

Two peptides produced by *Deinococcus radiodurans*

Eunjung Lee, Jungmo Yang, Choonshik Shin, and Yoongho Lim

Bio/Molecular Informatics Center, Konkuk University

TEL: +82-2-450-3760, FAX: +82-2-453-3761

Most microorganisms can be killed by radioactive radiation. In 1950s, however, it was found that even though a strong radiation was irradiated on the canned beef, it went rotten. Later, it was known that the reason was caused by *Deinococcus radiodurans*. This microorganism is found in the area irradiated by a strong radiation as well as dried valleys of the South pole and ponds saturated with cesium. DOE, USA is interested in its survival ability in the radioactive waste. It can produce metabolites in toluene under 6,000rads. Its ability does not come from protection against radiation, but from recovering ability of DNA injured by radiation. Its genome sequencing was done in 1999¹⁾. In order to know its recovering ability, many studies are being carried out, but still it is not clear. In addition, this microorganism can be used for recovery of cancer cell. Because of its special characteristics, authors are interested in the peptides contained in it. Here we report two peptides found based on LC/MS/MS analysis.

Reference

1. White O, Eisen JA, Heidelberg JF, Hickey EK, Peterson JD, Dodson RJ, Haft DH, Gwinn ML, Nelson WC, Richardson DL, Moffat KS, Qin H, Jiang L, Pamphile W, Crosby M, Shen M, Vamathevan JJ, Lam P, McDonald L, Utterback T, Zalewski C, Makarova KS, Aravind L, Daly MJ, Fraser CM, et al. Genome sequence of the radioresistant bacterium *Deinococcus radiodurans* R1(1999), *Science* 286, 1571-7.