Effect of Faradarmani Consciousness Field on the susceptibility of *Candida albicans* and *Aspergillus fumigatus* to antifungal drugs

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**Dr. Laleh Amani was an outstand-ing, compassionate, and enthusiastic researcher in the Cosmointel. Inc studies who passed away in 2021. We extend our sincere condolences and appreciation for her extraordi-nary efforts in this research and pray for her peace.

ABSTRACT

A suitable antifungal therapy for successful patient outcomes is needed for all serious fungal infections. Only a few antifungal agents are available, so the appearance of resistance to a single drug and currently multidrug resistance has critically hampered the management of patients. Faradarmani Consciousness Field (CF) introduced by Taheri is neither energy nor matter and does not have a quantity, so it cannot be directly measured. Nevertheless, it is possible to assess their effects indirectly through controlled experimentations in the laboratory. This study aimed to evaluate the effect of Faradarmani CF on the susceptibility of *Candida albicans* and *Aspergillus fumigatus* to antifungal drugs. For this purpose, antifungal susceptibility was assessed via the disk diffusion method to evaluate the Faradarmani CF effect. Faradarmani CF significantly reduced the resistance of *C. albicans* and *A. fumigatus* to nystatin. As well as reduced, the resistance against amphotericin B was observed in both fungi but compared to the control was not significant. Considering the results, the drug resistance of *C. albicans* and *A. fumigatus* decreased under influence of Faradarmani CF, and it can be examined in fungal infections in vivo. In addition, it is recommended that the effects of Faradarmani CF on other drug-resistant pathogens be investigated.

Keywords: Faradarmani Consciousness Field, Taheri Consciousness Fields, *Candida albicans*, *Aspergillus fumigatus*

INTRODUCTION

The invasive mycoses caused by opportunistic pathogenic fungi such as *Aspergillus fumigatus* and *Candida albicans* have increased considerably over the past three decades (Hajjeh et al., 2004, Seagle et al., 2021). This increase in infections is directly correlated to increase populations of at-risk patients, which leads to serious fungal infections development and excessive morbidity and mortality (Gudlaugsson et al., 2003, Rayens et al., 2021). Serious life-threatening fungal infections have been reported with a growing number of pathogens, such as *C. albicans* and *A. fumigatus*, which are well-known opportunistic pathogens (Pfaller et al., 2004).

Resistance to available three types of antifungal drugs (echinocandin, azoles, and polyenes) can severely restrict treatment options. Drug resistance is particularly concerning for severe infections that may be harder to treat such as invasive fungal infections, which affect the heart, brain, eyes, blood, or other parts of the body (Gupta et al., 2021, Seagle et al., 2021, Fernández-García et al., 2017).

The nature of consciousness and its place in science have received much attention in the current century. Many philosophical and scientific theories have been proposed in this area. In the1980s, Mohammad Ali Taheri introduced novel fields with a non-material/non-energetic nature named Taheri Consciousness Fields (TCFs). In this perspective, T-Consciousness is one of the three existing elements of the universe apart from matter and energy. According to this theory, there are various TCFs with different functions, which are the subcategories of a networked universal internet called the Cosmic Consciousness Network (CCN). The major difference between the theory of TCFs and other theoretical concepts about consciousness is related to the practical application of the TCFs. These fields can be applied to all living and non-living creatures, including plants, animals, microorganisms, materials, etc.

Mohammad Ali Taheri, the founder of Erfan Keyhani Halqeh, a school of thought, introduced a new science in 2020 as a branch of this school. He coined the term Sciencefact for this new science because it utilizes scientific investigations to prove the existence of T-Consciousness as an irrefutable phenomenon and a fact. Although science focuses solely on the study of matter and energy and Sciencefact, by contrast, explores the effects of the [non-material/non-energetic] TCFs, Sciencefact has provided a common ground between the two by conducting reproducible laboratory experiments in various scientific fields, and it has used the scientific approach in proving TCFs.

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

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

ferent 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.

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.

In this study, the effect of Faradarmani CF on the susceptibility and resistance of *C. albicans* and *A. fumigatus* to antifungal drugs amphotericin B and nystatin was investigated.

METHODS AND MATERIALS

Applying the Faradarmani CF

TCFs were applied to the samples according to the protocols regulated by COSMOintel research center (www.COSMOintel.com). A request for Connection to the CCN to utilize TCFs can be placed through the COSMOintel website in the "Assign Announcement" section. This access is available for everyone at no cost. In order to study and experience this Connection, the researchers can register on the website at any time and in order to report the experiment to the COSMOintel research center. Certain details of the experiment must be provided to the center; for example, the characteristics or number and name of samples and controls must be specified. This entire experiment was carried out as a double-blind method where lab technicians were completely unaware of TCFs theory, and the Faradarmangar at the COSMOintel research center who established the Connection was unaware of the details of the study. Double-blind is a gold standard that is common in science experiments in the field of medicine and psychology, involving theoretical and practical testing.

In the present study, Faradarmani CF was announced for the treatment group of disk diffusion method after the culture of fungi and before inserting the disks as the. The Faradarmani CF was only applied for test plates.

Evaluation of the effect of different dilutions of amphotericin B and nystatin

The effects of amphotericin B and nystatin on *C. albicans* and *A. fumigatus* were measured by the disk diffusion method (Fothergill, 2012). In the first stages, the effect of different dilutions of amphotericin B and nystatin on fungi was investigated in several stages and the minimum effect of drugs was calculated. Then, the effect of Faradarmani CF on fungi was measured with the selected concentration of drugs.

C. albicans and *A. fumigatus* were obtained from laboratory archives and were cultured on Sabouraud Dextrose Agar (SDA) medium. It was used from *A. fumigatus* spores and *C. albicans* yeast phase for agar diffusion test. Fungi inoculums con-

Table1. The zone size (mm) of *Aspergillus fumigatus* and *Candida albicans* against nystatin and amphotericin in Faradamani CF treatment and control groups (p<0.05 *)

	Nystatin		Amphotericin B	
	Control	CF treatment	Control	CF treatment
A. fumigatus	16.25±1.7	20.75±2.21*	15.25±2.21	16±1.8
C. albicans	16±0.81	24.75±2.9*	9.75±1.7	11±1.8

tained 1 ×10^6 to 5×10^6 cells/ml (0.5 McFarland densities) and the standard suspension was used for agar diffusion methods (Fothergill, 2012).

Before experimenting, to evaluate the effective concentrations of antibiotics, different dilutions were prepared from amphotericin B (Sigma) and nystatin (Jabraben Hayan). Prepared dilutions of amphotericin B were 200, 20, and 2 mg/mL, as well as 200, 20, and 2 µg/mL for *C. albicans* and *A. fumigatus*, respectively. The dilutions of 10,000, 1000, 100, and 10 units/mL of nystatin were prepared for both fungi. Finally, two concentrations of nystatin, including 10 unit/mL and 100 unit/mL against *C. albicans* and *A. fumigatus* were selected, respectively. As well, two concentrations of amphotericin B including 2mg/mL and 200 µg/mL for *C. albicans* and *A. fumigatus* were selected, respectively. The blank disks were placed in micro-tubes containing different dilutions of the drugs for five minutes and after ensuring that the disks were properly mixed with the evaluated drugs by shaking the micro-tubes for one minute, the disks were placed with three replications on cultured plates. The plates were maintained in an incubator at 37 ° C for 24 hours. The inhibiting zone was measured. The selected amounts according to the appropriate diameter of the zone of each drug to prevent the growth of fungi were determined. Disk diffusion test was performed with disks containing selected concentrations of drugs in treatment groups (Faradarmani CF) and control groups.

STATISTICAL ANALYSIS

The independent t-test was used to calculate the significance of differences between control and treatment groups, and $p< 0.05$ was considered statistically significant.

RESULTS

For evaluation of Faradarmani CF effect on the susceptibility of *C. albicans* and *A. fumigatus* to nystatin and amphotericin, two concentrations of nystatin including 10 unit/mL and 100 unit/mL against *C. albicans* and *A. fumigatus* were selected, respectively. As well as two concentrations of amphotericin B including 2mg/mL and 200 µg/mL for *C. albicans* and *A. fumigatus* were selected, respectively. The results of the disk diffusion test showed the significant effect of Faradarmani CF on the zone size in the plates treated with Faradarmani CF compared to the control plates (untreated with Faradamani CF) in the fungi treated with nystatin. In addition, the increase of the zone size in the plates treated with Faradarmani CF in the fungi treated with amphotericin was observed but was not significant compared to the control (Table 1).

DISCUSSION

The application of antifungal drugs in the treatment of fungal infections can cause antifungal resistance (Revie et al., 2018). Resistance to almost

all antifungal drugs has been described in various pathogens, including *Aspergillus* and *Candida* species (Beardsley et al., 2018). Treatment options for controlling fungal infections are limited and combining multiple drugs to achieve a better therapeutic effect is tempting. In recent years, several new resistance patterns have been observed, including antifungal resistance from environmental sources in *A. fumigatus* and the emergence of simultaneous resistance to different types of antifungals (multidrug resistance) in different *Candida* species (Sanglard, 2016).

Finding a way to treat at-risk patient populations with drug-resistant fungal infections is essential. This study showed the effect of Faradarmani CF on increasing the susceptibility of *C. albicans* and *A. fumigatus* against nystatin significantly.

In previous researches, we observed the effects of the TCFs on MCF7 cancer cell line (Taheri et al., 2020a), Alzheimer's disease rat models (Taheri et al., 2021b), spatial memory, and avoidance behavior of a rat model of Alzheimer's disease (Taheri et al., 2021c), tolerance of *Triticum aestivum* L. under salinity stress (Torabi et al., 2020), bacterial population growth (Taheri et al., 2021d), Vesicular Stomatitis Virus (VSV), Herpes Simplex Virus 1 (HSV1), Encephalomyocarditis Virus (EMCV), and Reovirus (Taheri et al., 2021a), and the electrical activity of the brain during Faradarmani in the Faradarmangars population (Taheri et al., 2020b).

TCFs are not measurable, but it is possible to investigate their effects indirectly through various experiments. We suggest more investigations on other drug-resistant microorganisms to study the effect of the Faradarmani CF on drug resistance.

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CONFLICTS OF INTEREST

The authors declare no conflict of interest.

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