APPLICATIONS

• Immune System Support
• Inflammatory Response Support
• Cardiovascular Support
• Neurological Support
• Blood Glucose and Metabolic Support
• Antioxidant Support
• Microbial Support

WHY PENTACYCLIC CHEMOTYPE MATTERS (POAS VS. TOAS)

_U. tomentosa_ (bark) most commonly contains both Pentacyclic Oxindole Alkaloids (POAs) and Tetracyclic Oxindole Alkaloids (TOAs). The POAs include speciophylline, uncarine F, mitraphylline, isomitraphylline, pteropodine, and isopteropodine, while the TOAs include rhynchophylline and isorhynchophylline. The preferred chemotype contains only POAs, which are recognized for helping to support immune system homeostasis. POAs contribute to immune support by helping to maintain lymphocyte-proliferation-regulating factor levels already within the normal range. Alternatively, TOAs block the effects of POAs, negating their support of immune health.

IMMUNE SYSTEM SUPPORT

_U. tomentosa_ (pentacyclic chemotype) may help to support immune system homeostasis. Research suggests that POAs help to maintain lymphocyte-proliferation-regulating factor levels already within the normal range, CD4⁺CD25⁻Foxp3⁻ levels already within the normal range, and Th2 levels already within the normal range. It should be noted that TOAs inhibit the effect of POAs on lymphocyte-proliferation-regulating factor in a dose-dependent manner, thus TOA-free _U. tomentosa_ is required for adequate immune support. The specific POA mitraphylline may help to support healthy neutrophil function and maintain levels of Th1, Th2, and Th17 already within the normal range. Mitraphylline may also help to support healthy apoptosis.

INFLAMMATORY RESPONSE SUPPORT

_U. tomentosa_ (pentacyclic chemotype) may help to maintain and support a healthy inflammatory response. _U. tomentosa_ may help to support NF-kappaB levels already within the normal range in a dose-dependent manner, thus supporting both TNF-alpha and IL1-beta already within the normal range. _U. tomentosa_ and its most prevalent POA alkaloid, mitraphylline, may help to maintain levels of IL1-alpha, IL2, IL4, IL6, IL8, and IL17 already within the normal range, in addition to supporting healthy function of the MAP kinase pathway.
OTHER USES

Cardiovascular Support

*U. tomentosa* may help to maintain blood pressure already within the normal range, attributed to the constituent hirsutine.116

Neurological Support

*U. tomentosa* may help to support neurological health and help to maintain healthy neurocognitive function,117 potentially due to the POA mitraphylline.118

Blood Glucose and Metabolic Support

*U. tomentosa* may help to support healthy insulin levels and to maintain blood glucose levels already within the normal range.119,120

Antioxidant Support

*U. tomentosa* may give antioxidant support, helping to maintain levels of oxidative stress already within the normal range,121 attributed to the constituent flavan-3-ol monomers, alkaloids, and polyphenols.

Microbial Support

*U. tomentosa* may assist with a broad range of microbial support.122,123

SAFETY AND CAUTIONS

*U. tomentosa* (bark) is generally well tolerated. Gastrointestinal effects such as nausea, vomiting, constipation or diarrhea have been reported.124 It should be avoided in those taking immunosuppressants, as it may interfere with immunosuppressant therapy.125 *U. tomentosa* may inhibit P450 CYP3A4 enzymes and therefore may slow the metabolism of drugs metabolized by CYP3A4.126 *U. tomentosa* may have additive effects with anticoagulants, generally attributed to the TOAs rhynchophylline and isorhynchophylline,127 as well as additive effects with antihypertensive drugs, generally attributed to the TOAs rhynchophylline and isorhynchophylline.128 As a reminder, *Samento* is TOA-free, with levels in trace amounts or undetectable.

Safety not documented in breastfeeding or pregnant women, or in children under 3 years of age due to insufficient safety research.

* These statements have not been evaluated by the Food and Drug Administration. This product is not intended to treat, cure, or prevent any diseases.

REFERENCES