

### Scutellaria lateriflora L. Dry extract 10% baicalin

Scutellaria lateriflora L. (Blue skullcap) is a perennial herb native to North America with a long traditional use to relieve anxiety and improve mood. Recent studies suggest neuroprotective and anxiolytic effects.

It is a rich source of constituents with known biological activity:

- Flavonoids (baicalin, baicalein, wogonoside, wogonin)
  - Diterpenoids (scutelaterin A, B, and C)
  - Phenylpropanoids (caffeic acid, cinnamic acid, coumaric acid, ferulic acid)
    - Essential oils (terpenoids)
    - Amino acids and melatonin



### THREE MAIN REASONS TO CHOOSE BLUECALM



Supply chain entirely made in Italy, from the field to the final extract

Official analytical method (EP)



Botanical species certified by DNA barcoding to prevent the adulteration with hepatotoxic Teucrium species

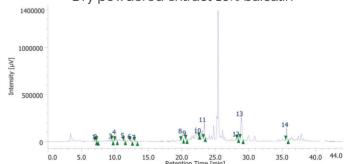
Compliance with EU legislation on Food and Food Supplements



In vitro studies

#### Scutellaria lateriflora L.

Dry powdered extract 10% baicalin

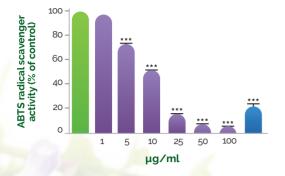


HPLC-DAD chromatogram of the phenolic compounds contained in BlueCALM® (Scutellaria lateriflora L.) Dry extract. 1. Gallic acid 1; 2. Gallic acid 2; 3. Catechin; 4. Chlorogenic acid; 5. Epicatechin; 6. Caffeic acid; 7. Siringic acid; 8. Coumaric acid;

9. Ferulic acid; 10. Rutin; 11. Benzoic acid; 12. Cinnamic acid; 13. Naringenin; 14. Baicalein



# Blue ALM has strong antioxidant activity showing a significant dose-dependent radical scavenger activity in different experimental models.

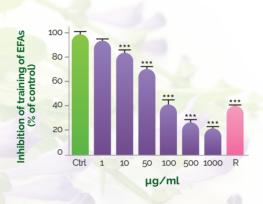




Scavenger activity of BlueCALM® towards the ABTS radical.
Each value represents the mean of ± EMS (n=6).
""p<0.001 indicates a statistically significant reduction in ABTS radical levels compared to the control (Ctrl).

## **Blue** ALM has shown anti-glycation activity

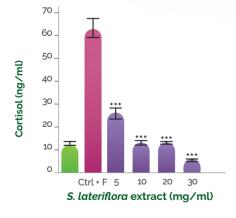
It inhibits the formation of AGEs (Advanced glycation end products), some harmful substances deriving from the combination of proteins and fats with sugars, that are involved in many chronic degenerative diseases, including Alzheimer's, and in aging. These results may support the plant's neuroprotective effects, already reported by available scientific data.



## LEGENDA Ctrl BlueCALM® Rutin 50 µg/ml

Inhibition of the formation of AGEs induced by BlueCALM®. Each value represents the mean of ± EMS (n=6). ""p<0.001 indicates a statistically significant reduction in AGEs levels compared to the control (Ctrl).

### **Blue** ALM significantly inhibits the cortisol release\*





Concentration of cortisol (ng/mL) released from H295R cells in the basal state (CRT) following the treatment with forskolin (CRT+forskolin), and following the treatment of cells with increasing concentrations (5-30 mg/ml) of *S. lateriflora* extract. Data were expressed ad mean ± SD from 3 biological replicates. ""p<0.001

Excess cortisol release is associated with many health concerns, including psychiatric issues (i.e. anxiety, insomnia, and depression), osteoporosis, and impairment of neuroendocrine and immune systems.

BlueCALM® has been tested on a human adrenocortical carcinoma cell line, an in vitro model commonly used to investigate the mechanism of action of molecules with anti-anxiety activity. BlueCALM® induced a significant inhibition, ranging from 58 to 91%.

\*Buccato, D.G.; Ullah, H.; De Lellis, L.F.; Piccinocchi, R.; Baldi, A.; Xiao, X.; Arciola, C.R.; Di Minno, A.; Daglia, M. In Vitro Assessment of Cortisol Release Inhibition, Bioaccessibility and Bioavailability of a Chemically Characterized Scutellaria lateriflora L. Hydroethanolic Extract.

Molecules 2024, 29, 586. https://doi.org/10.3390/molecules29030586

