Early step of JSRV-mediated cell transformation involves the interaction between Env and the RALBP1 cellular protein

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Ovine pulmonary adenocarcinoma is a naturally occurring lung cancer in sheep induced by the Jaagsiekte Sheep RetroVirus (JSRV). Its envelope glycoprotein (Env) carries oncogenic properties, and its expression is sufficient to induce in vitro cell transformation and lung adenocarcinoma in vivo. The precocious mechanisms leading to initiation of cell transformation are still unknown, and identification of cellular partners of JSRV envelope remains crucial for deciphering mechanisms leading to cell transformation. We initially identified RALBP1 (Ral A Binding Protein also known as RLIP76 or RIP), a cellular protein implicated in the ras pathway, as a partner of JSRV Env by yeast double-hybrid screening and confirmed formation of RALBP1/Env complexes in mammalian cells. Expression of the RALBP1 protein was repressed in tumoral lungs as well as in tumor-derived alveolar type II cells. Through its inhibition using specific siRNA, we showed that RALBP1 was involved in envelope-induced cell transformation and in modulation of the mTOR/p70S6K pathway by the retroviral envelope.

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Communication Factors that Influence High School Students in their Response to being Faithfulness Message for HIV/AIDS Prevention in Hossana Town, Ethiopia: A Cross Sectional Study

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Background: Despite the massive resources and intensified interventions, desired decline in HIV/AIDS epidemics has not been achieved. This study was aimed to evaluate how students are reacting being faithfulness message for HIV/AIDS prevention using Extended Parallel Process Model (EPPM).

Method: Cross sectional study was conducted using quantitative and qualitative methods of data collection. Structured self-administered questionnaires were used to collect data. Simple random sampling was used to select respondents. Quantitative data were analyzed using SPSS version 16.0. Qualitative data were analyzed using Open Code software.

Results: 61.5% (251/408) of the respondents were in danger control response whereas 38.5% (157/408) of the respondents were in fear control response. As independent predictors, self-efficacy [AOR (95%CI) =0.32 (0.37 to 0.72)], response efficacy [AOR (95%CI)=0.82 (0.59 to 0.98)] of HIV/AIDS, religion (catholic) [AOR (95%CI)=0.33(0.65 to 0.69)] and age (20-24) [AOR (95%CI)=0.13 (0.43 to 0.73)] were positively associated with danger control response whereas fathers’ occupation [AOR (95%CI)=3.31 (3.55 to 19.08)], perceived susceptibility to [AOR (95%CI)=4.42 (2.44 to 8.61)], perceived severity of [AOR (95%CI)=5.33 (3.21 to 14.74)] HIV/AIDS and not hearing faithfulness message [AOR (95%CI)=5.11 (6.91 to 17.08)] were negatively associated with danger control response. The EPPM Model explained 59.04% of variance in this study.

Conclusion: Despite higher numbers of students were in danger control psychological responses, intolerable numbers are in fear control responses. Therefore, due attention should be given to fill the gap of perception of risk in both self-efficacy to be fixed with one sexual partner and response efficacy to be stayed with that one sexual partner tailoring the message in the context of their religion, age and their income.

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