

Letter to the Editors

International Journal of Vaccine Theory, Practice, and Research

Brief summary: It is reported that the microscopic constructs identified in the Pfizer and Moderna COVID-19 injections are responsive to manmade electromagnetic fields, such as a mobile/cell phone on a wireless charger. However, this conclusion requires further investigation and validation.

Dear Editors,

I read the 2024 paper by Lee and Broudy¹ with interest, but I came away with some concerns, particularly in regard to the conclusion that the identified constructs are responsive to the electromagnetic fields (EMF) emitted by a mobile or cell phone in 5G streaming mode atop a wireless battery charger.

In scientific investigation, if there is another plausible explanation for an observed phenomenon, then it needs to be considered in the study design, analysis, and/or interpretation. For example, the visual similarities between the response to warming (Figure 22) and the response to EMF exposure (Figure 23) struck me as important.

In the ‘Heat’ experiment, the test solutions — Pfizer or Moderna product in distilled water or 0.9% sodium chloride (normal saline) — were placed on a heating pad or plate set to 36.5 °C and left overnight. By morning, crystalline structures with geometric shapes had formed on the top of the solution:

“The next morning assembled nanostructures were observed [microscopically] floating over the surface of the medium in more discernible and developed shapes than before the heat (warming) exposure. Two to three weeks were needed for the growth of structures at room temperature (15–20 °C) whereas one evening was needed for the same growth at body temperature (Figure 22).”

We don’t know how long it took for these structures to form or assemble under the influence of warming; it could have been 1 hour or less. Unfortunately, the test solutions weren’t reexamined until the following morning.

In the ‘EMF’ experiment, the test solutions were placed directly onto a mobile/cell phone for 1–2 hours while the phone was in 5G streaming mode. The phone itself sat atop a wireless charger (*i.e.*, the charger is connected to mains power; the phone is placed on it so that its battery can be recharged wirelessly). The authors don’t specify whether or not the charger was plugged in and turned on for this experiment, but in Figure 3(b), which shows three culture plates on a phone, the charger beneath it is clearly turned on.

In this particular experiment, there were striking differences between the Pfizer and Moderna products. Multiple crystalline structures appeared at the top of the Moderna solution within 1 hour of exposure, whereas the Pfizer solution remained unchanged:

“Even after 1 hour of exposure to the wireless recharger with a cellular phone in operational mode, Moderna showed noticeable immediate changes. The floating materials abruptly became larger and more numerous with sharper and more rectangular edges (Figure 23). In contrast, Pfizer showed no immediate response...”

It wasn't until 1 month after this short exposure that the Pfizer solution showed any change: “a moderate proliferation of floating filaments (Figure 24).”

There are at least two differences between the products that are worth considering in relation to this differential response. The first is that the Moderna product may have contained more than three times the concentration of encapsulated mRNA as the Pfizer product. The vial contents aren't specified in this paper, but from memory the Moderna product in late 2021, when this study was conducted, delivered 100 µg/dose and the Pfizer product for adults delivered 30 µg/dose.

Second, the Moderna solution was incubated for 36 days before EMF exposure, whereas the Pfizer solution was incubated for 101 days. However, this difference should have had little impact, given that the graph shown as Figure 9 indicates appreciable development of these microscopic constructs at both times. Development of these constructs in undisturbed solutions peaked between 2 and 6 months of incubation for both products, regardless of the medium (distilled water or normal saline). In fact, at 36 days' incubation, the Moderna solution was nowhere near at its peak, which occurred at 4–5 months of incubation.

Again, the Pfizer product showed no response during EMF exposure in this study, and only a very small and arguably immaterial change 1 month later.

Furthermore, in the ‘before’ photomicrograph of the Moderna solution prior to EMF exposure (Figure 23, a), multiple structures appear faintly in the background, best seen when the image is enlarged. Might they simply have changed position within the fluid medium during this experiment — *i.e.*, might they simply have risen to the top — making them more noticeable under the stereomicroscope focused on the near field (the surface of the medium)?

What is not considered in this experiment is the possible effect of heat generated by the phone in streaming mode, by the phone as its battery charged, and by the wireless charger itself. Although it's unlikely that these processes raised the temperature of the test solution into the physiological range, it is entirely plausible that in the 1–2 hours the solution sat on the devices, it was warmed above the ambient temperature (15–20 °C). At what temperature is development of these constructs appreciably accelerated?

A second possibility is mechanical vibration from one or both electronic devices that was indiscernible to the human senses. Or might the phone have received a call, text, or other alert during the exposure period for the Moderna product but not for the Pfizer?

The energy for assembly of these artificial constructs must come from somewhere. In this experiment, EMF was only one possible source, yet it was the only one considered.

In short, other plausible explanations for the observed effect were not considered. Neither was any explanation offered for why the Moderna solution appeared to be EMF-responsive whereas the

Pfizer solution was not, even though both were tested within the incubation window in which multiple assemblies formed.

Confounding things further, there was another experiment involving EMF: exposure to an external hard drive connected to a personal computer. The test solutions were placed on the hard drive for 2 hours while the drive was activated by various file management tasks. This exposure had no effect on the Moderna solution and only slight effect on the Pfizer solution:

“After two hours of exposure... Moderna showed no noticeable effects, but Pfizer showed modest disruptive changes — slightly blurred boundary lines across structures with softer edges sitting at the bottom of the culture dishes.”

This subtle blurring is suggestive of physical disturbance, such as a fine vibration indiscernible to the human senses, or of slightly increased opacity of the fluid medium. Again, other explanations were not considered.

The reason I raise this issue and “pick” at these “nits” is because I am concerned that many readers may consider the matter settled as to whether or not these artificial constructs are responsive to manmade EMF on the strength of this study. I have no doubt that these constructs are unnatural, are in these products by design, and are intended for undisclosed and likely (to me) nefarious purposes. However, we still need to design and implement robust scientific studies that settle the question of whether these constructs are indeed EMF-responsive, to what extent, under what conditions, and to what end.

An additional concern, and one directly related to the question of EMF-responsiveness, is how little the constructs in this study resembled the complexity and apparent sophistication and purpose documented recently by Dr David Nixon,² using both dark- and bright-field microscopy. Some of the more advanced constructs he presented look for all the world like micro-electronic circuitry components. In contrast, the assemblies in the Lee and Broudy study are relatively rudimentary.

There is so much we don’t know about the contents of these vials, yet so many assumptions have been made and assertions confidently broadcast. Our credibility is on the line here, and we cannot afford for our concerns to be dismissed — or worse, our efforts discredited — because we are acting ahead of irrefutable scientific evidence.

Thank you for the opportunity to share my concerns here.

Sincerely,

Christine King, BVSc, MANZCVS, MVetClinStud

Emerald, VIC

Australia

Submitted 18 April, 2025

References

1. Lee, Y.M., & Broudy, D. (2024). Real-time self-assembly of stereomicroscopically visible artificial constructions in incubated specimens of mRNA products mainly from Pfizer and Moderna: a comprehensive longitudinal study. *International Journal of Vaccine Theory, Practice, and Research*, 3(2), 1180–1244. <https://doi.org/10.56098/586k0043>
2. Nixon, D. (2025). Active microscale construction in Pfizer Comirnaty: investigating complex self-assembling structures. *Journal of Bionanotechnology*, 1(1), 1–114. <https://cdn.manula.com/user/15577/docs/active-microscale-construction-in-pfizer-comirnaty-20250409-final.pdf>