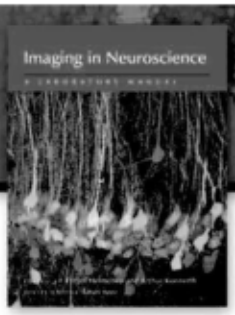

Imaging in Neuroscience

A Laboratory Manual

Edited by Fritjof Helmchen, *Brain Research Institute, University of Zurich, Switzerland,* and Arthur Konnerth, *Institute for Neurosciences, Technical University Munich, Germany;* Series Editor, Rafael Yuste, *Howard Hughes Medical Institute, Columbia University*

As imaging technologies have revolutionized research in many areas of biology and medicine, neuroscientists have often pioneered the use of these new visualization techniques. *Imaging in Neuroscience: A Laboratory Manual,* part of Cold Spring Harbor Laboratory Press' *Imaging* series, provides the definitive collection of methods in use in this groundbreaking field. With over 90 chapters, the manual offers a depth of coverage unavailable from any other source. Sections focus on imaging at the molecular level, axons and nerve terminals, spines and dendrites, neurons and circuits in vitro, neurons and circuits in vivo, glia, brain dynamics, and behavior and brain pathology. Protocols range from basic techniques such as maintaining live cells and tissue slices during imaging to recent breakthroughs in optogenetics, uncaging, calcium imaging and imaging neuronal activity. *Imaging in Neuroscience: A Laboratory Manual* is an essential guide to discovering and implementing these techniques in the neuroscience laboratory.

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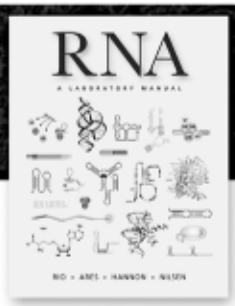
CONTENTS



RNA A LABORATORY MANUAL

By Donald C. Rio, *University of California, Berkeley*; Manuel Ares, Jr., *University of California, Santa Cruz*; Gregory J. Hannon, *Cold Spring Harbor Laboratory*; and Timothy W. Nilsen, *Case Western Reserve University School of Medicine*

RNA molecules participate in and regulate a vast array of cellular processes, and the scientific community is now entering a new era in which some aspect of RNA biology—as a tool, a therapeutic, a diagnostic, or part of a fundamental process—is becoming increasingly important. But initiating RNA research can be intimidating, and without a thorough understanding of the challenges and complexities inherent in handling this fragile nucleic acid, forays into the RNA world can be quite frustrating. *RNA: A Laboratory Manual* provides a broad range of up-to-date techniques so that any investigator can confidently handle RNA and carry out meaningful experiments, from the most basic to the most sophisticated. Originating in four of the field's most prominent laboratories and written with novices as well as more advanced researchers in mind, this manual provides the necessary background and strategies for approaching any RNA investigation in addition to detailed step-by-step protocols and extensive tips and troubleshooting information. *RNA: A Laboratory Manual* will enable any researcher to approach a wide variety of RNA-related problems with confidence and a high expectation of success.

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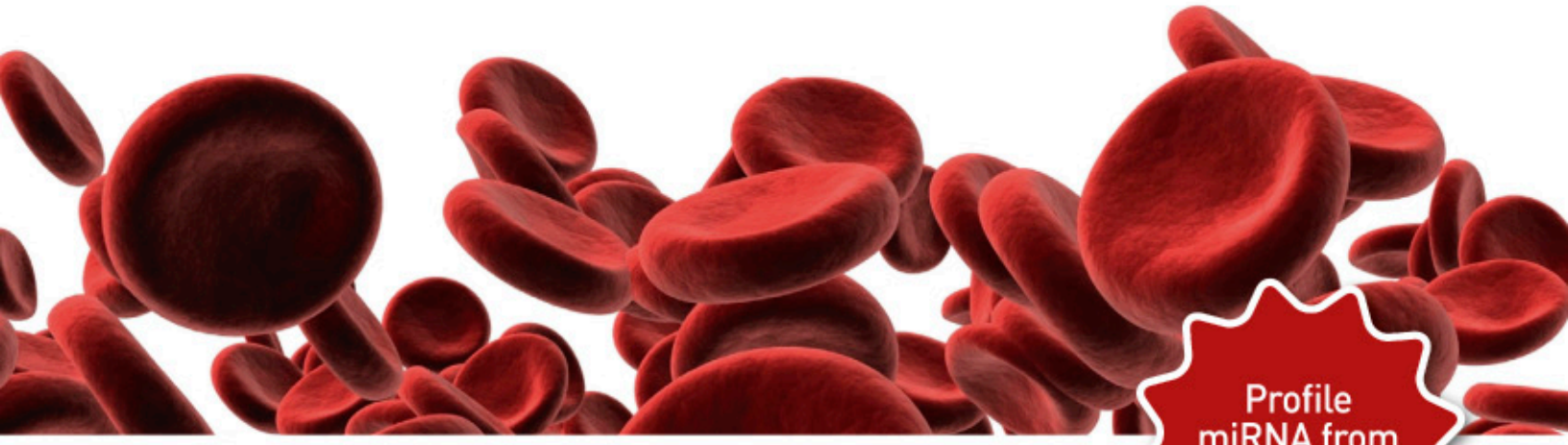

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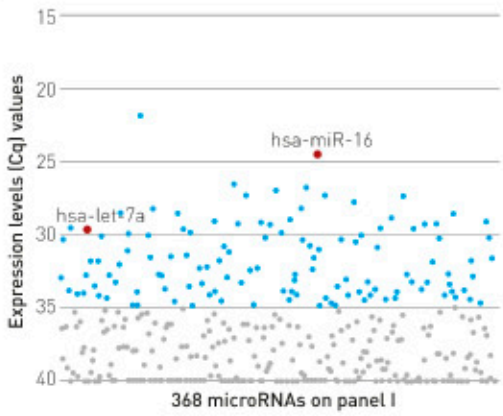

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This position will also afford the successful applicant an opportunity to obtain postdoctoral training in the context of a leading community of RNA scientists at UMass Medical School.

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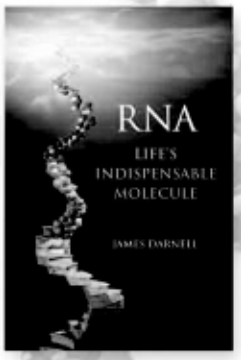
RNA
Life's Indispensable Molecule



By James Darnell, *The Rockefeller University*

In *RNA: Life's Indispensable Molecule,* Jim Darnell provides a comprehensive and captivating account of RNA research, illuminated by his own life-long and celebrated engagement in the field. Darnell describes how scientists unraveled fundamental questions about the biochemical and genetic importance of RNA—how mRNAs are generated and used to produce proteins, how noncoding and catalytic RNAs mediate key cellular processes, and how RNA molecules likely initiated life on Earth. With a scope extending from the early 20th century to the present day, and with the clarity expected from an accomplished textbook author, he conveys the intellectual context in which these questions first arose and explains how the key experiments were structured and answers obtained. The book is geared towards scientists from the graduate level on up, and will particularly appeal to active investigators in RNA biology, educators of molecular biology and biochemistry, and science historians.

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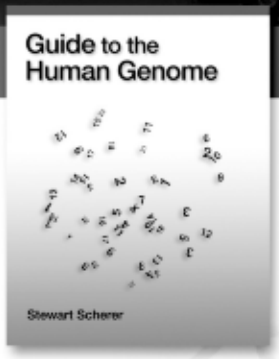

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