Preface

Angiogenesis is the physiological process through which new blood vessels form from pre-existing vessels, formed in the earlier stage of vasculogenesis. Angiogenesis continues the growth of the vasculature by processes of sprouting and splitting. Vasculogenesis is the embryonic formation of endothelial cells from mesoderm cell precursors, and from neovascularization, although discussions are not always precise (especially in older texts). The first vessels in the developing embryo form through vasculogenesis, after which angiogenesis is responsible for most, if not all, blood vessel growth during development and in disease. Angiogenesis is a normal and vital process in growth and development, as well as in wound healing and in the formation of granulation tissue. However, it is also a fundamental step in the transition of tumors from a benign state to a malignant one, leading to the use of angiogenesis inhibitors in the treatment of cancer. The essential role of angiogenesis in tumor growth was first proposed in 1971 by Judah Folkman, who described tumors as "hot and bloody," illustrating that, at least for many tumor types, flush perfusion and even hyperemia are characteristic.[1]

In the present book, fifteen typical literatures about angiogenesis published on international authoritative journals were selected to introduce the worldwide newest progress, which contains reviews or original researches on cardiomyocytes, colorectal cancer, coordinate β-adrenergic, basement membrane, YAP, TAZ, *ect*. We hope this book can demonstrate advances in angiogenesis as well as give references to the researchers, students and other related people.

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[1] From Wikipedia: https://en.wikipedia.org/wiki/Angiogenesis