## Non Technical Abstract

Ovarian cancer is a deadly disease in need of new treatment paradigms. Previous trials have investigated the utility of using cold viruses such as adenoviruses that exert their anti-tumor activity by selectively replicating in infected ovarian cancer cells and causing these cells to burst. These initial trials demonstrated limited clinical activity, which could be attributed in part to the inability of these conditionally replicative adenoviruses (CRADs) to achieve efficient cancer cell infection. To this end, investigators at UAB and MD Anderson have developed a novel infectivity enhanced CRAD named Ad5-Δ24RGD that has been shown to achieve dramatically enhanced anti-tumor activity in both laboratory models of ovarian cancer. It is our hypothesis that by virtue of the enhanced tumor cell infection achieved with this infectivity enhanced CRAD, an enhanced therapeutic effect in patients with ovarian cancer will be realized. Accordingly, this proposal includes a human gene therapy protocol for ovarian and extraovarian cancer patients with persistent or recurrent disease for whom no curative therapies exist. This Phase I protocol will 1) determine the maximally tolerated dose and spectrum of toxicities encountered with intraperitoneal delivery of Ad5-Δ24RGD in patients with recurrent ovarian cancer; 2) determine the biologic effects encountered with intraperitoneal delivery of Ad5-Δ24RGD in patients with recurrent ovarian cancer cells; and 3) determine immunologic response generated against Ad5-Δ24RGD when administered intraperitoneally to patients with recurrent ovarian adenocarcinoma. It is anticipated that this clinical trial would establish the safety of this novel reagent and provide an indication of the efficacy of this approach in patients with ovarian cancer.