

# International Conference on Prostate Cancer

June 22-24, 2015 Florida, USA

## Caffeic acid phenethyl ester inhibits epithelial–mesenchymal transition, proliferation and migration in human prostate cancer cells

Jiang Tian, Yajuan Gao, Zhou Wang and Shivendra Singh  
University of Pittsburgh, USA

Most prostate cancer-associated deaths are due to the metastatic disease. Targeting prostate cancer cell migration may lead to a new approach to treat and/or prevent metastatic prostate cancer. Increasing evidence has shown that epithelial mesenchymal transition (EMT) plays a pivotal role in promoting cancer metastasis. Thus targeting EMT represents a potential therapeutic approach to slow down or prevent metastatic spread. Caffeic acid phenethyl ester (CAPE), one of major bioactive components of propolis was reported to have the ability to suppress the EMT in pancreatic cancer. In this study, we investigated the preventive and inhibitory effect of CAPE on EMT in prostate cancer cells *in vitro* and *in vivo*. Our results indicated that the cell migration and proliferation were significantly inhibited in a dose-dependent manner in prostate cancer cell lines PC3, DU145 and C4-2. By analyzing the expression of EMT markers, we observed the enrichment of epithelial phenotypes, including E-cadherin,  $\beta$ -catenin and/or Claudin-1 and suppression of mesenchymal phenotypes including Vimentin, Snail-1 and/or Slug in PC3, DU145 and C4-2 cells treated with CAPE. *In vivo* studies also showed fewer tumor cells in the lung tissues of CAPE treated mice as compared with vehicle treated controls. Induction of E-cadherin and down regulation of Vimentin was also observed in the lung tissue of treatment group. Taken together these results suggest that CAPE suppression of prostate cancer metastasis is in part mediated through inhibition of EMT, proliferation and migration of human prostate cancer cells.

### Biography

Jiang Tian is currently working as a Postdoctoral associate in Department of Urology, University of Pittsburgh School of Medicine. He received his MD degree from Hebei Medical University in 2005 and Master degree and PhD degree from Sun Yat-sen University in 2008 and 2011 respectively. His research interest is in studying some dietary bioactive compounds to prevent and inhibit cancer cell growth.

[tianj@upmc.edu](mailto:tianj@upmc.edu)

### Notes: