

## Bcl-2 Inhibitor ABT-737 Alleviated *in Vivo* and *in Vitro* Allergic Rhinitis Reactions

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ABT-737 is an inhibitor of Bcl-2 and has an anti-cancer property. Recent studies reported that tumor growth, invasion, angiogenesis, and metastasis were accelerated by inflammatory reactions. Here the aim of this study is to assess the anti-allergic inflammatory effect of an anticancer agent, ABT-737 on human mast cell line HMC-1 and allergic rhinitis (AR) animal model. ABT-737 significantly diminished production and mRNA expression of pro-inflammatory cytokines on activated human mast cell line, HMC-1. In an AR animal model, ABT-737 decreased rub scoring and IgE, histamine, thymic stromal lymphopoietin, pro-inflammatory cytokines, and vascular endothelial growth factor levels from the serum of ovalbumin-challenged mice. ABT-737 reduced numbers of infiltrated mast cells and eosinophils in nasal mucosa tissues of AR mice. In addition, levels of Th2 cytokines and chemokines were significantly reduced by ABT-737 in nasal mucosa tissues of AR mice. In conclusion, the results suggest that ABT-737 is potential candidate for treatment of AR.

### Biography:

Hee-Yun Kim was born in 1985 and received M.S. degree in Biological Engineering from Inha University, R.Korea. Currently, he is a Ph.D. candidate at Kyung Hee University, R. Korea. He has been published many articles about allergic inflammation. He won an Excellent Research Paper Award from Kyung Hee University in 2017.