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Establishment of Korean Lichen Herbarium and Korean Lichen Data Base SystemJae-Seoun Hur^{1*}, Eui-Sung Kang², Hyung-Yeel Kahng¹, Hyun-Woo Kim¹, and Young Jin Koh³¹Department of Environmental Education, Suncheon National University, ²Department of Computer Education, Suncheon National University, ³Department of Applied Biology, Suncheon National University

The first national-wide lichen herbarium in Korea was established in KoLRI (Korean Lichen Research Institute) at Suncheon National University this year. Approximately 2,000 specimens collected at several places of South Korea during the last few years have been deposited in the herbarium until now. Most of them are foliose and fruticose lichens. The herbarium built a cooperative network with foreign lichen herbariums. Korean lichen database, which contains information on so far identified lichen specimens in the herbarium of KoLRI, has also been established. This database is combined with the Korean lichen web server (<http://lichen.suncheon.ac.kr>). Users can simply access information on the database by providing key words such as genus or species names, collected locations, and substrates. The detail information includes the collector's name, habitat, substrate, and high-resolution image. In addition to, the web site contains the total list of Korean lichens and the latest update of the checklist for Korean lichens.

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***Chryseobacterium soldanellicola* sp. nov., and *Chryseobacterium halotolerans* sp. nov. Isolated from Root of Sand Dune Plant**Myung Soo Park^{*}, Se Ra Jung, Kang Hyun Lee, Kyung Sook Bae, and Seung Bum Kim

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A Gram-negative, yellow-pigmented bacteria (PSD1-4 and PHA3-4), which were isolated from two sand dune plant species, *Calystegia soldanella* and *Elymus mollis* growing along the coastal areas in Tae-an, Korea were investigated to determine these taxonomic status. Complete 16S rRNA gene sequence analysis indicated that the organism should be placed in the genus *Chryseobacterium*. Level of 16S rRNA gene sequence similarity existing *Chryseobacterium* species and two novel strains PSD1-4 and PHA3-4 were 92.9-96.7 and 92.1-97.0%, respectively, 15:0 iso, 17:0 iso 3-OH, and iso 17:1 w9c were the major fatty acids. On the basis of phenotypic and phylogenetic data, it is proposed that these strains should be designed *Chryseobacterium soldanellicola* sp. nov., *Chryseobacterium halotolerans* sp. nov. The type strains are respectively strain PSD1-4^T and PHA3-4^T

A035

Isolation and Success in the Culturing of Korean Lichen-Forming FungiJae-Seoun Hur^{1*}, Soon-Ok Oh², Kwang-Mi Lim³, and Young Jin Koh²¹Department of Environmental Education, Suncheon National University, ²Department of Applied Biology, Suncheon National University, ³Department of Biology, Suncheon National University

Isolation into pure culture was attempted on 125 species (362 specimens) of lichen-forming fungi from diverse ecosystems and systematic groups of macrolichens (covering 4 ascomycetes orders, 18 families and 54 genera) in Korea. One hundred twenty isolates (73 species, 58%) were successfully isolated either from ascospores or photobiont-free fragments from thallus macerates. Of the total number of isolation attempts from ascospores (115) and thallus fragments (247), 23% and 19% were successful, respectively. All the isolates were deposited in KoLRI (Korean Lichen Research Institute) at Suncheon National University. This is the first report on isolation and success in culturing lichen-forming fungi in Korea.

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A036

Isolation of Antarctic Bacteria with Chitinase, Lipase, or Protease ActivityKi Cheol Sung^{*}, In Hee Kim, So Yeon Kim, Joung Han Yim, Kyu Jin Park, Yoo Kyung Lee, and Hong Kum Lee

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Chitinase-, lipase-, or protease-producing bacteria were isolated from Antarctic region. Soil, sea water, and algal samples were collected around the King Sejong Station in Antarctica (62°S, 58°W). The collected samples were inoculated on Zobell agar plates with colloidal chitin, glyceryl tributylin, and skim milk, respectively. The plates were cultured at 25°C for 2-3 days, and colonies showing enzyme activity were selected. Total 152 strains were isolated: 20 strains showed lipase activity, 91 strains protease activity and 16 strains chitinase activity. 152. They exhibited enzyme activity at low temperatures (10°C). The bacteria were identified by phylogenetic analysis using 16S rDNA sequences. Most of them belonged to genus *Pseudoalteromonas*. Among them, a strain AC-11 showing chitinase activity shared a 97% 16S rDNA homology with *Sanguibacter keddietii*. The genus *Sanguibacter* is Gram-positive coryneform bacteria that isolated from blood and milk of healthy cows. On the other hand, the strain AC-11 was isolated from soil. The difference in habitat and low homology in 16S rDNA sequences suggest that this strain may be a new species of *Sanguibacter*