The tumor environment is highly diverse in nature. In addition to cancer cells, it has a specialized immune system that “protects” the tumor, thus contributing to tumor survival, progression, metastasis, and therapy resistance. As such, tumor-resident immune cells have emerged as important therapeutic targets in the fight against cancer. Our research, in collaboration with the Carson lab in the Department of Surgery, has thus been devoted to developing and testing different nanotechnologies to thoroughly study, at the single-cell level, the role such immune cells in cancer progression. At the same time, we are working towards developing novel nanotherapeutics to selectively target and manipulate these cells, and turn them against the tumor