In a structured review of the literature on the treatment of the common cold with echinacea by Caruso and Gwaltney [1], only 9 placebo-controlled studies of the common-cold were identified among 322 published reports that examined the effect of echinacea treatment on symptom severity and duration of the common cold. Only 2 of the 9 selected studies met all 11 of the clinically based criteria given by Caruso and Gwaltney [1], and both of those studies were considered to have negative results. Of the remaining 7 studies, 6 were judged to have positive results by the people who performed them, and 1 had negative results, but all lacked proof that the studies were blinded. This is especially important in the treatment of mild, short-duration illnesses such as the common cold, and the lack of blinding casts doubt on the validity of the recommendation and benefit of treatment with echinacea.

In view of the enormous number of reported studies of echinacea treatment for the common cold and the exceedingly modest positive results that were obtained, it seems apparent that the treatment has little or no effect. This is important, not because of any reported toxicities of the treatment, but because of the fact that echinacea treatments have required an unjustified large expenditure of money for their use.

The common cold is defined in the Harrison textbook of medicine [2] as a mild, self-limited viral infection of the upper respiratory tract. Adults experience, on average, 2–4 colds per year, and children experience about twice that number. The textbook states that rhinoviruses with 100 different immunotypes cause ~40% of cases, and that other respiratory viruses, especially corona viruses, cause the others. Newer studies using PCR analysis for diagnosis suggest that ~50% of common colds may be due to rhinoviruses. On this basis, it should be emphasized that the common cold is caused by many serologically distinct rhinoviruses, as well as a number of other viruses. It seems unlikely that echinacea has an antiviral spectrum broad enough to affect so many viruses. The suggestion that echinacea may act by enhancing immune responsiveness is also difficult to reconcile with the significant negative findings with respect to the treatment’s effect on clinical disease and to the uninhibited virus shedding. It should also be noted that many years of intensive research in many laboratories have produced only a small number of unequivocally therapeutically active antiviral drugs, and none have achieved a high level of utility.

With evidence of little or no therapeutic effect of echinacea found by clinical evaluations, the remaining alternative would be to measure its antiviral effect in patients or experimental subjects with rhinovirus infections under precisely controlled conditions. There are 2 recent reports on volunteers treated with echinacea for several days before and after they were inoculated with live rhinovirus, with additional control subjects given placebo. Sperber et al. [3] performed a double-blind study, with 24 volunteers in both the case and control groups. They found slightly fewer colds in the subjects treated with echinacea, but the difference was not significant, and treatment did not decrease the degree of rhinovirus infection in the subjects treated with echinacea. In a similar trial, Turner et al. [4] studied 63 volunteers treated with echinacea and 54 volunteers given placebo. Turner et al. [4] found no significant effect of echinacea treatment on either the occurrence of infection or the course of illness. I believe that the failure to show an effect of echinacea treatment on viral shedding and the finding of essentially no positive effect on the signs and symptoms of the disease in well-controlled studies of substantial size leaves little basis for the use of echinacea for treatment of common colds.

In summary, the extensive review by Caruso and Gwaltney [1], with essentially negative findings, and the recent negative findings from studies of carefully controlled live-virus inoculations of volunteers—in which the treated group was given heavy doses of echinacea before and after rhinovirus inoculation and was com-
pared with a group of volunteers given placebo—lead to the conclusion that echinacea does not have a significant antiviral or therapeutic effect for patients with the common cold. It follows that the considerable expense of its widespread use in the treatment of the common cold is not justified. There are other products used for medical treatment that also do not have verified activity. Together, they represent a major unjustifiable cost of health care at a time when legitimate health care costs are escalating. Such practices should be terminated.

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References