Analysis of survival and DNA damage of space exposed Deinococcus spp.

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Hotchin et al., 1967, <References>

Orig Life Evol Biosph

DNA repair pathway

recA

Mutants

rec30

D. radiodurans

UV578

ΔmtoA, ΔuvsE

Nucleotide excision

Homologous recombination

KH311

ppnA

The non-homologous end joining

4. Materials and Methods

Model organism: The radiation resistance of Deinococcus spp.

D. radiodurans

Isolated from a canned meat after gamma ray irradiation.

Extreme resistance to the UV, gamma ray and desiccation.

Mutants

DNA repair pathway

ΔmtoA, ΔuvsE

Nucleotide excision

Homologous recombination

ppnA

The non-homologous end joining

Method

Recover cells from each well

Calculate the survival fraction

Survival fraction = the number of colon (UV-Irradiated Sample) / the number of colony (non UV-Irradiated sample)

Colony formation assay

(Living cells make colony)

References