Fluoxetine

Fluoxetine was discovered by Eli Lilly and Company in 1972 and entered medical use in 1986. Fluoxetine hydrochloride is the first agent of the class of antidepressants known as selective serotonin-reuptake inhibitors (SSRIs). Fluoxetine is a racemic mixture of the R- and S-enantiomers and are of equivalent pharmacologic activity. Despite distinct structural differences between compounds in this class, SSRIs possess similar pharmacological activity. As with other antidepressant agents, several weeks of therapy may be required before a clinical effect is seen. SSRIs are potent inhibitors of neuronal serotonin reuptake. They have little to no effect on norepinephrine or dopamine reuptake and do not antagonize a- or ß-adrenergic, dopamine D2 or histamine H1 receptors. During acute use, SSRIs block serotonin reuptake and increase serotonin stimulation of somatodendritic 5-HT1A and terminal autoreceptors. Chronic use leads to desensitization of somatodendritic 5-HT1A and terminal autoreceptors. The overall clinical effect of increased mood and decreased anxiety is thought to be due to adaptive changes in neuronal function that leads to enhanced serotonergic neurotransmission. Side effects include dry mouth, nausea, dizziness, drowsiness, sexual dysfunction and headache. Side effects generally occur within the first two weeks of therapy and are usually less severe and frequent than those observed with tricyclic antidepressants. Fluoxetine may be used to treat major depressive disorder (MDD), moderate to severe bulimia nervosa, obsessive-compulsive disorder (OCD), premenstrual dysphoric disorder (PMDD), panic disorder with or without agoraphobia, and in combination with olanzapine for treatment-resistant or bipolar I depression. Fluoxetine is the most anorexic and stimulating SSRI.

SynZeal Research offers all Fluoxetine 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. Fluoxetine related products are being used by major pharmaceutical companies across the globe for their ANDA/DMF filing.

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