Special Issue

Exploitation and Development of “Synthetic Lethality” Strategy for Cancer Therapy

Message from the Guest Editor

“Synthetic lethality” is defined as a genetic interaction between co-occurring alterations of two individual genes that results in cell death. Synthetic lethality has emerged as a promising approach for designing combination therapies or novel anti-cancer agents. PARP inhibitors (PARPi) are the first clinically used anti-cancer drugs designed to exploit synthetic lethality, and they have achieved huge success in managing BRCA1/2-mutant cancers. Although PARPi are the first-line maintenance therapy for BRCA1/2-mutant ovarian cancers, required or de novo resistance has hindered their clinical efficacy. Therefore, novel “synthetic lethality” partners and targets are needed to design novel anti-cancer therapies. In addition, effective combination strategies are urgently needed to overcome PARPi resistance. Therefore, this Special Issue will accept submissions including, but not limited to, novel anti-cancer therapeutics based on “Synthetic lethality”, novel mechanisms exploring anti-cancer therpies, novel combination strategies to overcome PARPi, and novel molecular target and action mechanisms of anti-cancer drugs.

Guest Editor

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