15.2 MATERIALS AND METHODS

15.2.1 Collection and Identification of Plant Material

Pogostemon mollis was collected from Kattapettu, Ooty, Tamil Nadu. The taxonomic identity of the plant was confirmed from the Botanical Survey of India, Southern Regional Centre, Coimbatore, Tamil Nadu. An herbarium of the specimen was submitted to the Department of Botany, Bharathiar University, Coimbatore (BUBH-006242). The aerial parts of the plant were collected, washed under running tap water to remove the surface pollutants and air-dried under shade separately. Then they were homogenized into fine powder using a mixer and grinder, which was kept for further studies.

15.2.2 Chemicals

The chemicals were obtained from Himedia Laboratories, Mumbai; Sisco Research Laboratories (SRL), Mumbai; Merck, Bengaluru and Sigma Aldrich, United States. All the chemicals and solvents used in this study were of analytical and HPLC grade.

15.2.3 Extraction of Plant Material

The powdered sample was packed into small thimbles and extracted successively with different organic solvents, ethyl acetate, acetone and methanol in an increasing order of polarity using a Soxhlet apparatus. Each time before extraction with the next solvent, the thimble was dried in hot air oven below 40°C. These different solvent extracts were concentrated by a rotary vacuum evaporator (Equitron, Medica Instruments Mfg. Co., India) and then air-dried. The dried extracts were collected, weighed and stored in deep freezer (–20°C) for further studies.

15.2.4 Antifungal Activity

The strain *Fusarium graminearum* (MTCC-2089) was used for the antifungal activity. Czapek-Dox broth was used to prepare the mother culture of each of the fungal strains. This culture was used to streak the PDA media prepared in petriplates. Later, the wells were made and blocked with agar. The extracts (20 µg) were added to the wells. Standard antibiotic amphotericin b (10 µg) was added to the well in the centre. The plates were kept in 37–40°C for incubation. After 4 to 5 d, fungal growth was monitored and the zone of inhibition was measured.

15.2.5 Anti-Mycotoxigenic Activity

An anti-mycotoxigenic test was carried out to further analyse the effects of the plant extracts on the growth of the fungi.