題目：

Complex interplay between Cancer and Tumor Microenvironment in Cancer Metastasis：Aiming at the metastatic niche as a therapeutic target

摘要：

Accumulating evidences reveal that the tumor microenvironment impacts on tumor progression, therapeutic strategy and the outcome of therapy, once we understand more about the interplay of cancer cells and tumor microenvironment, we can develop more effective treatment to cure cancer. Bladder cancer is the fifth most common malignancy, and is largely incurable when it progresses into invasive disease. The 5-year survival rate for metastatic bladder cancer is only 6% with no effective therapeutic options. Clinically, it is critical to investigate the mechanisms that drive bladder cancer progression and develop therapeutic drug for targeting. Metastases account for the majority of cancer deaths. While certain steps of the metastatic cascade are well characterized, identification of targets to block this process remains a challenge. Host factors determining metastatic colonization to secondary organs are particularly important for exploration, as those might be shared among different cancer types. Currently, our study showed that bladder tumor cells expressing the collagen receptor, CD167a/DDR1, responded to collagen I stimulation at the primary tumor to promote local invasion and utilized the same receptor to preferentially colonize at airway smooth muscle cells (ASMCs)—a rich source of collagen III in lung. Morphologically, COL3-CD167a/DDR1-driven metastatic foci are uniquely distinct from typical lung alveolar metastatic lesions and exhibited activation of the CD167a/DDR1-HSP90-Stat3 axis. Importantly, metastatic lung colonization could be abrogated using an investigational drug that attenuates Stat3 activity, implicating this “seed-and-soil” interaction as a therapeutic target for eliminating lung metastasis.