COMPLEX ROLES OF HUMAN ENDOMETASE/MATRILYSIN-2 IN CANCER INVASION, PROGRESSION, AND INFLAMMATION Qing-Xiang Amy Sang, Zahraa I. Khamis, Seakwoo Lee, Yun-Ge Zhao, Hyun I. Park, Tiebang Kang, Douglas R. Hurst, Diego A.R. Zorio, Yonghao Jin, and Martin A. Schwartz, Department of Chemistry and Biochemistry and Institute of Molecular Biophysics, Florida State University, Tallahassee, FL 32306, USA

Human matrix metalloproteinase-26 (MMP-26, endometase, matrilysin-2) is a zinc endopeptidase specifically expressed by many types of human carcinoma cells and tissues, and a putative cancer biomarker. It activates pro-MMP-9 and promote human prostate cancer cell invasion. Its highest protein expression level is in pre-invasive stages of human breast and prostate cancer tissues. Biochemical and enzyme inhibition data indicate that it has an intermediate S1' pocket at the enzyme active site and two calcium binding sites. Recent results suggest its anti-inflammation function. MMP-26 may play pro-invasion and protective roles in cancer invasion, progression, and inflammation.