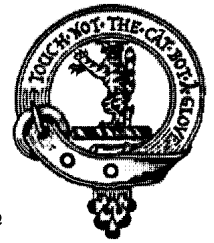


# Keith Conover, M.D., FACEP

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January 16, 1999

Michael G. Charapp, Esq.  
Charapp, Deese & Weiss, LLP  
Attorneys at Law  
1901 Pennsylvania Avenue, N.W. Suite 1001  
Washington, DC 20006-3303

Dear Mr. Charapp:

I am writing in response to your letter of August 20, in which you accuse me of a "campaign of defamation" against DielectroKinetic Laboratories, LLC (DKL), and its product, the LifeGuard™, and further of making statements with the intent to damage DKL, and/or with reckless disregard of the truth, specifically in regard to information on my personal Web page ([www.pitt.edu/~kconover](http://www.pitt.edu/~kconover)).

As my Web page states, and as I quote directly, my reasons for posting truthful information about the DKL LifeGuard™ devices are as follows. *Based on this information, [The U.S. Department of Energy's tests of the DKL LifeGuard™ device] and the risk of death to members of the public, as a physician and search and rescue volunteer with some small reputation in the field, I felt morally and ethically obligated to inform the SAR community about my suspicions and conclusions, regardless of the legal risk to myself.* I have no motive nor any intent to damage DKL, I have no prospect of financial gain from speaking against or for DKL, and since I am referencing tests conducted by United States government laboratories, I am acting in scrupulous regard for the truth.

Please let me address the examples cited in your letter, in the order in which you set them out, and point out the error of your assertions in each and every case.

**1. "...the devices called "LifeGuards" that are offered by DielectroKinetic Labs are useless..."**

The patent on which these devices are based, United States Patent 5,748,088, states: *The device is held in a balanced horizontal state, and the operator scans the device in a constant uniform motion back and forth. An antenna extends from the front of the device, and both are acted on by the dielectrophoretic force. This force results in a subsequent resulting torque, acceleration, vibration or any other measurable quantifiable manifestation of the force about the handle's pivot line hence driving the device and its antenna toward the direction and position of any entities of the*

*predetermined type that are within range. Your marketing materials state: fire; wilderness; avalanche; earthquake [pictures of all four]- In three to five seconds, DKL's revolutionary handheld detectors can find and track a person up to 500 yards away.*

I tried a LifeGuard™, knowing in advance the *ideomotor effect* illusion, common to dowsing rods. Thus I didn't misinterpret subtle tilting, multiplying the gravitational torque on the device. I was unable to feel any torque, acceleration, vibration. Even if *had* felt something, I could have been misled by the ideomotor effect – thus, the importance of rigorous double-blind testing of anything as subjective as "feeling a torque." And, the U.S. Department of Energy conducted rigorously controlled scientific tests of the LifeGuard™, under conditions agreed to before the test by DKL to be within the specification of the devices. [Murray, Dale W.; Spencer, Floyd W.; Spencer, Debra D. Double Blind Evaluation of the LifeGuard Model 2. U.S. Department of Energy, Sandia National Laboratories, Office of Safeguards and Security, Report Sand98-0977 UC-600, May 1998] In these double-blind tests, the LifeGuard failed to perform as stated, and was no better than random guessing – any post-hoc rationalizations and scurrilous assertions against the Department of Energy laboratories notwithstanding. Note that I have no connection whatsoever with the Department of Energy, the DOE Sandia Labs, or any of their affiliated companies.

Therefore, my statement, that the device is useless – for the purposes you state, and in the context of my web page, for purposes of urban or wilderness search – is based on and consistent with the official U.S. Government tests of your device, and is true.

**2. "These devices, which sell on the \$5000-\$15000 range, are nothing more than an expensive dowsing rod."**

Thus far, neither DKL, nor any other person who has contacted me, has provided scientific evidence that contradicts my statements and the U.S. Department of Energy tests of the LifeGuard™ devices. Some LifeGuard™ devices may contain an electrostatic meter, and may be able to detect electrostatic fields under certain limited circumstances, as documented in Joseph Dougherty's tests at Advanced Materials Technologies in State College, Pennsylvania.. Mr. Dougherty's tests do not mean that the devices are any more usable than a dowsing rod for detecting people at 500 yards, or through collapsed buildings, or distinguishing live from dead humans, or distinguishing live humans from live cows. Likewise, Mr. Dougherty's tests are in no way refutation of the U.S. Department of Energy tests, nor does they support claims made by DKL, as quoted from DKL's Web page, that *DKL's new line of LifeGuard instruments can locate and track any living human being more than 500 yards away in the open and at shorter distances through concrete walls, steel bulkheads, heavy foliage, earthworks, or up to 10 feet of water. All three LifeGuard models can detect and lock onto a person in three to five seconds, and they can distinguish a human from any other animal, even a gorilla or an orangutan.* For the purposes stated on your Web page, the U.S. Government tests have shown the device to be no better than random chance, which is

what one would expect of a dowsing rod, and again my assertion is based on and consistent with the official U.S. Government tests of your device, and is true.

**3. "There is no good solid theoretical basis for their claims about their devices nor do they work in controlled empirical testing."**

The question of "good solid theoretical basis" is a matter of scientific opinion and debate, as is characteristic of scientific peer review, and not a subject about which any claim of defamation is legitimate. If one takes "work" to mean functioning in the manner and under the conditions claimed by DKL on its web page, in its patent, and in the promotional material given to me, I have been able to find no such scientific evidence, DKL has not provided any such evidence on its Web page or other public materials available to me, nor have you included any such in your letter.

In your letter you demand that I retract my Web site statements, post a notice about my "lack of scientific background," withdraw my conclusions, and issue and email apologies. I reject this as unsupported by any factual contents of your letter or any other material about your devices communicated to me through any public or private means.

Let me specifically state that my background is *ideal* for detecting problems in research on electronic and physical systems that *also* depend on human interaction to work, and are designed to detect the unique electronic signature of the human heart. Specific examples include:

- ❑ undergraduate training in physics, psychology, and multidisciplinary sciences at one of the nation's top universities,
- ❑ doctoral-level graduate training in the methods of scientific research, cardiac electrophysiology, and related topics at one of the nation's top medical schools,
- ❑ three years of postdoctoral training in internal medicine (which includes the subspecialty of cardiology, the study of the human heart),
- ❑ over ten years involved in research and teaching on the medical school faculty of arguably the country's top postgraduate emergency medicine program, and
- ❑ twenty-four years experience as an amateur radio operator tested and licensed by the Federal Communications Commission.

This background helps me to recognize the importance of *controls* in research in testing. In particular, I appreciate the need for controls against unconscious bias, such as *double-blind experiments* – especially so when human interpretation is a key part of the system. This seems to have escaped many physicists when they venture into areas involving human biology, psychology or medicine.

I direct your attention to United States Patent 5,748,088 for the LifeGuard™ device, and in particular to the following lines:

Column 4, lines 7-10: *These forces create a subsequent torque around a well-defined pivot line when tends to make the locator device's antenna and the device's other components.*

Column 4, lines 49-53: *...the operator changes the six position switch until a maximum force and subsequent resulting torque is detected and used to "aim" the antenna and the device's other component parts toward the target entity.*

Column 5, lines 46-53: *By holding the locator **100** in a horizontal level position and scanning the locator device 100 in a uniform and constant motion back and forth, the operator **A** detects a self-correcting constant-direction-seeking force, and the subsequent resulting torque upon the antenna **102** and the locator device's other component parts cause the locator device to point toward the direction and location of the visually obscured second human being **B**.*

Column 7, lines 15-23: *By adjusting **R1-R3** and **S2**, the individual human operator and the locator device **100** can be jointly tuned and optimized to detect the maximum dielectrophoretic force and subsequent resulting torque for the specific human being operating the locator device **100**. This is accomplished by using a reference entity (such as a visible human being) and adjusting **S2** and **R3** until the maximum dielectrophoretic force and subsequent resulting torque are detected by the individual human operator.*

Column 8, lines 26-28: *The dielectrophoretic force manifests itself as an easily detected torque motion of the antenna **708** about the pivot line **711**.*

These illustrate the critical claims for the device: that a human can feel a dielectrophoretic torque - but in a situation where the slightest insensible tilting of the device will result in a powerful torque. Thus, regardless of any dielectrophoretic forces, or any circuitry in the device, effectiveness depends on a human detecting a force that could be masked by that of gravity.

As the DKL Web page states: "Why does the LifeGuard need an operator and why does it not detect the operator? ... The operator must recognize the torque that signals a detection." And researching human detection of subtle (or not-so-subtle) effects requires controls of the type used in medical science, i.e., double-blinded trials with controls against unconscious bias. As Sir Peter Medawar observes in *The Art of the Soluble*: "If a person (a) is poorly, (b) receives treatment intended to make him better, and (c) gets better, then no power of reasoning known to medical science can convince him that it may not have been the treatment that restored his health."

If careful controls against bias are not used, researchers may be misled, as has happened time and again in examples of what, since Sir Peter Medawar's time, has been called "pathological science." Indeed, someone with a medical background is much better suited than a pure physicist to comment on appropriate research methods when a human's perceptions are critical to the system's function.

As far as posting a link to the DKL site from my personal site, I agree that this is an important convenience for visitors to my Web site, and I have added a link to the DKL web site from my Web site.

I am willing to withdraw my public complaints about the usefulness of the DKL LifeGuard™ devices, under the following conditions:

1. That DKL withdraw and publicly refute the following exorbitant claims for the devices:
  - a) that the LifeGuard™ can reliably discriminate between human and other similar-sized animals,
  - b) that the LifeGuard™ can reliably discriminate between human and other similar-sized carriers of electrostatic charge,
  - c) that the LifeGuard™ "swivels" in response to an external force other than those of gravity and tilting of the device by the user's hand; and,
2. that DKL publicly provide *adequately controlled* scientific studies of the uses and limitations of the LifeGuard™ device that have either been conducted by, or meet the official approval of
  - a) the U.S. Department of Energy and U.S. Army Research Laboratory scientists responsible for past tests of the LifeGuard™ devices, or
  - b) a panel established by the National Academy of Sciences.

I should also note that I would consider any attempts at defamation action to represent a SLAPP suit, and would vigorously and publicly prosecute a counterclaim.

Yours aye,

Keith Conover, M.D., FACEP

cc: FBI, FTC

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