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Biophoton Research Papers

G. Lednyiczky & O. Zhalko-Tytarenko : Biological Resonance -- Resonance in Biology (www.hippocamous-brt.com) [PDF]
Dr Switzer : Biophoton Nutrition & Cyclical Eating [PDF]
R. VanWijk : Biophotons & Biocommunication (J. Sci. Exploration 15, No 2: 183-197, 2001) [PDF]
Dr J. Boswinkel : Biophotons & Biophotonics : The Science of the 21st Century (Explorer 12, No 5, 3002) [PDF]
MaAnna Stephenson : Biophotons & Food Quality (www.sageage.net) [PDF]
Marco Bischof : Biophotons : The Light In Our Cells (J. Optometric Phototherapy, March 2005) [PDF]
C. da Nobrega : Biophoton -- The Language of the Cells (Technoetic Arts, vol. 4, No. 3) [PDF]
C. Jiin-Ju : Physical Properties of Biophotons and Their Biological Functions (Indian J. of Experimental Biology 46: 371-277, May 2008) [PDF]
Fritz-Albert Popp : Properties of Biophotons and Their Theoretical Implications (Indian J. of Experimental Biology 41 : 391-402 (May 2003) [PDF]
Peter Gariaev [Gajarev], et al : The DNA Wave Biocomputer [PDF]
V. Voiekov, et al. : Biophoton Research in Blood Reveals Its Holistic Properties [PDF]

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http://www.ncbi.nlm.nih.gov/pubmed/20221457

Biophotons as neural communication signals demonstrated by in situ biophoton autography
Y. Sun, et al.

Cell to cell communication by biophotons has been demonstrated in plants, bacteria, animal neutrophil granulocytes and kidney cells. Whether such signal communication exists in neural cells is unclear. By developing a new biophoton detection method, called in situ biophoton autography (IBA), we have investigated biophotonic activities in rat spinal nerve roots in vitro. We found that different spectral light stimulation (infrared, red, yellow, blue, green and white) at one end of the spinal sensory or motor nerve roots resulted in a significant increase in the biophotonic activity at the other end. Such effects could be significantly inhibited by procaine (a regional anaesthetic for neural conduction block) or classic metabolic inhibitors, suggesting that light stimulation can generate biophotons that conduct along the neural fibers, probably as neural communication signals. The mechanism of biophotonic conduction along neural fibers may be mediated by protein-protein

biophotonic interactions. This study may provide a better understanding of the fundamental mechanisms of neural communication, the functions of the nervous system, such as vision, learning and memory, as well as the mechanisms of human neurological diseases.

Photochem Photobiol Sci. 2010 Mar;9(3):315-22.
doi: 10.1039/b9pp00125e. Epub 2010 Jan 21.

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Sun Y1, Wang C, Dai J.

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http://www.ncbi.nlm.nih.gov/pubmed/3294033

F. Popp, et al. : Physical aspects of biophotons

By comparing the theoretically expected results of photon emission from a chaotic (thermal) field and those of an ordered (fully coherent) field with the actual experimental data, one finds ample indications for the hypothesis that 'biophotons' originate from a coherent field occurring within living tissues. A direct proof may be seen in the hyperbolic relaxation dynamics of spectral delayed luminescence under ergodic conditions. A possible mechanism has to be founded on Einstein's balance equation and, under stationary conditions, on energy conservation including a photochemical potential. It is shown that the considered equations deliver, besides the thermal equilibrium, a conditionally stable region far away from equilibrium, which can help to describe both 'biophoton emission' and biological regulation.

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http://www.ncbi.nlm.nih.gov/pubmed/15244274
Indian J Exp Biol. 2003 May;41(5):514-27

Bajpai R. : Quantum coherence of biophotons and living systems

Coherence is a property of the description of the system in the classical framework in which the subunits of a system act in a cooperative manner. Coherence becomes classical if the agent causing cooperation is discernible otherwise it is quantum coherence. Both stimulated and spontaneous biophoton signals show properties that can be attributed to the cooperative actions of many photon-emitting units. But the agents responsible for the cooperative actions of units have not been discovered so far. The stimulated signal decays with non-exponential character. It is system and situation specific and sensitive to many physiological and environmental factors. Its measurable holistic parameters are strength, shape, relative strengths of spectral components, and excitation curve. The spontaneous signal is non-decaying with the probabilities of detecting various number of photons to be neither normal nor Poisson. The detected probabilities in a signal of Parmelia tinctorum match with probabilities expected in a squeezed state of photons. It is speculated that an in vivo nucleic acid molecule is an assembly of intermittent quantum patches that emit biophoton in quantum transitions. The distributions of quantum patches and their lifetimes determine the holistic features of biophoton signals, so that the coherence of biophotons is merely a manifestation of the coherence of living systems.