

## **The Role of Medicinal and Aromatic Plants against Obesity and Arthritis: A Review**

### **ABSTRACT**

Obesity is a significant health concern, as it causes a massive cascade of chronic inflammations and multiple morbidities. Rheumatoid arthritis and osteoarthritis are chronic inflammatory conditions and often manifest as comorbidities of obesity. Adipose tissues serve as a reservoir of energy as well as releasing several inflammatory cytokines (including IL-6, IFN- $\gamma$ , and TNF- $\alpha$ ) that stimulate low-grade chronic inflammatory conditions such as rheumatoid arthritis, osteoarthritis, diabetes, hypertension, cardiovascular disorders, fatty liver disease, oxidative stress, and chronic kidney diseases. Dietary intake, low physical activity, unhealthy lifestyle, smoking, alcohol consumption, and genetic and environmental factors can influence obesity and arthritis. Current arthritis management using modern medicines produces various adverse reactions. Medicinal plants have been a significant part of traditional medicine, and various plants and phytochemicals have shown effectiveness against arthritis and obesity; however, scientifically, this traditional plant-based treatment option needs validation through proper clinical trials and toxicity tests. In addition, essential oils obtained from aromatic plants are being widely used as for complementary therapy (e.g., aromatherapy, smelling, spicing, and consumption with food) against arthritis and obesity; scientific evidence is necessary to support their effectiveness. This review is an attempt to understand the pathophysiological connections between obesity and arthritis, and describes treatment options derived from medicinal, spice, and aromatic plants.