Cannabinoids and Multiple Sclerosis: A Critical Analysis of Therapeutic Potentials and Safety Concerns

Rana A. Nouh*, Ahmed Kamal*, Ammar Abdelnasser

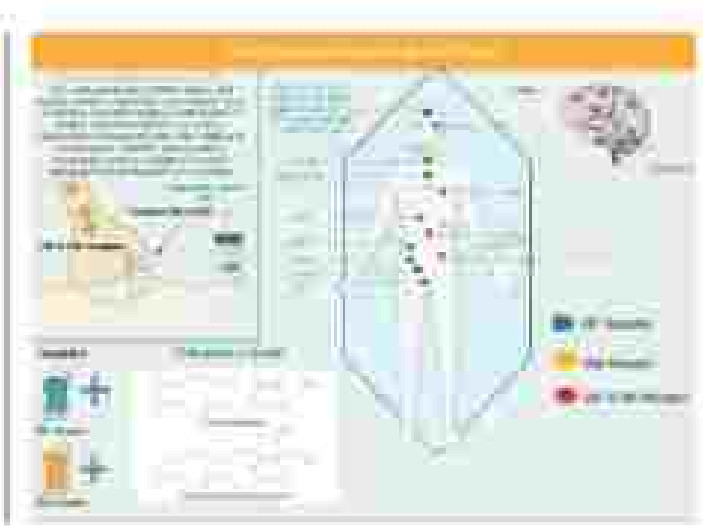
Abstract:

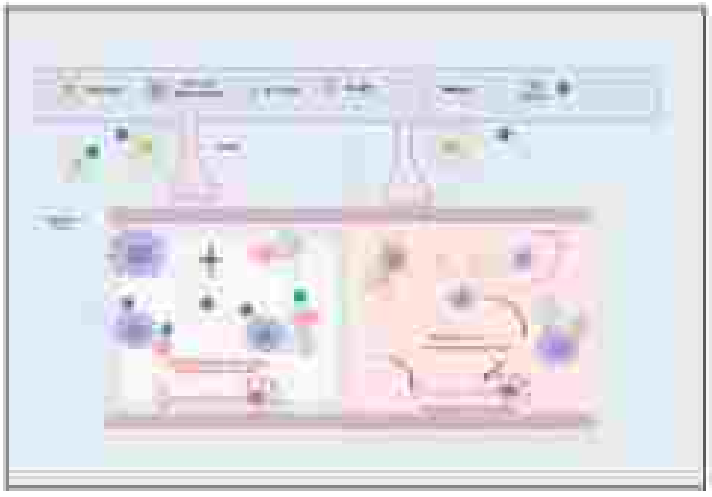
Multiple sclerosis (MS) is a complicated condition in which the immune system attacks myelinated areas in the Central Nervous System (CNS), destroying both myelin and axons to varying degrees. Several environmental, genetic, and epigenetic factors influence the risk of developing the disease and how well it responds to treatment. Cannabinoids have recently sparked renewed interest in their therapeutic applications, with growing evidence for their role in symptom control in MS. The double nature of cannabinoids, which causes both positive and negative effects, comes from their actions on the same receptor. Several medications have been adapted to alleviate the effect. However, there are still numerous limitations to using cannabinoids to treat MS patients. In the review, we will explore and discuss the molecular effect of cannabinoids on the ECS system, the various factors that affect the response to cannabinoids in the body, including the role of gene polymorphism and its relation to dosage, assessing the positive over the adverse effects of cannabinoids in MS, and finally exploring the possible functional mechanism of cannabinoids in MS and the current and future progress of cannabinoid therapeutics.

Image

Recent Publications

1. Nouh, R. A., Kamal, A., & Abdelnasser, A. (2023). Cannabinoids and Multiple Sclerosis: A Critical Analysis of Therapeutic Potentials and Safety Concerns. *Pharmaceutics*, *15*(4), 1161.
2. Farag, M. A., Mansour, S. T., Nouh, R. A., & Ghattas, A. R. (2023). Crustaceans (shrimp, crab, and lobster): A comprehensive review of their potential health hazards and detection methods to assure their biosafety. *Journal of Food Safety*, *43*(1), e13038.\n\nSchmachtMS, Chaudhry, Choudhry\nMA (2008) Acute exercise intoxication potentiates neutrophil-mediated intestinal tissue damage after burn injury. Shock 29: 577
3. Ibrahim, M.K., Kamal, M., Thiamoo, R., Noor, R.A., Tan, J. and Sajad, M., 2020. Effects of chronic caffeine administration on behavioral and molecular adaptations to sensory context model-induced stress in adolescent male mice. *Behavior genetics*, *50*, pp.374-388.
4. Ibrahim, M.K., Thiamoo, R., Kamal, M. and Sajad, M., 2020. Testosterone cholecalciferol effects on behavior and cognitive functions in male swiss albino mice exposed to Chronic Social Defeat. *Research Journal of Pharmacy and Technology*, *13*(12), pp.6041-6046.







Biography:

Dr Roua possesses specialized knowledge in the field of evaluation and demonstrates a strong commitment to enhancing health and wellbeing. The individual's area of focus lies in the assessment of the efficacy of natural substances in the prevention and treatment of various diseases, with a particular expertise in the identification of gene expression and drug activity.

Email: roua@aucegypt.edu