**Indole (Synthetic/Natural) as potential antifungal agents**

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During the last decades, the frequency of fungal infections has increased due to more intensive and cytotoxic chemotherapies. A number of antifungal drugs are already available in the market but drug resistance has opened up new opportunities against fungal infections. The natural products are gaining considerable attention as potential leads for designing novel therapeutic agents. Indole alkaloids represent the most significant and emerging class of antifungals. Despite the decreasing interest of modern pharmaceuticals in pursuing natural products as leads for new medicine, indole alkaloids have gained considerable attention as potential leads for therapeutics. The isolation, characterization and identification of bioactive profile is complex due to their diversified sources such as plants, fungi, bacteria, sponges, tunicates and bryozoans.Among the synthetic compounds, azoles represent the major category of antifungal drugs being used but current research era is opening up newer insights towards hybrid compounds. Indole and its hybrids with pyrimidines, triazole, imidazole are gaining attention of researchers towards the synthesis of new indole containing antifungal agents. Understanding the pathway of development of resistant towards antifungals is an important aspect of designing newer antifungal agents. This chapter will focus on various underlying mechanisms involved in developing resistance towards antifungal drugs as well as on new emerging natural and synthetic indole containing drugs as antifungals.

**Keywords:** Indole, drug resistance, antifungal, synthetic, natural products.

Content

1. Introduction
2. Structure activity relationship and related mechanism of action as an antifungal agents
3. Indole drugs as potential antifungal agents
4. Conclusion
5. references