Isavuconazole

National Cancer Institute

Source

National Cancer Institute. Isavuconazole. NCI Thesaurus. Code C64543.

A water-soluble triazole prodrug with broad-spectrum antifungal activity. Isavuconazole is absorbed easily, given either orally or intravenously, and is hydrolyzed to its active moiety BAL4815 by plasma esterases. BAL4815 inhibits fungal cytochrome P450 lanosterol 14-alpha-demethylase (CYP51) that catalyzes the conversion of lanosterol to ergosterol, an important component of the fungal cell membrane. Enzyme inhibition by this agent leads to a decrease in ergosterol pool and therefore disturbs synthesis of fungal cell membrane, thereby increasing cell membrane permeability and promoting loss of essential intracellular elements. This ultimately causes fungal cell lysis and death.