Biofield 5 physics notes

Applying very–low power coherent EMFs at specificfrequencies in the mm range to biological systemsresults in a resonance-like behavior that supports thetheoretical prediction of polar coherent modes in amanner comparable to Bose condensation.30 Polarcoherent modes are predicted to result from the high intensity field across cell membranes, that when driven by metabolism, create coherent microwave oscillation.

A Bose-Einstein condensate is a state of matter of a dilute gas of bosons cooled to temperatures very close to absolute zero. Under such conditions, macroscopic quantum phenomena become apparent. Such macroscopic quantum phenomena are hypothesized as qualitiesof the biofield. Moreover, according to Fröhlich,27these polar coherent modes represent the basis for electromagnetic oscillations at cellular levels in the organism.

The existence of endogenous EMFs at the predicted Fröhlich frequencies has not yet been proven experimentally, and their coherent nature in the body is only inferred.2 However, the discovery of an endogenous EMF at much lower MHz frequencies in microtubules is significant because it suggests a form of coherent electromagnetic activity that may play a role in biofield signaling, thus lending some support to the theory coherent modes of Fröhlich but at much lower frequencies than predicted theoretically.31

In summary, the electromagnetic basis includes the presence of at least 2 field sources: “one (static electric-transmembrane potential) that has been known for long, and the other, a high frequency oscillating and more or less coherent EMF.”2 The latter can be considered to have 2 further aspects manifesting indifferent energy or frequency ranges: (1) a microwave to MHz and lower frequency range coherence, which we can simply refer to as the Frölich field, and (2) a visible/infrared/near ultraviolet diffuse field, which we can refer to as the Popp photon field. The former has been observed but at lower frequencies than predicted; the latter is supported empirically by observations of the statistical coherence of biophotons, which produce emission spectra that are distinctly different from byproducts of biochemical reactions.40 This appears to be related to quantum mechanical squeezed states.40,41

Recently it has been suggested that the Fröhlich field and the Popp field are interconnected through strong mode coupling in livingsystems.2 The collective biofield consists of (at least)electromagnetic, optical, acoustic, and non classical energy fields“. Longitudinal” or “scalar” waves have also been suggested to be primary aspects of thebiofield.24 In contrast to the transverse vector waves of classical EMF theory, such scalar waves are hypothesized to result from superposition of electromagnetic waves—eg, when 2 waves cancel each other, a transformation of energy into vacuum potentiality is thought to occur.25 Such scalar fields, which are not mediated by electric dipoles or electron transitions, propagate far from equilibrium25 and clearly don’t constitute known electromagnetic-based structures. These connections with nonclassical fields have led several scientists to consider the body as functioning as a macroscopic quantum system.9,25,55-58.

What is the role of observation in the structure of the biofield? Does the state of the practitioner affect the structure of the biofield…Can the biofield be understood as ultimately emanating from the quantum vacuum?