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Special Issue Reprint

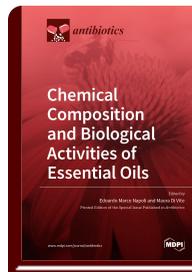
Chemical Composition and Biological Activities of Essential Oils

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Essential oils extracted by the distillation or hydrodistillation of aromatic plants are a complex mixture of volatile compounds with several biological activities. Their efficacy as antimicrobial agents is related to the activity of several natural compounds belonging to different chemical families that can act both in synergy with each other and with other antibiotics. The antibiotic resistance detected among pathogens has been quickly increasing in recent years, and the control of some of these microorganisms is becoming a planetary emergency for human and animal health. The control of the microbial growth is a problem of great importance also for the food industry (food deterioration and shelf life extension) and for the world of cultural heritage (indoor and outdoor phenomena of biodeterioration). Essential oils can play an important role in this scenario, due their recognized broad-spectrum antimicrobial activity. Therefore, the main subject of this Special Issue includes an essential oil-based approach to control microorganisms in areas such as human and veterinary medicine, entomology, food industry and agriculture. In addition, the chemical composition of essential oils from endemic and rare medicinal/aromatic plants, nanoformulations of essential oils, applications in human and veterinary medicine and its use as animal feeding supplements are topics covered in this Special Issue



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