and AOEC often work jointly, and advance policy recommendations that go into government proposals and health directives. 112,115,177

Because of concern about conflicts of interests, AOEC sought to develop a position on ethical conduct. It is a disappointment that AOEC turned to the International Commission on Occupational Health (ICOH) for a code of ethics to emulate. The AOEC board of directors in 1996 recommended that the organization adopt the ICOH International Code of Ethics, one noted for its entirely voluntary and unenforceable provisions.115,118 Goodman had warned that, "A bad or shallow code is worse than none at all."114 Goodman's warning went unheeded. Many of the same people who met on behalf of AOEC later met again, this time representing ACOEM, and followed the ICOH precedent since it had served their purposes before. 112 The ICOH is widely recognized for its support of industry. 153,178 ICOH committees have advanced the interests of asbestos mining and manufacture, chemicals, and pesticides. 179-182 The ICOH membership and activities are similar to those of ACOEM, only conducted on a global scale. ACOEM and ICOH conduct joint meetings and share common philosophies and practices. 183

## STATEMENT ON MOLD

The ACOEM Statement on Mold was introduced in 2002 as an evidence-based statement and published in JOEM. <sup>184</sup> The policy statement by ACOEM is that mold exposure in an indoor environment could not plausibly reach a level of exposure to cause toxic health effects. Reported to be a review of scientific literature on the subject of illnesses caused by molds and the toxins they may produce, ACOEM concluded that,

Levels of exposure in the indoor environment, dose–response data in animals, and dose-rate considerations suggest that delivery by the inhalation route of a toxic dose of mycotoxins in the indoor environment is highly unlikely at best, even for the hypothetically most vulnerable subpopulations.

However, none of the references cited in the JOEM paper and in the ACOEM Statement on Mold arrive at this conclusion. <sup>185,186</sup> To form this conclusion, the authors made their own calculations from a single rodent study conducted by other investigators.

The matter of ACOEM conflicts of interest was detailed in a front page *Wall Street Journal* article, January 9, 2007, "Court of Opinion Amid Suits Over Mold, Experts Wear Two Hats: Authors of Science Paper Often Cited by Defense Also Help in Litigation." The result of a six-month investigation, the *Wall Street Journal* article outlined how three authors who frequently testified in mold lawsuits as experts for the defense were specifically selected by ACOEM to write the ACOEM position statement on mold. One of the three,

Bryan Hardin, had recently retired from NIOSH. The *Wall Street Journal* quoted a senior toxicologist for the Washington State Department of Health, "They [the ACOEM authors] took hypothetical exposure and hypothetical toxicity and jumped to the conclusion there is nothing there." ACOEM predictably defended its message and the authors, stating that it was not alone in its interpretation of the evidence.<sup>188</sup>

The issue that ACOEM refused to address was that the ACOEM Statement on Mold was written with no apparent effort to determine the conflicts of interest among the authors. One of the authors had published a review article on mold in 2000 stating that there were no health effects. <sup>189</sup> The authors had extensive experience as consultants to many industries and as defense witnesses in court cases. Authorship of the ACOEM Statement on Mold advanced the interests of industry and advanced the reputations with industry of the authors, who went on to aid the industry in defending against claims.

Jonathan Borak, in charge of the peer review of the ACOEM Statement on Mold, reported to the ACOEM officers and executive director in 2002,

I am having quite a challenge in finding an acceptable path for the proposed position paper on mold. Even though a great deal of work has gone into it, it seems difficult to satisfy a sufficient spectrum of the College, or at least those concerned enough to voice their views. I have received several sets of comments that find the current version, much revised, to still be a defense argument. On the other hand, Bryan Hardin and his colleagues are not willing to further dilute the paper. They have done a lot, and I am concerned that we will soon have to either endorse it or let it go. I do not want to go to the Board of Directors and then be rejected. That would be an important violation of Bryan. I have assured him that if we do not use it he can freely make whatever other uses he might want to make. If we "officially" reject it, then we turn his efforts into garbage. 190

In the spring of 2003, Veritox, a risk-management company that provides defense testimony in mold litigation, and of which two of the authors of the JOEM article are principals, was paid \$40,000 by the Manhattan Institute to convert the ACOEM Statement on Mold into a "lay translation" to be shared through the United States Chamber of Commerce with stakeholder industries—real estate, mortgage, construction, and insurance. The authors unfairly presented the essence of the mold controversy as, "Thus the notion that 'toxic mold' is an insidious secret 'killer' as so many media reports and trial lawyers would claim is 'junk science' unsupported by actual scientific study." The Chamber of Commerce presents the benign Veritox interpretation of mold as,

Hardin and his team of scientists provide a detailed primer on mold in A Scientific View of the Health Effects of Mold. Fungi, they point out, play an "essential role in the cycle of life as the principal decomposers of organic matter, converting dead organic material into simpler chemical forms that can in turn be used by plants for their growth and nutritional needs. Without fungi performing this essential function, plant and animal debris would simply accumulate." Mold is everywhere. <sup>191</sup>

The authors and many other ACOEM members have cited the JOEM paper and the ACOEM Statement on Mold before the courts in an effort to deny illness claims when testifying as experts on behalf of those with financial stakes in the building and finance industries. Although the defense testimony has been deemed to be an unscientific nonsequitur by the Institute of Medicine and by the courts, ACOEM continues to deny that there is any basis in fact to dispute its position statement. 188

To make matters worse, ACOEM and AOEC together mocked the mold victims who gave interviews to the *Wall Street Journal* in an Internet message that they falsely attributed to the *FDA News* as an April Fool's joke. Government symbols appeared on the ACOEM-AOEC message, and the contact information was a legitimate FDA phone number.<sup>194</sup> Principals in both organizations later sent a note of apology to the mold victims, saying that they were the sole authors, but the note of apology was not sent to the international distribution of the phony *FDA News* that was received by thousands of occupational and environmental physicians around the world, who would not be expected to notice the potential significance of an April 1 date on official FDA letterhead.<sup>195</sup>

As a result of the organizational biases, the close affiliations with industry, funding and contracts from government agencies, and the perverse influence over the practice of medicine and the appearances in court of company-sponsored experts, the ACOEM Statement on Mold has exerted far too much influence. <sup>196–198</sup> The ACOEM Statement on Mold brings into serious question the objectivity of those formulating position papers; and of equal concern, the ethics of those who profit from the position taken by ACOEM and AOEC. <sup>199</sup>

## **REFORM**

The workers' compensation model of occupational and environmental medicine should be converted to a public health model. Occupational and environmental medicine, as a part of the public health infrastructure, could play a much more substantive part in bringing about a national program to deal with occupational and environmental health. Abolishing workers' compensation would remove the perverse incentives that currently undermine the practice of occupational medicine. <sup>89</sup> If occupational physicians were not protected

from litigation by workers' compensation law, there would be much less attention paid to the interests of employers, and a lot more concern for the wellbeing of workers. It is also likely that there would be far fewer health and safety professionals working for companies. The vacuum could be filled by health and safety professionals with public health training working in settings that are much less likely to respond to the influence of corporations and insurers. Medical care for workers should be provided without question or clearance criteria by health care professionals who are not subject to influence by employers or insurers. ACOEM has supported, "changes in regulatory and procedural areas that have made recovery from injuries unnecessarily complicated in the workers' compensation system," but has not supported fundamental change to the system itself.200

In the area of professional competence, ACOEM publishes lofty recommendations for competencies, but is woefully short on ideas of how to provide them to its members.<sup>201</sup> The primary purpose of the sketchy training offered by ACOEM is to increase membership in a failing organization. The short courses and introductory sessions conducted by ACOEM at its annual gatherings are wholly insufficient, and merely provide the pretence of training and background that assures the membership of new physicians to replace the losses of recent years.

## **BACK TO THE FUTURE**

In 1977, Irving R. Tabershaw gave an address entitled "The Health of the Enterprise" to the ACOEM annual meeting. He noted that occupational medicine had come under public scrutiny with the passage of the OSHAct. The public, according to Tabershaw, wondered whether the occupational physician was the agent of the employer or the employee. His answer became a historic defense of industry-supported medicine, and initiated the stunning growth in industry consultants in the years that followed that continues to the present.

It is evident that the basic ethical and moral responsibility of all physicians, including occupational physicians, is to safeguard the health of the individual—the worker. There is, however, another consideration—'the health of the enterprise'—in which the employee earns his livelihood and which retains and pays for the services of the occupational physician.<sup>1</sup>

Although mindful of the difficulty in doing so, Tabershaw defended the practice of occupational medicine, and if anything, called for a major expansion of its breadth and scope. He referred to, "our responsibility for the total health of the enterprise, be it a corporation, a conglomerate, a multinational, a nonprofit institute, an educational institution, or a privately owned company." This clever sleight of hand drew