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Influence of immune modulation by tumor cell-derived soluble compound

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Cancer has been viewed as a disease consisting of transformed cells, of hyper proliferative, invasive and immortal nature. Accordingly, the anti-cancer strategies are also focused on tumor cells only. In the present study, the gastric cancer cell (SNU-484) soluble compounds have been evaluated for its immunosuppression properties. The proteins present in the SNU-484 soluble compounds (SC) were identified with human cytokine array. The effect of SC on rat splenocytes has been studied with special emphasis on NK cell activity. In results, the addition of various concentration of SC did not show any significant apoptotic or proliferation changes when compared to untreated control splenocytes. Further the incubation of splenocytes with SC reduced the expression of NK cell markers at the transcription level. The same scenario was observed with the *in vivo* study following 2 days of treatment. Incubation of splenocytes with SC for a longer period reduced the cytotoxic ability, further this observation was strengthened by the reduction of $CD161^{+}CD3^{-}$(NK) cells in SC treatment. In addition tests were performed to check whether SC can influence tumor formation in allogenic tumor model. The B16F10 melanoma cells-injected animals developed tumor in 3 weeks, whilst the SC injected animals along B16F10 cells aggravates tumor formation, by increasing the PI3K/AKT levels. These findings clearly demonstrate that the presence of SC can modulate immune system response that favors the tumor formation.

Biography

Mohammad Amjad Hossain has completed his graduation from University of Development Alternative, Bangladesh and currently studying MS in Veterinary Medicine from Chonbuk National University School of Veterinary Medicine, South Korea. He has published 2 papers in reputed journals.

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