

Differential Effects of the Faradarmani Consciousness Field on Cell Cycle Progression of Lymphoma Raji Cells Under Clinostat-Simulated Microgravity and Earth Gravity Conditions

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Abstract

This study explores a novel hypothesis. According to Taheri, various T-Consciousness Fields (TCFs) exist, each with distinct functions, and are considered subsets of the Cosmic Consciousness Network. Although these fields lack any physical entity, their effects can be detected through laboratory experiments. It is hypothesized that when a subject is exposed to TCFs, the information transmitted from these fields can alter the properties or behavior of the treated samples compared to untreated controls. In the present experiment, the Faradarmani Consciousness Field, one type of TCF, was applied to investigate its effect on the cell cycle progression of the lymphoma Raji cell line under both simulated microgravity and normal Earth gravity conditions. There were four experimental groups, and the experiment duration was 48 hours. Samples not exposed to the Faradarmani Consciousness Field were considered the control group. Based on flow cytometry analysis, apoptosis was observed in cells exposed to microgravity (MG), with the sub-G1 phase increasing to approximately 42% (p -value < 0.05), whereas Faradarmani-treated samples remained almost unchanged under MG stress. Similarly, Faradarmani-treated samples exhibited similar percentages of G1 and S phases under microgravity conditions compared to Earth gravity, while a significant decrease was observed in samples without the field effect (p -value < 0.05). However, under normal gravity conditions, the effect of FCF was not significant compared to the control. These observations suggest that the Faradarmani Consciousness Field influences cell cycle progression differently depending on environmental conditions. Under microgravity (MG) stress, the information transmitted from this T-Consciousness Field appears to have an alleviating effect, whereas under normal Earth gravity, it did not produce a significant change.

Keywords: Faradarmani, Microgravity, Information, Cell Cycle, Raji, Apoptosis, Clinostat

Introduction

Human curiosity has always been a driving force behind exploration and discovery. From ancient civilizations observing the stars to modern scientists launching satellites and rovers, the desire to understand the universe has been deeply rooted in our nature. Despite the wonders of space, exploration has always come with immense physical risks for astronauts. For example, microgravity stress leads to muscle atrophy, bone density loss, cardiovascular changes, and altered immune responses (Baran et al., 2002; Manna et al., 2024). Although countermeasures like treadmill and cycling exercises, along with special suits to stress skeletal muscles, are used to prevent physical deterioration in microgravity, they are not fully effective. Despite these efforts, the negative effects of weightlessness often persist after returning to Earth, leading to reduced work efficiency and quality of life (Ruden et al., 2018; Scott et al., 2019; Bonanni et al., 2023).

Using terrestrial tools like the clinostat is crucial for advancing our understanding of how microgravity affects biological systems, without the high cost and complexity of space missions (Ferranti et al., 2021). A clinostat is a device that slowly rotates biological samples, such as cells or small organisms, to cancel out the directional influence of gravity over time (Kim et al., 2023). This creates a condition that mimics the effects of microgravity. It enables researchers to study how living systems respond to the absence of gravitational force, similar to what occurs during spaceflight (Kiss et al., 2019).

T-Consciousness is a term coined by Mohammad Ali Taheri, proposing that consciousness is not an emergent property of matter; rather, information, matter, and energy originate from it. Within this framework, various T-Consciousness Fields (TCFs)—each with distinct functions—are introduced as subsets of the Cosmic Consciousness Network (Taheri, 2013). Unlike mainstream theories such as Integrated Information Theory (IIT), Global Workspace Theory (GWT), Higher-Order Thought (HOT)

Theory, or Orch-OR, which attribute the source of consciousness to physical structures (e.g., the brain, information integration, or quantum processes) (Sattin et al., 2021), TCF theory suggests that the brain functions primarily as a detector of information—hardware operating in conjunction with the software aspect, the mind. Indeed, instead of focusing on neural complexity in explaining conscious experience, TCF theory adopts a non-local perspective, viewing T-Consciousness as independent of neural activity and beyond the brain.

Moreover, what makes this theory unique is its practical and testable model of non-physical field influence. Various experimental studies have reported the effects of TCFs on a wide range of subjects, including plants, animals, cells, and microorganisms (Taheri et al., 2022; Torabi et al., 2023; Taheri et al., 2024). It is hypothesized that information transmitted from TCFs can modify the properties and behavior of the studied subjects. In the current experiment, the effects of the Faradarmani Consciousness Field (FCF) on cell cycle progression of the lymphoma Raji cell line were evaluated to investigate whether this treatment could mitigate the adverse effects of microgravity stress induced by a clinostat device.

Material and methods

Faradarmani Consciousness Field application

FCF was applied to the samples according to protocols regulated by the COSMOintel research center (www.COSMOintel.com). Further details are provided in the general considerations of this issue.

Microgravity (MG) application

In this study, the microgravity condition was simulated using a clinostat, which was donated by the United Nations Office for Outer Space Affairs in Vienna to the Aerospace Research Institute of Iran. The clinostat was sterilized using ultraviolet light and 70% ethanol, and

subsequently placed in an incubator set at 37 °C (Figure 1). The experiment included four groups (n = 3) as follows: Group 1 – microgravity with FCF (MG + FCF); Group 2 (control) –

microgravity without FCF (MG); Group 3 – normal gravity with FCF (1G + FCF); and Group 4 (control) – normal gravity without FCF (1G).



Figure 1. The clinostat used in this experiment and the placement of samples under microgravity (MG) and normal gravity (1G) conditions.

Cell culture

In this experiment, human B-lymphoblastoid Raji cells were purchased from the Pasteur Institute of Iran and cultured in Roswell Park Memorial Institute 1640 medium containing 10% fetal bovine serum (Gibco Laboratories, Grand Island, NY), 100 IU/ml penicillin, and 100 µg/ml streptomycin. The cultures were maintained in a humidified incubator at 37 °C (Memmert, Schwabach, Germany) with 5% CO₂. To prevent the formation of air bubbles, the flasks were completely filled with culture medium, and then the samples were secured in a circular holder within the clinostat environment. The rotational speed was set at 30 rpm and continued for 48 hours to cover the cell doubling time.

Flow cytometry

Harvested cells of these two experiments were washed twice with PBS, and after adding 50 µl of cold PBS (+2 to +8 °C), they were suspended with a short vortex period. Then cells were fixed in 1ml cold 70% ethanol (-20 °C), and

were resuspended using the vortex mixer. After that, the cell suspension was centrifuged at 1500 rpm for 20 minutes, at room temperature, and after removing the supernatant; cells were washed once with PBS. Next, the PBS was slowly removed and 1ml MIX MASTER PI solution was added. The final concentration of cells in mentioned solution must be 5×10^5 cells/ml. Finally, the cells are incubated for 30 minutes at ambient temperature and read by flow cytometry. The proportion of cells at different stages of the cell cycle was assessed using a flow cytometer in the BD FACS Calibur system (BD bioscience, San Jose, CA, USA). The cell cycle phases were assessed by FlowJo software (Tree Star, San Carlos, CA).

Master PI mix solution for cell cycle

Propidiumiodide (PI) 1 mg/mL: 40 µl

RNase (DNaseFREE) 10mg/mL: 10 µl

PBS, ca⁺², mg⁺² Free: 950 µl

Data analysis

Each experiment was repeated three times, and the data were presented as mean \pm standard error (SE). One-way analysis of variance (ANOVA) followed by multiple comparisons with a 95% confidence interval was performed using GraphPad Prism software (version 9), and p-values less than 0.05 were considered statistically significant.

Results and Discussion

Table 1 shows the percentage distribution of cell cycle phases with and without Faradarmani Consciousness Field (FCF) treatment under both microgravity (MG) and Earth gravity (1G) conditions. As shown, the lowest average percentage of live cells within the selected gate was observed under microgravity (MG) stress without FCF treatment. Similarly, analysis of cell cycle progression reveals a significant increase in the sub-G1 phase in this group. In contrast,

the FCF-treated sample under MG conditions displays a sub-G1 percentage comparable to that observed under Earth gravity (1G).

A flow cytometry plot displaying FL3-A versus SSCH parameters enables the analysis of cellular populations based on DNA content and internal complexity (McKinnon, 2018). Figure 2 shows that elevated SSCH values in the untreated microgravity (MG) sample suggest the induction of structural damage or apoptosis.

Figure 3 illustrates the cell cycle phase distribution based on DNA content. The black curve in the figure (a) displays a distinct peak at DNA content values <200 , which is characteristic of the sub-G1 phase, typically associated with apoptotic cells containing fragmented DNA (Plesca et al., 2008).

Table 1. Effect of Faradarmani Consciousness Field (FCF) on the percentage of cell cycle phases under microgravity (MG) or earth gravity (1G) condition.

Groups	Samples description	The average percentage of live cells in selected gate	Sub G1	G1	S	G2	Super G2
FCF-/MG	Control - MG condition without FCF	64	42.10 \pm 2.44	20.33 \pm 0.80	28.27 \pm 0.92	11.17 \pm 1.88	0.70 \pm 0.31
FCF+/MG	MG condition with FCF	78	6.29 \pm 0.79	47.78 \pm 0.05	40.85 \pm 1.96	10.17 \pm 1.13	0.57 \pm 0.33
FCF-/1G	Control - 1G condition without FCF	77	6.90 \pm 2.90	47.78 \pm 6.37	39.12 \pm 1.61	9.10 \pm 1.44	0.41 \pm 0.02
FCF+/1G	1G condition with FCF	78	6.79 \pm 1.41	42.66 \pm 1.79	42.21 \pm 2.43	11.62 \pm 1.61	0.59 \pm 0.22

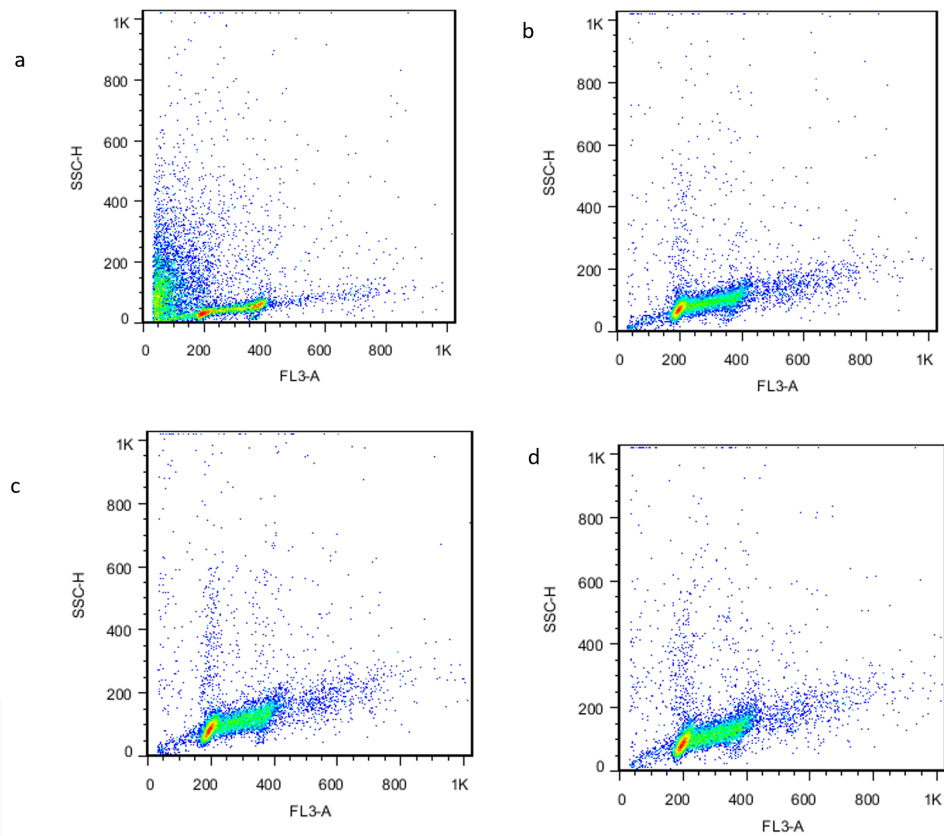


Figure 2. Representative FL3-A histograms of Raji cells under (a) Microgravity (MG) without Faradarmani Consciousness Field(FCF), (b) MG with FCF, (c) 1G without FCF, and (d) 1G with FCF.

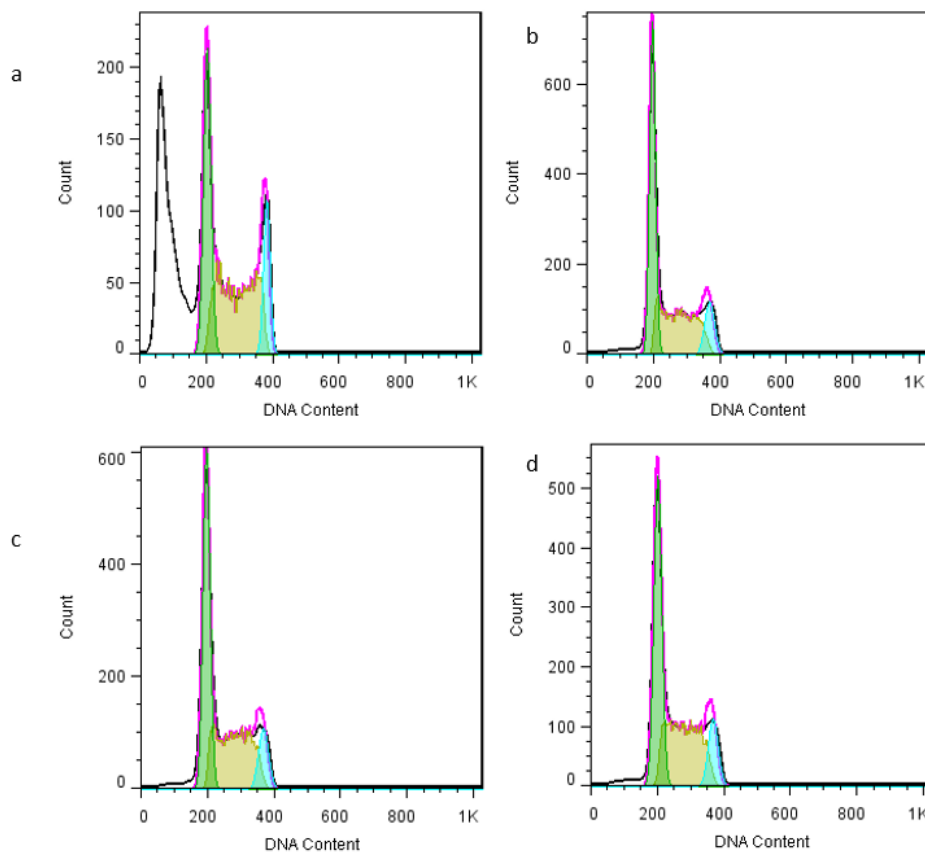


Figure 3. Representative histogram (single replicate) showing cell cycle phase distribution in Raji cells under (a) MG without FCF, (b) MG with FCF, (c) 1G without FCF, and (d) 1G with FCF.

Furthermore, statistically significant changes in cell cycle phases are presented in Figure 4. As shown, MG stress led to a marked increase in the sub-G1 population (p -value < 0.05) and a significant reduction in G1 and S phases

in untreated samples (p -value < 0.05). In contrast, FCF-treated samples displayed values comparable to the controls under Earth gravity (1G) conditions.

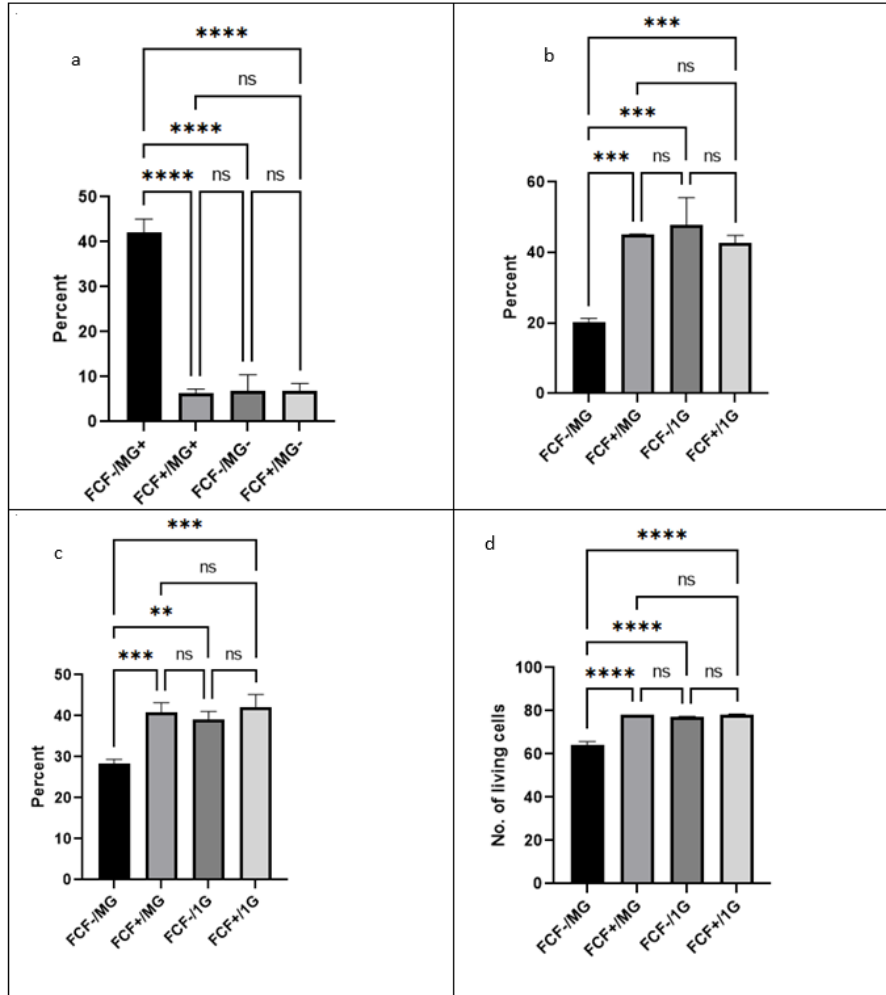


Figure 4. Effect of Faradarmani Consciousness Field (FCF) and gravity on the percentage of the living cells in (a) Sub-G1, (b) G1, and (c) S phases, as well as the number of live cells (d). MG: microgravity; 1G: Earth gravity; ns: not significant; ** p < 0.001; *** p < 0.0001; **** p < 0.00001.

Numerous studies on various cell types have demonstrated morphological sensitivity to microgravity (Tauber et al., 2017; Bradbury et al., 2020). For example, one study reported that simulated microgravity significantly disrupts the mechanical properties and cytoskeletal structure of endothelial cells. After just 24 hours of exposure, these cells showed a marked reduction in stiffness and viscosity (Janmaleki et al., 2016). This stress has also been reported to impair cell cycle progression (Vidyasekar

et al., 2015) and increase apoptosis (Pan et al., 2020; Sokolovskaya et al., 2020).

It is well established that physical forces such as gravity have played a fundamental role in the evolution of life on Earth, influencing numerous biological processes (Topal and Zamur, 2021). In this study, cells treated with the FCF tolerated reduced gravity and remained viable. As noted in the introduction, it is hypothesized that FCF transmits information capable of altering the properties or behavior of the treated system.

The current results demonstrate that FCF substantially mitigated the damaging effects of microgravity (MG), while FCF-treated samples under Earth gravity showed responses similar to untreated controls.

This suggests that the information conveyed by FCF may vary depending on environmental conditions. Consistent with its alleviative effects, these findings align with our previous

studies showing that FCF reduced the harmful impact of salinity on wheat seedlings and decontaminated radioactive materials in aquatic environments (Taheri et al., 2022b; Torabi et al., 2023). This observation warrants further investigation under real weightlessness, as well as hypergravity conditions, to gain deeper insight into how FCF treatment may influence the behavior of organisms in space.

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