

Interdisciplinary volume on biological rhythms serves as both primer and in-depth resource

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A variety of organisms—from bacteria and fungi to plants and animals—have biological rhythms, where the timing and duration of fundamental biological processes is naturally adjusted to allow them to adapt and survive, even under fluctuating environmental conditions. In recent years, significant advances have been made to understand the molecular basis of these rhythms and how they translate into modifications in cellular physiology and organismal behavior.

A new book from Cold Spring Harbor Laboratory Press, *Clocks and Rhythms*, reviews the latest advances in biological clocks and rhythms across a broad range of species and biological disciplines. Chapters in the book are based on presentations by world-renowned investigators at the 72nd annual Cold Spring Harbor Symposium on Quantitative Biology at Cold Spring Harbor Laboratory, which was attended by 316 scientists from more than 20 countries.

"Since the discovery and cloning of the first clock gene, period, more than 20 years ago, tremendous progress has been made about the nature of the clock and how it functions in a wide variety of different plants and animals," wrote the meeting organizers, Bruce Stillman, David Stewart, and Terri Grodzicker, in the Foreword to the book. "Research previously limited to describing 'the hands of the clock' has been enormously successful in recent years in describing the inner anatomy and mechanism of the clock in individual cells and in the whole

organism."

The first section of *Clocks and Rhythms* provides an overview of the field of biological rhythms, providing an introduction to the field of chronobiology, as well as primers on the molecular basis of biological rhythms, pacemakers, and sleep. Subsequent sections of the book offer in-depth discussions on specific topics, including genetic and cellular studies aimed at characterizing circadian mechanisms; systems approaches to understanding physiological, endocrine, and neural networks; and models used for studying mental and physical cycles. A variety of normal and abnormal chronobiological patterns are discussed, including sleep, aging, migration, hibernation, seasonality, depression, and arrhythmias.

Clocks and Rhythms is also available online (www.cshl-symposium.org).

Source: Cold Spring Harbor Laboratory

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