

Korean

# Introduction of Korean Traditional Knowledge Portal (KTKP)

**March, 2011**

**Korean Intellectual Property Office**



## □ Background of Korean Traditional Knowledge

1. Korean TK history is about 5,000 years long.

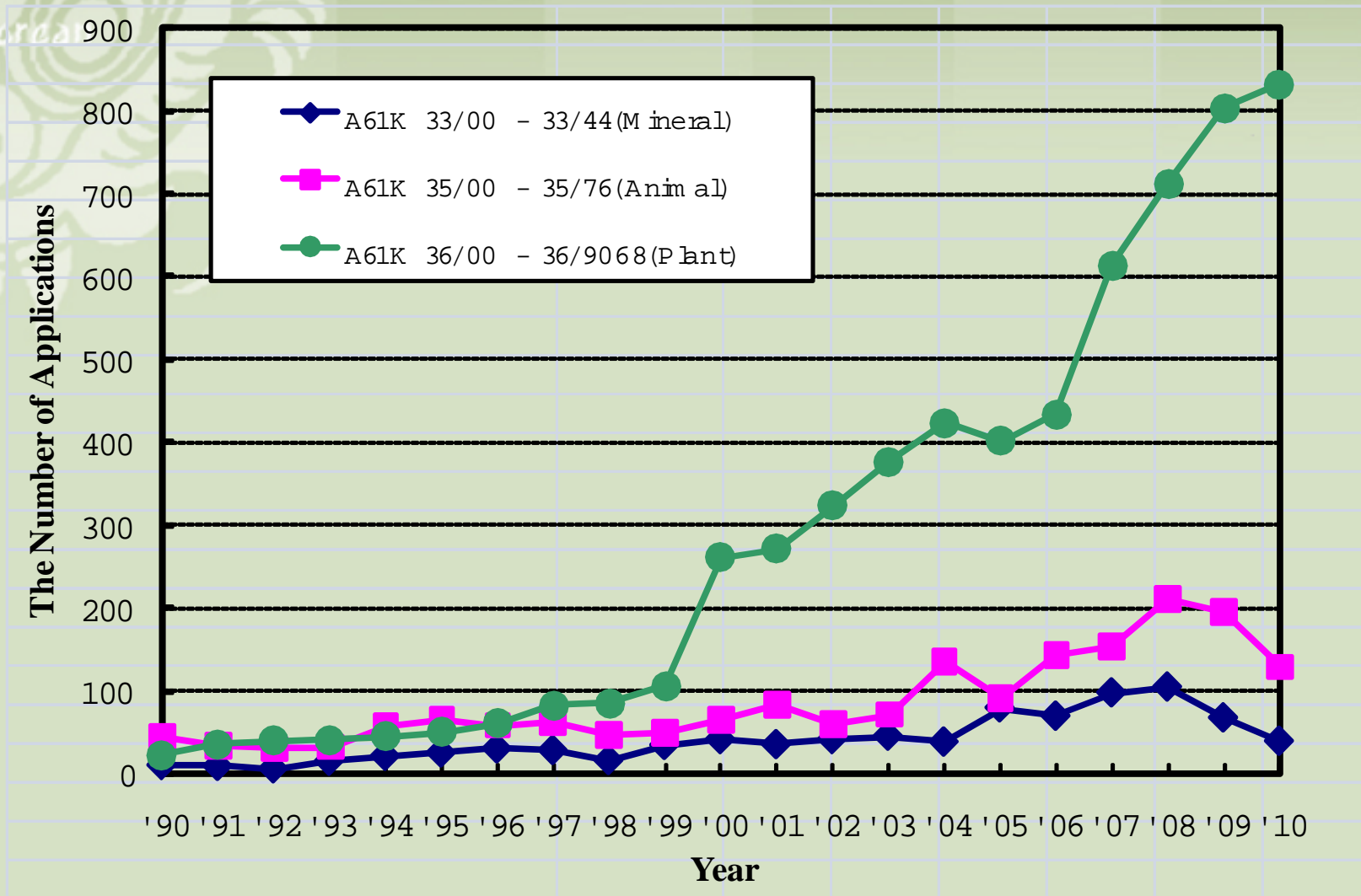
- mountainous peninsula extending south-southeast
- about 30,000 species of animal and plant life.



- The indigenous medical traditions in the area have made extensive use of about 5,100 plants in history.



## 2. Application trend for Oriental Medicine.



- The first new drug as a natural product in Korea



Joins

**Ingredients:** self-heal, tricosanthes root, clematis root

**What it's used for:** as an anti-inflammatory to relieve joint pains caused by arthritis

**Herbal Healing**  
 In 1995, Ryoo launched the Joins project to develop a new way of treating arthritis, which afflicts 10% of the world's over-60 population. Ryoo decided to submit traditional Korean herbal remedies to stringent tests based on Western scientific methods. "Western medicine can't completely cure arthritis because they don't know its exact cause," he says. Ryoo began by analyzing the causes of arthritis using traditional methods. His studies showed there were three major causes: "wind," "coldness" and "wetness." In traditional medical practice, these conditions, along with rheumatoid arthritis, were considered the most common in traditional medical practice. Ryoo then scoured the 600 herbs used for centuries in Korea, performing a long screening process that included tests on animals, and finally narrowed the field to three herbs. Ryoo combined them into a yellow pill the size of an aspirin and christened it Joins.

## Anti-arthritis Drug (Joins)

### Joins

#### Joins®

Joins is a new anti-arthritis drug developed by the Life Science R&D Center of SK chemical.

Joins has a strong anti-inflammatory effect on the affected region.

Joins inhibits the degradation of proteoglycan and attenuates the osteoarthritis-like change induced by collagenase and free radicals. So, Joins has a prophylactic effect against the progression of osteoarthritis. Joins has fewer adverse effects than existing NSAIDs and so can be prescribed to older patients over a long period.

#### ::Description

Osteoarthritis (degenerative arthritis)  
 (Expected indication and effect)  
 Rheumatoid arthritis

#### ::Dosage & Administration

One tablet (200mg as active ingredients) 3 times daily.





#### ::Characteristics

1. Joins tab. inhibits cartilage degradation.
2. The anti-inflammatory and analgesic effects of Joins tab. are equivalent to Diclofenac retard tab.
3. Joins tab. rarely causes gastrointestinal trouble
4. Joins tab. is a new drug developed in Korea



□ Applications for Oriental Medicine Cosmetics

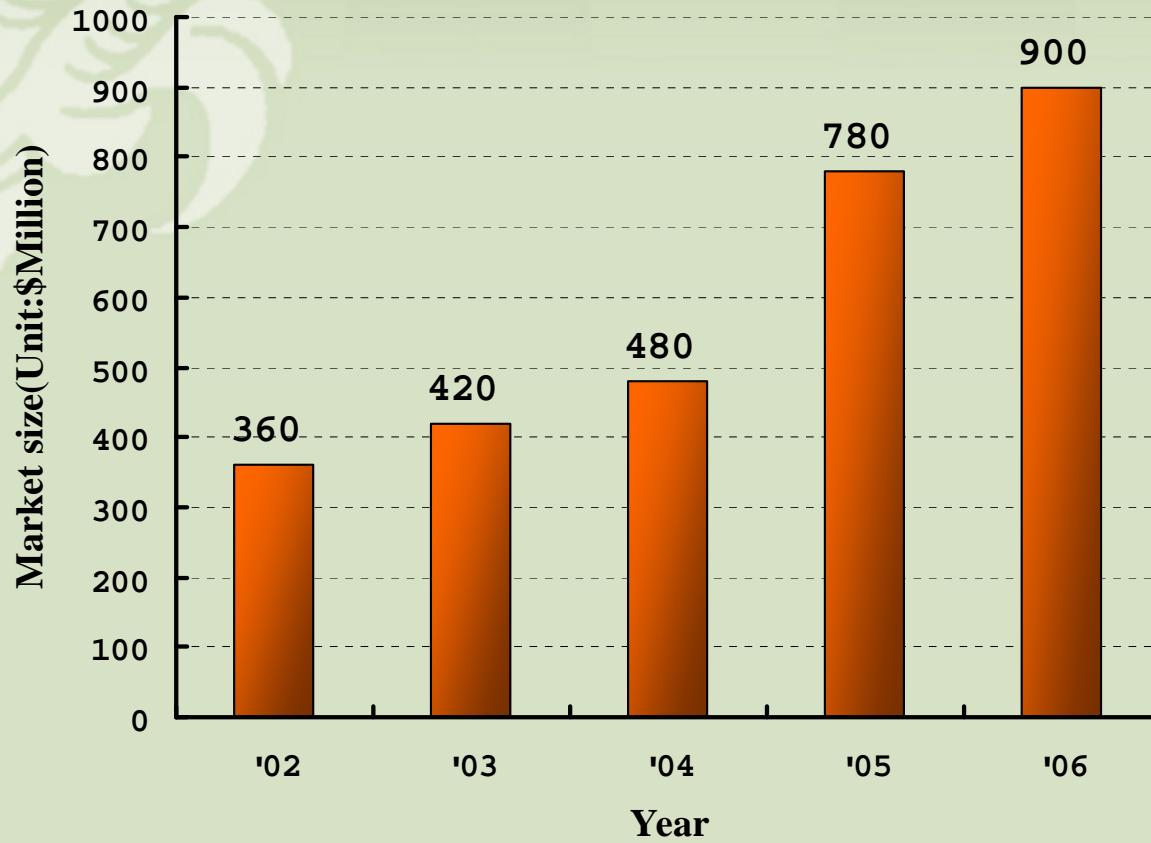
Korean

| Company           | Cosmetics   | Ingredients   | Application Number |
|-------------------|---|---|--------------------|
| Amore pacific     |    | <ul style="list-style-type: none"> <li>• Polygonatum officinale</li> <li>• Paeonia lactiflora</li> <li>• Pehmannia glutinosa</li> <li>• Lilium longiflorum</li> </ul>                 | 1997-0013647       |
| Hankook cosmetics |    | <ul style="list-style-type: none"> <li>• Wild ginseng adventitious roots</li> </ul>   | 2001-0039685       |
| Rosee             |   | <ul style="list-style-type: none"> <li>• Paecilomyces japonica</li> <li>• Acanthopanax senticosus</li> <li>• Ganoderam Lucidum,</li> <li>• Deer antlers</li> <li>• Ginseng</li> </ul> | 2003-0039770       |
| Somang cosmetics  |  | <ul style="list-style-type: none"> <li>• Red ginseng</li> </ul>   | 1998-0058839       |



# Market trend of Cosmetics using Oriental Medicine

Korean



Adclick market report (December, 1, 2006)



□ Application of Traditional preservation method of Kimchi in winter

Korean



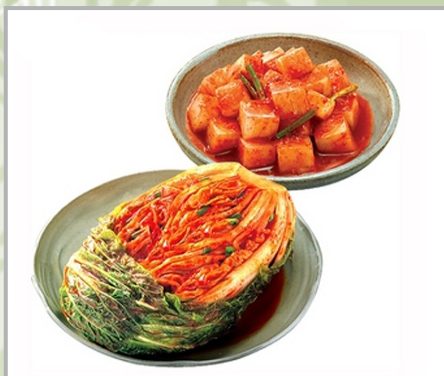
Traditional stone jar for preservation of Kimchi at Beop-ju temple, in winter.



Refrigerator for Preservation of Kimchi throughout the year



□ Patent dispute case of Korean Traditional Knowledge



Kimchi



sauerkraut

**United States Patent** [19]  
Hsu et al.

[11] **Patent Number:** 4,490,396  
[45] **Date of Patent:** \* Dec. 25, 1984

[54] **PREPARATION OF A FLAVORED SOLID VEGETABLE AND VEGETABLE JUICE UTILIZING HYDROLYSED PROTEIN**

[58] **Field of Search** ..... 426/49, 51, 52, 8, 481, 426/533, 615, 650

[75] **Inventors:** Jau Y. Hsu; Elaine R. Wedral, both of Brookfield, Conn.; William J. Klinker, Blue Island, Ill.

[56] **References Cited**  
U.S. PATENT DOCUMENTS  
3,840,674 10/1974 Mosher ..... 426/533  
4,242,361 12/1980 Christ et al. .... 426/49

[73] **Assignee:** Societe d'Assistance Technique pour Produits Nestle S. A., Lausanne, Switzerland

**OTHER PUBLICATIONS**  
Desrosier, N. W. Elements of Food Technology; 1977 Avi Publ. Co. pp. 246-250.  
Lopez, A., A Complete Course in Canning, 1970, The Canning Trade, Inc., pp. 241-246.

[\*] **Notice:** The portion of the term of this patent subsequent to Sep. 8, 1999 has been disclaimed.

*Primary Examiner*—Robert Yoncoskie  
*Assistant Examiner*—Marianne S. Minnick  
*Attorney, Agent, or Firm*—Vogt & O'Donnell

[21] **Appl. No.:** 538,792  
[22] **Filed:** Oct. 4, 1983

[57] **ABSTRACT**  
A process for the production of flavored vegetables which comprises fermenting a vegetable in the presence of a powdered hydrolysed protein wherein the total amount of salt present in the process is from 1.0% to 4.5% by weight based on the weight of the vegetable.

**Related U.S. Application Data**

[63] Continuation-in-part of Ser. No. 435,074, Oct. 18, 1982, Pat. No. 4,428,968.  
[51] **Int. Cl.<sup>3</sup>** ..... A23L 1/218  
[52] **U.S. Cl.** ..... 426/49; 426/8; 426/51; 426/650

**3 Claims, No Drawings**

*“Nestle’s preparation method of flavored vegetable was canceled only in Korea, because of similarity with Kimchi ”*



## □ Korean Journal of Traditional Knowledge

1. Korean journal of Traditional Knowledge is fully digitized.  
Therefore, it can be easily provided to the International Authorities.
  - Articles related to TK selected from 47 kinds of main Journals.
  - Provided under the agreement on the right of on-line transfer.

| Field             | Number of Journals | Coverage  | Format |
|-------------------|--------------------|-----------|--------|
| Oriental Medicine | 28                 | 1947-2010 | PDF    |
| Sitology          | 7                  |           |        |
| Pharmacy          | 7                  |           |        |
| Life science      | 5                  |           |        |
| Total             | 47                 |           |        |



□ Contents of Article DB

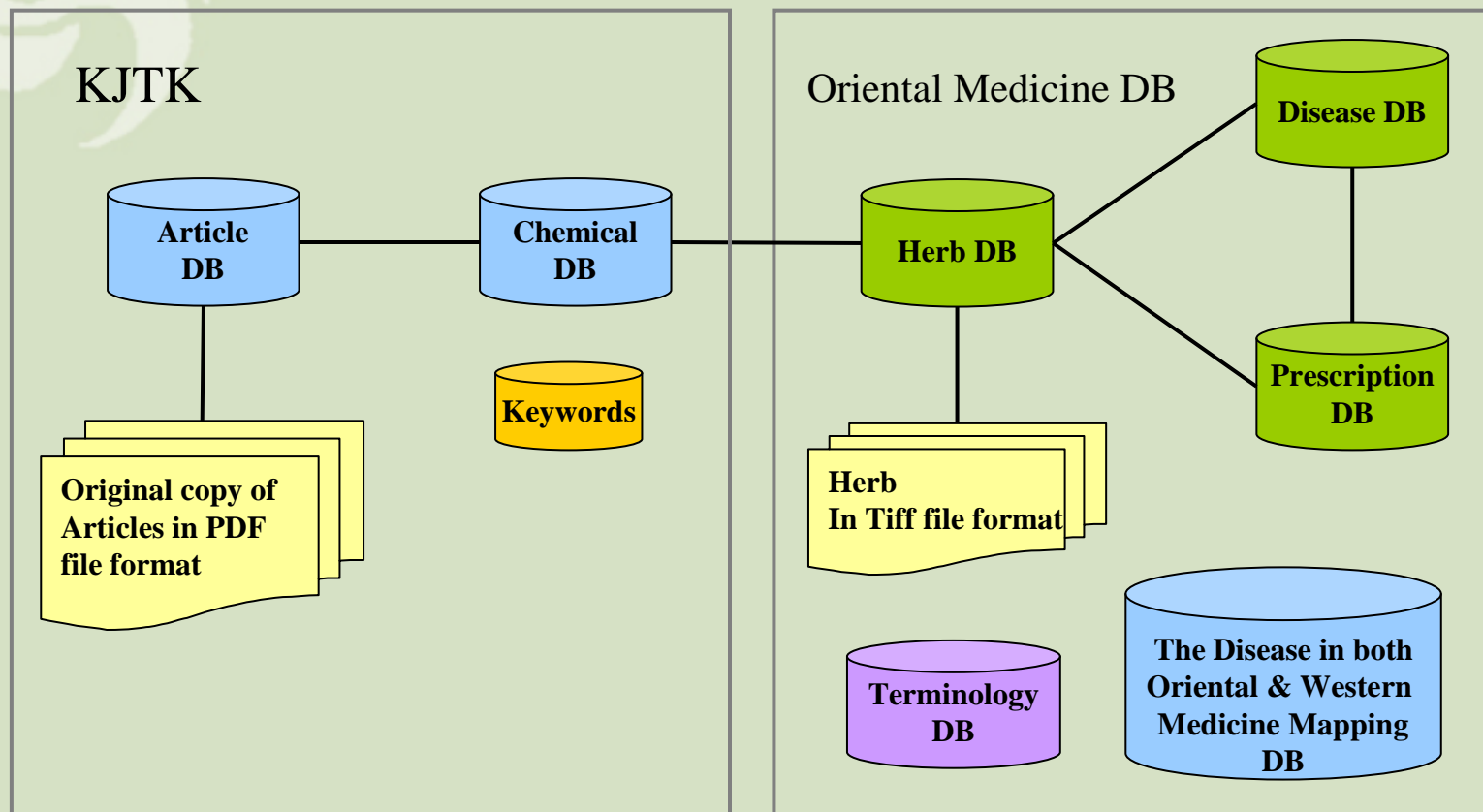
| Contents   | Note   |
|--|--|
| <b>Bibliographic data</b>                                      | <ul style="list-style-type: none"><li>▪ Bibliographic data composed with title, author, author affiliation, journal, volume, issue, pages etc.</li></ul>   |
| <b>English abstract &amp; summary</b>                          | <ul style="list-style-type: none"><li>▪ If there is a English abstract of the author, used as it is.</li><li>▪ If there is no English abstract of the author then make a summary based on the original text.</li></ul> |
| <b>Full-text article</b>                                       | <ul style="list-style-type: none"><li>▪ Using PDF file format for the original articles</li></ul>  |
| <b>IPC(International Patent Classification) &amp; Keywords</b> | <ul style="list-style-type: none"><li>▪ Patent analysis information.</li></ul>   |

“All Bibliographic info., title, abstract are provided in Korean and English with searchable format.”



## Traditional Oriental Medicine DB

- Article DB is linked to Traditional Oriental Medicine DB.



## □ Traditional Life DB

| Field                | Contents   |
|----------------------|--|
| <b>Agriculture</b>   | <ul style="list-style-type: none"><li>▪ Agricultural technique used in traditional society</li><li>▪ Description for traditional cultivating method and evaluation notes for the expected value</li><li>▪ To link scholarly articles, patents related to agriculture</li></ul> |
| <b>Art of Living</b> | <ul style="list-style-type: none"><li>▪ Traditional art of living related to food, clothing and shelter</li><li>▪ Explanations, methods and notes regarding natural dyeing and traditional life and culture</li></ul>  |
| <b>Food</b>          | <ul style="list-style-type: none"><li>▪ Korean traditional food verified by ancient literature</li><li>▪ Classification, ingredients, recipes of traditional food and ancient literature as a reference</li></ul>  |



# Korean Traditional Knowledge Portal

Korean

- Provides free internet search service.
- KJTK(Scholarly Article), Traditional Oriental Medicine, Agricultural life
- <http://www.koreantk.com>

The screenshot shows the homepage of the Korean Traditional Knowledge Portal (KTKP). At the top, there is a navigation bar with links for HOME, LOGIN, JOIN US, KIPO.60.KR, and KOREAN. Below this is a search bar and a menu with categories like KJTK, TKMed, SIMILAR PRESCRIPTION, and COMPOUND. The main content area features a 'Recommended Knowledge' section with an article on 'Saengbani (生翳) : Alumen', which describes its physical properties and solubility. There is also a 'KJTK Introduction' section and a 'KTKP Statistical data' section showing metrics like 23,425 cases for KJTK and 5,506 cases for Herbs.

The screenshot displays the search interface of the KTKP. It features a search bar at the top with a dropdown menu set to '- KTKP WEB'. Below the search bar is a 'KJTK SEARCH' section with a 'FULLTEXT RETRIEVAL' option. The search form includes several input fields: Title, ISSN, Publisher, Author, Name of Journal, Summary, IPC, Compound Name, Writer Keyword, Herb Keyword, Prescription Keyword, Disease Keyword, and Other Keyword. There are also checkboxes for 'Automatic expansion of inquiry' and 'expansion term'. A 'SEARCH' button and a 'CANCEL' button are at the bottom of the form. On the right side, there is a 'KJTK SEARCH INFO&TIP' sidebar with a table explaining search terms and a section for 'What is the full-text search?'.

| Field                | Example             | Explanation   |
|----------------------|---------------------|---|
| Title                | Red & Ginseng       | searches titles that include Red and Ginseng  |
| ISSN                 | 1226-3311           | searches by International Standard Periodical number  |
| Name of an Institute | Korean Food*        | Searches "Korean Food" without rear Part  |
| IPC classifying Code | A61K                | searches by IPC classifying code  |
| Date of Issue        | 20050301 ~ 20051021 | searches KJTK issued between 03/01 in 2005 and 10/21 in 2005                                  |
| Automatic Inquiry    | 2005*               | searches KJTK issued in 2005  |
|                      | expand term         | searches by automatically expanding second name, common name, latin name, and scientific name |
|                      | Keyword             | searches by automatically expanding Keywords  |



- Search example of KJTK in the portal

*Input-keywords*

**1** *Integrated Search Article, herbs, etc.*

**2** *Keywords title, publisher, writer, etc.*

**3** *Tips on queries, operators, etc.*

**What is KJTK(Articles DB) Search?**  
It is a field search that allows the user with detailed information to search within constructed KJTK DB by typing words into corresponding categories. When doing field search, each field applies **AND(&)** operator and **Boolean method** can be used to each field.

| Field                | Example             | explanation   |
|----------------------|---------------------|---|
| Title                | Red & Ginseng       | searches titles that include Red and Ginseng  |
| ISSN                 | 1226-3311           | searches by International Standard Periodical number  |
| Name of an Institute | Korean Food*        | Searches "Korean Food" without rear Part  |
| IPC classifying Code | A61K                | searches by IPC classifying code  |
| Date of Issue        | 20050301 ~ 20051021 | searches KJTK issued between 03/01 in 2005 and 10/21 in 2005                                  |
|                      | 2005*               | searches KJTK issued in 2005  |
| Automatic inquiry    | expand term         | searches by automatically expanding second name, common name, latin name, and scientific name |
|                      | Keyword             | searches by automatically expanding Keywords  |

**What is the full-text search ?**  
For the full-text search of KJTK(Articles DB), Boolean expression can be used.

- Search example of KJTK in the portal

## Result-List

KTKP KOREAN TRADITIONAL KNOWLEDGE PORTAL

HOME | LOGOUT | MYPAGE | KIP.O.G

- KTKP WEB [SEARCH]

KJTK | HERB | PRESCRIPTION | DISEASE | SIMILAR PRESCRIPTION | COMPOUND | STATISTICS | DICTIONARY | MAPPING DICTIONARY

**KJTK SEARCH**

The 'KJTK' search results about 'Red & Ginseng' [Search again](#)

SELECT contents / Total 243 results sort by order by similarity Display 10

- Studies on Stability for the Quality of Ginseng Products -4. Determination of Sorption Properties and Optimum Moisture Contents in Red Ginseng, Red Ginseng Powder and Red Ginseng Powder Tablet-**  
 Journal of the Korean Society of Food Science and Nutrition(pp.247-250) , 1984-08-31 , Abstract(see abstract)
- Comparative Study of Red Ginseng and White Ginseng (I) -Effect of Red and White Ginseng on the growth of Broiler Chicken-**  
 Korean Journal of Pharmacognosy(pp.225-232) , 1976-09-15 , Abstract(see abstract)
- Red-Colored Phenomena and Morphochemical Characteristics of Red-Colored Substances in Ginseng Roots (Panax ginseng C.A. Meyer)**  
 Journal of Ginseng Research(pp.107-112) , 2000-09-30 , Abstract(see abstract)
- The Ergogenic Effects of Red Ginseng and Paeonia radix Mixtures**  
 The Journal of Korean Oriental Medicine(pp.62-73) , 2005-12-30 , Abstract(see abstract)
- Efficacy of Oral Korean Red-ginseng on sCRP and Soreness after Muscle Damage**  
 The Journal of Korean Oriental Medicine(pp.39-45) , 2005-12-30 , Abstract(see abstract)
- Preparation of Red Ginseng Extract Rich in Acidic Polysaccharide from Red Tail Ginseng Marc Produced After Extraction with 70% Ethyl Alcohol**  
 Journal of Ginseng Research(pp.60-64) , 1996-04-30 , Abstract(see abstract)
- Effect of Dry Heat Treatment of Red Ginseng and Red Ginseng Residue on Mycelial Growth and on Induced Tolerance of Fusarium oxysporum to Mercury Chloride**  
 Journal of Ginseng Research(pp.99-104) , 1992-08-31 , Abstract(see abstract)
- Saponin Analysis and Red Ginseng Production using the Simplified Method of Korean Ginseng (Panax ginseng C.A.Meyer)**  
 Korean Journal of Plant Resources(pp.133-138) , 2006-02-28 , Abstract(see abstract)
- Inhibitory Effect of Water- or petroleum Ether-extract from Red Ginseng on Serotonin Release from Human Platelets (Comparative Study Between 6-year and 4-year Old of Red Ginseng)**  
 Journal of Ginseng Research(pp.140-146) , 1998-06-30 , Abstract(see abstract)

**Most Popular Traditional Knowledge TOP10**

- Gaeyotong(芥腰痛)
- Biseok(砒石)
- Gamisipjondaebotang(加味甘司匹宗大藥房)
- Sogal(消渴)
- Gagangamnoeum(加味甘岡安腦丸)
- Baekgalgeun(白葛根)
- Nokgwak(鹿藿)
- Saengjeonwangnyeonhwar(生煎王延緩丸)
- Garnguk(甘菊)
- Soseorinsam(小善人蔘)

**Search History TOP10**

- red ginseng... Paper
- Red & Ginseng... Paper
- Nelumbinis... Search
- ginseng... Search
- red ginseng... Paper
- ginseng... Paper

1 Integrated Search  
Article, herbs, etc.

2 sort by  
Title,  
publication date

3 hyperlink to  
abstract

4 Search History



Search example of KJTK in the portal

Result-Abstract

The detailed information about 'The Ergogenic Effects of Red Ginseng and Paeonia radix Mixtures' Search again

RELATED PAPERS ORIGINAL TEXT

\* It was selected as the preceding document for license investigation.

**Title**  
The Ergogenic Effects of Red Ginseng and Paeonia radix Mixtures

**Public**  
Korean Oriental Medical Society  
(F)Association of Korea Oriental Medicine

**Name of Journal**  
The Journal of Korean Oriental Medicine  
(F)The Journal of Korean Oriental Medicine Society

**Summary**  
Objectives : This study was designed to identify the ergogenic effects of Red Ginseng and Paeonia radix mixtures to rats and exhaustion by treadmill running. Results : The treatment of Red Ginseng and Paeonia radix mixtures on the 5-HT synthesis and the TPH expression in the dorsal raphe was observed at the dose of 200 mg/kg and the optimal ratio for the maximum efficacy was 50:50. Under normal conditions (not exercise), long-term treatment of Red Ginseng and Paeonia radix mixtures did not affect the 5-HT synthesis and the TPH expression during exercise is a possible ergogenic mechanism of these mixtures. Conclusions : Red Ginseng and Paeonia radix mixtures Reduce exercise-induced fatigue, and have the effect of acting as ergogenic aids on the time to exhaustion by treadmill exercise and on 5-HT synthesis and TPH expression.

**ISSN**  
1010-0695

**Volume Issue**  
Vol.26 No.4

**Page**  
62-73

**Date of Issue**  
2005-12-30 (YYYY-MM-DD)

**Publishing country**  
KOREA

**Publishing Organization**  
Korean Oriental Medical Society

**Writer**  
Cho, Tae-Young, Song, Yun-Kyung, Lim, Hyung-Ho,

**Organization**  
Department of Oriental Rehabilitation Medicine, College of Oriental Medicine, Kyungwon University, Department of Oriental Rehabilitation Medicine, College of Oriental Medicine, Kyungwon University, Department of Oriental Rehabilitation Medicine, College of Oriental Medicine, Kyungwon University,

**Used language**  
KOREAN

**Writer keyword**  
Ergogenic effects, Red Ginseng, Paeonia radix, 5-hydroxytryptamine, Tryptophan hydroxylase,

**IPC**  
A61K 36/258, A61K 36/65, A61P 3/00

**Compound Name (Total 1 results)**  
5-Hydroxytryptamine

**Analytical keyword**  
fatigue, Red Ginseng, Ginseng Radix, Panax Ginseng C.A. Mey (=Panax schinseng), Paeonia Radix, Paeonia lactiflora Pallas,

**Other keyword**  
5-hydroxytryptamine, Tryptophan hydroxylase, TPH-expression, ergogenic aid

**Most Popular Traditional Knowledge TOP10**

- 1 Gaeyotong (防風痛)
- 2 Biseok (砒石)
- 3 Gamisipjeondaebotang (加味
- 4 Sogal (蘇合)
- 5 Gagangamnoeum (加減甘露
- 6 Baekgalgeun (白朮葛)
- 7 ...
- 8 ...
- 9 ...
- 10 ...

**History TOP10**

- 1 red ginseng... Paper
- 2 Red & Gins... Paper
- 3 Nelumbinis... Search
- 4 ginseng... Search
- 5 red ginseng... Paper
- 6 ginseng... Paper

1 Abstract In english

3 Original doc. In PDF file format

Original Article

**The Ergogenic Effects of Red Ginseng and Paeonia radix Mixtures**

Tae-young Cho, Yun-kyung Song, Hyung-Ho Lim  
Department of Oriental Rehabilitation Medicine, College of Oriental Medicine, Kyungwon University

**Objectives :** This study was designed to identify the ergogenic effects of Red ginseng and Paeonia radix mixtures and optimal ratios.

**Materials and Methods :** This study was conducted by administering treatments of Red ginseng and Paeonia radix mixtures to rats and by measuring the time to exhaustion by treadmill running.

**Results :** The treatment of Red ginseng and Paeonia radix mixtures to the rats increased the time to exhaustion by treadmill running. The most potent inhibition of Red ginseng and Paeonia radix mixtures on the 5-HT synthesis and the TPH expression in the dorsal raphe was observed at the dose of 200 mg/kg and the optimal ratio of Red ginseng and Paeonia radix for the maximum efficacy was 50:50. Under normal conditions (not exercise), long-term treatment of Red ginseng and Paeonia radix mixtures did not affect the 5-HT synthesis and the TPH expression in the dorsal raphe, suggesting that Red ginseng and Paeonia radix mixtures does not alter serotonin level in the normal rats. The suppressive effect of Red ginseng and Paeonia radix mixtures on the 5-HT synthesis and the TPH expression during exercise is a possible ergogenic mechanism of these mixtures.

**Conclusions :** Red ginseng and Paeonia radix mixtures reduce exercise-induced fatigue, and have the effect of acting as ergogenic aids on the time to exhaustion by treadmill exercise and on 5-HT synthesis and TPH expression.

**Key Words:** Ergogenic effects, Red ginseng, Paeonia radix, 5-hydroxytryptamine, Tryptophan hydroxylase

4 Chemical Info.

**Introduction**

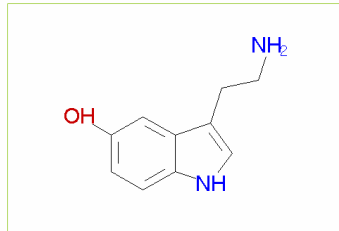
It has been reported that multiple neurological factors influence fatigability during prolonged exercise<sup>1</sup>. The central fatigue hypothesis states that maximal exertion or exhaustion may directly enhance serotonergic activity via locomotor regulation or stimulation of long-term stress responses, serotonin/5-hydroxytryptamine in the brain, resulting from the central nervous system (CNS) about deterioration in exercise which was supported by serotonin. Red ginseng is produced steaming. Ginseng radix is C.A. MEYER/Araliaceae; extract of Ginseng radix has vital energy and to promote It has been shown to possess the central nervous system, stimulating the mechanism

Received 16 August 2005; received in revised form 20 October 2005; accepted 31 October 2005  
Correspondence to : Tae young Cho, Department of Oriental Rehabilitation Medicine, Seoul Oriental Hospital, Kyungwon University, 30-8 Seongsu-Dong, Seongsu-Gu, Seoul, Korea. Tel:82-2-425-3456, Fax:82-2-425-3500, E-mail:checho0700@naver.com

62

**COMPOUND**

The 'Compound' stuff search results about "5-Hydroxytryptamine"



**Compound name** 5-Hydroxytryptamine

**CAS Number** 59-67-9

**Chemical Equation** C<sub>10</sub>H<sub>12</sub>N<sub>2</sub>O

**Molecular Mass** 176.2199

**Related Medical Stuff (12)**

Hakodshi (何頓池), Baeanmoojeum (白朮葛), Mogeum (麥冬), Sogal (蘇合), Mogeum (麥冬), Mogeum (麥冬), Ya hagu (夜合根), Wandothu (晚豆), Tobongbang (土崩), Tobongwa (土崩), Hahwanjeum (何汗煎)

2 bibliographic info. Title, Volume issue, page Date of issue, IPC, etc.



# The Korean Traditional Knowledge Portal

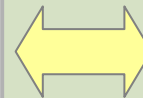
Korean

is accessible in **Korean** and **English**

- Bibliographic information, title, abstract etc.

| <a href="#">관련특허보기</a> <a href="#">원문보기</a> <a href="#">영문보기</a> |  |
|--|--|
| * 특허 심사시 선행기술 문헌으로 선정됨.  |  |
| ■ 제목   | 형질전환 인삼 callus의 단백질, 환원당 및 Ginsenoside의 양상   |
| ■ 학회명  | 고려인삼학회   |
| ■ 학술지명   | 고려인삼학회지  |
| ■ 초록   | 인삼의 조직배양에 의한 유용물질 대량생산 연구의 일환으로서 우선 기내배양에 의하여 증식된 인삼 callus 조직과 Agrobacterium tumefaciens C58에 의하여 형질전환된 인삼 gall callus의 생리적 특성과 이차대사산물로서 인삼 saponin 및 ginsenoside pattern를 조사하였는 바, 그 결과를 요약하면 다음과 같다. 1. Agrobacterium tumefaciens C58에 의하여 형질전환된 인삼 gall calls는 gall 조직 특유의 물질인 nopaline이 검출됨으로써 T-DNA에 의하여 형질전환이 되었음을 재확인되었다. 2. 인삼 형질전환 callus는 정상 callus보다 단백질 함량이 많았으며 단백질 pattern도 매우 상이하였다. 3. 인삼 형질전환 callus는 정상 callus와 재배인삼뿌리에서는 나타나지 않는 xylose가 검출되었다. 4. 인삼 형질전환 callus보다 조 saponin 함량이 3배 정도 많았으며 ginsenoside pattern도 재배인삼 뿌리와도 비슷한 경향을 보였다. 5. 이런 점을 감안할 때 T-DNA에 의하여 형질전환된 인삼 callus는 기내에서 사포닌을 대량 생산할 수 있다. |
| ■ ISSN   | 1226-8453  |
| ■ 권호명  | 제 15권 2호   |
| ■ 페이지  | 124-130  |
| ■ 발행일  | 1991년 8월 31일   |
| ■ 발행국가   | 대한민국   |
| ■ 발행기관   | 고려인삼학회   |
| ■ 저자   | 양덕춘(Yang, Deok-Chun);최광태(Choi, Kwang-Tae);양덕조(Yang, Deok-Cho);   |
| ■ 소속기관   | 한국인삼연초연구소 유전생리부;한국인삼연초연구소 유전생리부;충북대학교 생물학과;  |
| ■ 사용언어   | 한국어  |
| ■ 저자 키워드   | Agrobacterium tumefaciens;Crown gall;Ginsenoside;Panax ginseng;Reducing sugar;Soluble protein;   |

*Korean*



| <a href="#">관련특허보기</a> <a href="#">원문보기</a> <a href="#">영문보기</a> |   |
|--|---|
| * 특허 심사시 선행기술 문헌으로 선정됨.  |   |
| ■ 제목   | Patterns of Soluble Protein, Reducing Sugar and Ginsenosides in Transformed Calli of Ginseng (Panax ginseng C.A. Meyer)   |
| ■ 학회명  | The Korean Society of Ginseng   |
| ■ 학술지명   | Journal of Ginseng Research (F)Korean Journal of Ginseng Society  |
| ■ 초록   | This study was conducted to obtain basic information about the transformation of ginseng tissue, identification of opine compound and protein, and saponin production from ginseng callus transformed with Ti-plasmid of Agrobacterium tumefaciens C58. Ginseng crown gall callus induced by pTIC58 could be continuously cultured on the phytohormone-free medium. The transformation was reconfirmed by the detection and identification of opine compound, from the gall callus. The transformed ginseng callus contained higher amounts of protein than normal callus and the protein pattern of transformed callus was quite different from that of normal callus. The xylose which is not detected in the normal callus and ginseng root was identified in gall callus. The saponin contents of gall callus of ginseng were three times higher than that of normal callus, and ginsenoside composition of the transformed ginseng root, but quite different from that of normal ginseng root. |
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| ■ 저자   | Yang, Deok-Chun;Choi, Kwang-Tae;Yang, Deok-Cho;   |
| ■ 소속기관   | Korea Ginseng and Tobacco Research Institute;Korea Ginseng and Tobacco Research Institute;Department of Biology, Chungbuk National University;  |
| ■ 사용언어   | KOREAN  |
| ■ 저자 키워드   | Agrobacterium tumefaciens;Crown gall;Ginsenoside;Panax ginseng;Reducing sugar;Soluble protein;  |

*English*



Korean

**Thank you !**

