Letrozole

Letrozole (INN, trade name Femara®) is an oral non-steroidal aromatase inhibitor that has been introduced for the adjuvant treatment of hormonally-responsive breast cancer. Estrogens are produced by the conversion of androgens through the activity of the aromatase enzyme. Letrozole blocks production of estrogens in this way by competitive, reversible binding to the heme of its cytochrome P450 unit. The action is specific, and letrozole does not reduce production of mineralo- or corticosteroids. In contrast, the antiestrogenic action of tamoxifen, the major medical therapy prior to the arrival of aromatase inhibitors, is due to its interfering with the estrogen receptor, rather than inhibiting estrogen production. Letrozole is approved by the United States Food and Drug Administration (FDA) for the treatment of local or metastatic breast cancer that is hormone receptor positive or has an unknown receptor status in postmenopausal women. Side effects include signs and symptoms of hypoestrogenism. There is concern that long term use may lead to osteoporosis, which is why prescriptions of Letrozole are often accompanied by prescriptions of osteoporosis-fighting medication such as Fosamax. Letrozole has shown to reduce estrogen levels by 98 percent while raising testosterone levels. The anti-estrogen action of letrozole is preferred by athletes and bodybuilders for use during a steroid cycle to reduce bloating due to excess water retention and prevent the formation of gynecomastia related breast tissue that is a side effect of some anabolic steroids. Usage above 2.5 mg/day is known to potentially temporarily kill sex drive. Above 5mg/day for extended periods may cause kidney problems. Letrozole has also been shown to delay the fusing of the growth plates in adolescents. This may boost the effectiveness of growth hormone, and thus Letrozole is used to treat adolescents and children with short stature.

SynZeal Research offers all Letrozole related impurities which certified COA with all characterization data like IR, Mass, HPLC purity, NMR & TGA report. We also provide CMR, DEPT and detailed structure characterization report as per requirements. Letrozole related products are being used by major pharmaceutical companies across the globe for their ANDA/DMF filing.