

## Anti-Cancer Mushroom of Toadstool in Korea

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### ABSTRACT

Many mushrooms of toadstool were collected all over the Korea from March 1976 to September 1999. They were identified and classified into anti-cancer mushrooms of toadstool. According to the result they were composed of 12 families, 19 genera and 32 species. Among them, 26 species of mushroom of toadstool is experimented about how their anticancer function works in China. But until now, there has not been any other studies for medicinal function in Korea.

*Key words* : anti-cancer, mushroom, toadstool.

### INTRODUCTION

Mushrooms which are subordinated to higher fungi control balance of ecosystem by performing their function of decomposer. They are used for long time as food, medicine and forestal resources by the human being. Nowadays, however, there are many extinct biological species because of environmental pollution and ecosystem destruction and also some kinds of higher fungi are included.

Recently in mushrooms it is found that polysaccharide which is anticancer compound and  $\beta$ -glucan that increase human immunity. So many researchers are interested and have been working in them. For example from mushrooms new biotics Tylopeptins A and B was found from *Tylopilus neofelleus*(Lee et al.1999).

Also some anticancer compound and other medicinal compounds were found from *Lampermyces japonicus* and *Clitocybe acremelagus*. Actually *Ganoderma lucidum*, *Phellinus linteus* *Agaricus blazei* and

*Cordyceps* group are being used for preventing or treating cancer and they are artificially cultivated these days. Especially in China, poisonous mushrooms has been used well as immune intensifier customary.

In this research, mushrooms of toadstool which grow spontaneously in Korea were collected and worked taxonomically Then it is examined that their ecological properties, geographical distributions and medicinal properties.

### MATERIALS AND METHODS

#### Materials

Many toadstools were collected all over the Korea from 1976 to 1999. They were identified and classified into toadstools.

#### Methods

Among toadstools anticancer compound were examined with the Cho(1999), Huang(1998), Lee et al.(1999), Mao et al.(1993) and Ying et al.(1987).

## Results

### Tricholomataceae

*Panellus stypticus* (Bull.:Fr.) Karst.

Hab. : Clustered on trunks and branches of broadleaved trees.

Distr. : Korea, all over the world.

*Clitocybe acromelalga* Ichimura

Hab. : Clustered or cespitose on soils of bamboo and mixed forests. Seldom fairy ring.

Distr. : Korea, Japan

*C. clavipes* (Pers.:Fr.) Kummer

Hab. : Solitary or clustered on soils of forests.

Distr. : kKorea, North temperate of Northern hemisphere.

*Lampteromyces japonicus* (Kawam.) Sing.

Hab. : Clustered on dead trunk of broadleaved.

Distr. : Korea, Japan, Russia.

*Mycena pura* (Pers.:Fr.) Kummer

Hab. : Clustered on soils of forests with leaves.

Distr. : Korea, Japan.

*Tricholoma ustale* (Fr.:Fr.) Kummer

Hab. : Solitary or clustered on soils of pine trees with broad leaved

Distr. : Korea, Temperate of Northern hemisphere.

### Amanitaceae

*Amanita volvata* (Peck) Martin

Hab. : Clustered on soils of broadleaved forests.

Distr. : Korea, Japan, China, Russia, North America.

*A. ceciliae* (Berk. & Br.) Bas

Hab. : Solitary or clustered on soils of forests.

Distr. : Korea, Australia, Northern hemisphere.

*A. muscaria* (L.:Fr.) Pers.

Hab. : Clustered on soils of needle-broadleaf forests.

Distr. : Korea, Japan, Australia, New Zealand, North temperate of northern hemisphere.

*A. pantherina* (DC.:Fr.) Krombh.

Hab. : Solitary or clustered on soils of mixed forests.

Distr. : Temperate of northern hemisphere.

### Agaricaceae

*Agaricus placomyces* Pk.

Hab. : Solitary or clustered on soils of forests.

Distr. : Korea, Japan, China, North America.

### Coprinaceae

*Coprinus atramentarius* (Bull.:Fr.) Fr.

Hab. : Clustered on soils of garden, field, near rotten trees.

Distr. : Korea, all over the world.

*C. comatus* (Muller:Fr.) Pers.

Hab. : Clustered on soils of fields, near fence.

Distr. : Korea, all over the world.

*Coprinus micaceus* (Bull.:Fr.) Fr.

Hab. : Clustered or cespitose on trunk on broadleaf trees or on trees in soils.

Distr. : Korea, all over the world.

### Strophariaceae

*Naematoloma fasciculare* (Hudson:Fr.) Karst.

Hab. : Cespitose on trunks in trees and bamboo trees.

Distr. : Korea, all over the world.

*N. sublateritium* (Fr.) Karst.

Hab. : Cespitose on trunks, fallen trees, trees in soil of broadleaved trees.

Distr. : Korea, temperate of northern hemisphere.

*Pholiota adiposa* (Fr.) Kummer

Hab. : Cespitose on dead trunks of trees.

Distr. : Korea, Northern hemisphere.

*P. flammans* (Fr.) Kummer

Hab. : Clustered on trunks of broadleaved trees.

Distr. : Korea, Japan.

### **Cortinariaceae**

*Gymnopilus spectabilis* (Fr.) Sing.

Hab. : Cespitose on rotten wood of broadleaved trees.

Distr. : Korea, all over the world.

### **Paxillaceae**

*Paxillus involutus* (Batsch:Fr.) Fr.

Hab. : Clustered on soils of forests and fields.

Distr. : Korea, Japan, Minor Asia, Europe, Africa, north America.

### **Russulaceae**

*Lactarius piperatus* (Scop:Fr.) S.F.Gray

Hab. : Clustered on soils of mixed forests.

Distr. : Korea, Australeia, north temperate of northern hemisphere.

*L.vellereus* (Fr.) Fr.

Hab. : Clustered on soils of mixed forests.

Distr. : Korea, Japan, China, Siberia, minor Asia, Europe, north America.

*Russula densifolia* (Secr.) Gill.

Hab. : Clustered on soils of forests.

Distr. : Korea, Japan, China, Siberia, Europe, north America.

*R. emetica* (Schaeff.:Fr.) S.F.Gray

Hab. : Clustered on soils of forests.

Distr. : Korea, japan.

*R. foetens* Pers.:Fr.

Hab. : Clustered on soils of forests.

Distr. : Korea, Japan, Siberia, minor Asia, Europe, North America.

*R. lauracerasi* Melzer

Hab. : Clustered on soils of broadleave trees.

Distr. : Korea, Japan, Europe, North America.

### **Boletaceae**

*Boletus speciosus* Frost

Hab. : Clustered on soils of broadleaved trees.

Distr. : Korea, Japan, China, Siberia.

*Gyroporus castaneus* (Bull.:Fr.) Quéf.

Hab. : Solitary or clustered on soils of forests.

Distr. : Korea, Australeia, Temperate of norther hemisphere.

### **Ramariaceae**

*Ramaria flava* (Schaeff.:Fr.) Quéf.

Hab. : Solitary on soils of forests.

Distr. : Korea, Japan, Europe.

*R.formosa* (Pers.:Fr.) Quéf.

Hab. : Clustered on soils of broadleaved forests.

Distr. : Korea, Japan, Temperate of northern hemisphere, Australeia.

### **Phallaceae**

*Lysurus mokusin* (L.:Pers.) Fr.

Hab. : Clustered on soils with weed.

Distr. : Korea, Japan.

### **Sclerodermataceae**

*Scleroderma citrinum* Pers.

Hab. : Clustered on soils of forests.

Distr.: Korea, all over the world.

## **REFERNCES**

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Received 1999. 10. 15

Accepted 2000. 3. 20