

# SPECIAL SEMINAR

## “Association of Uba6-specific-E2 (USE1) with lung tumorigenesis”



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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. USE1 has a conserved D-box domain and the level of the protein was regulated by the anaphase-promoting complex (APC/C) through its interaction with CDC20 and CDH1. 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.

**Thursday, March 9, 2017**

**4:00 PM – 5:00 PM**

**Jukhyun Bio Auditorium**

**School of Life Sciences**

**Gwangju Institute of Science and Technology (GIST)**