Abstract:
Beyond Targeting Oncogenes: Emerging Anti-Cancer Strategies
It has become clear that tumorigenesis results from much more than just the activation of an oncogene and/or the inactivation of a tumor suppressor gene, and that the cancer cell genome contains many more alterations than can be specifically targeted at once. This observation has led our group to a search for alternative ways to kill cancer cells (while sparing normal cells) by focussing on properties unique to the former. It has emerged that at least three approaches with the potential to generate new anti-cancer therapies: combatting the tactics by which cancers evade anti-tumor immune responses, targeting metabolic adaptations that tumor cells use to survive conditions that would kill normal cells, manipulating a cancer cell's response to excessive oxidative stress, and exploiting aneuploidy.