A new review article by an international working group is now available

My colleague Gerry Quinn from the Centre for Molecular Biology at the University of Ulster in Northern Ireland published an important review paper some time ago on the problems and missteps during the COVID-19 pandemic. I helped with it in part [1]. We have now published a new review paper with a similar group of authors on the issues surrounding the mRNA platform. Whilst the paper primarily focuses on the COVID-19 vaccines, as these were the first products to be produced and authorised using this platform, it is important to bear in mind that this is an entirely new pharmaceutical technology, and the industry will pull out all the stops to harness the momentum generated by the COVID-19 vaccines for other vaccines.

This new study, which is now available online in the Journal of Toxicology, is highly recommended to all [2]. There is now also an official press release from the research center. It is well worth studying this paper in detail. It has undergone several rounds of peer review, including by some sceptical reviewers, and endeavours to present the situation as neutrally as possible. I shall summarize the key points here. One thing is certain: unless a strong political counter-movement forces the regulators to apply our current legal standards, a whole host of new mRNA-based interventions and ‚vaccines‘ will be authorized, and the problems we experienced during the COVID-19 vaccination campaigns will multiply.

The History

Attempts to use RNA as a pharmaceutical vehicle have been ongoing for over 20 years. Initially, these failed because foreign RNA triggers a severe immune response. The body’s own RNA is metabolized immediately. So what was to be done? The first breakthrough came in 1989, when Robert Malone and his colleagues demonstrated that RNA, encapsulated in lipid particles, could be delivered into the body. Incidentally, Robert Malone is now one of the fiercest critics of these vaccines and maintains an interesting Substack, where he discusses this issue.

Another important step was to replace the ribonucleic acid uridine in the RNA with pseudo-uridine (more precisely, N1-methylpseudouridine—m1Ψ). This is a synthetic nucleic acid. Whilst pseudouridines occur frequently, the methylated form is synthetic. This technique made it possible to stabilize the RNA and use it to encode foreign genetic information. In the case of the COVID-19 vaccines, this was specifically to encode the spike protein. These two steps enabled the more stable modified RNA (modRNA) to be packaged in such a way that it

could enter the body and exert an immunological effect there.

Although this sounds ingenious in theory at first, and the hope that many have placed in these vaccines is understandable, in this article we highlight a number of problems that have been given too little attention. In essence, these will apply to all modRNA vaccines. Such vaccines, e.g. for influenza, are already authorized in the USA and are also undergoing the authorization process in Europe.

I only summarize the key points. The relevant literature is cited in the article.

- m1Ψ-pseudouridine is rarely found in humans

It is found in archaea, in bacterial RNA, in yeast, and in human cancer cells. It has been shown that its presence causes reading errors, known as frame-shifting. This occurs when, during the reading of a genetic codon, the correct sequences are not read; instead, other sequences arise, for example, through the omission or insertion of an additional codon. This has now been not only theoretically demonstrated but also proven for modRNA. In practice, this can lead to the formation of incorrect proteins and immunological problems.

- The lipid nanoparticles (LNPs) do not remain at the injection site

Animal studies have shown that, contrary to what is generally claimed in propaganda, lipid nanoparticles do not remain at the injection site. They spread throughout the body because there is a high probability that a blood vessel will be hit during injection. However, this means that all kinds of cells – including, for example, endothelial cells in blood vessels, cells in the uterus, and cells in the brain – can carry the antigens on their surface and thus become targets for the immune system. This leads to local inflammation and an attack by the immune system on the body’s own cells. This issue is difficult to resolve. If, as is customary with other vaccinations, one aspirates – that is, draws back the syringe after the injection to ensure that no blood vessel has been damaged – the LNPs are subjected to additional pressure, which destroys them. The problem could only be solved by using a different type of syringe. Nevertheless, it is highly problematic to assume that one can determine the site of antigen exposure within the body.

- The lipid nanoparticles themselves are problematic

LNPs are pro-inflammatory, activate the complement system (part of the innate, natural immune system), and are therefore problematic in their own right. In the past, medicines developed on this basis have already been withdrawn due to immunological concerns. We describe the mechanisms of these inflammatory processes.

- Spike protein as an antigen

The spike protein as an antigen, encoded by the mRNA, has already been widely criticized. Whilst it is a key marker of SARS-CoV-2, there would have been other, less problematic gene sequences available. This is because the spike protein is precisely the part of the virus that leads to clinical issues and, likely, to what is now known as Post-Vaccination Syndrome. The persistence of this protein following vaccination, in combination with various human cell types—such as monocytes—has been documented over many months and could explain a whole range of clinical syndromes.

- DNA contaminants and the problems they pose

The original authorization documents relate to a modRNA substance produced via a purification process using a PCR template, i.e. in the laboratory. This process is not suitable for mass production. A second process was therefore used, which involves a bacterial template. For this purpose, Escherichia coli bacteria are genetically engineered so that they mass-produce spike proteins as the end product. The risk here is that bacterial DNA also ends up in the vaccines, a fact that has now been demonstrated on several occasions. This poses the risk that such bacterial DNA could be incorporated into the human genome. Such incorporation has been detected in animal trials.

This could also lead to immune dysregulation. The bacterial endotoxins, which are attributable to the original E. coli template, can trigger severe immunological reactions.

- Endothelial injury

As outlined above, the expression of spike proteins in cells of the blood vessel walls can lead to immunological reactions against these cells. This explains various problems that have been observed: ranging from thrombosis and vasculitis to myocarditis and heart attack.

- Specific problems with the COVID-19 vaccines: lack of risk assessment, insufficient efficacy, issues with the trials

Normally, toxicological data from animal studies must be available before human trials can begin. This is the lesson learned from the thalidomide scandal of the 1960s. This was disregarded during the authorization of the COVID-19 vaccines. The argument put forward was the grave danger posed. However, it was clear that such a danger of high case fatality rates did not exist as early as the beginning of 2020, when these trials were planned. The case fatality rate was in the range of a severe bout of flu, i.e. approximately 0.7–0.9 percent [1]. Therefore, this breach of the regulatory process is inexcusable. Sterz, one of our co-

authors, has already pointed this out [3].

We would also point out that the vaccines were of limited efficacy. Admittedly, the relative risk reduction (RRR) was emphasized in communications. This was always high to satisfactory. However, this is a misleading figure, as it does not consider the total number of people affected. If one does so, one obtains the absolute risk reduction, and this was only 1 percent or less from the outset. We present this in the following table:

Vaccine	Participants		Cases identified		RRR %	ARR %	Vaccine type
Vaccine	Control	Vaccine	Control				
Pfizer/BioNTech	21,720	21,728	8	162	95.06	0.71	modRNA/LNP
Moderna	15,210	15,210	11	185	94.05	1.14	modRNA/LNP
Oxford AZ	5807	5829	30	101	70. 18	1.22	viral/vector DNA
Johnson & Johnson	19,630	19,691	116	348	66.56	1. 18	Viral DNA/vector
Sputnik	16,501	5,476	16	62	91.41	1.04	Viral DNA/vector

Table 1 (Table 2 of the original publication) – Vaccines, absolute number of participants in the studies, number of cases, relative risk reduction (RRR), absolute risk reduction (ARR) and type of vaccine

If we take the first row, for example, the eight cases in the vaccine group divided by the 162 cases in the control group gives 0.049, and 1 – 0.049 gives a relative risk reduction (RRR) of 95.06 percent. However, if you divide 162 and 8 respectively by the number of cases in each group and calculate the difference, you get the absolute risk reduction (ARR), which is less than 1 percent. This is because the ARR takes into account the total number of people to whom this ratio applies.

And this is important if one wishes to balance the efficacy – that is, the ARR – against safety. This is because a vaccine is administered to a very large number of people, and all of them then face the risk of experiencing side effects. In contrast, the risk of experiencing a symptom against which one wishes to be protected is relatively low in the case of a disease such as COVID-19. This can be seen simply by comparing the number of cases in the control

group with the total size of the control group. In the case of the Pfizer trial, the risk of contracting a PCR-confirmed infection would have been 0.7 percent (162/21,728 × 100 = 0.7). This is because these studies did not even investigate clinically relevant outcomes (such as severe illness or death), as these would have been far too rare. As early as 2022, Fraiman and colleagues pointed out, based on Canadian regulatory data, that the risk of suffering a severe vaccine side effect is greater than the risk of being hospitalized with COVID-19 requiring treatment [4].

We also draw attention to other issues that cast serious doubt on the credibility of some studies. Reports have emerged detailing serious breaches of good practice: from the withholding of safety data to false reporting, for example regarding the number of deaths [5] or the number of positive cases in the active groups.

- Side effects and other issues

We draw attention to the long list of side effects that only became apparent over time. A very large cohort study found a 286 percent increased risk of heart attack, a 240 percent increased risk of stroke, and similarly high risks for coronary heart disease and arrhythmias [6]. The Vaccine Adverse Events Reporting (VAERS) database reveals that 91 percent of all vaccine-related deaths recorded since 1990 are attributable to COVID-19 vaccinations, more than for all other vaccinations combined. Estimates of the increase in mortality, infertility, neurological and many other problems we mention are correspondingly high.

- The unresolved issues

We conclude that mRNA technology is unusable. It violates a whole series of well-established principles:

- We do not know exactly where a substance is transported to.
- We do not know how long production takes.
- We do not know how much of a substance is produced.
- Production cannot be stopped because the system does not have a stop switch.
- This violates the three most important principles of good pharmaceutical practice.
- Furthermore, the technology disrupts the immune system even when used in accordance with the instructions.
- It always causes inflammation

These are not all the issues, but they are arguably the most significant ones. Some issues specific to the COVID-19 vaccines could, in theory, be brought under control in the future through more sophisticated production methods. However, the concerns mentioned above

are inherent to the platform and, as things stand at present, cannot in principle be resolved.

This should serve as a warning to everyone: the mRNA platform should not be promoted as a viable solution for the future. Because it is not. It is a form of gene therapy, even though a clever regulatory loophole has been used to exempt gene-therapy-based vaccines from the regulatory requirements applicable to gene therapies; otherwise, these products would never have stood a chance. But a change in terminology does not alter the nature of these substances: they are, and remain, gene therapies.

Sources

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