

Abstract Submitted
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Photobiomodulation (PBM) Applications in Ophthalmology

ROBERT DOTSON, Private Medical Practice — In a very real sense, we are all creatures of light. This fact is just now beginning to impact medicine, as quantum theory begins to spread outside the confines of physics and into the life sciences. No longer can living organisms simply be viewed as retorts for biochemical reactions. They also demonstrate an energy component that will prove to be the unifying force of life in all its varied forms. With the advent of this shift in the life sciences, light is becoming an increasingly important diagnostic and therapeutic tool within medicine. Ophthalmologists have long been concerned with light and its application and, consequently, have an interest in the coming scientific revolution, photomedicine. A brief history of the use of low energy light for healing, a review of known mechanisms by which photons interact with living cells, and a review of some of the established cellular effects will be presented. Finally, brief clinical studies will be presented illustrating the benefits of PBM - specifically regarding: corneal healing, glaucoma, and dry age-related macular degeneration. The purpose of this talk is to introduce the emerging field of PBM to the physics community at large.

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