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| Autore                  | Amal O. Amer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Titolo                  | Microbial modulation of host apoptosis and pyroptosis / / topic editors: Yongqun He and Amal O. Amer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
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| Soggetti                | Cytology<br>Biology<br>Health & Biological Sciences                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Lingua di pubblicazione | Inglese                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
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| Livello bibliografico   | Monografia                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Note generali           | Bibliographic Level Mode of Issuance: Monograph                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
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| Sommario/riassunto      | <p>Infectious disease is the result of an interactive relationship between a microbial pathogen and its host. In this interaction both the host and the pathogen attempt to manipulate each other using a complex network to maximize their respective survival probabilities. Programmed host cell death is a direct outcome of host-pathogen interaction and may benefit host or pathogen depending on microbial pathogenesis. Apoptosis and pyroptosis are two common programmed cell death types induced by various microbial infections. Apoptosis is non-inflammatory programmed cell death and can be triggered through intrinsic or extrinsic pathways and with or without the contribution of mitochondria. Pyroptosis is an inflammatory cell death and is typically triggered by caspase-1 after its activation by various inflammasomes. Microbial pathogens are able to modulate host apoptosis and pyroptosis through different triggers and pathways. The promotion and inhibition of host apoptosis and pyroptosis vary and depend on the microbe types, virulence, and phenotypes. For example, virulent pathogens and attenuated vaccine strains may use different pathways to modulate host cell death. Specific microbial genes may be responsible for the modulation of host cell death. Different host cells,</p> |

including macrophages, dendritic cells, and T cells, can undergo apoptosis and pyroptosis after microbial infections. The pathways of host apoptosis and pyroptosis induced by different microbes may also differ. Different methods can be used to study the interaction between microbes and host cell death system.

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