lated one will be detected in the cytoplasm under transition-stimulating conditions. If phosphorylation inhibits the transition, the phosphomimetic mutant will be detected in the cytoplasm in stimulating conditions, while the dephosphorylated one will localize to the nucleus under standard conditions. As expected, YB-1 S102A was absent from the nucleus under transition-stimulating conditions, while YB-1 S102D was detected there in standard conditions. Conclusions Thus, phosphorylation at S102 activates nuclear translocation of YB-1, which is in agreement with the literature data [3,4,5]. Hence, the proposed approach can be used in studies of the posttranslational modification effect on protein transport.

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H-1. Mg, K-containing microparticle: a possible active principle of EM fermentation product

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EM represents Effective Microorganisms, a microbial consortium consisting mainly of photosynthetic bacteria, lactic acid bacteria and yeast. Various effects on cells of EM fermentation product were reported in the previous WBW25 Meeting in 2017. Here, we report our attempt to identify its active principle and the ongoing preliminary results. The activity was assayed by promoted formation of fruiting body of Dictyostelium discoideum. The EM fermentation product was first subjected to liquid-liquid separation, with the activity being recovered in aqueous phase. Concentrated aqueous fraction was further subjected to column chromatography. No activity was detected in any eluant, while almost all activity was recovered in residual insoluble material. The application of conventional organic chemistry procedures did not lead to any informative results. Acid treatment of the insoluble material produced air bubbles, suggesting it to be composed of some inorganic carbonate. Viewed under scanning electronmicroscope, these residues revealed spherical particles of μm range. Energy Dispersive X-ray (EDX) Spectroscopy pointed to the existence of magnesium and, to a certain extent, potassium. In a separate experiment, acid treatment and alkali neutralization of EM fermentation product completely wiped out the stimulatory activity of fruiting body formation. These lines of evidence indicate these Mg, K-containing microparticle to be active principle of EM fermentation product, at least, in regard to fruiting body formation in Dictyostelium discoideum. How these particles exert their effect is currently under extensive investigation.