



COVID-19:
ORIGIN, IMPACT AND MANAGEMENT
PART 1



Editors:
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COVID-19: Origin, Impact and Management

(Part 1)

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CHAPTER 2

Hypothetical Study on Organophosphates and SARS-CoV-2 Collaborating in Causing Several Respiratory and Immune Diseases for Future Generation: A Review

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Abstract: Increasing population and increased intensity of crop production led to the invention of pesticides, among which organophosphates are extensively commercialized and used as commercial pesticides. Their toxicity leads to millions of deaths every year. The insecticide enters the food web and inhibits acetylcholinesterase enzyme production, which upturns into respiratory dysfunctioning and immuno-toxic production. SARS-CoV-2, a natural micro immuno-toxin, serves a similar mechanism over our body. It affects both the respiratory system and autoimmunity. The scope of this review article is to brief and explain the mechanism and relation between these two co-partners and their futuristic impact on the world. Henceforth, it is also recommended to utilize cost-effective homemade natural pesticides and integrated farming practices to provide secure and healthy food production and curb the future health hazards caused by SARS-CoV-2 and organophosphates.

Keywords: Immune-toxins, Natural Pesticides, Organic Farming, Organophosphates, Pesticides, SARS-CoV-2.

INTRODUCTION

Pesticides, an ingredient that prevents, destroys, repels, or mitigates any pest, are classified as Herbicides, Rodenticides, Fungicides, and Bactericides used to control pest-induced diseases and improve crop yields. These dominant factors are the leading cause of using pesticides. But, after the famous identification of Bernardino Ramazzini that farmers are prone to Ramazzini's syndrome (an acute

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Dr. Tahmeena Khan is currently working as an assistant professor, in the Department of Chemistry, Integral University. She did M.Sc., and holds a specialization in inorganic chemistry. She did her M.Phil. in magnetic resonance spectroscopy and magnetic resonance imaging and worked on automated 3D structure determination of proteins for her dissertation. For her doctoral degree, she worked on mixed ligand-metal and mixed metal-ligand complexes of thiosemicarbazones and their therapeutic properties. She holds fifteen years of teaching experience and has published more than forty research papers and twenty book chapters. She also has two international books and two national books as editor and two books as author to her credit. Dr. Khan is also a life member of several academic bodies. She has keen interest in medicinal and environmental chemistry.