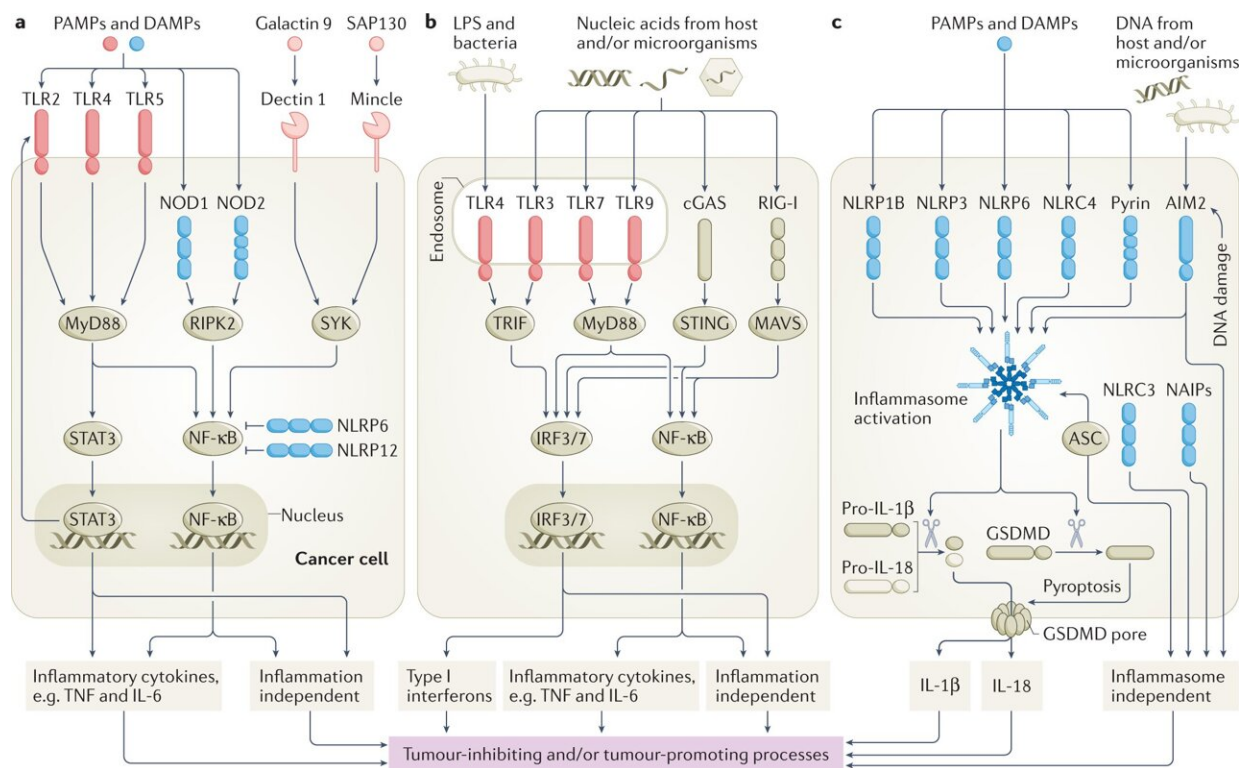


Extensive review fills the gaps on immune system cancer research

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Pattern recognition receptors orchestrate diverse cellular processes relevant to cancer development and progression. Credit: *Nature Reviews Cancer* (2022). DOI: 10.1038/s41568-022-00462-5

New light has been shone on the role of specific protein components of the immune system in both causing and preventing cancer.

In the most extensive review of its kind, published in *Nature Reviews Cancer*, Professor Brendan Jenkins has analyzed all available studies on innate immune [pattern recognition receptors](#) (PRRs)—the critical regulators of the immune system response to microbial infection and host tissue damage.

His analysis is important in light of recent studies showing that in many cancer types, PRRs play a central role in modulating tumor-inhibiting and tumor-promoting [cellular responses](#), both in immune cells within tumors and directly in [cancer cells](#).

New immune-based cancer drugs

Professor Jenkins believes this opens the potential to target PRRs for new immune-based biomarkers and [therapeutics](#) (drugs) to be developed for improved diagnosis and treatments for cancer patients.

"For the first time there is a comprehensive review and perspective on all PRRs in all cancers, including their potential targeting," he said.

"There is a broad spectrum of innate immune PRRs with the potential to either inhibit or promote the growth of tumors, so there are opportunities to develop anti-cancer drugs that either augment or block their activation in a large range of cancers.

"Working with Professor Si Ming Man from the Australian National University, our review also summarizes many of the previous and current clinical trials in cancer involving PRR inhibitors or activators," Professor Jenkins said.

More information: Si Ming Man et al, Context-dependent functions of pattern recognition receptors in cancer, *Nature Reviews Cancer* (2022). [DOI: 10.1038/s41568-022-00462-5](https://doi.org/10.1038/s41568-022-00462-5)

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