have been used at KCOM/ATSU for about a decade, are the learning objectives for the entire medical school curriculum. We expect this review to be completed by late fall 2006.

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Interventions Need to Be Consistent With Osteopathic Philosophy

To the Editor:

As a researcher, chiropractic clinician, and beginning first-year osteopathic medical student, I found several shortcomings in the review of pediatric migraine by Andrew D. Hershey, MD, PhD, and Paul K. Winner, DO, appearing in the supplement to the April 2005 issue of *JAOA—The Journal of the American Osteopathic Association* (2005;105[4 suppl 2]:S2–S8). Specifically, the authors neglected to accurately detail nonpharmacologic treatment modalities such as dietary and nutritional interventions. Further, they do not mention manipulative treatment.

In contrast to the description of the osteopathic medical profession by the American Osteopathic Association,[1] namely, "doctors of osteopathic medicine, or D.O.s, apply the philosophy of treating the whole person to the prevention, diagnosis and treatment of illness, disease and injury," Drs Hershey and Winner essentially reviewed only pharmacologic treatment. They dedicated 2597 words (97.7%) to pharmaceutical treatment but incompletely reviewed nonpharmacologic treatment modalities in only 62 words (2.3%).

Drs Hershey and Winner did not mention clinical trials showing benefit of magnesium supplementation in pediatric patients with migraine.[2] Modes of therapy under the genre of "biofeedback" appear to be safe and effective for pediatric migraine.[3-5] Perhaps more important, the authors neglected to objectively review data on diets that eliminate food allergens, which have been proved effective as a migraine preventive in children[6,7] and adults.[8] Furthermore, while it is true that the adult studies documenting the antimigraine benefits of spinal manipulation,[9] coenzyme Q10 (CoQ10),[10] riboflavin,[11] feverfew,[12] *Petasites hybridus*,[13] vitamin D,[14] cobalamin,[15] 5-hydroxytryptophan,[16] and combination fatty acid therapy[17] need to be replicated in children, Drs Hershey and Winner either ignored or too quickly dismissed these low-cost, low-risk interventions, which have shown clinical efficacy when used singly and which may also be used safely in combination.[18,19]

Although the US Food and Drug Administration generally does not "approve" the use of nutritional supplements for the treatment of disease in the same way that it does pharmaceutical medications, lack of such approval does not imply lack of efficacy or safety. To my immediate knowledge, only soy, dietary fiber/fruit/vegetables, stanols/sterols, calcium, and folic acid have received such "approval" for health claims (see http://www.cfsan.fda.gov/%7Edms/flg-6c.html). Nonetheless, as noted in the previous paragraph, there exist studies proving the effectiveness of riboflavin, CoQ10, magnesium, biofeedback, elimination of food allergens, spinal manipulation, feverfew, *Petasites hybridus*, 5-hydroxytryptophan, and fatty acids against migraine. Furthermore, for example, studies have shown that omega-3 fatty acids reduce the risk of cardiovascular death more effectively than statin drugs, which are "approved," yet I am not aware that fatty acids have been officially "approved" despite this obvious show of safety and effectiveness.[20]

It is hoped that future reviews in this journal can include a more balanced survey of the literature, inclusive of nonpharmacologic and "holistic" interventions that are consistent with osteopathic philosophy.

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Editor's Note

Dr Vasquez disclosed that he has been a researcher for Biotics Research Corporation in Rosenberg, Tex. Biotics Research Corporation does not sell products, testing, treatments, or training associated with biofeedback, food allergy, spinal manipulation, feverfew, *Petasites hybridus*, or high-dose riboflavin. Biotics Research Corporation does produce nutritional supplements containing magnesium, coenzyme Q10, vitamin D, cobalamin, 5-hydroxytryptophan, and fatty acids.

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Editor's Response

Drs Hershey and Winner were shown this letter and declined to comment.

Dr Vasquez, a first-year osteopathic medical student, states that studies using such alternatives as spinal manipulation, coenzyme Q10, riboflavin, feverfew, *Petasites hybridus*, vitamin D, cobalamin, 5-hydroxytryptophan, and combination fatty acid therapy need to be replicated in children. The implication is that such studies have not been done in children. Therefore, had Drs Hershey and Winner mentioned these interventions, they would have been asked to document their efficacy for use in children with published studies. Without such documentation, they would have been referring to off-label treatment, thus failing to adhere to the topic of this *JAOA* supplement: "evidence-based medicine" in the treatment of patients with headache. One of the tenets of osteopathic medicine states: "The practice of medicine should be based on sound medical principles. Only therapies proven clinically beneficial in improving patient outcome should be recommended" (see http://www.osteopathic.org/index.cfm?PageID=ost_tenet). In addition, Dr Vasquez's reference 10 was published in February 2005 and therefore would not have been available to Drs Hershey and Winner via a literature search at the time they wrote their article (between the last week of January 2005 and the end of February 2005).

—Gilbert E. D'Alonzo, Jr, DO

Correction

The American Osteopathic Association's Division of Research Development regrets that the incorrect text was published with the following abstract:

> Oxenberg JC, Smith R, Troutman D, Greene C, Kriebel R. Addition of laminin and fibronectin to SIS used as conduits in peripheral nerve repair. *J Am Osteopath Assoc*. 2006;106:485–486. C18. Available at: http://www.jaoa.org/cgi/content/full/106/8/471. Accessed September 21, 2006.

The correct text for this clinical studies abstract should have appeared as shown below:

♦C18

Addition of Laminin and Fibronectin to SIS Used as Conduits in Peripheral Nerve Repair

Jacqueline C. Oxenberg, MS III,[1] Ryan Smith, DO, MBA,[2] Douglas Troutman, MS III,[1] Richard Kriebel, PhD,[1] Charlotte Greene, PhD[1]; [1]Philadelphia College of Osteopathic Medicine, Philadelphia, PA 19131; [2]Tripler Army Medical Center, Honolulu, HI

This is a pilot study using laminin and fibronectin as an additive to small intestine submucosa (SIS) grafts used to repair transected sciatic nerve in a rat model. Previous studies in our lab have shown sciatic nerve regeneration to be successful using SIS grafts without growth factors. SIS is a biological material that may be used to correct problems of larger peripheral nerve gap injuries and improve regrowth by acting as a natural guide between the proximal and distal segments of the nerves, providing the proper growth environment with minimal antigenicity, thus decreasing chances of rejection. Other studies have shown the addition of fibronectin to various types of grafts further enhanced nerve regeneration by promoting Schwann cell growth. The goal of this study is to determine whether adding laminin and/or fibronectin to SIS grafts improves sciatic nerve regeneration. The experimental group had a 10 mm segment of the right sciatic nerve resected followed by placement and suturing of and SIS graft plus laminin and/or fibronectin laced in the gap as a conduit for nerve regeneration. The control group had the right sciatic nerve resected and reattached directly. Schwann cell growth and nerve regeneration were assessed using anti-s100 antibody, and fast cresyl violet stain to assess Schwann cell migration and neuron regeneration respectively. Preliminary results indicated that:

1. Schwann cell migration and accompanying neuron infiltration occurred up to approximately 2.5 cm over the 6-month healing time in experimental animals.
2. Healing in control animals was observed to be inhibited by the formation of collagen scar tissue.
3. Gait analyses show increased sciatic function in experimental groups of laminin and/or fibronectin compared to control groups.

These results exceed previously reported rates of peripheral nerve regeneration using non-SIS graft materials and show addition of laminin and/or fibronectin improve both sciatic nerve regeneration and sciatic function in gait analyses.

The August 2006 issue of the *JAOA* has been corrected online to reflect this change. In addition, the abstract, as reprinted in the final program for the 50th Annual American Osteopathic Association Research Conference, has been corrected in advance of publication:

> AOA Council on Research. *Osteopathic Medicine in the American Health Care System, Las Vegas, Nev, 16–18 October 2006*. Chicago, Ill: American Osteopathic Association; 2006.

This poster is entered in the Student Prize Competition, a judged event that takes place during the Poster Session at the Research Conference.