Anthony Atala (ed): Progenitor and Stem Cell Technologies and Therapies

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The book edited by Dr. Atala is a compilation of well selected chapters that focus on three important aspects of the stem cell field. The first section examines basic principle of stem and pluripotent stem cell biology, the second section looks at issues related to using these cells in a clinical setting and the third section is related to specific stem cell populations and their uses.

This is a distinct lay-out that is different from what is commonly seen and in this readers eyes has both strengths and weaknesses. I like the overview it provides of the field and allows one to compare and contrast the issues related to each cell type. One the other hand it makes for jerky reading just as one is settling in to read about mesenchymal cells one is urged to flip to studying embryonic cells and it is hard to get a detailed look at any one cell population that a more focused book might provide. The data is there but scattered across multiple chapters.

Nevertheless I find the book very useful. The chapter on the IP landscape and the chapter on regulatory issues for example are comprehensive and provide a wealth of information. Likewise the chapter on commercializing stem cells with its detailed discussion on business models and references is a unique and useful resource. Likewise the chapter on basic

principles of cells culture provides a very nice introduction to the issues related to cell culture.

One other feature of this book that distinguishes it from other books in the field is its relative balance between pluripotent stem cells and adult somatic cells. This is in contrast to many other stem cell books that offer a similar lopsided but reversed ratio. Perhaps this reflects the current reality of the field where the number of companies that promote adult stem cells, the number of publications in the stem cell field related to adult cells and the number of clinical trials in adult stem cells outnumber those in pluripotent stem cells by a ratio of perhaps 30–30 to 1. However, the ratios are changing and given the normal life of a book designed for a wide audience I would have expected a more balanced approach. Any reader who would purchase this book to understand PSC biology would be wise to consider additional books to supplement their knowledge.

On the other hand there are very few books currently available that offer a balanced coverage of multiple adult stem cell types. Books focused n single cell types such as Mesenchymal cells or cord blood cells exist but none provide the balanced coverage and the ability to look at the big picture that this book provides. I would recommend this book to anyone looking at translational work with cell-based therapy. In a few succinct chapters the reader will understand who works in the field, what the issues with starting the cell culture process are, what alternative cell types exist and how to navigate the complex terrain of regulatory and licensing requirements.

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