Description:

The study of stem cell biology is under intensive investigations. Because stem cells have the unique capability to self-renew and differentiate into one or several cell types, they play a critical role in development, tissue homeostasis and regeneration. Stem cells also constitute promising cell candidates for cell therapy.

The aim of this book is to provide an accurate knowledge on stem cell biology and regenerative medicine. This book will cover many topics in the field and is based on seminars given by recognized scientists involved the international master program on stem cell biology at the University Pierre and Marie Curie (UPMC) in Paris.

Keywords: pluripotent stem cells, adult stem cells, ontogeny, phylogeny, differentiation, reprogramming, microenvironment, transcription, epigenetics, regeneration, repair, cancer, cell therapy, epistemology, regulatory issues.