

# Have a Great Day with VENETRON®

Derived from a patented, purified, powdered extract of *Apocynum venetum*, Venetron® is a dietary ingredient for sleep and mood support that has great potential to vastly improve health outcomes. Unlike other mood support herbs such as St. John's Wort, Venetron does not affect the CYP3A pathway and is also more potent and therefore requires a lower dose of just 50 mg per day. [1]

Standardized to contain at least 4% hyperoside and isoquercitrin, Venetron has been shown in several placebo-controlled human clinical trials to:

**Support a positive outlook\* Alleviate occasional stress\* Improve sleep quality\***

## Status



## Functions



### MECHANISM OF ACTION

Venetron is believed to exert its effects in the following ways:

- Reducing secretion of chromogranin A, a stress marker\*[2]
- Working in synergy with GABA, whose main function is to calm brain excitation\*[3]
- Increasing serotonin levels, thereby boosting mood\*[4]

### Scientific name

*Apocynum venetum* L.

### General name

Luobuma (in Chinese)

Rafuma (in Japanese)

### Origin

Tarim Basin, Xinjiang Uighur

Autonomous Region, China

### Usage

A traditional folk medicine in China as tea drink

A beverage as Foods for Specified Health Uses

(FOSHU) in Japan for over 20 years



VENETRON® is extracted from the leaves of *Apocynum venetum* L.

- ◆ Developed by TOKIWA PHYTCHEMICAL CO., LTD from 1998 in Japan
- ◆ Used as a dietary supplement material for 20 years
- ◆ First dietary supplement in US released in 2001

### TOP 3 Best dietary supplement materials in Japan For sleep improvement

1. Theanine

2. VENETRON®

3. GABA

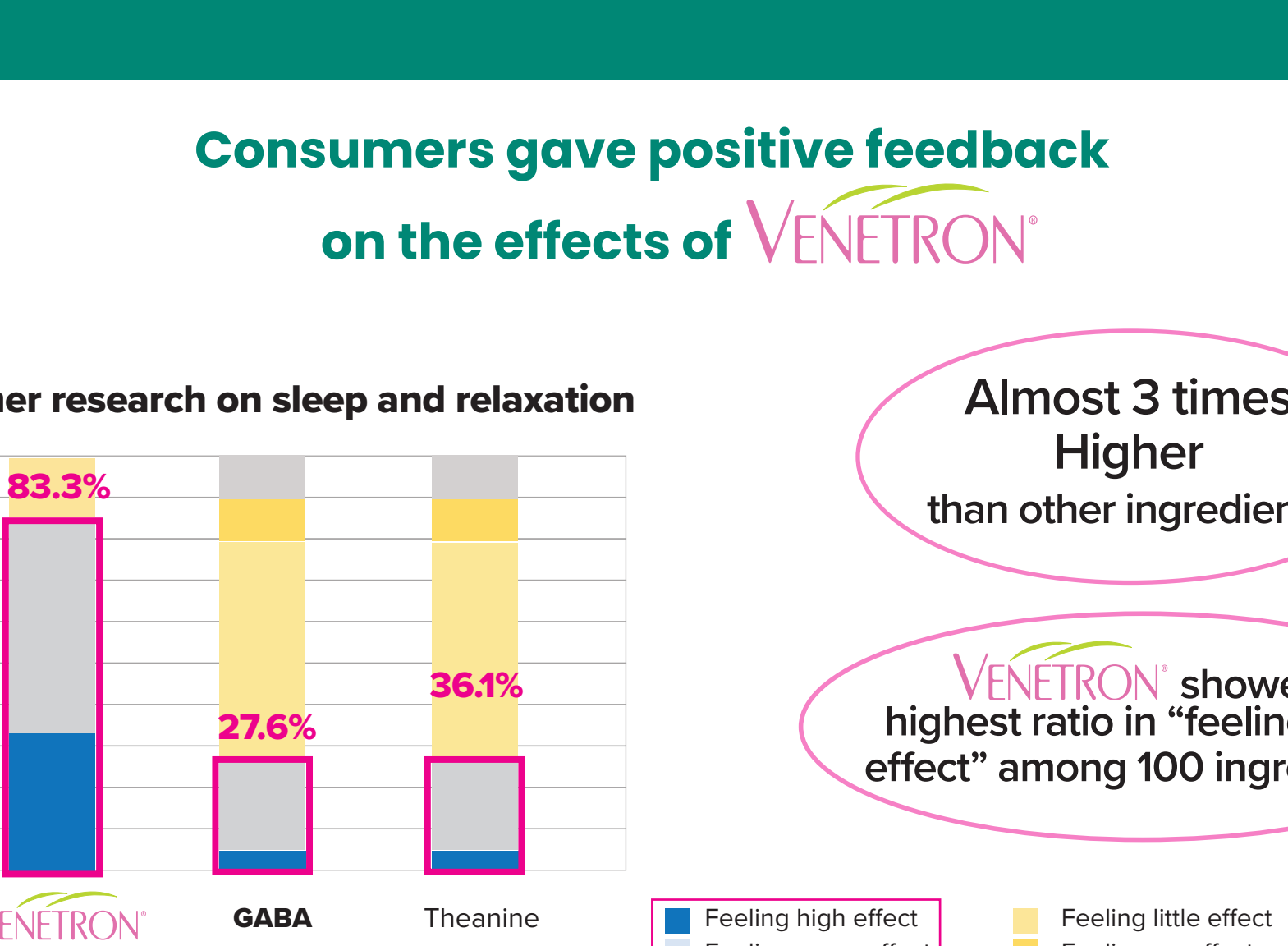
ALMOST **21%** of the sleep supplement market

The industry health new, 1667,01/05/19

## VENETRON® will support a better night's sleep and a relaxed work day

with VENETRON®

Without Support



## Consumers gave positive feedback on the effects of VENETRON®

### Consumer research on sleep and relaxation

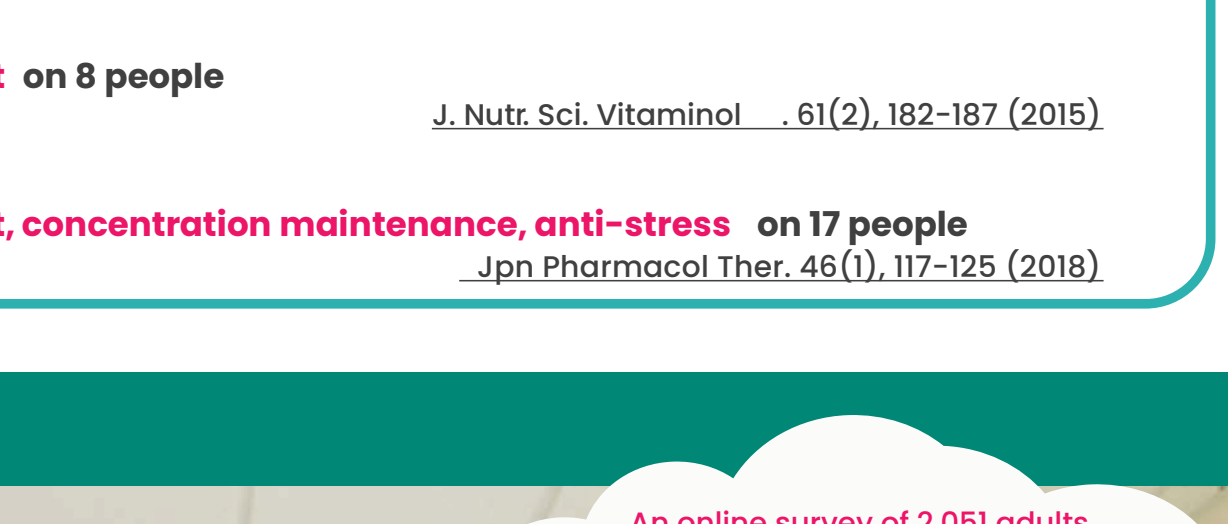


Almost 3 times  
Higher  
than other ingredients

VENETRON® showed  
highest ratio in "feeling high  
effect" among 100 ingredients

Fuji Keizai 生物由来有用成分・素材市場徹底調査 2020 年 (株)富士経済

## VENETRON® makes formulating your next product easier with two grades.



## VENETRON® is backed by 5 clinical trials and over 20 published papers.

- ◆ **Clinical trial 1**  
: **Mood and sleep improvement** on 39 people  
*Journal of Nutritional Food*, 12, 1-9 (2009)
- ◆ **Clinical trial 2**  
: **Safety** study on 30 people  
*Journal of Nutritional Food*, 12, 1-9 (2009)
- ◆ **Clinical trial 3**  
: **Anti-stress** by co-ingestion of GABA and VENETRON® on 12 males  
*Japanese Journal of Physiological Anthropology*, 14(3), 151-155 (2009)
- ◆ **Clinical trial 4**  
: **Sleep improvement** on 8 people  
*J. Nutr. Sci. Vitaminol*, 61(2), 182-187 (2015)
- ◆ **Clinical trial 5**  
: **Sleep improvement, concentration maintenance, anti-stress** on 17 people  
*Jpn Pharmacol Ther.*, 46(1), 117-125 (2018)

An online survey of 2,051 adults (age 18 and over) said, the top sources of stress were the rise in prices of everyday items due to inflation (e.g. gas prices, energy bills, grocery costs, etc.) (87%), followed by supply chain issues (81%).\* [4]

[4] <https://www.stress.org/daily-life>

## Clinical Trial 3: Anti-stress by co-ingestion of GABA and VENETRON®

Design	: Double-blind, placebo-controlled, cross-over studies
Subjects	: 12 healthy males into 4 groups
Samples	: ① GABA (25 mg) + placebo (25 mg) ② VENETRON® (25 mg) + placebo (25 mg) ③ GABA + VENETRON® (25 mg) + VENETRON® (25 mg) ④ Placebo + placebo (50 mg)
Test Period	: Each sample/day/person, different sample order for each group in 4 days
Evaluation	: Chromogranin A (CgA) conc. in salivary before and after UK test (to check psychological stress)



★Synergistic effect of VENETRON® and GABA was suggested  
and co-ingestion of VENETRON® and GABA may be more potent for stress

- Concurrent ingestion of VENETRON® and GABA exhibited a significant less increase in CgA conc. compared with placebo and single ingestion.
- Concurrent ingestion of VENETRON® and GABA reduced the CgA conc. almost to the same level as the normal state at pre-ingestion.
- Synergistic effect of VENETRON® and GABA was suggested, and concurrent ingestion of VENETRON® and GABA may be more potent for stress.

Japanese Journal of Physiological Anthropology  
Yoto a et al. Japanese Journal of Physiological Anthropology, 14(3),55, 2009

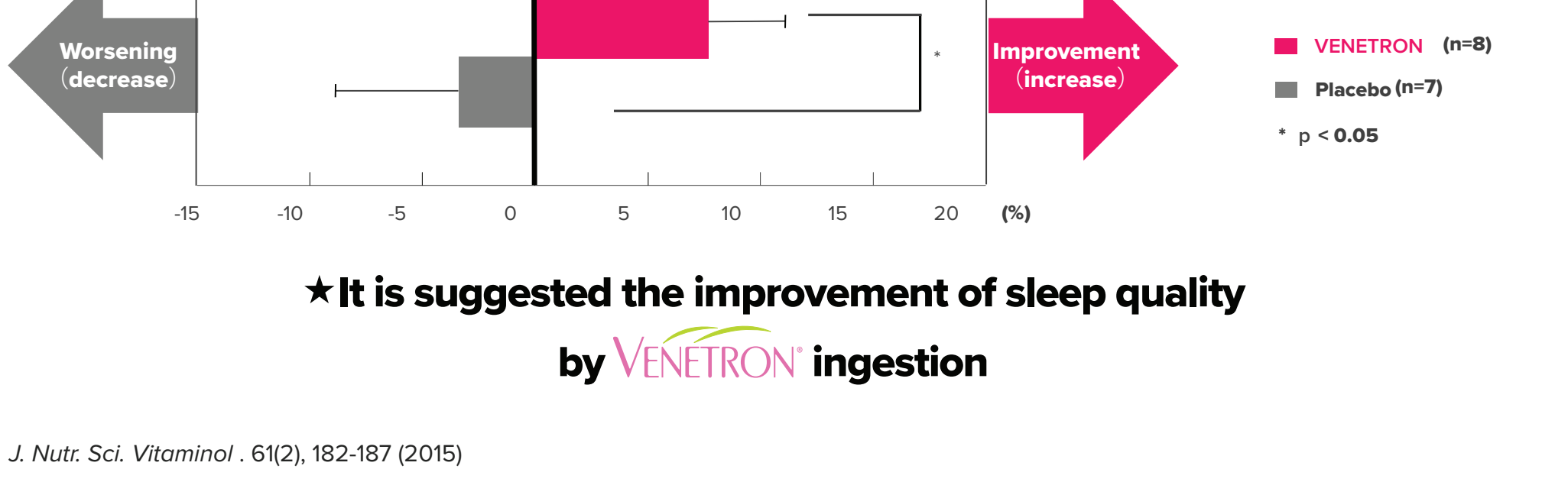
## Anti-stress Effect of VENETRON® in Healthy Humans



Ingestion of Venetron® reduced the increase rate of CgA, compared with placebo.

Yoto a et al. Japanese Journal of Physiological Anthropology, 14(3),55, 2009

## Sleep Statistics



REM SLEEP MAKES UP BETWEEN 20-25% OF TOTAL SLEEP IN HEALTHY ADULTS. [b]

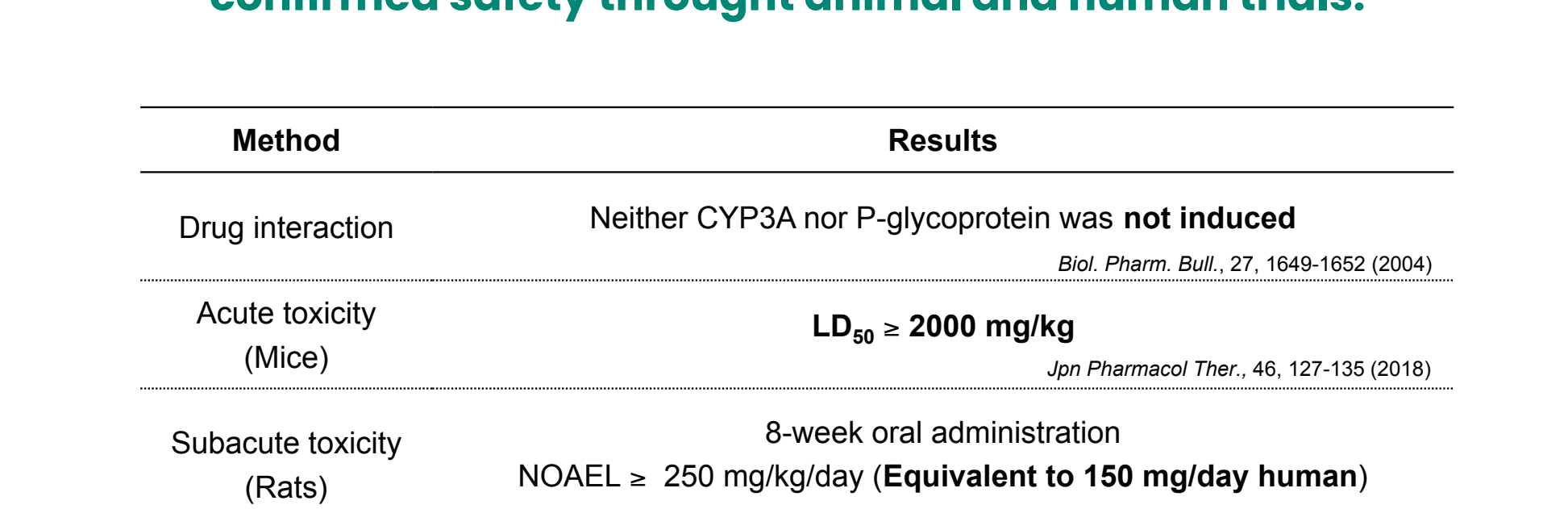
31.6% OF ADULTS IN THE USA, 18 YEARS AND OVER, GET INSUFFICIENT SLEEP. [c]

[b] <http://healthysleep.med.harvard.edu/healthy/science/what/sleep-patterns-rem-nrem>

[c] <https://www.cdc.gov/nchs/fastats/sleep-health.htm>

## Clinical Trial 4: Sleep Quality Improvement

Design	: Placebo-controlled trial
Subjects	: People who have subjective dissatisfaction of sleep quality
Dose	: 50 mg VENETRON®/day (2 capsules/day)
Intake	: 1 week, 30 min before going to bed
Evaluation	: Electroencephalogram (EEG) to observe sleep stage)



★It is suggested the improvement of sleep quality  
by VENETRON® ingestion

J. Nutr. Sci. Vitaminol., 61(2), 182-187 (2015)

## Safety

VENETRON® has acquired self-affirmed GRAS certification, and confirmed safety through animal and human trials.

Method	Results
Drug interaction	Neither CYP3A nor P-glycoprotein was not induced <i>Biol. Pharm. Bull.</i> , 27, 1649-1652 (2004)
Acute toxicity (Mice)	LD <sub>50</sub> ≥ 2000 mg/kg <i>Jpn Pharmacol Ther.</i> , 46, 127-135 (2018)
Subacute toxicity (Rats)	8-week oral administration NOAEL ≥ 250 mg/kg/day (Equivalent to 150 mg/day human) <i>Jpn Pharmacol Ther.</i> , 46, 127-135 (2018)
Clinical trial	12 week trial (50 mg/day for 8 weeks & 150 mg/day for 4 weeks) No severe adverse effects were observed <i>Journal of Nutritional Food</i> , 12, 1-9 (2009)
	A review paper of the safety of VENETRON® has been published <i>Jpn Pharmacol Ther.</i> , 46, 127-135 (2018)

## Safety

Venetron is an extract of *Apocynum venetum*, an herb that has been used for centuries in Traditional Chinese Medicine and is also consumed as food and tea. Studies on *Apocynum venetum* have confirmed its safety.[5],[6] Venetron's action is based on well-known and safe flavonoid phytochemicals, and it has not demonstrated any significant adverse effects in clinical trials.

## US/Japan Patent

- Self-affirmed GRAS certified
- JIHS health food raw materials GMP certified
- Kosher certified
- HACCP certified
- Patent



### US Patent



- *Apocynum venetum* extract for use as mood support  
US 6,737,085 B2

Usage for sleep improvement  
15/938 618

### Japan Patent



- Mood Support  
JP 4629933

Usage for sleep improvement  
JP 2017-193127

[1] Butterweck V, et al. Pharmacol Biochem Behav. 2003 Jun;75(3):557-64.

[2] [3] Yoto A, et al. Japanese Journal of Physiological Anthropology. 2009Aug;14(3):151-5.

[4] GKX Inc. Unpublished study.

[5] Xie W, et al. J Ethnopharmacology. 2012 May 7;141(1):1-8.

[6] Yang J, et al. Journal of Nutritional Food. 2009;12:1-9.

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