Leptin Does Not Act Directly on Mammary Epithelial Cells in Prepubertal Dairy Heifers.
By Thorn et al., page 1467. Prepubertal heifers fed a high plane of nutrition have impaired mammary development. Leptin has been proposed to mediate this effect of nutrition on mammary development. Our results show that circulating leptin and local mammary leptin synthesis are elevated in prepubertal heifers fed a high plane of nutrition. Leptin did not, however, induce signaling events or inhibit cell proliferation in bovine mammary epithelial cells. We conclude that leptin does not act directly on mammary epithelial cells. Future studies are needed to investigate the possibility that other hormones could mediate the effect of nutrition on mammary development.