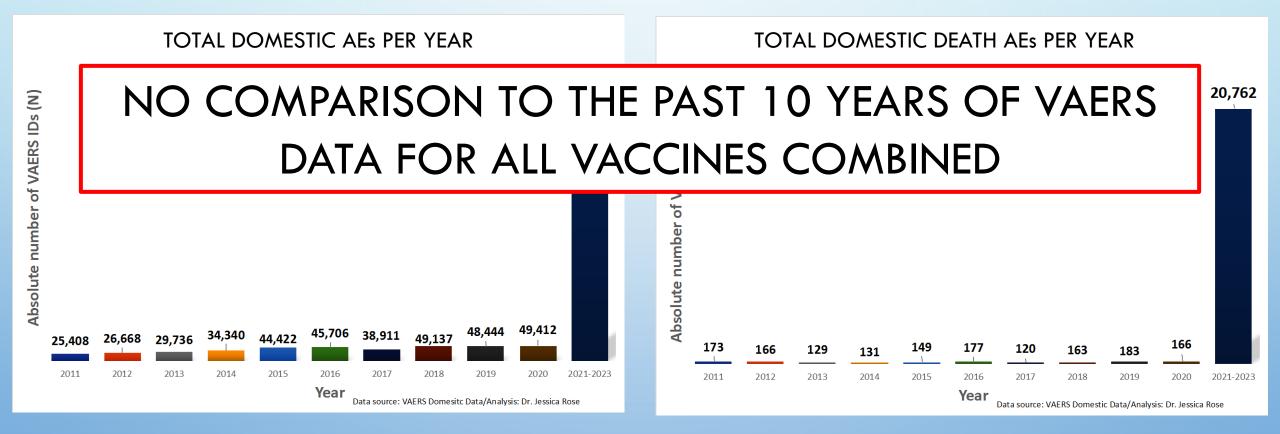


$$N = 1,485,202$$

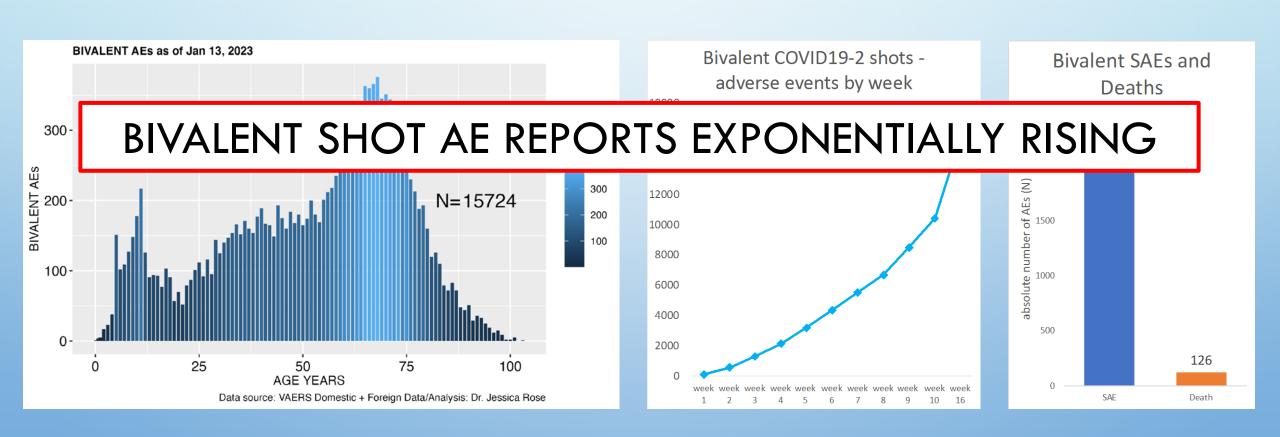
 $N_{\text{w/age data}} = 1,031,853$

COMPARISONS TO BACKGROUND RATES/HISTORICAL

VALUES (DOMESTIC DATA AS OF JAN 13, 2023)



THE NEW 'BIVALENT' SHOTS ARE ALREADY A DISASTER WITH REGARD TO DEATH AND SAES



WHY WERE BABIES AGES 0-4 BEING INJECTED PRIOR TO DECEMBER 9, 2022? AS A FIRST DOSE AS WELL!

What You Need to Know

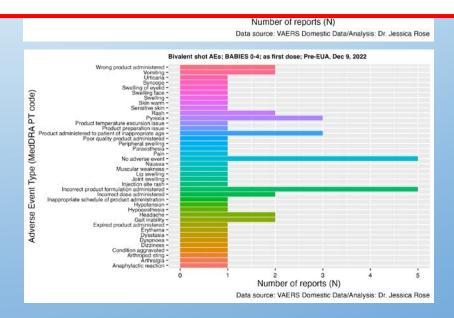
Updated Jan. 9, 2023

- Updated (bivalent) boosters became available on:
 - September 2, 2022, for people aged 12 years and older
 - October 12, 2022, for people aged 5–11 years



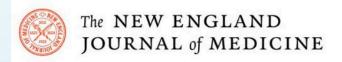
WHY WERE BABIES BEING INJECTED WITH THE 'BIVALENT' SHOTS PRIOR TO EVEN EUA?

- Can someone, like Walensky, explain why 0-4-year-olds were/are being injected with this crap as a first dose?
- Or at all? It was not even EUA authorized prior to December 9, 2022!



EVEN PAUL OFFIT IS SPEAKING OUT AGAINST THESE THINGS

"I believe we should stop trying to prevent all symptomatic infections in healthy, young people by boosting them with vaccines containing mRNA from strains that might disappear a few months later." Paul Offit







Perspective

Bivalent Covid-19 Vaccines — A Cautionary Tale

Paul A. Offit, M.D.

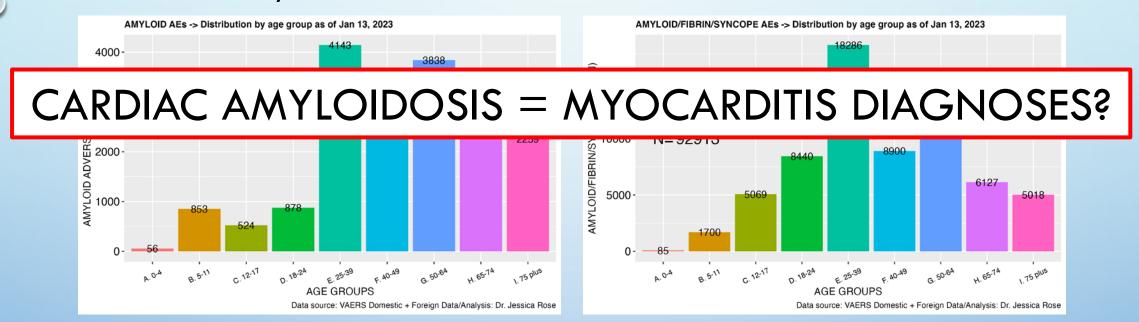
January 11, 2023

DOI: 10.1056/NEJMp2215780

OTHER STAND-ALONE ADVERSE EVENTS IN VAERS

Dr. Jessica Rose

AMYLOID/FIBRIN + SYNCOPE REPORTS IN VAERS



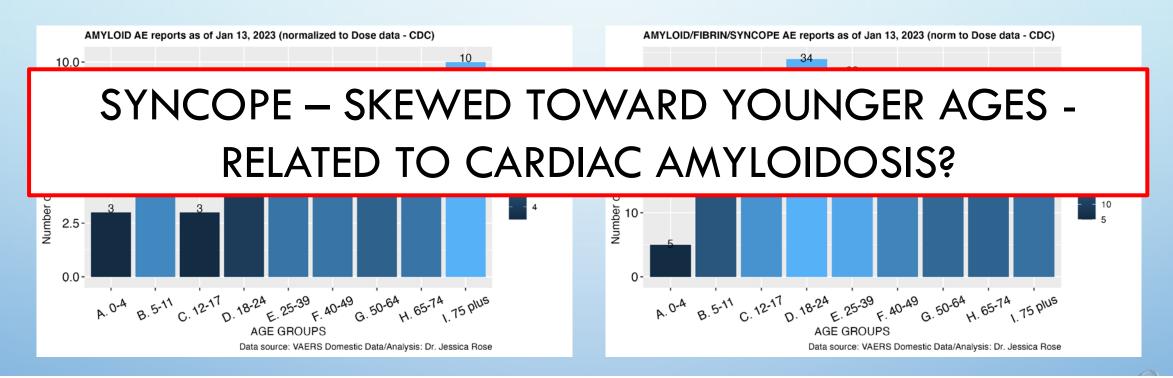
"Amyloidosis is a group of disorders that can affect almost any organ due to the misfolding of proteins with their subsequent deposition in various tissues, leading to various disease manifestations based on the location."

Nyström S, Hammarström P. Amyloidogenesis of SARS-CoV-2 Spike Protein. Journal of the American Chemical Society. 2022 May 25;144(20):8945-8950. doi: 10.1021/jacs.2c03925. Epub 2022 May 17. PMID: 35579205; PMCID: PMC9136918.

Douglas B. Kell, Gert Jacobus Laubscher, Etheresia Pretorius; A central role for amyloid fibrin microclots in long COVID/PASC: origins and therapeutic implications. **Biochem J** 25 February 2022; 479 (4): 537–559. doi: https://doi.org/10.1042/BCJ20220016

Dr. Jessica Rose

YOUNG FOLKS REPORTING SYNCOPE – IS THIS RELATED TO [CARDIAC] AMYLOIDOSIS?



"When the heart is involved, amyloidosis can manifest with a multitude of presentations such as heart failure, arrhythmias, orthostatic hypotension, syncope, and pre-syncope."

Hoyer C, Angermann CE, Knop S, Ertl G, Störk S. Kardiale Amyloidose [Cardiac amyloidosis]. Medizinische Klinik (Munich). 2008 Mar 15;103(3):153-60. German. doi: 10.1007/s00063-008-1022-2. PMID: 18344065.

MYOCARDITIS REPORTS FROM VAERS DOMESTIC DATA REVEALS DOSE RESPONSE

 The absolute number of myocarditis adverse events as per

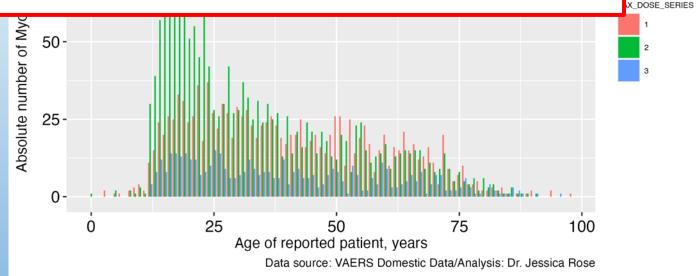


Myocarditis in VAERS after mRNA injection by age and dose # as of Jan 13, 2023

MYOCARDITIS IN YOUNG PEOPLE IS DOSE 2 RELATED

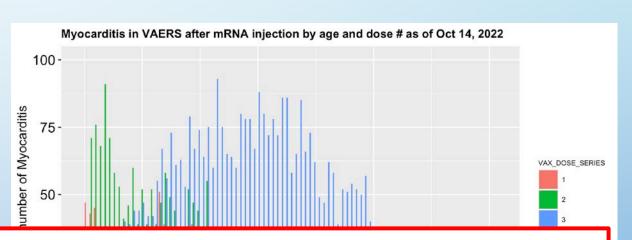
100-

to dose 2 for domestic data

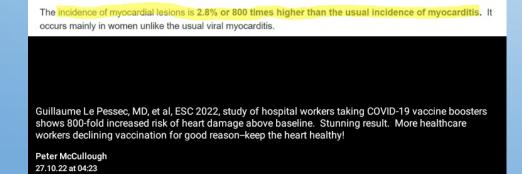


MYOCARDITIS REPORTS FROM VAERS FOREIGN DATA REVEALED DOSE RESPONSE





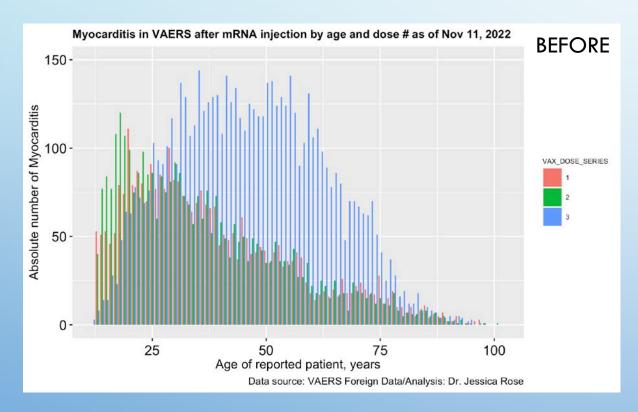
MYOCARDITIS IN MIDDLE-AGED PEOPLE IS DOSE 3 RELATED

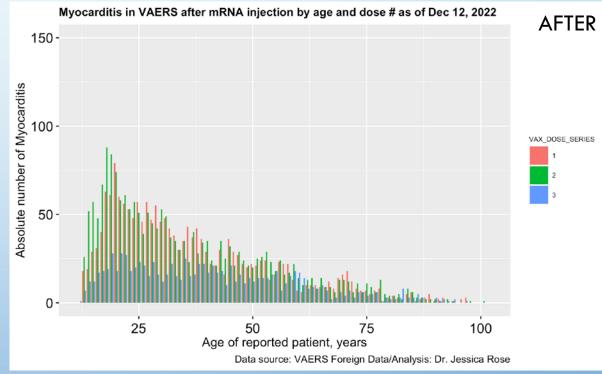


Conclusion



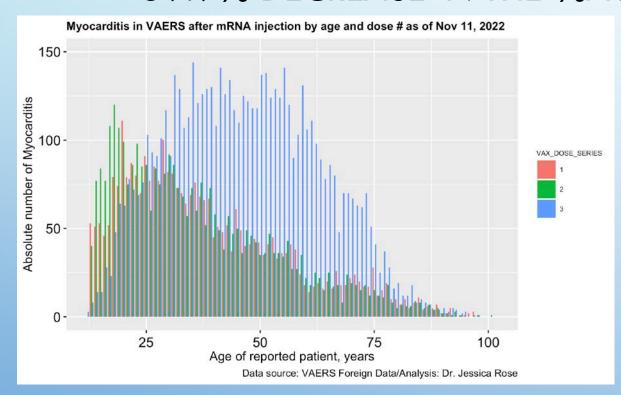
FOREIGN DATA SET WAS RECENTLY PURGED — DESTROYED DOSE 3 SIGNAL





Dr. Jessica Rose

FROM NOVEMBER 11, 2022 → □ DECEMBER 12, 2022 1.4% INCREASE IN THE NUMBER OF PEOPLE 66.3% DECREASE IN FILE SIZE 59.9% DECREASE IN THE %AGE OF MYOCARDITIS REPORTS



150 - 100 -

Myocarditis in VAERS after mRNA injection by age and dose # as of Dec 12, 2022

BEFORE, N = 563,456 Myocarditis reports: 40,383 7.16% of reports AFTER, N = 571,525 Myocarditis reports: 16,396 2.87% of reports

https://jessicar.substack.com/p/the-foreign-data-set-was-gutted-this https://jessicar.substack.com/p/a-new-development-in-the-foreign





LESSONS

NEVER RUSH THROUGH CLINICAL TRIALS TESTING NOVEL TECHNOLOGIES/PRODUCTS

NEVER IGNORE THE PRECAUTIONARY PRINCIPLE

LESSONS LEARNED 3 YEARS LATER...

- BIOLOGICAL PLAUSIBILITY ⇒□ BIOLOGICAL EVIDENCE
- TEMPORAL ASSOCIATIONS BETWEEN SHOTS AND INJURIES LEND CREDENCE TO CAUSAL EFFECT (AS DOES BIOLOGICAL EVIDENCE)
- POLICY MAKERS NEED TO GET UP-TO-DATE ON THE DATA AND SCIENCE BEHIND THE REAL MODUS OPERANS AND EFFECTS OF THESE NOVEL GENE THERAPIES
- LITIGATORS NEED TO LITIGATE
- MEDICAL LICENSES NEED TO BE REINSTATED
- JOURNAL ARTICLES NEED TO BE REINSTATED
- CENSORSHIP OF SCIENCE NEEDS TO STOP

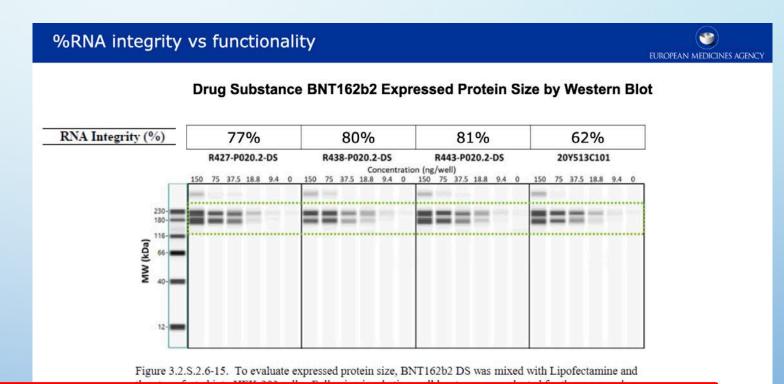
THE COVID 'EXPERIENCE' NEEDS TO BE INVESTIGATED TO THE FULL EXTENT OF THE LAW.

FIN

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%RNA INTEGRITY AND AUTOMATED WESTERN BLOTS

 Pfizer use an automated Western Blotting method and it is highly questionable



AUTOMATED WESTERN BLOT RESULTS ARE QUESTIONABLE

r, Andover

THEY LOWERED THE THRESHOLD FOR ACCEPTABLE %RNA INTEGRITY FOR EU COMMERCIAL PRODUCTS TO GET AROUND THE LOW %RNA INTEGRITY ISSUE

• The stuff being injected into people likely has $\sim 50\%$ RNA integrity

COVID-19 Vaccine (BNT162, PF-07302048) R.1 BNT162b2 Comparability Overview

Table R.1-1. BNT162b2 Drug Product Comparability of Release Test Results

Manufacturing Information

IF IT DOESN'T PASS, JUST LOWER THE THRESHOLD

"However, when present in the cell there is a possibility that aberrant proteins will be expressed with possibilities for unwanted immunological events."*

									IIUII
DP Manufacturing Site		Polymun	Pfizer, Puurs	Pfizer, Puurs	Pfizer, Puurs	Pfizer, Puurs	Pfizer, Puurs	Pfizer, Puurs	Pfizer, Puurs
DP Fill/Finish DOM		Apr -Jul 2020	Jul 2020	05-Aug-2020	05-Aug-2020	25-Sep-2020	05-Oct-2020	07-Oct-2020	16-Oct-2020
Drug Product Analytical Information									
Release Test	Acceptance Criteria	Clinical Range		Results					
RNA Integrity	≥55% Intact RNA	62-86		55	55	68	66	69	60
Bacterial Endotoxins	≤12.5 EU/mL	<1		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Sterility	No growth detected	Sterile		No growth detected					

- a. Clinical lots BCV40420-A, BCV40620-A, BCV40620-B, BCV40620-C, BCV40620-D, BCV40720-A, BCV40720-B, BCV40720-C
- b. Clinical lots BCV40720-P and BCV40820-P
- c. Data not available (NA) at the time of filing.
- Batch EE8493 also used in clinical trials.

*BioNTech COVID19 mRNA vaccine (nucleoside modified) EMA Quality Office CMC observations. BWP 24th November. Ton van der Stappen and Brian Dooley https://childrenshealthdefense.eu/eu-issues/a-further-investigation-into-the-leaked-ema-emails-confidential-pfizer-biontech-covid-19-vaccine-related-docs/

https://www.ema.europa.eu/en/documents/assessment-report/comirnaty-epar-public-assessment-report_en.pdf

Crommelin DJA, et al., Addressing the Cold Reality of mRNA Vaccine Stability. J Pharm Sci. 2021 Mar;110(3):997-1001. doi: 10.1016/j.xphs.2020.12.006. Epub 2020 Dec 13. PMID: 33321139; PMCID: PMC7834447