

MEDI  HERB<sup>®</sup>

Echinacea  Premium<sup>®</sup>

Research-Supported Echinacea



# The Science of Echinacea

## Research-Supported by MediHerb®

Kerry Bone, Co-Founder of MediHerb, has always believed that a key aspect of modern phytotherapy is a respect for traditionally generated knowledge. *E. angustifolia* root however is very expensive and the cost was prohibitive for many of his patients. To overcome this, Kerry developed Echinacea Premium, a blend of *E. angustifolia* and *E. purpurea* roots. An extensive research project was designed to identify the bioavailable components of Echinacea Premium and how they support healthy immune system function.\*

### What are the key phytochemicals in Echinacea?

From MediHerb *in vitro* and human pharmacokinetic research we know:

- Alkylamides are the ONLY constituents detected in the blood after taking Echinacea Premium. No caffeic acid conjugates, degradation products of these or the alkylamides were found<sup>1</sup>
- The immune active alkylamides in *E. purpurea* are rapidly degraded by the liver
- In contrast, the alkylamides mainly in *E. angustifolia* were much more slowly degraded
- When combined together the alkylamides from *E. angustifolia* actually slowed down the rate of degradation of the alkylamides from *E. purpurea*
- The combination of *E. angustifolia* and *E. purpurea* alkylamides decreases the degradation of the active alkylamides so that they last in the bloodstream longer<sup>2</sup>
- This is a strong justification for the combination of *E. angustifolia* root with *E. purpurea* root, as in Echinacea Premium, and this finding is protected by patent<sup>3</sup>
- The total amount of alkylamides absorbed into the bloodstream was essentially the same for both Echinacea Premium tablets and Echinacea Premium 1:2 liquid<sup>4\*</sup>

### Do alkylamides have an effect on the immune system?

The key finding of the *in vitro* studies is that:

- The alkylamides are largely responsible for the proposed immune effects of Echinacea lipophilic extracts.\*

### MediHerb Research: Echinacea Premium

If taken before and during travel on long-haul flights, Echinacea Premium **may support upper respiratory tract health during travel**. In a randomized, double-blind trial, adults who took Echinacea Premium had lower respiratory symptom scores during travel compared to placebo ( $p = 0.05$ ).<sup>5</sup> The dose depended on the phase of travel of the participants and their health status:\*

- Prior to travel (priming): one tablet twice daily (equivalent to 2.55 g/day of dried root, providing 8.8 mg/day of alkylamides)
- When travelling: twice the priming dose
- If additional immune support is required: three times the priming dose\*



## A Comprehensive Understanding of Echinacea

The research on Echinacea Premium conducted or supported by MediHerb has made a substantial contribution to understanding the value of lipophilic extracts of Echinacea. It can be concluded from this research that:



**Alkylamides** are the major **quality and activity** markers. They are bioavailable and active



**Echinacea** root is the preferred plant part. It contains the highest levels of alkylamides



The **preferred species** of Echinacea are ***E. angustifolia*** and ***E. purpurea*** since they contain high levels of alkylamides (compared to *E. pallida*)



Echinacea must be extracted using a high **alcohol percentage** to efficiently extract the alkylamides



The synergistic blend of *E. angustifolia* and *E. purpurea* alkylamides in Echinacea Premium **may potentiate each other** for greater effect



The traditional way Echinacea was used has been **validated by scientific research**

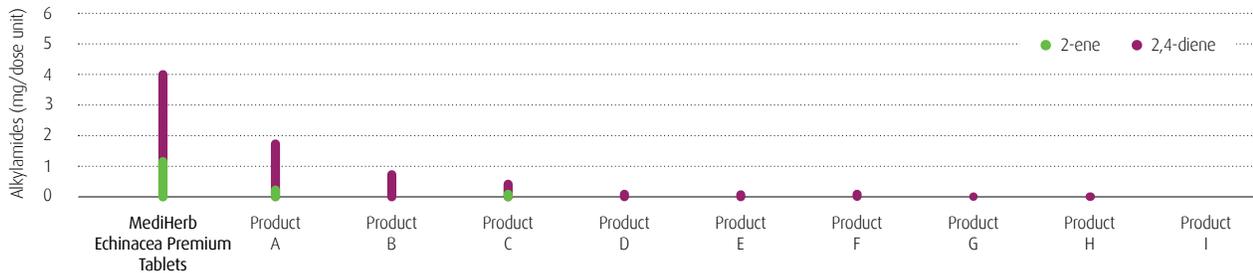


MediHerb guarantees a minimum of **4.1 mg of alkylamides** in every tablet of Echinacea Premium to ensure optimal clinical results\*

# Echinacea Comparison Charts

MediHerb Echinacea products are labeled with their total alkylamide content. The testing below reports the alkylamide content of MediHerb Echinacea Premium and nine other U.S. Echinacea products. Note that most of the other Echinacea products do not make claims of alkylamide content. Through research, MediHerb has determined alkylamides are important constituents of Echinacea.

## Echinacea Solid Dose Product Comparison

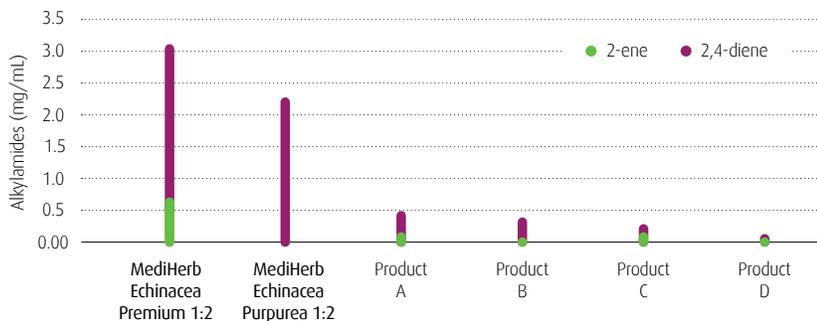


## Tablet Dosage Comparison

The table below shows the amount of tablets required to equal the alkylamides in one Echinacea Premium tablet.

MediHerb Echinacea Premium Tablets	Product A	Product B	Product C	Product D	Product E	Product F	Product G	Product H	Product I
1	2.4	5	9	18	22	22	63	159	341

## Echinacea Liquid Extract Product Comparison



## Liquid Dosage Comparison

The table below shows the amount of extract required to equal the alkylamides in one 5 mL daily dose of Echinacea Premium 1:2.

MediHerb Echinacea Premium 1:2	Product A	Product B	Product C	Product D
5 mL	32 mL	41 mL	75 mL	562 mL

Studies shown above were conducted between 2014 and 2015 by an independent, TGA-licensed analytical laboratory.

# Echinacea: A New Understanding

Echinacea is both misunderstood and underestimated. There are many Echinacea products which differ according to species, plant parts, quality markers and dosage. The wide variety of products available is why there is controversy surrounding Echinacea and its effectiveness. To many people, all Echinacea is the same. However, treating different species, plant parts and actives of Echinacea as the same thing is like comparing apples with oranges.

Echinacea is commonly thought of as an herb for seasonal stresses and only for short-term use. Kerry Bone's applications for Echinacea are much broader than this and you may wonder why this is. Kerry has spent many years both researching and prescribing Echinacea for thousands of patients. His passion for Echinacea led to the MediHerb research project and a greater understanding of Echinacea and how it works. The research results validate the traditional wisdom of Echinacea, i.e. to achieve good clinical results you must use only a root preparation with high levels of alkylamides.\*

## MediHerb® Echinacea Premium

By combining the whole root extracts of two species of Echinacea (*E. purpurea* & *E. angustifolia*) in a patented alkylamide ratio, MediHerb created a blend that reveals the potentiation of *E. purpurea* alkylamides by the *E. angustifolia* alkylamides.

The paradigm-shifting Echinacea Premium:

- Provides immune system support – as shown in a landmark study of air travelers
- Supports healthy immune system response following temporary seasonal stressors\*

By combining the alkylamides from both plants in a patented, optimized ratio, the MediHerb research team has developed an Echinacea extract that when used every day delivers gentle immune system support.\*



# The Quality Choice for Practitioners



## Over 30 years of experience in natural health care

For over 30 years, MediHerb has provided health care professionals with high-quality herbal products. Our own primary research, clinical experience and respect for traditional evidence defines our approach to innovation – tried, tested, trusted and true.



## Manufactured to pharmaceutical GMP standards

All MediHerb products are manufactured under pharmaceutical GMP and subject to our rigorous and specialized testing to ensure they contain what is on the label for suitable clinical results batch after batch. We've invested in our own state-of-the-art laboratories featuring the latest technological equipment for precision, accuracy and quality control. Our testing occurs at various stages of production and follows strict criteria, so you can be sure every MediHerb product is of the highest quality and consistent potency.



## Results-driven formulations

Standardized ingredients and quantified activity levels are tested where relevant and allow us to ensure MediHerb formulas retain potency and deliver suitable doses throughout their shelf life. Our labels state exactly how much each product contains of the important plant constituents, so you know exactly what you are prescribing to your patients and can rest assured that our formulations are produced at suitable doses.

### References

<sup>1</sup> Matthias A et al. *Life Sci* 2005; **77**: 2018-2029 <sup>2</sup> Matthias A et al. *Chem Biol Interact* 2005, **155**: 62-70 <sup>3</sup> Lehmann R, Bone K, Penman K, Matthias A, inventors; Integra Healthcare (Australia) Pty Ltd, assignee. *Echinacea Formulation*. United States patent US 9,205,121. 2015 Dec 8 <sup>4</sup> Matthias A et al. *Phytomedicine* 2007; **14**: 587-590 <sup>5</sup> Tiralongo E et al. *Evid Based Complement Alternat Med* 2012; **2012**: 417267

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\* These statements have not been evaluated by the Food and Drug Administration. These products are not intended to diagnose, treat, cure, or prevent any disease.