

Transgenesis techniques
Principles and protocols
Elizabeth J. Cartwright (Ed)
Humana press, Totowa, NJ, USA
Series: Springer Protocols
Methods in Molecular Biology,
Volume 561, 2009
Pages: 336; €93.55
ISBN: 978-1-60327-018-2

Elizabeth J. Cartwright, from the University of Manchester, states that this volume "... is designed to become an invaluable source of information in any lab currently involved in transgenic techniques, as well as for researchers who are newcomers to the field". I am pretty sure that the reader will be satisfied about this sentence and in agreement with both the volume's Editor and the writer of this review that what so unconditionally stated exactly match both the volume contents and qualities. Even the Preface section of the book is quite interesting (there are no sentences trying to convince the reader of the stunning merits of the volume and why it is worth to spend money to get it), being a very brief and concise historical summary of the transgenic technologies clearly explaining the great potential we hold to understand gene functioning and to artificially manipulate it. To be more than a perfect Preface (as it is!) I would had liked to read just a few words relating transgenesis to synthetic biology. The book is devoted for a great part to transgenesis in the mouse (Part II, sixteen chapters), many chapters dealing with the generation of genetically

modified mice by injection of exogenous DNA into the pronuclei of fertilised eggs, not forgetting details that often are not put in light (e.g., from surgical details till the colture of ES cells to maintain their stemness). Unfortunately, a chapter devoted to sperm-mediated transgenesis is missing. Two chapters are devoted to the generation of chimaeras (such a powerfull methodology in the hands of Biology but able to create fears for laypeople when applied to human reagents). Chapter 16 describes the use of Cre/loxP and flp/rtt site-specific recombination systems but others systems are presented too. The last three chapters deal with essential information: husbandry, archiving, maintaining and distributing mutant laboratory mice. For those colleagues whose favoured experimental animal is not mouse there are (Part I, five chapters) state of the art presentations dealing with *Drosophila*, *Caenorabditis*, *Xenopus*, zebrafish and rat transgenesis studies. By choosing to cover the whole zoo of the most popular experimental animals, prof. Cartwright payed attention to the entire scientific community and to the newcomers. Well done. Since we share with all these animals the very great part of our 20,000 – 25,000 coding genes it is a great chance for the youngest researchers to learn more and more of transgenesis in a comparative scenario, so we can run fast and furiously toward not only a full understanding of gene functioning but to a range of applications for the benefit of our health.

CarloAlberto Redi
University of Pavia, Italy