

Editorial

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Introduction to this special issue - “Autophagy and Cancer: current biology and drug development”

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How to cite this article: Cheung CHA. Introduction to this special issue - “Autophagy and Cancer: current biology and drug development”. *J Cancer Metastasis Treat* 2019;5:60. <http://dx.doi.org/10.20517/2394-4722.2018.74>

Received: 14 Nov 2018 **First Decision:** 28 Nov 2018 **Revised:** 5 Dec 2018 **Accepted:** 10 Dec 2018 **Published:** 9 Aug 2019

Science Editor: Chun Hei Antonio Cheung **Copy Editor:** Jia-Jia Meng **Production Editor:** Tian Zhang

It is my pleasure, as one of the editorial board members, to introduce the readers of *JCMT* to this special issue entitled “Autophagy and Cancer: current biology and drug development”.

Autophagy is a fundamental process for cells to degrade unwanted proteins/damaged organelles and also to recycle cellular components. Since its discovery on 1960's, a vast amount of effort has been made in understanding the physiological role/s of this process. For example, it is now known that mitosis, apoptosis, and autophagy are inter-connected and inter-regulated in cells^[1]. It is also known that upregulation of autophagy is a double-edged sword that promotes both cell survival and cell death, depending on the circumstances. However, the pathological role/s of autophagy in normal-to-cancer cell transformation, tumor development, and tumor drug resistance was not clear until the arrival of various breakthrough discoveries in the past 15 years. Noticeably, it has been demonstrated that dysregulation of autophagy (and probably downregulation) induces genomic instability in non-cancerous cells and subsequently promotes tumorigenesis^[2]. In contrast, upregulation of autophagy has been shown to enhance the survival ability of cancer cells in response to various micro-environmental stresses and different chemotherapeutic agents^[3]. Therefore, autophagy is currently a “hot” cellular pathway target for the development of cancer therapeutics^[4-7].

This special issue contains reviews focusing on recent understandings on the regulation of autophagy in non-cancerous cells and dysregulation of this process in cancer cells. Reviews on recent advances in the development of autophagy modulators for cancer treatment are also included in this special issue.



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DECLARATIONS

Authors' contributions

Manuscript drafting: Cheung CHA.

Availability of data and materials

Not applicable.

Financial support and sponsorship

None.

Conflict of interest

All authors declared that there are no conflicts of interest.

Ethics approval and consent to participate

Not applicable.

Consent for publication

Not applicable.

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