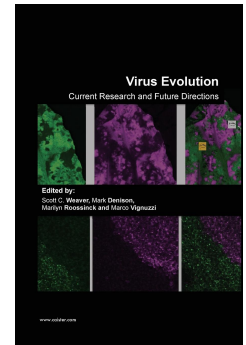


Virus Evolution

Current Research and Future Directions



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The field of virus evolution has developed during the past three decades from one considered by many to be esoteric and unimportant for human and agricultural health, to a major driver of our thinking about infectious diseases of plants and animals. The field has been spurred on during the past 30 years by emerging viral diseases such as HIV/AIDS, hantaviruses, SARS, MERS and Ebola, and discoveries of the quasispecies nature and potential for rapid evolution and diversification of RNA virus populations. Over time the focus of research has expanded and developed to encompass a diverse mixture of approaches: from highly theoretical and mechanistic studies of the basic evolutionary mechanisms to detailed research on the molecular host range and virulence changes responsible for emerging viral diseases.

This timely book addresses a wide range of current questions and research approaches at the forefront of the field and highlights recent advances in our understanding of the history and mechanisms of virus evolution. Wherever possible authors have integrated information from the study of plant, animal and bacterial viruses. Every effort has been made to unify findings and to highlight the diversity in patterns and modes of virus evolution between systems in order to aid comparative analysis. Essential reading for everyone working on virus evolution and emerging viral diseases, the book is also recommended reading for anyone working in the area of viral pathogenesis.

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