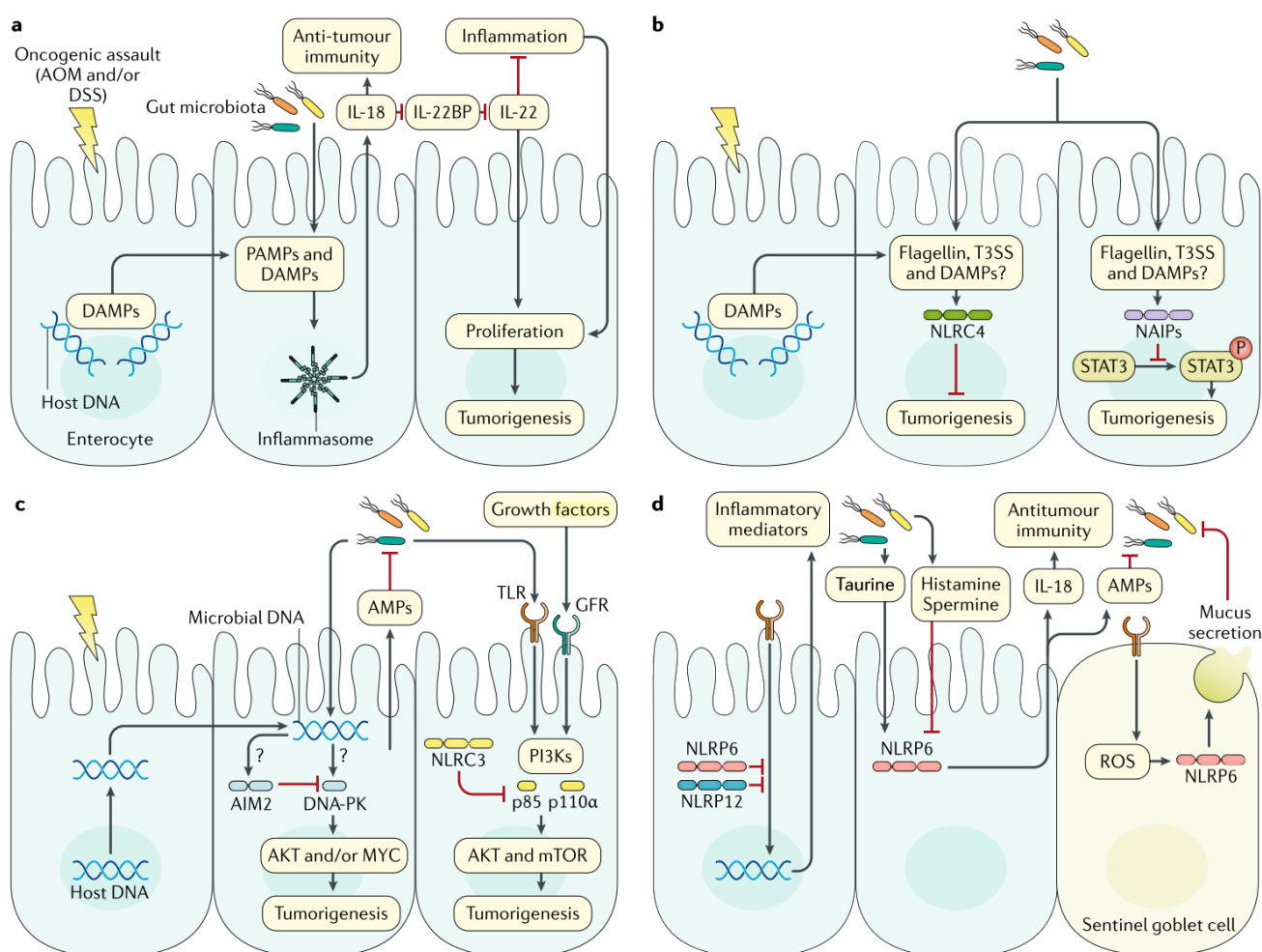


胃肠道中的炎症小体：感染，癌症和肠道微生物群稳态

Inflammasomes in the gastrointestinal tract: infection, cancer and gut microbiota homeostasis [4, done]



炎症小体-微生物群轴调节肠道炎症和癌症的发展

- a | 诸如氧化偶氮甲烷 (AOM) 和葡聚糖硫酸钠 (DSS) 等致癌因素引起损伤，导致危险相关分子模式 (DAMPs) 的释放。同时，细菌可侵入肠细胞并将病原体相关分子模式 (PAMPs) 引入宿主细胞。炎症小体可以感知 DAMPs 和 PAMPs¹⁻⁶。IL-18 促进可溶性 IL-22 结合蛋白 (IL-22BP) 的下调，可溶性 IL-22 结合蛋白可以控制 IL-22 抑制炎症或诱导肠道肿瘤发生的能力⁷。
- b | 核苷酸结合结构域，富含亮氨酸重复序列的蛋白 (NLR) 家族 CARD 结构域蛋白 4 (NLRC4) 和神经细胞凋亡抑制蛋白 (NAIPs) 可阻断细胞增殖和肿瘤发生^{8,9}。
- c | DNA 依赖性蛋白激酶 (DNA-PK) 通过激活 AKT 和转录因子 MYC 诱导结直肠癌发生^{10,11}。该过程会被黑色素瘤缺乏因子 2 (AIM2) 抑制。AIM2 也可以诱导肠道上皮细胞产生抗菌肽 (AMPs) 以调节肠道微生物群^{12,13}。研究表明 NLRC3 具有类似的负向调节作用¹⁴。
- d | NLRP6 和 NLRP12 在胃肠道感染，急性结肠炎和结直肠癌的发病机制中也发挥作用¹⁵⁻²⁴。

问号表示未知的调节物质。

TIPs:

Nucleotide-binding domain, leucine-rich repeat-containing protein (NLR) family CARD domain-containing protein 4 (NLRC4): 核苷酸结合结构域，富含亮氨酸重复序列的蛋白 (NLR) 家族 CARD 结构域蛋白 4 (NLRC4) ；

neuronal apoptosis inhibitory proteins (NAIPs): 神经细胞凋亡抑制蛋白;
 GFR, 生长因子受体;
 mTOR, 雷帕霉素的机制目标;
 NLRP (NACHT, LRR and PYD domains-containing protein) 含 NACHT, LRR和PYD结构域的蛋白质;
 PI3Ks, 磷酸肌醇3-激酶;
 ROS, 活性氧;
 STAT3, 信号转导和转录激活因子3;
 T3SS, 3型分泌系统;
 TLR, Toll样受体;

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