
Preface

In 2009, the Nobel Prize in Physiology or Medicine was awarded to Drs. Elizabeth H. Blackburn, Carol W. Greider, and Jack W. Szostak for their pioneering work on telomeres and telomerase, nearly 40 years after the first identification of telomeres. Our knowledge of the telomerase and how telomeres are maintained has continued to grow, thanks in no small part to the ever-expanding tools and platforms that are available to investigators. It is clear that telomere maintenance is critically linked to cell growth, proliferation, aging, and diseases such as cancer. Active investigations are underway to untangle the complex signaling events that lead from telomere dysfunction to premature aging and carcinogenesis.

In the second volume of *Telomeres and Telomerase* book (MiMB Vol. 735), a variety of assays were presented that allowed investigators to query the activity of telomerase, function of telomere proteins, and the responses of the telomere DNA. Further advances in technology have equipped us with new and improved assays that enable us to ask fundamental questions of telomere regulation in diverse model systems. This volume aims to expand the scope further, incorporating some of the newest technologies in the field. This combination of genetic, proteomic, genomic, biochemical, and molecular approaches will afford us unprecedented insight into the complex protein interaction networks at work on the telomere chromatin, and the detailed information regarding telomere dynamics in response to stress or stimuli.

These protocols are detailed and easy to follow. It is our belief that this work will prove useful and informative.

Houston, TX, USA

Zhou Songyang

Telomeres and Telomerase

Methods and Protocols

SONGYANG, Z. (Ed.)

2017, XI, 218 p. 37 illus., 18 illus. in color., Hardcover

ISBN: 978-1-4939-6891-6

A product of Humana Press