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DNA Microarray Analysis of Gene Expression in Yeast, *Saccharomyces cerevisiae*, responses to Floating-Electrode Dielectric Barrier Discharge Plasma Irradiation.[1] YOSHIHITO YAGYU, National Institute of Technology, Sasebo College, NOBUYA HAYASHI, Kyushu University, YUTA HATAYAMA, TAKASHI YAMASAKI, TAMIKO OHSHIMA, MASAHIRO KOSHIMURA, TAIKI MIYAMOTO, HIROHARU KAWASAKI, TAKESHI IHARA, YOSHIAKI SUDA, National Institute of Technology, Sasebo College, NATIONAL INSTITUTE OF TECHNOLOGY, SASEBO COLLEGE TEAM, KYUSHU UNIV. TEAM — Effect of plasma irradiation for an application of plasma medicine has been investigated, and active species generated in plasma probably play an important part in a reaction between plasma and biological subjects relating to living organisms. In this study, gene expression variation of yeast, *Saccharomyces cerevisiae*, treated by floating-electrode dielectric barrier discharge (FE-DBD) as an atmospheric plasma source was analyzed by DNA microarray method. As a result, it has been found that the variance of gene expression caused by FE-DBD plasma irradiation was detected. The variance of gene expression will be investigated by using a data on a biochemical pathways for analyzing a detail about effect of plasma irradiation to living organisms.

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