10 September 2021

Open Letter from the UK Medical Freedom Alliance to:

- Prof Arne Akbar – President of the British Society for Immunology
- Prof Colin Dayan – Clinical Secretary of the British Society for Immunology

Re: British Society for Immunology "Immunity to SARS-CoV-2" Infographic

The UK Medical Freedom Alliance are an alliance of medical professionals, scientists and lawyers who are campaigning for Informed Consent, Medical Freedom and Bodily Autonomy to be protected and preserved.

We have become aware of an infographic published by the British Society for Immunology entitled "Immunity to Covid-19"[i]. We are genuinely concerned that this contains information which is not only unsubstantiated but also in direct contradiction to the available scientific evidence. We are deeply disappointed about misinformation being published by your society, which would certainly be expected to have well-founded expertise in this field.

Our concerns mainly relate but are not limited to your claims quoted below.

We set out evidence that challenges or refutes your statements:

1. Vaccination induces an immune response in a safe & controlled way

We take grave issue with this statement, which categorically declares Covid-19 vaccines to be safe.

a. Since the start of the Covid-19 vaccine rollout in December 2020, **thousands of vaccine-related illnesses and deaths have been reported** through databases in the US (VAERS[ii]), Europe (Eudravigilance[iii]) and the UK (MHRA[iv]), raising serious concerns about safety.

In the report published by the MHRA on 18 August 2021, there were **over one million (1,165,636) adverse reactions in the UK**, some of them extremely serious, including seizures, paralysis, blindness, strokes, blood clots and acute cardiac events. This report includes **1609 fatalities**.

Some life-threatening effects, such as blood clots and myocarditis[v], have been reported specifically in young people, who are at minimal risk from Covid-19 disease. The **risk of myocarditis following the Covid-19 vaccine seems to be 30-200x the normal background risk**, as shown in a recent presentation by the US CDC's Advisory Committee on Immunization Practices (ACIP) who are currently investigating 1200 cases of vaccine-associated myocarditis and pericarditis in the US[vi]. Although many of these cases are described as "mild" and resolve in the short-term, myocarditis carries a significant long-term risk of heart failure, and also may require restricted exercise and medication for several months after recovery.

In this context, it is also essential to note that Covid-19 **vaccine manufacturers demanded and were granted exemption from any liability for adverse effects of injury or death** caused by their products, as they did not feel they could afford to take on this risk[vii] [viii].

b. Traditional vaccines have been deemed safe as they rely on stimulating an immune response to either dead or attenuated virus strains or fragments. Covid-19 vaccines are based on **completely new biotechnology**. mRNA and DNA-vector vaccines have never previously received full regulatory approval for mass use in humans and are more akin to genetic manipulation/modification than traditional

vaccination. Not only is this a novel approach, but **the part of the virus (the spike protein) that is utilised to stimulate an immune response is now recognised to be the most pathogenic component of the SARS-CoV-2 virus.**

The current Covid-19 vaccines introduce a synthetic viral gene which induces the recipient's own cells to produce viral spike proteins. **Spike proteins appear to contribute significantly to the pathogenicity of SARS-CoV-2**, and there are studies suggesting that they have the potential to cause pathology on their own[ix] [x]. Multiple concerns have been raised by scientists regarding possible short- and long-term adverse effects, specifically relating to the spike protein[xi] [xii]. **The safety of this novel technology may not be assumed at this stage and will need to be thoroughly investigated and firmly established, using long-term trials and data analysis,** prior to declaring it with certainty.

c. It is currently unknown how much spike protein will be produced by an individual as a reaction to the mRNA / DNA, and for how long this process will continue. It is further unknown how strong the immune response of any individual will be to the spike protein, how long it will continue and whether it will be limited to exogenous pathogens or whether there may be a cross-reaction to endogenous tissues, prompting autoimmune disease[xiii]. It is plausible that younger, healthier people may produce higher quantities of spike proteins in response to the vaccine genes, potentially increasing the risk of side-effects. With many uncertainties regarding the immunological processes, we certainly suggest that this approach may not be described as "controlled".

d. Attempts at developing a coronavirus vaccine, which have been in progress for almost 20 years, have been limited by serious safety concerns in the animal trials[xiv] [xv]. Specifically, an effect of antibody-dependent enhancement (ADE) was observed, which caused animals to develop more severe disease when exposed to the wild virus after immunisation[xvi]. It has not been investigated whether the currently administered Covid-19 vaccines will trigger this devastating effect. There is a therefore a risk that **Covid-19 vaccines may worsen clinical disease due to antibody-dependent enhancement** (ADE). It has been acknowledged that this is potentially of significant concern, further questioning the safety of the immune response elicited by Covid-19 vaccines[xvii] [xviii].

2. <u>Vaccination reduces the chance of spreading the virus to others.</u>

The regulatory trials have not demonstrated whether Covid-19 vaccines reduce asymptomatic infection or transmission, and therefore the recipient is likely to still be able to spread the virus to others[xix] [xx]. It has never been claimed by the vaccine manufacturers that their products will prevent transmission or even infection.

Guidance from the UK government is that vaccinated individuals will still need to socially distance and wear masks[xxi]. The US Centers for Disease Control and Prevention (CDC) has recently advised that "*preliminary evidence suggests that fully vaccinated people who do become infected with the Delta variant can spread the virus to others*" [xxii]. In these circumstances, **there is simply no justification for suggesting that Covid-19 vaccines benefit the safety of others**.

3. <u>Most (even older people) produce a strong immune response to vaccination, which may be more robust than immunity following natural infection.</u>

SARS-CoV-2 infection has been shown to induce a robust antigen-specific, humoral immune response in humans, which "*will be extraordinarily long-lasting*". This was concluded as scientists found populations of bone marrow plasma cells (BMPCs) whose formation had been triggered by individuals' SARS-CoV-2 infection 7–8 months before[xxiii] [xxiv].

On the other hand, protection against Covid-19 following vaccination appears to wane after as little as six months[xxv] [xxvi]. Data from Israel, published in July, indicate that "*people with immunity from natural infection were far less likely to become infected again in comparison to Israelis who only had immunity via vaccination*"[xxvii]. A further, more recent study from Israel concurs, showing that vaccinated individuals had a "*13.06-fold (95% CI, 8.08 to 21.11) increased risk for breakthrough infection with the Delta variant compared to those previously infected*" and also were "*at a greater risk for COVID-19-related-hospitalizations*" [xxviii].

If the immune responses to vaccination were more robust than natural immunity, there would be no indication to consider any requirements for boosters as soon as six months following the initial doses, which is now being instigated in Israel and proposed in many countries including the UK and US.

4. Natural immunity may be linked to disease severity. Protection reduces over time and tends to be lower in people who were mildly ill.

There is no evidence that natural immunity against SARS-CoV-2 wanes over time. In fact, regarding other viral infections, the opposite has been demonstrated with life-long protective immunity after infection[xxix], whilst it wanes following vaccination[xxx]. A study published in February 2021 suggested that substantial immunological memory to SARS-CoV-2 lasts for up to 8 months after infection, finding that about 95% of subjects retained immune memory at about 6 months[xxxi]. The Lancet also reported that a "*previous history of SARS-CoV-2 infection was associated with an 84% lower risk of infection, with median protective effect observed 7 months following primary infection. This time period is the minimum probable effect because seroconversions were not included. This study shows that previous infection with SARS-CoV-2 induces effective immunity to future infections in most individuals*[xxxii].

Several studies have indicated that a **robust immune response is elicited independent of disease severity and even in the absence of any symptoms**. Research from Public Health England and the UK Coronavirus Immunology Consortium (UK-CIC) has demonstrated robust T cell responses to SARS-CoV-2 virus peptides in all participants in their study following asymptomatic or mild/moderate COVID-19 infection. They also found that a robust cellular memory against the virus persists for at least six months[xxxiii]. Another study also showed that **asymptomatic and symptomatic COVID-19 patients display similar levels of SARS-CoV-2-specific T-cell memory**, demonstrating the versatility and potential of memory T cells[xxxiv].

5. Two doses of vaccination produce long-term protection so far, and provide strong protection against many currently identified variants.

The validity of the statement regarding "long-term protection" is highly questionable considering the length of time Covid-19 vaccines have been available and the fact that a requirement for booster doses has already been indicated and even rolled out in some countries e.g. Israel.

The claim that vaccinations provide strong protection against many variants is incompatible with the observation of a significant number of breakthrough cases. Figures from Public Health Scotland indicate that a significant proportion of patients hospitalised with Covid-19 have been vaccinated (48% since the end of May). The proportion of vaccinated individuals among those who have died as Covid-19 cases is also substantial in Scotland (87% in July)[xxxv].

The current Delta variant appears to have largely escaped vaccine-induced immunity leading to high levels of Covid-19 related cases, hospitalisations and deaths in countries like Israel, Gibraltar and Iceland with almost fully vaccinated populations.

6. The immune system may not be able to recognize a viral variant.

A recent study showed that **convalescent subjects, previously infected with SARS-CoV-2, produce neutralizing antibodies that are potent against 23 variants**, including variants of concern[xxxvi]. In addition, this study also demonstrated that combinations of natural antibodies had the potential to decrease the generation of escape mutants. Natural immunity therefore confers a benefit not only to the convalescent individual but to society as a whole, as it reduces the risk of the development and spread of resistant variants.

Other studies have indicated that many people already had T cell reactivity to SARS-CoV-2 with no known prior exposure to the virus, indicating that natural immunity is not only long lasting but also very adaptable[xxxvii]. There is further evidence that **new variants are recognized effectively by T cells**[xxxviii] [xxxix].

Broad T-cell reactivity has been observed to many SARS-CoV-2 proteins, but notably only 3 of the 29 epitopes inducing immunity are located in the S protein, which is the target of gene-based vaccine-induced immunity. Vaccine-induced immunity develops therefore only towards a tiny fraction of what the immune system recognises of SARS-CoV-2[xl].

Vaccine-induced immunity on the other hand is less adaptable and would be more likely to depend on further booster doses to cover any variants. Indeed, it has been suggested that booster doses may lead to "*quantitative increase in plasma neutralizing activity but not the qualitative advantage against variants obtained by vaccinating convalescent individuals*" indicating that "***memory antibodies selected over time by natural infection have greater potency and breadth than antibodies elicited by vaccination***"[xli].

7. Immunity to the virus from natural immunity is boosted by vaccination

There is absolutely no basis for this claim that natural pre-existing immunity is boosted by vaccination, as prior immunity has not been tested in individuals receiving a Covid-19 vaccine. On the contrary, concerns have been raised, that individuals who already have antibodies against the spike protein due to a previous infection may be at increased risk of adverse reactions[xlii] [xliii]. Testing for pre-existing immunity has been advocated[xliv] but has so far not been implemented, and the effect of vaccines on recovered individuals is therefore unknown.

Conclusions and Recommendations

In the current situation, which is fraught with uncertainty and fear, the public is looking to professional societies for balanced and well-resourced advice. We suggest that any public institution conveying information relevant to Covid-19 vaccination bears the responsibility to do so comprehensively and based on all available evidence.

We further suggest that presenting such unsubstantiated messages as in your infographic is deeply irresponsible and even unprofessional.

We find it incomprehensible how a professional society for immunology has completely omitted to consider all the information we have presented in this letter.

We therefore strongly recommend that you immediately review and redact your resource and issue a corrected version, including comprehensive and scientifically validated and referenced information regarding the available evidence on immunity to SARS-CoV-2.

We thank you for reading this letter and sincerely hope you consider its contents in full.

UK Medical Freedom Alliance

www.ukmedfreedom.org

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[i] https://www.immunology.org/coronavirus/connect-coronavirus-public-engagement-resources/covid-immunity-natural-infection-vaccine
[ii] https://www.openvaers.com/covid-data
[iii] http://www.adrreports.eu/en/index.html
[iv] https://www.gov.uk/government/publications/coronavirus-covid-19-vaccine-adverse-reactions
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[xxxiii] https://www.birmingham.ac.uk/university/colleges/mds/news/2020/11/covid-moss-cellular-immunity.aspx
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