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Responses of cells in plasma-activated medium HIROMASA TANAKA, MASAAKI MIZUNO, KENJI ISHIKAWA, KEIGO TAKEDA, HIROSHI HASHIZUME, KAE NAKAMURA, HIROAKI KAJIYAMA, Nagoya University, HIROYUKI KANO, NU Eco Engineering, YASUMASA OKAZAKI, SHINYA TOYOKUNI, SHOICHI MARUYAMA, YASUHIRO KODERA, HIROKO TERASAKI, Nagoya University, TETSUO ADACHI, Gifu Pharmaceutical University, MASASHI KATO, FUMITAKA KIKKAWA, MASARU HORI, Nagoya University — Plasma consists of electrons, ions, radicals, and lights, and produces various reactive species in gas and liquid phase. Cells receive various inputs from their circumstances, and induce several physiological outputs. Our goal is to clarify the relationships between plasma inputs and physiological outputs. Plasma-activated medium (PAM) is a circumstance that plasma provides cells and our previous studies suggest that PAM is a promising tool for cancer therapy. However, the mode of actions remains to be elucidated. We propose survival and proliferation signaling networks as well as redox signaling networks are key factors to understand cellular responses of PAM-treated glioblastoma cells.

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