Epigenetics and Regeneration

Volume 11

Edited by
Daniela Palacios

Epigenetics and Regeneration compiles the first foundational reference on epigenetic mechanisms governing tissue development, repair, homeostasis, and regeneration, as well as pathways to employ these mechanisms in clinical practice and translational science. In this book, life science researchers, clinicians, and students will discover an interdisciplinary resource bringing together common themes in the field, background overviews, research methods, recent advances, and opportunities for drug discovery. Throughout this volume, special attention is paid to preclinical and first clinical studies aimed at increasing the regenerative potential of damaged tissues by epigenetic drugs, as well as innovative, discipline spanning strategies to enhance cell reprogramming.

As an all-inclusive, evidence-based volume, *Epigenetics and Regeneration* will stimulate discussion and boost new research in this fascinating and impactful area of translational epigenetics.

Key Features

- Provides a foundational overview of epigenetics in regenerative medicine
- Examines epigenetic components of tissue regeneration for a variety of organ systems and tissue types, as well as current attempts to employ these mechanisms in clinical practice
- Offers researchers, students, clinicians, and pharmacologists the tools they need to enhance tissue development, repair, homeostasis, and regeneration and explore new epigenetic therapeutic pathways
- Features chapter contributions from leading international researchers and clinicians in the fields of epigenetics and regenerative medicine

About the Editor

Dr. Daniela Palacios, PhD, is the director of the Epigenetics and Signal Transduction Laboratory at Fondazione Santa Lucia in Rome, Italy. She was trained as a molecular biologist in top academic and health institutions located in four different countries (Spain, UK, Italy, and USA). Research in her laboratory integrates state-of-the-art genomic and proteomic approaches with biochemistry, imaging, and novel RNA-based nanotechnologies to study how environmental stimuli modulate the epigenome during tissue regeneration and oncogenic transformation. The goal of the laboratory is to integrate basic research with innovative technological approaches to develop new tools for biomedical applications.

Dr. Palacios has authored over 20 peer-reviewed articles and reviews on the subjects of epigenetics, development, and regeneration, including a chapter in Medical Epigenetics. In the past, she has participated as editor and guest editor to several journals within the fields of development and genomics.

ISBN 978-0-12-814879-2

ACADEMIC PRESS
An imprint of Elsevier
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