

Notes on *Exploring the Biofield Hypothesis* [article]

Beverly Rubik *IONS Shift* 2004

[http://www.noetic.org/publications/shift/issue5/s5\\_rubik.pdf](http://www.noetic.org/publications/shift/issue5/s5_rubik.pdf)

The term “biofield” has been accepted by the US National Library of Medicine as a medical subject heading search (MESH) term. In 1999, the National Center for Complementary and Alternative Medicine at the United States National Institutes of Health (NIH) issued a Request for Application for grant proposals dealing with biofield therapies such as Reiki, Therapeutic Touch, external ch'i healing, and other subtle energy interactions. These NIH-sponsored research centers for “frontier medicine in biofield science” were established in 2002. See: <http://www.nih.gov/health/whatiscaam/>

The term biofield is now used to represent the “vital force” concept excised from biology of the early 20<sup>th</sup> century.

Beverly Rubik suggests the transfer of bio-information may be by subtle energy, as opposed to molecules.

Physicist William Tiller proposes the existence of a new force to explain certain features of life, in addition to the other four known forces of physics.

In Germany, biophysicist Fritz-Albert Popp and his colleagues propose coherent dynamic states in organisms' physiologies, whereby they display a high degree of order and stability, and emit coherent electromagnetic waves called biophotons.

Engineer Savely Savva believes the biofield involves a mental component in addition to electromagnetism. Biophysicist Chang-Lin Zhang calls the biofield the “electromagnetic body”, and considers it to be an ultraweak field of standing waves that form the energy anatomy, including the chakras and acupuncture meridians.

I suggest that, consistent with ancient wisdom, there are subtle bodies of the human being beyond the physical body that involve realms of mind, soul, and spirit.

I define the biofield in part as the endogenous, complex dynamic electromagnetic (EM) field resulting from the superposition of component EM fields of the organism.

Research in bioelectromagnetics has experimentally demonstrated various biological effects of extremely low-level nonionizing EM fields applied to organisms,

### **bioelectromagnetic medicine**

The technology of applying certain beneficial EM fields to the body to stimulate the natural healing response, known as bioelectromagnetic medicine, is a new form of CAM therapy. Specific EM fields have been identified that stimulate therapeutic effects such as osteogenesis, soft tissue regeneration, psychophysiological modulations, and immune system enhancement.

Extremely low intensity, nonionizing EM fields can produce biological effects. At such extremely low levels, the energy content of an applied signal is even less than the random energy of molecular motion at body temperature. This means that such extremely low-level fields cannot act energetically on organisms, because the energy content is negligible. Thus, it has been proposed that they are acting informationally. Fields carrying biologically relevant information have been called “electromagnetic bio-information.”

This may occur through resonance or entrainment of specific frequencies in the biofield.

### **bioinformation**

The term “information” has taken on a mechanistic meaning in our age of computers, appropriate for machines, but is severely limited for describing life processes with their features of self-reference, selforganization, and consciousness.

From a nonmechanistic viewpoint appropriate for living systems, information is neither energy nor matter in itself. Energy or matter is simply its carrier.

Always involves at least two entities, a sender and a receiver. Information also depends upon the context.