



Maizinol®

Natural Alternative to Melatonin for Enhanced Sleep Quality

What is Maizinol®?

Maizinol® is a Zea mays (corn leaf)-derived, patented, clinically proven natural sleep aid ingredient that contains proprietary standardized natural compounds known to bind to melatonin receptors and produce melatonin-like effects for better sleep quality. *

Applications

- Sleep aid

Key Benefits

- Once-a-day dosing increases consumer compliance
- High compatibility in formulating with other ingredients
- Natural plant source with a long history of safe human use *
- Extensive in vivo safety testing with no adverse effects *
- Patent protected

Formulation

Can be used as an active agent in tablets, capsules, liquids, gels, gummies, powders, bars, RTD and other delivery systems.

Plant Origin

Zea mays (corn or maize) leaves.

Physical Properties

Brown powder.

Product Profile

What Makes Maizinol® Unique?

- Maizinol® is a hormone free natural supplement clinically proven to increase the restorative stage of sleep. *
- Maizinol® was found to be effective in improving sleep quality in human clinical studies by enhancing the deep sleep stage of sleep. *
- Maizinol® was shown to improve sleep quality as it was measured by the Pittsburgh Sleep Quality Index (PSQI) in human clinical studies. *
- Maizinol® is known to contain biologically active compounds proven to bind to melatonin receptors with a 4-fold higher affinity for MT2 Receptor. *

Mechanism of Action

The sleep quality effects of Maizinol® are derived from three defined mechanisms of action:

1. binding to melatonin receptors
2. reducing cortisol levels
3. regulating melatonin synthesis pathways via 6-MBOA

As the molecular structure of 6-MBOA is very similar to that of melatonin, 6-MBOA itself acts as a melatonin analogue (Sweet & Berger, 1988).

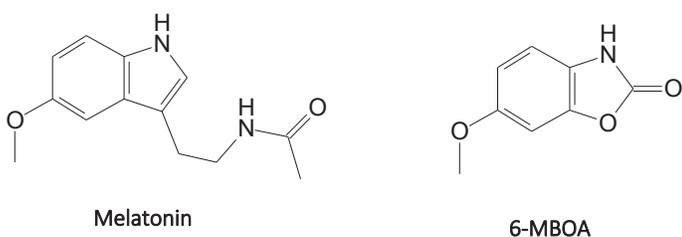


Fig. 1: Similar structure between melatonin and 6-MBOA

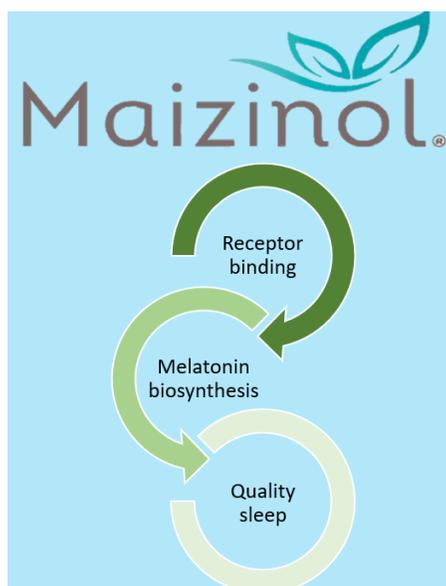


Fig. 2: Maizinol® mechanism of action

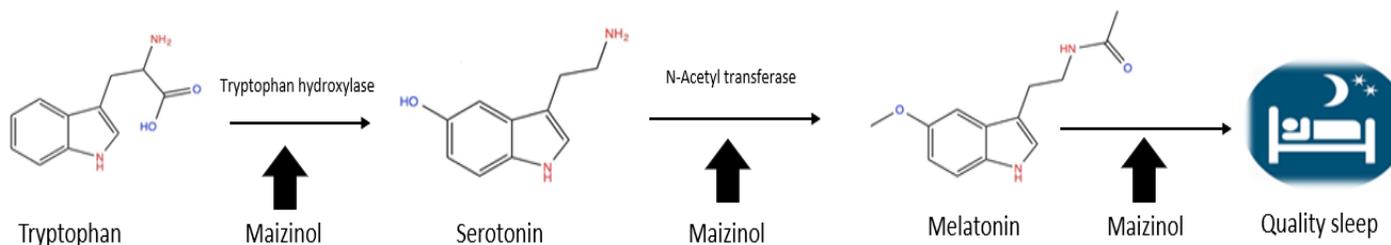


Fig. 3: Induction of rate limiting enzymes in melatonin biosynthesis

Clinical Data on Sleep Quality

Summary Highlights

- Maizinol[®] supplementation improved the state of deep sleep and hence quality of sleep in a dose-correlated manner.*
- Maizinol[®] showed a statistically significant increase in total sleep time compared to baseline.*
- Maizinol[®] supplementation improved sleep quality and efficiency as measured by Pittsburgh Sleep Quality Index.*

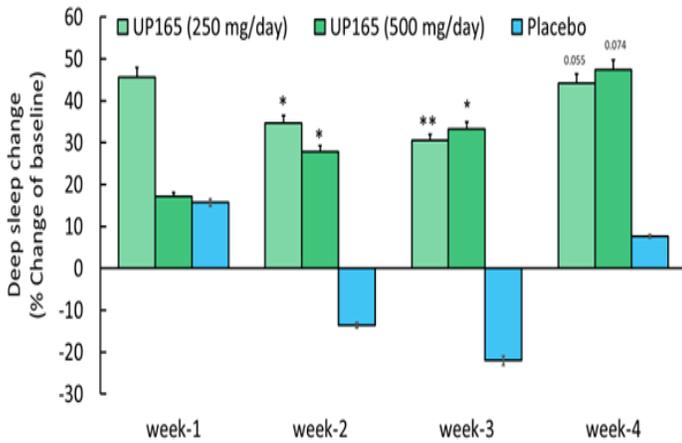


Fig. 4: Maizinol[®] showed progressive increase in deep sleep time. ** $p \leq 0.001$ vs placebo; * $p \leq 0.05$ vs placebo

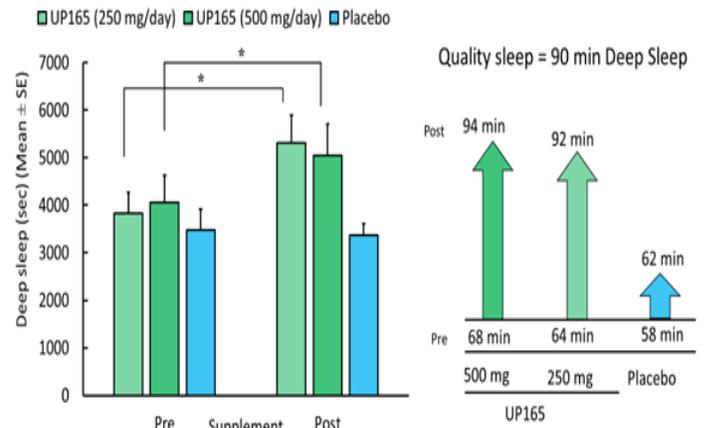


Fig. 5: Maizinol[®] showed up to ~30 min increase in deep sleep time. * $p \leq 0.05$ vs baseline

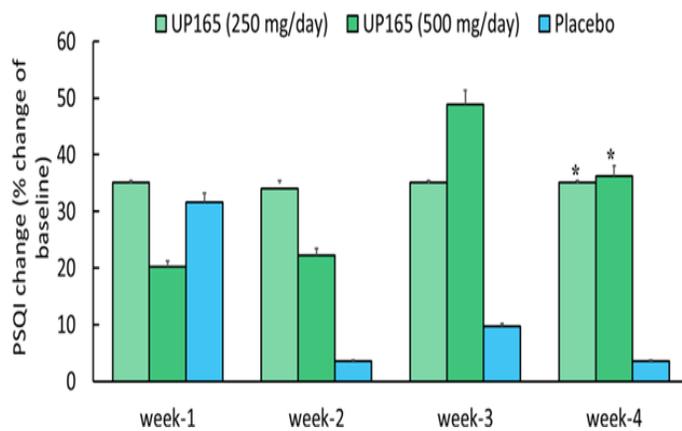


Fig. 6: PSQI global scores for 3 supplement groups. * $p \leq 0.05$ vs placebo

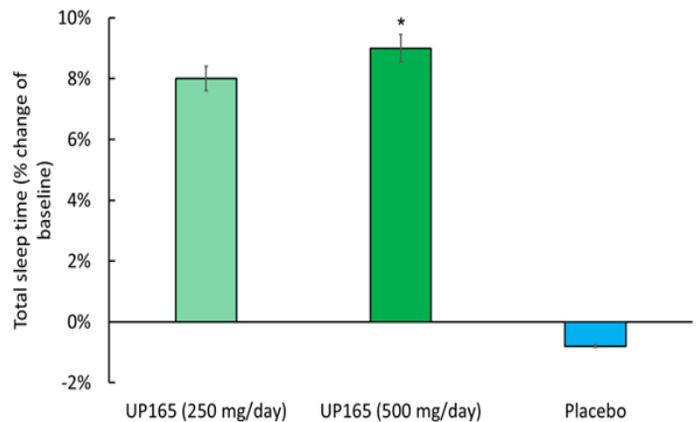


Fig. 7: Maizinol[®] showed a 34- and 42-minutes increase in total sleep time per night. * $p \leq 0.05$ vs baseline

Conclusion: There was a clear and consistent benefit of Maizinol[®] (UP165) on Sleep Quality improvement, particularly showing that subjects spent more time in deep sleep stages with Maizinol[®] supplementation. Improvements in sleep quality were reflected in both subjective and objective measures. Data from this double-blind placebo controlled clinical trial have shown that supplementation of subjects with Maizinol[®] to produce a statistically significant improvement in sleep quality compared to the placebo group. By the end of the 4-week supplementation period, subjects in the Maizinol[®] group benefited significantly more than those in the Placebo group.*

References

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Bring the inspiration of science to your business.

2121 South State Street, Suite 400 Tacoma, WA 98405

Phone: 253.274.7160

www.unigen.net