

Book Reviews

doi:10.1017/S0016672307008737

Translational Control in Biology and Medicine. Eds. M. B. Mathews, N. Sonenberg & J. W. B. Hershey. Cold Spring Harbor Laboratory Press. 2007. 934 pages. ISBN 0 87969 767 9. Price \$135. (hardback)

The popular molecular biology and genetics text books by-and-large convey the impression that the control of gene expression is essentially achieved through the modulation of transcription. Except this is not strictly true. As is amply illustrated by this excellent new edition of the Cold Spring Harbor Laboratory Press monograph on Translational Control, numerous post-transcriptional control mechanisms have now been identified from studies on viral, unicellular and multicellular model systems, many of which act via modulation of the translational machinery.

When the first edition of Translational Control appeared just over a decade ago, several mRNA-specific and global translational control systems had been identified that largely operated through modifications to the translation initiation machinery, specifically the initiation factors eIF2 and eIF4. In the subsequent decade, which has taken in a second edition of this monograph in 2000, many new types of translational control mechanism have emerged and we can now more fully appreciate the range of cellular and disease processes that involve and exploit such levels of control. In this new (third) edition, the three editors (who have remained the same through all three editions) have revamped the focus of the monograph to take into account many of these new developments, especially those relating to human health and disease. Consequently, among the 30 chapters that make up this near 900 page monograph, we find chapters dealing with subjects ranging from apoptosis through to signal transduction and cancer with the final chapter describing the opportunities translation-based targets hold for new drug discovery.

As the editors point out in their preface, this is not a book that should necessarily be read from cover-to-cover. There is no obvious conceptual framework which defines the order the chapters are arranged in; for example Chapter 5 deals with how internal ribosome entry sites (IRES) facilitate translation of

viral mRNAs in infected cells, yet it is not until Chapter 20 that we get an overview of translational control during viral infection. But this is not a criticism nor a problem for the reader as each Chapter provides a self-contained, authoritative and impressively up-to-date account of a specific area of translational control. The editors are to be congratulated on assembling an outstanding collection of contributions and contributors. While which chapters you choose to read will undoubtedly reflect your specific interests, I would encourage all to read the opening chapter written by the editors where they provide a highly readable review of the origins, mechanisms and targets of translational control and in so doing provide an important historical context for readers new to this 'hot' topic.

Even if you already have the previous edition of Translational Control (as I do), then that should not inhibit you from buying this new edition; it is not just an updated version of the previous editions. The editors have introduced a significant number of new topics, some of which (for example, microRNAs) were not yet on the radar in 2000. Where topics have been covered in the previous edition(s), they have succeeded in their stated aim of getting chapters that are "stimulating, edifying and authoritative" and in several cases have used different authors to 'ring the changes'. And if you are one of those 'students' of molecular biology and genetics brought up on a diet of transcriptional control, this book will provide you with a tasty and equally satisfying second course.

MICK F. TUIITE

*Department of Biosciences
University of Kent*

doi:10.1017/S0016672307008749

Bioinformatics for Geneticists: A Bioinformatics Primer for the Analysis of Genetic Data. 2nd Edn. Ed. M. R. Barnes. Wiley. 2007. 528 pages. ISBN 978-0-470-02620-5. Price £45. (paperback)

Put a group of bioinformaticians in a room and the chances are that the skill base for each of them will differ considerably, even those involved in genetics based projects. By the nebulous definition