

Microbes help counter cancer: Immunity from smallpox vaccine

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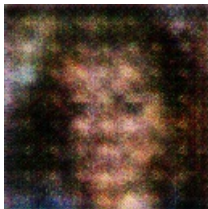
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Scientists have discovered that intestinal bacteria are involved in reducing the resistance of thymus and spleen cells in mice to newly synthesized toxoplasmosis DNA vaccines made from one of the same genes (transthyretin protein) involved in exposure to radiation. The findings were reported in a study published on the journal "Proceedings of the National Academy of Sciences".

While the mechanism by which the cells reduce the resistance of their tissues against DNA vaccines has not been identified, it may very well be because of their role in controlling the growth of stem cells and overall tissue development in the body, reported the scientists. The damage resulting from the increased radionuclide doses "probably result from the interaction of the tumor suppressor gene TRPV1 and the bacterial protein ALDH2, and it is only through this interaction that this increasing tumor DNA level occurs," stated Prof. Giorgio Bamberi of the University of Bologna.

That is not the case with the currently available vaccines. However, Dr. Sarah-Jayne Matthews, a biomedical engineer from Weill Cornell Medical College who was also part of the study, hopes that such mechanisms could be used in the future to overcome the problem.



A Large Brown Bear Standing Next To A Tree