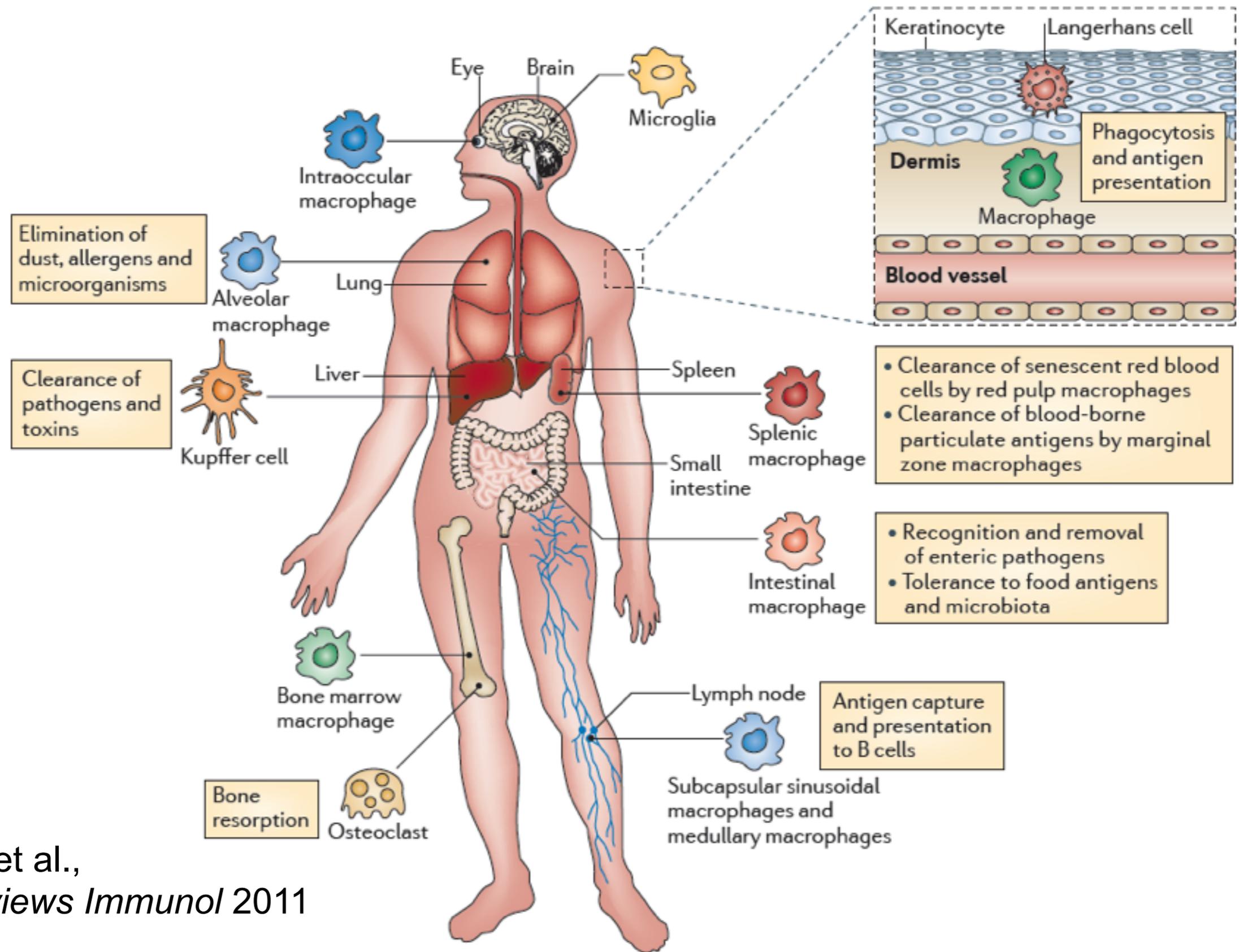
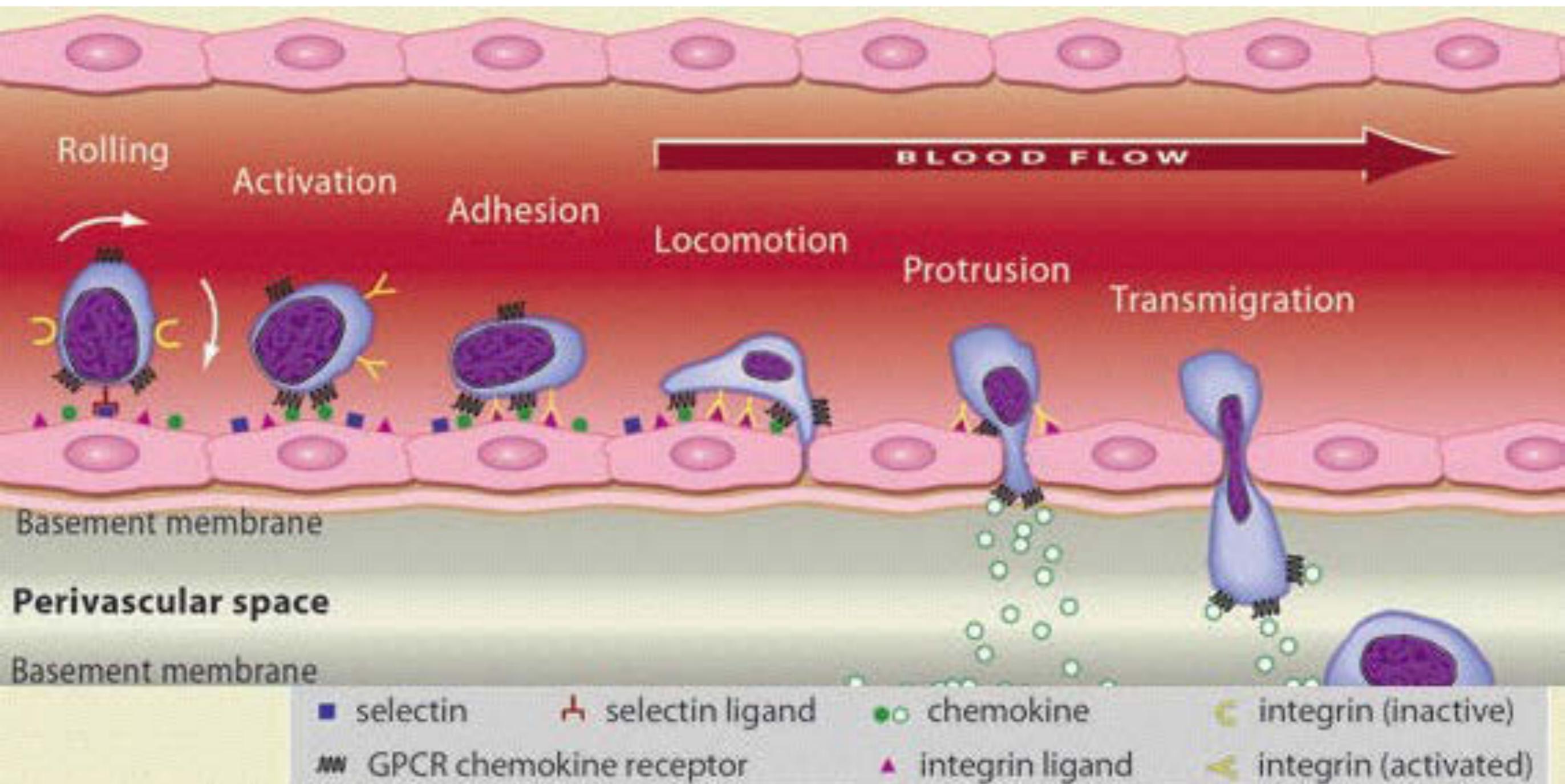


# “Protective and pathogenic functions of macrophage subsets”



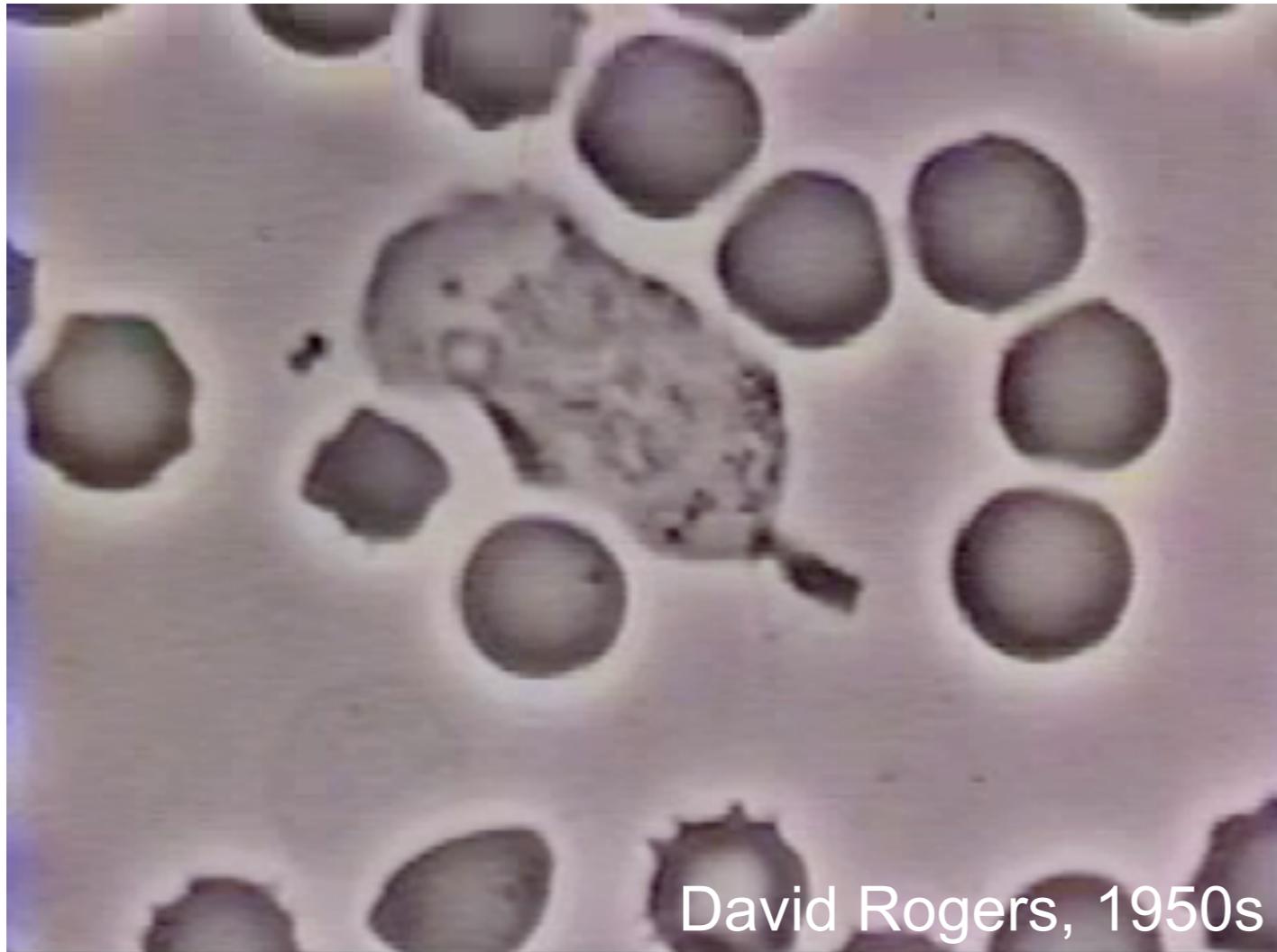
Murray et al.,  
*Nat Reviews Immunol* 2011

# White blood cell (e.g., neutrophil) scavenging: rolling, adhesion, and extravasation

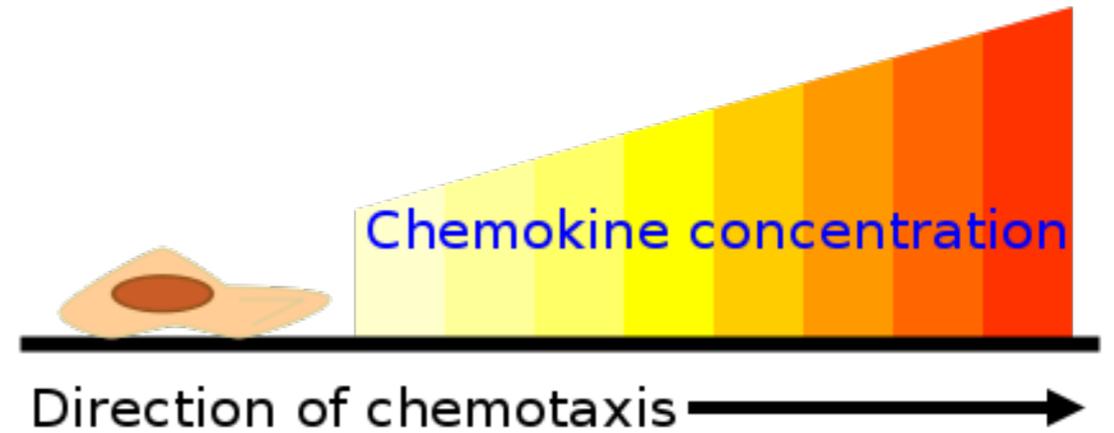


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 Source: Man, Shumei, Eroboghene E. Ubogu, and Richard M. Ransohoff. "Inflammatory cell migration into the central nervous system: a few new twists on an old tale." Brain Pathology 17, no. 2 (2007): 243-250.

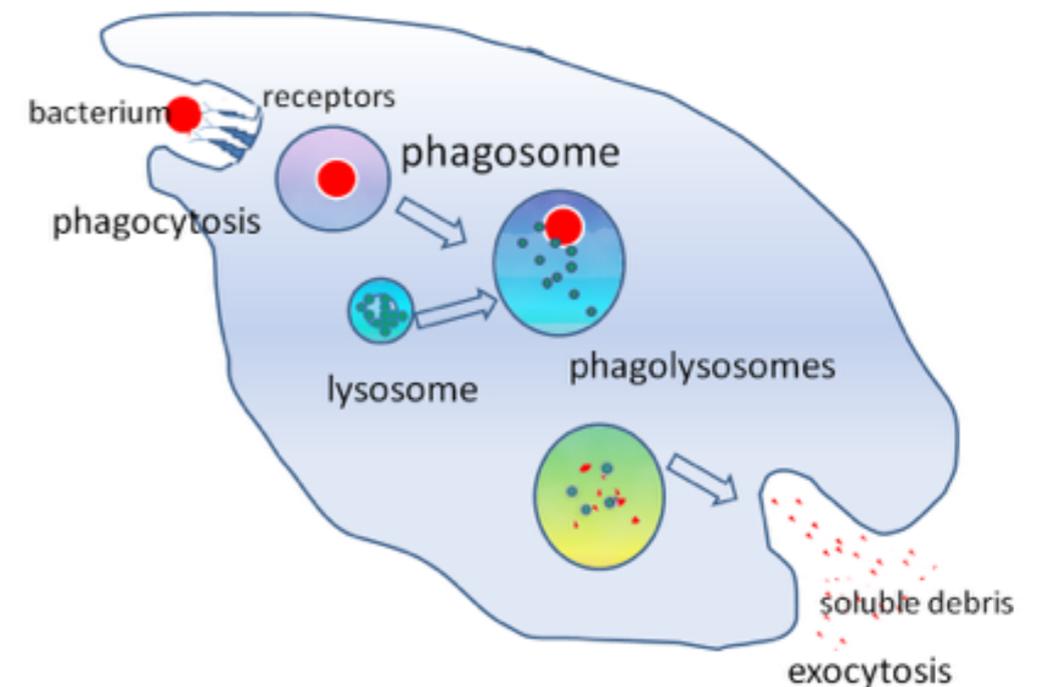
# Chemotaxis: Macrophages hunt and destroy bacteria



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# Modeling leukocyte adhesion and rolling: What are the forces?

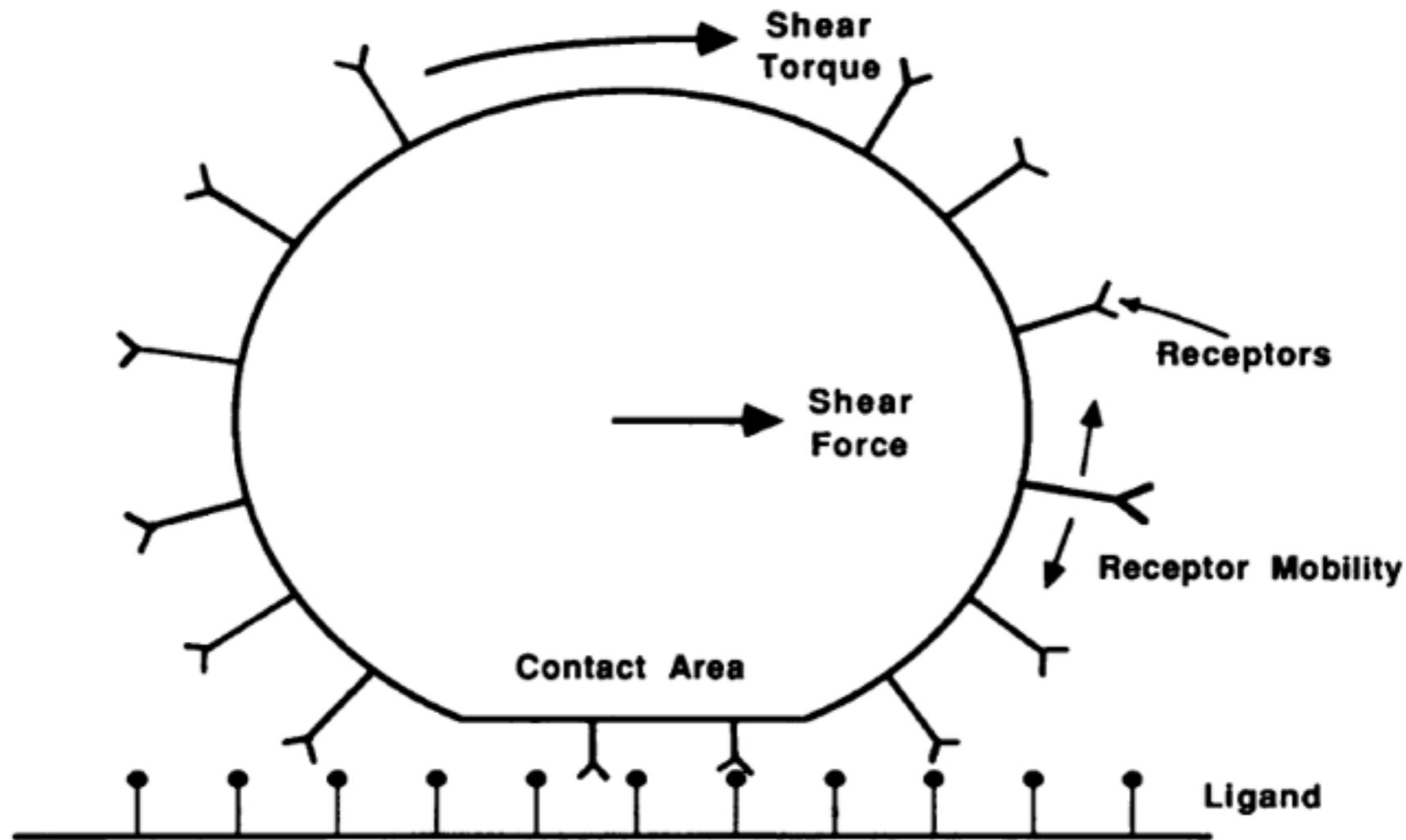


FIGURE 1 Quantities expected to influence the receptor-mediated cell adhesion to a surface include receptor number, the density of complementary surface ligands, the force and torque transmitted to the cell by the passing fluid, the mobility of receptors in the plane of the membrane, and the contact area in which cell to surface bonds may form.

Hammer & Lauffenburger, *Biophys J* 1987

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<http://web.mit.edu/hml/ncfmf.html> 5:39–7:40

[http://www.youtube.com/watch?v=51-6QCJTAjU&list=PL0EC6527BE871ABA3&index=7&feature=plpp\\_video](http://www.youtube.com/watch?v=51-6QCJTAjU&list=PL0EC6527BE871ABA3&index=7&feature=plpp_video)



## 7. Low-Reynolds-Number Flows

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