

International Conference on Global Infectious Diseases and Clinical Vaccines (ICGDC-2025)

Conference Proceedings

May 08, 2025 - Florida, USA

Gastroenteritis Impact on General Health and Proper Approach

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This implies that the root cause of each phenomenon lies within the specific system structure – the set of rules and variables that govern the behavior of each type of decision-maker. Agent-based modeling, an entirely bottom-up approach, enables us to construct artificial societies that mirror this principle. In these models, the cause of a macro-level phenomenon is expressed in terms of the model's structure: the set of factors essential for reproducing the phenomenon's key characteristics. Through systematic computer experiments, we can identify these crucial factors and, consequently, uncover the underlying causal mechanisms of the phenomenon's emergence. I term this approach "mechanism-oriented agent-based modeling" and propose it as a valuable scientific methodology for investigating the causes of various social phenomena. This methodology's applicability extends beyond social systems. In biological systems, such as the human body, disease and recovery are driven by the roles and interactions of individual components. This presentation outlines the principles and procedures of mechanism-oriented agent-based modeling. To illustrate its application, I present a pandemic model that simulates infection and recovery processes at the individual level, incorporating heterogeneity in immunity and antibody levels. My analysis revealed that the most critical factor in pandemic convergence is the immune-boosting effect of fever.