EFFECTS OF INTENTIONALLY TREATED WATER ON GROWTH OF ARABIDOPSIS THALIANA SEEDS WITH CRYPTOCHROME MUTATIONS

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Background: Cryptochromes (abbreviated CRY) are blue photoreceptors, which respond to 400 to 500 nm signals. They exist in plants, bacteria, animals, and humans, and they are involved in the organism’s growth and circadian rhythms. Any protein that has a DNA sequence 25–50% similar to that of photolysis, but that lacks photolysis’ ability to use blue light to repair UV-induced DNA damage, is called a CRY. CRY was originally suggested as a mind–matter interaction (MMI) target by the first author, and if further work confirms that CRY is as robust a target as our observations suggest, it could provide such a mechanism. The speculation is that CRY, a flavoprotein present in all living systems, may be a "transducer" of intention because of its quantum biological characteristics. Among other things, these quantum effects are thought to account for the exquisite sensitivity to magnetic fields and light in living organisms. Arabidopsis thaliana, a small flowering weed in the mustard family with the popular name "mouse ear cress." This is one of the most-studied plants. Arabidopsis grows quickly in the laboratory and it contains a photosensitive flavoprotein called CRY. Three variations of CRY act either as photoreceptors or as transcription regulators; they are known as CRY 1, 2 and 3. These proteins play key roles in photomorphogenesis, circadian clocks, flowering time, seed germination, etc. The potential quantum biological properties of Arabidopsis made it an interesting system for exploring intentional effects.

Aims: To investigate the CRY Theory objectively, we studied whether Arabidopsis thaliana seeds hydrated under blinded conditions with intentionally treated vs. untreated water would show differences in hypocotyl length, anthocyanin, and chlorophyll.

Method: Three Buddhist monks focused their intention on commercially bottled water with the goal of improving the growth of seeds; bottled water from the same source served as an untreated control. Seeds with three variations of CRY were used: the wild type Arabidopsis (Columbia-4), a gain-of-function mutation (His-cry2), and a loss-of function mutation (cry1/2), where “gain” and “loss” refer to enhanced and reduced sensitivity to blue light, respectively. Seeds were hydrated with treated or untreated water under blinded conditions, then placed in random positions in an incubator. The germination process was repeated three times in each experiment, each time using new seeds, and then the entire experiment was repeated four times.

Results: Data combined across the four experiments showed a significant decrease in hypocotyl length in the His-cry2 seedlings (treated mean 1.31 ± 0.01 mm, untreated mean 1.43 ± 0.01 mm, p < 10⁻¹³), a significant increase in anthocyanin with all three forms of cry, particularly His-cry2 (treated mean 17.0 ± 0.31 mg, untreated mean 14.5 ± 0.31 mg, p < 10⁻⁴), and a modest increase in chlorophyll in His-cry2 (treated mean 247.6 ± 5.63 mg, untreated mean 230.6 ± 5.63 mg, p = 0.05). These outcomes conformed to the monks’
intentions because a decrease in hypocotyl length and increase in anthocyanin and chlorophyll are associated with enhanced photomorphogenic growth. These experiments suggest that the His-cry2 mutation of Arabidopsis may be an especially robust “detector” of intention.

Conclusions: The present study suggests that elementary living systems with quantum-biological properties may be especially responsive targets. If future studies continue to replicate the results of the present experiments, then quantum-inspired models may be useful guides in developing hypotheses for understanding and testing the role of intention in the physical world.

Keywords: Cryptochrome, Intention, Mind–matter interaction

Publications:

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