The field; pp 39-71

Fritz-Albert Popp performed tests on 37 chemicals, some carcinogens, and some not. After a while, he could predict which substances could cause cancer: those which absorbed UV light (at 380 nanometers), and emitted it with a changed frequency. Noncarcinogenic substances would re-emit the UV light with unchanged frequency. Popp was shocked to learn that photo repair works most efficiently at 380 nm, the same wavelength the carcinogens would react to and scramble.

He deduced that if carcinogens only react to this wavelength, their effect must somehow be linked to photo-repair. If so, this must mean that there must be some light in the body responsible for photo-repair. A carcinogen must cause cancer because it blocks and scrambles the light frequency, so it can't do photo repair.

A prestigeous journal on cancer agreed to publish these results. Popp was celebrated for his paper. He was invited to speak to the world's leading cancer researchers. Popp's science was unassailable, except for one detail: it assumed that a weak light of 380 nm was being produced in the body. Most of the researchers did not believe this to be the case.

Popp persuaded Bernhard Ruth to develop a machine that could count photons. The photomultiplier picked up coherent photons of high intensity from assorted vegetables. In quantum physics, coherence means that subatomic particles are linked by bands of common electromagnetic fields, so they can 'communicate'. As they get into phase, they begin acting like one giant wave.

Popp found with experimentation that molecules in the cells would respond to certain frequencies and that a range of vibrations from the photons would cause a variety of frequencies in other molecules of the body. From experiment, Popp showed that one of the most essential sources of biophoton emission was DNA. In biophoton emissions, Popp believed he had an answer to the question of morphogenesis. He showed in his experiments that these weak light emissions were sufficient to orchestrate the body.

Previous researchers had suggested that a field of EM radiation somehow guides the growth of the cellular body. The Russian Alexander Gurwitch had to be credited with first discovering what he called "mitogenetic radiation" in onion roots in the 1920s. Harold S. Burr of Yale studied and measured electrical fields around living things. Elmer Lund, of the University of Texas, showed that he could control regeneration of hydra heads by passing a weak electric current thru the body. Orthopedist Robert O. Becker attempted to stimulate or speed up regeneration in humans and animals. He also demonstrated "current of injury" in which salamanders with amputated limbs develop a charge at the site of the stump, whose voltage climbs until the new limb appears.

As Popp was pondering the larger implications of biophoton emissions, a French scientist had begun looking at the reverse: the effect of this light on individual molecules. Popp believed that bio-photons orchestrated bodily processes, and the French scientist Jacques Benveniste was learning how this process worked. The vibrations of the biophotons Popp had observed in the body caused molecules to vibrate and create their own signature frequency.

While Benveniste was director at INSERM, he found that if solutions of antibodies were diluted repeatedly until they no longer contained a single molecule of the antibody, they still produced a response from immune cells. These effects were replicated by five different labs in four countries: France, Israel, Italy, and Canada. The results were published in a 1988 edition of Nature magazine.

These researchers concluded that: "specific information must have been transmitted during the dilution/shaking process. Water could act as a template for the molecule, for example, by an infinite hydrogen-bonded network, or electric and magnetic fields.. the precise nature of this phenomenon remains unexplained." Benveniste's studies were widely regarded as making a valid case for homeopathy.

If water were able to imprint and store information from molecules, this would have an impact on our understanding of molecules and how they "talk" to one another in the body. The conventional theory of how molecules communicate in the body requires some direct contact. This theory is too dependent on chance, and also requires a long time duration, and can't account for rapid emotional changes. According to Benveniste's theory, which has been supported by experiment, molecules rely on electromagnetic signaling at low frequencies (between 20hz and 20 khz)Each molecule has its own signature frequency, and can resonate with other molecules.

During the 1990s, BenVeniste demonstrated that one could transfer specific molecular signals simply using an amplifier and EM coils, and that these signals could be recorded and played back using a PC.

Over thousands of trials, Benvenista's team recorded the activity of the molecule on the pc, and replayed it to a biological system sensitive to that substance. In every instance, the biological system had been fooled into thinking it was interacting with the substance itself. Other studies showed that if these signals were erased these signals and stop activity in the cells would sstop. ... The inescapable conclusion: As Fritz Albert Popp theorized, molecules speak to each other in frequencies.

Reputable research supporting Benveniste's results slowly began to surface in other areas. In 1992, the Federation of American Societies for Experimental Biology (FASEB) held a symposium, organized by the international Society for Bioelectricity, examining the interactions of electromagnetic fields with biological systems. Numerous other scientists have replicated high dilution experiments, and several have endorsed and successfully repeated experiments using digitized information for molecular communication. The most unassailable tests of homeopathy were performed in Glasgow by Dr. David Reilly. Despite the scientific design of his tests, although The Lancet agreed to publish the results, the journal simply refused to accept them.