

Compound in tobacco leaves may aid fight against cancer: Study

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PRAYAGRAJ: Research by a team of scientists from various countries, including an alumnus of Allahabad University (AU), has found a compound derived from tobacco leaves that might possess the potential to combat multiple forms of cancer.

The findings offer a striking contrast because tobacco usage, according to WHO, is accountable for a quarter of all cancer-related fatalities worldwide and remains the primary cause of lung cancer.

The remarkable discovery by AU alumnus Amit Dubey, along with Indian scientist Aisha Tufail and Malaysian researchers Miah Roney and Prof AKM Moyeenul Huq, has been published in the "Journal of Biomolecular Structure and Dynamics", a publication of Taylor & Francis Ltd in the UK. According to the study's findings, a singular anti-cancer compound termed "4-[3-Hydroxyanilino]-6,7 Dimethoxyquinazoline" can be extracted from tobacco leaves, exhibiting no discernible side effects.

Amit explained: "The proliferation, survival, adhesion, migration, and differentiation of cancer cells are all significantly influenced by the epidermal growth factor receptor (EGFR). The walls of tumour cells contain EGFR. They require this protein to survive and develop."

The research team used a collaborative approach to screen drug bank compounds targeting the EGFR protein. This was facilitated through the drug bank, a comprehensive, free-access online database maintained by the University of Alberta and the Metabolomics Innovation Centre in Alberta, Canada, from which the team sourced the compound found in tobacco leaves for their study. Amit is senior scientist at Quanta Calculus Pvt Ltd in Greater Noida.

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