

Survival and Infectivity of SARS-CoV-2 under the Influence of Taheri Consciousness Fields in Different pHs

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**Dr. Laleh Amani was an outstanding, compassionate, and enthusiastic researcher in the CosmoIntel, Inc studies who passed away in 2021. We extend our sincere condolences and appreciation for her extraordinary efforts in this research and pray for her peace.

ABSTRACT

The SARS-CoV-2 virus is responsible for causing coronavirus disease 2019 (COVID-19), which has become a severe and important public health problem globally since 2019. Studies have shown that the pH of the environment is a critical factor for the entry of a virus into cells and the fusion of its envelope with the membrane of the host cells. Taheri Consciousness Fields (TCFs) introduced by Mohammad Ali Taheri, are novel fields that are neither matter nor energy. Therefore, they are non-quantifiable and cannot be directly observed or measured. However, it is possible to demonstrate and measure the effects of these fields through standard scientific experiments. This study aimed to investigate the effects of two TCFs (A and B) on the survival and infectivity of SARS-CoV-2 in different pHs. Viruses (1×10^6 TCID₅₀) were exposed to several pH conditions (pH: 2-12) at room temperature for one day. CPE (cytopathic effect) monitoring and TCID₅₀ were used for the evaluation of virus survival and infectivity. The results showed that the two TCFs completely inactivated SARS-CoV-2 at pH of 4, 11, and 9.5 and significantly reduced the virus titer at pHs of 6, 7.2, and 8.5. These results suggest the TCFs as a qualitative intervention can inactivate SARS-CoV-2. However, additional research is needed to further clarify the mechanism of action of TCFs on the survival and infectivity of SARS-CoV-2.

Keywords: Taheri Consciousness Fields, T-Consciousness, COVID-19, SARS-CoV-2, pH

INTRODUCTION

The emergence of coronavirus 2019 (COVID-19) in China and its rapid spread poses a health emergency all around the world (Ciotti et al., 2019). Ecosystem-related factors such as pH, temperature, disinfectants, objects, food, etc. play a critical role in the survival rate of SARS-CoV-2 outside the body and in the laboratory environment. Furthermore, the studies have revealed that pH is an important factor for the fusion of virus envelope with the membrane of the host cells and entry into cells (Earp et al., 2004). It is easier for the SARSCoV-2 to attach to ACE2 (angiotensin-converting enzyme 2) in lower cytosolic pHs because the lower cytosolic pH, the increased ACE2 level increases the viral load (Cure et al., 2020).

The nature of consciousness and its place in science has received much attention in the current century. Many philosophical and scientific theories have been proposed in this area. In the 1980s, Mohammad Ali Taheri introduced novel fields with non-material/non-energetic nature named Taheri Consciousness Fields (TCFs). In this perspective, T-Consciousness is one of the three existing elements of the universe apart from matter and energy. According to this theory, there are various TCFs with different functions, which are the subcategories of a networked universal internet called the Cosmic Consciousness Network (CCN). The major difference between the theory of TCFs and other theoretical concepts about consciousness is related to the practical application of the TCFs. These fields can be applied to all living and non-living creatures, including plants, animals, microorganisms, materials, etc.

Mohammad Ali Taheri, the founder of Erfan Keyhani Halqeh, a school of thought, introduced a new science in 2020 as a branch of this school. He coined the term Sciencefact for this new science because it utilizes scientific investigations to prove the existence of T-Consciousness as an irrefutable phenomenon and a fact. Although sci-

ence focuses solely on the study of matter and energy and Sciencefact, by contrast, explores the effects of the [non-material/non-energetic] TCFs, Sciencefact has provided a common ground between the two by conducting reproducible laboratory experiments in various scientific fields, and it has used the scientific approach in proving TCFs.

The influence of the TCFs begins with the Connection between CCN as the whole Taheri consciousness of the universe and the subjects of study as a part. This Connection called "Ettesal" is established by a Faradarmangar's mind (a certified and trained individual who has been entrusted with the TCFs). The human mind has an intermediary role (Announcer) which plays a part by fleeting attention to the subject of study and then the main achievement obtained as a result of the effects of the TCFs. These fields cannot be directly measured by science, but it is possible to investigate their effects on various subjects through reproducible laboratory experiments (Taheri 2013).

The research methodology in the study of T-Consciousness has been founded on the process of *Assumption, Argument, and Proof*, in which the basic Assumption is: The Cosmos was formed by a third element called T-Consciousness that is different from matter and energy.

The Argument: The existence of TCFs can be demonstrated by its effects on matter and energy (e.g., humans, animals, plants, microorganisms, cells, materials, etc.)

The Proof: is the scientific verification of the effects of TCFs on matter and energy (according to the Argument) through various reproducible scientific experiments.

Accordingly, to investigate and verify the existence, effects, and mechanisms of TCFs, the following five research phases (Phases 0 through 4), and the aims of each phase are outlined below.

Phase-0 studies aim to prove the existence of TCFs by observing their effects. The nature of T-Consciousness and what it is will not be addressed in this phase. Phase-1 explores the varied



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effects of different TCFs. Phase-2 examines the reason behind the varied effects of these fields. Phase-3 investigates the mechanism of TCFs effects on matter and energy. Finally, Phase-4 draws significant conclusions, particularly with regard to the *mind and memory of matter* and their relation to the T-Consciousness, etc.

In previous research, the effects of the TCFs on MCF7 cancer cell line (Taheri et al., 2020a), Alzheimer's disease rat models (Taheri et al., 2021b), spatial memory, and avoidance behavior of a rat model of Alzheimer's disease (Taheri et al., 2021c), wheat plant (Torabi et al., 2020), bacterial population growth (Taheri et al., 2021d), viral growth (Taheri et al., 2021a), and the electrical activity of the brain during the Faradarmani Connection in the Faradarmangars population (Taheri et al., 2020b) have been investigated. This study aimed to investigate the effects of two TCFs (A and B) on the survival and infectivity of SARS-CoV-2 in different pHs. Viruses were exposed to several pH conditions (pH: 2-12) at room temperature for one day. CPE (cytopathic effect) monitoring and TCID50 were used for the evaluation of virus survival and infectivity.

MATERIAL AND METHODS

Application of Taheri Consciousness Fields

TCFs were applied to the samples according to the protocols regulated by the COSMOintel research center (www.COSMOintel.com). A request for Connection to CCN to utilize the TCFs can be placed through the COSMOintel website in the "Assign Announcement" section. This access is available for everyone at no cost. In order to study and experience this Connection, the researchers can register on the site above at any time and in order to report the experiment to the COSMOintel research center. Certain details of the experiment must be provided to the center; for example, the characteristics or number and name of samples and controls must be specified.

Double-blind is a gold standard that is common in science experiments in the field of medicine and psychology, involving theoretical and practical testing. This entire experiment was carried out as a double-blind method where lab technicians were completely unaware of TCFs theory, and the Faradarmangar at the COSMOintel research center who established the Connection was unaware of the details of the study. In the present study, the TCFs was used exactly at the same time as virus inoculation in cell culture flasks in laboratory TCFs treatment groups.

CULTURING OF VERO CELLS AND SARS-CoV-2

Vero cells preparation

Vero cell line was cultured in a T-75 flask with 10% FBS (fetal bovine serum) (Gibco) and 90% DMEM medium (Gibco) and incubated at 37 °C and 5% CO² until 80% confluency (Rosenke et al., 2021).

Virus isolation and culturing

SARS-CoV-2 were isolated from samples of COVID-19 positive patients according to their Real-Time PCR analysis (Cycle threshold: 10). A biosafety level 3 (BSL-3) laboratory was used for all surveys on the virus (WHO 2020). SARS-CoV-2 propagations and a fifty-percent tissue culture infective dose (TCID50) assay were done. Cells and viruses seeded in 96-well plate and Reed-Muench method were used for the evaluation of TCID50 assay (Reed et al., 1938). Lastly, based on the analysis of the result, virus culture with log TCID50/mL (virus titer) ~6 and Ct value 11 were selected for the inoculations.

Effect of TCFs on survival and infectivity of SARS-CoV-2 under different pHs

VTMs (Viral transport mediums) with different pHs ranging from 2 to 11 were prepared using hydrochloric acid (5M and 1M HCL) and sodium

hydroxide (1N NaOH) according to common international protocols. SARS-CoV-2 supernatant suspension (log TCID₅₀/mL~6) was added to the VTMs and incubated at room temperature (20-25 °C). For each pH condition, three replications were considered, and each sample was divided into two groups of TCFs treatment and control (the group without the TCFs treatment). Survival and infectivity were measured up to one day after inoculation. Virus titer was calculated by the TCID₅₀ assay method described by Reed and Munch method (Reed et al., 1938).

Virus precipitation (Concentration)

The polyethylene glycol (PEG) precipitation method was utilized in this study to eliminate cytotoxic agents of cell culture and/or PCR inhibitors. Samples were blended with PEG 6000 stock solution and were agitated on a shaking incubator at 150 rpm at 4 °C for 8 h. Then, the supernatant was centrifuged for 50 min at ×3600 g. The PEG-containing supernatants were removed, and the resultant pellet was dissolved in phosphate-buffered saline (PBS) and re-centrifuged for 40 min at ×4000 g. The resultant supernatant was filtered through a 0.2 µm sterile membrane filter and 50 µl added to the 96-well plate wells and incubated at 37 °C and 5% CO₂ for TCID₅₀ assessment. The wells were checked every 24 h for cytopathic effect (CPE) and results were reported after six days

(Norouzbeigi et al., 2021).

STATISTICAL ANALYSIS

Data were analyzed by SPSS software version 26 with a confidence level of 95%. ANOVA test was used to recognize any significant differences between the samples.

RESULTS

The results of the effect of simultaneous application of the two TCFs on SARS-CoV-2 under different pHs are shown in Table 1. The virus was not detected at pH 2 and 12 in both treatment and control groups. Furthermore, the TCFs eliminated the virus at pH of 4, 11, and 9.5, while active viruses were seen in the control group. Also, TCFs at pHs of 6, 7.2, and 8.5 significantly reduced the virus titer compared with the control group.

DISCUSSION

Previous studies have shown that the infectivity of coronaviruses is influenced by changes in pH and temperature (Lamarre et al., 1989). A critical step for the entry of a virus into cells is the fusion of its envelope with the membrane of the host cells (Earp et al., 2004).

The neutral and slightly acidic pH is optimal

Table1. SARS-CoV-2 titer in the studied groups

No.	pH	Virus titer (TCID ₅₀)		
		Initial	Control group	TCFs
1	2.0	1 × 10 ⁶	ND	ND
2	4.0	1 × 10 ⁶	1 × 10 ^{3.3}	ND*
3	6.0	1 × 10 ⁶	1 × 10 ⁵	1 × 10 ^{3.5} *
4	7.2	1 × 10 ⁶	1 × 10 ^{5.2}	1 × 10 ^{4.1} *
5	8.5	1 × 10 ⁶	1 × 10 ^{4.6}	1 × 10 ³ *
6	9.5	1 × 10 ⁶	1 × 10 ^{3.5}	ND*
7	11.0	1 × 10 ⁶	1 × 10 ³	ND*
8	12.0	1 × 10 ⁶	ND	ND

ND: Not detected, TCFs: simultaneous effect of Taheri Consciousness Fields (A and B). The asterisk (*) displays a significant difference (p<0.05) between the TCFs treatment and control groups.

for the fusion of SARS-CoV-2 and penetration into the host target cells and the spike glycoprotein interaction with the ACE2 receptor (Gallagher et al., 2001, Tang et al., 2020). Our results showed that TCFs (A and B) inactivated SARS-CoV-2 approximately in all pHs. However, additional studies are needed in order to better understand the effects of the TCFs in different conditions.

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CONFLICTS OF INTEREST

The authors declare no conflict of interest.

REFERENCES

- Ciotti, M., Angeletti, S., Minieri, M., Giovannetti, M., Benvenuto, D., Pascarella, S., Sagnelli, C., Bianchi, M., Bernardini, S., & Ciccozzi, M. J. C. (2019). COVID-19 Outbreak: An Overview. *Chemotherapy*, 64(5-6), 215-223.
- Cure, E. & Cumhuri Cure, M. (2020). Comment on "Organ protective Effect of Angiotensin converting Enzyme 2 and its Effect on the Prognosis of COVID 19". *Journal of Medical Virology*, 92, 1423-1424.
- Earp, L., Delos, S., Park, H. & White, J. (2004). The Many Mechanisms of Viral Membrane Fusion Proteins. *Membrane Trafficking in Viral Replication*, 25-66.
- Gallagher, T. M. & Buchmeier, M. J. (2001). Coronavirus Spike Proteins in Viral Entry and Pathogenesis. *Virology*, 279, 371-374.
- Lamarre, A. & Talbot, P. J. (1989). Effect of pH and Temperature on the Infectivity of Human Coronavirus 229E. *Canadian Journal of Microbiology*, 35, 972-974.
- Norouzbeigi, S., Yekta, R., Vahid-Dastjerdi, L., Keyvani, H., Ranjbar, M. M., Shadnough, M., Yousefi, M., Khorshidian, N., Sohrabvandi, S., & Mortazavian, A. M. (2021). Stability of SARS-CoV-2 as Consequence of Heating and Microwave Processing in Meat Products and Bread. *Food Science & Nutrition*, 9(9), 5146-5152. Advance Online Publication.
- Reed, L. J. & H. Muench. (1938). A Simple Method of Estimating Fifty Percent Endpoints. *American Journal of Epidemiology*, 27, 493-497.
- Rosenke, K., S. Leventhal, H. M. Moulton, S. Hatlevig, D. Hawman, H. Feldmann & D. A. J. o. A. C. Stein. (2021). Inhibition of SARS-CoV-2 in Vero Cell Cultures by Peptide-conjugated Morpholino Oligomers. 76, 413-417.
- Taheri, M. A. (2013). *Human from Another Outlook* (2nd Edition). ISBN-13: 978-1939507006, ISBN- 10: 1939507006.
- Taheri, M. A., M. R. Etemadi, S. Torabi, N. Nabavi & F. Semsarha. (2021a). Evaluation of the Influence of Faradarmani Consciousness Field on Viral Growth.
- Taheri, M. A., F. Semsarha, M. Mahdavi, Z. Afsartala & L. Amani. (2020a). The Influence of the Faradarmani Consciousness Field on the Survival and Death of MCF-7 Breast Cancer Cells: An Optimization Perspective. Available at SSRN 3705537.
- Taheri, M. A., F. Semsarha & F. Modarresi-Asem. (2020b). An Investigation on the Electrical Activity of the Brain during Faradarmani Connection in the Fara-Therapist Population.
- Taheri, M. A., S. Torabi, N. Nabavi & F. Semsarha. (2021b). Faradarmani Consciousness Field Suppresses Alzheimer's Disease Development in Both in Vitro and in Vivo Models of The Disease.
- Taheri, M. A., Torabi, S., Nabavi, N. & Semsarha, F. (2021c). Influence of Faradarmani Consciousness Field on Spatial Memory and Passive Avoidance Behavior of Scopolamine Model of Alzheimer Disease in Male Wistar Rats.
- Taheri, M. A., Zarrini, G., Torabi, S., Nabavi, N. & Semsarha., F. (2021d). Influence of Faradarmani Consciousness Field on Bacterial Population Growth. *BioRxiv*.
- Tang, T., M. Bidon, J. A. Jaimes, G. R. Whittaker & Daniel., S. (2020). Coronavirus Membrane Fusion Mechanism Offers a Potential Target for Antiviral Development. *Antiviral Research*, 178, 104792.
- Torabi, S., Taheri, M. A. & Semsarha, F. (2020). Alleviative Effects of Faradarmani Consciousness Field on Triticum Aestivum L. Under Salinity Stress. *F1000Research*, 9, 1089.
- World Health Organization. (2020). Laboratory Biosafety Guidance Related to Coronavirus Disease 2019 (COVID-19): Interim Guidance, 12 February 2020. World Health Organization. <https://apps.who.int/iris/handle/10665/331138>.