

# Exhibit 232

**Mechanism based analysis of Covid-19 vaccines: no way to create safe Covid-19 vaccine based on induction of anti Spike antibodies; known risks of mRNA and vector vaccines ignored by drug regulatory agencies and World Health Organization; vaccine induced transgenome formation in cell nuclei and mitochondrial DNA; abortions, infertility**

[https://www.efvv.eu/images/content/2022/0627/why-to-make-mechanism-based-analysis-no-safe-mrna-vaccine\\_53c7b.pdf](https://www.efvv.eu/images/content/2022/0627/why-to-make-mechanism-based-analysis-no-safe-mrna-vaccine_53c7b.pdf)

# **Mechanism based analysis of Covid-19 vaccines: no way to create safe Covid-19 vaccine based on induction of anti Spike antibodies; known risks of mRNA and vector vaccines ignored by drug regulatory agencies and World Health Organization; vaccine induced transgenome formation in cell nuclei and mitochondrial DNA; abortions, infertility**

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## **WHY TO MAKE MECHANISM BASED ANALYSIS?**

Robert Malone, key figure in inventing mRNA vaccine technology, warns about irreversible damages that Covid-19 genetic therapy based vaccines can cause [1] (Analysis Overview). Pfizer document mentions 1 2991 types of side effects in connection to Pfizer-BioNTech vaccine [2] (5.3.6 Cumulative; 2021). Clinical trials of vaccine containing 100 µg mRNA was stopped by Pfizer after first dose for "reactogenicity" [3] (BNT162b2 2.7.3; 2021) but World Health Organization recommends application two doses of the same amount of mRNA in Moderna vaccine even now [4] (The Moderna; 2022). Former vice-president of Pfizer Pharmaceuticals Michael Yeadon petitioned to halt III. stage of clinical trials of Pfizer Covid-19 gene therapy based vaccine in December 2020 [5] (!! Urgent !!; 2020). Later he teamed with other specialists to make unique web based database investigating toxicity of single batched of all Covid-19 vaccines. Substantial differences in toxicity are reported [6] (How bad).

Is there a rational reason for concern in connection to Covid-19 vaccines ? If yes, than the problem must be in the heart of technology used in those vaccines. Mechanism based analysis is the only way to probe this issue and that's why this analysis was created.

## **ABSTRACT:**

This study presents mechanism based risk analysis of Covid-19 vaccines. Spike protein, anti Spike antibodies, bio-physio-chemical properties of vaccines, risks in connection to the way of application of vaccine, possible inter human transmission and other issues of Covid-19 vaccines were scrutinized. Vector and mRNA vaccines present unique challenge in evaluating vaccine safety because those vaccines meet criteria for gene therapy. This study supports the findings that there are inherent limitations and health risks present directly in the core of gene therapy based vaccine technology. Solutions for those risks are behind the scope of current science. This analysis reveals that indicators of possible severe risks in connection to Covid-19 vaccination were known prior to the start of mass vaccination programs but ignored and not addressed by drug regulatory agencies and health organizations like WHO.

There was shown manufacturing of Covid-19 health statistics in one member state of EU, the Czech republic [7] [8] [9] (Zjednotek; 2021; Úvod; 2021; Problém; 2021). The same problem was reported from the USA [10] [11] (Renz Whistleblowers; 2022 ; Feds; 2022;). At the moment there is not known how many countries and organizations distorted Covid-19 health statistics.

There is no way to make valid conclusions on manufactured statistics therefore mechanism based analysis is the only way to evaluate safety of Covid-19 vaccines.

## 1. SPIKE PROTEIN:

Spike protein is a surface protein of the SARS-CoV-2 virus. This protein enables virus-cell interaction and infection of the cell. Neutralizing antibodies targeted against Spike protein are thought to interrupt binding of virus to cell. This way neutralizing antibodies should protect cell from virus infection. That's the reason why Spike protein is preferred as an active agent to induce immunity response in all nowadays Covid-19 vaccines.

Spike protein on its own possesses some properties of special interest in mechanism based risk analysis of any SARS-CoV-2 vaccine.

### 1.1. structure and autoimmunity

First of all there were shown homologies of primary sequences between human genes and components of SARS-CoV-2 for heptapeptides. More similarities were found for linear sequences of 7 contiguous residues (7 mer) and even more if secondary and tertiary structures were evaluated [12] (The SARS-CoV-2, 2021). This finding of potential autoimmunity triggering by SARS-CoV-2 virus and Spike protein specifically is strongly supported by Pfizer's documentation. Pfizer cumulative analysis of vaccine post-authorization adverse events report contains 1 291 types of possible adverse effects, number of autoimmune antibodies included [2] (Cumulative analysis, 2021).

#### **short summary:**

Above mentioned should be sufficient to demonstrate capability of SARS-CoV-2 and vaccine Spike protein specifically to induce creation autoimmune antibodies in humans and possibly triggering autoimmune diseases.

### 1.2. prion disease triggering

Amyloid aggregation is pathological process that triggers prion diseases development in humans. Incurable neurodegenerative diseases like Alzheimer disease belong to this group of diseases. There was predicted that Spike protein of SARS-CoV-2 possesses amyloid aggregation capability based on SARS-CoV-2 genome analysis [13] (Covid-19 RNA; 2021). This was supported by mathematical modeling [14] (SARS-CoV-2 Prion; 2020) and confirmed in cells in vitro [15] (Amyloidogenic proteins; 2021). It's of note that S1 subunit of Spike protein was detected in human blood cells 15 month post infection without presence of any other part of SARS-CoV-2 virus [16] (Persistence of SARS; 2021). S1 subunit of spike protein was also demonstrated to cause cognitive deficiency and anxiety in mice if administered into hippocampus. It was concluded that another novel pathological process was involved. This novel process involves glia activation and non-cell autonomous hippocampal neuronal death induced by the brain-infiltrating S1 protein [17] (SARS-CoV-2 spike; 2022).

#### **short summary:**

Long term presence of amyloid aggregation triggering protein in cells warrants extreme caution. Starting such a process in infected cell can be lethal for the cell and devastating for organism. Prion diseases manifest years after exposure and there is no way to treat them. There is not known what amyloid aggregation triggered by Spike protein can cause in body in long term. It can be expected prion disease triggering in brain but devastating effects should be expected in any other organ. There be shown below that vaccine do infect many, in some cases almost all tissues in body. There'll be also shown that Spike genes can transfer from mother to child hidden in her genome. No one can predict consequences of triggering amyloid aggregation in so many different tissues in body.

The only certainty is that there'll be no cure and that the consequences of those effected will be severe.

There is even indication that amyloid aggregation is not the only way Spike protein triggers damage in brain. Spike protein should be categorized as neurotoxin and cell toxin.

## **2.0. SPIKE PROTEIN ANTIBODIES**

### **2.1. general pathological effects**

Pathogenic effects of Spike antibodies were demonstrated in animal model. Damage of lung epithelium, kidney, brain, heart, conditions like ARDS, cytokine storm, death were observed. There was also demonstrated that those antibodies cross placental barrier causing damage in multiple fetal organs. Spike antibodies binded to pup's lungs, kidneys, brain, heart, liver, intestine were detected. Abortions, postpartum labors, still birth, neonatal death of pregnant females were observed.

Spike antibodies were found to bind to many human fetal lungs, heart, kidneys, brain, pancreas, liver, thymus, testicles, retina, coroid, sclera, eye ball.

Pathogenicity induced by Spike antibodies was substantially reduced when Nucleocapsid antibodies were added to Spike antibodies. [18] (Pathogenic antibodies).

Nucleocapsid antibodies are created in natural Covid-19 infection but not post vaccination [19] (Differential; 2021).

There was reported disturbed creation of Nucleocapsid antibodies if natural infection followed vaccination during Moderna clinical trial [20] (Anti-nucleocapsid; 2022).

Nucleocapsid antibodies are indicated to play important role in improvement of long Covid -19 infection [21] ( Serum Level, 2022).

#### **short summary:**

Spike antibodies are harmful to body. They do cause pathologies in many tissues and can be classified as pathological. They are capable to cross placental barrier and induce pathology in fetus resulting in fetal damage or fetal death.

Pathological effects of Spike antibodies are attenuated with Nucleocapsid antibodies that are not created post Covid-19 vaccination. Covid-19 vaccination disturbs Nucleocapsid antibodies creation even if vaccination is followed by natural infection.

Vaccination induces creation of only pathological antibodies. Antibodies that can mitigate those pathological effects are not created and their creation is disturbed later in life. Damages caused by pathological antibodies should be supposed to be more prevalent in vaccinees than in non vaccinated.

### **2.2. antibodies and reproduction**

European Medicines Agency (EMA) was petitioned to stop clinical trials of Covid-19 Pfizer-BioNTech vaccine ahead of the start of mass vaccination campaigns in EU. One of the reasons mentioned was similarity of Syncytin-1 protein to the part of Spike protein. Syncytin-1 protein is protein necessary for human placenta development [22] (Petition/motin; 2020).

Syncytin antibodies were investigated as potential immune based contraception for their ability to disrupt pregnancy [23] (Evaluation; 2004). There was found that Syncytin antibodies do create post vaccination in substantial amounts even prior to creation of Spike antibodies [24] [25] (Addressing; 2021; What; 2021).

Impaired fertility in animal models was reported in both mRNA vaccines by their manufacturers to EMA. There was found twofold increase in number of early abortions in vaccinated animals

following vaccination with Pfizer vaccine [26] (Assessment report Comirnaty; 2021) and reduced fertility in animals vaccinated with Moderna vaccine [27] (Assessment report Covid-19; 2021). Early pregnancy loss observed in animals is in line with findings in humans. One study reported 104 spontaneous abortions out of 127 pregnancies in women vaccinated up to 20 week of pregnancy. That account for pregnancy loss of about 80% [28] (Preliminary Findings; 2021). Pfizer reported to follow 270 pregnancies. Results of only 27 pregnancies were known to Pfizer. Another 5 pregnancies were pending at the time report. There was one pregnancy with twins out of the 27 pregnancies. 27 pregnancies ended with 23 abortions, 2 pregnancies with neonatal death, 2 abortions with intrauterine death and twin pregnancy ended with 1 abortion and 1 normal outcome [2] (5.3.6 cumulative; 2021).

**short summary:**

Impaired fertility due to Covid-19 vaccination can be supposed to be a matter of importance since it is based on findings on animal models as well as reports on humans. Higher pregnancy loss can be attributed partially to creation of Syncytin antibodies as well as effect of Spike antibodies.

### **3.0. POST VACCINATION IMMUNITY**

SARS-CoV-2 utilizes ACE2 receptor to infect cells except for peripheral blood cells like lymphocytes. Those cells express extremely low amount of ACE-2 and are infected by LFA-1 receptor [29] (ACE2-independent; 2022). The same receptor has been found to promote HIV infection and transmission [30] (LFA-1 expression, 2001). There was also shown HIV antibodies to bind to SARS-CoV-2 Spike protein [31] (Glycan; 2021).

Second dose of Pfizer vaccine was found to decrease post vaccination Spike antibodies levels in 38.8% vaccinated people if they were infected with SARS-CoV-2 prior to the start of vaccination [32] (Negative effect; 2021).

Disturbed creation of post infection Nucleocapsid antibodies was report in previously vaccinated by Moderna vaccine [33] (Anti-nucleocapsid; 2022) and in previously vaccinated health workers [34] (Serological; 2021).

Unintended effects of viral vector based vaccines on immune system need to be evaluated as well.

Ad5 viral vector is indicated to enhance HIV-1 replication in CD4 T cells [35] (Use of; 2020).

CanBiologics vaccine utilizes this vector [36] (The CanSino; WHO web).

**short summary:**

Covid-19 vaccination substantially effects immune system functioning. It disrupts development of natural post infectious Covid-19 immunity. It interferes with development of Nucleocapsid antibodies that neutralizes pathological effects of anti Spike antibodies (discussed above). Multi dose vaccination regimes even disrupts creation of post- vaccinal anti Spike antibodies in previously infected. This should be a red flag indicating unknown adverse processes going on in vaccinees. SARS-CoV-2 utilizes the same receptor to infect cells of immune system as HIV. Most probably this interaction is mediated by Spike protein that is created in vaccinees in higher amounts than in people with natural sever Covid-19 disease (discussed bellow).

Introduction of huge amount of cytotoxic Spike this way into immune cells warrant extreme caution due to the possibility of triggering development of HIV like syndrome in vaccinee.

### **4.0. ARE mRNA AND VECTOR VACCINES FORM OF GENE THERAPY?**

Food and Drug Administration (FDA) defined gene therapy as a therapy that achieves its effects by introducing genetic material into a targeted cell by means of nucleic acids, viruses or genetically modified micro-organisms [37] (Recommendations; 2006).

Moderna, Inc. informed potential investors that mRNA technology based vaccines were supposed to

be considered gene therapy by FDA in documents for US Securities and Exchange Commission [38] (United States; 2018).

European patent application of vector based flu vaccine developed in Gamaleya Institute directly mentions it's vector based flu vaccine to be genetic vaccine [39] (European patent, 2012).

**short summary:**

There is certain without any dispute that health organizations and drug regulator agencies were well aware that vector and mRNA vaccines are not nothing like prior vaccines but that they are gene therapies. Those vaccines were not evaluate as gene therapy based vaccines. This decision has serious consequences for vaccinees due to the differences in risk evaluation between standard vaccines and gene therapy.

#### **4.1. genetic integrity of vaccines**

mRNA vaccines:

There was reported by British Medical Journal (BMJ) that truncated and modified mRNA amounted up 45% in commercially used vaccines and 25-30% in vaccines used for clinical trials of Pfizer-BioNTech vaccine [40] (The EMA, 2021). EU based drug regulatory agency in the Czech republic was not able to provide information about genetic composition of mRNA vaccines in it statement [41] (Vážený pane; 2021).

vector vaccines:

The amount of genetic impurities during production of Adeno-associated virus vectors is reported to be usually 1-3% but can be about as much as 26%. Those impurities includes non vector sequences - plasmid DNA, DNA from host cells used during production and helper virus sequences, chimeric vector-non vector sequences and truncated vector DNA [42] (Cellular, tissue; 2021).

**short summary:**

There is no way to make guarantee for composition of genetic material contained in mRNA and vector vaccines especially if accounted for single batches or vials to be administered. Even drug regulatory agencies do not know genetic composition of Covid-19 vaccines.

#### **4.2. perseverance of vaccine genes in body**

mRNA vaccines:

There was shown perseverance of Pfizer vaccine mRNA in body for 60 days, the whole study length [43] (Immune imprinting; 2022).

vector vaccines:

Many non-human primates studies showed that adeno-associated virus vector can stay active and produce protein for years if applied intramuscularly. [44] (Adeno-associated virus; 2017).

Janssen Human based Adenovirus vaccine DNA was reported to be detected in animal body up to 180 days. The length of the study is not reported [45] (Assessment report; page 50).

**short summary:**

Gene based vaccines are made to perseverant in body active for months or even years.

#### **4.3. amount of Spike protein created**

There was performed study investigating amount of Spike protein created post mRNA vaccination. It was found more Spike protein to be created due vaccination than due to natural severe Covid-19 disease [43] (Immune imprinting; 2022).

#### **4.4. Spike protein in blood**

Exosomes with Spike protein circulate in high amount in blood at least up to 4 months post second dose of Pfizer mRNA vaccination; full study length [46] (Cutting edge; 2021)

#### **4.5. human transgenome creation**

mRNA vaccines:

Pfizer mRNA vaccine integrates into human DNA in 6 hours [47] (Intracellular reverse, 2022).

vector vaccines:

The possibility of virus vector DNA integration into human DNA was not study directly but it can be deduced from other adenoviral vector gene therapy studies.

There was reported adenoviral vector integration into animal and human DNA. Integration process often involves vector changes - rearrangement, partial deletion, concatemerization. There was also reported integration of vector DNA into human mitochondrial DNA [48] (Cellular, tissue; 2021; page 23).

It's of note that vector often integrates near genes involved in cell growth. Vector integration effects were reported to present themselves even years after application of vector based gene therapy [49] (A long-term; 2021).

**short summary:**

Both types of gene based Covid-19 vaccines do integrate in human DNA. mRNA vaccines could be reasonably thought to integrate more frequently than vector vaccines. There is indication of vector vaccines capabilities to integrate into human mitochondrial DNA as well. If mRNA vaccines can integrate into human mitochondrial DNA is not known.

#### **4.6. unpredictable products of vaccine genes**

Atypical truncated form of Spike protein was reported to form after adenoviral vaccination. This soluble Spike protein is thought to contribute to post-vaccination embolism [50] (Vaccine-Induced; 2021). Genes originated from adenoviral vector backbone are reported to express at different levels depending on human cell line used. Cellular transactivators in vaccinees and absence of E1 region of chimpanzee adenovirus vector can even facilitate expression of viral genes [51] (Adenoviral vector DNA; 2021).

**short summary:**

Expression of undeclared forms of mRNA, DNA in vaccinees can have deteriorating effects on health and survival of vaccinees. The effects of coexpression of human and chimpanzee adenoviral genes can not even be estimated at the moment.

### **5.0. SPIKE PROTEIN TUMOROGENESIS, ENDOGENOUS VIRUS ACTIVATION**

Spike protein located in cellular nucleus was shown to impair DNA repair processes in vitro. This way Spike protein can contribute to tumorigenesis [52] (SARS-CoV-2 Spike; 2021). In vitro study demonstrated ability of Spike protein to activate endogenous retroviruses that are dormant present in human DNA [53] (SARS-CoV-2 induces; 2022). Documentation provided to Australian drug regulatory agency by Pfizer company indicates that Spike protein created after vaccination enters cell nuclei [54] (Nonclinical Evaluation; 2021).

**short summary:**

There is strong support for concluding that post vaccine created Spike protein can enter nuclei of human cells. Spike protein inside cell nuclei can start tumorigenesis and activate dormant

endogenous retroviruses that were integrated into DNA during evolution.

## 6.0. VACCINE DISTRIBUTION IN BODY

mRNA vaccines:

Biodistribution study of Pfizer mRNA vaccine was released by Japan Pharmaceuticals and medical devices agency. This study lasted for 48 hours and it revealed that mRNA vaccine spreaded from the site of application into all the tissues investigated. Vaccine accumulated in many peripheral tissues. 118-fold increase of vaccine concentration was detected in ovaries. There was confirmed distribution of mRNA vaccine into brain as well [55] (SARS-CoV-2).

vector vaccines:

Virus vector used in Janssen vaccine can infect many cell types in vitro. The receptor used in vivo in humans is unknown for this vector [56] (Vaccines based; 2020).

EMA assessment report for human based adenoviral vaccine Janssen mentions that the vaccine does „not widely distribute following IM administration in the animals.“ Vector was detected at the site of application, draining lymph nodes and the spleen. From these tissues, Ad26 DNA diminished slowly, with a small amount remaining in iliac lymph node of 1 animal at 180 days post vaccination. [45] (Assessment report; 2021).

**short summary:**

Covid-19 vaccines are widely distributed in body. mRNA vaccines seems to effect broader spectrum of tissues than vector-based vaccines.

## 7.0. VACCINE LIPID NANOPARTICLES

LNPs are indispensable part of mRNA vaccines since they encapsulate mRNA. Risk evaluation of LNPs is tricky since minor changes in biophysical properties like particle size, shape, liposome lamirality, homogeneity can have substantial impact on LNPs effects. Physicochemical stability, bioactive moiety uptake, bio distribution, circulation times and immunogenicity are effected [57] (The novel; 2021). Even manufacturing process must be accounted in evaluating toxicity of nanoparticles [58] (Nanotoxicology; 2018). LNPs in Pfizer vaccines are highly inflammatory with estimated half time in humans of 20-30 days. There is not known if LNPs in humans can cause chronic inflammation leading to immune exhaustion or not [59] (The mRNA-LNP; 2021).

Toxicity of LNPs were not evaluated during approval process of Pfizer mRNA vaccines. There was stated that toxicological evaluation is not needed due to similarity of LNPs used in vaccine to other LNPs already used in human medicine. The same report provided to Australian drug regulatory agency mentions just a few pages bellow that those vaccine LNPs are dissimilarity to those already approved [54] (Nonclinical evaluation; 2021).

**short summary:**

LNPs used in mRNA vaccines are highly inflammatory and persist in body for long time. There is not known if those LNPs can cause chronic inflammation and lead to immune system exhaustion. No toxicological evaluation was made for LNPs used in mRNA vaccines despite the fact that even minor changes in their properties can have substantial impact on human health.

## 8.0. HUMAN TO HUMAN TRANSMISSION

**Horizontal transmission (from human to human):**



mRNA vaccines:

Children living in households with vaccinated people were found to develop anti Spike antibodies without being previously infected with Covid-19 virus [60] (Evidence for aerosol; 2022).

Accumulation of mRNA vaccine in airways tissues was detected. Those tissues involves saliva glands and lungs [55] (SARS-CoV-2; 2021). Human cells are known to secrete exosomes that contain mRNA. Exosomal mRNA was demonstrated to induce protein formation in cells [61] (Exosome secreted; 2013). Exosome based vaccines containing Spike protein of SARS virus induced high levels of anti Spike antibodies [62] (Exosomal vaccines; 2007).

Exposure of pregnant women to vaccinated persons or health professionals by breathing or skin contact was evaluated by Pfizer as environmental exposure during clinical trials of it's mRNA vaccine [63] (A Phase 1/2/3; 2020).

vector vaccines:

Viral shedding was observed in context of adenoviral associated virus vector gene therapy [64] (AAV specific) even when replication deficient adeno-viruses were used [65] (Adenovirus Vectors; 2015).

#### **Vertical transmission (from mother to unborn baby)**

Vaccine mRNA was detected in human milk [66] (Neutralizing Activity; 2021). Both types of vaccines - vector and mRNA vaccines have the capability to integrate into human DNA (discussed above). Cells exchange between mother and child during pregnancy. This process is called materno-fetal and feto-maternal transfer and is common occurrence in pregnancy. Genes contained in Vector and mRNA vaccines can be trafficked inside maternal cell DNA into unborn baby [67] [68] (Cell Migration; 2007; Maternal-fetal; 2014).

#### **short summary:**

The possibility of human to human transmission of Covid-19 vaccines was not addressed directly but was considered by Pfizer during clinical trials. Pfizer supposed exposition of unvaccinated to vaccinated or health care workers providing vaccination as environmental exposure.

mRNA vaccines do distribute and transfect almost every tissue in body, airways tissues included. It seem logical that exosomes produced by those tissues will contain active compounds of mRNA vaccines and this way the vaccine can be shedded in part or whole. Possibility of Covid-19 vaccine shedding was confirmed by finding vaccine derived mRNA in human milk.

Shedding of vector based vaccines seems to be possible with much lower probability but cannot be excluded till appropriate research be made and prove otherwise.

Vector and mRNA vaccines have capability to integrate into human DNA. This way human to human transmission by blood, tissues, tissue derivatives and from mother to unborn baby can happen and this way of transmission can be supposed to be proven.

## **9.0. RISKS IN CONNECTION TO THE WAY OF APPLICATION**

There were shown some risks in connection to the way Covid-19 vaccine is applicated. Inadvertent application of Covid-19 mRNA vaccine intravenously was reported to cause myopericarditis in mice model [69] (Intravenous; 2021).

Mice animal model also demonstrated substantial difference in toxicity of LNPs based on the way of application. Intradermal application of LNPs lead to robust inflammatory response. Intranasal application of the same dose killed about 80% of animals tested [70] (The mRNA; 2021).

## **CONCLUSIONS:**

This mechanism based analysis clearly reveals interconnected adverse processes to be triggered by

Covid-19 vaccines.

Covid-19 vaccines can be expected to cause live long hyperstimulation of immune system on the one hand and depletion of immune system functioning on the other hand. Both processes seems to proceed at the same time.

From the clinical point of view this analysis presents the prospect that vaccinees will be for some time asymptomatic. Later they will show symptoms of up and down regulation of immune system from time to time. Nevertheless the immune system functioning will decline in time.

Elevated tumorogenesis and activation of endogenous retroviruses can be expected in vaccinees in advanced stages of vaccine-induced disease.

Elevated tumorogenesis and activation of endogenous retroviruses while immune system is about to be depleted can lead to formation of atypical never before seen tumors and infections. There is possible that lowered immune capabilities will limit spread of new infections originated from endogenous retrovirus activation inside vaccinees to vaccinated people only since those infections will not be able to overcome barrier of competent immune system to spread.

The above mentioned processes can resemble HIV development prior therapy was developed except for the last stage.

The last stage of vaccine-induced syndromes seems to be the stage of incurable prion disease with versatile symptoms and 100% lethality.

There is also expected lowered fecundity and intergeneration transmission of Covid-19 vaccine induced syndromes due to autoimmunity induced by Spike antibodies and due to the transfer of transgenoming cells created inside pregnant women and transferred to babies as result of maternal-fetal transfer.

There is no way to establish the scale of people effected by adverse effects of Covid-19 vaccines but dangers of Covid-19 vacciness should not be underestimated.

Comparing risks of different vaccines seems to be tricky at the moment due to incompleteness of data available at the moment for all types of vaccines but estimation can be made on amount of genetic material applied per dose, biodistribution, probability of transgenome creation etc.:

Based on available data most adverse effects can be expected to caused by Moderna vaccine followed by Pfizer-BioNTech followed by vector vaccines.

There can also be estimated that the possibility and severity of adverse effects will be dose dependent and increase with lowered age of vaccine application.

Time line for dominant adverse effects appearance based on this analysis since the time of vaccination can be summarized as follows:

1. minutes to hours - anaphylaxis, allergic reactions
2. from day 4 on: effects on pregnancy: early pregnancy loss, fetal malformations etc.
3. from day 4 on: effects on reproduction: disturbed fecundity
4. from days or weeks: blood clotting
5. weeks to months: inflammatory complications - like myocarditis, pericarditis etc.
6. moths to years: autoimmune diseases triggering- inflammation in other organs like thyroid gland, brain (psychiatric deterioration)
7. months to years - syndromes of immune system exhaustion - rise in tumors, activation of latent viral infections like severe atypical shingles, severe mononucleosis etc.
8. years on: activation of endogenous retroviruses
9. years on: prion diseases manifestations - dementia, neurological diseases with atypical symptoms, atypical different organ malfunctions

Long term effects of SARS-CoV-2 infection are underinvestigated at the time but vaccines seems to have properties that can potentially surpass any adverse effects caused by natural SARS-CoV-2 infection. Vaccination must be halted till all of those adverse effects will be rebutted.

## **References:**

## WHY TO MAKE MECHANISM BASED ANALYSIS?

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- [2] (5.3.6 Cumulative; 2021)
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## ABSTRACT:

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## 1. SPIKE PROTEIN:

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