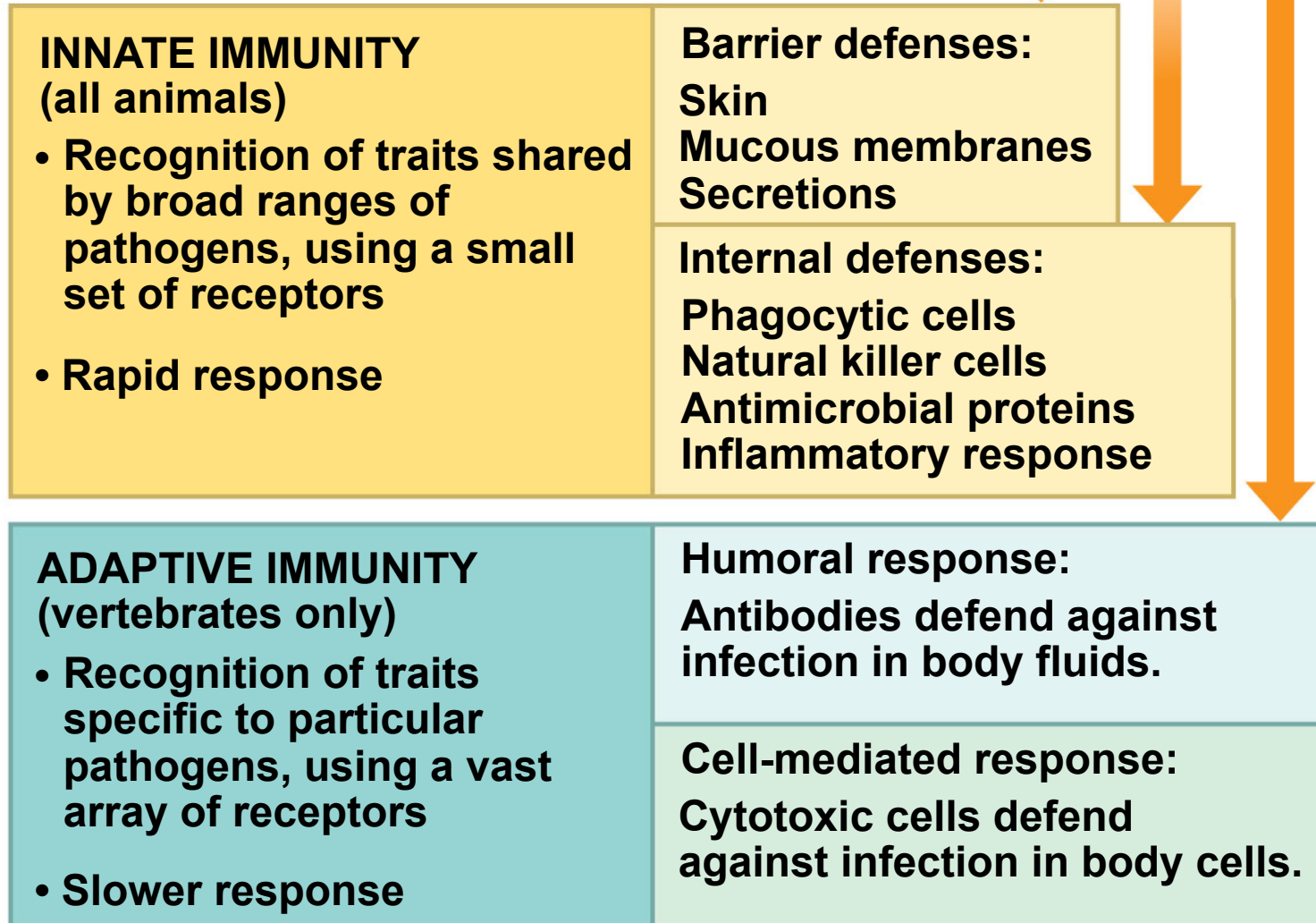
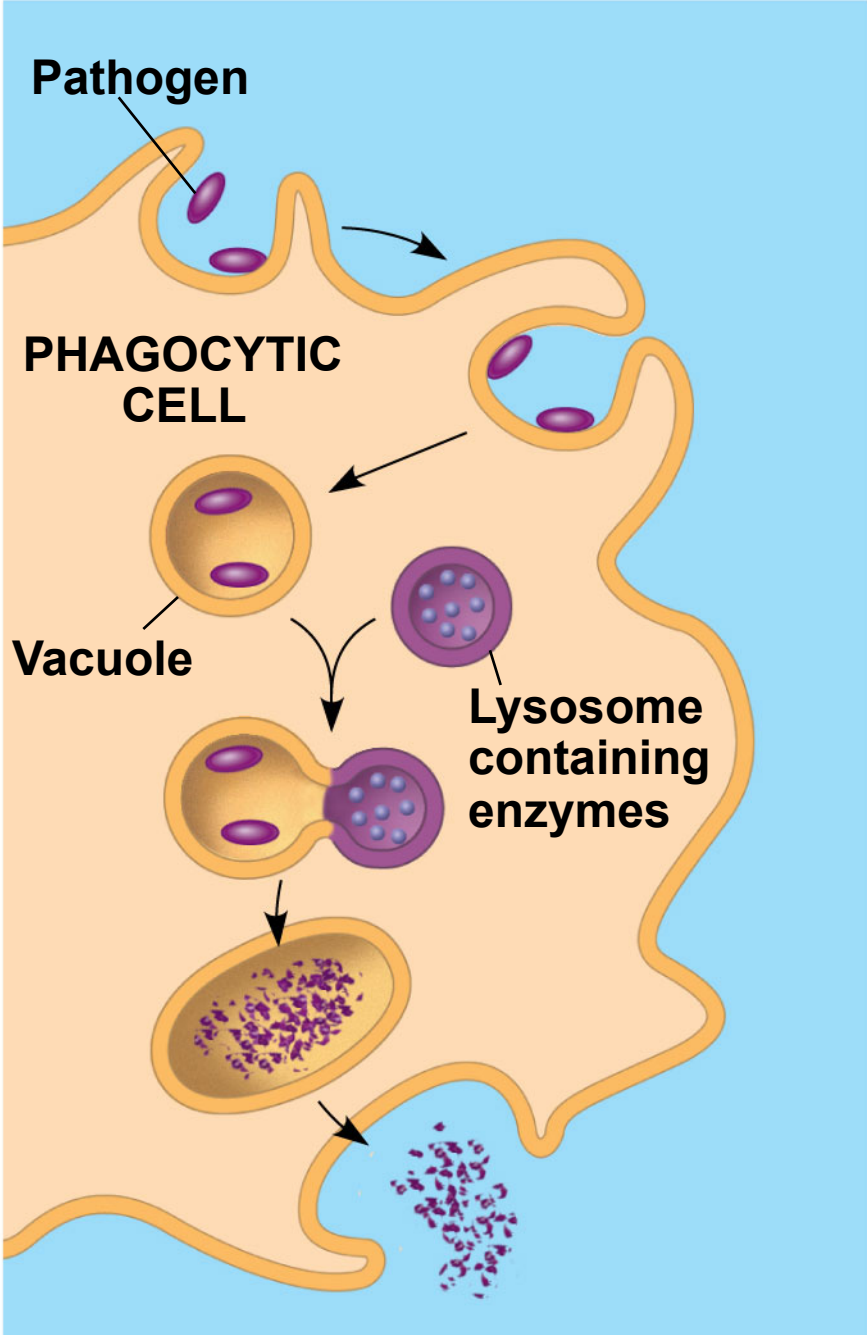


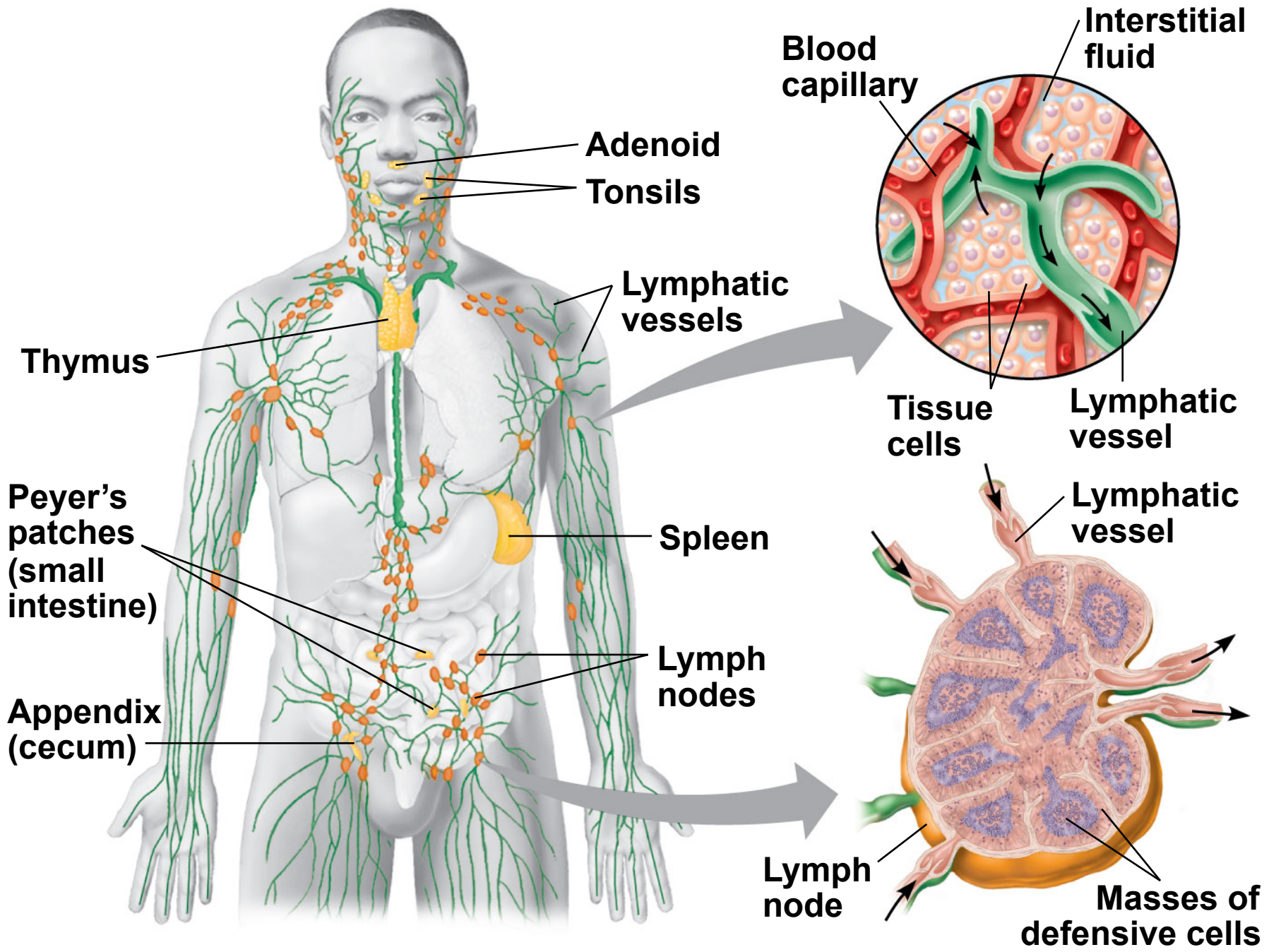
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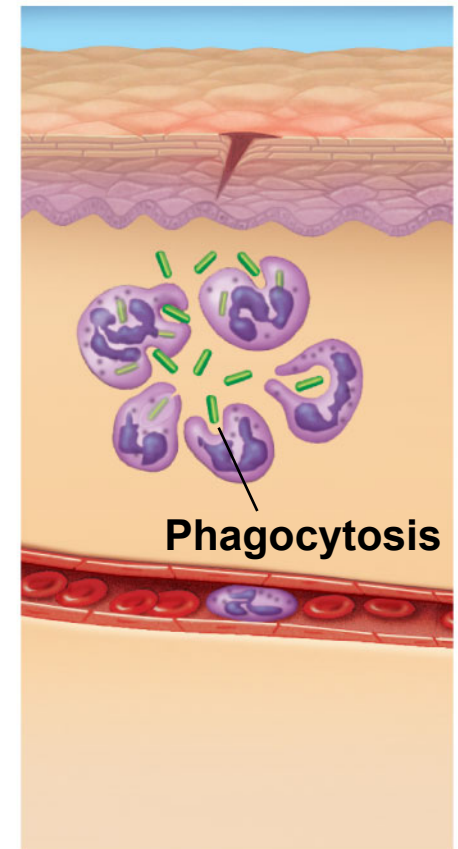
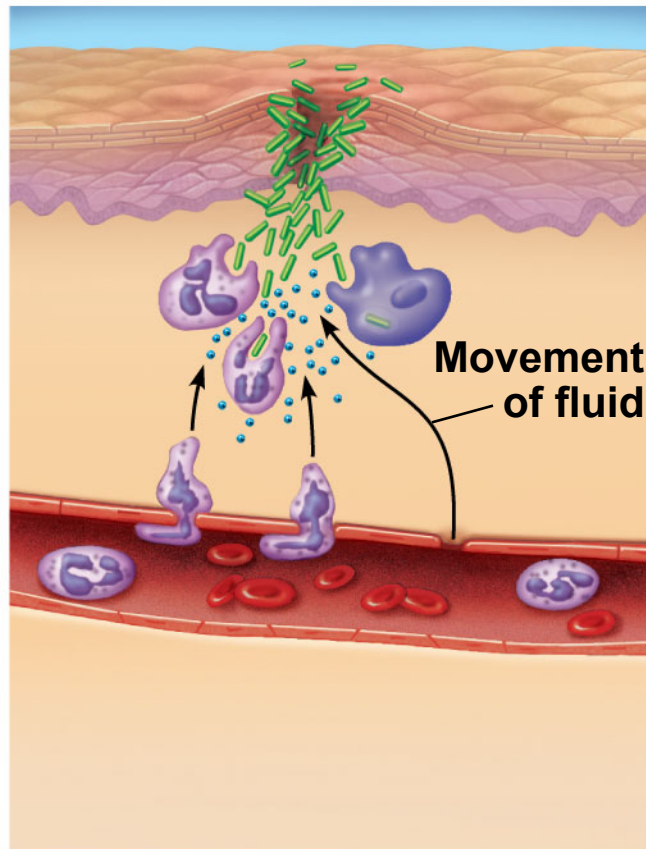
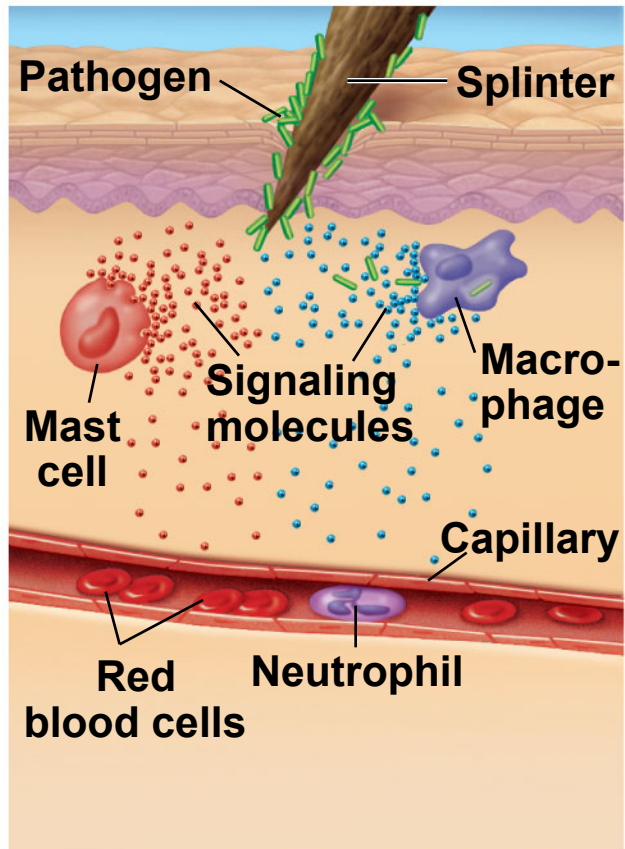
**Pathogens
(such as bacteria,
fungi, and viruses)**





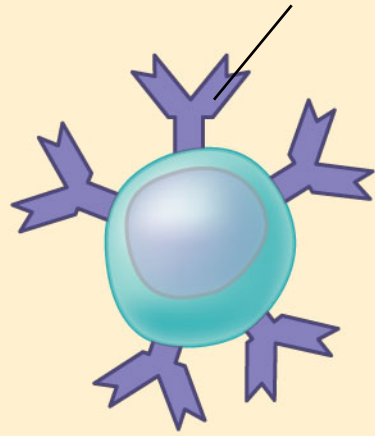
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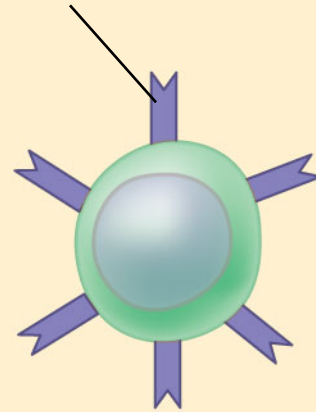


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**Antigen
receptors**

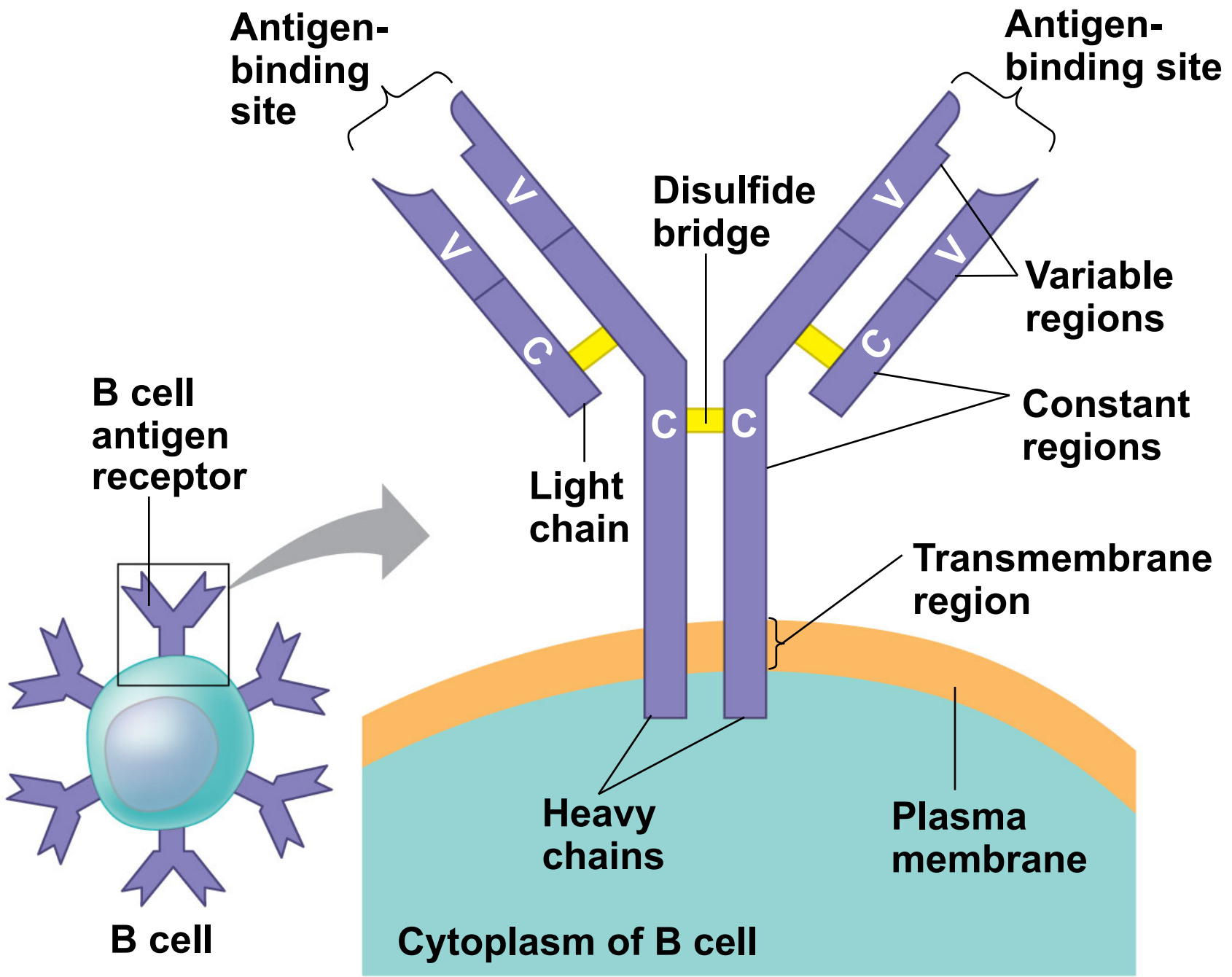


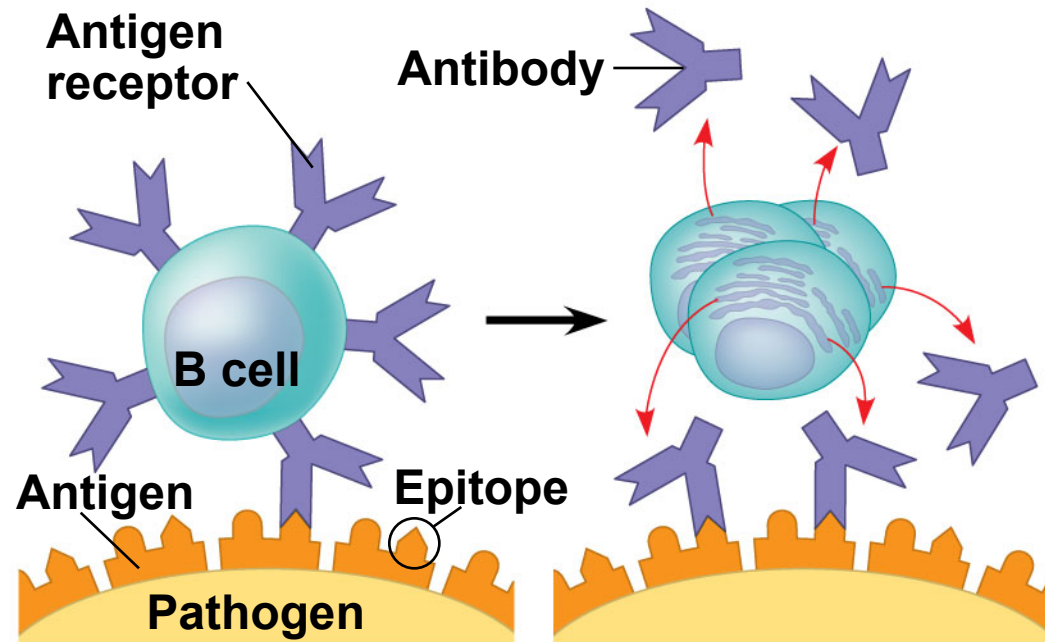
Mature B cell



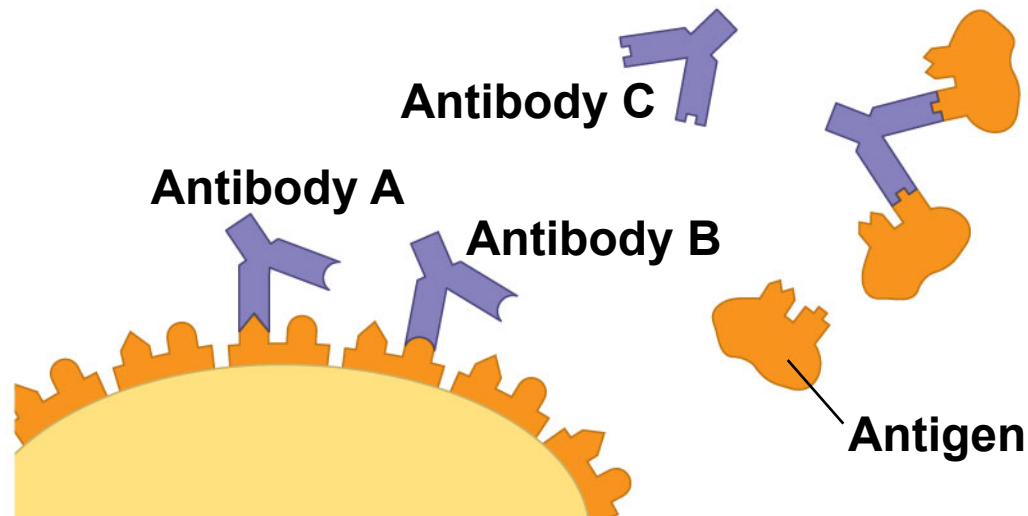
Mature T cell

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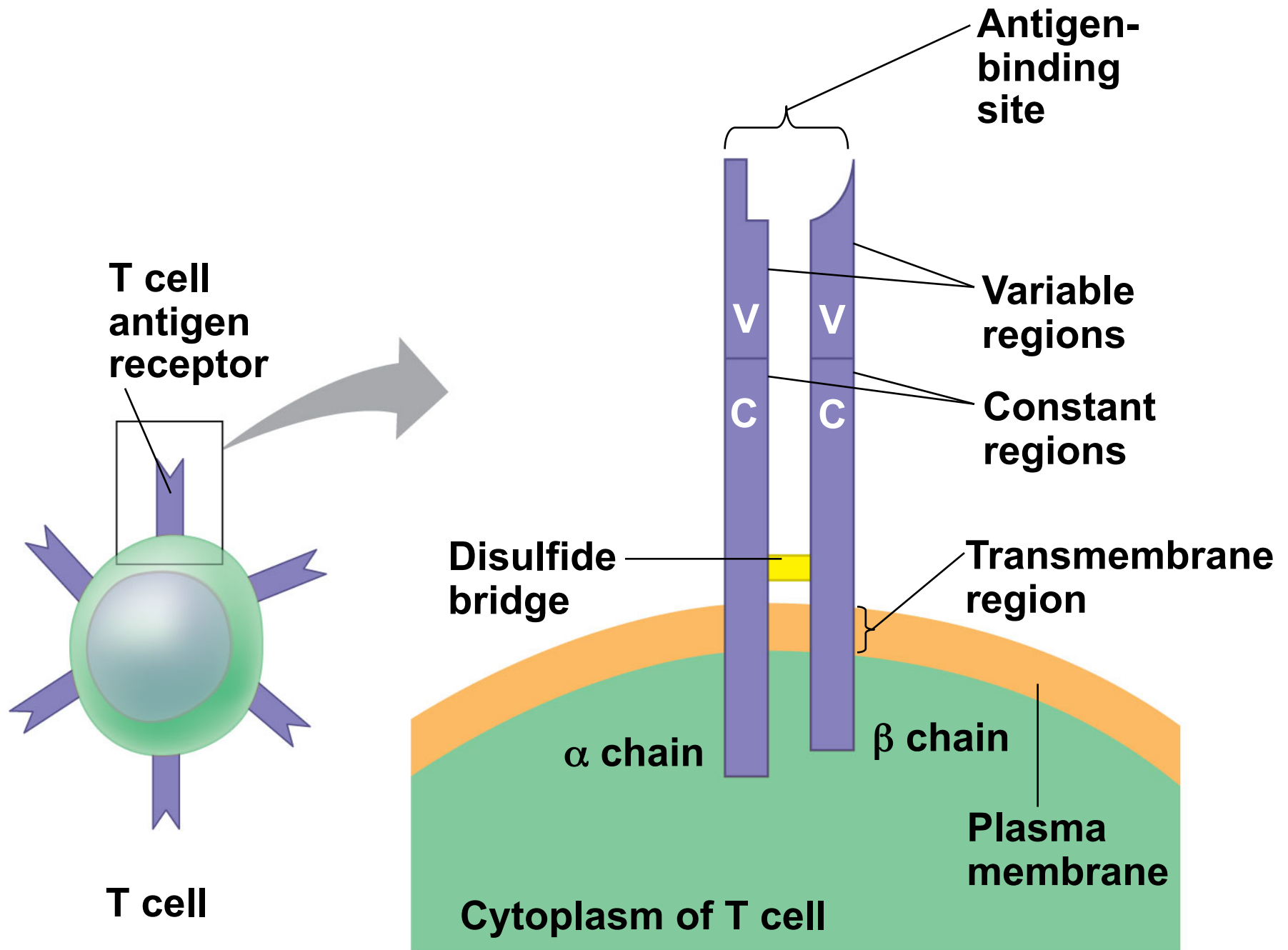


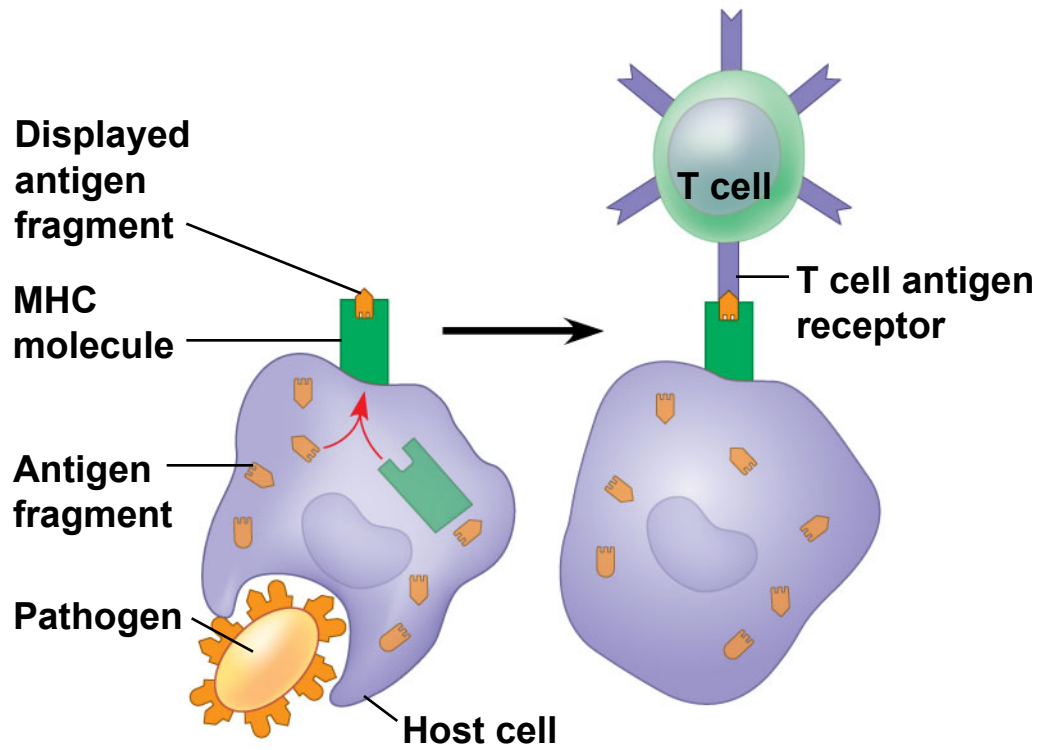


(a) B cell antigen receptors and antibodies

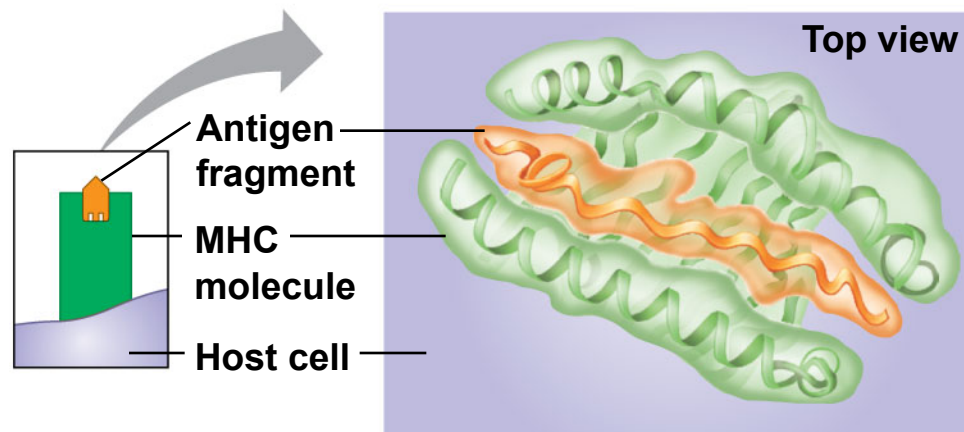


(b) Antigen receptor specificity





(a) Antigen recognition by a T cell



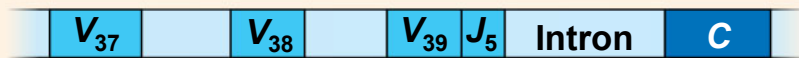
(b) A closer look at antigen presentation

DNA of undifferentiated B cell

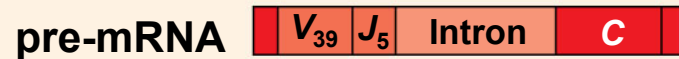


1 Recombination deletes DNA between randomly selected V segment and J segment

DNA of differentiated B cell



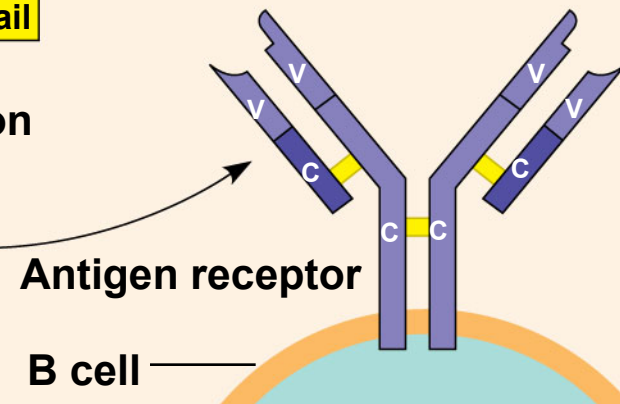
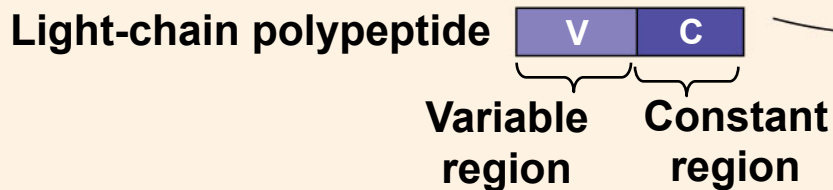
2 Transcription



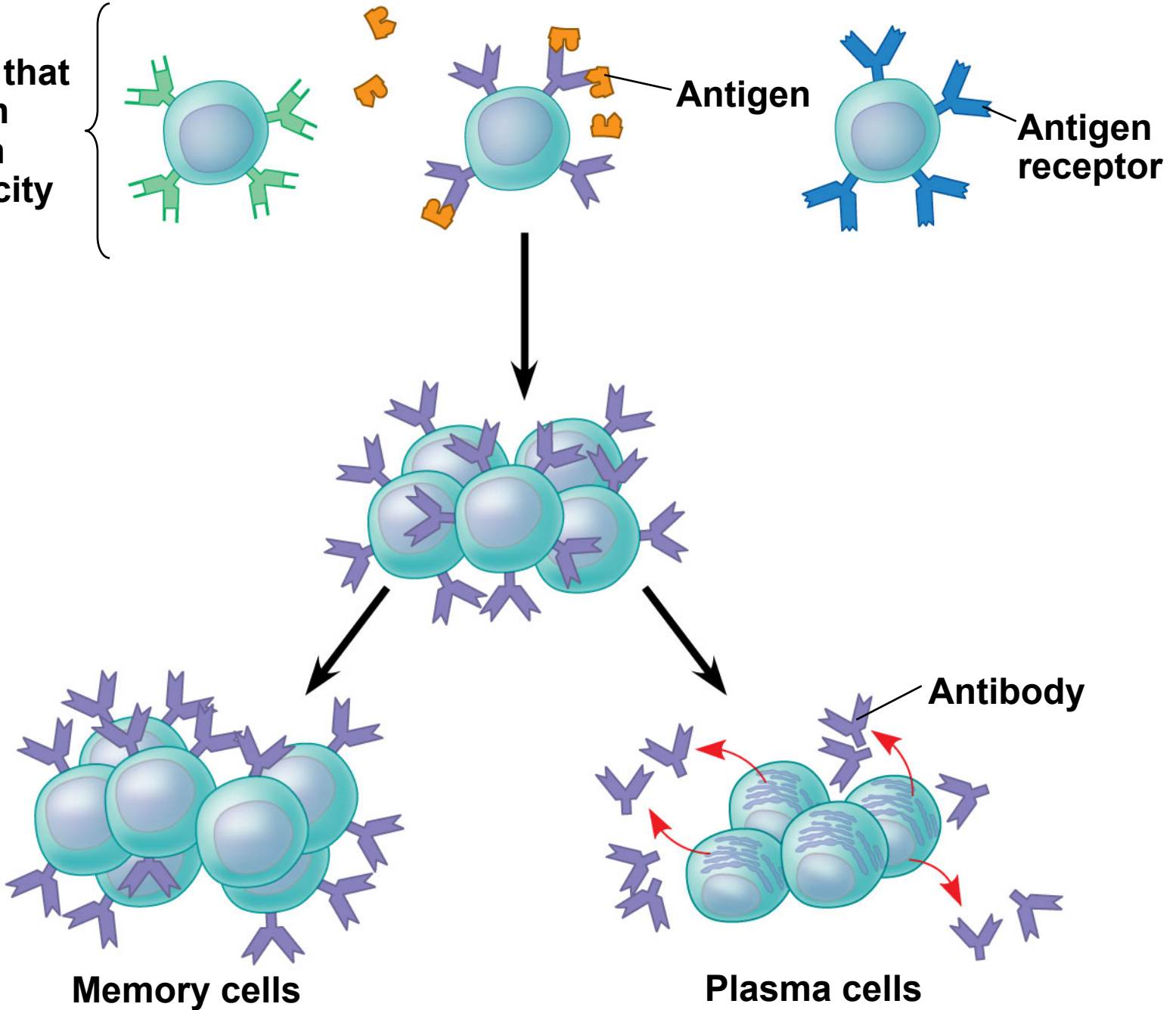
3 RNA processing

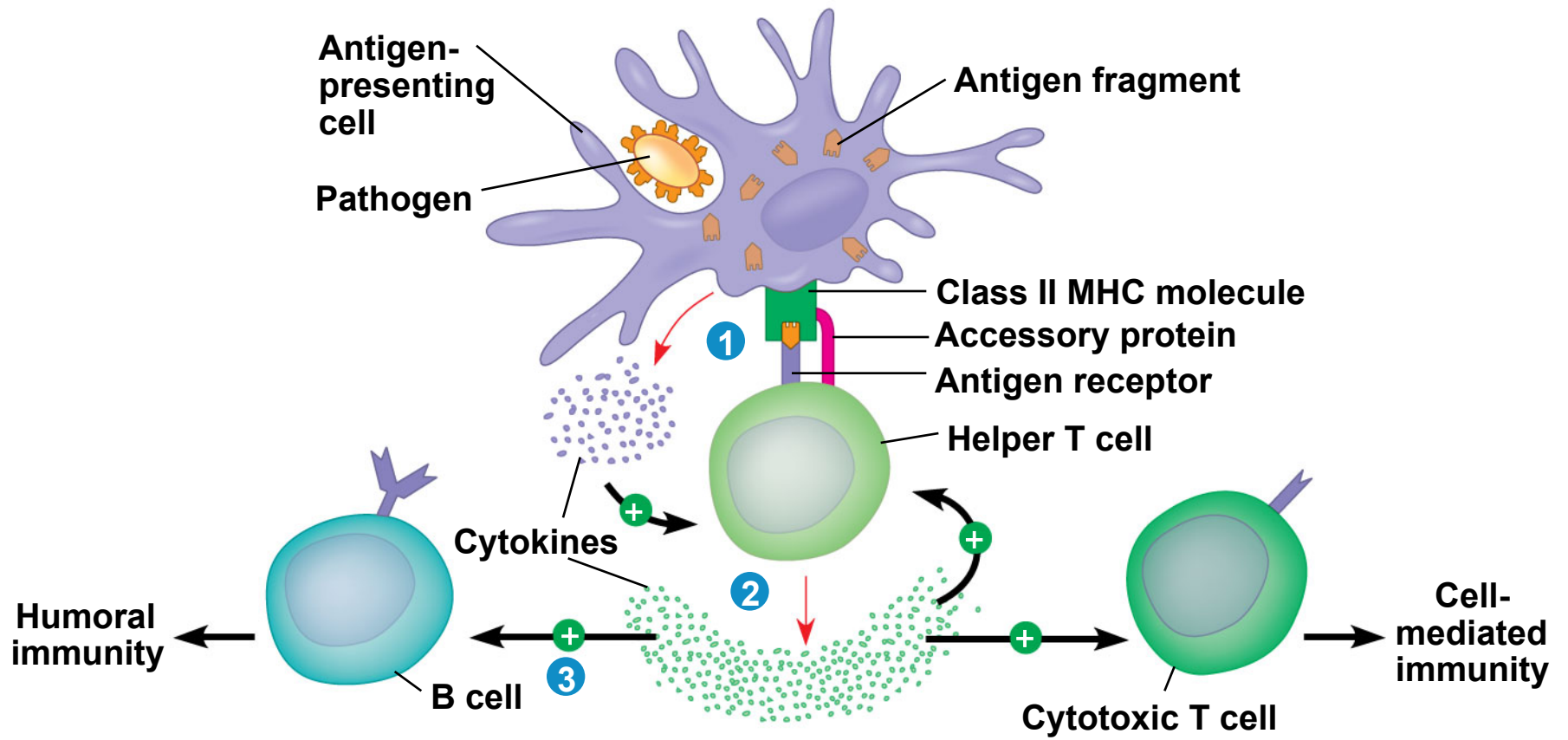


4 Translation

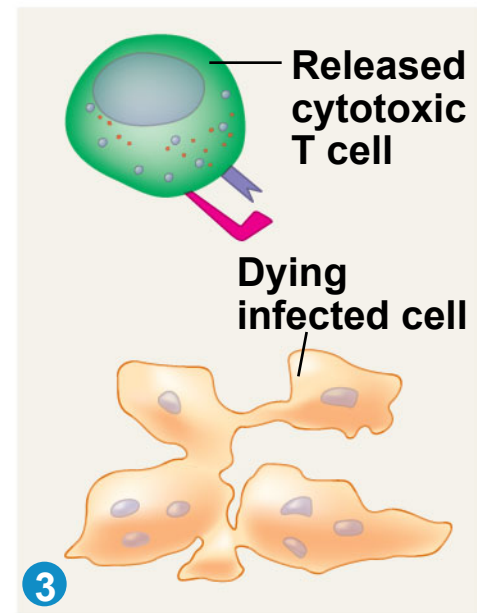
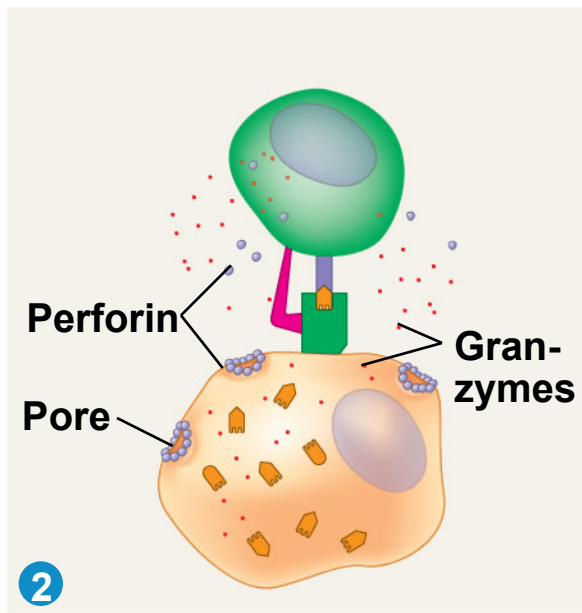
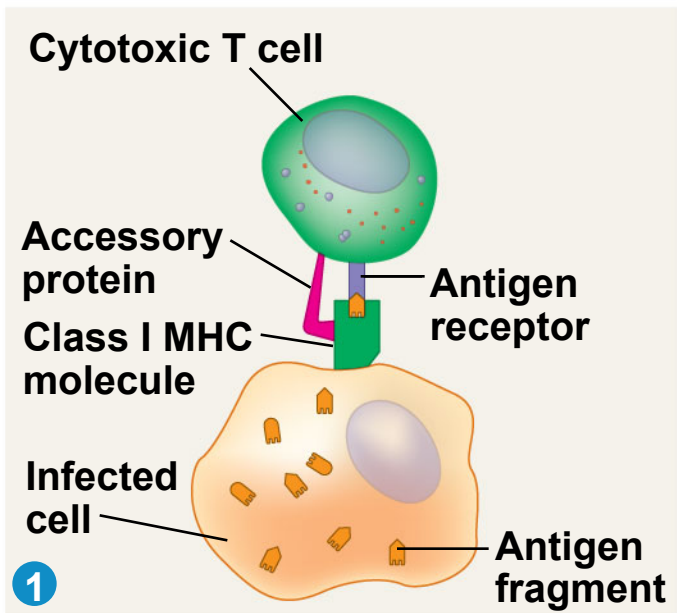


B cells that differ in antigen specificity

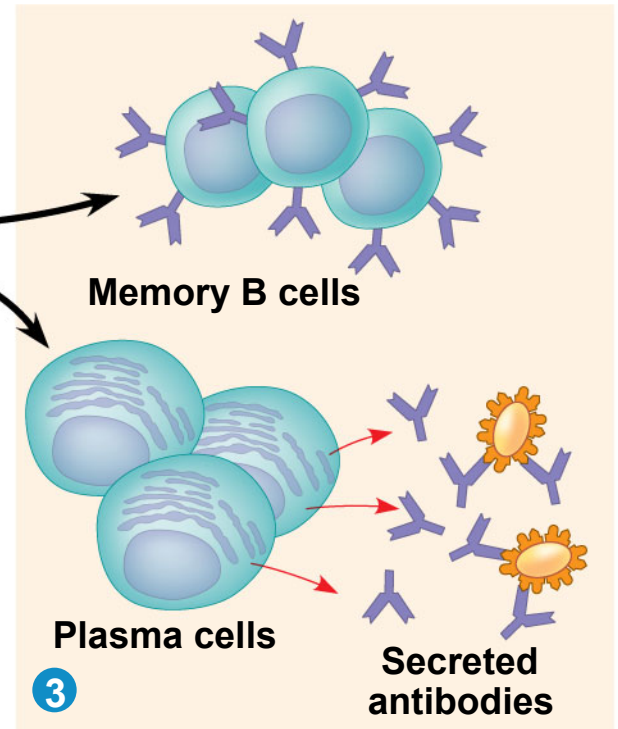
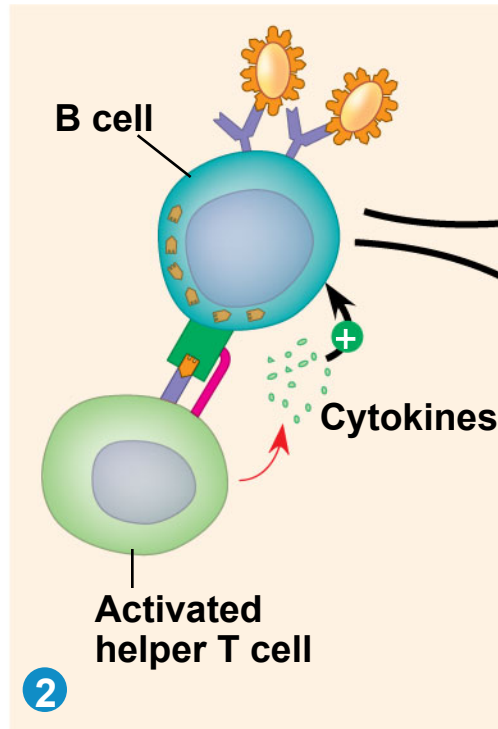
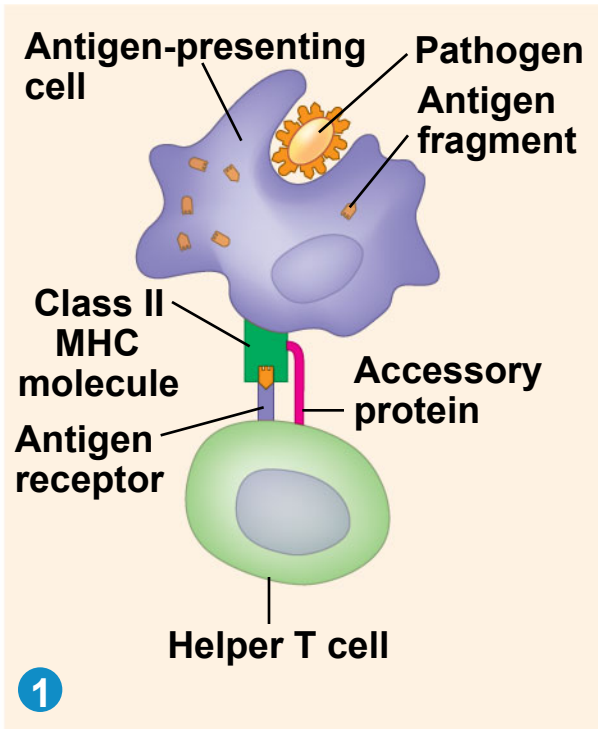




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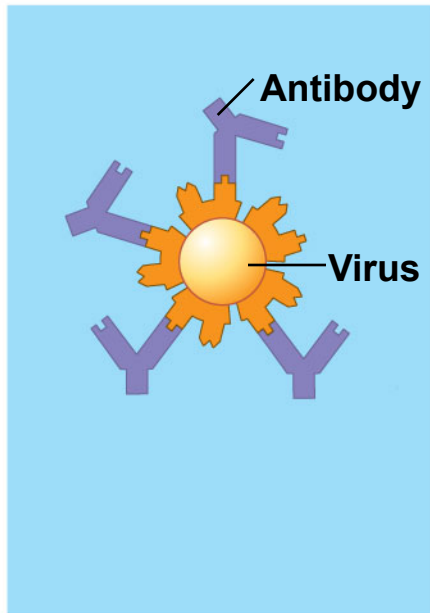


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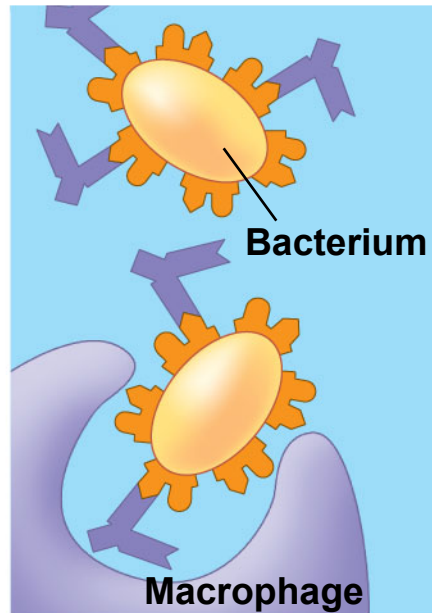


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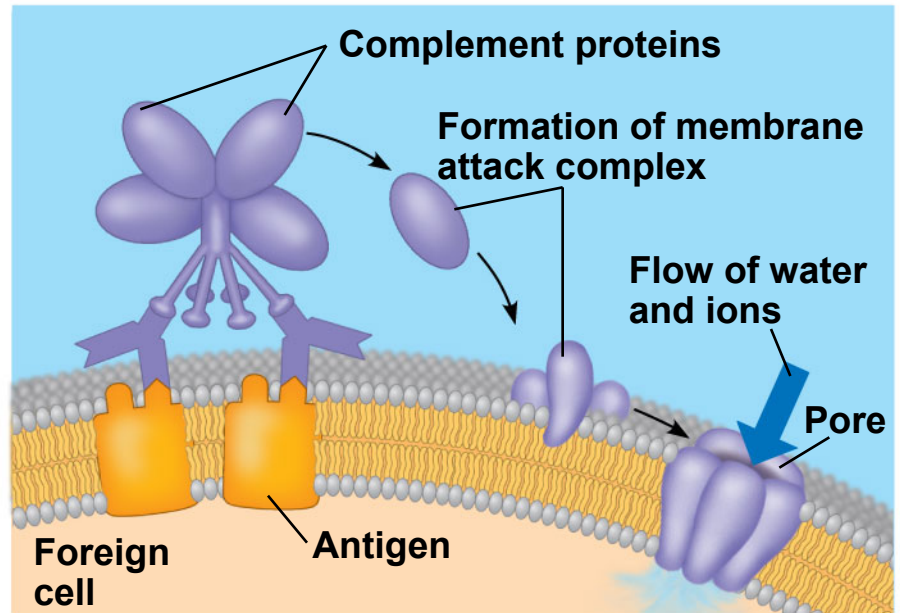
Neutralization



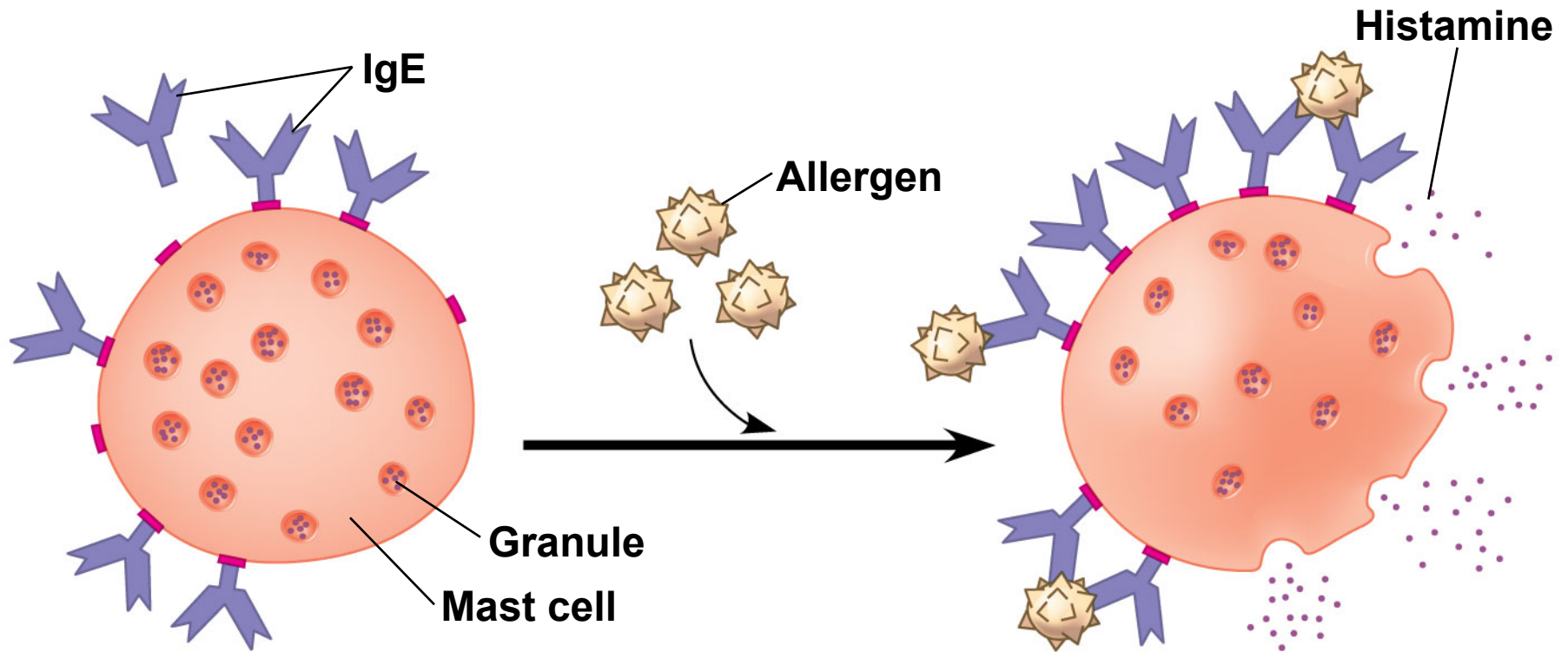
Opsonization



Activation of complement system and pore formation



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