1. No.
   2019G022

2. Title
   Analyzing the molecular mechanisms of Tobacco-mediated regulation of androgen receptor

3. Period
   2019-2021

4. Summary
5. In this project term, we could reveal some novel conclusions about link between androgen receptor and tobacco smoke described below. Tobacco smoke condensate increased PSA gene expression in LNCaP cells. Tobacco smoke condensate -induced PSA gene expression was through androgen receptor. Tobacco smoke condensate increased transcriptional activity of androgen receptor via ARE (androgen response element). Tobacco smoke condensate increased transcriptional activity of androgen receptor independent of its ligand binding. Tobacco smoke condensate targeted an unknow protein region of androgen receptor protein other than ligand binding domain to activate androgen receptor. We would like to reveal detailed molecular mechanisms explaining this novel androgen receptor activation mechanisms by Tobacco smoke condensate through proteomic approach identifying Tobacco smoke condensate -dependent transcriptional complexes. This protein complexes might be a novel therapeutic target to prevent tobacco-mediated prostate cancer development.