Ovarian Cancer Metastasis: Targeting the Microenvironment

Abstract: High grade serous ovarian cancer (HGSOC) is the most lethal gynecological cancer, with a 5-year survival rate of less than 40%. Genomic analysis of HGSOC tumors indicates that there are few mutations that are present in more than 5% of patients, limiting the potential for available molecular-targeted therapies to even be examined in a clinical trial. For the last several years, my laboratory has been working to understand this complex disease to identify new targets that may have broader efficacy and to determine how to better apply existing therapies. In this talk, I will present recent work using tissue engineering and systems biology approaches to study metastasis in HGSOC, with a focus on the impact of the extracellular matrix and immune cells in this process.

Biography: Pamela Kreeger is an Associate Professor in the Department of Biomedical Engineering at the University of Wisconsin-Madison, with affiliations in the Department of Cell & Regenerative Biology and the Department of Obstetrics & Gynecology in the University of Wisconsin School of Medicine and Public Health. She earned a BS in Chemistry from Valparaiso University, a PhD in Chemical Engineering at Northwestern University, and was a post-doctoral fellow in Biological Engineering at MIT. Her lab utilizes tools from systems biology and tissue engineering to determine how the interactions between multiple components of the disease microenvironment influence cellular phenotypic decisions. She is the recipient of the NSF CAREER, the American Cancer Society Research Scholar, and the NIH New Innovator.