

Pharma GABA



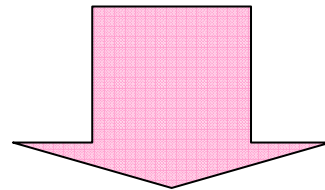
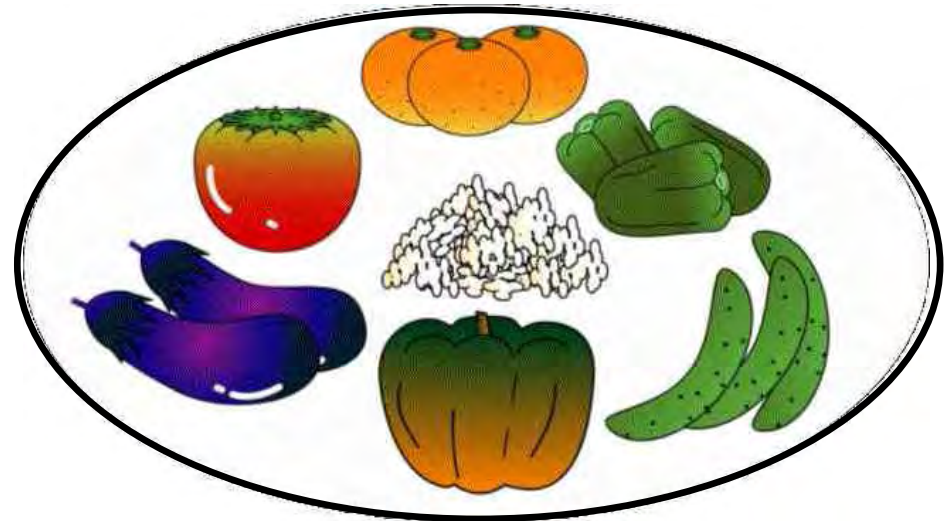
PharmaGABA™

What's GABA?

a kind of amino acids widely exist in nature world, including human body.

What is the function for human?

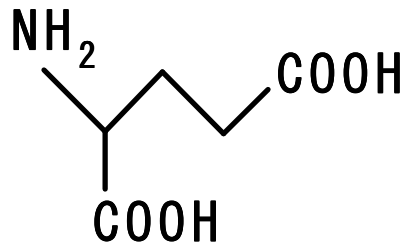
Exists as neurotransmitter and stimulates parasympathetic nerve system.



**Relax, anti-stress,
concentration, sleep effect**

GABA

(Gamma Amino Butyric Acid)

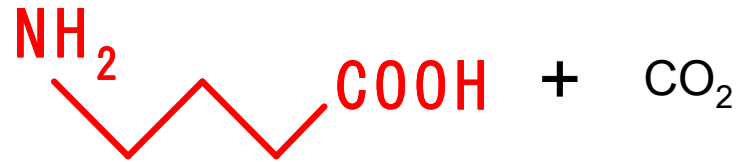


Glutamic acid



GAD

(Glutamic Acid
Decarboxylase)

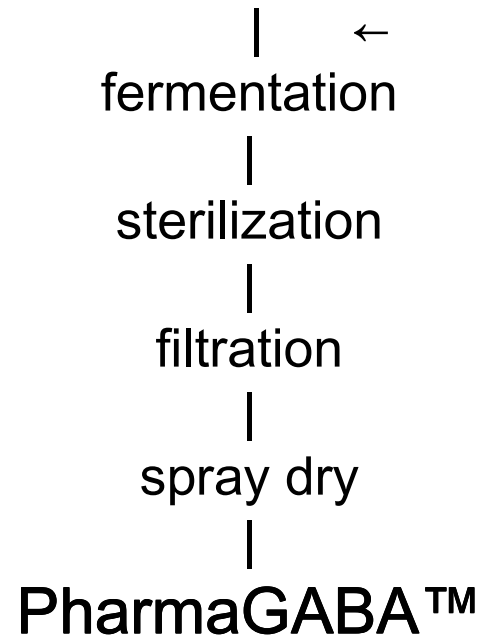


GABA

- Molecular Weight: 103.12
- Melting Point: 195°C
- CAS No.: 56-12-2
- White to light yellow solid at normal temp. and atom.

【Production Method of PharmaGABA™】

Medium (Glutamic acid etc)



Lactobacillus hilgardii K-3



Lactobacillus hilgardii K-3

Relax & Comfort effect
with PharmaGABA™

【Measurement of Relaxation by EEG (electroencephalogram)】



human brain waves

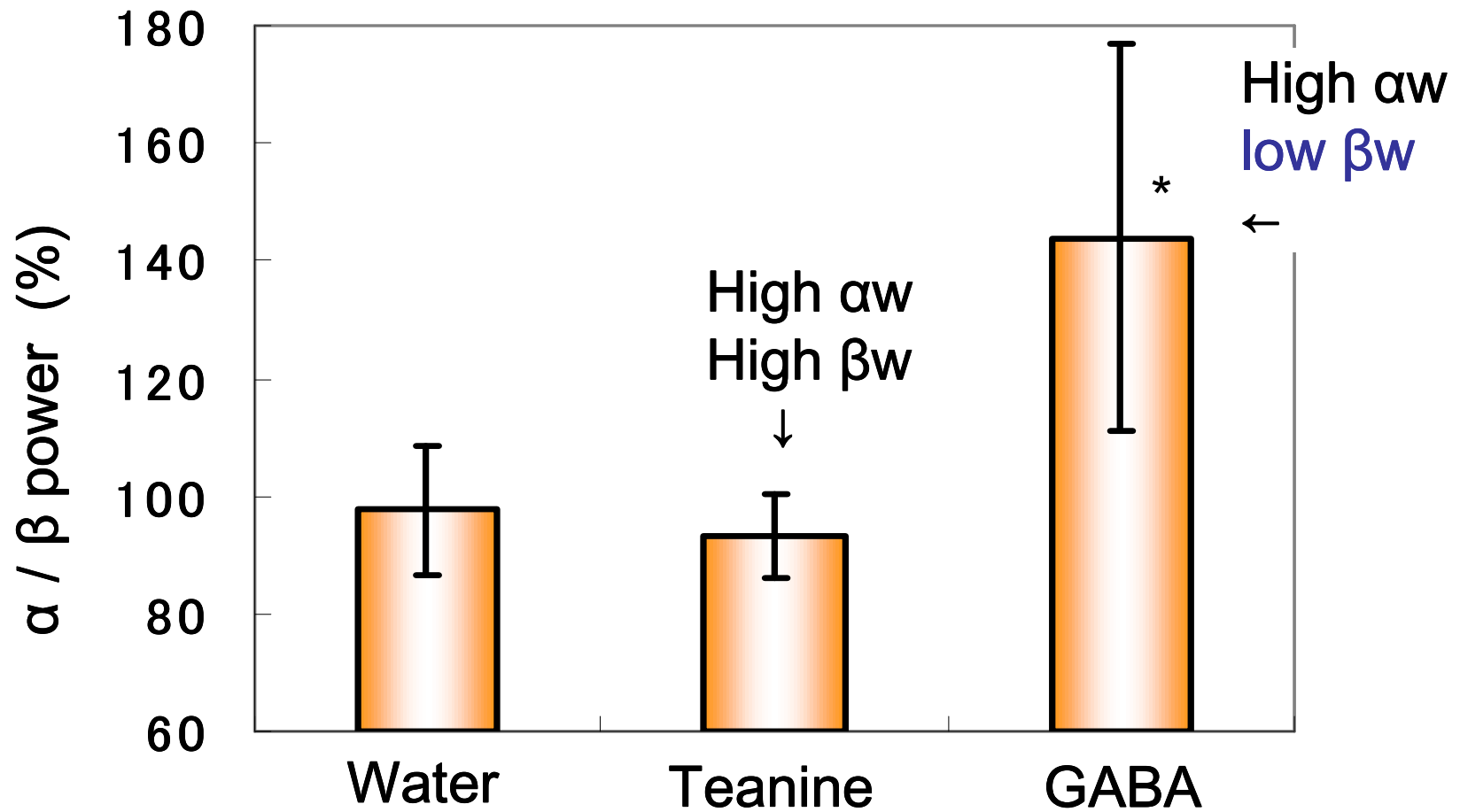
δ wave (less than 4Hz) : sleeping

θ wave (4 ~ 8Hz) : half-asleep

α wave (8Hz ~ 13Hz) : calm, relax

β wave (more than 13Hz) : tension

【Effect of GABA on human brain waves – α wave/ β wave】



GABA or teanine ; 100mg

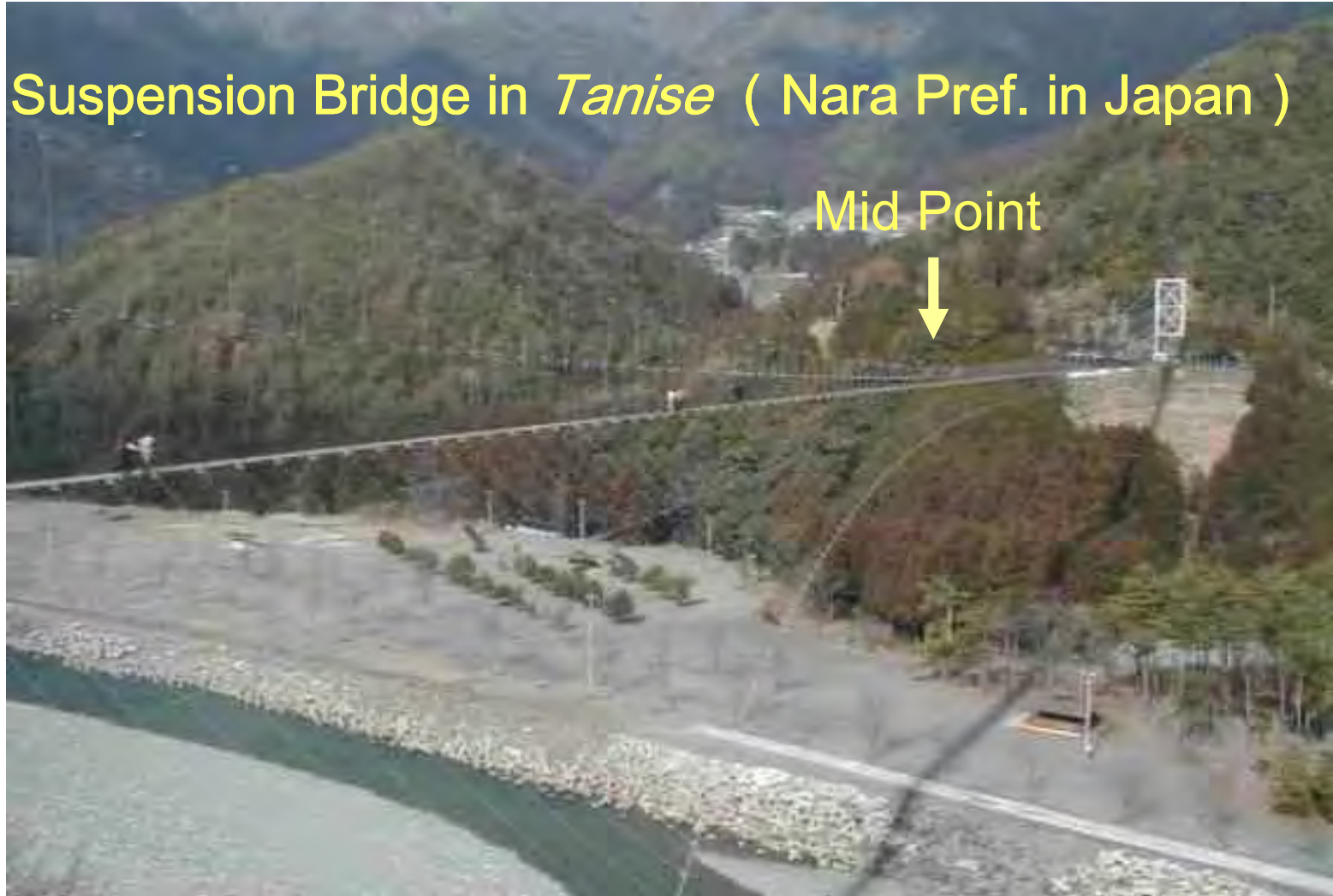
Brain waves were measured for 1 hr after GABA-intake

* $p < 0.05$

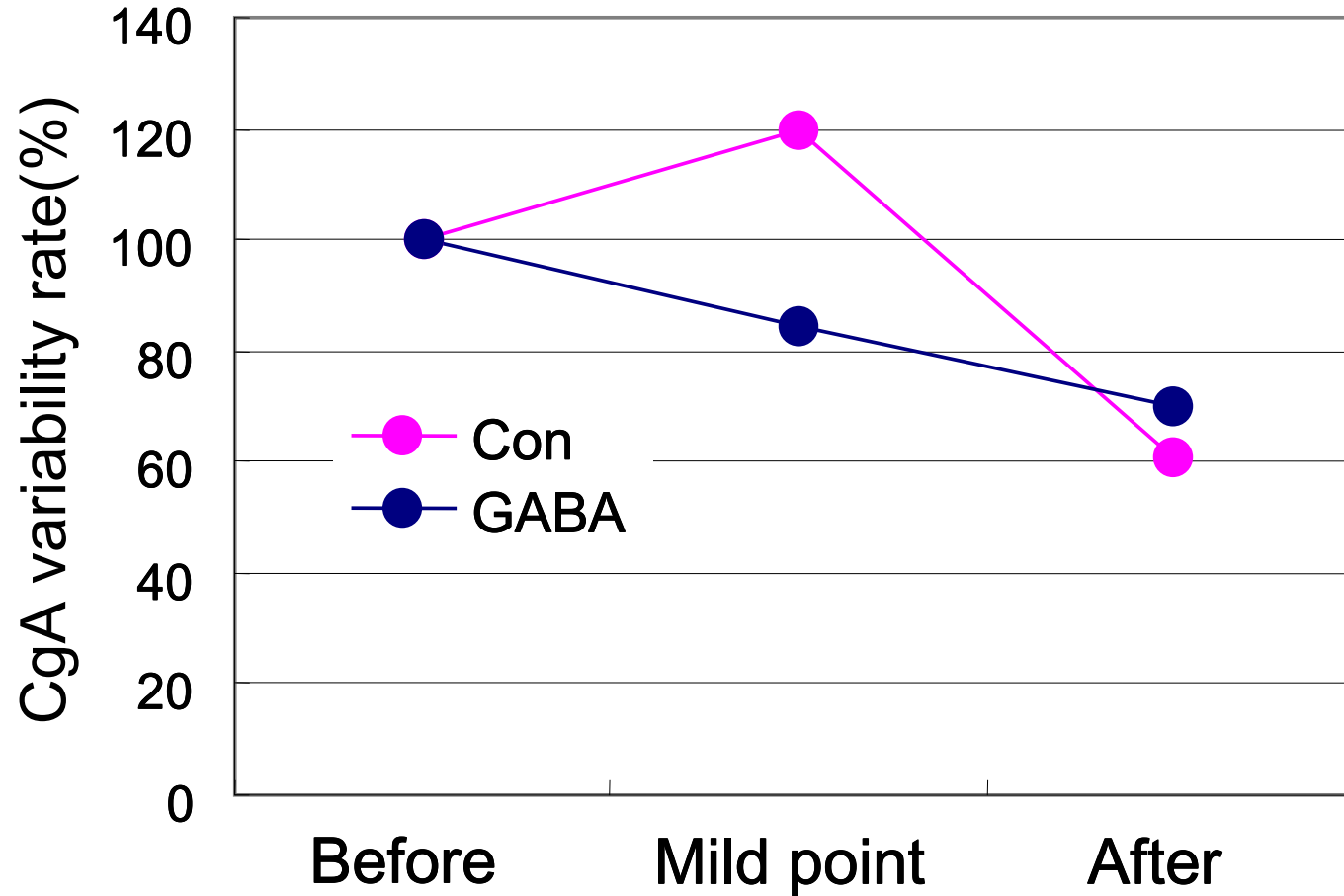
【 Loading Stress by height 】

Suspension Bridge in *Tanise* (Nara Pref. in Japan)

Mid Point



【Result - Chromogranin A (※)】



※Chromogranin A (CgA): Mental stress marker in saliva
(Toyota Central Lab. R&D Review Vol . 34 No.3 (1999))

【First GABA Product from The Top Confectionary Maker】

ストレス社会で闘うあなたに。



PharmaGABA™'s effect on sleep

【Effect on sleep before going bed】

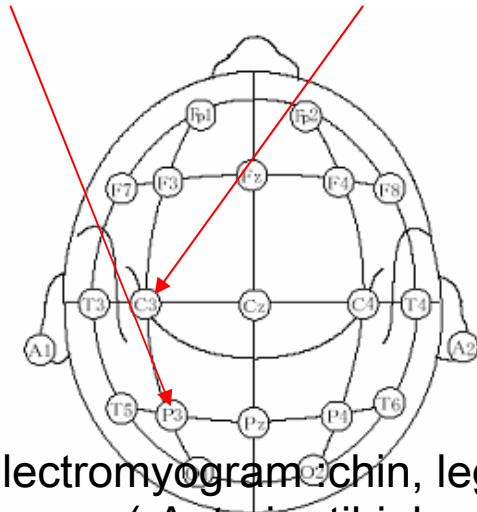
【Subject】

5 healthy males in age 20s

【Measure】

1. Brain wave :

P3 C3 Left side
(Left side of occipital) (of head-top)



2. Electromyogram of chin, legs
(Anterior tibial muscle)
3. Electro-oculogram
4. Electrocardiogram
5. Rectal temperature



Brain wave, electromyogram,
electrooculogram



Electromyogram



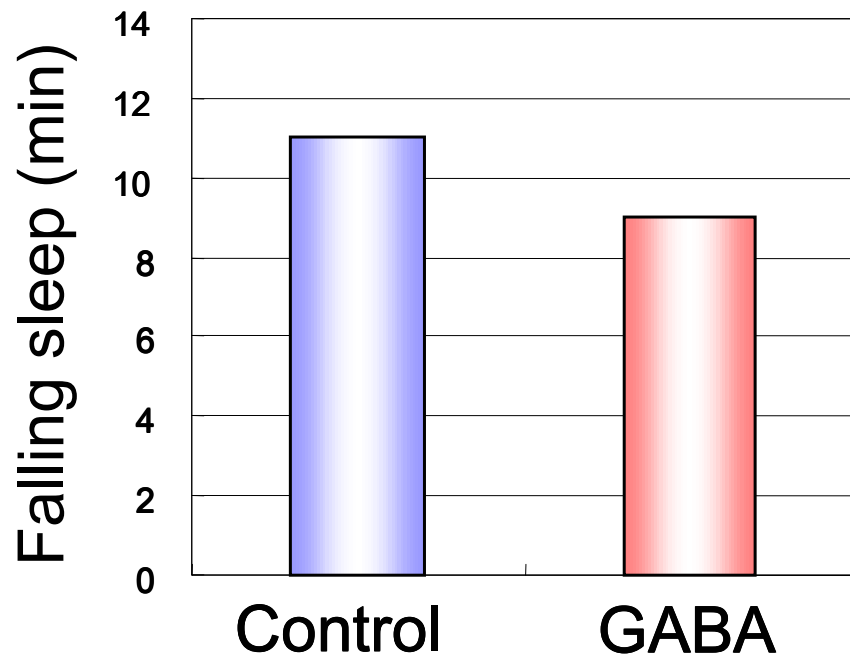
Measuring

Electrocardiogram

【Required time to fall asleep and Length of deep sleep】

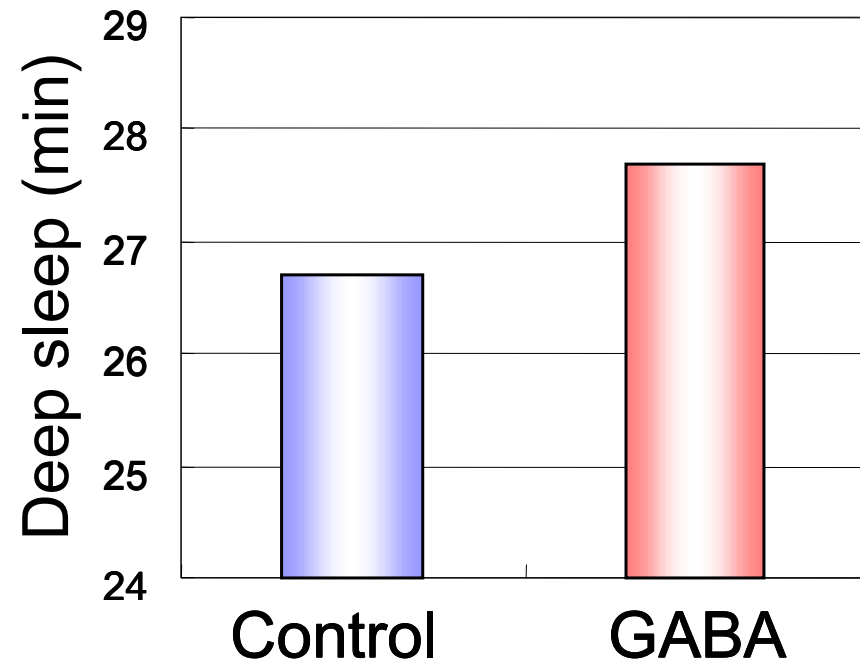
Falling sleep

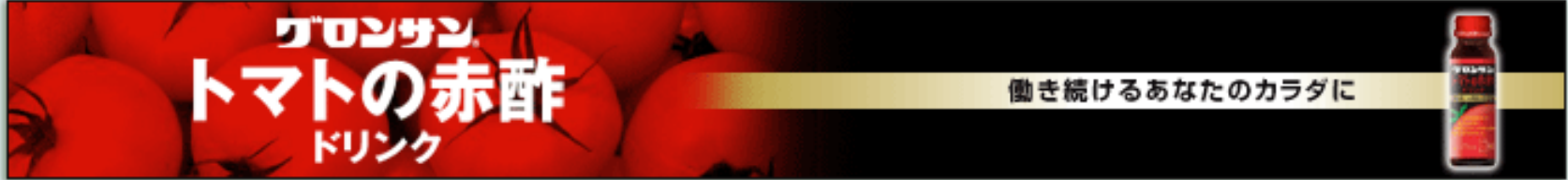
⇒ measured time before falling (deep) sleep



Deep sleep in 60 mints sleep

⇒ (deep, quality) sleeping time





LION
健美創研
KENBISOUREN

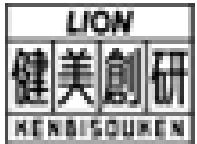
すっきり、爽快
グッスミン

▶ スペシャルサイトはこちら

グッスミン

すっきり、爽快
グッスミン

快活生活サポート飲料
● トマト酢・GABA
クエン酸・ビタミンC・ポリフェノール



グッスミン



PharmaGABA™'s
effect on mental focus

【Uchida Kraepelin (speed calculation) test】

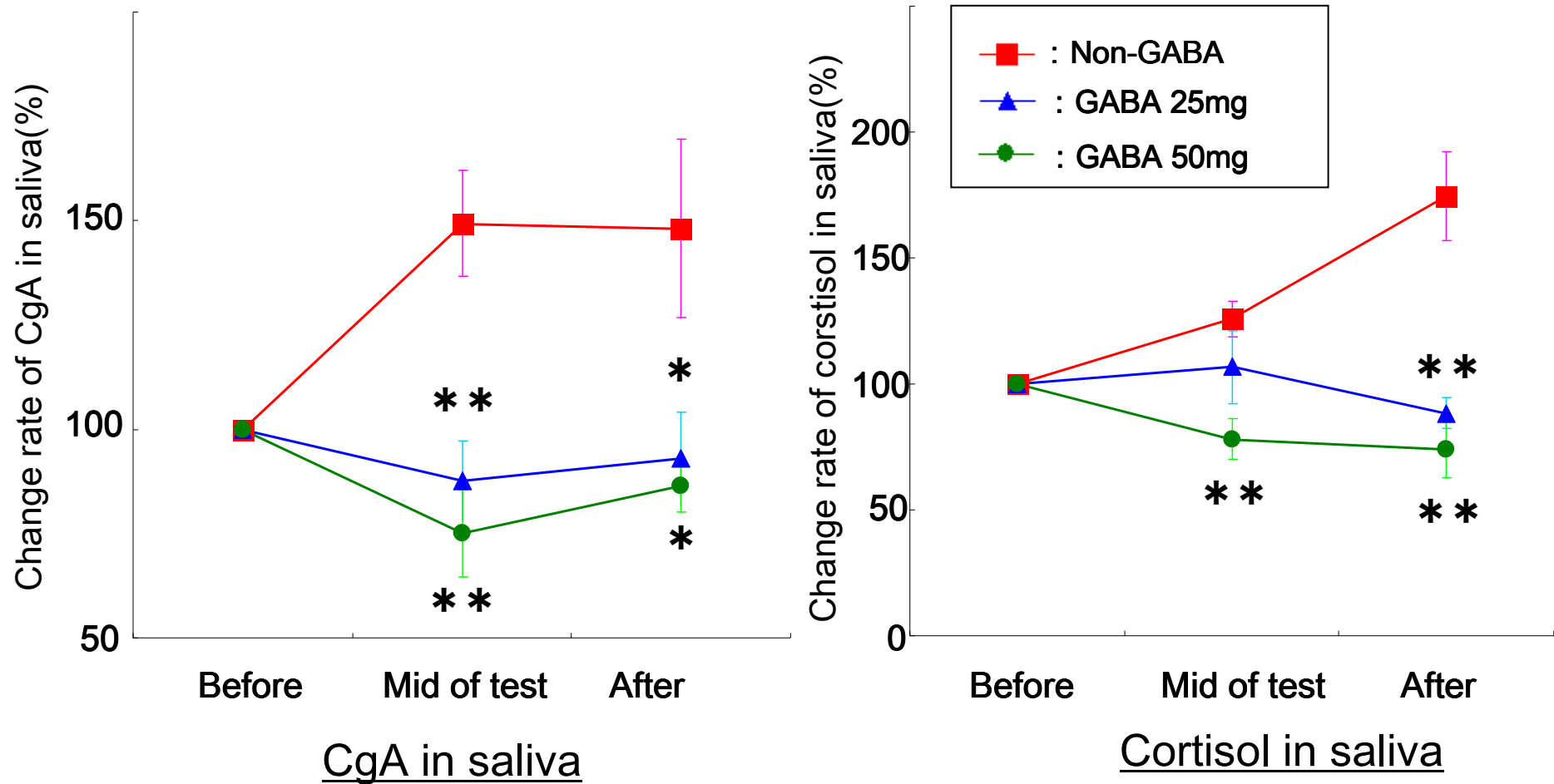


内田クラペリン検査[®]
標準型 検査用紙

著者：内田勇三郎 © 著作権登録番号5530号の1
本検査用紙の一部または全部を無断で転載、複製することを禁じます。

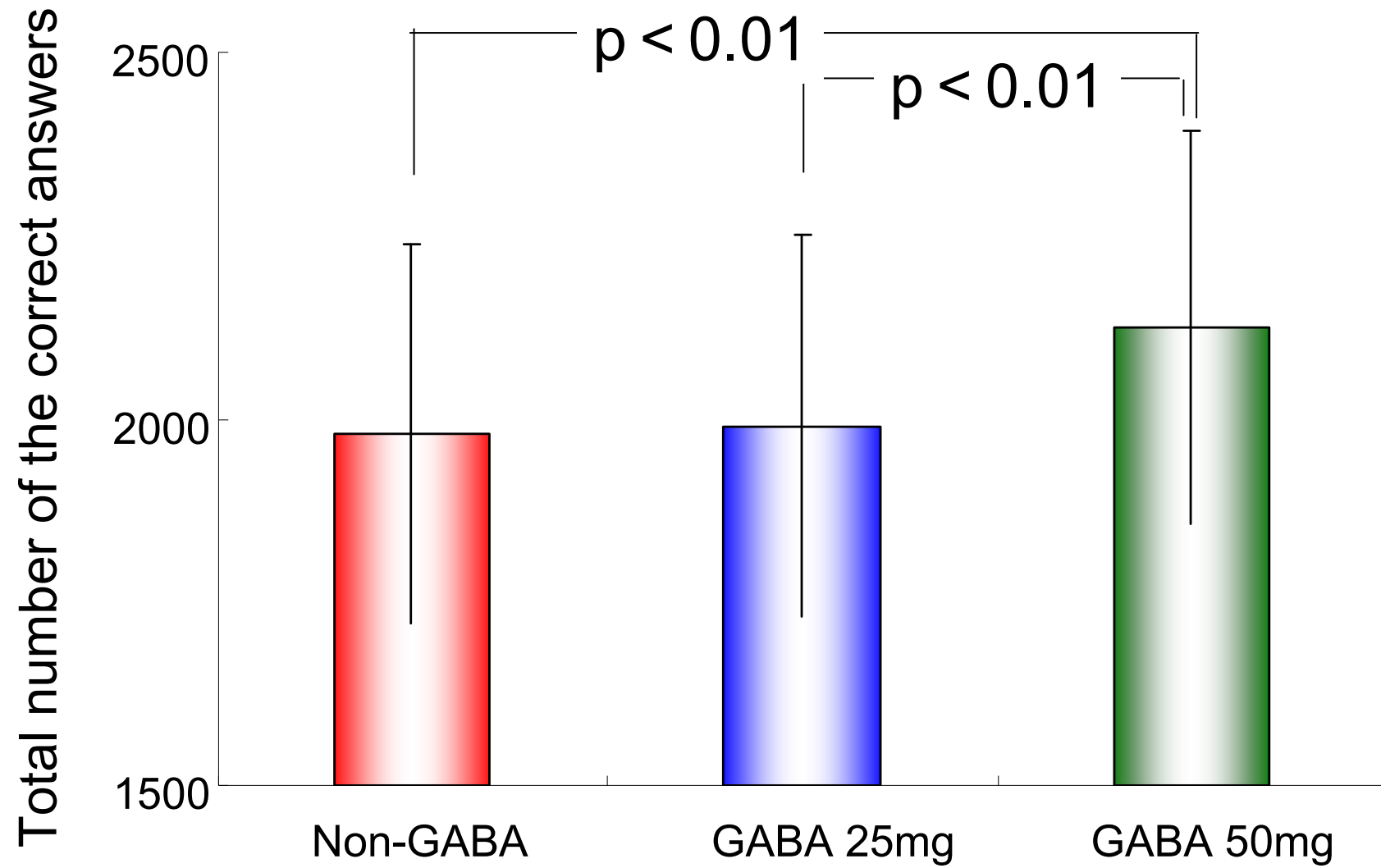
7 9 4 6 3 8 6 7 5 9 8 5 6 3 9 7 4 8 9
3 8 5 9 8 7 6 5 4 9 6 8 3 7 9 8 4 5 8
8 7 4 9 8 4 7 3 8 5 9 8 5 6 7 3 6 9 4
4 7 8 6 5 3 9 5 8 4 5 6 7 9 8 4 6 5 7
8 3 5 9 4 8 7 5 3 8 4 5 8 7 6 8 9 7 5

【Fatigue Release with GABA】



* : vs non-added p < 0.05
 ** : vs non-added p < 0.01

【Number of Correct Answers】



“Sharp Charge” from AQUARIUS

- Sharpen you in business –
- Launched in June, 2007



2000ml



1000ml



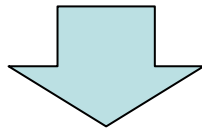
500ml



【Why PharmaGABA™?】

- **Sole GABA ingredient that acquired GRAS (Self-Affirmed) status.**
- 80% share of GABA market in Japan
- The share keeps growing
- Excellent/reliable evidence and PR activity
- 100% natural GABA by fermentation with good quality.

**PharmaGABA™
acquired
Self-Affirmed GRAS
on May 18, 2007**



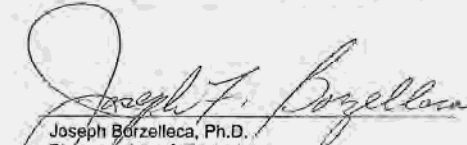
**Opened the door
for food
applications!**

CONCLUSION

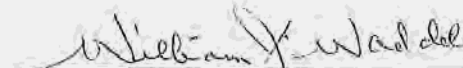
We, the Expert Panel, have, independently and collectively, critically evaluated the data and information summarized above and conclude that the proposed uses of PHARMA GABA, produced consistent with current Good Manufacturing Practice (cGMP) and meeting appropriate food grade specifications, are safe.

We further conclude that the proposed uses of PHARMA GABA are Generally Recognized as Safe (GRAS) based on scientific procedures.


It is our opinion that other qualified experts would concur with these conclusions.


Joseph Borzelleca, Ph.D.
Pharmacology & Toxicology
Medical College of Virginia

25 October 2007
Date


William Waddell, M.D.
Department of Pharmacology and Toxicology
University of Louisville School of Medicine

29 October 2007
Date


Stephen Taylor, Ph.D.
Institute of Agriculture and Natural Resources
University of Nebraska

7 November 2007
Date

on August 11, 2008

FDA gave PharmaGABA™

GRAS Notice No.GRN 000257

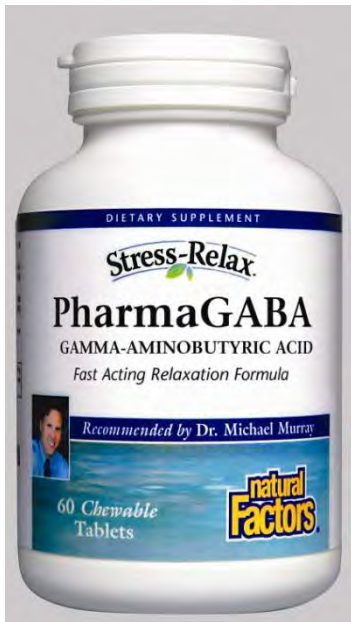
Products on the Market



Products on the Market



Products on the Market



**natural
Factors**



QUEST



Yakult
WELCOME TO THE OFFICIAL SITE



SHISEIDO