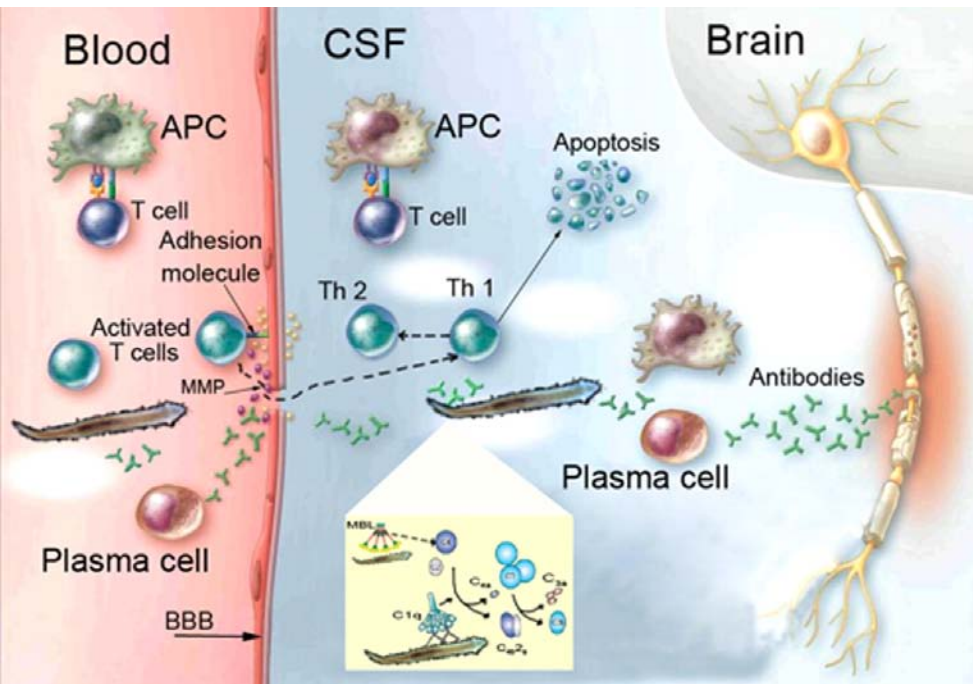




Immunologic Response to *Angiostrongylus cantonensis*

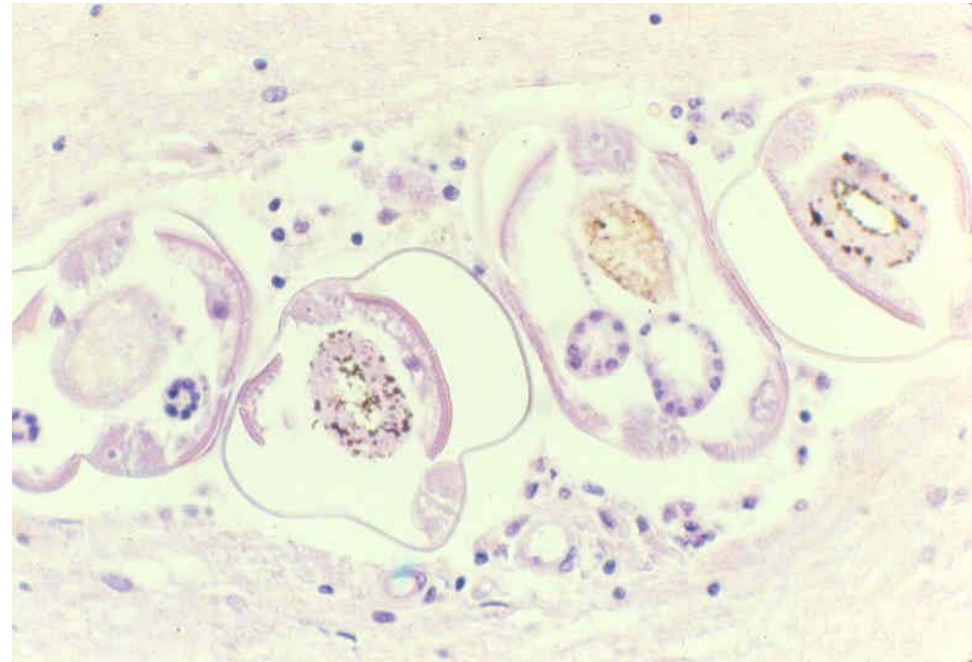


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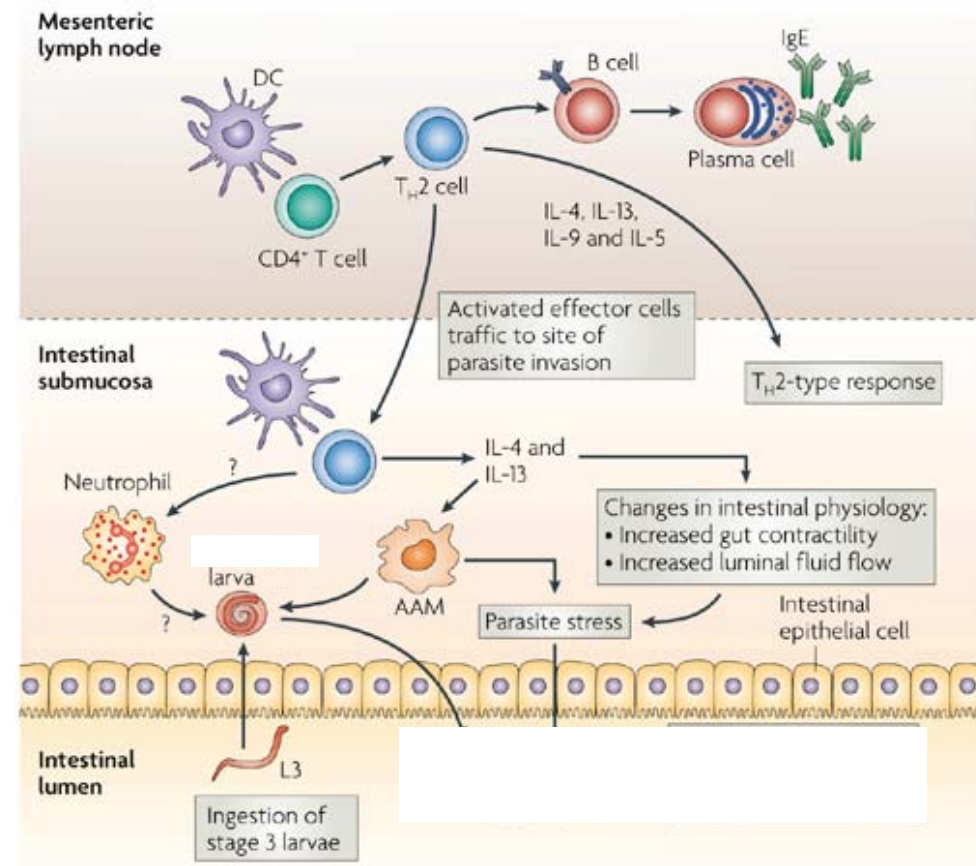
Eosinophilic Meningitis

- Most common clinical presentation of *A. cantonensis*
 - Defined as the presence of >10 eosinophils/ μl in CSF or at least 10% eosinophils in the total CSF leukocyte count.
 - Eosinophils are not normally found in the CSF.
- Eosinophilic inflammatory response to parasite.



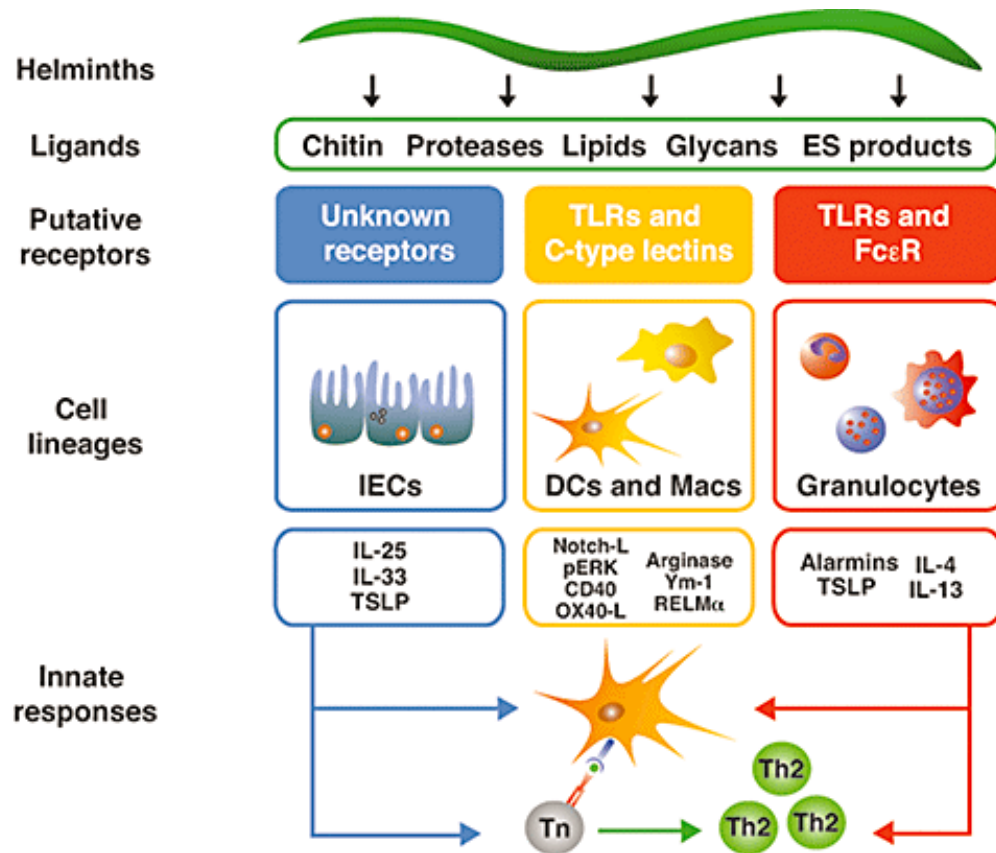
Initiation of Response

- First response to parasite is in the GI tract.
 - Larvae comes into contact with a number of immune cells located in the submucosa.
 - Local lymph node involvement.

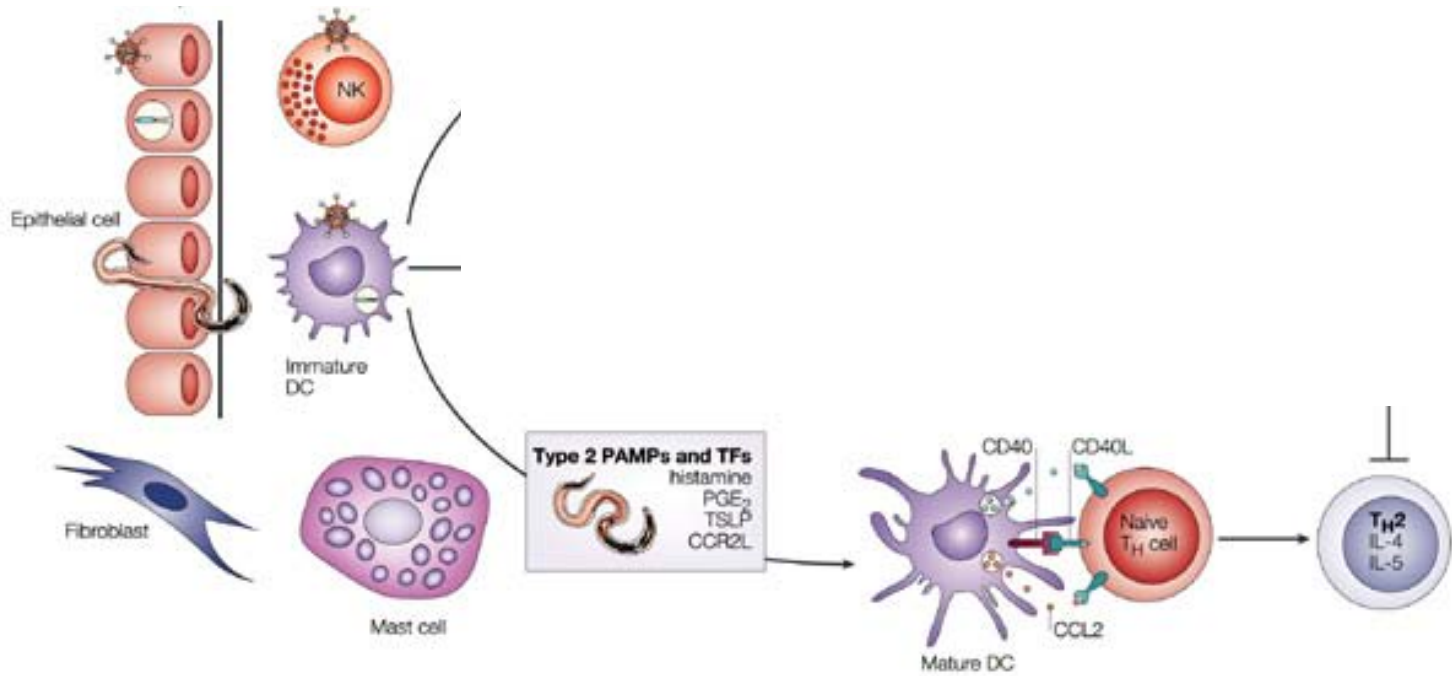


Recognition

- Pattern recognition receptors (PRR)
 - Respond to pathogen-associated molecular patterns (PAMP) and
 - endogenous stress signals termed danger-associated molecular patterns (DAMP).

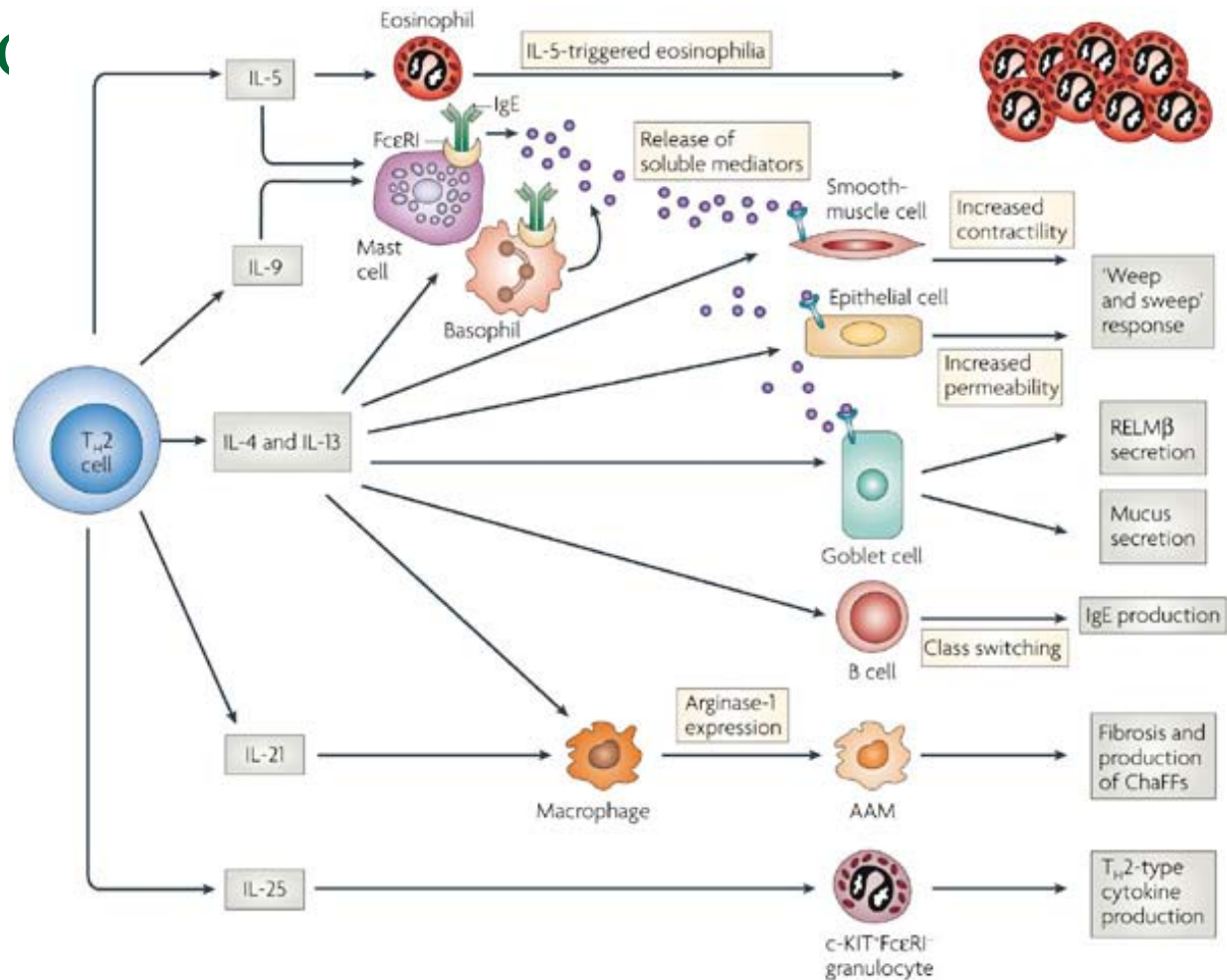


T Helper 2 (T_H2) Directed Res_p



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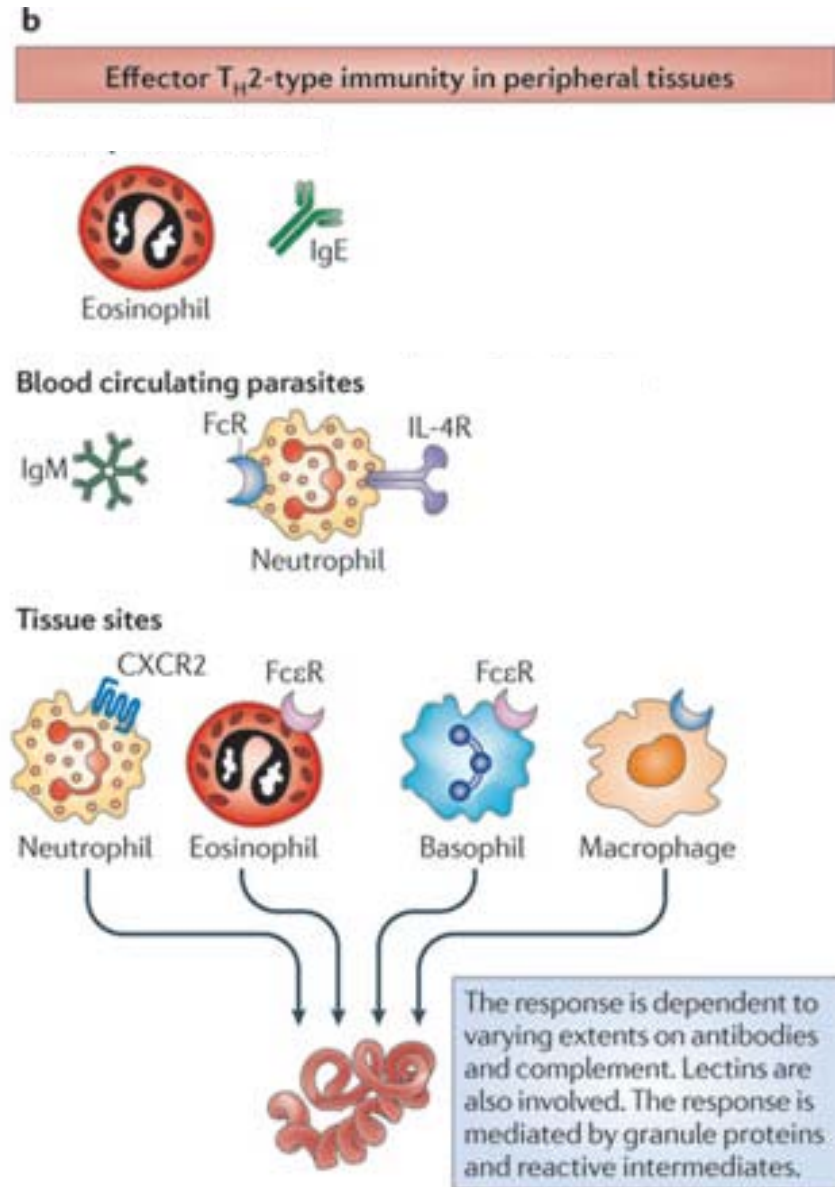
T_H2-cell Functions in Helminth Infection



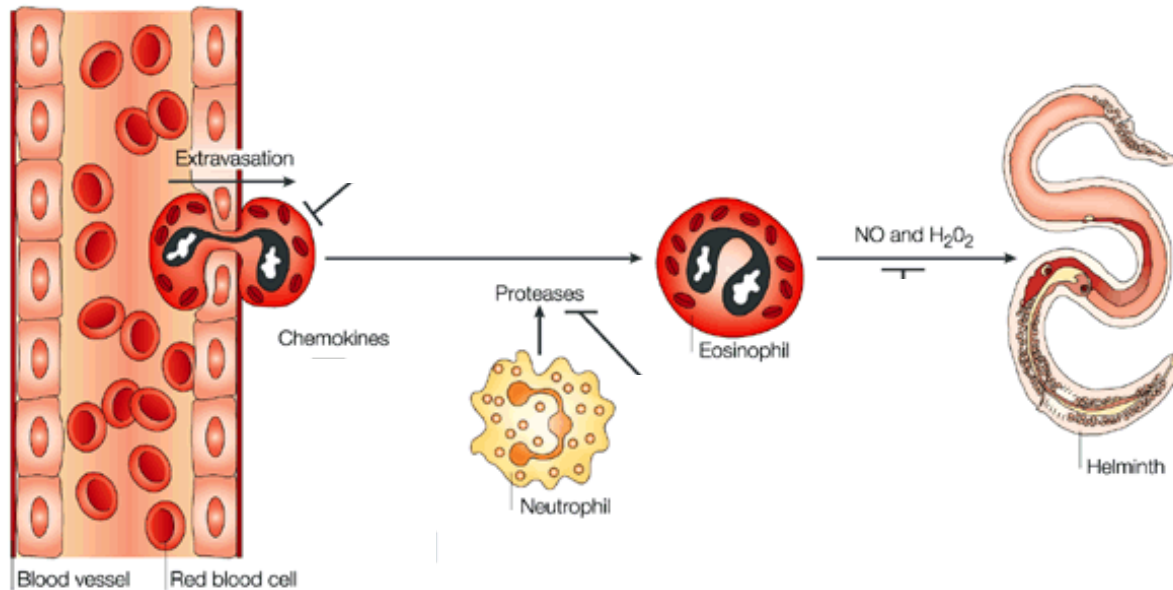
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Antihelminth Mechanisms

- Classic repertoire of cells and molecules
 - Eosinophils
 - Activated macrophages
 - Basophils
 - Neutrophils
 - IgE
 - IgM



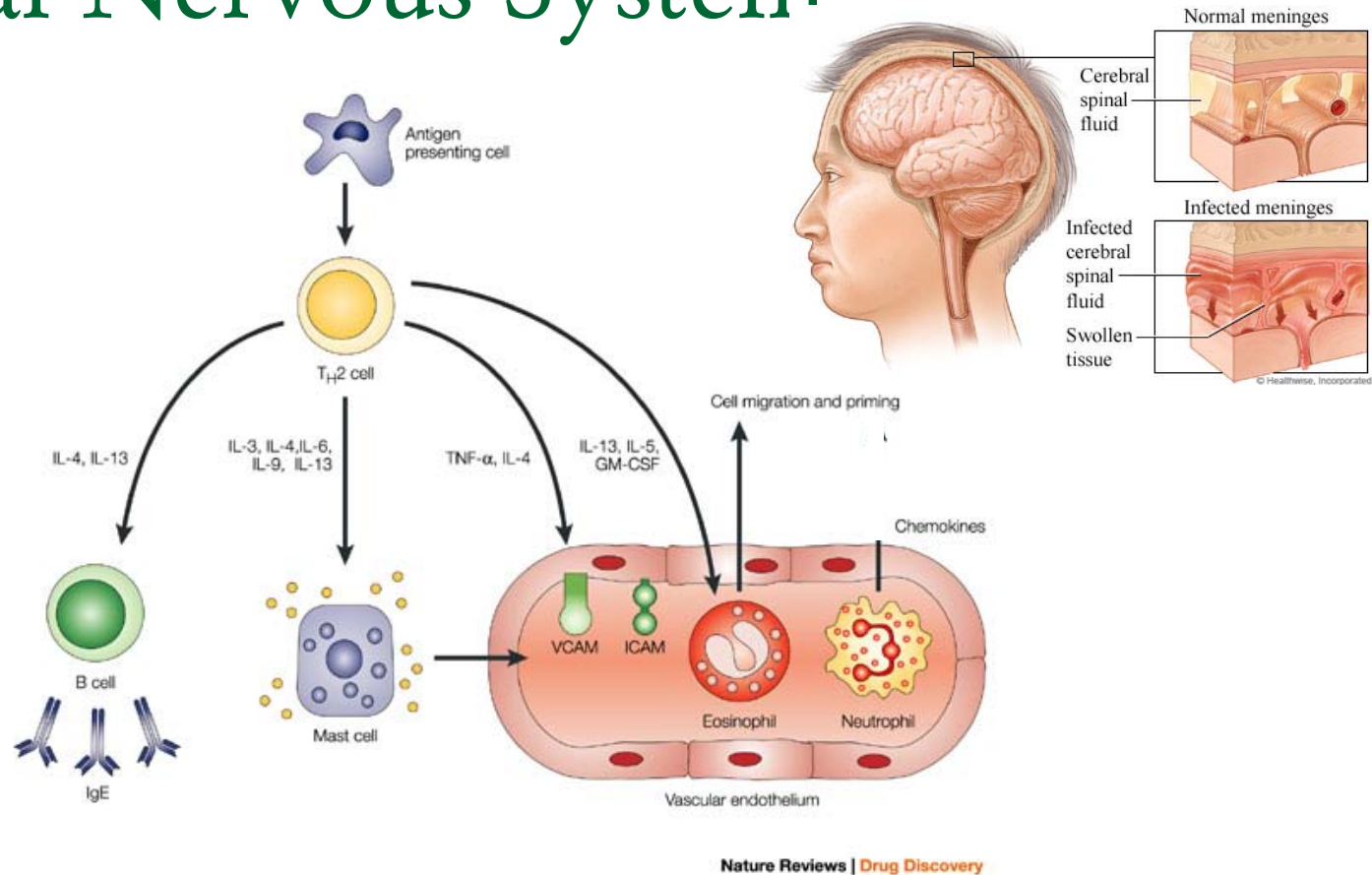
Eosinophil Function



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- Antihelminth responses include release of host proteases and potentially lethal attack with reactive nitrogen and oxygen intermediates (NO and H₂O₂) by eosinophils and other cells

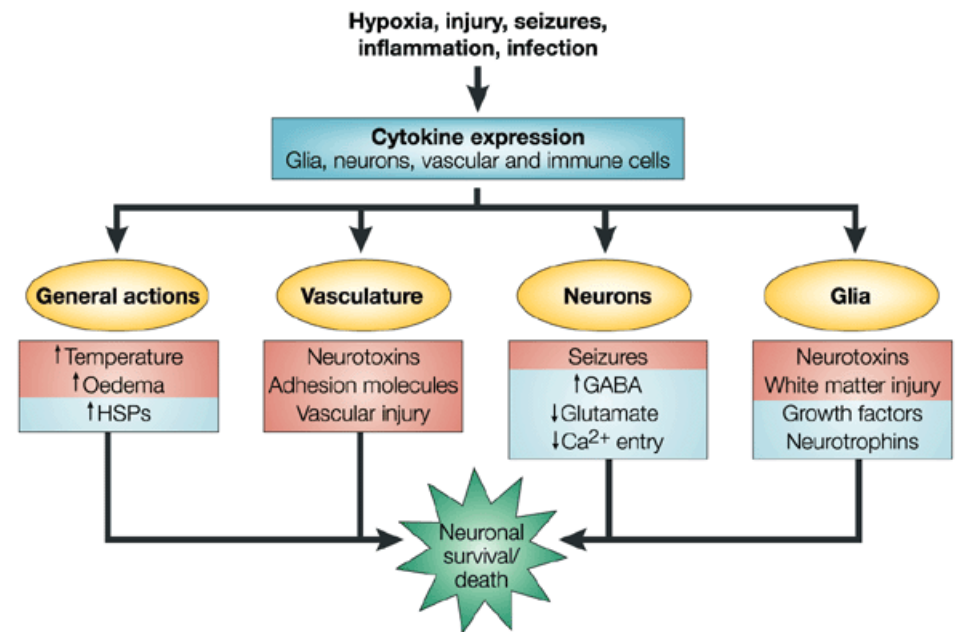
Central Nervous System



- Parasites migrate from area of immune 'first contact' (the gut) to CNS

Cytokines in Neuronal Injury

- Cytokines can be expressed by numerous cell types and can have actions on many aspects of central nervous system function that might contribute to or limit subsequent neuronal injury.



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