PAMPS and alarmins in autoimmunity – lessons for cancer?

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Alarmins released during tissue injury have been recently linked to CD8 cells' ability to express effector functions. Cryogenic CNS injury, triggering local alarmin release, however, does not render the CNS susceptible to an attack by CNS antigen-reactive Th17 CD4 cells. In contrast, deposition of the PAMP, CpG, into the CNS does. Potentially pathogenic CD4 cells' ability to exert effector function in a target organ is therefore dependent on a local "third signal" which in EAE can be a PAMP, but not an alarmin. These findings may also apply for the autoimmune response against tumor antigens, and thus to tumor immunology.