Studies on the Anticancer Mechanisms of the Natto Extract

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We have investigated anti-cancer properties of Natto, a traditional Japanese food made from soybeans fermented with bacillus subtilis. The protein related ingredient was partially purified from Natto using an ammonium sulphate fractionation and added to HeLa cells. As a result, all cancer cells perished the next day. On the other hand, if only a protein related extract from boiled beans and fermented soybean bacterium was added, there were no changes in cell growth. We purified and investigated amino acid sequence of anti-cancer peptide from Natto using Butyl Sepharose column chromatography of 5-kDa peptide. The peptide appeared to be a new antibacterial peptide.

Key Words: Natto, fermented soybeans, anti-cancer effect, antibacterial peptide, fermented food.