

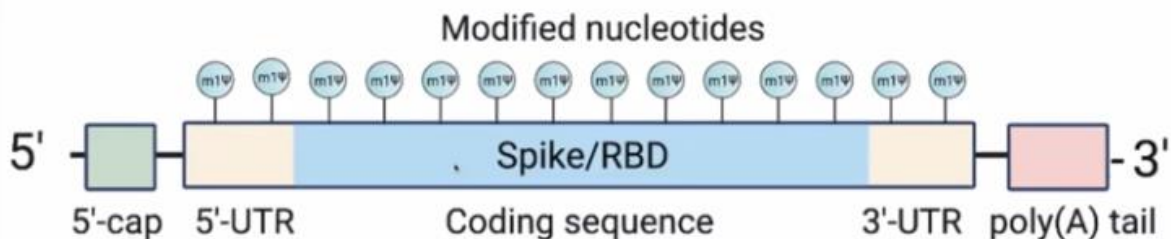
“Worse than the Disease? Reviewing Some Possible Unintended Consequences of the mRNA Vaccines Against COVID-19” *

The mRNA vaccines are a poorly evaluated novel technology with many unknowns

Some potential adverse consequences:

- Pathogenic priming, multisystem inflammatory disease and autoimmunity
- Allergic reactions and anaphylaxis
- Antibody dependent enhancement
- Activation of latent viral infections
- Neurodegeneration and prion diseases
- Emergence of novel variants of SARS-CoV-2
- Potential for integration of the spike protein gene into human DNA

*S Seneff and G Nigh. IJVTPR May 2021; 2(1): 38-79.



- mRNA vaccines contain the genetic code to make spike protein
- The RNA is carefully engineered to resist breakdown (PEGylated)
- All of the uridines are replaced with 1-methyl-pseudouridine (m1ψ)
- The mRNA is incorporated into a lipid particle that simulates a human LDL particle
- A synthetic cationic (positively charged) lipid is added to act as an adjuvant – very toxic to the cells
- The “humanized” mRNA is a stealth entry system for massive production of spike protein

*S Seneff and G Nigh. IJVTPR May 2021; 2(1): 38-79.

The Big Picture

- A natural infection starts in the nose and lungs and never makes it into general circulation if the immune system is healthy
- Injection of spike mRNA nanoparticles into deltoid muscle bypasses mucosal and vascular barriers
- Immune cells take up mRNA nanoparticles and carry them into the lymph system, ultimately into the spleen
- Immune cells in the spleen release large quantities of spike protein displayed on the surface of exosomes
- These exosomes disperse throughout the body, but, especially, travel to the brain along nerve fibers to deliver the toxic prion-like spike protein to neurons
- Inflammatory response in the brain induces neurological damage

[Trends Neurosci.](#) 2020 Dec; 43(12): 931–933.

Published online 2020 Oct 21. doi: [10.1016/j.tins.2020.10.009](https://doi.org/10.1016/j.tins.2020.10.009)

Is COVID-19 a Perfect Storm for Parkinson's Disease?

[Patrik Brundin](#),¹ [Avindra Nath](#),² and [J. David Beckham](#)³

- Loss of smell is a common early symptom of Parkinson's and of COVID-19
- Virus can gain access to brain along nerve fibers
 - Olfactory nerve
 - Vagus nerve
- Neuroinvasion of SARS-COV-2 could upregulate α -synuclein
 - High levels of α -synuclein leads to misfolding and toxicity
- Dopaminergic neurons in substantia nigra express high levels of the ACE2 receptor



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Is COVID-19 a Perfect Storm for Parkinson's Disease?

Patrik Brundin,^{1,*} Avindra Nath,² and J. David Beckham³

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 - V
- Three independent case reports have described the development of Parkinson's disease following COVID-19.*
- vagus nerve
 - Neuroinvasion of SARS-COV-2 could upregulate α -synuclein
 - High levels of α -synuclein leads to misfolding and toxicity
 - Dopaminergic neurons in substantia nigra express high levels of the ACE2 receptor

D-19

* Ernesto Estrada *Viruses* 2021; 13: 897.

Exosomes and Parkinson's Disease*

- Parkinson's disease often begins in the gut as an immune reaction to prion-like proteins produced by pathogens
- The spike protein is a prion-like protein
 - It contains 6 glycine zippers (GxxxG) – a characteristic signature of prions (The human prion protein contains 15, and amyloid beta (linked to Alzheimer's disease) contains only 4)
- Stressed immune cells in the digestive tract and spleen upregulate α -synuclein and release it packaged up in exosomes, along with foreign misfolded proteins
- The exosomes travel along the vagus nerve to the brain stem nuclei
- Damage to the substantia nigra causes Parkinson's disease
- The whole process can take years or decades before symptoms appear

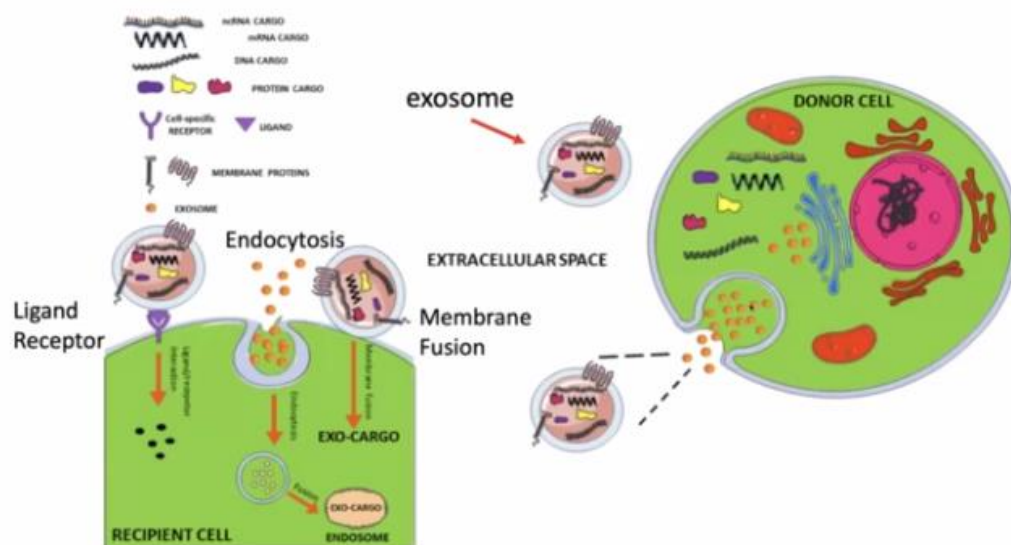
*S Seneff and G Nigh. *IJVT* 2021; 2(1): 38-79.

SARS-CoV-2 Spike Activates Human Microglia in the Brain via Exosomes Loaded with miRNAs*

- "SARS-CoV-2 spike transfected cells release a significant amount of exosomes loaded with microRNAs such as miR-148a and miR-590"
- "MicroRNAs get internalized by human microglia in the brain"
 - Induce a strong inflammatory response
- "These results uncover a bystander pathway of SARS-CoV-2 mediated CNS [central nervous system] damage through hyperactivation of human microglia"

*Ritu Mishra and Akhil C. Banerjee. *Frontiers in Immunology* 2021; 12:656700

Exosome Transfer from Cell to Cell*



*Figure 1. Marianna D'Anca et al. *Front. Aging Neurosci.* 28 August 2019; 11: 232.

"Nucleoside-modified mRNA vaccines induce potent T follicular helper and germinal center B cell responses"*

- "Nucleoside-modified" means that all the uridines in the mRNA were replaced with 1-methyl-pseudouridine
 - This replacement resulted in robust synthesis of protein from the mRNA code (protected RNA from degradation)
- Result was a very strong antibody response due to formation and maintenance of *germinal centers in the spleen*
- Another study showed that repeated exposure to antigen (foreign protein) through immunization resulted in increased susceptibility to prion protein exposure**
 - Attributed to *expansion of splenic germinal centers*

*Norbert Pardi et al. J. Exp. Med. 2018 Vol. 215 No. 6 1571–1588

**Juliane Bremer et al., PLoS ONE 2009; 4(9): e7160.

Problems with the vaccine spike protein*

- "Is it possible the spike protein itself causes the tissue damage associated with Covid-19?"
- A "furin cleavage site" in the spike protein allows S1 subunit to be snipped off and released into circulation
- "The S1 subunit localizes to the endothelia of microvessels in the mouse brain and is a potent *neurotoxin*."
- "So the spike S1 subunit of SARS-CoV-2 alone is capable of being endocytosed by ACE2 positive endothelia in both human and mouse brain, with a concomitant paucicellular *microencephalitis* that may be the basis for the neurologic complications of COVID-19."

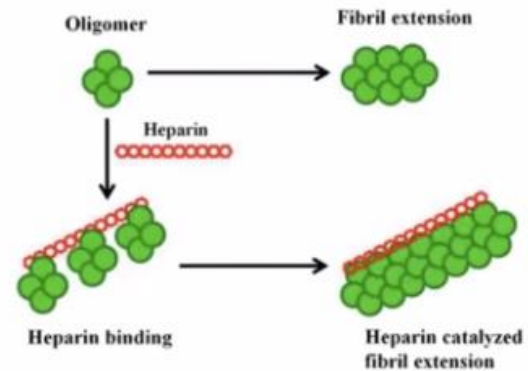
*<https://beta.regulations.gov/document/FDA-2020-N-1898-0246>

Comment from J. Patrick Whelan MD PhD
Food and Drug Administration on Dec 8, 2020



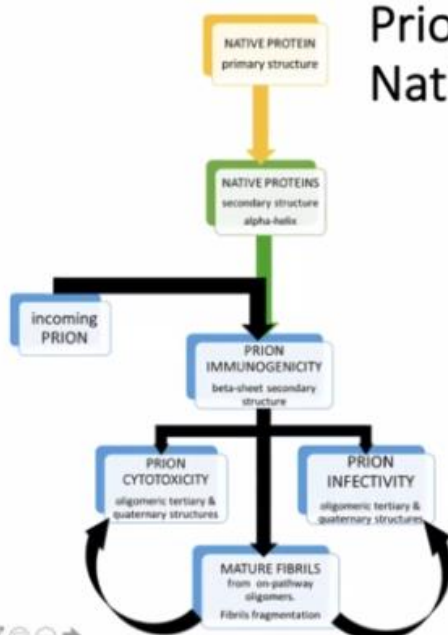
“SARS-CoV-2 spike protein interactions with amyloidogenic proteins: Potential clues to neurodegeneration”*

- The receptor binding domain of the spike protein binds to heparin and to heparin-binding proteins
- Heparin binding accelerates aggregation of amyloid proteins
 - Amyloid- β , α -synuclein, tau, prion and TDP-43
- This could lead to neurodegeneration in the brain



*D Idrees and V Kumar. Biochemical and Biophysical Research Communications 2021; 554: 94e98.

Prion Corruption of Natively Folded Proteins*



- Foreign prion proteins (e.g., spike) act like crystals to induce misfolding of susceptible human proteins (e.g., α -synuclein, amyloid- β , etc.)
- Proteins change from α -helix to β -sheet configuration
- This leads to formation of oligomers and fibrils \rightarrow neurodegenerative disease (Parkinson’s, Alzheimer’s, ALS, CJD, ..)

*Dana Butnaru and Joab Chapman. Autoimmun Rev 2019; 18(3): 231-240.



Article

SARS-CoV-2 Spike Impairs DNA Damage Repair and Inhibits V(D)J Recombination In Vitro

Hui Jiang ^{1,2,*} and Ya-Fang Mei ^{2,*}

"Mechanistically, we found that the spike protein localizes in the nucleus and inhibits DNA damage repair by impeding key DNA repair protein BRCA1 and 53BP1 recruitment to the damage site."*

*Hui Jiang and Ya-Fang Mei, *Viruses* 2021; 13: 2056.

"COVID-19 Vaccine Associated Parkinson's Disease, A Prion Disease Signal in the UK Yellow Card Adverse Event Database."*

"All the COVID-19 vaccines on the market contain spike protein or its nucleic acid sequence creating a possible catastrophic epidemic of prion disease in the future."

"This analysis should serve as an urgent warning to those mindlessly following advice of politicians and public health officials regarding COVID immunization."

*J Bart Classen. *J Med - Clin Res & Rev.* 2021; 5(7): 1-6.

VAERS Adverse Events, as of Dec. 4, 2021*

Condition	COVID vaccines (2021)	All other vaccines 1990-2021	Ratio
Memory Impairment	2,287	1,448	1.58
Amnesia	1,891	1,374	1.38
CJD (Prion disease)	27	4	6.75
Mobility Decreased	9,513	8,719	1.09
Alzheimer's	58	13	4.46
Parkinson's Disease	154	69	2.23
Dysphagia (Difficulty Swallowing)	5,976	3,226	1.85
Anosomia (Loss of Smell)	4,266	122	34.97

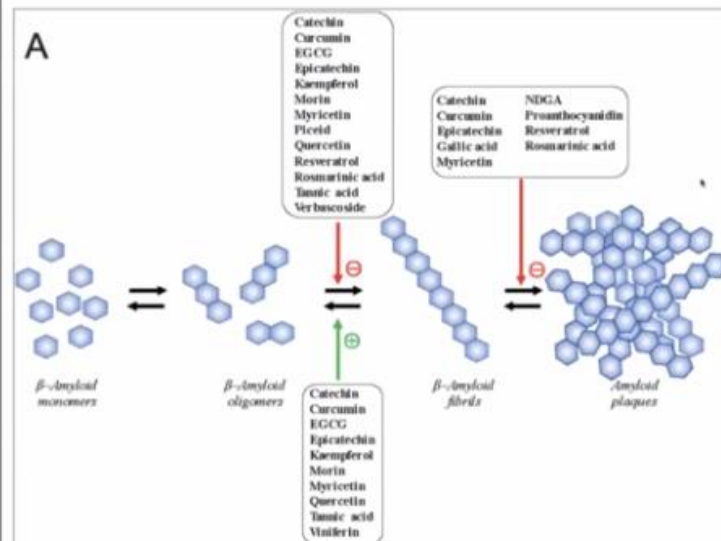
*US Vaccine Adverse Event Reporting System: <http://wonder.cdc.gov/vaers.html>

Anecdotal Evidence: Marc Doyer (in France) testified that his wife developed Creutzfeldt Jakob disease about two weeks after her second dose of the Pfizer mRNA vaccine *

“We must no longer speak of chance, because when you develop a disease where it is said that there is one case in a million, and less than sixty cases per year in France, and that you develop the first symptoms 15 days after the second injection of a vaccine that we do not know well, we can no longer afford to speak of chance.”

* <https://news.in-24.com/lifestyle/tv/148758.html>

Polyphenols Therapeutic in Prion Disease*



*Aline Freyssin et al., *Neural Regen Res* 2018; 13(6): 955-961.

Summary

- The mRNA vaccines are carefully crafted to induce immune cells to produce large quantities of the SARS-CoV-2 spike protein
 - The spike protein is neurotoxic and has prion-like characteristics
- Whereas SARS-CoV-2 infection is localized in the lungs, the vaccine induces an immune response primarily in the spleen
- Exosomes traveling from the spleen to the brain may play a decisive role
- The vaccines produce a very strong antibody response in the spleen by activating germinal centers, and this increases susceptibility to prion disease
- Spike causes an inflammatory response in the brain by activating microglia
- There is much evidence from VAERS of mRNA vaccines causing neurodegenerative diseases, including Alzheimer's, Parkinson's and CJD
- Anecdotaly, CJD can be induced within 15 days of mRNA vaccination
- Herbs and spices rich in polyphenols may have therapeutic value