Dr. Heather A. Hartmann (Research Fellow)

Prostate cancer can be inhibited by inhibition of androgen synthesis, which is catalyzed mainly by P450 17A1 (i.e., formation of androstenedione and dehydroepiandrosterone, DHEA). However, P450 17A1 catalyzes partially processive 2-step oxidations of progesterone and pregnenolone, and the intermediate 17α-hydroxy products are needed for glucocorticoid synthesis. Screening strategies are being developed to identify selective inhibitors of the two reactions, with a goal of only inhibiting the 2-carbon lyase reaction.