

TABLE

## Double-Blind Randomized Placebo-Controlled Trials of Echinacea Formulations for Respiratory Infections

| Species (Product)  | Plant Part    | Reference                         | Purpose | N   | Outcome Measure(s)*    | Benefit | Limits |
|--|---------------|-----------------------------------|---------|-----|------------------------|---------|--------|
| <i>E. purpurea</i> (Echinaforce)                           | Herb and root | Brinkeborn, 1998                  | Treat   | 119 | URI symptoms           | Yes     | AB     |
| <i>E. purpurea</i> (Echinagard)†                           | Herb          | Hoheisel, 1997                    | Treat   | 120 | URI symptoms           | Yes     | AB     |
| <i>E. purpurea</i> (2 doses<br><i>E. purpurea</i> extract) | Root          | Bräunig, 1992                     | Treat   | 180 | Flu-like symptoms      | Yes     | AB     |
| <i>E. pallida</i> ( <i>E. pallida</i> extract)             | Root          | Bräunig, 1993                     | Treat   | 160 | Flu-like symptoms      | Yes     | AB     |
| <i>E. angustifolia</i> (Resistan)‡                         | Herb and root | Dom, 1989                         | Treat   | 100 | URI symptoms and signs | Yes     | AB     |
| <i>E. angustifolia, pallida</i> (Esberitox-N)§             | Root          | Reitz, 1990                       | Treat   | 150 | URI symptoms and signs | Trend   | ABC    |
| <i>E. angustifolia, pallida</i> (Esberitox)                | Root          | Vorberg, 1984                     | Treat   | 100 | URI symptoms and signs | Trend   | ABC    |
| <i>E. angustifolia</i> ( <i>E. angustifolia</i> )          | Unknown       | Galea, 1996                       | Treat   | 235 | URI symptoms           | No      | ABD    |
| <i>E. angustifolia</i> (Resistan)‡                         | Herb and root | Vorberg, 1989                     | Treat   | 100 | URI symptoms and signs | Yes     | ABC    |
| <i>E. angustifolia, E. purpurea</i> (3 arm)                | Root          | Melchart, 1998                    | Prevent | 302 | URI incidence          | Trend   | AC     |
| <i>E. purpurea</i> (Echinacin)                             | Herb          | Schöneberger, 1992<br>Grimm, 1999 | Prevent | 109 | URI incidence          | Trend   | ABC    |
| <i>E. angustifolia</i> (Resistan)‡                         | Herb and root | Schmidt, 1990                     | Prevent | 646 | URI incidence          | Trend   | ABC    |
| <i>E. angustifolia, pallida</i> (Esberitox)¶               | Root          | Forth, 1981                       | Prevent | 95  | URI incidence          | Trend   | ABC    |

E denotes Echinacea; URI, upper respiratory infection.

\*Flu-like illnesses included fever, chills, and muscle aches along with upper respiratory symptoms.

†Echinagard, also called Echinacin, is a direct extract from the above-ground parts of *Echinacea purpurea*.

‡Resistan contains extracts of *Eupatorium*, *Baptista*, and *Amica*, as well as *Echinacea angustifolia*.

§Esberitox-N contains extracts from *Baptista* and *Herba thujae*, as well as *Echinacea angustifolia* and *Echinacea pallida*.

¶Esberitox contains homeopathic dilutions of *Apis*, *Crotal*, *Silicea*, and *Lachesis* as well as the ingredients in Esberitox-N.

Note: Limitations: (A) lack of objective, validated measures; (B) no report of whether participants thought they took Echinacea or placebo;

(C) trends rather than statistically and clinically significant benefits (insufficient power); and (D) insufficient dose. ☒