Antiviral Drug Discovery and Development [

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Monografía

This book summarizes state-of-the-art antiviral drug design and discovery approaches starting from natural products to de novo design, and provides a timely update on recently approved antiviral drugs and compounds in advanced clinical development. Special attention is paid to viral infections with a high impact on the world population or highly relevant from the public health perspective (HIV, hepatitis C, influenza virus, etc.). In these chapters, limitations associated with adverse effects and emergence of drug resistance are discussed in detail. In addition to classical antiviral strategies, chapters will be dedicated to discuss the non-classical drug development strategies to block viral infection, for instance, allosteric inhibitors, covalent antiviral agents, or antiviral compounds targeting proteinâprotein interactions. Finally, current prospects for producing broad-spectrum antiviral inhibitors will be also addressed. The book is distinctive in providing the most recent update in the rapidly evolving field of antiviral therapeutics. Authoritative reviews are written by international scientists well known for their contributions in their topics of research, which makes this book suitable for researchers not only within the antiviral research community but also attractive to a broad audience in the drug discovery field. This book covers molecular structures and biochemical mechanisms mediating the antiviral effects, while discussing various ligand design strategies, which include traditional medicinal chemistry, computational chemistry, and chemical biology approaches. The book provides a comprehensive review of antiviral drug discovery and development approaches, particularly focusing on current innovations and future trends.

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