

ICMC Congress, Paris May 7, 2018

Progress on a few promising non-hormonal targets

William BREMNER
University of Washington

A non-hormonal male contraceptive is a contraceptive that doesn't involve the administration of hormones or hormone blockers. This presentation will focus on the use of Lonidamine derivatives and inhibitors of retinoic acid biosynthesis and function as approaches to male non-hormonal contraception. Two current lonidamine derivatives, Adjudin and H2-gamendazole are in development as male contraceptives. These potent anti-spermatogenic compounds impair the integrity of the apical ectoplasmic specialization, resulting in premature spermiation and infertility. Another approach to male contraceptive development is the inhibition of retinoic acid in the testes, as retinoic acid signaling is necessary for spermatogenesis. The administration of the retinoic acid receptor antagonist BMS-189453 reversibly inhibits spermatogenesis in mice. Similarly, oral dosing of WIN 18,446, which inhibits testicular retinoic acid biosynthesis, effectively contracepts rabbits. Hopefully, one of these approaches to non-hormonal male contraception will prove to be safe and effective in future clinical trials.