





River Publishers Series in Biotechnology and Medical Research

Adult Stem Cell Standardization

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ISBN: 9788792329745

Available From: November 2011

Price: € 90.00

Description:

Stem cell research and technology represent a major challenge for treating otherwise non-curable patients. A decade of intensive research has demonstrated that initial hopes based more on the will to succeed than on solid scientific bases can be translated into factual techniques only by adopting more rigorous procedures and strategies. Among other major impediments, the failure so far experienced in applying stem cell technologies to repair parenchymal organs can be ascribed to the lack of sufficient knowledge of basic mechanisms, but also to the lack of standardized criteria and protocols. Very often each laboratory follows its own "recipe" using erratic nomenclature and non-comparable, if not confusing, experimental protocols. All this makes it difficult to learn from the others and, ultimately, hampers the advance of knowledge on stem cell behavior.

The ambitious goal of this book is to gather the most innovative and scientifically robust knowledge and technologies on stem cells and involve investigators from academy and industry in formulating recommendations to standardize the isolation and manipulation of stem cells using solid and well-documented knowledge rather than fragmentary and often unrepeatable experimental reports.

Keywords: Adult, Stem Cell, Paolo Di Nardo, Stem cell research and technology