Pathways for Vaccine Damage

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To whom it may concern,

The WHO has recently published a statement listing the ten most imminent health challenges for humanity in 2019 [1]. The list includes a crusade against so-called *'vaccine sceptics*', i.e. people who challenge the safety and effectiveness of national immunisation programs.
Considering that there is no independent control of these two important parameters in today's vaccine programs and the industry alone is responsible for delivering data on their products, there is significant cause for concern when comparing these data with investigation by independent sources. The press is now claiming that "*vaccine critics are one of the greatest health risks for humanity.*"
Science would tend however to suggest that on the contrary; **it is a lack of vaccine safety, which is one of humanity's greatest health risks.**

The European Forum for Vaccine Vigilance (EFVV) is an association demanding freedom of informed vaccine consent and application of the precautionary principle with respect to vaccines in Europe and beyond. Many countries have vaccine injury payment schemes and sums paid out for vaccine adverse effects are significant: more than $4 billion total in the USA and over £74 million over 39 years in the UK. In the UK, claims will only be considered in persons over two years of age, precluding claims relating to most of the vaccine schedule. In addition, the adverse reactions acknowledged by vaccine injury compensation schemes only deal with side effects in close proximity to the vaccine administered whereas it can take time for an autoimmune condition to manifest and often victims have to prove over 50% disability linked with the vaccine. According to a US government-funded Harvard Medical School study, 'fewer than 1% of vaccine adverse events are reported' [2], so these staggering figures will represent only a very tiny fraction of the real number. The European Union's recent resolution on vaccine hesitancy also states clearly that transparency and safety monitoring in this field are insufficient. Vaccine safety is therefore a topic of significant concern, requiring further investigation before any vaccine is mandated anywhere.

As such, the EFVV would like to be quoted with the inclusion of the scientific facts. The current portrayal of vaccine-critical individuals as "*emotional, irrational and irresponsible*" is an insult to the therapists, family members, carers and activists who have witnessed the harm caused by vaccination programs to this generation. The increase in chronic neurological and immunological diseases recorded today is in fact proportional with the increasing number of vaccines delivered. This is the reality we face.

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[1] *https://www.who.int/emergencies/ten-threats-to-global- health-in-2019*

[2] *https://healthit.ahrq.gov/sites/default/files/docs/publication/r18hs017045-lazarus-final-report-2011.pdf*, p. 6.

It is not only isolated scientists, activists or parents of vaccine-damaged children who question the safety of today's vaccines. After scientific research revealed a causal link between vaccines and many autoimmune diseases (AID) and cancer in Italian soldiers, an Italian parliamentary inquiry commission, *Commissione Parlamentare Uranio Impoverito-Inchiesta SIGNUM* [3], issued the following imperative guidelines for vaccinating members of the military:

1. Before vaccination, all military personnel must undergo hypersensitivity and immune system assessment tests to establish whether the vaccine might cause harm.
2. Single- rather than multiple-dose vaccines are recommended.
3. No more than five single vaccines may be given at any one time, due to the increased risk of causing AID and cancer.
4. Every vaccinated individual must be monitored for ten years post-vaccination to determine what side effects might manifest later.
5. Persons allergic to military vaccines will not be allowed to join the military.

An important issue in vaccine science is the potential spreading of pathogens via a vaccination, known as "*vaccine spreading*".

Scientific evidence demonstrates that individuals vaccinated with live virus vaccines such as MMR (measles, mumps and rubella), rotavirus, chicken pox, shingles and influenza can shed the virus for many weeks or months afterwards and infect both vaccinated and unvaccinated alike (Rosen, 2014; Rota, 1995). Furthermore, vaccine recipients can carry diseases in the backs of their throats and infect others while displaying no symptoms of a disease themselves. "Numerous scientific studies indicate that children who receive a live virus vaccination can shed the disease and infect others for weeks or even months afterwards. Thus, parents who vaccinate their children can indeed put others at risk," explains Leslie Manookian, documentary filmmaker and activist [4]. Manookian's award -winning documentary, *The Greater Good*, aims to open up a dialogue about vaccine safety.

Both unvaccinated and vaccinated individuals are at risk from exposure to those recently vaccinated. Vaccine failure is widespread; vaccine-induced immunity is not permanent and recent outbreaks of diseases such as whooping cough, mumps and measles have occurred in fully vaccinated populations (Faryon, 2014). Flu vaccine recipients also become more susceptible to future infection after repeated vaccination (Mc Lean, 2014).

"Health officials should require a two-week quarantine of all children and adults who receive vaccinations," says Sally Fallon Morell, president of the Weston A. Price Foundation. "This is the minimum amount of time required to prevent transmission of infectious diseases to the rest of the population, including individuals who have been previously vaccinated."

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[3] https://www.dropbox.com/sh/ybwfqth0xyps25o/AADf3IcBTy94iZTSaRgMY-hla?dl=0&preview=Final+Report+of+IV+Parliamentary+Commission.pdf, pp 144-202.

[4] https://www.faim.org/leslie-manookian

“Vaccine failure and failure to acknowledge that live virus vaccines can spread disease have resulted in an increase in outbreaks of infectious disease in both vaccinated and unvaccinated individuals,” says Manookian, “The CDC should instruct physicians who administer vaccinations to inform their patients about the risks posed to others by those who’ve been recently vaccinated.”

The number of measles deaths declined from 7,575 in 1920 (10,000 per year in many years in the 1910s) to an average of 432 each year from 1958-1962. The vaccine was introduced in 1963. Between 2005 and 2014, there have been no deaths from measles in the U.S. but 108 deaths from the MMR vaccine (Shilhavy, 2019).

We must also draw your urgent attention to the results of an independent vaccine ingredient analysis carried out recently in Italy by the Corvelva group, using independent laboratories [5], in correlation with the mechanisms of potential harm described here below. The analyses revealed numerous impurities ranging from human and mice DNA to viruses, chemicals, etc., found in large quantities in the vials tested. Five out of seven vaccines do not conform to the guidelines for the quantity of biological material, DNA or foreign RNA of human or animal origin, or for the presence of genetic mutations of the antigens.
It is therefore of utmost importance not only to lay the responsibility for vaccine safety and coherence with the ingredients labelled, in the hands of the Industry, but to insist that independent monitoring be introduced by the states recommending or mandating these vaccine programs. Current regulatory systems are officially sponsored by the manufacturers or, as in the case of the CDC in the USA, the regulators even possess financial interests themselves by holding vaccine patents. The Cochrane Collaboration has frequently criticised this conflict of interest and lack of independence in the past.

In addition, today’s vaccine trials do not require a true placebo any more [6], making them invalid to judge safety from the moment the vaccines are launched on the market and administered to the public. As a general rule, only young healthy males are recruited for these studies; the population studied is therefore not representative of the vaccine’s target market. A return to scientific industry standards should be a priority so that regulatory panels may make an informed statement about the actual safety of today’s vaccines.

The EFVV therefore sees it as necessary and overdue to reassess current vaccine programs and initiate an open and honest scientific discussion on this topic. The Italian SIGNUM inquiry criteria should be applied not only to Italian military personnel, but to the general public wherever vaccine programs are imposed, in many cases by mandate.

It is not our aim to discuss the actual effectiveness of individual vaccines here (even if this is also a matter of grave concern) but to highlight proven potential pathways of harm through vaccines, most of which are in fact disregarded causes of the many current health problems in our children. Please take the time to consider these points and create a platform for a balanced exchange and debate to secure the health of our children.

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[5] *https://www.corvelva.it/speciali-corvelva/analisi.html*.

[6] *https://apps.who.int/iris/bitstream/handle/10665/94056/9789241506250_eng.pdf;jsessionid=0E5A50FDF67F6054557D265A446A46D3?sequence=1*

Mechanisms for potential neurological and immunological damage due to vaccines:

1. **Predisposing genetics and single nucleotide polymorphisms**
   MTHFR, apo E 4, COMT, VDR Taq, GST, etc.
2. **Environmental toxin background load**
   i.e. metals, chemicals, etc.
3. **Vaccine damage via allergic reaction to the ingredients**
   i.e. gelatin, neomycin, etc.
4. **Vaccine damage via autoimmunity**
   i.e. ASIA
5. **Vaccine damage via Inflammation and cytokine release**
   i.e. aluminium and polysorbate 80 as strong immune stimulators
6. **Vaccine damage via toxic ingredients**
   i.e. aluminium, squalene, thimerosal, etc.
7. **Vaccine damage via adjuvants**
   i.e. aluminium as a strong immune stimulator
8. **Vaccine damage via contaminants**
   i.e. viral and bacterial compounds found in around 60% of all vaccines
9. **Vaccine damage via cross peptide reactivity**
10. **Vaccine damage via modification to the microbiome**
    i.e. mast cell stimulation from aluminium
11. **Synergistic effects with other neurotoxic agents**
    i.e. mercury, fluoride

Potential pathways for vaccine damage:

Predisposing genetics and associated single-nucleotide polymorphisms.

A variety of genetic markers have been associated with a decreased capacity of the body to detoxify. The MTHFR polymorphism for example leads to a decrease in glutathione synthesis, one of the major elimination pathways of the body. The majority of children in the autistic spectrum belong to this classification. APO E 4 has been associated with a range of neurological diseases and as such has been recognised as a major risk factor for Alzheimer's disease. Science will tell if these genetic markers will be a contraindication for drugs with neurotoxic ingredients, such as vaccines and the neurotoxic aluminium in them. Many children with vaccine side effects present with these markers and scientists are discussing whether children with the individual risk factors should not be vaccinated.

Environmental toxin load.

In toxicology, most substances are studied individually for their harmful effects. We now know however that in order to judge the toxic effect we must also take their synergistic effect with other toxins into account. Considering the increase in chemicals, heavy metals, etc. in our environment, we must look carefully at the cumulative damage potentially caused by individual substances working synergistically. Aluminium on its own is neurotoxic. If we combine it with even small doses of mercury, the effect is much greater. If we take a dose of aluminium capable of killing one in one hundred rats and combine it with the dose of mercury capable of killing one in a hundred, the result is the death of all hundred rats observed.

Vaccine damage via allergic reaction to the ingredients.

Various vaccine ingredients have been shown to cause severe allergic reactions. The MMR vaccine for example has been shown to trigger egg allergies since the viruses are cultivated on chicken eggs (Herman, 1983). Other vaccine ingredients like the antibiotic neomycin (Kwittken, 1993), gelatin (Sakaguchi, 1995), yeast (Brightman, 1989), formaldehyde (Fabry, 1968), thimerosal (Cox, 1988), squalene (Asa, 2000), aluminium (Cosnes, 1990), hydrocarbon oils (Kuroda, 2004), etc. have demonstrated allergenic properties. Even active vaccine components like the tetanus toxoid (Jacobs, 1982) have demonstrated this.

The effect on the foetal immune and nervous systems for example has not been studied and should be a subject of future studies to ensure safety for the unborn child in the case of vaccines given in pregnancy. What is more, the results of the recent independent vaccine ingredient analysis organised by the Corvelva group in Italy, reveal that vaccines contain unknown ingredients with potential allergenic properties but these are not listed on the insert or in any document. Under such circumstances, how can the allergenic potential or effects of such products be established?

Vaccine damage via autoimmunity.

An entire book by respected international authors on the connection between vaccines and autoimmunity (Vaccines and Autoimmunity, 2015) was published by Prof. Shoenfeld.
In neurological problems of the central nervous system (CNS), autoantibodies against various brain structures, such as serotonin receptors, myelin basic protein, neuron axon filament protein, nerve growth factor and cerebellar neurofilaments, etc. (Fawal, 1996; Singh, VK, 1993/1997/2004; Singer, HS, 2006) have been observed.

Immunologists have now concluded that autoimmune disorders are not the result of excessive activation of a normal immune system but rather activation of a dysfunctional immune system. There is also compelling evidence to indicate that certain vaccinations are associated with these autoimmune-related conditions (Shoenfeld, Y, 2000).
Ironically, substances that suppress a portion of the immune system, usually cellular type immunity, increase the likelihood of autoimmunity. Immunologists speak about a Th1 to Th2 shift and vice versa. This can occur with exposure to mercury as well as in response to vaccination. A large number of autoimmune diseases are associated with a Th2 shift.

Vaccine damage via cytokines and excitotoxins.

Both animal and human studies show that systemic infections and also immune activation by vaccines, rapidly activate the brain's microglial system; in fact, vaccines can do so for prolonged periods. Practitioners report raised cytokines up to eleven years after an immunisation in vaccine-damaged individuals. Once the primed microglia are reactivated by a subsequent vaccination or infection, the microglia activate fully and secrete their destructive compounds as previously discussed.

The immune system can clear a natural infection quickly and then shut down the immune activation, thus allowing repair of what damage may have been caused. This shutting down of the microglia is very important. There is evidence that with repeated and excessive vaccine-triggered immune stimulation, the microglia do not shut down.

Any inflammation via infection or vaccine will result in a release of cytokines. Systemic inflammation has been shown to increase the risk of adverse neurological outcomes in extremely low gestation newborns (Kuban, 2015). In low concentrations, cytokines act to protect developing brain cells and promote brain development (neurotrophic function), but in high concentrations they can be very destructive, especially in combination.

Of particular importance are the inflammatory cytokines interleukin 1 and 1β (IL-1 and IL-1β), IL-6, and tumour necrosis factor-alpha (TNF-α). It is known, for example, that women who are infected with the flu during pregnancy are significantly more likely to give birth to an autistic child or a child with schizophrenia, depending on when the infection occurred. At first, they assumed this was due to the virus being passed to the foetus, but subsequent studies found that it was not the virus, but the mother's immune reaction that caused the problem—that is, it was the immune cytokines (IL-1, IL-2, Il-8, IL-6 and TNF-α) that were causing the injury to the baby's developing brain. Incidentally, if catching the flu when pregnant can increase the chances of giving birth to an autistic or schizophrenic child due to an intense increase in cytokine release, what will vaccines given during pregnancy do, as they also trigger an intense release of cytokines?

Another cytokine is type I interferon. Based on a series of experiments in mice and rats in the 1970s, Ion Gresser and colleagues drew attention to the possibility that inappropriate exposure to type I interferon (IFN) — for example, too much, for too long or at the wrong time — might be detrimental in mammals. With remarkable prescience, they postulated that the embryo-toxic effects of congenital viral infection might directly relate to the host IFN response (induced by the infectious agent) rather than to the virus per se (Crow, 2015). In mammalian cells, immune responses to viral infection often involve host-encoded nucleic acid-binding, pattern-recognition receptors (PRRs), including endosomal Toll-like receptors (TLRs, namely TLR3, TLR7, TLR8 and TLR9), RNA sensors (including the retinoic acid-inducible gene I (RIG-I-like receptors (RLRs) IFIH1 and RIG-I) and DNA sensors (particularly cyclic GMP–AMP synthase (cGAS) and γ-IFN-inducible protein 16 (IFI16)).

Virus-encoded nucleic acids are recognised as non-self pathogen-associated molecular patterns (PAMPs) and the binding of viral PAMPs to PRRs triggers signalling cascades that act through the adaptor molecules TRIF (in the case of TLR3), MYD88 (in the case of TLR7 and TLR9), mitochondrial antiviral-signalling protein MAVS (in the case of the RLRs) and stimulator of IFN genes protein STING (in the case of cGAS and IFI16).

These pathways induce the expression of virus-responsive genes and pro-inflammatory cytokines (including the type I IFNs), which restrict virus replication and modulate innate and adaptive immunity (Crow, 2015). Although the rapid induction and amplification of the type I interferon system is highly adaptive in terms of virus eradication, aberrant stimulation or unregulated control of the system could lead to inappropriate and/or excessive interferon output (Crow, 2013).
Interferons have been shown to be neurotoxic (Kessing, 2015) through activation of the type I receptor and the GluN2A subunit of the NMDA receptor.

Type I interferons have even been suggested to be a future adjuvant in vaccines, which we hope, from our current knowledge, will not be implemented (Bracci, 2008). It is of note that nucleic acids can also trigger inflammasome activation, which has been related to at least one human disease phenotype (Kaneko, 2011; Tarallo, 2012).

Following treatment with IFN (for example, for hepatitis C virus infection or as cancer therapy), numerous reports describe the occurrence of features such as digital vasculitis, SLE and glaucoma (Bessis, 2002; Ronnblom, 1990; Kwon, 2001). IFN production could also be a mechanism of a vaccine potentially harming the brain. In the case of microcephaly in Brazilian children it could therefore be that a generally harmless Zika virus could cause cytokine production which can be harmful to the developing brain; it is also plausible that this occurred due to vaccination or as a third scenario, the combination of the two or even more factors as a cumulative overstimulation of the immune system.

Vaccine damage via toxic ingredients.

Mercury (Bjørklund, 2018, Ha, 2016) and aluminium (Zhang Q, 2018) are known to be strong neurotoxins, but even ingredients like squalene demonstrate toxic effects by giving rise to pathogenic cells in both draining and non-draining lymph nodes (Holm, 2002). Many substances are usually declared to be safe as they supposedly don't cross the placenta but there are a considerable number of factors known to modify the placental crossing as well as the not yet established blood brain barrier in the foetal central nervous system.

Aluminium in vaccines has recently been observed as nanoparticles. Many studies generally consider nanoparticles to be unsafe as they can enter even cell organelles but the effect on the foetus has not yet been studied. Safety levels for vaccine ingredients are usually set for adults but not for children. To date, they don't exist for the foetus at all.

This should be of utmost importance for vaccine safety studies and needs to be set before legalising dosages harmful to the foetal or infant brain in early development. Again, the results of the recent independent vaccine ingredient analysis organised by the Corvelva group in Italy, reveal that vaccines contain unknown ingredients with potential toxicological properties but these are not listed on the insert or in any document. As such, how can the toxicological effects of such products be established?

Vaccine damage via contaminants.

Not listed on official lists are bacterial and viral contaminants in vaccines (Cutrone R, 2005; Harasawa R, 1994). Several studies found a high incidence of microorganism contamination in vaccines made by a number of major pharmaceutical companies, with figures as high as 60% of the vaccines being contaminated (Cutrone R, 2005; Geier M, 1978; Giangaspero M, 2001; Harasawa R, 1994; Johnson JA, 2001; Potts BJ, 1987). Bacterial and viral fragments have also been found in a number of vaccines. Vaccine promoters were quick to assure us that these viral fragments *should* cause no problem but research indicates otherwise.

In fact, a non-viable viral fragment implanted in microglia and astrocytes in the brain caused the devastating dementia associated with the HIV virus (Gonzales-Sarano F, 2005; Rubin SA, 1999). The virus does not infect the brain neurons themselves; the mechanism proposed is an immunological/excitotoxic-induced toxicity, just as we see with repeated vaccination.

The same mechanism is seen with a number of viruses, including measles viruses, borna virus and the herpes virus (De la Torre JC., 2002; Lellouch-Tubiana A, 2000; Ovanesov MV, 2006; Rubin SA, 1999; Volmer R, 2000). When brain glial cells or neurons are chronically infected with these viruses (called a persistent viral infection) the smouldering immune/excitotoxic reaction slowly destroys the brain cell connections because the immune system is attempting to destroy the infectious microorganism.

It can never however kill the organism so the destruction (and intense microglial activation) continues for decades, as we see in the autistic brain (Vargas DL, 2005). In 2017, Gatti and Montanari were able to demonstrate nano-contamination in vaccine samples. The results of this new investigation show the presence of micro- and nano-sized particulate matter composed of inorganic elements in vaccine samples. This is not declared among the components and their undue presence is, for the time being, inexplicable. In detail, they verified the presence of saline and aluminium salts, but further presence of micro-, submicro- and nano-sized, inorganic foreign bodies (ranging from 100 nm to about ten microns) was identified in all cases. Given the contaminations they observed in all samples of human-use vaccines, adverse effects after the injection of those vaccines are possible and credible, and also have the character of randomness since they depend on where the contaminants are carried by the blood circulation.

Vaccine damage via adjuvants.

Although in contemporary vaccine history, aluminium adjuvants have been portrayed as inherently safe (Offit and Jew, 2003), studies in animal models and humans have demonstrated their ability to inflict immuno-inflammatory conditions by themselves (Authier et al., 2001; Petrik et al., 2007; Couette et al., 2009; Israeli et al., 2009; Shaw and Petrik, 2009; Gherardi and Authier, 2012). There is no legal or medical requirement to demonstrate that aluminium adjuvants are without risk for human use and there is no approval mechanism. Only vaccines are approved for human use. There are two commonly used aluminium adjuvants, Alhydrogel® and AdjuPhos®, as well as a sulphated version of the latter, which is included in Gardasil, a vaccine against the human papilloma virus (HPV). Merck's own safety trial data suggest a frequency of adverse events for the vaccine of approximately 2.5% and similarly 2.5% for their 'placebo group' who received

their proprietary adjuvant. So, even though 25,000/1,000,000 perfectly healthy recipients become ill on receiving Gardasil, it is deemed to be safe since the same number became ill on receiving only the adjuvant alone. In a very small true control group where the placebo was reported to be saline, there were zero (no) adverse events. This raises some serious questions about adjuvants themselves.

Numerous publications demonstrate clearly the toxic nature of aluminium (Exley, 2016) and its role in the aetiology of diseases from multiple sclerosis (Mold, 2018) to Alzheimer's disease (Exley,2017) and even autism (Mold, 2017). Pathways of how the adjuvant aluminium can contribute to health problems have been identified (Mold, 2016; Mujika, 2017, Shardlow, 2018). Recently it was discovered that the effects of an aluminium adjuvant can be much more complex as there seems to be no clear dose-dependant correlation and even smaller concentrations can lead to more hazardous situations on a cellular level (Crepeaux, 2017).
In particular, aluminium's interference with the endocrine and immune systems' regulatory pathways may trigger pro-inflammatory and pro-oxidative cascades with detrimental effects on the brain's development and function (Tomljenovic and Shaw, 2011b; Blaylock, 2012).

It is the most commonly used vaccine adjuvant even if it has proven to be a neurotoxin and a strong immune stimulator. Hence, the adjuvant aluminium has the necessary properties to induce neuroimmune disorders. Babies in the womb have a different physiology and are much more vulnerable to toxic challenges. Even in adults, adjuvants can cause serious autoimmune and inflammatory conditions and safety levels are usually set for the adult organism.

The doses children, babies and foetuses are exposed to are therefore proportionally much higher and have usually not been investigated. The rise in neurological and neurodevelopmental problems in children is not being associated with a toxic insult to the developing immune and nervous systems, a link which has been proven in countless studies in the field of environmental medicine, immunology and toxicology.

Aluminium itself is toxic to all life forms (Exley, 2009). Aluminium is genotoxic, pro-oxidant, pro-inflammatory, and immunotoxic (Shoenfeld and Agmon-Levin, 2011; Tomljenovic, 2011; Tomljenovic and Shaw, 2011a, b; Blaylock, 2012). Additionally, aluminium is an endocrine disruptor; it depresses glucose metabolism and interferes with many other essential cellular processes such as calcium homeostasis, various ATP-dependent mechanisms, membrane receptor signalling, and mitochondrial function (Agarwal et al., 1996; Tomljenovic, 2011).

Experimental and clinical data have clearly identified the central nervous system (CNS) as the most sensitive target of aluminium toxic effects. The neurotoxicity of aluminium manifests typically in learning, memory, concentration and speech deficits, impaired psychomotor control, increased seizure activity and altered behaviour (i.e. confusion, anxiety, repetitive behaviours and sleep disturbances (Tomljenovic, 2011), yet it is the most commonly used adjuvant. Aluminium has potent and multifactorial stimulatory effects on the immune system (Exley et al., 2010).

Other than attenuated viruses, in the absence of aluminium, most antigenic compounds fail to launch an adequate immune response (Israeli et al., 2009), suggesting that a significant part of vaccine-induced immune stimulation may be driven by the aluminium adjuvant itself. In the triple vaccine used on pregnant women in Brazil for example, aluminium is used as adsorbed hydrated aluminium hydroxide (Al (OH)) and aluminium phosphate.

Aluminium compounds serve to boost dramatically and prolong the immune reaction of the vaccination. Some aluminium remains at the site of injection for years. Aluminium was first added to vaccines in 1926 and it has taken decades to start questioning its use. Aluminium compounds as well as other vaccine components boost immunity—including some undesirable components of the immune system such as B-cells. Vaccine adjuvants are designed to produce prolonged immune stimulation, so they pose a particular hazard to the developing nervous system. Studies have shown that immune activation following vaccination can last up to two years.

This means that the brain's microglial cells are also primed for the same length of time or possibly longer. What this causes for the developing brain in the foetus has not been studied. It is known that aluminium can accumulate in the brain and that this accumulated aluminium is associated with neurodegeneration.

The evidence for a link between aluminium neurotoxicity and Alzheimer's disease continues to mount. Aluminium, like mercury, activates microglia leading to chronic brain inflammation—a major event in both Alzheimer's disease and Parkinson's disease (Armstrong RA, 1995; Bishop NJ, 1997; Campbell A, 2004; Esparza JL, 2003; Shirabe T, 2002; Yokel RA, 1999). Flarend et al. conducted a study (using radiolabeled aluminium [^{26}Al]) in which either of two approved forms of adjuvants (aluminium hydroxide or aluminium phosphate) used in vaccines was injected at a dose approved by the FDA (0.85 mg per dose) (Flarend RE, 1997).

The results showed that aluminium was rapidly absorbed into the blood from both forms. However, aluminium phosphate was absorbed faster and produced tissue levels 2.9 times higher than aluminium hydroxide. Blood levels of aluminium remained elevated for 28 days with both adjuvants. Elevated aluminium levels were found in the kidney, spleen, liver, heart, lymph nodes and brain. What this does to the developing organs in utero has not been investigated. It is also known that aluminium enhances the toxicity of mercury and that aluminium, even from sources other than vaccines, increases inflammation in the body (Rojo, 2006). The question no one seems to be asking is this: Does the aluminium act as a constant source of brain inflammation? Research, especially focusing on aluminium-triggered microglial activation, seems to indicate that it does (Zhao, 1998).

It therefore appears plausible that disruptions of critical events in immune development may also play a role in the establishment of neuro-behavioural disorders (Dietert and Dietert, 2008). Indeed, immune stimulation (including vaccine-induced) during critical windows of developmental vulnerability, both pre- and post-natal, has been shown to produce behavioural outcomes and neuroanatomical abnormalities.

Vaccine damage via cross peptide reactivity.

Darja Kanduc describes peptide cross reactivity as the original sin of vaccines (Kanduc, 2012). She starts her important article by pointing out that evolution has created an extensive peptide identity platform being shared between viruses and humans. This sharing can bring harmful collateral effects in vaccine administration that can result in autoimmunological consequences for the individual.
She describes a vicious circle connecting peptide commonality, microbial immune escape, adjuvants in vaccines and autoimmune cross reactivity. In 1962 (Rowley, 1962), it was discovered that infections can lead to autoimmune disease as a result of cross-reactive antibodies or T cells. This leads to further research demonstrating that the sharing of amino acid sequences of structures between viruses and humans was a root of autoimmune diseases (Shapiro,1976; Ebringer A, 1979; Fujinami, 1983; Albert, 1999).

In this new interpretation called the molecular mimicry concept, the immune system "sees", "recognises" and "attacks" the pathogen sequences/structures. In doing so, the immune system does not pay attention to the fact that the main sequences and structures can be present in the host. As such, an autoimmune reaction is triggered, a theory which is still being discussed at present. Kanduc and others (Trost, 2010) have identified a massive overlap between viral proteins and the human proteome. In fact, millions of peptides are being shared.
They demonstrated that at a hexapeptide level, the commonality between microbes and humans shows a ratio of human proteins containing bacterial heptapeptides of 99.7% and those that don't, 0.3%. This illustrates that only a tiny fraction of approximately 30,000 proteins forming the human proteome is exempt from bacterial heptapeptide motifs. Kanduc (Trost, 2010) describes viruses and bacteria as a portion of human self and describes that they are subject to the same tolerogenic mechanisms that characterise human antigens and tissues. Kanduc also affirms that only those amino acid sequences uniquely expressed in a proteome may have an immune potential (Segal, 2017).

Hence, vaccination protocols including an immune response against whole antigens from viruses and bacteria may also induce a vast array of autoimmune responses in the vaccinated host because of the widespread pentapeptide sharing between viral and bacterial proteins and the human proteome (Kanduc, 2009; Kanduc 2011, Kanduc, 2012).

This mechanism might also explain the fact that active vaccines based on antigens from infectious agents might produce a weak (or no) response in the human immune system as it fails to recognise them as foreign since too many peptide sequences are shared with the host. This is why adjuvants have been introduced. They stimulate an immune response but by doing so lead to hyper-activation of the immune system and can alter or silence the still ill-defined mechanisms that keep the immune system under control and lead to an avoidance of harmful autoimmune attacks. Subsequent to adjuvanted vaccination therefore, specific reactions can occur between the host molecules/structures because of massive peptide matching between the microbes and human peptides thus starting an autoimmune response. This factor has not been investigated at all in vaccination safety studies for the unborn child.

Vaccine damage via modification of the microbiome.

Science has just started to discover the life of billions of microorganisms in and on our bodies. The 100 trillion microbes in the gut have around 4.3 million genes and we are only just beginning to discover how important they are for many body systems and functions. One gut bacterium for example has been shown to regulate glutathione metabolism in mice; this is our major intrinsic detoxification process (Mardingogiu, 2015) that can determine the way we react to toxins (e.g. vaccines) in our bodies.

Many gut bacteria have a direct influence on brain function. It's not yet clear how the microbiome alters the brain. Most researchers agree that microbes probably influence the brain via multiple mechanisms. Scientists have found that gut bacteria produce neurotransmitters such as serotonin, dopamine and GABA.

The immunostimulatory properties of aluminium have been routinely exploited for inducing mast cell-dependent food allergies in experimental animal models. Mast cells play key roles in a wide range of inflammatory gastrointestinal pathologies in which they compromise mucosal immunity and increase intestinal permeability (Berin and Mayer, 2009; Theoharides et al., 2009). Gastrointestinal dysfunction and food allergies are the most common non-neurological comorbidities in autism, and mast cell activation is strongly implicated as the underlying factor (Theoharides et al. 2009).

In fact practitioners worldwide who deal with vaccine injuries have reported a high incidence of elevated histamine levels in the GIT probably induced by the release from mast cells as a reaction to the vaccine. How this occurs is not yet clear but what the effect of a vaccine is on the foetal and infant GIT and therefore the microbiome has not been studied at all. In order to understand the important interactions between the microbiome and vaccines, a project with the name *Microbiome Vaccine Safety Project* [7] has recently been created.

Gut microbiota are known to affect vaccine response as several studies have now demonstrated. Imbalanced flora is associated with systemic inflammation and blunted immune response to vaccination. A recent paper was published with a central hypothesis that gut microbiota have a significant effect on host response to vaccination and in which it was postulated that a reduced or absent population of commensal flora coupled with an overgrowth of pathogenic strains may become a microbial predisposition to adverse vaccine reaction. [8]

Synergistic effects with other neurotoxic agents.

Synergistic toxicity effects occur in vaccine ingredients when combined with several other agents (chemicals, metals, etc.). One of them is the combination of fluoride (drinking water, toothpaste, etc.) and aluminium. Fluoroaluminium is a substance that interferes with immune function, as are many insecticides and herbicides used around the home. The most dangerous synergistic effect of any aluminium or thimerosal (ethylmercury)-

[7] *https://www.patreon.com/thegutclub/overview*

[8] *http://www.alliedacademies.org/timely-topics-in-clinical-immunology/*

containing vaccine is mercury. In a study on Amazonian children it was shown that methylmercury from maternal origin (i.e fish consumption) had a synergistic neurotoxic effect when combined with the ethylmercury in vaccines, manifesting in delayed neurodevelopment (Marques, 2016).

Nutrition and relevance to inflammation and potential vaccine damage.

The immune system depends on many nutritional and psychological factors. The digestive system is responsible for almost 80% of the immune function so its state is of vital importance for human defence mechanisms. A foetus does not have an active immune system of its own; it depends largely on its mother's. Factors that can influence the intestinal microbiome and the immune system in general can be:

Aluminium cooking ware.
As we heard above, aluminium is a neurotoxin. In many poorer countries, a large number of households use mostly aluminium cooking ware. It is possible that there is not only a neurotoxic effect but an immunological sensitisation may also occur through repeated exposure. Most vaccines nowadays use aluminium as an adjuvant. This could be a contributing factor to the fact that people in these countries are more prone to vaccine reactions.

Oils.
While omega-3 oils are known to be healthy, the EPA component is significantly immune suppressing and as a result, high intakes should be avoided. It is the DHA component that has most of the beneficial effects, especially as regards brain repair and inflammation reduction. DHA also inhibits excitotoxicity. In brain inflammation, a combination of EPA and DHA is preferable, with a lower content of EPA.

Malnutrition and also modern fast food can be factors causing orthomolecular deficiencies, which can make the foetus more vulnerable when exposed to an inflammation. Often forgotten is the substantial evidence that omega-6 oils powerfully induce inflammation and immune suppression when consumed in large amounts.

Pregnant women and children should avoid immune suppressing oils such as the omega-6 oils (corn, soybean, safflower, sunflower and peanut oils). Through consumption of food containing these oils, children's immunity can be altered, making them not only more susceptible to natural infection but also prone to vaccine complications.

Milk, gluten, fluoride, soy.
Milk and milk products and foods containing gliadin and gluten, such as grains for example, can have a synergistic effect on autoimmunity processes. The dairy protein casein is sometimes contained in vaccines and an adjuvant may therefore stimulate an immune response to it. Polysorbate 80, which is often used in vaccines, can contain wheat. Soy foods are also responsible for a significant number of food allergies and are

very high in glutamate, fluoride, and manganese as well as having a toxic effect on the thyroid gland. Fluoride should be avoided. Water is also a significant source of aluminium in the diet (it is added as a clarifying agent) and in fluoridated water the fluoride complexes with aluminium to form the highly neurotoxic fluoroaluminium compound. Flour, black tea, some conventional salts and baked goods made with aluminium-containing baking powder are additional sources of aluminium.

Mineral deficiencies:
Low magnesium intake is associated with higher degrees of inflammation in the body and lower glutathione levels. Magnesium deficiency enhances excitotoxicity, because it is a natural modulator of the NMDA glutamate receptor. Low intakes of magnesium greatly enhance glutamate receptor sensitivity, worsening excitotoxicity. Low magnesium also lowers brain glutathione levels, which increases brain sensitivity to mercury toxicity. Increasing magnesium levels reduces inflammation, raises glutathione levels and reduces excitotoxic sensitivity. Zinc and selenium are very important in many detoxification processes and have to be monitored as well. If physiological levels are not present at the time of an infection or vaccination this can predispose to side effects.

Vitamin deficiencies:
For an adequate neuroprotective state, the B Vitamins (Especially B1, B3, B6 and B12), Vitamin D and Vitamin C are important. Folates have become more and more important in recent years as MTHFR mutations are occurring in higher numbers making it difficult for the carrier to metabolise the active form of folic acid, so important in the body's detoxification processes through glutathione synthesis. It is therefore very useful to start folate supplementation in pregnancy with the active form methyltetrahydrofolate. If physiological levels are not present at the time of an infection or vaccination this can predispose to side effects.
Kalokerinos (1974) demonstrated repeatedly and quite conclusively that Aboriginal infants and children, a group with an unusually high death rate after vaccinations, were almost completely protected from this outcome by dosing them with vitamin C before and after vaccination. Measles is a major cause of death in children in low-income countries and is particularly dangerous in children with vitamin A deficiency.

Eight studies involving 2,574 participants were included in a review published by the Cochrane Collaboration and they found that there was no significant reduction in mortality in children receiving vitamin A. Vitamin A megadoses (200,000 international units (IUs) on each day for two days) however, lowered the number of deaths from measles in hospitalised children under the age of two (Yang, 2006).
Two doses of vitamin A are not considered to be overly expensive, and are not likely to produce adverse effects, the report concluded. Vitamin A deficiency is associated with increased mortality and this is especially true for a measles infection. To protect against the consequences of vitamin A deficiency, the World Health Organization recommends that high-dose vitamin A supplements be given together with routine vaccines to children between six months and five years of age in more than 100 low-income countries. The recommendation is based on logistical considerations. The consequences of combining vitamin A and vaccines were not investigated in randomised trials prior to the

implementation of this policy; it was assumed that the interventions were independent. Bern (Bern, 2012) found out however that whilst Vitamin A supplementation would enhance the non-specific beneficial effects on mortality of BCG and measles vaccine, it also enhanced the negative effects of the DTP vaccine.

The inactivated DTP vaccine has been associated worryingly with increased mortality from other infectious diseases. Whilst Vitamin A can therefore be beneficial in some circumstances and age groups, it can be dangerous for others when combining it with vaccines. These considerations, whilst scientifically proven, are never considered in health policies. Note that studies have shown that Vitamin A megadoses without vaccine implementation demonstrated effectiveness in decreasing mortality.

Phytochemical deficiencies (fruit, herbs and vegetables, etc).
A number of phytochemicals (flavonoids, polyphenols, quercetin, etc.) are neuroprotective, especially against inflammation and excitotoxicity. Highly anti-inflammatory are foods like pineapple, apples, cherries, papaya, almonds, walnuts, ginger, turmeric, spinach and sweet potatoes. If physiological levels are not present at the time of an infection or vaccination this can predispose to side effects.

Conclusions:

Vaccine side effects are rarely reported. Numbers range from one in one hundred to one in a thousand. As we have seen above through the different mechanisms in which harm can occur, evidence of damage can manifest with a significant time delay and to date, this has not been a subject for vaccine safety studies. Most vaccine follow-up studies stop after only a few days. The current increase in neurodevelopmental, psychological and autoimmune problems in children should alert us and incite us to consider vaccine side effects as a potential risk factor for these concerns.

All the aforementioned mechanisms should be topics for scientific investigation to ensure that mass or even mandatory vaccination programs targeting an entire generation don't result in irreversible damage to our children. The main emphasis should be that any ingredient used in an injection should not be toxicologically or immunologically harmful. At present, this is not the case. Safety levels for ingredients e.g. adjuvants should be set for the specific physiology and suitable peptides, not DNA, should be used in vaccines to avoid any cross-reactivity. Until we have actual data on these factors, vaccines in pregnancy should be avoided.

In addition, the European Parliament resolution of 19 April 2018 on vaccine hesitancy [9] stressed that researcher conflicts of interest must be declared, that there must be greater transparency around the EMA panel and the clinical data and trials it holds, as well as around the funding of independent research programs on vaccines and their adjuvants.

[9] http://www.europarl.europa.eu/sides/getDoc.do?type=TA&reference=P8-TA-2018-0188&language=EN&ring=B8-2018-0188

Here below are these vital articles aimed at ensuring public confidence (2017/2951(RSP)):

*5. *Points out that vaccines are rigorously tested through multiple stages of trials before being prequalified by the WHO and approved by the European Medicines Agency (EMA), and regularly reassessed;* ***points out that researchers must declare any conflicts of interest;***

*6. ***Proposes that researchers subject to a conflict of interest be excluded from evaluation panels; calls for the confidentiality of the deliberations of the EMA's evaluation panel to be lifted; proposes that the scientific and clinical data which inform the conclusions of the panel, and whose anonymity is guaranteed in advance, be made public;***

* *14. Recalls* ***the importance of transparency in building and maintaining public trust in medicines;***

* *15. Recalls* ***the importance of the Clinical Trials Regulation*** [10] ***in stimulating and facilitating research into new vaccinations and ensuring the transparency of the results of clinical trials****; calls on the Commission and the EMA to implement the Clinical Trials Regulation without further delay, in particular through* ***setting up the European Portal and Database (EUPD), the implementation of which has been subject to significant delays of over two years****; calls, furthermore, on all parties involved to ensure that the current process of relocating the EMA away from London does not cause any additional disruption or delays to the work of the agency;*

* *20.* ***Stresses that increased transparency in the process of evaluating vaccines and their adjuvants, and the funding of independent research programs on their possible side-effects, would contribute to restoring confidence in vaccination****;*

It is therefore of utmost importance, in compliance with this European Parliament resolution and given the scientific data presented in this paper, for decision-makers to keep an open mind with respect to the potential hazards vaccination may cause, and to avoid by all means the harm that may be done to an individual or to the population at large.
Shooting the messenger never avoided a catastrophe. Likewise, discrediting those who point to the scientifically proven risks will not add to the wellbeing of European and global populations.

The EFVV
European forum for vaccine vigilance

10 http://www.europarl.europa.eu/sides/getDoc.do?type=TA&reference=P8-TA-2018-0188&language=EN&ring=B8-2018-0188#def_1_8

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