



2005년도 한국식품영양과학회 국제심포지움 및 정기학술대회

주제: Nutraceuticals and Food Safety for Well-Being Life

일시: 2005. 10.19-21

장소: 강원도 용평리조트

Session 1. Beneficial Function and Safety of Soy Products

1. Soy protein: Health benefits throughout life stage
2. Developing soybean-based products: Current status and future directions
3. Safety study and dietetic application of isoflavone
4. Current studies of isoflavone efficacy (focus on bone health)

Session 2. Attractive Products of Jeonnam &Regional Development

1. The status &strategy of Jeollanamdo Innovation Agency
2. Superiority of Korean solar salt and physiological effects of chitosan salt in human body
3. Utilization of bamboo as performance enhancing beverage
4. Bioactive compounds and biological properties of edible natural products

Session 3. Current Trends in Functional Milk Industry

1. Milk-derived growth factors as nutraceuticals
2. Current market trends and prospects of fermented milk products in Korea
3. Inhibitory effects of *Lactobacillus acidophilus*

- on the virulence of *Escherichia coli* O157:H7
4. Functional properties of milk and its physiological characteristics

Session 4. Nutrigenomics of Bioactive Food Components

1. Practical aspects of cDNA microarray application in nutrigenomics: Gene expression profiles in a high-fat diet-induced obesity mouse model
2. Gene expression changes induced by taurine in cultured human hepatoma cells, HepG2
3. Nutrigenomics of retinoic acid, an active metabolite of vitamin A
4. Green tea lowers blood cholesterol level through an increase in the fecal bile acid excretion
5. Extracellular matrix mineralization and bone-related gene expression in osteoblastic MC3T3-E1 cells under zinc deficiency

Session 5. Traditional Fermented Foods as Nutraceuticals

1. Functional properties of Korean fermented foods
2. Transformation of the glycoside by probiotics and food microorganisms

3. Enhancing the functional properties of soybean curd residue by solid-state fermentation
4. Role of indigenous microflora in traditional fermented foods
5. Fermentative characterization of Alaska pollack sikhae and their biological activity

Session 6. Current Trends of GMP in Food Industry

1. Good manufacturing practice in manufacturing, packing, or holding functional health foods (Korea)
2. Rational operation and management of GMP factory
3. Sanitation plan of a GMP factory
4. Quality control of GMP factory
5. Clean air maintenance for health food good manufacturing practice (GMP)

Session 7. Safety and Hygienic Aspects of Food Packaging

1. The US Federal Government's role: Regulating container integrity
2. Prediction of mutual interaction between packaging materials and the contained food
3. Improvement of migration testing methods and safety management system for food-contact materials
4. Food packaging regulations and current issues in Korea

Session 8. Functional Food for Health Promotion

1. Physiological activities of mulberry leaf and it's utilization as a new resource of functional foods
2. Development of materials and products with high levels of GABA from plants and lactic

- acid bacteria
3. Combining effects of dietary PUFA and natural polyphenols on risk factors causing metabolic vascular diseases in human endothelial ECV 304 cells
4. RUNX2 transcription factor and bone formation
5. Antioxidative, antiinflammtory, and anti-hypertensive effects of isoflavones in vitro and in vivo

Session 9. Kimchi, Lactic Acid Bacteria and Functionality

1. The cytotoxic, antioxidative, and antihypertensive activities in Dolsan leaf mustard and its Kimchi
2. Transformation of *Leuconostoc mesenteroides* SY1, a strain isolated from Kimchi
3. Antifungal activity of lactic acid bacteria from Kimchi and its application
4. Screening and identification of Kimchi LAB producing functional substances

Session 10. Evaluation and Labeling of Efficacy on Dietary Health Supplements

1. Efficacy evaluation on new functional ingredients or components
2. Consumer perceptions regarding claims for health/functional food
3. A study on functional claim in Korean health supplement food
4. Nutrient function claims of vitamin and mineral supplements

Session 11. Health Function of Green-Yellow Vegetables

1. Effect of green-yellow vegetables (GYV) on the smoking-related cancer prevention

2. Effect of fruit and vegetables on lymphocyte DNA damage: Human intervention trials
3. Medicinal herbal extracts and their constituents as potential neuroprotectants
4. Neuroprotective action of new lignan from butterbur, traditional vegetable

Session 12. Dietary Bioactive Compounds

1. Dietary supplements for blood glucose regulation and the biomarkers for efficacy evaluation
2. Protective effect of Pueraria radix on the cisplatin-induced damage of HEI-OC1 auditory cells through scavenging free radicals
3. Anti-diabetic effect and action mechanism of Rhodiola rosea extract in db/db mice
4. Dietary antioxidants as modulators for inflammation-related diseases
5. Changes in antioxidant defense system following dietary intervention with healthy foods

Session 13. Present and Future of Nutrition Policy for Public Health Promotion

1. Scheme for management of new ingredients in infant food
2. Nutrition education/publicity works and needs of consumer
3. Development of Korea food and nutrient data system
4. Nutrition policy of KFDA

Session 14. Current Trends and Prospects of Bio-Food Industry in Gangwon Province

1. Identification of properties of fungal metabolites and gene expression in response to anti-tumour intervention by polysaccharide-K (PSK)
2. Industrialization and development of health functional foods and cosmetics on new biomaterials
3. Development of health functional food using agricultural products from Gangwon province
4. Current status of Chuncheon biocluster "The meca of bio-venture in Korea"

2005년도 한국응용생명화학회 정기총회 및 추계국제학술대회
주제: Application of Biotechnology for Sustainable Environments

일시: 2005. 11.3-11.5

장소: 제주 칼호텔

□ **Bioactive components from soybean Fermented with *Monascus sp.***

Young-Hee Pyo*, Kyeong-Soon Choi, Mi-Ja Kwon, Young-Chul Lee
 (Korea Food Research Institute)

This study was undertaken to investigate the

possible application of cultures from soybean fermented with *Monascus sp.*, as a multi-functional source containing bioactive mevinolins and isoflavones. Of the twenty strains investigated *M. pilosus* K-1 yield 0.22% mevinolins without

the production of citrinin, a toxic fungal secondary metabolite, at 50 days of fermentation employing a whole soybean substrate largely as the hydroxycarboxylate form (open lactone, 91.8–96.8%) which is the pharmaceutical active drug, a potent inhibitor of cholesterol biosynthesis (HMG-CoA reductase). The production of mevinolins was time-dependent. The significant bioconversion ($p < 0.001$) of the glucoside isoflavones (daidzin, genistin) into their bioactive aglycones (daidzin, genistin) in soybean fermented with *M. pilosus* K-1, with an average 9.4-fold increase of aglycones was observed. These results indicated that soybean fermented with *Monascus* sp., could be regarded as a better health promoting source due to its remarkable content of bioactive mevinolins and isoflavones (SRAA).

□ **Functionality of Mucoprotein from Chickens Comb**

Young-Mi Jung*, Sung-Lan Kang, Nam-Hyouck Lee, Sung-Yong Yang, Young-Ho Kim, Young-Bung Kim, Jeoung-Hae No and Ki-Hong Jeon

(Korea Food Research Institute)

For availability of chicken comb, mucoprotein (MP) in chicken comb was isolated, and then functional properties of MP was investigated to using interaction between MP and actomyosin (AM) isolated from pork muscle. Functional properties of MP such as solubility, turbidity

and viscosity at various conditions (varied mixing ratio of MP and AM, reaction temperature and pH) were examined. The yield of MP from comb was about 14.5% (w/w). The major components of MP were hyaluronic acid (about 5.7%) and protein (8.8%). When MP and AM were mixed at ratio of 1:10, the lowest solubility (%) showed, but viscosity and turbidity was increased.

□ **Rapid determination of *Listeria monocytogenes* and *Vibrio parahaemolyticus* using biochemical properties of protein**

Hyun-Kyung Kim, Nam-Hyouk Lee, Yun-Ji Kim, Se-Wook Oh, Sang-Pill Hong and Jin-Ho Jo

(Korea Food Research Institute)

Microbial ATPase break down the ATP to ADP and phosphate. It is well known that the cell has almost equal contents of ATP regardless cell type. And lots of rapid method has been developed for determining cell number using this phenomenon. So, we investigated the possibilities of ATPase activity as an indicator of total cell number. *Listeria monocytogenes* (KFRI 00799) and *Vibrio parahaemolyticus* (KCTC2471) was used as a target microorganism. Ca-ATPase activity was checked by adding higher concentration of ATP. As the total cell number was increased, the total Ca-ATPase activity was also increased.

2005년도 한국식품영양과학회 추계산업심포지움

주제: 비만, 당뇨 조절과 건강기능식품

일시: 2005. 11.10

장소: 연세대학교 연세공학원 강당

□ Alpha lipoic acid prevents the development of metabolic syndrome in OLETF rats

이기업 교수
(울산대학교 의과대학)

□ 체중조절용 건강기능식품의 인체시험

강재현 교수
(인제대학교 의과대학)

□ 기능성 식품 개발을 위한 체중조절 효능 평가 및 작용기작 규명

박태선 교수
(연세대학교 식품영양학과)

□ 천연물로부터 2형 당뇨 치료제 개발 전략

정성현 교수
(경희대학교 약학대학)

□ 항당뇨 기능성 식품 소재 개발

박선민 교수
(호서대학교 식품영양학과)

□ 염증가설에 근거한 비만성 질환 제어

유리나 교수
(울산대학교 식품영양학과)

□ 두충엽의 단백질 당화 억제효과-당뇨 합병증 예방제로서의 가능성

김혜영 박사
(한국식품연구원 식품기능연구본부)

2005년도 식품위생안전성학회 추계 국제심포지움 및 정기학술대회

주제: Cost-Benefit Analysis for Risk Management

일시: 2005. 11.11

장소: 한국식품연구원

Session I

1. Risk Assessment of Nutrient and Related Compounds
2. Chemical Toxicity Assessment of Dietary Fatty Acids

3. Elevated Sphingoid Bases and Their 1-phosphate for the Toxic Mechanism-based Risk Assessment of Fumonisin as Food Contaminant

Session II

1. Modelling Microbial Growth and Inactivation through the Farm to Fork Chain within Quantitative Microbial Food Safety Risk Assessment
2. Application of Quantitative Risk Assessment for Controlling Harzadous Microorganisms during Pork Slaughtering Process in Korea
3. Application of Predictive Modeling for the Microbial Risk Assessment in the Food Industry

Worksho on Cost-Benefit Analysis for Risk Management

1. Cost-Benefit Analysis for Risk Management
2. Cost-Benefit Analysis for Risk Management in USEPA
3. Risk Assessment and Risk Management
4. Cost-Benefit Analysis for Risk Management in KOREA

