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Influence of the H_2O_2 in the plasma gene transfection method¹ MASANORI KIMURA, HIROKI TACHIBANA, YUKI OHNO, YOSHIHISA IKEDA, HIDEKI MOTOMURA, Depertment of Electrical and Electronic Engineering, Ehime Univ, YUGO KIDO, Pearl Kogyo Co.Ltd, SUSUMU SATOH, Y's Corporation, KUNIHIDE TACHIBANA, Depertment of Electrical and Electronic Engineering, Osaka Electro-Communication Univ, MASAFUMI JINNO, Depertment of Electrical and Electronic Engineering, Ehime Univ — Gene transfection is the process of deliberately introducing nucleic acids into cells. The authors have been developing a novel gene transfection method using microplasma irradiation (plasma gene transfection method). Our previous study shows that long life chemically reactive species contribute to gene transfection, which induce the transfection at least 60 s after plasma irradiation (after effect). In order to clarify the key reactive species which is effective on the after effect, the effect of H₂O₂ addition after plasma irradiation was investigated. Addition of H_2O_2 at 1/1000-1 ppm after plasma irradiation did not largely affect or slightly decease the transfection ratio, whereas the H₂O₂ concentration induced by plasma irradiation is estimated as 2.7 ppb after dilution by the medium. It is found that the H₂O₂ is not main species for the after

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