

PRINCIPLES OF Virology 4TH EDITION

Teaching introductory virology by emphasizing shared principles

Principles of Virology is the leading virology textbook because it does more than collect and present facts about individual viruses. Instead, it facilitates an understanding of basic virology by examining common processes and principles. Using a set of representative viruses to illustrate viral complexity, this rational approach enables students to understand viral reproduction and provides the tools for future encounters with new or understudied viruses.

This new edition is fully updated to represent the rapidly changing field of virology. A major new feature of this edition is the inclusion of 26 video interviews with leading scientists who have made significant contributions to the field of virology. These in-depth interviews, conducted by Vincent Racaniello, provide the background and thinking that went into the discoveries or observations connected to the concepts being taught in this text. Students will discover the personal stories and twists of fate that led the scientists to work with viruses and make their seminal discoveries.

Principles of Virology is ideal for teaching the strategies by which all viruses reproduce, spread within a host, and are maintained within populations. It is

appropriate for undergraduate courses in virology and microbiology as well as graduate courses in virology and infectious diseases. *Volume I: Molecular Biology* covers the molecular biology of viral reproduction. *Volume II: Pathogenesis & Control* addresses the interplay between viruses and their host organisms. The two volumes can be used for separate courses or together in a single course. Each includes a unique appendix, glossary, and links to Internet resources such as websites, podcasts, and blogs.

"Principles of Virology is an extremely valuable and highly informative textbook that describes virology at the interface of modern cell biology. Instead of teaching virus groups individually, the authors elegantly compile the molecular and cell biological aspects that orchestrate virus replication in general and how infections with these pathogens cause cell damage and diseases. As a teacher of graduate students in biosciences and in human medicine, I highly recommend this textbook."

Ralf Bartenschlager, Department Head and Professor,
Molecular Virology, University of Heidelberg



Jane Flint is a Professor of Molecular Biology at Princeton University. Dr. Flint's research focuses on investigation of the molecular mechanisms by which gene products of adenoviruses modulate host cell pathways and antiviral defenses to allow efficient reproduction in normal human cells.

Vincent Racaniello is Higgins Professor of Microbiology & Immunology at Columbia University Medical Center. Dr. Racaniello has been studying viruses for more than 35 years, including poliovirus, rhinovirus, enteroviruses, and hepatitis C virus. Dr. Racaniello blogs about viruses at virology.ws and is host of the popular science program *This Week in Virology*.

Glenn Rall is a Professor in the Blood Cell Development and Function Program and the Associate Chief Academic Officer and Director of the Postdoctoral Program at the Fox Chase Cancer Center. Dr. Rall's laboratory studies viral infections of the brain and the immune responses to those infections, with the goal of defining how viruses contribute to disease in humans.

Anna Marie Skalka is a Professor and the W.W. Smith Chair in Cancer Research at Fox Chase Cancer Center, Director Emerita of the Institute for Cancer Research, and an Adjunct Professor at the University of Pennsylvania. Dr. Skalka's major research interests are the molecular and biochemical aspects of retrovirus genome replication and insertion in the host cell.



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