Vasohibin-1 Increases the Malignant Potential of Colorectal Cancer and Is a Biomarker of Poor Prognosis

Background
Vasohibin-1 (VASH1) is related to angiogenesis and poor prognosis in several types of cancer. However, the biological function and clinical significance of VASH1 in colorectal cancer (CRC) is not fully known.

Materials and Methods
The associations between VASH1 expression and clinicopathological features were investigated by immunohistochemistry in 429 CRC tissues. To evaluate the function of VASH1 in vitro, small-interfering VASH1-targeting RNA was transfected into human CRC cell lines.

Results
We found that VASH1 was highly expressed in the cytoplasm of CRC tissues. High VASH1 expression in the cytoplasm was significantly associated with tumor progression, such as larger tumor size, advanced T-stage, lymph node metastasis, and distant metastasis and poor prognosis. Moreover, a significant positive correlation was detected between VASH1 expression and microvessel density. VASH1 siRNA inhibited CRC cell proliferation, migration, and invasion, and promoted anoikis.

Conclusion
Overexpression of VASH1 in CRC cells increased malignant potential and promoted metastasis.