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Taheri Consciousness Fields and Their Effect on the COVID-19 Virus

Mohammad Ali Taheri
Originator of T-Consciousness Theory

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Table of Contents:

Editorial 6

Considerations of this issue 8

Effect of the Faradarmani Consciousness Field on Mutant Strain of SARS-CoV-2 10

Effect of Faradarmani Consciousness Field on Cell Culture, Bacterial Contamination of Cell Culture, and SARS-CoV-2 Replication *In Vitro* 17

Study of Environmental Survival and Infectivity of SARS-CoV-2 Virus under the Influence of Taheri Consciousness Fields in Various Foods 23

Comparative Study between the Effects of Disinfectant and Taheri Consciousness Fields on SARS-CoV-2 29

Survival and Infectivity of SARS-CoV-2 under the Influence of Taheri Consciousness Fields in Different pHs 34

Investigation of the Effect of Faradarmani Consciousness Field on *NF-κB* and Proinflammatory Factors Genes Expression Using Blood Samples of Patients with COVID-19 39

The Effect of Taheri Consciousness Fields on Survival and Infectivity of SARS-CoV-2 at Various Temperatures 45

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Editorial

Taheri Consciousness Fields and Their Effect on the COVID-19 Virus

Mohammad Ali Taheri
Founder of T-Consciousness Theory



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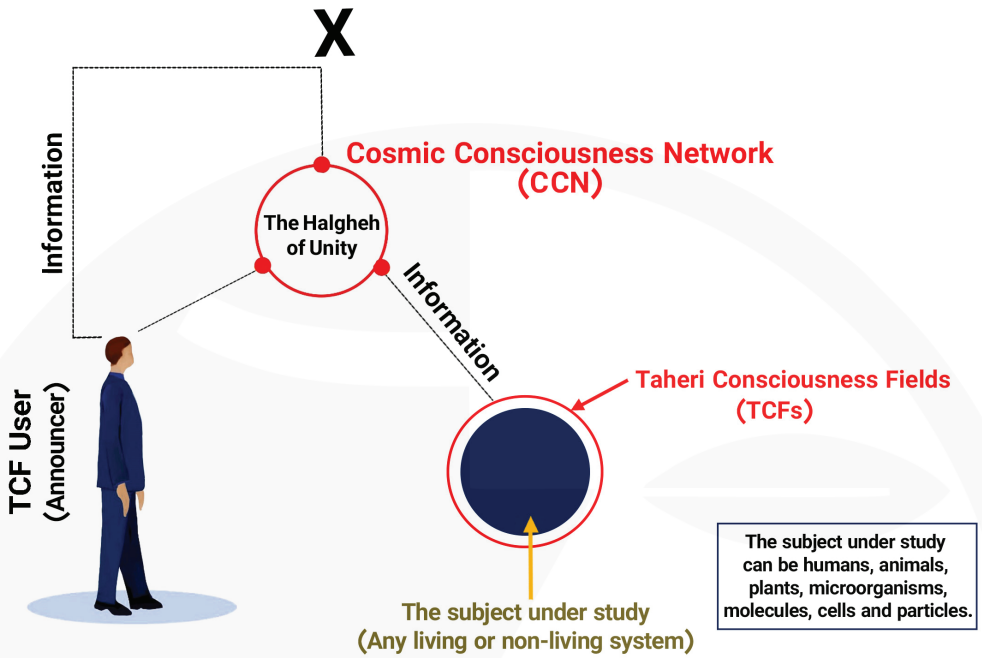
Consciousness is one of the most complex topics discussed in popular science, and many efforts have been made to understand its position, role, and function. However, it is not possible to find a single definition for this complex concept. In the series of studies in this issue, a theory regarding the subject of "consciousness" has been presented, which uses the term "T-consciousness" to distinguish this theory from other theories. In this approach, T-consciousness is introduced as a fundamental component of the universe that does not have a frequency nature and is the origin of matter, energy, and information. Also, there are various T-Consciousness Fields (TCFs) with different functions that are a subset of the Cosmic Consciousness Network (CCN).

One of the most important challenges in studies on the field of T-Consciousness is the possibility of its operational testing, especially when this approach is proposed in a non-local way or beyond the brain and at the broad level of the universe. The theory of TCFs, with the possibility of operational testing, provides an opportunity for researchers in this field to obtain practical evidence of the existence of T-Consciousness and its position and role, and to take an important step towards understanding this complex concept.

To explain further, the physical and observable part that is studied in conventional science can be likened to computer hardware, which requires a software part with the ability to process specific information for proper functioning. From the perspective of conventional science, this part of the software, which is not visible, remains hidden. For example, concepts such as mind, memory, information, consciousness, etc., cannot be considered hardware and cannot be measured and described quantitatively, using tools to measure and describe their characteristics. The use of TCFs and recording their effects allows researchers to indirectly obtain practical evidence in this field.

To evaluate the effects of TCFs, in the design of these experiments, the changes of the groups affected by these Fields are compared with the control groups, or without the effect of TCFs, and the effects are recorded using the methodology of conventional science, and the results are reported after statistical analysis. The hypothesis that is put forward is that the information transmitted from TCFs can lead to changes in the samples affected by the TCFs compared to the control. In fact, this effect, which is carried out without physical intervention and only with brief and immediate attention to the subject under study, is called a kind of software effect. The series of studies in this issue has focused on the COVID-19 virus and has reported this effect in a series of independent experiments and under various conditions, such as temperature, pH, the presence of disinfectants, effect of different foods on the virus, its effect on inflammatory factors present in the serum isolated from COVID-19 patients, etc.

This research provides an opportunity to evaluate the potential of TCFs in combating the spread of viruses and the challenge of pandemics, in addition to the practical evaluation of these theories. We encourage researchers in this field to conduct further research to test and examine the operational dimensions of this theory.



A schematic on applying T-Consciousness Fields (TCFs). The effect of TCFs begins with connecting to the Cosmic Consciousness Network (CCN) and through the TCFs user (announcer). Variable T-Consciousness Fields are a subset of CCN, and by applying each TCF, specific information is transmitted. In this way, the subject of study, which can be living or non-living creatures, is exposed to this information. It should be noted that TCFs and the information do not have a material or energetic nature; therefore, they cannot be measured directly and quantitatively. However, it is possible to record and examine their effects by designing different experiments. For this purpose, the behavior or indicators measured by the researchers in the subject under study after being exposed to the TCFs are compared with the control samples (without the effect of TCFs), and the results are reported after statistical data analysis.

Considerations of this issue

1. Common introduction

1-1 T-Consciousness and the New Science of Sciencefact

In the present century, the nature of Consciousness and its place in science has received much attention. Many philosophical and scientific theories have been presented in this field. In the 1980s, Mohammad Ali Taheri introduced new fields of non-material and non-energetic nature, which are called T-Consciousness Fields (TCFs). In this view, T-Consciousness along with matter and energy are the three main elements of the universe and it is different from the other two elements. According to this theory, there are various TCFs with different functions that are a subset of the Cosmic Internet Network called the Cosmic Consciousness Network (CCN).

The main difference between the theory of T-Consciousness Fields and other theoretical concepts presented in relation to consciousness is the application and practical use of TCFs. These fields can be applied to all living and non-living organisms, such as plants, animals, microorganisms, materials, etc. The new science of Sciencefact was introduced in 2020 by Mohammad Ali Taheri, the founder of the Erfan-e-Keyhani-e-Halgheh school, as one of the subgroups of this school. The name "Sciencefact" was chosen because it uses scientific research to confirm the existence of T-Consciousness as a "fact". Although common science only considers the study of matter and energy, Sciencefact investigates the effects of T-Consciousness Fields (non-material and non-energetic) on matter and energy and all their manifestations (such as humans, animals, plants, microorganisms, cells, materials, etc.). By conducting repeatable laboratory research in various fields of science, Sciencefact has emerged as a common ground between them and uses this capability to investigate "T-Consciousness" and "T-Consciousness Fields" resulting from it.

The influence of the T-Consciousness Fields begins with the connection (Etesal) between the Cosmic Consciousness Network as the Whole Consciousness and the studied subject as a component. The connection is established by the mind of the Faradarmangar (a person who has been trained and assigned the T-Consciousness Fields). The human mind has the role of an intermediary (announcer) that acts with short and immediate attention to the subject of study, and the main achievement is achieved as a result of the effects of the T-Consciousness Fields. These fields cannot be directly measured by science, but their effects on various subjects can be investigated through repeatable experiments.

1-2 Taheri's research methodology of T-Consciousness Fields

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 their 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.

1-3 Study phases in Sciencefact

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 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.

1-4 Using T-Consciousness Fields

The samples under study were subjected to T-Consciousness Fields (TCF) according to the specified protocol on the website of Research Management on Consciousness Fields (www.cosmointel.com). The request for *Etesal* (connection) to the cosmic consciousness network to use TCF can be submitted through the Cosmointel website in the "Assign Announcement" section. This access is freely available to everyone. Researchers can register on this website anytime to experience TCFs and conduct research in this area. Detailed information about the experiment needs to be provided to the research center; for example, the number and name of samples and controls must be specified. These studies were conducted in a double-blind manner, where lab technicians were completely unaware of TCFs theory, and the Faradarmangar at the COSMOintel research center who established the consciousness bond was unaware of the details of the study. Double-blindness is a gold standard that is common in science experiments in the field of medicine and psychology, involving theoretical and practical testing.

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Effect of the Faradarmani Consciousness Field on Mutant Strain of SARS-CoV-2

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Abstract

The COVID-19 pandemic is still a threat to global health. In late 2020, the rapid emergence of SARS-CoV-2 mutant strains was reported, raising concerns in the prevention and treatment of COVID-19. SARS-CoV-2 carrying the D614G mutation in the viral spike (S) protein predominated globally, and this change increased virus transmission. Furthermore, false-negative results in respiratory specimens are a problem in COVID-19 detection. Taheri Consciousness Fields (TCFs) introduced by Mohammad Ali Taheri are novel fields that neither matter nor energy. Therefore, they are not 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. The present study aimed to evaluate the effect of Faradarmani CF, one of the TCFs, on the titer and RNA copy number of the mutant D614G virus and on the quality of amplification of coronavirus genome fragments. The results of this study showed that Faradarmani CF increased the replication of both non-mutated and mutated viruses compared with the control, thereby improving their replication fitness. The Faradarmani CF increased the rate of replication of the mutant strain in cells to a level close to that of the non-mutant strain, and, in fact, reached a biological equilibrium of compatibility similar to that of the Wuhan strain with the cells. The study suggests that Faradarmani CF acted as a modulator, equalizing replication rates between mutant and non-mutant strains, thereby achieving a biological equilibrium akin to the Wuhan strain. Scientifically, this is provocative; it challenges conventional molecular biology and demands rigorous studies. In addition, the PCR products of coronavirus genome fragments under the influence of the Faradarmani CF showed sharper bands on gel electrophoresis and higher-quality amplification compared with the control. This result suggests that Faradarmani CF can be used in diagnostic assays to reduce false-negative results and improve test sensitivity. Based on the results, it is recommended that the effects of TCFs on other mutants be investigated.

Keywords: COVID-19, Faradarmani, Taheri Consciousness Fields, T-Consciousness, Mutant, RT-PCR

Introduction

SARS-CoV-2 is a type of RNA virus. The process of viral replication is characterized by a high mutation rate due to the absence of a mismatch repair mechanism. Hence, coronavirus mutations are quite predictable and reasonable. The virus may become more transmissible and difficult to eliminate due to mutations (Domingo et al., 1997). Korber *et al*. identified the D614G variant (the amino acid in the 614 position was mutated from aspartic acid to glycine), which is more contagious and has been dominant worldwide (Korber et al., 2020; Hou et al., 2020). Currently, other new strains are spreading rapidly worldwide, raising concerns about the prevention and treatment of COVID-19. Recent research has shown that only mutations with important biological functions showed high transmissibility, suggesting that these key mutations may affect COVID-19 severity, virus spread, and escape from natural or vaccine-induced immunity (Zhou et al., 2021). SARS-CoV-2 infects human cells by binding to angiotensin-converting enzyme (ACE2) through the receptor-binding domain (RBD) of the Spike protein. These key mutations appear to affect the ability to bind to ACE2 (Starr et al., 2020).

Vaccination is carried out worldwide as a fundamental strategy to combat COVID-19. However, with the emergence of several SARS-CoV-2 variants, vaccine effectiveness has become a major global debate. Current studies show that SARS-CoV-2 variants significantly affect vaccine effectiveness (Zhou et al., 2021).

Detection of COVID-19 is performed by SARS-CoV-2 RNA detection via real-time RT PCR. Studies on false-negative results in respiratory specimens for SARS-CoV-2 are varied and report false-negative rates of 1-30% (Long et al., 2020; Arevalo-Rodriguez et al., 2020). The false-negative results can happen for several reasons, such as the non-optimal collection of samples, low analytical sensitivity, early testing of disease, unsuitable type of specimen, variability in the shedding of virus, or low viral load (Kinloch et al., 2020; Kucirka et al., 2020; Kanji et al., 2021; Pan et al., 2020). Given the urgency of controlling COVID-19, it is necessary to find a novel way to curb SARS-CoV-2 mutation and transmission and reduce false-negative SARS-CoV-2 detection results.

This study investigates the effects of Taheri Consciousness Fields (TCFs). According to Taheri's theory, TCFs are non-frequency in nature and are a subset of the Cosmic Consciousness Network (CCN), and it is possible to investigate their effects on a variety of subjects, including living beings and materials (Taheri, 2013).

In previous research, the effects of the TCFs on the MCF7 cancer cell line (Taheri et al., 2020a), spatial memory and avoidance behavior of a rat model of Alzheimer's disease (Taheri et al., 2021a), wheat plant (Torabi et al., 2020), bacterial population growth (Taheri et al., 2021b), and the electrical activity of the brain during the application of Faradarmani in the *Faradarmangars* population (Taheri et al., 2020b) have been investigated. The present study aimed to evaluate the effect of Faradarmani CF as one of the TCFs on mutant D614G virus titer, RNA copy number, and quality of amplification of coronavirus genome fragments.

Material and Methods

Application of the Faradarmani Consciousness Field

The study samples were influenced by Faradarmani Consciousness Field according to the protocols mentioned on the website of research management in the TCFs (www.COSMOintel.com). More details are provided in the Common Considerations section of this issue. In the present study, Faradarmani CF was announced exactly at the same time as the virus inoculation in cell culture flasks in the treatment groups of the examination.

Preparation of mutant and non-mutant strains

For the current study, non-mutant strains similar to the original Wuhan strain, as well as mutant strains with the D614G mutation in the virus spike protein, were isolated from the nasopharyngeal and oropharyngeal hospital specimens of patients admitted to the intensive care unit in the acute phase of the disease with positive real-time RT-PCR results and Ct values of 13 and 12.

Cell culture and virus titration

The T-25 flasks were seeded with 5×10^6 Vero cells in culture media composed of high glucose DMEM (Gibco) with 10% fetal bovine serum (Gibco) and incubated in 5% CO2 at 37°C until 80% confluency. Then they were divided into five groups, each with six flasks: mutant virus and non-mutant virus with and without the Faradarmani CF treatment, and a negative control (without virus). Cell cultures were prepared for virus inoculation after reaching 70% confluency. A biosafety level 3 (BSL-3) laboratory was used for all surveys on the virus (WHO, 2020). The virus culture with TCID50/ml ~ log 6 was selected for inoculations into the flasks. TCID50/ml was assessed in 96-well plates, and all the plates were monitored every 24 h for Cytopathic effect (CPE). After 4 days, the results were reported, and the virus titer was calculated using the Reed & Munch method (Reed et al., 1938).

Real-time RT-PCR for evaluation of SARS-CoV-2 virus RNA copy number

The LabPrep™ Viral DNA/RNA Mini Kit was used to extract RNA according to the manufacturer's protocol. SinaClone cDNA synthesis kit was used for cDNA synthesis. All steps were performed with RNase-free tools and solutions. Also, to make cDNAs with the same concentration in each sample, based on the RNA concentration, the volume was determined to contain 1000 ng of RNA, and the final volume was adjusted to 20 microliters with water and Master Mix. The Biotechrabbit GmbH kit was used for real-time PCR testing. RNA copy numbers were evaluated using Nucleocapsid (N) gene primers according to the protocol and materials. A Rotor-Gene Q 6000 thermocycler (Corbett, Australia) was used for all real-time RT-PCR reactions.

RT-PCR and electrophoresis of PCR products of S protein fragments of mutated SARS-CoV-2

For six selected and positive real-time PCR samples with a Ct value of 13 for which RNA was extracted, and cDNA was previously fabricated, and with three pairs of primers called B26, B27, and B28 for different parts of the S1 spike protein, PCR was performed (Table 1).

Table 1: Sequences of applied primers for PCR of S1 spike protein.

Primer number	Sequence of primer (5' to 3')	Length	Annealing temp (°C)	Target protein	Ref
B26	F: TATCTTGGCAAACCACGCGA R: ACCAGCTGTCCAACCTGAAG	1057	58	Spike	(20)
B27	F: CCCTCAGGGTTTTTCGGCTT R: CTGTGGATCACGGACAGCAT	1093	60	Spike	(20)
B28	F: CCAGCAACTGTTTGTGGACC R: GTGGCAAAACAGTAAGGCCG	1027	60	Spike	(20)

PCR products were run on a 1% agarose gel in TBE buffer containing Tris base, boric acid, EDTA, and ethidium bromide, at pH 8. For electrophoresis, the products were run at 90 V for 55 minutes, using a 100 bp Plus DNA Ladder (Germany, Fermentas) as a marker.

Statistical analysis

Statistical significance was set at $p < 0.05$ (95% confidence level). Virus titer and real-time RT-PCR data were analyzed using two-way ANOVA to assess the effects of treatment and virus strain.

Results

Faradarmani CF significantly increased the replication of both non-mutated and mutated viruses compared with control samples ($p< 0.05$). Moreover, Faradarmani CF elevated the replication rate of the mutant strain to a level approaching that of the non-mutant strain in cell culture; however, this difference in replication was not statistically significant ($p> 0.05$) (Table 2). The $TCID_{50}$/mL increased from 3×10^7 in the control of the mutated virus to $2 \times 10^{7.2}$ (approximately 3.17×10^7) in the Faradarmani CF-treated mutated virus group, with no statistically significant difference observed ($p > 0.05$). Also, Faradarmani CF increased the time required for cell destruction and mortality.

Table 2: The titer of mutant and non-mutant SARS-CoV-2 under the influence of Faradarmani CF (FCF) and control groups. All conditions, except virus strains, were the same for both Faradarmani CF groups.

	Inoculum (Seed)	Non-mutated control	Mutated control	Non-mutated virus+ FCF	Mutated Virus+ FCF	Cell culture (Cell control)
TCID50/mL	1×10^6	$2 \times 10^{6.5}$	3×10^7	$2 \times 10^{7.2}$	$2 \times 10^{7.2}$	-
Ct Value in real-time RT-PCR	14	11	9	8	8	-

In real-time PCR results, the RNA copy number of the non-mutant control group was changed compared to the non-mutant group affected by Faradarmani CF, with a difference of 3 C_t value ($p<0.05$). Also, in the mutant group, this difference between the control mutant and the mutant affected with Faradarmani CF was changed by one C_t value, which was not statistically significant ($p>0.05$).

To investigate the effect of the Faradarmani CF on the RT-PCR of the mutated coronavirus genome and the amplification rate of coronavirus genome fragments, PCR was performed on three important fragments of the coronavirus glycoprotein spike gene responsible for cell binding. Then gel electrophoresis was done on the PCR products. The sharper detected bands in the samples treated with Faradarmani (data not shown) might signify the effect of Faradarmani on the quality of amplification in the PCR, but proving this assumption requires doing complementary experiments.

Discussion

The D614G substitution in the spike glycoprotein of the Wuhan primary strain increased viral replication (Plante et al., 2021). Plante *et al.* highlighted the importance of the G614 variant in virus spread and its implications for vaccine and antibody therapy efficacy. The G614 virus replicated more than the original D614 virus in primary human upper airway tissues and the human airway epithelial cell line (Calu-3). The increased replication fitness was associated with

increases in specific stability and infectivity of the G614 virus (Plante et al., 2021). Higher levels of viral RNA were detected in patients infected with the D614G mutant, which is more infectious than the original Wuhan strain (Korber et al., 2020). Ozono *et al*. showed that the D614G mutation confers increased entry efficiency by enhancing binding affinity for ACE2, with no influence on the antigenicity of the S protein (Ozono et al., 2021).

This study showed that Faradarmani CF increased replication of non-mutated and mutated viruses compared to the group without Faradarmani CF treatment, increased replication fitness, and enabled the virus to gain greater control over the cellular replication machinery. It seems that the Faradarmani CF increases the rate of replication of the mutant strain in cells to a level close to that of the non-mutant strain and reaches a biological equilibrium of compatibility similar to that of the Wuhan strain with the cells. In order to elucidate the effects of this treatment, we recommend that the influence of the TCFs on animal models with mutated and non-mutated virus infection be evaluated.

False-negative results have vital implications for the isolation and transmission risk and for the management of COVID-19 (West et al., 2020). According to the results of the Faradarmani CF effect on the RT-PCR of the mutated coronavirus genome, Faradarmani CF may improve different steps of PCR, such as primer binding, amplification, and electrophoresis motion. According to the results, the Faradarmani CF may play an effective role in PCR for virus fragments and can help increase laboratory test accuracy and reduce false-negative results.

As mentioned, TCFs are not directly measurable, but their effects can be investigated indirectly through various experiments. We suggest investigating other mutations of the COVID-19 virus to assess the effect of the Faradarmani CF on the efficacy of immunization and vaccination *in vivo*.

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Conflicts of Interest

The authors declare no conflict of interest.

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Effect of Faradarmani Consciousness Field on Cell Culture, Bacterial Contamination of Cell Culture, and SARS-CoV-2 Replication *In Vitro*

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Abstract

The highly contagious and life-threatening coronavirus SARS-CoV-2, which has caused a global outbreak since December 2019 (COVID-19), is a beta coronavirus that has spread rapidly and become a worldwide pandemic. So far, there is no definitive treatment for this disease. The Faradarmani Consciousness Field, as one of many T-Consciousness Fields (TCFs) introduced by Mohammad Ali Taheri, is a novel field that is 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. The present work aimed to study the effect of Faradarmani CF on SARS-CoV-2 replication and on contaminated cell culture flasks inoculated with the bacteria. According to the results, Faradarmani CF induced virus proliferation in the virus culture. In contaminated cell culture flasks inoculated with bacteria, significant differences in color, turbidity, and Vero cell viability were observed between the Faradarmani CF treatment and control groups, demonstrating the effect of Faradarmani CF. Further studies are highly recommended to investigate the effect of TCFs *in vivo*.

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

Introduction

Over the last 20 years, the world has seen three emerging coronavirus pathogens: severe acute respiratory syndrome (SARS), Middle East respiratory syndrome (MERS), and the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) pandemic (Al-Tawfiq, 2020). SARS-CoV-2 is a new member of the beta coronavirus genus, first reported in China in mid-December 2019 and rapidly spreading worldwide, causing the COVID-19 pandemic. The spread of coronavirus pathogens has become a global concern for the World Health Organization (WHO) over the last decade. Therefore, it is imperative to consider effective treatments to prevent the spread and mortality from coronavirus disease (Liu et al., 2020).

According to Taheri's theory, T-Consciousness is the main component of the universe and the origine of matter, energy, and information. Also, various T-Consciousness Fields (TCFs) of a non-frequency nature have been introduced. These fields cannot be directly measured by science, but their effects can be investigated across various subjects through reproducible laboratory experiments. The effect of TCFs begins with the brief and immediate attention of the *Faradarmanagar* (trained individual) to the subject of study (Taheri, 2013).

In previous research, the effects of the TCFs on the MCF7 cancer cell line (Taheri et al., 2020a), spatial memory and avoidance behavior of a rat model of Alzheimer's disease (Taheri et al., 2021a), wheat plant (Torabi et al., 2020), bacterial population growth (Taheri et al., 2021b), and the electrical activity of the brain during Faradarmani Connection in the Faradarmangars population (Taheri et al., 2020b) have been shown. The present work aimed to study the effect of the Faradarmani CF on SARS-CoV-2 replication and cell culture flasks contaminated by the bacteria.

Material and Methods

Application of Faradarmani Consciousness Field

Faradarmani CF was applied to the samples according to the protocols regulated by the COSMOintel research center (www.cosmointel.com). More details are provided in the Common Considerations section of this issue. In the present study, Faradarmani CF was used simultaneously with the inoculation of the virus in cell culture flasks.

Cell and virus preparation

The effects of Faradarmani CF on cultured Vero cells inoculated with SARS-CoV-2 were studied, and the propagation and growth of SARS-CoV-2 were evaluated.

Collection and transportation of positive COVID-19 samples

Three samples were collected using nasopharyngeal and/or oropharyngeal swabs from COVID-19-positive patients. Patients were diagnosed by Real-Time PCR analysis with low Cycle threshold (Ct < 20). Swabs were placed into 3 mL Viral Transportation Medium (VTM) and transferred to the BSL-3 facility laboratory units at 4 °C on the same day for culture and propagation. VTM contained DMEM (High glucose), 2% Penicillin-Streptomycin solution, and 5 µg/mL Amphotericin.

Vero cell culture

Vero cells (from the same T-75 flask) were seeded in eighteen T-25 flasks in culture media that were composed of high-glucose DMEM (Gibco) with 10% fetal bovine serum (Gibco) and incubated in 5% CO2 at 37°C until 80% confluency. The eighteen T-25 flasks were divided into three groups of six flasks.

In the first group, three flasks were under the influence of Faradarmani CF, and the other three flasks were considered as controls without

applying Faradarmani CF. This group of flasks was visually monitored every day for three days to reach full confluency. In the second group, three cell culture flasks were marked as treatment flasks to evaluate the effect of Faradarmani CF on virus replication, TCID50, and cytopathic effect (CPE). The other three cell culture flasks were considered the control group. In the third group, three cell culture flasks were utilized for the investigation of the effect of Faradarmani CF on cell contamination with bacteria, and the remaining three flasks were considered as the control group.

Preparation of virus samples, inoculation, and isolation in cell culture

The suspension of 12 samples was diluted and mixed with phosphate-buffered saline (PBS) and then centrifuged at 4000 rpm for about 25 minutes. Then, the suspension was filtered twice through 0.45 and then 0.22 µm pore filter membranes under a Laminar hood in sterile and safe conditions. An isolation procedure was followed with the T-25 flask with a Vero cell line. Initially, the medium of the flask was discarded, and following inoculation (1000µl of virus sample) and the virus adsorption period (1.5h, at 37°C and 5% CO2), the medium was removed, and fresh medium (DMEM high glucose with 2% serum) was added and incubated at 37°C, 5% CO2. Each day, CPE was recorded under an inverted microscope for six days. On day six, samples were directed for RT real-time PCR for verification of virus isolation. Then, isolated viruses were titrated in a 96-well plate from dilution 10^3 to 10^8 using the Reed–Muench method (Reed et al., 1938). The observed CPE flask with confirmation of RT real-time PCR, and the titrated virus was transferred for storage at -20 °C freezer until use for the next sub-culturing.

Virus preparation and titration

A virus sample with 1×10^6 TCID50/mL, and 4×10^6 virus RNA copy number was selected, and 1 mL of it was added to flasks of treatment by Faradarmani CF and control groups.

Effect of Faradarmani CF on contaminated culture medium with bacteria

In parallel with virus culture, six cell cultures were prepared for inoculation with the contaminant (a cell culture diagnosed as contaminated with Bacillus spp.). In the Faradarmani CF treatment group, simultaneous with initiation of the Faradarmani CF effect, 20 µL (1×10^5 CFU/ mL) supernatant from a flask was inoculated directly into three cell culture flasks. Also, three flasks were inoculated as a control. Cultures were visually observed daily for 3 days to monitor changes in color, turbidity, cell death, and other visible characteristics.

Statistical analysis

Data were analyzed in SPSS version 21 using t-test and normal analysis, and p-value <0.05 was considered statistically significant.

Results

Cell culture results

The difference between cell count results and growth rate of Vero cells in the Faradarmani CF treatment compared with the control group was not significant ($p \geq 0.05$).

Virus replication in cell culture

Figure 1 shows CPEs observation after six days on non-infected Vero cells (A), culture SARS-CoV-2 without Faradarmani CF treatment (B), and with Faradarmani CF treatment (C). In the TCID50 assay for virus titration in infected Vero cells, in the Faradarmani CF treatment and control groups, there was an average of TCID50/mL $4 \times 10^{7.5}$ and TCID50/mL $2 \times 10^{6.4}$ for cultured flasks, respectively. This result showed that Faradarmani CF has significantly increased TCID50/mL virus infectivity in treatment flasks ($p \leq 0.05$) (Figure 1). In addition, in microscopic observation, more CPE regions were seen in the Faradarmani CF treatment group (Figure 1C).

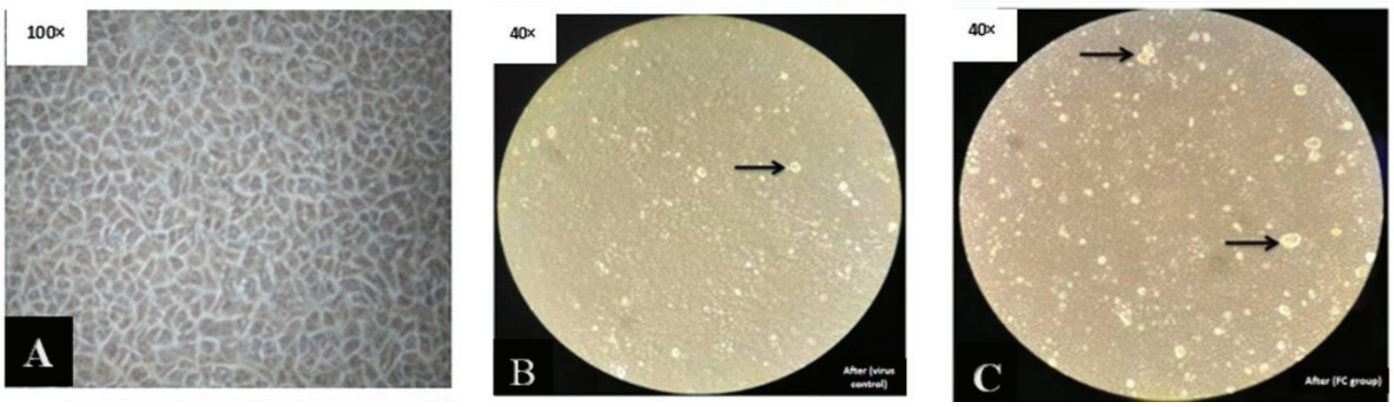


Figure 1. (A) Non-infected Vero cells, (B) SARS-CoV-2 infected Vero cells, and (C) SARS-CoV-2 infected Vero cells with Faradarmani CF treatment demonstrated by inverted light microscopy with 100× and 40× magnification. Some CPEs (rounded, detached, and aggregated bright spots) are shown by black arrows.

Cell contamination results

The phenol red is used as a pH indicator in cell culture media (phenol red has a yellow color at a pH of 6.4 or below and a red color at a pH of 8.2 and above). Gradual acidification (turning yellow) is a sign of the use of media glucose in the uninfected cell. Especially, in bacterial contamination, the color of the environment quickly turns yellow, and the media becomes turbid, without any cell growth in the flask.

The contaminated flask under the influence of Faradarmani CF treatment (A) and the contaminated flask without Faradarmani CF treatment (B) are shown in Figure 2. Significant differences were found in the color, turbidity, and viability of the cultured Vero cells. Although contamination was clearly seen in both cultures, and cells were completely detached from the bottom of the flasks after 18h for flask B and 48h for flask A.

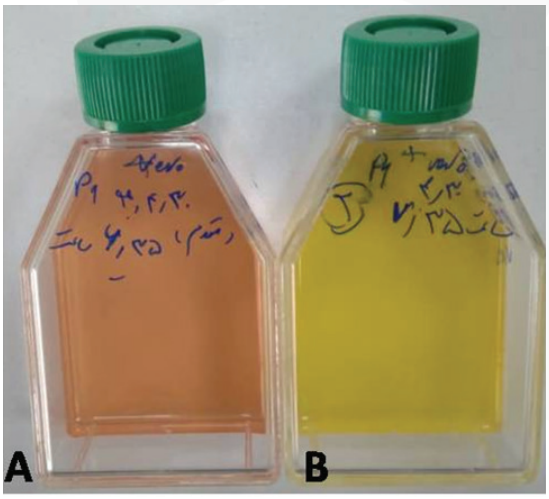


Figure 2. The samples of contaminated cell culture T-25 flasks after 24 h observation. A: contaminated flask with Faradarmani CF treatment, B: contaminated flask without Faradarmani CF treatment (control). The significant differences in the color and turbidity of the cell culture supernatant could be observed in the flasks.

Discussion

The results demonstrated that Faradarmani CF promotes virus growth and proliferation as well as Vero cells' protection against bacterial contamination. In virus cultures, Faradarmani CF treatment increased viral proliferation and growth. However, the cells showed longer survival time, more robustness, and better ability to withstand harsh conditions against the virus.

Most routine virology laboratories add antibiotics to cell culture medium in order to protect the cells from the damaging effects of bacterial contamination (Cruickshank et al., 1952; Leifert et al., 2001). Cell cultures inoculated with samples to isolate the virus fail due to bacterial overgrowth despite the presence of antibiotics (Gray et al., 1991). In this study, the effect of the Faradarmani CF on bacterial contamination of cell culture flasks was investigated. The Faradarmani CF appears to inhibit bacterial growth in the cell culture medium. Further research on the mechanism and function of Faradarmani CF in the laboratory requires experimentation with different cell types and microorganisms. Research on cells, microorganisms, and biological processes raises numerous questions about their behavior and function.

Our knowledge of the nature and operation of the TCFs is at the very early stages, and although the mechanism of the Faradarmani and other TCFs is not yet definable by science, it is important to investigate their effects on various biological (and non-biological) organisms to understand the nature and extent of their beneficial effects and treatment capabilities.

The results of this study demonstrated an observable change in the behavior of the cells contaminated by bacteria. Further studies investigating the effects of the Faradarmani CF on SARS-CoV are needed in order to discover the full range and all aspects of the TCFs treatment method.

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Conflicts of Interest

The authors declare no conflict of interest.

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f1000research.25247.4

Study of Environmental Survival and Infectivity of SARS-CoV-2 Virus under the Influence of Taheri Consciousness Fields in Various Foods

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Abstract

The coronavirus disease 2019 (COVID-19), a severe global public health problem, is caused by the SARS-CoV-2 virus. Numerous therapeutic agents have been suggested for the treatment of COVID-19. T-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. The aim of this study was to investigate the effects of TCFs (1, 2, and 3) on the infectivity of SARS-CoV-2 in several types of foods, including bread, dairy, meat, and fruit. The cytopathic effect (CPE) monitoring, TCID50 (50% Tissue Culture Infectious Dose), and real-time RT-PCR were used to evaluate virus survival and infectivity in the TCFs treatment and control groups in different types of food. The results showed that TCFs decreased the survival and infectivity of SARS-CoV-2 across different types of food. These results provide evidence of the effectiveness of TCFs. It seems that TCFs, as a qualitative intervention, have the potential for *in vivo* research and clinical management of SARS-CoV-2 infection.

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

Introduction

Human coronaviruses were first described in the 1960s for patients with the common cold (Su et al., 2016). They are a family of single-stranded RNA enveloped viruses that infect many animal species and humans (Weiss et al., 2005). Among all known RNA viruses, coronaviruses have the largest genomes (26.4 to 31.7 kb) (Woo et al., 2010). SARS-CoV-2 causes COVID-19 disease, which is a new disease that can lead to severe acute respiratory syndrome. Transmission of SARS-CoV-2 is possible through droplets from coughing and sneezing, direct hand contact with the patient, and fecal-oral, fecal, urinary, and saliva transmission (Jones et al., 2020). The infection fatality rate (IFR) of the disease across a population is reported as 0.68% (0.53%-0.82%), based on a published systematic review and meta-analysis on COVID-19 until July 2020 (Meyerowitz-Katz et al., 2020).

The survival rate of coronavirus out of the human body and in the environment is one of the most critical and seriously discussed issues in the world and in the global health community, where ecosystem-related factors such as temperature, pH, material, food, disinfectants, etc., play a crucial role (Eslami et al., 2020). Although there is no evidence that people can catch COVID-19 from food (WHO, 2020), there is a hypothesis that contaminated food may have the potential to be transported to regions with no COVID-19 (Han et al., 2021; Olaimat et al., 2020).

This study investigated the effects of Taheri Consciousness Fields (TCFs) on various foods. TCFs are non-frequency in nature and cannot be measured directly, but it is possible to record their effects in the laboratory and understand their function at the biological level. It should be noted that the effect of TCFs begins through the announcer (Faradarmangar) and with a short and immediate attention (Taheri, 2013). This feature has led researchers to design various experiments to conduct research in this area.

In previous research, the effects of the TCFs on the MCF7 cancer cell line (Taheri et al., 2020a), spatial memory and avoidance behavior of a rat model of Alzheimer's disease (Taheri et al., 2021a), wheat plant (Torabi et al., 2020), bacterial population growth (Taheri et al., 2021b), and the electrical activity of the brain during Faradarmani Connection in the Faradarmangars population (Taheri et al., 2020b) have been investigated. In this study, the effects of TCF-1, TCF-2, and TCF-3 are evaluated separately to investigate the infectivity of SARS-CoV-2 in different types of foods, including bread, dairy, meat, and fruit.

Material and Methods

Application of the TCFs

TCFs were applied to the samples according to the protocols regulated by the COSMOintel research center (www.COSMOintel.com). More details are provided in the Common Considerations section of this issue.

Virus isolation, culturing, and food preparation

In this study, specimens were isolated from COVID-19 positive diagnosed patients according to their Real-Time PCR analysis (Cycle threshold (Ct) values = 10) from swabs of the nasopharyngeal cavity in Viral Transportation Medium (VTM). SARS-CoV-2 viruses were cultured in a Vero cell line in DMEM media (Gibco) with 10% fetal bovine serum (Gibco) and incubated at 37 ˚C and 5% CO2 until 80% confluency. One mL of VERO cell suspension containing viral titer of TCID50 = 1×10^6 and RNA copy number = 4×10^6 was used. A biosafety level 3 (BSL-3) laboratory was used for all studies on the virus (WHO, 2020). For each sample, three replicates were considered. Food groups were divided into four groups.

Group A (Bread): Three different types of Iranian breads, including Sangak, Lavash, and Barbari, were used in this study due to their different texture and thicknesses. The primary reason for picking these three bread varieties is that they are all popular and easy to find in Iran. Their components are almost identical and

do not affect the virus's ability to survive. After pouring 1 mL of the virus suspension droplets onto the bread under the Class 3 hood, it took 20 minutes for the droplets to penetrate the bread and dry.

Group B (Dairy products): 1 mL virus suspension was added to dairy products, including milk (high fat), yogurt, yogurt drink (it is sourer than yogurt and its pH is more acidic), buttermilk, and ice cream.

Group C (Meats): 1 mL of virus suspension was added to meat products, including beef, fish, sausages, and hamburgers.

Group D (fruits): 1 mL of virus suspension was added to the flesh texture of fruits, including apples and tangerines.

Each group contained three samples affected by each of the T-Consciousness Fields (1, 2, and 3), and one control group. All groups were incubated for 2 hours at room temperature. The food samples were then crushed in a mortar with PBS, and the contents were centrifuged at 4000 rpm. In the next step, the virus was concentrated and recovered using PEG 6000 at a final concentration of 10% according to the following protocol.

Virus concentration protocol using PEG 6000

Polyethylene glycol 6000 precipitation is an effective concentration method that increases the detection chances of human virus pathogens in environmental samples. First, the virus elution was moved to a sterile beaker. In the next step, NaCl was added slowly to a final concentration of 2.3% under constant and gentle magnetic stirring.

Then, PEG-6000 was added slowly to a final concentration of 7%. The stirring continued for 1 hour, and the eluate was kept at 4°C overnight. Then the eluate was centrifuged at 16,000×g for 15 minutes, and the supernatant was removed. The pellet was suspended in 15 mL of Tris-EDTA-sodium chloride buffer. After vertexing for 1 minute, PEG was removed from suspensions by centrifugation at 13,000×g for 5 minutes, and the supernatant was utilized for viral analysis (Hierholzer et al., 1996). Finally, the liquid obtained from the sample was filtered with a 0.22 µm sterile membrane.

Assessment of virus titer and RNA copy number

168 samples (3 replications per sample) were added to the 96-well plate and incubated. During this time, CPE and cellular changes were checked every 24 h. After 6 days, TCID50 was also evaluated (Reed et al., 1938). Also, 400 µL of the contents of each well were sent for RNA extraction. Total RNA was extracted via an Allprep DNA/RNA/miRNA universal kit (Qiagen) with on-column DNase treatment (RNase-Free DNase Set; Qiagen). A cDNA synthesis kit was used to synthesize cDNA. For Quantitative real-time PCR, the Biotech rabbit GmbH kit was used according to standard protocol.

Statistical analysis

Data were analyzed using statistical software (SPSS version 26) at a 95% confidence level to assess significance between treatments. Two-way ANOVA analysis was used to detect significant differences between samples.

Results

As shown in Tables 1 and 2, all three TCFs reduced the titer, survival, and copy number of the RNA of viruses ($p<0.05$). In group A (Breads), the most influential TCFs in removing the virus were TCF-2 and TCF-3, and among the three bread types, TCFs had the greatest effect on Lavash. In the dairy products group, the most significant effect was seen in yogurt drinks, and all three TCFs eliminated the virus compared to the control group. In the meat group, the most significant reduction in virus infectivity was seen in sausage and hamburger.

All TCFs can significantly reduce the survival of the virus in sausage and hamburger products.

In sausage, the virus was inactivated entirely under all three TCF types (1, 2, and 3). The same effect can be seen in hamburgers under TCF-2. The TCFs had a low impact on fish and beef, suggesting the need for further studies. In the fruit group, the TCFs (2 and 3) in sour tangerine eliminated the virus. In apple, TCF-2 completely inactivated the virus.

Table 1. SARS-CoV-2 titer in the studied groups

Food group	Food name	SARS-CoV-2 titer				
		Initial	Control group	TCF-1	TCF-2	TCF-3
Bread (Group A)	Sangak bread	1×10^6	1×10^4	$1 \times 10^{3.5*}$	$1 \times 10^{2.7*}$	$1 \times 10^{3.2*}$
	Lavash bread	1×10^6	1×10^4	$1 \times 10^{4*}$	ND*	ND*
	Barbari	1×10^6	1×10^4	$1 \times 10^{3.2*}$	ND*	$1 \times 10^{2.5*}$
Dairy (Group B)	Milk (high fat)	1×10^6	$1 \times 10^{4.8}$	$1 \times 10^{3.5*}$	$1 \times 10^{3.2*}$	$1 \times 10^{3.5*}$
	Yogurt drink	1×10^6	1×10^2	ND*	ND*	ND*
	Buttermilk	1×10^6	$1 \times 10^{4.2}$	$1 \times 10^{4*}$	$1 \times 10^{3.5*}$	$1 \times 10^{3.5*}$
	Yogurt	1×10^6	1×10^3	$1 \times 10^{3*}$	ND*	$1 \times 10^{2.5*}$
	Ice cream	1×10^6	$1 \times 10^{5.8}$	$1 \times 10^{5*}$	$1 \times 10^{5*}$	$1 \times 10^{5*}$
Meat (Group C)	Beef	1×10^6	$1 \times 10^{4.8}$	$1 \times 10^{4.5*}$	$1 \times 10^{4.5*}$	$1 \times 10^{4.2*}$
	Fish	1×10^6	1×10^5	$1 \times 10^{4.5*}$	$1 \times 10^{4.5*}$	$1 \times 10^{4.2*}$
	Sausages	1×10^6	$1 \times 10^{2.75}$	ND*	ND*	ND*
	Hamburgers	1×10^6	1×10^3	1×10^3	ND*	$1 \times 10^{2.7*}$
Fruits (Group D)	Apples	1×10^6	1×10^3	$1 \times 10^{2.5*}$	ND*	$1 \times 10^{2*}$
	Tangerines	1×10^6	$1 \times 10^{2.75}$	$1 \times 10^{2.7}$	ND*	ND*

ND: Not detected, TCF: Taheri Consciousness Field. The asterisk (*) displays a significant difference ($p<0.05$) between the TCFs treatment groups compared with control group.

Table 2 RNA copy number of SARS-CoV-2 in the studied groups

Food group	Food name	RNA copy number SARS-CoV-2				
		Initial	Control group	TCF-1	TCF-2	TCF-3
Bread (Group A)	Sangak bread	4×10^6	2×10^6	$2 \times 10^{5*}$	$1 \times 10^{4*}$	$1 \times 10^{5*}$
	Lavash bread	4×10^6	1×10^6	$2 \times 10^{4*}$	ND*	ND*
	Barbari	4×10^6	1×10^6	$1 \times 10^{5*}$	ND*	$1 \times 10^{4*}$
Dairy (Group B)	Milk (high fat)	4×10^6	2×10^6	$1 \times 10^{5*}$	$2 \times 10^{4*}$	$1 \times 10^{4*}$
	Yogurt drink	4×10^6	1×10^2	ND*	ND*	ND*
	Buttermilk	4×10^6	1×10^6	$2 \times 10^{5*}$	$2 \times 10^{4*}$	$2 \times 10^{4*}$
	Yogurt	4×10^6	2×10^4	$2 \times 10^{4*}$	ND*	$1 \times 10^{4*}$
	Ice cream	4×10^6	4×10^5	$3.5 \times 10^{5*}$	$3 \times 10^{5*}$	$3 \times 10^{5*}$
Meat (Group C)	Beef	4×10^6	3×10^5	$2 \times 10^{5*}$	$2 \times 10^{5*}$	$1 \times 10^{5*}$
	Fish	4×10^6	3×10^5	$2 \times 10^{5*}$	$2 \times 10^{5*}$	$1 \times 10^{5*}$
	Sausages	4×10^6	2×10^3	ND*	ND*	ND
	Hamburgers	4×10^6	4×10^3	$2 \times 10^{3*}$	ND*	$2 \times 10^{2*}$
Fruits (Group D)	Apples	4×10^6	2×10^3	$1 \times 10^{3*}$	ND*	$2 \times 10^{2*}$
	Tangerines	4×10^6	1×10^3	$1 \times 10^{2.8}$	ND*	ND*

ND: Not detected, TCF: Taheri Consciousness Field. The asterisk (*) displays a significant difference ($p<0.05$) between the TCFs treatment groups compared with control group.

Discussion

The present study demonstrates that TCFs decreased the survival and infectivity of SARS-CoV-2 on different foods; also, the persistence of SARS-CoV-2 in food matrices is highly dependent on both the type of food and the applied treatment conditions (TCFs). Overall, TCF-2 and TCF-3 were consistently more effective than TCF-1, achieving complete viral inactivation in several food groups. These findings highlight the importance of both food composition and treatment conditions in determining viral persistence. The results suggest that TCFs can significantly reduce or eliminate SARS-CoV-2 contamination in specific food matrices. Further studies are warranted to elucidate the mechanisms underlying these differences and to develop treatment strategies with TCFs for diverse food categories. According to these results, it is recommended that TCFs, as a qualitative intervention, be investigated *in vivo* in research on SARS-CoV-2 infection. Also, other studies can be done on the effect of TCFs on other types of viruses.

Acknowledgments

This study was performed at the Keyvan Virology Specialty Laboratory (KVSL) in Tehran, Iran. We thank the members of this laboratory for their assistance in experiments.

Conflicts of Interest

The authors declare no conflict of interest.

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Comparative Study between the Effects of Disinfectant and Taheri Consciousness Fields on SARS-CoV-2

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Abstract

The highly contagious and life-threatening coronavirus SARS-CoV-2, which has caused a global outbreak since December 2019 (COVID-19), is a beta coronavirus that has spread rapidly and become a worldwide pandemic. To control the public spread of the virus, different types of disinfectants are used. 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.The present work aimed to compare the effect of the TCFs with a disinfectant agent (sodium hypochlorite) on the SARS-CoV-2 virus. To assess the effect of TCFs, disinfectants, and their combination, cytopathic effect (CPE) monitoring, 50% Tissue Culture Infectious Dose (TCID50), and real-time RT-PCR (Ct value) methods were applied. The results showed a reduction or elimination of the live viruses in the groups treated with sodium hypochlorite and TCFs simultaneously. Although the TCFs decreased the infectivity of the virus, the infectivity potential of the virus remained. It seems that the use of the TCFs along with disinfectants can strengthen and enhance the effect of antiseptic compounds. Based on the findings, further investigations are recommended in order to better understand the effects of the TCFs on viruses.

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

Introduction

Recently, the critical global public health problem known as the Coronavirus disease 2019 (COVID-19) has emerged, which is caused by the SARS-CoV-2 virus. Disinfection is regarded as a common way to prevent SARS-CoV-2 infection at homes and communities. The survival of human coronaviruses on inanimate surfaces such as glass, metal, or plastic is found to be up to 9 days, but it can be deactivated by surface disinfectants such as ethanol (62-71%), hydrogen peroxide (0.5%), or sodium hypochlorite (0.1%) within 1 minute (Kampf et al., 2020). Although surface disinfection is recommended to reduce the risk of infection, there have been rising reports of its adverse effects on respiratory diseases such as asthma (Clausen et al., 2020). In addition, the active components of the majority of disinfectants are harmful. Therefore, finding a way to reduce the use of disinfectants will be very helpful (Goh et al., 2020; Pradhan et al., 2020).

According to Taheri's theory, T-Consciousness is the basic component of the universe, and matter, energy, and information arise from it. Also, Taheri Consciousness Fields (TCFs) that are non-frequency in nature and are a subset of the Cosmic Consciousness Network (CCN) have been introduced. Since these fields are neither matter nor energy, they cannot be measured with physical instruments, but they can be studied indirectly. The effect of TCFs begins with a brief and immediate attention to the subject under study. This operational feature has led researchers to design experiments to study the effect of these fields on various subjects (Taheri, 2013).

In previous research, the effects of the TCFs on the MCF7 cancer cell line (Taheri et al., 2020a), spatial memory and avoidance behavior of a rat model of Alzheimer's disease (Taheri et al., 2021a), wheat plant (Torabi et al., 2020), bacterial population growth (Taheri et al., 2021b), and the electrical activity of the brain during Faradarmani Connection in the Faradarmangars population (Taheri et al., 2020b) have been investigated. This study evaluates the simultaneous effect of the TCFs on the survival of SARS-CoV-2 exposed to different concentrations of disinfectant.

Material and Methods

Application of Taheri Consciousness Fields

TCFs were applied to the subjects according to the protocols regulated by the COSMOintel research center (www.COSMOintel.com). More details are provided in the Common Considerations section of this issue. In the current study, the effects of TCF-1 and TCF-2 on the survival of SARS-CoV-2 were screened. The TCFs were applied after inoculation of the virus to media with different concentrations of sodium hypochlorite.

Disinfectant

The World Health Organization (WHO) recommended a 0.1% solution of sodium hypochlorite (1000 mg/L) for ambient cleaning and management of waste in clinical laboratories for the detection of SARS-CoV-2 (WHO 2020b).

Hypochlorite-based liquid product (sodium hypochlorite) was selected for the present study as the disinfectant material, and was obtained from local commercial sources for incubation with SARS-CoV-2 in a designed comparative study with TCFs.

Culture of Vero cell and SARS-CoV-2

The Vero cell line was cultured in DMEM (Gibco) with 10% fetal bovine serum (Gibco). Previously, nasopharyngeal cavity swabs have been used to isolate virus from SARS-CoV-2-positive patients with real-time PCR analysis (Cycle threshold (Ct) values of 10) in Viral Transportation Medium (VTM). A biosafety level 3 (BSL-3) laboratory was used for all surveys on the virus (WHO, 2020b). The proliferation of SARS-CoV-2, as well as TCID50 (virus titration) and Real-time RT-PCR assays, was performed before the initiation of the study.

Then, the comparative virucidal activity of the disinfectant and TCFs was evaluated separately and together. For the TCID50 examination, cells and viruses were seeded into a 96-well plate, and the results were evaluated using the Reed-Muench method (Reed et al., 1938). Finally, virus culture with Ct value 11 and log TCID50/ml ~6 was selected for inoculation into the disinfectant group, TCFs group, and a group of them combined.

Virus incubation with disinfectant, Taheri Consciousness Fields, and both

The solution containing nine mL, including phosphate-buffered saline (PBS) + % disinfectant in final concentration, was incubated with one mL virus (TCID50 10^6) for one hour at room temperature (21 ˚C) in different dilutions in the following groups:

Group 1: Different concentrations of sodium hypochlorite in four subgroups with three replications (A:0.5%, B: 0.1% C: 0.01%, D: 0.001%).

Group 2: Treated with TCFs and different concentrations of sodium hypochlorite in five subgroups with three repetitions (A: Affected by the TCFs alone, B: Under the influence of TCFs + 0.5%, C: Under the influence of TCFs + 0.1%, D: Under the influence of TCFs + 0.01%, E: Under the influence of TCFs + 0.001%)

Virus precipitation

Polyethylene glycol (PEG) precipitation was used to concentrate the virus and remove cytotoxic agents of cell culture and/or PCR inhibitors from treated samples. They were mixed with 1.5 ml of the PEG 6000 stock solutions. The suspensions were agitated on a shaking incubator at 150 rpm for 8 h at 4 ˚C, and the supernatant was transferred into the centrifuge tube. Then, they were centrifuged at 3600 g for 50 min. The PEG-containing supernatants were removed, and the resulting pellet was dissolved in 1 mL PBS and re-centrifuged at 4000 g for 40 min. The resulting supernatant was filtered through a 0.2 µm sterile membrane filter, and 50 µL was added to the 96-well plate wells for virus titration (in triplicate) by TCID50 assay and then incubated at 37 ˚C with 5% CO2. All the 96-well plates were monitored every 24 h for cytopathic effect (CPE), and after six days, the results were reported. Simultaneously, these processes were followed in flasks, and each sample was cultured in some cell culture flasks.

Real-time RT-PCR

The supernatant from samples cultured in flasks for the subgroups was subjected to a real-time test after 6 days. All real-time RT-PCR reactions were performed on the Rotor-Gene-Q 6000 thermocycler (Corbett, Australia) using the recommended protocol. The following ingredients were used: 10 µL of extracted RNA or blank, 0.1 µL of RT enzyme, 4 µL of Roche MasterMix, 0.5 µL of primer-probe mix, and deionized, RNase- and DNase-free water. The heating program was 3 secs at 55 ˚C, 30 secs at 95 ˚C (1 cycle); 3 secs at 95 ˚C, 12 secs at 60 ˚C (45 cycles); and 10 secs at 40 ˚C (1 cycle).

Statistical analysis

The experiments, as well as measurements, were done in triplicate. Data were analyzed using SPSS software version 26.

Results

As display in Table 1, the results showed that the SARS-CoV-2 viruses were completely killed in concentrations of 0.5% and 0.1% sodium hypochlorite, and the simultaneous application of the TCFs caused the loss of infectivity of the virus and its death at a concentration of 0.01%.

On the other hand, although the TCFs (in the group in which the TCFs are used alone) have been able to reduce the infectivity of the virus.

Table 1. Effect of disinfectant, Taheri Consciousness Fields (TCFs), and the combination of them on the survival of the SARS-CoV-2 virus

Group	Sub-group	Ct (threshold cycle) in Real-time PCR	$TCID_{50}$	Visible CPE
Sodium hypochlorite	0.5%	-	-	-
	0.1 %	-	-	-
	0.01 %	37± 1	-	-
	0.001 %	31±2	$10^{2.6}$	-/+
T-Consciousness Fields	TCFs	18 ± 1	$10^{4.4}$	+
	TCFs + 0.5%	-	-	-
	TCFs + 0.1 %	-	-	-
	TCFs + 0.01 %	-		-
	TCFs + 0.001 %	35±1	10^{2}	-
Controls +	None	8	10^{7}	+
Controls -	None	-	-	-

Discussion

When a COVID-19 infected person speaks, sneezes, or coughs, the virus spreads through respiratory droplets. Also, by contacting a contaminated surface and then touching the nose, mouth, or eyes, people can become infected (WHO, 2020a). All these factors highlight the importance of keeping the environment sanitized and clean from any pathogens. According to a descriptive-analytical study with 1090 participants, 41.4 % had health problems in at least one organ of their body due to the use of disinfectants (Dindarloo et al., 2020). The results of our study demonstrated that TCFs without disinfectant could reduce the infectious burden of the virus.

The current investigation confirms that TCFs can affect the survival of the SARS-CoV-2 virus. Therefore, the use of the TCFs along with disinfectants can strengthen and enhance the effect of antiseptic compounds. The TCFs alone can reduce the infectious burden of the virus. We suggest conducting research on the effects of TCFs on viruses under different environmental conditions.

Acknowledgments

This study was performed in Keyvan Virology Specialty Laboratory (KVSL) in Tehran, Iran. We thank the members of this laboratory for their assistance in experiments.

Conflicts of Interest

The authors declare no conflict of interest.

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

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Abstract

The SARS-CoV-2 virus causes 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 (1 and 2) on the survival and infectivity of SARS-CoV-2 across different pH values. Viruses (1×10^6 TCID50) were exposed to several pH conditions (pH: 2-12) at room temperature for one day. Cytopathic effect (CPE) monitoring and the 50% tissue culture infectious dose (TCID50) were used to evaluate virus survival and infectivity. The results demonstrated that the two TCFs completely inactivated SARS-CoV-2 at pH values of 4, 9.5, and 11, and significantly reduced viral titers at pH 6, 7.2, and 8.5. These findings indicate that TCFs, as a qualitative intervention, possess the potential to inactivate SARS-CoV-2. Nevertheless, further studies are required to elucidate the underlying mechanisms by which TCFs influence viral survival and infectivity.

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

Introduction

The emergence of coronavirus disease 2019 (COVID-19) in China and its rapid spread have posed a global health emergency (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, studies have shown that pH is an important factor in the fusion of the viral envelope with the host cell membrane and in cell entry (Earp et al., 2004). It is easier for SARS-CoV-2 to attach to ACE2 (angiotensin-converting enzyme 2) at lower cytosolic pH (Cure et al., 2020).

In the present century, the nature of consciousness and its place in science have received much attention, and many philosophical and scientific theories have been presented in this field. In the 1980s, Mohammad Ali Taheri introduced new fields of non-material and non-energy nature, which are called T-Consciousness Fields (TCFs). These fields, which have diverse functions, are a subset of the Cosmic Consciousness Network (CCN). It is possible to study the effects of TCFs on living and non-living beings such as plants, animals, microorganisms, materials, etc. (Taheri, 2013). This feature of operational research has led researchers to design numerous experiments to record the effects of these non-frequency fields.

In previous research, the effects of the TCFs on the MCF7 cancer cell line (Taheri et al., 2020a), spatial memory and avoidance behavior of a rat model of Alzheimer's disease (Taheri et al., 2021a), wheat plant (Torabi et al., 2020), bacterial population growth (Taheri et al., 2021b), and the electrical activity of the brain during Faradarmani Connection in the Faradarmangars population (Taheri et al., 2020b) have been investigated.

This study aimed to investigate the effect of two TCFs (1 and 2) 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 only one day. The cytopathic effect (CPE) and the 50% tissue culture infectious dose (TCID50) were used to evaluate 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). More details are provided in the Common Considerations section of this issue. In the present study, the TCFs were 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% CO_2 until 80% confluency (Rosenke et al., 2021).

Virus isolation and culturing

SARS-CoV-2 was 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 propagation and a TCID50 assay were done. Cells and viruses were seeded in a 96-well plate, and the TCID50 assay was evaluated using the Reed-Muench method (Reed et al., 1938). Lastly, based on the analysis of the results, virus cultures with log TCID50/mL ~6 and Ct value 11 were selected for inoculation.

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

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

sodium hydroxide (1N NaOH) according to standard 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 used, and each sample was divided into two groups: the TCFs treatment group and the control group (without 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 Muench (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 a PEG 6000 stock solution and agitated in a shaking incubator at 150 rpm and 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 was added to the wells of a 96-well plate, which was then incubated at 37 ˚C and 5% CO_2 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 via SPSS software version 26 with a confidence level of 95%. An 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 (1 and 2) 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 4, 11, and 9.5, whereas active viruses were observed 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 ($p<0.05$).

Table 1. SARS-CoV-2 titer in the studied groups

No.	pH	Virus titer (TCID50)		
		Initial	Control group	TCFs
1	2.0	1×10^6	ND	ND
2	4.0	1×10^6	$1 \times 10^{3.3}$	ND*
3	6.0	1×10^6	1×10^5	$1 \times 10^{3.5}$ *
4	7.2	1×10^6	$1 \times 10^{5.2}$	$1 \times 10^{4.1}$ *
5	8.5	1×10^6	$1 \times10^{4.6}$	1×10^3 *
6	9.5	1×10^6	$1 \times 10^{3.5}$	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 (1 and 2). The asterisk (*) displays a significant difference ($p<0.05$) between the TCFs treatment and control groups.

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 in the entry of a virus into cells is the fusion of its envelope with the host cell membrane (Earp et al., 2004).

The neutral and slightly acidic pH is optimal for the fusion of SARS-CoV-2, penetration into host target cells, and spike glycoprotein interaction with the *ACE2* receptor (Gallagher et al., 2001; Tang et al., 2020). Our results showed that SARS-CoV-2 survival was pH-dependent, with minimal survival at extreme acidic or alkaline conditions. Under intermediate pH values, the presence of TCFs significantly reduced viral titers compared to controls, indicating a potential antiviral effect. However, additional studies are needed 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.

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Investigation of the Effect of Faradarmani Consciousness Field on *NF-κB* and Proinflammatory Factors Genes Expression Using Blood Samples of Patients with COVID-19

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Abstract

The coronavirus disease 2019 (COVID-19) pandemic has become a worldwide challenge. Severe respiratory distress syndrome (ARDS) caused by coronavirus has often been associated with a cytokine storm. The Faradarmani Consciousness Field (CF), as one of many Taheri Consciousness Fields (TCFs) introduced by Mohammad Ali Taheri, is a novel field that is neither matter nor energy. Therefore, they are non-quantifiable and cannot be directly observed or measured; however, their effects can be demonstrated and measured through standard scientific experiments. The current study aimed to investigate the effect of Faradarmani CF on inflammatory factors in blood samples of patients with COVID-19. Blood samples were taken from 53 patients with COVID-19, and Faradarmani CF was applied to the blood samples of the treatment group. Then, the mRNA expression of *NF-κB*, *TNF-α*, *IL-1β*, and *IL-6* genes was examined in the treated and control (non-treated) blood samples. The results indicated that under the influence of Faradarmani CF, the expression of *NF-κB* and *IL-1β* genes was significantly decreased ($p<0.05$), the *TNF-α* gene expression was significantly increased ($p<0.05$), but the expression of *IL-6* did not show any significant change ($p>0.05$). We conclude that immunomodulation at the level of *NF-κB* and *IL-1β* by Faradarmani CF may inhibit the cytokine storm in COVID-19 patients. However, further studies are required to identify all effects of this T-Consciousness Field.

Keywords: COVID-19, Faradarmani, Taheri Consciousness Fields, T-Consciousness, Proinflammatory factors

Introduction

COVID-19 is a newly emerged respiratory disease in which most patients display mild to moderate symptoms. However, about 15% of the patients develop severe pneumonia, and about 5% finally progress to acute respiratory distress syndrome (ARDS), septic shock, and multiple organ failure (Huang et al., 2020; Xu et al., 2020).

Symptom management and oxygen therapy with ventilators are the primary clinical treatments for cases of respiratory failure. Although numerous antiviral drugs have been actively explored, none has been approved as an effective cure for COVID-19. In addition to vaccine production and methods that target the virus directly or prevent its transmission, treatments that address the disease's immunopathology have received considerable attention. COVID-19 infection can stimulate adaptive and innate immune responses. Nevertheless, impaired adaptive immune responses and uncontrolled innate inflammatory responses may cause harmful tissue damage, both systemically and locally (Cao, 2020).

Activation of the transcription factor NF-kappa B (NF-κB) by COVID-19 leads to the production of TNF-α, IL-1, IL-2, IL-6, IL-12, GM-CSF, LT-α, LT-β, and various chemokines (Hariharan et al., 2020). The mortality of COVID-19 patients has been linked to cytokine storms induced by the virus (Ragab et al., 2020). Some of the common clinical features of cytokine storm syndrome are splenomegaly, sustained fever, hepatomegaly, coagulopathy, skin rash, etc. (Shimizu, 2019). Another consequence of the cytokine storm is lung injury and multi-organ failure (Sun et al., 2020). Acute Respiratory Distress Syndrome (ARDS), which leads to low oxygen saturation levels, is the main cause of death in COVID-19. Although the precise mechanism of ARDS is not entirely understood, the overproduction of proinflammatory cytokines can be one of the most determining factors in the disease severity of patients with COVID-19 (Huang et al., 2020; Ragab et al., 2020; Lai et al., 2020).

According to Taheri's theory, there are various T-Consciousness Fields (TCFs) with different functions that are a subset of the Cosmic Consciousness Network (CCN). These fields are not material or energetic in nature; therefore, they cannot be measured using quantitative tools. It is possible to investigate the effects of these fields by designing experiments (Taheri, 2013).

In previous research, the effects of the TCFs on the MCF7 cancer cell line (Taheri et al., 2020a), spatial memory and avoidance behavior of a rat model of Alzheimer's disease (Taheri et al., 2021a), wheat plant (Torabi et al., 2020), bacterial population growth (Taheri et al., 2021b), and the electrical activity of the brain during Faradarmani Connection in the Faradarmangars population (Taheri et al., 2020b) have been investigated. In the present study, the effect of Faradarmani CF on the expression level of the *NF-kB* gene and pro-inflammatory factors *IL-1β*, *IL-6*, and *TNF-α* in blood samples isolated from patients with COVID-19 infection was investigated.

Material and Methods

Application of Faradarmani Consciousness Field

Faradarmani CF was applied to the samples according to the protocols regulated by the COSMOintel research center (www.COSMOintel.com). More details are provided in the Common Considerations section of this issue. In this study, two blood samples from each of 53 patients with COVID-19 were collected. All samples were stored at -72 °C until analysis. After collecting all samples, one group was treated with Faradarmani CF, and the other group was left untreated as a control. The RNA expression level of *NF-κB, TNF-α, IL-1β,* and *IL-6* genes was evaluated in the blood samples of Faradarmani CF and control groups.

Preparation of cells and evaluation of expression levels of *NF-κB, TNF-α, IL-1β,* and *IL-6* genes

RNA extraction was performed using FavorPrep Blood/Cultured Cell Total RNA Mini Kit (Favorgen) according to the manufacturer's protocol. The concentration of RNA was measured using a NanoDrop spectrophotometer (Thermo Fisher).

A cDNA synthesis kit (BioFACT) was used to synthesize the cDNA. The reaction mixture was prepared by mixing 1,000 ng of the extracted RNA, 1 µL of Random Hexamer primer, 1 µL of oligo(dT), and 10 µL of reverse transcription (RT), and the total volume was made up to 20 µL with RNase-free water. According to the synthesis protocol, total solutions were incubated at 95°C for 5 minutes, then cDNAs were prepared at 50°C for 40 minutes.

Real-time PCR was performed using a reaction mixture with a total volume of 15 µL consisting of 7.5 µL of 2× real-time PCR master mix (for SYBR-Green I; BioFACT), 1.5 µL of cDNA products, 0.6 µL of each forward and reverse primers, and 4.8 µL of sterile water to assess the RNA expression of the genes. The primer sequences used in this study are listed in Table 1.

The thermal cycling conditions were 95˚C for 10 minutes followed by 40 cycles of 95˚C for 15 seconds, annealing temperature for 25 seconds, and 72˚C for 30 seconds. The values for the relative quantification were calculated via the $2^{-\Delta\Delta Cq}$ expression formula.

Table 1. Sequences of the oligonucleotide primers used in this study

Genes	Primer sequences (5'->3')	Product length (bp)	Annealing temperature (°C)
IL-1β	F: CAGAAGTACCTGAGCTCGCC R: AGATTCGTAGCTGGATGCCG	153	55
IL-6	F: CTTCGGTCCAGTTGCCTTCT R: GATGCCGTCGAGGATGTACC	169	55
NF-κB	F: ACCAGCCTCTGTGTTTGTCC R: CACTACCACCGCCGAAACTA	161	57
TNF-α	F: TCTCTCGAACCCCGAGTGA R: TATCTCTCAGCTCCACGCCA	126	61
GAPDH	F: GTGGTCTCCTCTGACTTCAAC R: GGAAATGAGCTTGACAAAGTGG	96	60

Statistical analysis

Data are presented as mean and standard deviation. A Student t-test was used to compare differences between the Faradarmani CF and the control groups. Statistical analysis was performed via GraphPad Prism8, and a *p-value* of <0.05 was considered statistically significant.

Results

In the present study, the effect of Faradarmani CF on the expression levels of *NF-κB* and proinflammatory factors (*IL-1β*, *IL-6*, and *TNF-α*) was assessed in isolated blood samples from patients with COVID-19 using real-time RT-PCR. The results revealed that the expression of *NF-κB* and *IL-1β* genes was significantly decreased ($p<0.05$), whereas TNF-α expression was significantly increased ($p<0.05$), but IL-6 expression did not differ significantly ($p>0.05$) (Figure 1).

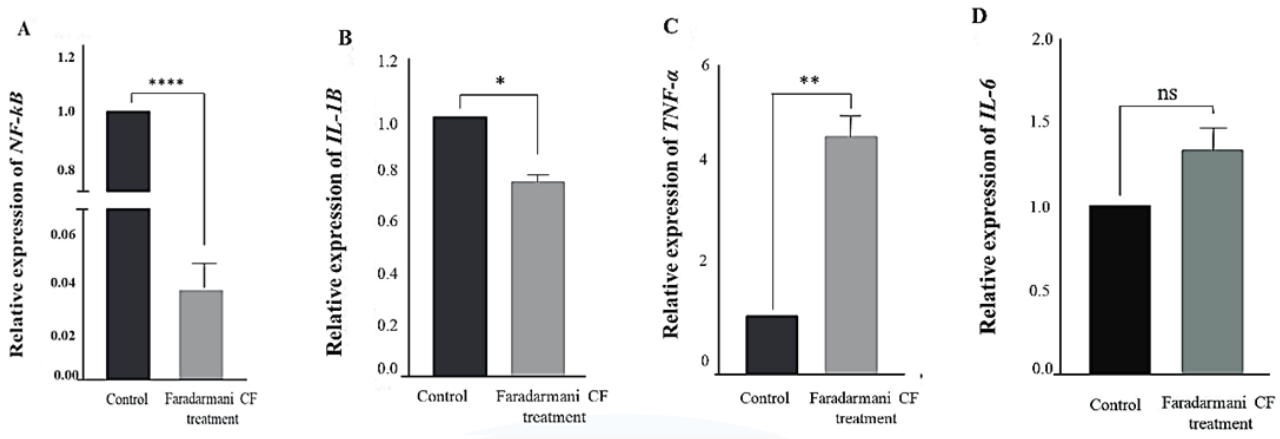


Figure 1. The expression level of evaluated genes in control and Faradarmani CF treatment on blood samples of patients with COVID-19 infection. A) *NF-κB*, B) *IL-1β*, C) *TNF-α*, and D) *IL-6* genes. The asterisk (*) displays a significant difference ($p<0.05$) between the Faradarmani CF treatment and control groups.

Discussion

The specific signaling pathways mediated during inflammatory responses in *HCoV*-infected patients have not been fully identified (Channappanavar et al., 2017; Battagello et al., 2020). However, several serum cytokines in COVID-19 patients have been reported to be higher than in healthy adults (Huang et al., 2020). A previous study suggested that among the signaling pathways activated by viruses, *NF-kB* plays an important role in inducing the expression of genes encoding cytokines and chemokines (Mogensen & Paludan, 2001). During the COVID-19 pandemic, research has associated the mortality rate among COVID-19 patients with cytokine storms (Mehta et al., 2020; Ruan et al., 2020). Anti-cytokine therapies, such as IL-6 receptor (Radbel et al., 2020; Xu et al., 2020) or IL-1 receptor antagonist (Cavalli et al., 2020; Conti et al., 2020), have been proposed for the treatment of COVID-19. The results of our research indicate that the expression of *NF-κB* and *IL-1β* genes was significantly decreased under the influence of Faradarmani CF.

The results of the present study showed that the Faradarmani CF affects the expression of *NF-κB, TNF-α,* and *IL-1β,* proinflammatory genes, in isolated blood samples from COVID-19 patients. Further studies are recommended to explore the mechanism and extent of the favorable effect of this TCF in the treatment of COVID-19.

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Conflicts of Interest

The authors declare no conflict of interest.

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The Effect of Taheri Consciousness Fields on Survival and Infectivity of SARS-CoV-2 at Various Temperatures

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Abstract

The SARS-CoV-2 virus that causes coronavirus disease 2019 (COVID-19) has become a serious global public health problem. Both laboratory and epidemiological investigations have revealed that ambient temperatures can affect the survival and transmission rate of coronaviruses. T-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 (1 and 2) on the survival and infectivity of the SARS-CoV-2 virus at different temperatures. To evaluate the effect of TCFs on virus replication at different temperatures, cytopathic effect (CPE) monitoring, fifty-percent tissue culture infective dose (TCID50), and virus RNA copy number were used. The results demonstrated that the association of the TCFs (1 and 2) with temperature can further reduce the infectivity and survival of SARS-CoV-2. The TCFs eliminated the virus at 56 °C for 30 min, whereas the control group showed virus activity. Also, TCFs significantly reduced the virus titer and RNA copy number at temperatures of 4 °C and 24 °C for 24h compared to the control group. In this study, for the first time, we showed that TCFs, as a qualitative intervention, can affect the survival of SARS-CoV-2 in different temperature conditions. Further studies are highly recommended to examine the effects of TCFs on viruses in different environmental conditions.

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

Introduction

Currently, the coronavirus (COVID-19) has affected many countries all around the world. Some evidence suggests that respiratory droplets are the main route of transmission of the virus among people who are in close contact with each other. Also, contacting contaminated surfaces and touching the eyes or mouth without washing hands may infect people (WHO, 2020a). Many reports have documented the role of environmental factors, such as temperature and humidity, in the transmission of the coronavirus (Yuan et al., 2020; Chi et al., 2021). It has been reported that COVID-19 incidence declined with increasing temperature; however, the association between temperature and transmission is negligible (Sehra et al., 2020). Laboratory and epidemiological surveys have revealed that ambient temperatures can affect the survival and transmission of coronaviruses. Furthermore, viral inactivation approaches are urgently required to allow safe experimental laboratory conditions (Batéjat et al., 2021; Cutts et al., 2016; Edwards, 2000; Leclercq et al., 2014; Saluzzo et al., 1988).

According to Taheri's theory, there are various T-Consciousness Fields (TCFs) with various functions that are a subset of the Cosmic Consciousness Network (CCN). These fields are non-frequency in nature, and their effects can be recorded and examined by designing experiments. It should be noted that the effects of the TCFs begin through the announcing mind (Faradarmangar) (Taheri, 2013).

In previous research, the effects of the TCFs on the MCF7 cancer cell line (Taheri et al., 2020a), spatial memory and avoidance behavior of a rat model of Alzheimer's disease (Taheri et al., 2021a), wheat plant (Torabi et al., 2020), bacterial population growth (Taheri et al., 2021b), and the electrical activity of the brain during Faradarmani Connection in the Faradarmangars population (Taheri et al., 2020b) have been investigated.

The present work aimed to study the effects of the TCFs (1 and 2) on the survival of SARS-CoV-2 exposed to various temperatures for different periods of time. Viral infectivity was assessed via the TCID50 method, and SARS-CoV-2 RNA copy numbers were quantified.

Material and Methods

Application of Taheri Consciousness Fields

The study samples were exposed to TCFs according to the guidelines provided on the COSMOintel research center (www.COSMOintel.com). More details are provided in the Common Considerations section of this issue. In the present study, TCFs were applied at the same time as the start of temperature application in the laboratory treatment groups.

Culturing of Vero cells and SARS-CoV-2

A T-75 flask of the confluent Vero cell line was trypsinized, centrifuged, and resuspended in DMEM media with 10% fetal bovine serum (Gibco). Also, cells were subcultured and incubated at 37 ˚C and 5% CO_2 until 80% confluency.

The previously isolated specimens from the nasopharyngeal cavities of COVID-19-positive patients (Cycle threshold (Ct) values of 10 in Real-Time PCR analysis) were used in the present study. All examinations on the SARS-CoV-2 were performed in a laboratory with a biosafety level 3 facility (WHO, 2020b). Comparative virucidal activity at different temperatures for the TCFs treatment groups (1 and 2) and the control group was separately assessed. So, SARS-CoV-2 propagation, Real-time PCR, and TCID50 assays were done before initiation of the study. For the TCID50 assay (virus titration), cells and viruses were seeded in a 96-well plate, and results were evaluated by the Reed-Muench method (Reed et al., 1938). Finally, based on the analysis of the results, a virus culture with a log TCID50/mL (virus titer) ~6 and a Ct value of 11 was selected for inoculation into incubations at

different temperatures in the TCFs groups and the control group.

Deactivation of the SARS-CoV-2 virus at different temperatures

Comparison of virulence activity and reduction of infectivity at different temperatures was performed according to the European Standard NF EN 14476-A2 (https://www.analytice.com/en/nf-en-14476-laboratory-biocide-efficacy-test). Briefly, 4 µL of the 10^6 TCID50/mL virus culture supernatant was incubated at different temperatures according to the following profile: 4 °C and 24 °C for 24h, 56 °C and 60 °C for 30 min, 60 °C for 60 min, and 80 °C and 92 °C for 30 min. Then, after virus concentration and recovery, the samples were cultured for TCID50 and real-time RT-PCR assays.

Virus precipitation, infectivity titration, and RNA copy number quantification

In this study, polyethylene glycol (PEG) precipitation was used to concentrate the virus and eliminate cytotoxic agents in cell culture and/or PCR inhibitors from samples. Therefore, they were mixed with 1.5 mL of the PEG 6000 stock solutions. The suspensions were agitated on a shaking incubator at 150 rpm for 8 h at 4 ˚C, and the supernatant was centrifuged at 3600×*g* for 50 min. The supernatant containing PEG was removed, and the resultant pellet was dissolved in one mL phosphate-buffered saline (PBS) and re-centrifuged at 4000×*g* for 40 min. The supernatant was filtered through a 0.2 µm sterile membrane filter, and 50 µL was added to the 96-well plate wells for virus titration (in triplicate) by TCID50 assay, then incubated at 37 ˚C with 5% CO2. All the 96-well plates were monitored every 24 h for Cytopathic effect (CPE), and after six days, the results were reported. Parallelly, these processes were performed in flasks, with each sample cultured in a separate flask.

Real-time RT-PCR

The supernatant from samples cultured in flasks was subjected to real-time PCR after 6 days. All reactions were performed on the Rotor-Gene Q 6000 thermocycler (Corbett, Australia) according to the recommended protocol. The following ingredients were used: 0.1 µL of RT enzyme, 10 µL of extracted RNA or blank, 4 µL of Roche MasterMix, 0.5 µL of primer-probe mix, and deionized RNase/DNase-free water. The heating program was 3 seconds at 55 ˚C, 30 seconds at 95 ˚C (1 cycle); 3 seconds at 95 ˚C, 12 seconds at 60 ˚C (45 cycles); and 10 seconds at 40 ˚C (1 cycle).

Statistical analysis

Data were analyzed using SPSS software (version 26) at a 95% confidence level to determine the significance of differences between treatments. ANOVA analysis was used to detect significant differences between samples.

Results

Tables 1 and 2 display the results of the effect of TCFs on viability, titer, and RNA copy numbers of SARS-CoV-2. The experiments and measurements were performed in triplicate. The results of this study show that the paired application of temperature with TCFs can further reduce the infectivity and survival of SARS-CoV-2. For instance, at 56 °C under TCFs, the virus was completely eliminated. Also, as in Table 1, at 4 °C (refrigerator temperature) and 24 °C (room temperature) under TCFs, a significant difference (p-value<0.05) for both types of TCFs (1 and 2) was reported compared to the control groups, which were kept in temperatures of 4 °C and 24 °C, without applying TCFs. It reveals that TCFs play the main role in reducing infectivity and survival of the virus at these temperatures. However, the results of applying TCFs at 60 °C on the virus's survival were similar to the control group. Since the temperature was high enough to eliminate the virus, the effect of TCFs could not be clearly demonstrated.

Table 1. SARS-CoV-2 titer in the studied groups

No.	Temperature/ Exposure time	Virus titer (TCID50)			
		Initial	Control group	TCF-1	TCF-2
1	4 °C for 24h	1×10^{6}	$1 \times 10^{5.7}$	1×10^{5}*	$1\times10^{4.7}$*
2	24 °C for 24h	1×10^{6}	$1\times10^{5.5}$	$1\times10^{4.2}$*	1×10^{4}*
3	56 °C for 30 min	1×10^{6}	1×10^{2}	ND*	ND*
4	60°C for 30 min	1×10^{6}	ND/ND[a]	ND	ND
5	60°C for 60 min	1×10^{6}	ND	ND	ND
6	80°C for 30 min	1×10^{6}	ND	ND	ND
7	92°C for 30 min	1×10^{6}	ND	ND	ND

The asterisk (*) indicates a significant difference ($p<0.05$) between the TCFs treatment groups and the control groups. ND: Not detected, NDa: detected in some samples (10^2), TCFs: Taheri Consciousness Fields

Table 2. SARS-CoV-2 RNA copy number in the studied groups

No.	Temperature/ Exposure time	Viral RNA copy number			
		Initial	Control group	TCF-1	TCF-2
1	4 °C for 24h	4×10^{6}	3.2×10^{6}	2×10^{6}*	2×10^{6}*
2	24 °C for 24h	4×10^{6}	3×10^{6}	2×10^{6}*	1.8×10^{6}*
3	56 °C for 30 min	4×10^{6}	1×10^{3}	1×10^{2}*	1×10^{2}*
4	60°C for 30 min	4×10^{6}	$1\times10^{2.2}$	1×10^{2}	1×10^{2}
5	60°C for 60 min	4×10^{6}	$1\times10^{2.5}$	1×10^{2}	1×10^{2}
6	80°C for 30 min	4×10^{6}	1×10^{2}	1×10^{2}	1×10^{2}
7	92°C for 30 min	4×10^{6}	1×10^{2}	ND	ND

The asterisk (*) indicates a significant difference ($p<0.05$) between the TCFs treatment groups and the control groups. ND: Not detected, TCF: Taheri Consciousness Field

Discussion

Considerable effort has been devoted to understanding the behavior of viruses in the environment (Sharma et al., 2020). According to a study, humidity and temperature showed negative associations with COVID-19; therefore, countries with low humidity and temperature should pay closer attention (Qi et al., 2020). Similarly, high temperatures have been found to increase the decay rate of SARS-CoV-2 on surfaces and reduce its transmission (Biryukov et al., 2021). However, Xie and Zhu reported that there is no evidence that COVID-19 decreases as the weather warms (Xie et al., 2020). The results showed that the association of temperature with TCFs can further reduce the infectivity and survival of SARS-CoV-2.

In conclusion, in addition to healthcare, TCFs can be considered a qualitative intervention to prevent COVID-19 infection. However, further research is recommended to investigate the effects of TCFs on different viruses and their variants.

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Conflicts of Interest

The authors declare no conflict of interest.

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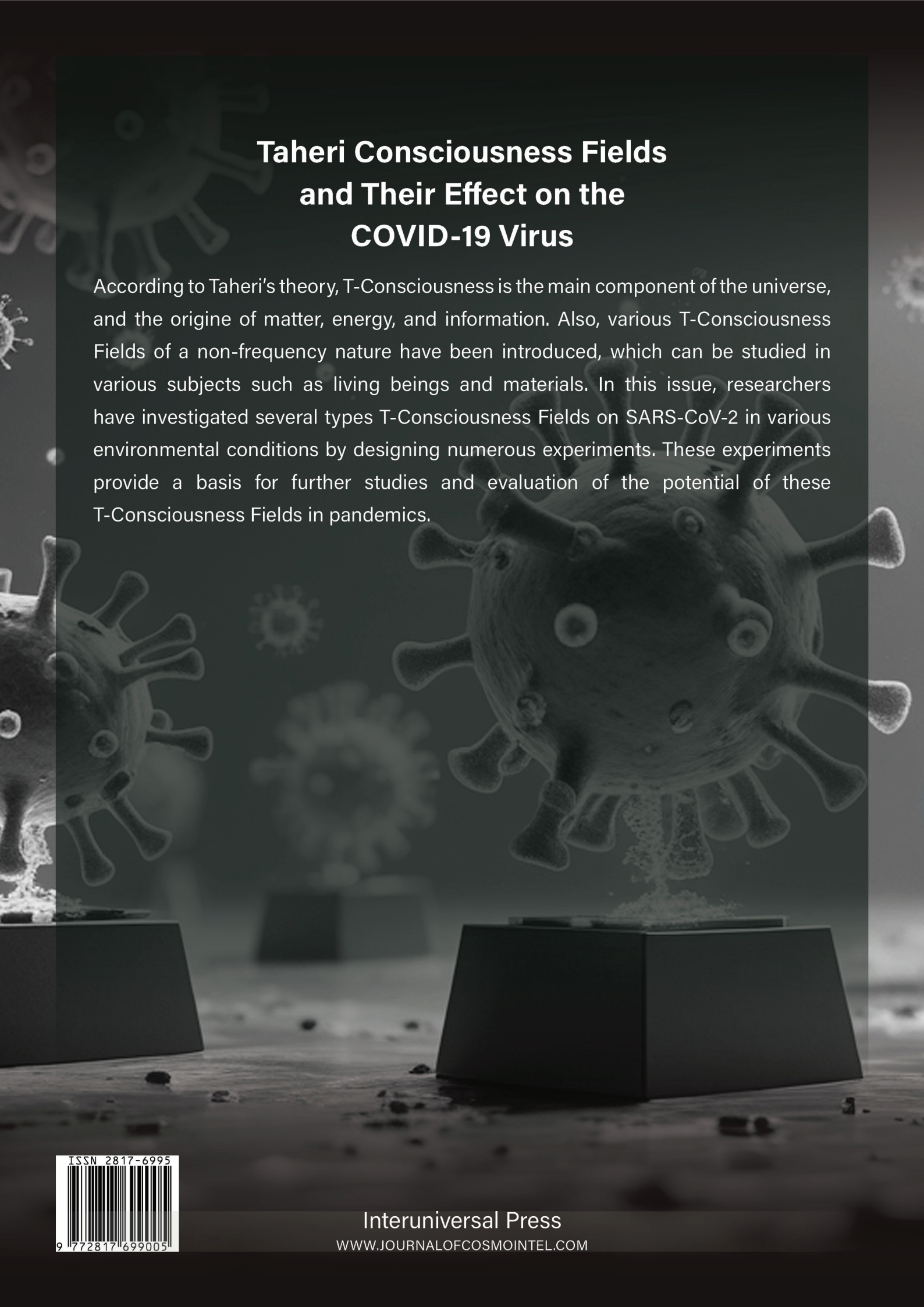
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Laleh Amani was an outstanding and dedicated researcher at the Cosmointel Research Center who passed away in 2021. We express our sincere condolences and gratitude for her invaluable contributions and pray for her peace.



Taheri Consciousness Fields and Their Effect on the COVID-19 Virus

According to Taheri's theory, T-Consciousness is the main component of the universe, and the origine of matter, energy, and information. Also, various T-Consciousness Fields of a non-frequency nature have been introduced, which can be studied in various subjects such as living beings and materials. In this issue, researchers have investigated several types T-Consciousness Fields on SARS-CoV-2 in various environmental conditions by designing numerous experiments. These experiments provide a basis for further studies and evaluation of the potential of these T-Consciousness Fields in pandemics.

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