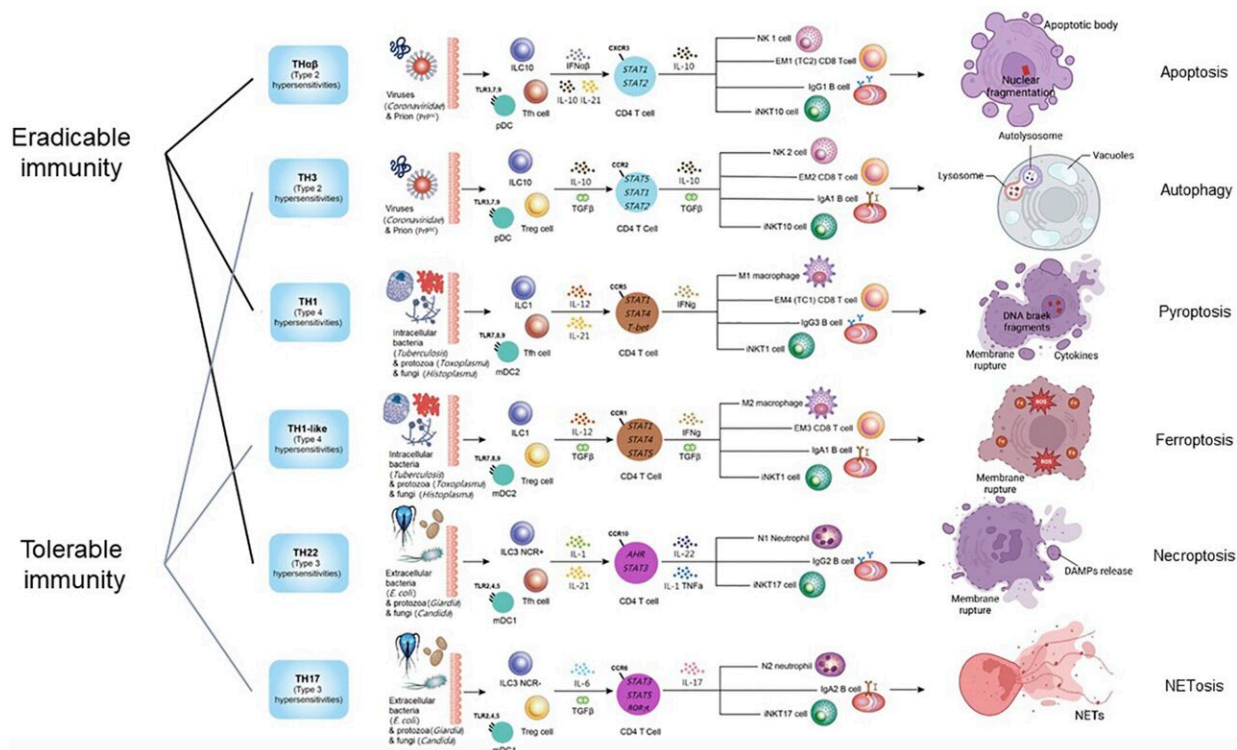


Cell death types and their relations to host immune pathways

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The framework of host immunological pathways and their relation to programmed cell death. Apoptosis is related to host anti-virus eradicable TH $\alpha\beta$ immunity. Autophagy is related to host anti-virus tolerable TH3 immunity. Pyroptosis is related to host anti-intracellular micro-organism eradicable TH1 immunity. Ferroptosis is related to host anti-intracellular micro-organism tolerable TH1-like immunity. Necroptosis is related to host anti-extracellular micro-organism eradicable TH22 immunity. NETosis is related to host anti-extracellular micro-organism tolerable TH17 immunity. Credit: 2024 Lu et al.

A new review was [published](#) as the cover paper of *Aging*, titled "Types of cell death and their relations to host immunological pathways."

Various immune pathways in the host, such as TH1, TH2, TH3, TH9, TH17, TH22, TH1-like, and TH $\alpha\beta$, have been identified. While TH2 and TH9 responses primarily target multicellular parasites, host immune pathways against [viruses](#), intracellular microorganisms (like bacteria, protozoa, and fungi), and extracellular microorganisms utilize programmed cell death mechanisms to initiate immune responses and effectively eliminate pathogens.

In their review, researchers Kuo-Cheng Lu, Kuo-Wang Tsai, Yu-Kuen Wang, and Wan-Chung Hu from Taipei Tzu Chi Hospital, Fu Jen Catholic University, Taoyuan Armed Forces General Hospital, Tri-Service General Hospital and Ming Chuan University, reviewed these cell death pathways associated with the host immunological pathways.

"These relationships can help us understand the host defense mechanisms against invading [pathogens](#) and provide new insights for developing better therapeutic strategies against infections or [autoimmune disorders](#)," explain the researchers.

More information: Kuo-Cheng Lu et al, Types of cell death and their relations to host immunological pathways, *Aging* (2024). [DOI: 10.18632/aging.206035](#)

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