

Abstract Submitted
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Effect of c-Met Inhibitor on HGF-induced Ovarian Carcinoma Cell Migration¹ CHUN-MIN LO, University of South Florida, JUN-CHIH LO, Nanhua University, KAY-PONG YIP, University of South Florida — The dysregulation of hepatocyte growth factor (HGF) and its receptor, c-Met, in cell migration contributes to tumor invasion and metastasis in numerous cancers including ovarian cancer. Specific inhibitors against HGF/c-Met signaling like SU11274, therefore, may have important therapeutic potential for the treatment of cancers. Here, we applied electric cell-substrate impedance sensing (ECIS) and traction force microscopy to evaluate the effect of SU11274 on HGF-treated SKOV-3 ovarian cancer cells. Our results showed that, compared with control cells, HGF-treated cell monolayer displayed lower junctional resistance between cells, larger cell-substrate separation, and higher cell micromotion. In addition, individual HGF-treated SKOV-3 cells demonstrated weaker traction forces on the collagen-coated polyacrylamide substrate than did control cells. These changes lead to faster directional movement of HGF-treated cells, as demonstrated with wound healing assay. Treatment of SKOV-3 cells with SU11274 indicated significant inhibition of HGF stimulation on all assays tested.

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Chun-Min Lo
University of South Florida

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