BIOLOGICAL ACTIVITY:

Taltobulin (HTI–286; SPA–110) is an analogue of Hemiasterlin; potent tubulin inhibitor; ADCs cytotoxin.

IC50 value:
Target: tubulin

in vitro: HTI–286 significantly inhibited proliferation of all three hepatic tumor cell lines (mean IC50 = 2 nmol/L +/- 1 nmol/L) in vitro. Interestingly, no decrease in viable primary human hepatocytes (PHH) was detected under HTI–286 exposure [1]. In all cell lines tested, HTI–286 was a potent inhibitor of proliferation and induced marked increases in apoptosis. Despite similar transcriptomic changes regarding cell death and cell cycle regulating genes after exposure to HTI–286 or docetaxel, array analysis revealed distinct molecular signatures for both compounds [2].

in vivo: Intravenous administration of HTI–286 significantly inhibited tumor growth in vivo (rat allograft model) [1]. HTI–286 significantly inhibited growth of PC–3 and LNCaP xenografts and retained potency in PC–3dR tumors. Simultaneous castration plus HTI–286 therapy was superior to sequential treatment in the LNCaP model [2].

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