Therapeutic efficacy; male athymic nude mice implanted with LNCap tumor

Procedure were approved by the appropriate Institutional Animal Care and Use Committee before initiation. Animals used in efficacy studies were allowed to acclimate for at least 72 hours in the respective animal facilities before experimentation. Animals were exposed to a 12-hour light/dark cycle and received food and water ad libitum throughout the studies. Male athymic nude mice (Charles River Laboratories or Taconic; about 6 weeks) were subcutaneously inoculated in the right flank with $2 \times 10^7$ human LNCaP prostate cancer cells (ATCC CRL-1740) resuspended in 50% growth medium and 50% Matrigel. Twenty-nine days after inoculation, the mean tumor weight was about 200 mg. Animals were randomized into groups of six mice such that the mean tumor weights were similar between groups. Mice were administered 10% sucrose (vehicle control) or DTXL encapsulated in targeted nanoparticles, sb- DTXL, or DTXL (5 mg/kg) encapsulated in nontargeted nanoparticles every 4 days for a total of four doses. Tumor measurements and body weights were monitored twice weekly beginning on the first day of treatment. Tumor volume was determined by caliper measurements with the formula for an ellipsoid sphere ($L \times W^2/2 = mm^3$), where L and W refer to the larger and smaller perpendicular dimensions collected at each measurement. Tumor volume was converted to tumor weight assuming unit density ($1\ mm^3 = 1$ mg).