

Preface

Over the past decade or so, an ever-increasing body of scientific evidence points to the functional role and unmistakable importance of autophagy in cancer. But can autophagy be successfully exploited as a target in effective cancer therapy? It is now widely believed that modulating the activity of autophagy through targeting regulatory components in the autophagy machinery may impact the development, progression, and therapeutic outcome of cancer. Therefore, autophagy has been considered a novel and promising target for drug discovery/development and therapeutic intervention for cancer; in fact, targeting of autophagy as a therapeutic strategy in cancer has already been explored in-depth and has shown great promise. The purpose of this volume is to provide the latest updates on the current status and a unique perspective on autophagy-based cancer therapy. This volume in the Springer series, *Current Cancer Research*, will cover a wide range of topics, including an overview of autophagy as a therapeutic target in cancer, autophagy modulators as cancer therapeutic agents, implications of micro RNA-regulated autophagy in cancer therapy, modulation of autophagy through targeting PI3 kinase in cancer therapy, targeting autophagy in cancer stem cells, and the roles of autophagy in cancer immunotherapy. In addition, this volume presents a chapter on the application of system biology and bioinformatics approaches to discovering cancer therapeutic targets in the autophagy regulatory network. This comprehensive volume is intended to be useful to a wide range of basic and clinical scientists, including cancer biologists, autophagy researchers, pharmacologists, and clinical oncologists who wish to delve more deeply into this exciting new research area.

Although there are already several excellent books that cover the biology and molecular biology of autophagy and their association with cancer development and progression, this is the first book devoted solely to dealing with targeting autophagy in cancer therapy. As the implications and importance of autophagy in cancer therapy have been increasingly appreciated, this timely and unique volume assembled by leading scientists in this field should prove its usefulness and value in understanding, exploring, developing, and promoting autophagy-based cancer therapy. This volume has the following distinguishing features: (1) it is the first book solely focusing on autophagy as a target in cancer therapy; (2) it is a comprehensive

discussion on the roles of autophagy in currently available cancer treatments; (3) it is a timely complement to the book (volume 8): *Autophagy and Cancer*, 2013, in this series. Finally, I want to sincerely thank all of the authors for their contribution. It is my earnest hope that this volume will serve as a catalyst for further exploration and investigation of autophagy-based cancer therapy.

Hershey, PA, USA

Jin-Ming Yang

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Yang, J.-M. (Ed.)

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