

Letters to the Editor

Remembering Hank Hannah

The loss of Harold Hannah is not restricted to the veterinary community in the United States; it is felt all over the world. Professor Hannah's "Legal Brief" articles served as an inspiration to practicing veterinarians all over the world. His articles helped to chart the course of many veterinary associations directly and indirectly.

For me, interacting with Hank helped make my dream of becoming a veterinary doctor come through.

*Babajide A. Agboola, DVM
Jos, Nigeria*

Sees limitations of clinical reports

I would like to respond to Dr. Russel Swift's comments about the superiority of case reports over controlled studies (*JAVMA*, Apr 1, 2002, p 962). There is a place for the publication of case reports in medical journals. Drs. Giger and Byrne and Ms. Cavanaugh have mentioned some of the uses in their letter of response to Dr. Swift. I would add one more. A case report may provide data or observations that suggest associations between two events, usually a treatment and a response. These associations may suggest a promising new approach to a problem and may stimulate further investigation along similar lines. But the case report itself cannot ever be used to prove the validity of a given treatment. For that, a separate study must be designed and run to specifically test the hypothesis under consideration. Dr. Swift alludes, somewhat disparagingly, to double-blind studies as "fallible and extremely limiting." Such studies, if well designed, are neither fallible nor infallible, but satisfy the requirements for testing a given hypothesis to a certain level of probability. Nor are statistical analyses and experimental design limited to double-blind studies.

There are a host of statistical techniques that can be applied to the analysis of data to achieve as accurate a conclusion as possible.¹

Dr. Swift would have the *JAVMA* publish more clinical reports "regarding the successful treatment of diseases with homeopathy and raw foods feeding." For Dr. Swift, these case reports are sufficient in and of themselves to prove whatever conclusions he is trying to demonstrate, and he would also prevent the actual testing of those conclusions when he states, "...opponents of such alternatives [should] cease their hue and cry for more double-blind studies, their contentions of placebo effects, and their condemnations of clinical experience." If proponents of rational thought (or opponents of alternative medicine as Dr. Swift names them) would cease to require such tests, then what means would be left to determine the validity of any statement? Dr. Swift supplies an answer to this when he reports approvingly, "that we use [our] gut, trial and error, and empiricism." If he is correct, then we would have an overwhelming number of alternatives, none of which could be proved to be effective, safe, and repeatable, which is exactly the case today with alternative medicine. At some point someone has to ask, "Does any of this stuff really work?" How will he answer that question?²

*Moe Milstein, DVM
North Vancouver, BC, Canada*

1. Ferguson, GA. *Statistical analysis in*

psychology and education. New York: McGraw Hill Book Co; 1959.

2. Milstein M. *The case against alternative medicine*. *Can Vet J* 2000;41:769-772.

Dr. Swift responds:

Dr. Milstein and I agree on several points. Some points, however, appear misunderstood. Case reports are not superior to studies. A case report should function as Dr. Milstein said—to "suggest associations between two events.... suggest a promising new approach... stimulate further investigations...." At the North American Veterinary Conference (NAVC), cases were presented. Practitioners intended to implement new therapies without additional investigations. I am critical of the double standard. A successful homeopathic case would have been dismissed as placebo effect or coincidence, not a "promising new approach."

Doctors, thinking medicine is science, see no alternatives. (There is no "alternative" chemistry). Conventional medicine is an ideology. Medical practitioners are willing to accept new ideas if they do not alter the paradigm. Scientists understand a paradigm is likely to change. Centuries after Hippocrates, his followers are still trying to balance body fluids—instead of four humors, there are hundreds of biochemicals. Medicine has operated under Hippocrates' presumption of material imbalance without question, neglecting research to validate its fundamental

Instructions for Writing a Letter to the Editor

Readers are invited to submit letters to the editor. Letters may not exceed 500 words and 6 references. All letters are subject to editing. Those pertaining to anything published in the *JAVMA* should be received within one month of the date of publication. Submission via fax or e-mail (847/925-9329; JournalLetters@avma.org) is encouraged; authors should give their full contact information including: address, daytime telephone number, fax number, and e-mail address if available.

Letters containing defamatory, libelous, or malicious statements will not be published, nor will letters representing attacks on or attempts to demean veterinary societies, their committees or agencies. Viewpoints expressed in published letters are those of the letter writers and do not necessarily represent the opinions or policies of the AVMA.

principles. Einstein said everything is either matter or energy. Which is disease? Science has laws (eg, the Laws of Thermodynamics) while medicine has none. Scientists direct their research to the elucidation of natural laws. Medical researchers seek protocols. They have yet to search for the Law of Nature governing the relationship between cure and disease—homeopathic (similar), allopathic (dissimilar), or antipathic (opposite). That will answer the question, “Does any of this stuff really work?” As a result, medicine fails to cure minor chronic diseases. Scientists know that one cannot alter any part of a system without affecting the entire system. This is cast aside in favor of double-blind studies evaluating single symptoms. Scientists do not introduce a variable into a malfunctioning system to learn its effects. Medical researchers use sick animals in drug trials. Dr. Samuel Hahnemann, founder of homeopathy, was a scientist who spent decades investigating the Law of Similars. He tested remedies on healthy individuals to elucidate their effects before applying them in sick patients, according to defined principles. No “proponent of rational thought” can dismiss his work as does medicine. If conventional practitioners want to be scientists, they must open their minds to concepts that can alter their paradigm, no matter how counterintuitive. The Theory of Relativity is not intuitive, yet physicists have accepted it.

I would not “prevent the actual testing.” I support scientific research, not misleading double-blind trials. I do not approve of using “[our] gut, trial and error, and empiricism” other than for inspiration. These were the suggestions of presenters at NAVC.

Unlike many homeopaths, I am not interested in acceptance by medicine. Dr. Hahnemann said “The physician’s highest and only calling is to make the sick healthy, to cure.”¹ The veterinarian vows to work to relieve animal suffering. These are different missions. Simply restating veterinary practice acts to clarify what constitutes medicine would allow other modalities without diluting veterinary

medicine, eliminate the statement on alternative medicine by the AVMA, and allow Americans their constitutionally guaranteed freedom.

Russell Swift, DVM
Tamarac, Fla

1. Hahnemann S. The highest ideal of cure. In: *Organon of the medical art*. Palo Alto, Calif: Birdcage Books, 1996:60.

Commends successful use of electrical cardioversion in a horse

I am pleased that electrical cardioversion of atrial fibrillation in a horse was accomplished, and I commend Dr. Frye et al for persistence in achieving successful cardioversion (*JAVMA*, Apr 1, 2002, pp 1039–1045). Thirty-five years ago, my colleagues and I were unsuccessful in cardioversion, using a commercial monophasic synchronized defibrillator, in two mature horses with atrial fibrillation of unknown duration. The first horse was positioned in right lateral recumbency after induction of general anesthesia. An external craniocaudal set of paddles was used with the broad, 5-inch diameter scapular plate paddle positioned under the right precordium and a standard, hand-held paddle over the left precordial area of the thorax as far cranial as allowed by the left triceps muscle. Repeated shocks at the maximum settings did not convert the atrial fibrillation, so the horse was awakened and treated successfully with quinidine sulfate administered orally. Cardioversion was attempted in the second horse after general anesthesia was induced, and a modified esophageal electrode was positioned over the base of the heart, based on external distance measurement from the nares. Initial low current settings were unsuccessful. A higher current discharge induced ventricular fibrillation, which resulted in death of the horse. We made no additional attempts at electrical cardioversion in horses.

James W. Buchanan, DVM,
M Med Sci, DACVIM
Philadelphia, Pa

The authors respond:

We appreciate Dr. Buchanan’s interest in our work and thank him for sharing his early experiences

with conventional monophasic electrical cardioversion in horses. We wish to remind readers that cardioversion or defibrillation using a monophasic waveform (the only technology available for Dr. Buchanan 35 years ago) requires high energy and current and is not very effective for patients with high transthoracic impedance. In contrast, experimental and clinical studies have shown that biphasic waveforms, as we are now using in horses, are effective at lower cardioversion and defibrillation energy thresholds and induce less post-shock myocardial dysfunction.¹⁻³ One human clinical study,³ for example, has shown 99.8% efficacy for low energy biphasic cardioversion of atrial fibrillation with 85% of patients converted at ≤ 50 J. In addition, biphasic cardioversion with < 200 J was 100% effective in a subset of these patients previously requiring 720 J monophasic for cardioversion. Specifically, a rectilinear biphasic waveform provides the additional advantage of eliminating high energy peaks that cause injury to tissues.⁴ Inducing ventricular fibrillation is therefore less likely to occur with the rectilinear biphasic cardioversion we now use than with the monophasic energy used by Dr. Buchanan. Considering the potential life-threatening adverse effects of quinidine at dosages needed to achieve pharmacologic cardioversion, we suspect that the risk-benefit ratio may be more favorable for rectilinear biphasic electrical cardioversion.

Melinda A. Frye, DVM, MS, DACVIM
Denver, Colo

Janice M. Bright, DVM, MS, DACVIM
Fort Collins, Colo

*Niebauer MJ, Chung MK, Wilkoff BL, et al. Success rate of the rectilinear biphasic waveform in atrial cardioversion in a large cohort of patients (abstr). *Circulation* 2000;102:572–574.

1. Schneider T, Martens PR, Paschen H, et al. Multicenter, randomized, controlled trial of 150 J biphasic shocks compared with 200 to 360 J monophasic shocks in the resuscitation of out-of hospital cardiac arrest victims. *Circulation* 2000;102:1780–1787.

2. Mittal S, Ayati S, Stein KM, et al. Transthoracic cardioversion of atrial fibrillation: comparison of rectilinear biphasic versus damped sine wave monophasic shocks. *Circulation* 2000;101:1282–1287.

3. Tang W, Weil MH, Sun S, et al. The effects of biphasic and conventional monophasic defibrillation on post-resuscitation myocardial function. *J Am Coll Cardiol* 1999;34:815–822.

4. Amato-Vealey E, Colonies PA. Demystifying biphasic defibrillation. *Crit Care* 2001:1–7.

More on the pregnant mare urine industry

I read with interest the recent news article on the pregnant mare urine (PMU) industry (*JAVMA*, Apr 15, 2002, pp 1130–1131) and was very pleased to see that the extensive veterinary involvement was acknowledged. The PMU industry has publicly maintained that veterinarians are the best resource to ensure the proper well-being of horses on PMU ranches. I have participated in the welfare review and research process in the industry since 1995 and currently consult as co-chair of the Equine Management Group (EMG) at Wyeth. This has provided an opportunity to observe the consideration for equine welfare in the industry from corporate boardrooms to ranches. In addition to establishing a culture that has embraced a concern for the well-being of horses, Wyeth has developed a multilayered oversight program that uses inspectors, veterinarians, and welfare experts in and outside the industry.¹ The industry has also supported controlled studies addressing specific equine management and welfare questions.

The oversight of equine welfare includes monthly ranch inspections by Wyeth field representatives. These representatives are trained by a veterinarian in charge of PMU mare health, and they use a check sheet that facilitates consistent reviews and data analysis. The field representatives are evaluated by field supervisors, who also work closely with the managing veterinarian. Three times during the 6-month stabled period, ranchers are required to hire an independent, practicing veterinarian to conduct a complete herd health review. There are more than 90 participating veterinarians. They use a common herd health form, developed by a committee of practicing veterinarians, to ensure that

all reviews are consistent and complete. And finally, veterinarians representing such organizations as American Association of Equine Practitioners, Canadian Veterinary Medical Association, Royal Society for the Prevention of Cruelty to Animals, and the International League for the Protection of Horses have all reviewed the ranches, management practices, and related research. These reviews have consistently found that the horses in the PMU industry are well managed and their welfare appropriate.

Housing at PMU ranches differs from many equestrian facilities, and this has led to specific questions regarding management. The PMU industry has supported an applied research program that addresses these questions. Members of the EMG and Equine Advisory Board established by Wyeth collaborate with the managing veterinarian in conducting these studies. These groups include veterinary researchers and clinicians from multiple specialty areas. The controlled studies on a working PMU research ranch have addressed the health, physiologic condition, and behavior of mares on various watering and turnout regimens. The data have been presented at national meetings and published in peer reviewed journals.^{2–5} Results of these studies have consistently revealed normal health and behavior in the horses.

It is not clear why the PMU industry continues to be a target for critic groups, because the reports from veterinarians and their organizations consistently indicate that the horses are normal and receive appropriate care. In reality, the oversight and controlled research programs, combined with the extensive veterinary involvement, should serve as a model for ensuring the welfare of animals for other animal industries.

Douglas A. Freeman, DVM, PhD, DACT
Fargo, ND

1. Freeman DA. The pregnant mare's urine industry—management and research. *J Am Vet Med Assoc* 2000;216:1239–1242.

2. Freeman DA, Cymbaluk NE, Kyle B, et al. Health and welfare of stabled PMU mares under varied water and turnout schedules: 1. Physiology, in *Proceedings*. 44th Annu Conv Am Assoc Equine Pract 1998;19–20.

3. McDonnell SM, Freeman DA, Cymbaluk NE, et al. Health and welfare of stabled PMU mares under varied water and turnout schedules: 2. Behavior, in *Proceedings*. 44th Annu Conv Am Assoc Equine Pract 1998;21–22.

4. Freeman DA, Cymbaluk NE, Schott HC, et al. Clinical, biochemical and hygiene assessment of stabled horses provided continuous or intermittent access to drinking water. *Am J Vet Res* 1999;60:1445–1450.

5. McDonnell SM, Freeman DA, Cymbaluk NE, et al. Behavior of stabled horses provided continuous or intermittent access to drinking water. *Am J Vet Res* 1999;60:1451–1456.

Grateful for article analyzing women in veterinary medicine

I was delighted to read Dr. Carin A. Smith's article about gender and work in the May 1, 2002 issue of *JAVMA*. After almost 30 years of thinking about the changing role of women in the veterinary profession, it is wonderful to see growing awareness among veterinarians of the importance of these issues.

Dr. Smith's analysis, based on her many excellent sources, is accurate, and her suggestions for change important. As she rightly points out, feminization of other professions has resulted in a decrease in prestige and earnings. It is our duty to make sure that this does not happen in veterinary medicine. I would challenge the National Commission on Veterinary Economic Issues, through their gender task force, to come up with concrete suggestions for action based on Dr. Smith's in-depth analysis.

My action plan is to teach young women veterinarians and veterinary students the salary and benefit negotiating skills that I learned (the hard way) through my career. I would encourage all veterinarians to think about what concrete actions they might want to take to ensure that our profession grows in prestige and income as we become a profession with the majority being women.

Thank you, Dr. Smith, for putting the effort into gathering this information and resource list, and for stating the issues in such a persuasive and helpful way.

Linda Rhodes, VMD, PhD
Holmdel, NJ