



Subject: The Beneficial Effects of BRe³ on Cellular Repair
From: BioRadiance Science Team led by our Ph.D. in Plant Physiology
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BRe³ -- NEW LIGHT ENERGY IMPROVES CELLULAR REPAIR!

Every cultivator understands the importance of cellular repair to the overall strength and growth of their cannabis plants. But we would also like every cultivator to know that our unique patented BRe³™ light energy technology will **positively improve** the cellular repair process.

Cellular repair is a critically important process that takes place within the plant cell itself. This ongoing repair activity keeps cells living longer, which makes plants stronger, healthier and more disease and pest resistant. Energy, in the form of ATP (Adenosine Triphosphate), promotes cellular repair. The more energy available equates to more cellular repair. ATP is often referred to as the "molecular unit of currency" of intracellular energy transfer. We know that BRe³ light energy accelerates ATP production.

Cannabis plant cells weaken over time due to:

- stresses from the environment like pollution
- unfavorable changes in pH - either a dramatic increase of acidity or alkalinity of plant's nutritional media (soil, soilless hydroponic solution or aquaponic solution)
- mechanical injury by wind, heat, drought or
- attacks by pests and pathogens

Your goal is to maximize the cellular repair process in cannabis plants:

To optimize this constant healing process, the plant must have ample energy to maintain cellular repairs. The ATP energy produced in the mitochondria is then transported directly to where cellular repair is needed. If energy is in short supply the mitochondria will direct the energy to the part of the cell that needs it the most and cellular repair is often shortchanged. This reduces the plants defenses, strength and health.

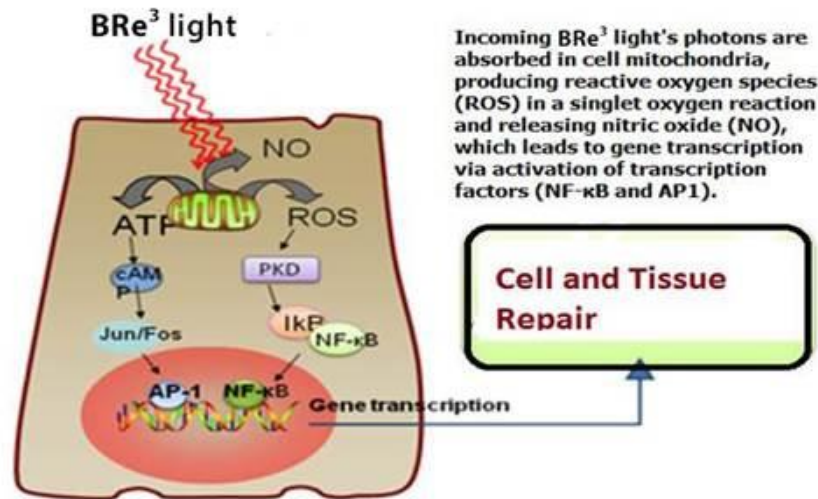
Where can ample or additional ATP come from naturally?

The Wand with BRe³ light energy supplies the "Missing Wavelengths™" of light that naturally complement the photosynthesis process including cellular respiration, which generates additional ATP production that every plant requires.

How does the light energy coming from the Wand provoke this to happen?

Incoming photons/light energy from the Wand are absorbed in cell mitochondria, producing reactive oxygen species (ROS) in a singlet oxygen reaction and releasing nitric oxide (NO), which leads to gene transcription via activation of transcription factors. A transcription factor ("TF" or sequence-specific DNA-binding factor) is a protein that controls the rate of transcription of genetic information from DNA to messenger RNA, by binding to a specific DNA sequence.

The function of TFs is to regulate - turn on and off - genes to make sure that they are expressed in the right cell at the right time and in the right amount throughout the life of the cell and the organism. **IMPORTANT:** If your plant's cells are not living longer because they are not receiving optimum cellular repair, there is no practical way that you can produce the best possible plant and or product.



Because of these activities, certain enzymes are synthesized in the cells because of these gene transcriptions. More specifically, plants synthesize a chemically diverse range of enzymes and hormones that regulate growth, development, and responses to environmental stresses. The major classes of plant hormones are specialized metabolites with exquisitely tailored perception and signaling systems, but equally important are the enzymes that control the dose and exposure to the bioactive forms of these molecules. These enzymes are involved in the cell's reparation process as well as in cell proliferation that leads to healing of damaged tissues and organs of a plant.

In Summary:

To quote our Ph.D. in Plant Physiology, "The Wand with BRe³ supplies plenty of energy and regulates activities of genes (DNA) to keep the plant's cellular repair process at optimum levels." This repair process keeps the plant as healthy as it can be and ready to keep its defense mechanisms at their highest level.

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