



RESEARCH ARTICLE

REVISED Alleviative effects of Faradarmani Consciousness Field on *Triticum aestivum* L. under salinity stress [version 3; peer review: 1 approved]

Previously titled: Alleviative effects of Fara-darmani Consciousness Field on *Triticum aestivum* L. under salinity stress

Sara Torabi¹, Mohammad Ali Taheri², Farid Semsarha³

¹Department of Plant Biology, School of Biology, College of sciences, University of Tehran, Tehran, 14155-6455, Iran

²Sciencefact Research Center, Cosmointel Ltd. Research Center, Ontario, Canada

³Institute of Biochemistry and Biophysics (IBB), University of Tehran, Tehran, 13145-1384, Iran

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Abstract

Background: The Faradarmani Consciousness Field was founded by Mohammad Ali Taheri. It is a novel field and is described similarly to the field of gravity, or the electromagnetic field. This field is neither matter nor energy, and therefore does not possess a quantity. Even though there is no direct scientific evidence for the Consciousness Field, it is possible to investigate its effects on objects through controlled experiments. The aim of the present work was to study the alleviative effects of the Faradarmani Consciousness Field on common wheat *Triticum aestivum* L. var Star under salt stress.

Methods: Plants were grown under 0 mM NaCl (control) and 150 mM NaCl with or without the influence of Faradarmani Consciousness Field for 3 weeks. Chlorophyll, hydrogen peroxide (H₂O₂), malondialdehyde (MDA) content and activity of antioxidant enzymes such as superoxide dismutase (SOD), polyphenol oxidase (PPO), and peroxidase (POX) were measured in all groups of plants.

Results: In the salt-treated plants under the influence of the Faradarmani Consciousness Field, the contents of total chlorophyll, as well as a and b chlorophyll forms, were elevated compared with the salt-treated plants without Faradarmani CF (34.8%, 17.8%, and 169% respectively). Additionally, Faradarmani increased H₂O₂ (57%) and the activity of SOD and PPO by 220% and 168%, respectively, under salinity compared with the salt-treated plants without Faradarmani CF. MDA content and activity of peroxidase were decreased by 12.5% and 34%, respectively.

Conclusion: These results suggest the Faradarmani Consciousness

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1

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report

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1. **Halimeh Hassanpour**, Aerospace Research Institute, Ministry of Science Research and Technology, Tehran, Iran

Any reports and responses or comments on the article can be found at the end of the article.

Field as a qualitative intervention strategy to withstand salt stress in plants, by increasing the contents of chlorophyll, antioxidant enzyme activities, and decreasing MDA content under salinity.

Keywords

Antioxidant enzymes, Faradarmani, Consciousness Field, Salt stress, Wheat

Corresponding authors: Sara Torabi (sara.torabi1986@gmail.com), Farid Semsarha (semsarha@alumni.ut.ac.ir)

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Competing interests: Mohammad Ali Taher is the innovator of Faradarmani Consciousness Field used as the main method of the present study. His contribution to the study was general supervision over the start and end of the Fara-darmani CF treatment in the study.

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REVISED Amendments from Version 2

Some words were edited throughout the text. The two words including Fara-darmani and Fara-therapist were replaced with Faradarmani and Faradarmangar in the figures and the main text.

Any further responses from the reviewers can be found at the end of the article

Introduction

Most criticism about complementary therapy is the lack of scientific research. In order to be accepted, academic studies using different study designs are necessary. Since one of the critical objections occurring when human beings are treated with complementary therapy is the placebo responses, biochemical plant-based studies can be a suitable method to clarify the phenomenon (Betti *et al.*, 2003). Among the different plant model systems, the wheat plant has been repeatedly selected for homeopathy research Baumgartner *et al.* (2000) showed that homeopathic drugs improved plant resistance, which exerted their effect through detoxification processes.

In arid and semi-arid areas of the world, salinity is considered as a major factor in reducing crop productivity (Poonia *et al.*, 1972). Plant growth is adversely affected by multiple environmental stresses, including biotic (e.g. fungi, bacteria, viruses, herbivores) and abiotic (e.g. low temperature, salt, drought, heavy metal toxicity). Among these the salination of arable land is one of the key factors that threatens the sustainability of the agricultural industry. Thus, many studies have attempted to explore processes that contribute to plant survival under salt stress (Ashraf & Harris, 2004) as a strategy to improve productivity and fertility. It is well documented that plants that are exposed to biotic or abiotic stresses have biochemical changes that exert oxidative damage through Reactive Oxygen Species (ROS) (Smirnoff, 1993). These free radicals disrupt cell membrane stability by peroxidation of polyunsaturated fatty acids in the plant cell membranes (Bor *et al.*, 2003; Hernández & Almansa, 2002; Shalata *et al.*, 2001) and denature protein and nucleic acids (Chen *et al.*, 1993). To alleviate adverse effects of oxidative stress, plants have developed diverse strategies, which are categorized as enzymatic, such as catalase, superoxide dismutase (SOD), peroxidase (POX), polyphenol oxidase (PPO) and ascorbate peroxidase, and non-enzymatic that directly scavenge ROS, such as glutathione, tocopherol, flavonoids and ascorbates (Agarwal & Pandey, 2004). Plants that have developed an antioxidant system that participates in ROS scavenging have better resistance to oxidative damage (Parida & Das, 2005).

To date, there have been many studies to explore the relationship between the intangible and physical world, especially the interaction between the human mind and outside physical world. For instance, it has been reported that the mind can affect dice tosses (Rhine, 1944). Researchers have previously

focused on probabilistic systems, like tossing coins, using random number generators (RNGs). The first RNG study was conducted by Radin & Nelson (1989), which included 597 experiments and 235 control studies. This type of research was considered as ‘micro-psychokinesis’ (micro-PK) (Jahn *et al.*, 1980; Varvoglis & Bancel, 2015). However, micro-PK is not completely acceptable to science because of the null effects and failure to replicate previous positive results (Jahn *et al.*, 2000). Throughout history, studies can be found that explain the interaction between the human mind and body, such as ‘distant healing’, or the effects of the mind on inanimate physical systems, like morphological changes in a thin strip of metal (Randall & Davis, 1982).

Faradarmani is one of the many Consciousness Field (CFs) founded by Mohammad Ali Taheri. In this theoretical concept, cosmic consciousness is the collection of consciousness, wisdom or intelligence governing the world of existence, which is also called ‘Awareness’. Consciousness, according to Taheri, is one of the three existing elements of the universe apart from matter and energy. By defining Consciousness as neither matter nor energy, we cannot associate a quantity to it. Since consciousness isn’t measurable, its existence can only be known through experience (Taheri, 2013). According to this theory, any living creature, including animals and plants, may be cured via humans by “Etesal” (virtual connecting) to internet-like facilities called the Cosmic Consciousness Network (CCN). In this type of affection, mind-matter interaction occurs through connecting to the CCN by a Faradarmangar (the person who makes the virtual connection). Faradarmani establishes a consciousness bond between the ‘whole’ consciousness and the ‘parts’ where all constituents will be scanned and corrected (Taheri, 2013). Although the mechanism of this linkage is not yet definable by science, its consequences can be measured and studied scientifically.

The aim of this study was to determine the effects of Faradarmani CF on alleviating the effects of salt stress in a spring wheat variety (Star).

Methods

Faradarmani Consciousness Field application

Subjects of study received Faradarmani via Faradarmangar by ‘announcement’ which is a process in which Taheri or any Faradarmangar (announcer) declares and sends the information of the subjects under study (e.g. the number of groups) to the CCN. The influence of Consciousness Field begins with the connection between the human mind and the CCN. In other words, the Faradarmangar’s mind acts as an intermediary between the subject of the study and the CCN. The first author of this study is an announcer and at the same time as the seedlings were subjected to salt stress, two groups of treatments received Faradarmani (group 2: 0 mM NaCl and group 4: 150 mM NaCl). This exposure occurs without any kind of physical intervention, since consciousness according to Taheri’s concepts is neither matter nor energy, receiving this treatment is possible from close and far distances.

This experiment can easily be repeated by any researcher even from far distances by registering on the COSMOintel website (the [Assign Announcement](#) section) COSMOintel is a research center, under the supervision of the innovator of the method (Mohammad Ali Taheri) that has been established to design and implement repeatable and reproducible studies in the world of science¹.

Plants

In this research, we used a spring wheat variety *Triticum aestivum* L. var Star (Seed and Plants Improvement Institute, Karaj, Alborz Province). Seeds were surface sterilized with 2.5% sodium hypochlorite for 10 min and washed thoroughly with sterile distilled water. After sterilization, seeds were soaked in distilled water for 24 hours at room temperature. For each treatment three pots were prepared and six seeds were initially sown in plastic pots (10 × 10 cm) containing perlite soil. After the germination they were thinned to five plants per pot. First, all pots were irrigated daily with 100ml distilled water for four days. Then received 100ml half-strength Hoagland's nutrient solution (pH= 5.7) (Hoagland & Arnon, 1950) every other day for another 12 days (chemicals purchased from Sigma-Aldrich).

Applying salinity stress

The sixteen-day-old seedlings were treated with salinity. The salts were added to the nutrient solution. To prevent osmotic shock, salt stress was started gradually on 50 mM NaCl (100ml). Every other day the concentration was increased by 50mM until 150 mM was attained. Salt stress was continued for three weeks (150mM NaCl was added every other day). Initial Faradarmani connection treatment occurred at the same time as adding the first NaCl solution. Four treatment groups (n=3 pots/group) were performed as follows: group 1, control – grown with no NaCl and did not receive Faradarmani CF; group 2 –grown with no NaCl and did receive Faradarmani CF; group 3 – treated with 150 mM NaCl for three weeks and did not receive Faradarmani CF treatment; group 4 – treated with 150 mM NaCl for three weeks and did receive Faradarmani CF treatment.

After three weeks, four fully expanded leaves were picked per replicate for future analyses. They were frozen in liquid N₂ and transferred to -20°C for imminent bench experiments.

¹Gaining an announcement: users must register on the COSMOintel Website (free). Once registered, go to the researcher section and fill out the form (the required information is listed below). In order to study at any given time and place, the researchers simply need to introduce the testing center to the guidance center. This means that the exact time of start and finish of the test, the total duration of the test, the number of samples and controls and their contractual name must be specified. It should be noted that registration on the site and also requesting and gaining an announcement is free. We recommend that you contact our center for the definition and selection of the relevant sample in order to obtain a clear and repeatable results (email: researchers@cosmointel.com).

General Condition of Study; Study location; Address; University/center; Research Area: Basic science, Engineering, Medical science, cognitive science, Humanities, others; Sample Name; Number of samples; Control Name; Brief explanation of the experiment; Exact time of research initiation; Exact time of completion of the research

Determination of chlorophyll content

For measuring photosynthetic pigments, we used the method by Arnon (1949). 0.5 gram of fresh leaf material placed in acetone 80% and homogenized to extract chlorophyll. The resulting solution was filtered through Whatman's No.1 filter paper. After extracting of photosynthetic pigments in acetone 80%, absorbance of chlorophyll a and b was recorded by UV-visible spectrophotometer (Shimadzu UV-160) at 645 and 663 nm respectively. According to Arnon (1949) chlorophyll concentrations were calculated using the formulas below:

Chl.a (mg l⁻¹) = [12.7 (A₆₆₃) – 2.69 (A₆₄₅)] * 0.5 ml of extracted sample

Chl.b (mg l⁻¹) = [22.9 (A₆₄₅) – 4.69 (A₆₆₃)] * 0.5 ml of extracted sample

Total chlorophyll = Chl a + Chl b

Determination of hydrogen peroxide content

Measurement of the hydrogen peroxide (H₂O₂) content was performed according to Velikova *et al.* (2000). One gram of leaf tissue was homogenized on ice with 5 ml of trichloroacetic acid (TCA; Sigma-Aldrich) 0.1% (w/v) and centrifuged at 12000 rpm for 15 min. Subsequently, 0.5 ml of 10 mM potassium phosphate buffer (pH 7) and 1 ml of 1M potassium iodide was added to 0.5 ml of supernatant. The absorbance of supernatant was determined at 390 nm wavelength.

Determination of lipid peroxidation

Malondialdehyde (MDA), which is a product of lipid peroxidation, has been considered as an indicator of membrane destruction. MDA content was determined according to Stewart & Bewley (1980). We added 5 ml of TCA to 0.2 g of fresh leaf. After homogenization, the solution was centrifuged at 13000 × g for 10 min. The mixture of 1 ml of supernatant with 4 ml of 0.5% thiobarbituric acid in 20% TCA was heated for 30 min at 95°C and quickly placed in an ice bucket. Subsequently, we centrifuged the solution at 10000 × g for 10 minutes and recorded the absorbance of supernatant at 532 and 600 nm. The calculation of MDA was done from the extinction coefficient of 155 mM⁻¹ cm⁻¹.

Determination of enzymes activity

To determine enzyme activity, 0.1 g of fresh third leaves were ground in 3 ml of 50 mM Tris-HCl buffer (pH 6.8) at 4°C. The homogenate was centrifuged at 13000 × g for 20 min at 4°C. The supernatants were then collected and stored at -70°C for determination of enzymes activity.

SOD activity was determined using the assay system described by Giannopolitis & Ries (1977). The reaction mixture consisted of 50 mM phosphate buffer pH 7.5, 13 mM methionine, 0.1 mM Na-EDTA, 75μM NBT, 75 μM Riboflavin and 100 μL of enzyme extract in a final volume of 3 ml (all the chemicals were purchased from Sigma-Aldrich). The mixture in glass test tubes was placed 30 cm from 30 W fluorescent lamps. Identical solutions without illumination and enzyme extract were considered as blanks. Since SOD has the ability to

inhibit the photochemical reduction of nitroblue tetrazolium (NBT), the amount of inhibition was estimated by reducing the generation of color in the presence of light. One unit of SOD was described as the amount of enzyme that lead to 50% inhibition of NBT reduction. After 16 min, the absorbance at 560 nm was recorded against the blank. SOD activities were calculated as units per milligram of protein.

POX activity was measured based on the method of Abeles & Biles (1991). The activity of POX was estimated by adding 0.01 ml of enzyme extract to 4 ml of 0.2 M acetate buffer (pH 5), 0.4 ml H₂O₂ (3%), 0.2 ml 20 mM benzidine. The absorbance was recorded at 530 nm using spectrophotometer and POX activity was expressed as U mg⁻¹ protein.

PPO was assayed according to Raymond *et al.* (1993). The reaction solution contained 2.5 ml of 200 mM sodium phosphate buffer (pH 6.8), 0.2 ml of 20 mM pyrogallol and 0.01 ml enzyme extract. The temperature of the reaction mixture was 40°C. The changes in absorbance were recorded at 430 nm.

Statistical analysis

Each experiment was repeated three times. Data were statistically analyzed using analysis of variance one-way (ANOVA)

with SPSS software (version 18). Means were compared by Duncan's test at the 0.05 level of confidence.

Results

Salinity decreased the contents of chlorophyll (Chl) a, Chl b and total Chl (Figure 1a–c). Under the influence of Faradarmani CF with 150 mM NaCl, the contents of total Chl, Chl a and Chl b were elevated (34.8%, 17.8% and 169%, respectively) compared to the plants treated with 150mM without Faradarmani CF.

The effect of NaCl treatment on H₂O₂ is shown in (Figure 1d). Results of the present study showed that H₂O₂ content remained unchanged under salinity condition whereas for the Faradarmani CF treated groups (control and 150mM NaCl) showed significant enhancement 100% and 57.1%, respectively.

MDA content was assessed as an oxidative indicator. Salinity stress caused an increase of 59.5% in MDA content as compared to that of control. The Faradarmani CF treatment to the salt-stressed plant decreased MDA content by about 12.5% (Figure 2d).

POX activity was significantly increased by NaCl treatment up to 244 % compared with control while under salinity treatment

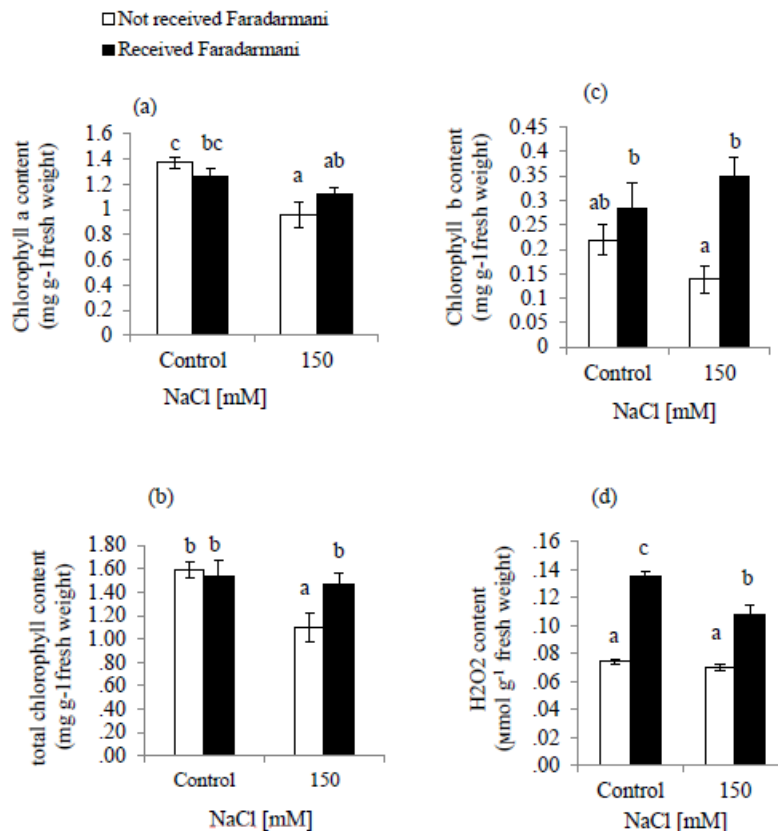


Figure 1. Effects of Faradarmani Consciousness Field treatment on (a) chlorophyll a, (b) total chlorophyll, (c) chlorophyll b, (d) hydrogen peroxide (H₂O₂). Plants were treated with 0 mM NaCl (control) or 150mM NaCl. Vertical bars indicate mean $\pm$ standard error of three replicates. Means followed by the same letter were not significantly different at P<0.05.

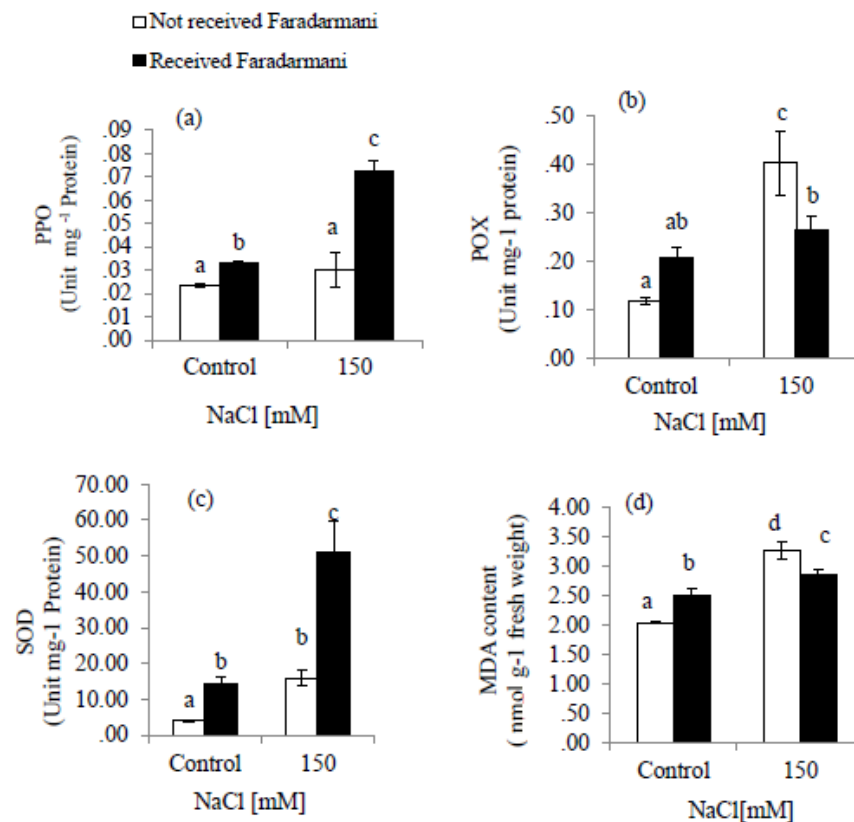


Figure 2. Effects of Faradarmani Consciousness Field treatment on antioxidant enzyme activities. (a) polyphenol oxidase (PPO), (b) peroxidase (POX), (c) superoxide dismutase (SOD) and (d) malondialdehyde (MDA) content. Plants were treated with 0 mM NaCl (control) or 150mM NaCl. Vertical bars indicate mean $\pm$ standard error of three replicates. Means followed by the same letter were not significantly different at $P < 0.05$.

exposure to Faradarmani CF decreased the activity of enzyme by 34 % (Figure 2b).

SOD activity was slightly increased under salinity. However, it was found that with Faradarmani CF the activity of SOD in salinity condition was about 220 % higher than that in salinity without Faradarmani CF treatment (Figure 2c)

Similarly, PPO activity was not significantly higher than non-saline condition (control). However, the PPO activity showed an increase of 168% under salinity in response to Faradarmani CF compared to the salinity treated without Faradarmani CF treatment (Figure 2a).

Discussion

In this study, chlorophyll a and b, and total chlorophyll contents decreased remarkably under salinity conditions (Figure 1). This is supported by previous data reported in tomato plants (Al-aghaby *et al.*, 2005) and wheat (Ashraf *et al.*, 2002), where salt stress unfavorably affects chlorophyll content. The decrease in chlorophyll content might be due to the formation of ROS in salinity stress that leads to lipid peroxidation and damages thylakoid membranes (Mittler, 2002). Our results showed that under salinity treatment,

Faradarmani CF ameliorated the adverse effects of salt stress, probably by improving antioxidant systems, scavenging ROS and increasing the chlorophyll a and b contents (Figure 1). Similar findings were presented by screening the effect of the Static Magnetic Field (SMF) on pigments in *Lettus* and it has been reported that all photosynthetic pigments, especially chlorophyll a increased under the influence of SMF and this positive result was associated with improvement of antioxidant system (Latef *et al.*, 2020).

For many years, numerous investigations have been made into salinity stresses and attempt to alleviate detrimental effects of salt stress such as effect of phytohormones, osmoprotectant, antioxidants, polyamines and trace elements (Kamran *et al.*, 2019). For instance, treatment of 2-week-old rice plants under 150 mM NaCl stress with sodium selenate (Na_2SeO_4) improved the total biomass and increased the activity of antioxidant enzyme (Subramanyam *et al.*, 2019) or exogenous melatonin pretreatment mitigates salt stress in wheat seedlings through regulation on polyamine metabolism (Ke *et al.*, 2018). In addition, it has been reported that exogenous application of ascorbic acid could alleviate the adverse effects of salt stress on wheat plant (Athar *et al.*, 2008; Khan *et al.*, 2006). In this research, for the

first time we investigate the effects of Faradarmani CF on wheat plant in order to improve plant tolerance to salinity stress. Although, consciousness field is neither matter nor energy, it is possible to trace its effects with various experimental test. For instance, the changes in cancer cell growth (Taheri *et al.*, 2020a) and investigation on the electrical activity of the brain during Faradarmani connection in the Faradarmangar population (Taheri *et al.*, 2020b) are other observations that have used this method in research.

Various abiotic stresses, including salinity, contribute to formation of ROS (Navari-Izzo *et al.*, 1998). Data of this study showed that under salinity conditions there was an increase in H_2O_2 content with Faradarmani CF treatment, which coincided with an increase in SOD activity (about 220%). Similarly, it has been reported that Static Magnetic Field (SMF), induced H_2O_2 content and SOD activity in *Matricaria chamomilla* (Hassanpour & Niknam, 2020). SOD converts superoxide radicals to H_2O_2 and molecular oxygen. It is possible that increasing H_2O_2 could therefore be attributed to Faradarmani-induced enhancement of SOD activity. This function may have a key role in mitigating oxidative stress. SOD is the first enzyme involved in antioxidative processes (Rubio *et al.*, 2002). Increasing the activity of SOD was observed similarly in the leaves of sugar beet (Bor *et al.*, 2003) *Lycopersicon* (Koca *et al.*, 2006), and in wheat (Esfandiari *et al.*, 2007; Sairam *et al.*, 2002) under salt stress. However, under salinity conditions, Faradarmani CF decreased POX activity, which decomposes the H_2O_2 produced by SOD. Wang *et al.* (2014) demonstrated that the activity of POX decreased in four wheat cultivars under high temperature (HT) stress and HT-resistant wheat cultivars had higher SOD activity. These results suggest that H_2O_2 may take part in the signaling networks. It has been reported that seed pretreatment with H_2O_2 improves salt tolerance of wheat seedlings by alleviation of oxidative damage and expression of stress proteins (Wahid *et al.*, 2007). Additionally, accumulation of H_2O_2 is thought to be a signal for induction of pathogenesis-related (PR) genes (Chen *et al.*, 1993). Kuźniak & Urbanek (2000) reported that H_2O_2 contributes to signal transduction, gene expression and cellular defense under oxidative stress conditions.

In the present study, Faradarmani CF also induced PPO activity. PPO may play a key role in scavenging H_2O_2 in salt-stressed plant. Agarwal & Pondy (2004) found that in *Cassia angustifolia* PPO activity increased under salinity stress. In wheat, various experiments reported changes in antioxidant enzymes activities to overcome environmental stresses (Agarwal *et al.*, 2005; Barakat, 2011; Heidari, 2009). The mechanism of action of Faradarmani CF as an inducer of antioxidant enzymes activity is not clear; therefore, future studies are needed to gain additional insights on biological and biochemical effects of this CF on various plants under biotic and abiotic stresses.

MDA content, which is a product of lipid peroxidation, reflects membrane destruction under oxidative stresses (Hernández & Almensa, 2002). Increase of MDA content under salt stress have been previously observed in different studies (Hasanuzzaman *et al.*, 2014; Saha *et al.*, 2010; Torabi & Niknam, 2011; Weisany *et al.*, 2012). Mandhanian *et al.*, 2006, reported that the better NaCl tolerance in a salt-tolerant cultivar of wheat was associated with lower MDA and much higher activities of antioxidant enzymes compared to salt-sensitive cultivar. Faradarmani as a CF decreased MDA content under salinity stress. It seems that decreased MDA content is correlated with increased activity of antioxidant enzymes under the influence of Faradarmani CF and a strategy developed by plant to withstand salt stress.

From these results, it can be concluded that Faradarmani CF minimizes the negative effects of salt stress in the wheat plant with evidence of increased activity of antioxidant enzymes, increased chlorophyll content and less membrane damage. The main challenge of this study is the fact that Consciousness Field doesn't possess a quantity and isn't directly measurable. Therefore, in order to identify its specific effects, we have measured Faradarmani CF effects indirectly on a plant's biochemical processes. We suggest that other researchers repeat similar experiment with different plants. It seems that botanical bioassays are suitable for screening the effect of such treatments, and apart from the placebo responses by humans, these assays can be beneficial to save time and resources.

Data availability

Underlying data

Harvard Dataverse: Alleviative Effects of Faradarmani Consciousness Field on *Triticum aestivum* L. under Salinity Stress, <https://doi.org/10.7910/DVN/XNMRMV> (Torabi, 2020).

This project contains the following underlying data:

- Raw data of chlorophyll a, chlorophyll b, hydrogen peroxide, MDA, POX, PPO, SOD, and total chlorophyll content in control and salinity conditions with and without receiving Faradarmani consciousness field (separate .tab files).
- Charts of chlorophyll a, chlorophyll b, hydrogen peroxide, MDA, POX, PPO, SOD, and total chlorophyll content in control and salinity condition with and without receiving Faradarmani consciousness field (separate .docx files).

Data are available under the terms of the [Creative Commons Zero "No rights reserved" data waiver](#) (CC0 1.0 Public domain dedication).

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Open Peer Review

Current Peer Review Status: 

Version 2

Reviewer Report 14 January 2021

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Halimeh Hassanpour

Aerospace Research Institute, Ministry of Science Research and Technology, Tehran, Iran

All comments were done in the text, and the art is confirmed for indexing in the journal.

Competing Interests: No competing interests were disclosed.

I confirm that I have read this submission and believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard.

Version 1

Reviewer Report 19 November 2020

<https://doi.org/10.5256/f1000research.27861.r73503>

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Halimeh Hassanpour

Aerospace Research Institute, Ministry of Science Research and Technology, Tehran, Iran

This research investigated effect of Fara-darmani Consciousness Field on alleviation of salt stress. It has some interests for the readers and me. Fara-darmani Consciousness Field increased antioxidant systems in plants against stress. But There are some questions about this art, and need to answer by authors:

Why did the authors select just 0 and 150 mM NaCl for this research?

The intensity or wavelength are not clear, and isn't the device regulates for intensity or wave?

How Fara-darmani Consciousness Field affect the cell, how is perceived by the cell, what is the effect on organisms? The discussion needs to improve.

If there isn't any research about Fara-darmani Consciousness Field, the author can use some article for the discussion:

- Impact of the Static Magnetic Field on Growth, Pigments, Osmolytes, Nitric Oxide, Hydrogen Sulfide Phenylalanine Ammonia-Lyase Activity, Antioxidant Defense System, and Yield in Lettuce.¹
- Establishment and assessment of cell suspension cultures of *Matricaria chamomilla* as a possible source of apigenin under static magnetic field.²

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2. Abdel Latef AAH, Dawood MFA, Hassanpour H, Rezayian M, et al.: Impact of the Static Magnetic Field on Growth, Pigments, Osmolytes, Nitric Oxide, Hydrogen Sulfide, Phenylalanine Ammonia-Lyase Activity, Antioxidant Defense System, and Yield in Lettuce. *Biology (Basel)*. 2020; **9** (7). [PubMed Abstract](#) | [Publisher Full Text](#)

Is the work clearly and accurately presented and does it cite the current literature?

Partly

Is the study design appropriate and is the work technically sound?

No

Are sufficient details of methods and analysis provided to allow replication by others?

No

If applicable, is the statistical analysis and its interpretation appropriate?

Yes

Are all the source data underlying the results available to ensure full reproducibility?

Yes

Are the conclusions drawn adequately supported by the results?

Partly

Competing Interests: No competing interests were disclosed.

I confirm that I have read this submission and believe that I have an appropriate level of

expertise to confirm that it is of an acceptable scientific standard, however I have significant reservations, as outlined above.

Author Response 22 Nov 2020

Sara Torabi, School of Biology, College of sciences, University of Tehran, Tehran, Iran

Dear Dr. Hassanpour

Thank you very much for your kind words about our paper. In the following sections, you will find our responses to each point and suggestions. We have carefully reviewed the comments and have revised the manuscript accordingly.

Why did the authors select just 0 and 150 mM NaCl for this research?

In the past, various investigations have been made into salinity stresses and attempt to minimize the losses of plant productivity, such as the effects of Coumarin (Saleh and Madany, 2015), Ascorbic acid (Athar et al, 2008, Azzedin et al, 2011, Khan et al, 2006), Oligochitosan (Ma, et al, 2012), Melatonin (Ke, et al, 2018), etc. on the wheat plant. Therefore, based on previous investigations, we screened ameliorative effects of Fara-darmani CF with two similar concentrations of NaCl including 0 and 150 mM. We suggest that the effects of the Fara-darmani CF be investigated with different NaCl concentrations and with different types of plants.

Ahmed Mahmoud Saleh, M.M.Y. Madany. Coumarin pretreatment alleviates salinity stress in wheat seedlings, *Plant Physiology and Biochemistry*, Volume 88, 2015, Pages 27-35, ISSN 0981-9428, <https://doi.org/10.1016/j.plaphy.2015.01.005>.

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The intensity or wavelength are not clear, and isn't the device regulates for intensity or wave?

As it was mentioned in the introduction section (paragraph 4, lines 5), according to Taheri, consciousness is one of the three existing elements of the universe apart from matter and energy. By defining consciousness as neither matter nor energy we cannot associate a

quantity to it. Therefore, we cannot register it by any device and must be mediated by human mind.

How Fara-darmani Consciousness Field affect the cell, how is perceived by the cell, what is the effect on organisms? The discussion needs to improve.

As stated in the last paragraph, the main challenge of this study is the fact that Consciousness Field doesn't possess a quantity and isn't directly measurable. Therefore, in order to identify its specific effects, we have measured Fara-darmani CF effects indirectly on a plant's biochemical processes. At this point, more biochemical and histological studies can collaborate to clarify this phenomenon. In addition, more explanation was added in the discussion section (paragraph 2).

If there isn't any research about Fara-darmani Consciousness Field, the author can use some article for the discussion:

Thank you for this suggestion. We have put a significant effort in improving the discussion section and these two references were added to the paragraph 1 and 2. In addition, we improved the discussion with more references.

Competing Interests: No competing interests were disclosed.

Comments on this article

Version 3

Reader Comment 04 Apr 2021

mehrnaz monzavi, University of Canterbury, New Zealand

Hi A. Evans,

I never hide my name and the works I scholarly did! This is superevident that everyone can Google, checking my background. Overall, as an academic and scholar, I believe that scientific and educational areas should welcome novel ideas, including Sciencefact, since we can't deny the spectacular results and empirical evidence! Let us practice being receptive to new science, which I did so; otherwise, it is getting improved, and we would be lagged.

Best, Mehrnaz

Competing Interests: No competing interests were disclosed.

Reader Comment 17 Mar 2021

A. Evans, A., USA

In the second edition, there is a comment by Mehrnaz Monzavi that has falsely claimed no conflict of interest. With a google search you can see that she is the author of an article entitled 'Historical path of traditional and modern idea of 'conscious universe' that is affiliated with the Association of Faradarmani & Psymetology, Tehran, Iran. <https://link.springer.com/article/10.1007/s11135-016-0324-3>

Such comments by a person affiliated with this group are not impartial, and she has hidden the fact that she is associated with them.

Competing Interests: No competing interests

Version 2

Reader Comment 25 Jan 2021

mehrnaz monzavi, University of Canterbury, New Zealand

Dear all,

The purpose of scientific publication is to present new ideas with sufficient information for others to evaluate the results and duplicate or expand on the work. Scientific forums need to remain open to new ideas and perspectives for human knowledge and understanding to grow.

When Madam Curie proposed that Radium was an element and theorized that radiation was an atomic property and not caused by molecular interactions, her work and theories were initially met with skepticism by some of the leading scientists of the time.

"Some scientists, including the grand old man of English science, Kelvin, never embraced radium as a new element. The idea that one element could be transformed into another smacked of alchemy, he and several others believed.¹"

However, from Curie's publications and in the years that followed, others were able to duplicate her work, confirm her theories, and build a greater understanding of atomic physics and radioactive elements.

As academic researchers and scientists dedicated to the advancement of knowledge, we must welcome and look forward to theories and hypotheses that challenge our established notions and practices which in many respects have not been sufficient to unlock the great mysteries we continue to grapple with.

From the prospect of a "Unified Theory" that to this day has eluded the greatest minds in science, to the mystery of the cosmos 95% of which still remains unidentified, and from the phenomenon of "consciousness" we all experience without exception but none yet understand, to our plight against a deadly pervasive virus that medicine and science seem to be ill-equipped to contain, we face an insurmountable volume of unknown that far exceeds the knowledge humankind has amassed

through all of its scientific endeavors. Thus, we need theories, ideas, and empirical studies that offer the slightest hope for alternative possibilities we so desperately seek.

Goethe, the German poet, scientist, and scholar famously (and fittingly) said:

"In the sciences, people quickly come to regard as their own personal property that which they have learned and had passed on to them at the universities and academies. If someone else comes along with new ideas that contradict the Credo and in fact even threaten to overturn it, then all passions are raised against this threat and no method is left untried to suppress it. People resist it in every way possible: pretending not to have heard about it; speaking disparagingly of it, as if it were not even worth the effort of looking into the matter. And so, a new truth can have a long wait before finally being accepted."

It would be disappointing and retrogressive if the scientific community has maintained the same attitude it held 200 years ago when such sentiments were expressed.

The efforts and courage of theorists and researchers like those presenting the current study are applaudable and appreciated as they clearly show their commitment to science and new knowledge takes precedence over potential criticism or disapproval they might face by their colleagues and the academic community.

Any criticism prior to attempting to duplicate the work is meaningless and unconstructive. We must keep an open mind if we are not to hold back humanity or sabotage or delay the scientific progress we seek. And we must remain civil in discussing the work of others until we have collected data to support our criticism. Let's all work together to expand human knowledge and help elevate humanity and move us forward in our quest for a better world and a greater understanding of our universe.

1. <https://physicstoday.scitation.org/doi/10.1063/PT.6.4.20171107b/full/>

Competing Interests: No competing interests were disclosed.

Version 1

Author Response 15 Sep 2020

Sara Torabi, School of Biology, College of sciences, University of Tehran, Tehran, Iran

Hi Michael

According to theory developed by Taheri who proposed the concept of the consciousness fields (CFs), Fara-darmani CF is neither matter nor energy so we cannot measure it directly but it's possible to investigate its effects indirectly by experiments. In other words, in the light of the scientific experiments, Consciousness fields can be understood. During the past years a wealth of information describing complementary therapy has been obtained but in order to be accepted, academic studies which using a well-structured design are necessary. Since botanical trials do not

present neither placebo effect nor ethical problem, we decided to screen the effects of Fara-darmani CF on wheat plant. In addition, we propose a range of tests for CFs in physics, chemistry, biology etc.

Competing Interests: No competing interests were disclosed.

Reader Comment 14 Sep 2020

frank sadler, UKISA (independent), London, UK

It would be exceptionally interesting to see the peer reviews of this paper. If this can be laboratory demonstrated and measured independently under agreed controlled conditions then we have a rather unique potential solution for some of the world's food production issues.

Reading the comments so far, I do note, however, that some commenters forget that science is about pushing out frontiers of knowledge by experiment and proof which is why peer reviews and independent experimentation are key factors. There is also no issue in our day and age in theories being put forward based on individual experimentation and measurement. That is what this is about not individual egos, likes or dislikes of particular people or organisations, or any other particular personal agendas.

Competing Interests: An open mind

Reader Comment 12 Sep 2020

Pantea Aghajani, Halque, Canada, Canada

Hello

I have to say I am so happy that such an article could be here today. I know there would be lots of doubts and thoughts on how nonsense this article is which is all normal. But the thing is it can be re-experienced over and over again, so hopefully consciousness field will be proven some how from its affecting. Another thing is the terminology which is used here might be different than what people used to. But after the explanation on what does those mean and the tests talks for themselves, there would be no need to explain more.

Thank you Mohammad Ali Taheri our beloved teacher and thank you all for making it happen. I can't wait to see the results.

Competing Interests: No competing interests were disclosed.

Reader Comment 11 Sep 2020

F1000 Research, F1000Research, London, UK

Hi Michael,

We appreciate your interest in our publishing model and welcome your feedback. Our publishing model allows us to publish articles with no prior editorial bias. We strongly believe that the research community is best placed to determine which findings are scientifically valid. In accordance with this belief, F1000Research has no academic editors or editorial board members who make decisions on whether to publish a paper. Before an article is published, we run a number of objective checks to ensure that reviewers are not unduly burdened with peer review invitations. To ensure that editorial censorship is avoided, these prepublication checks are primarily focused around authorship. To publish in F1000Research, authors must have a formal appointment at a recognised institution and hold a certain level of research-based qualification. We feel that it is very important that researchers can share any research findings they wish on F1000Research, without editorial selection.

I hope this comment has been able to provide some clarity about our editorial processes. If you would like any further information on our editorial requirements and peer review model, please feel free to contact a member of our editorial team at research@f1000.com.

Competing Interests: No competing interests were disclosed.

Reader Comment 08 Sep 2020

m mokhtarian, faradarmangar, Iran

Greetings to the Master of Love and Knowledge and congratulations to the pioneers in the field of introducing consciousness and awareness. Wish good for human advancement.

Competing Interests: No competing interests were disclosed.

Reader Comment 07 Sep 2020

yaser Beheshti, Interuniversal, I., Iran

Greetings to the Master of Love and Knowledge and congratulations to the pioneers in the field of introducing consciousness and awareness

Peace be upon the great teacher who taught us to think

Competing Interests: No competing interests were disclosed.

Reader Comment 07 Sep 2020

Vida Majidzadeh, Faradarmanghar, Iran

Master of Love; Master Mohammad Ali Taheri; sincerely congratulate me. I wish you more and more success.

Competing Interests: No competing interests were disclosed.

Reader Comment 06 Sep 2020

Michael Müller, Cosmic Unconsciousness Network, Germany

I can't even comment on how ridiculous this exercise in absurdity is.

F1000research.com has become a joke by letting this kind of manuscripts slip through its first pre-scanning process. What are editors doing. Not even skimming through the text once? I doubt that even Arxiv would allow such a shenanigan on its website.

Quotes from text: "**by connecting to internet-like facilities** called the **Cosmic Consciousness Network (CCN)**" any living creature, including animals and plants can be **healed** by humans.

In Fara-darmani, subjects of study become connected to that Consciousness Field via Fara-therapist by '**announcement**' which is a process in which Taheri or any Fara-therapist (announcer) declares and sends the information of the subjects under study (e.g. the number of groups) to the CCN. The influence of Consciousness Field begins with the connection between the human mind and the CCN.

This **exposure** occurs **without** any kind of **physical intervention**, since consciousness according to Taheri's **concepts is neither matter nor energy**, receiving this treatment is possible from **close and far** distances.

Competing Interests: I have to confess that I have bias toward science and logic.

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