

세미나 초록

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발표 주제	Defining the Molecular Mechanism of the UBA6-USE1 pathway in lung cancer
발표 내용	<p>Talk 1. The UBA6-USE1 ubiquitin enzyme cascade is a poorly characterized arm of the ubiquitin-proteasome system. We found that USE1 proteins are frequently overexpressed in lung cancer patients (92.45%, n = 106). Stable overexpression of USE1 significantly increased cell proliferation, migration, and invasiveness in lung cancer cells and xenograft models, whereas their knockdown significantly reduced cell proliferation, migration, and invasion. Furthermore, five missense mutations in USE1 identified in patients prolong the half-life and stability of the protein. These data reveal an unexpected role for USE1 in lung cancer promotion, migration, and invasion.</p> <p>Talk 2. Tripartite motif-containing 28 (TRIM28) is an E3 ubiquitin ligase harboring multiple cellular functions and works together with UBA6-USE1 enzyme cascade. We found that the TRIM28 protein is frequently overexpressed in patients with lung cancer. The stable overexpression of TRIM28 in lung cancer cells and xenograft models significantly increased the proliferation, migration, and invasiveness, whereas knockdown of TRIM28 had the opposite effect. We further observed that TRIM28 regulates the ubiquitin ligases RLIM and MDM2 to target the p53 levels during lung tumorigenesis. These data provide new insights into lung cancer development and potential new therapeutic targets for this disease.</p>