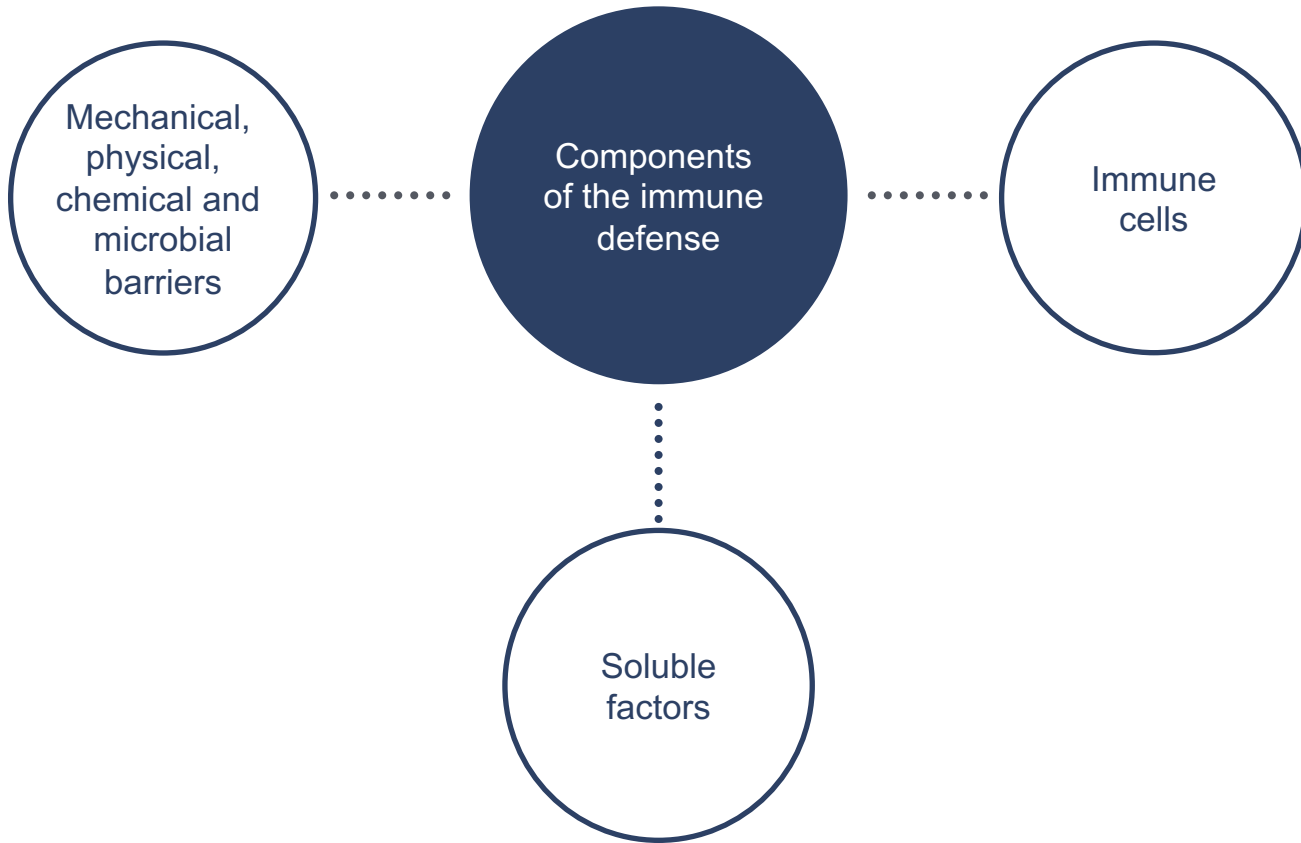
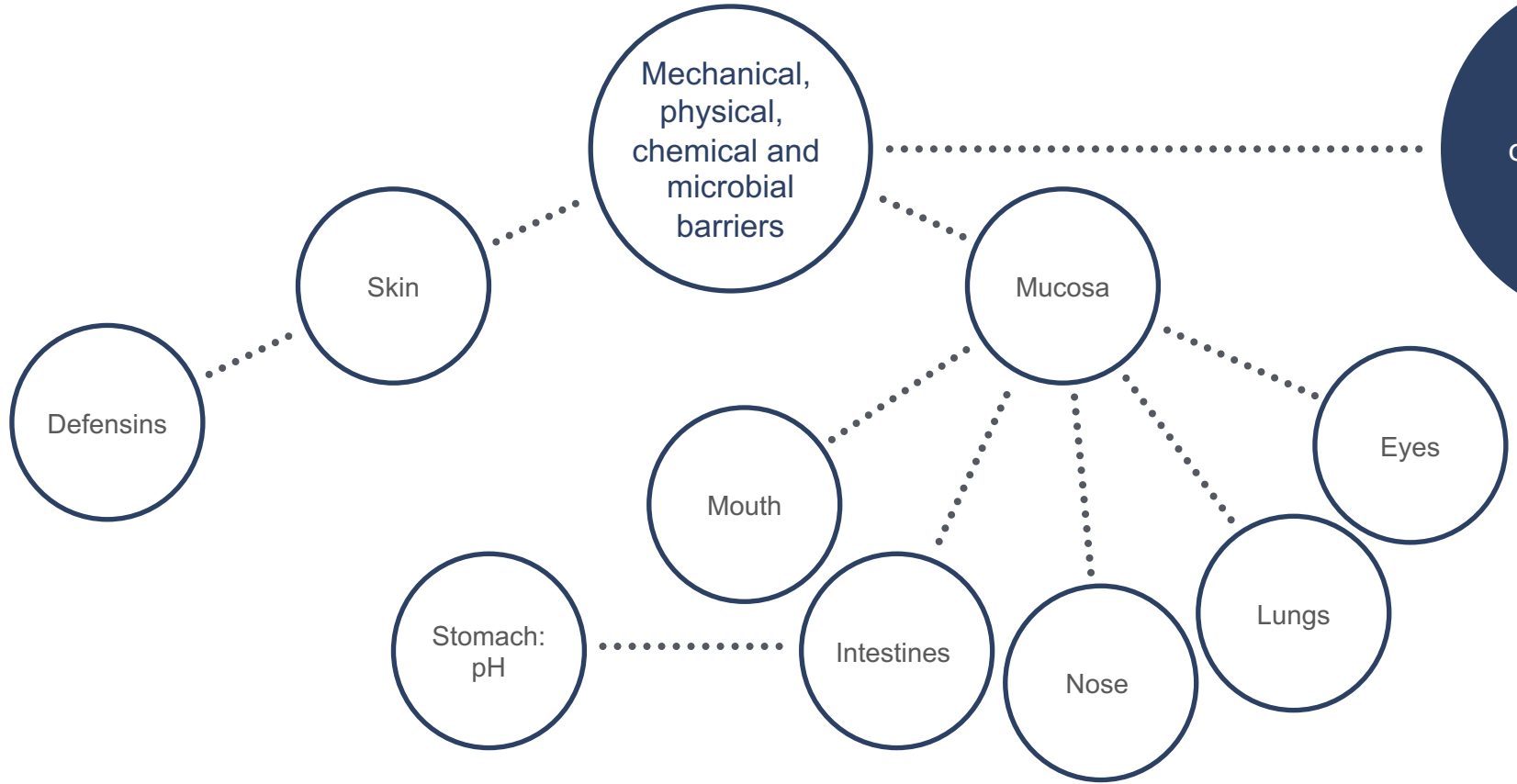


**University
of Basel**

Components that interact

Prof. Andreas J. Bircher





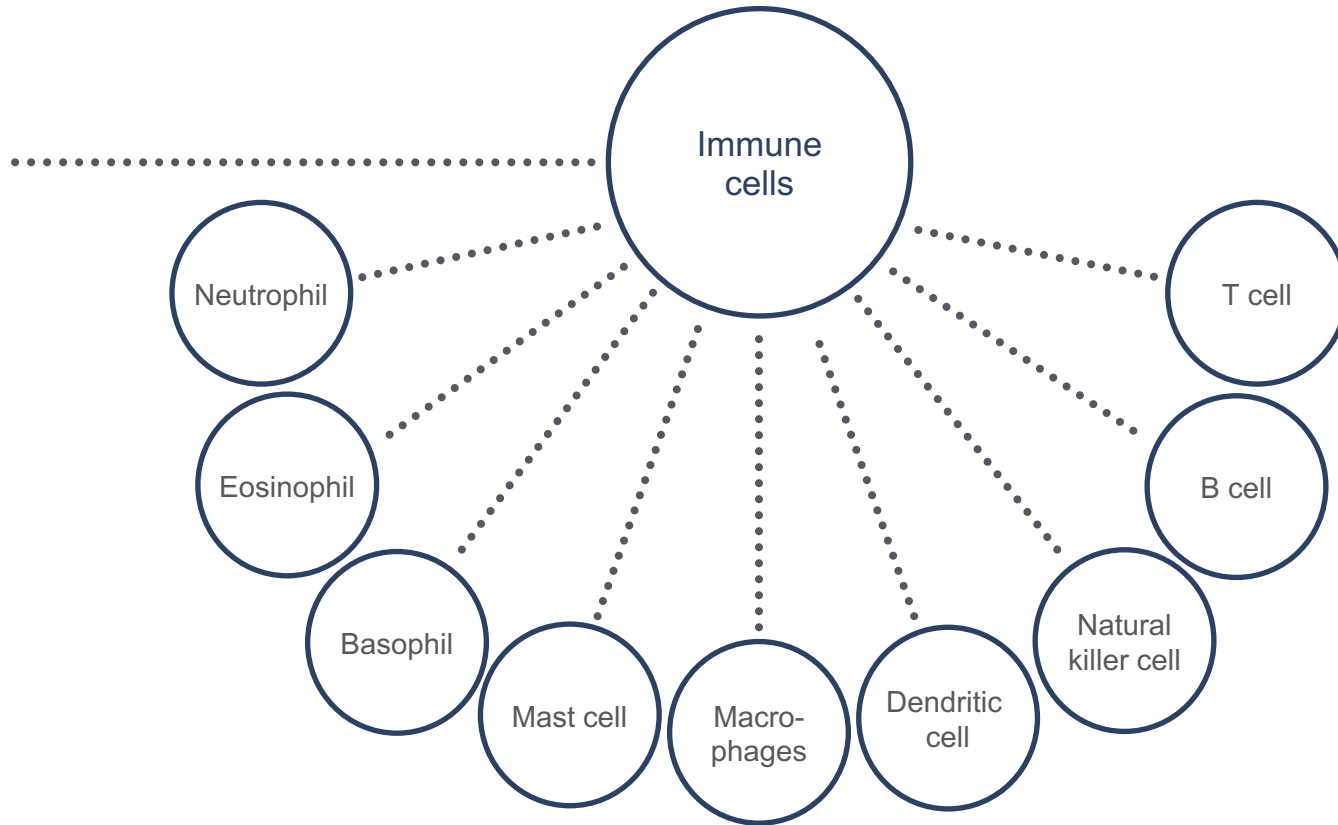
Components of the immune defense

ponents
immune
ense

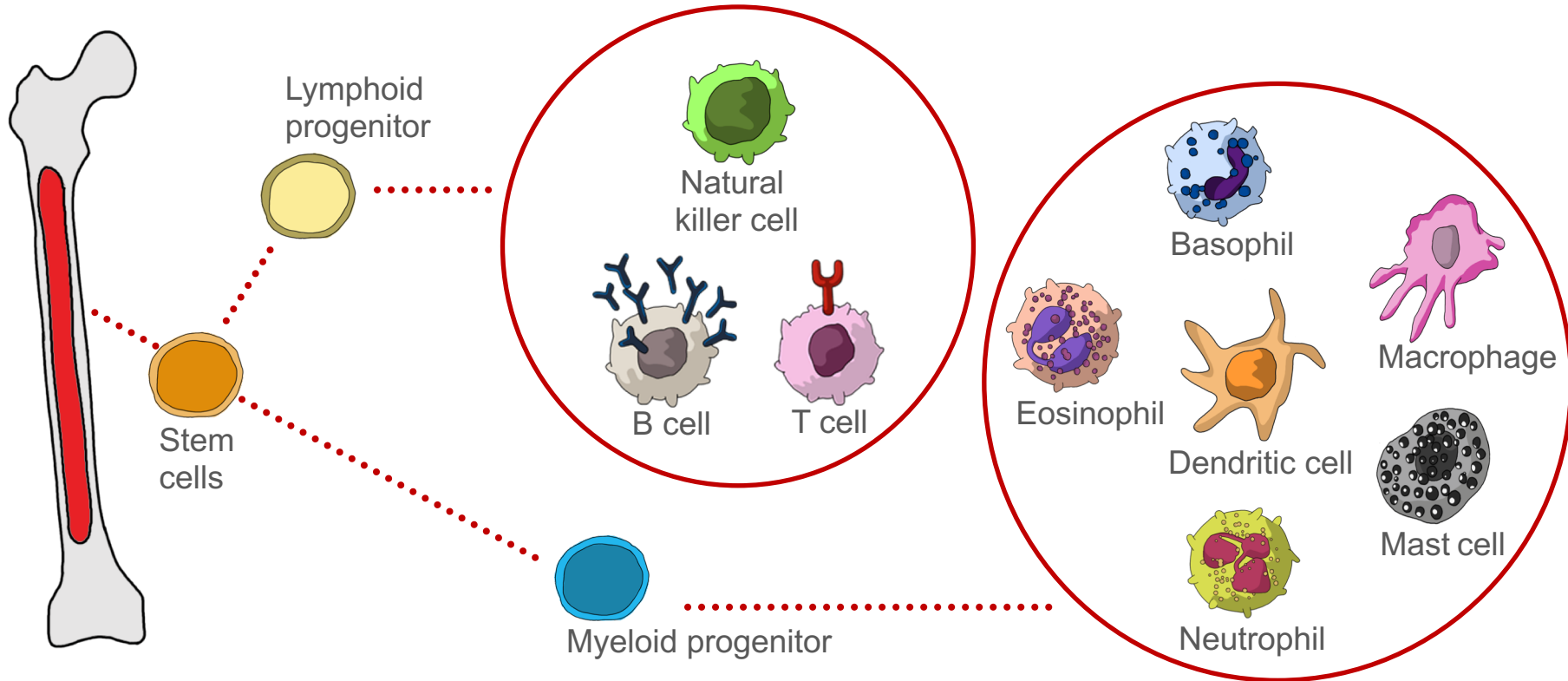


Immune
cells

Components
of immune
response

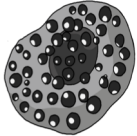


Produced from stem cells



Innate and adaptive immune cells

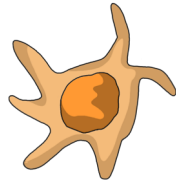
Innate:



Mast cell



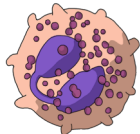
Macrophage



Dendritic cell



Neutrophil



Eosinophil



Basophil



Natural
killer

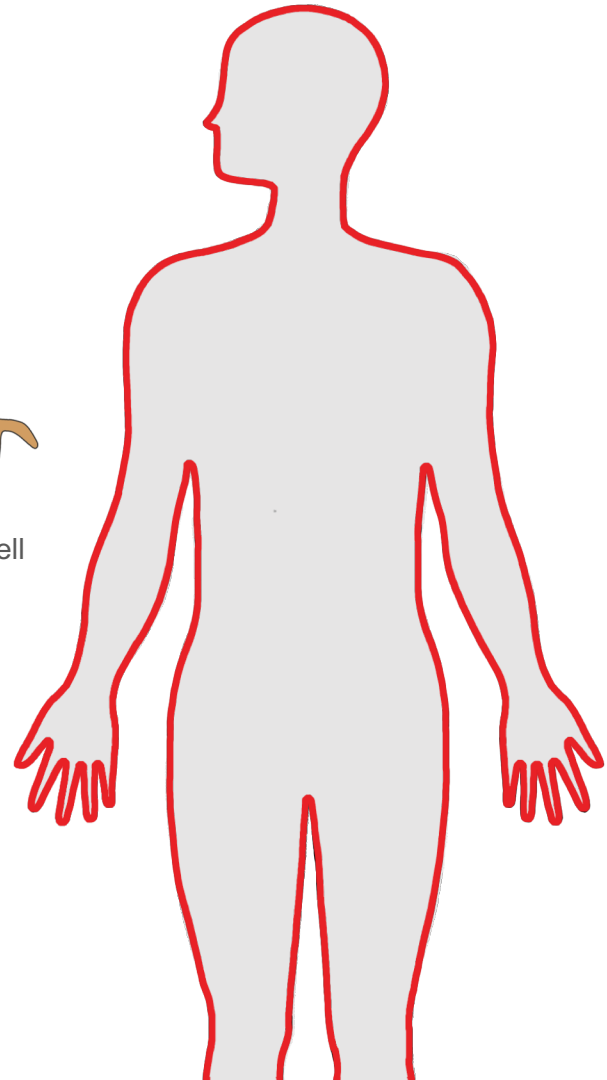
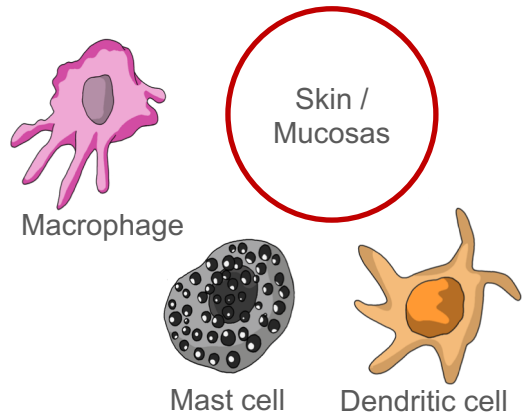
Adaptive:



B cell

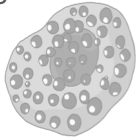


T cell





Macrophage

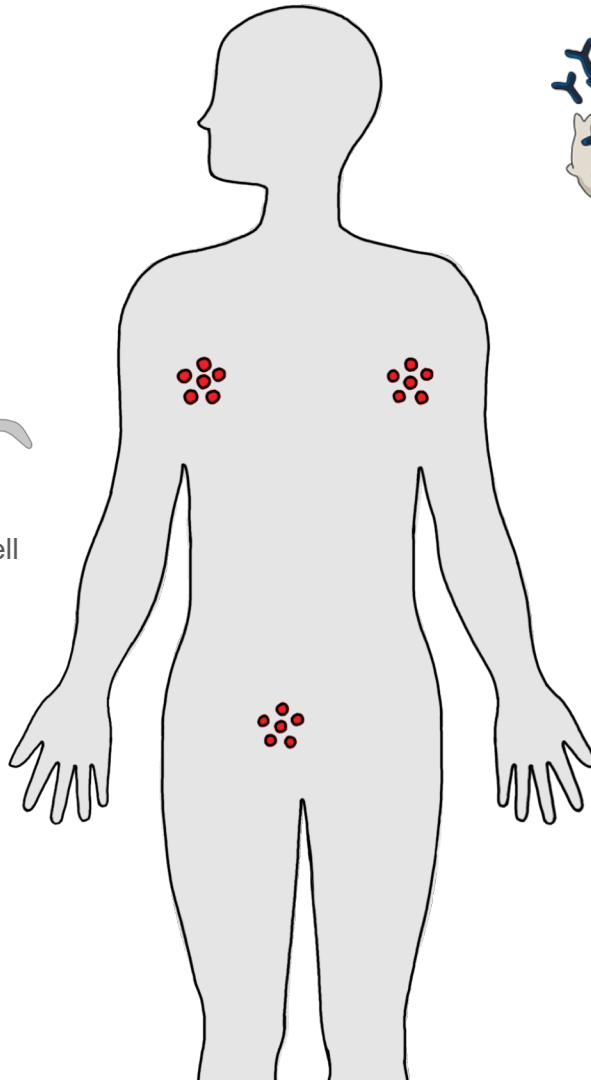


Mast cell



Dendritic cell

Skin /
Mucosas



B cell



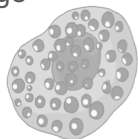
T cell



Lymphatic
tissues



Macrophage

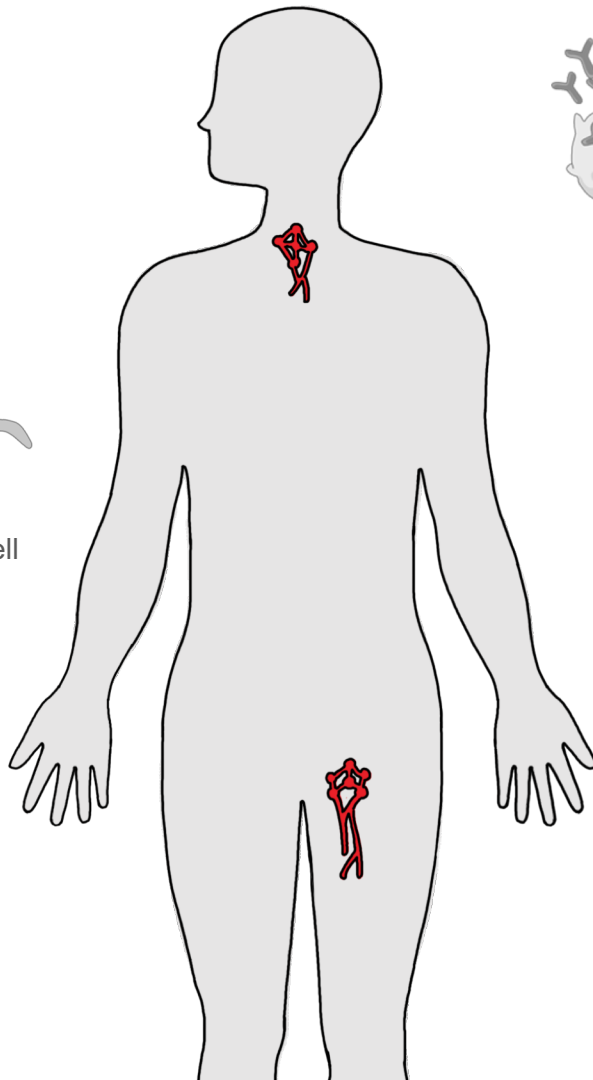


Mast cell



Dendritic cell

Skin /
Mucosas

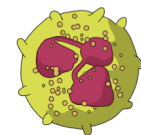


B cell

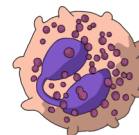


T cell

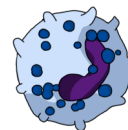
Lymphatic
tissues



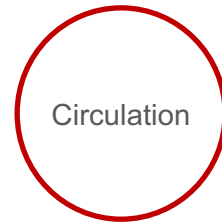
Neutrophil



Eosinophil



Basophil

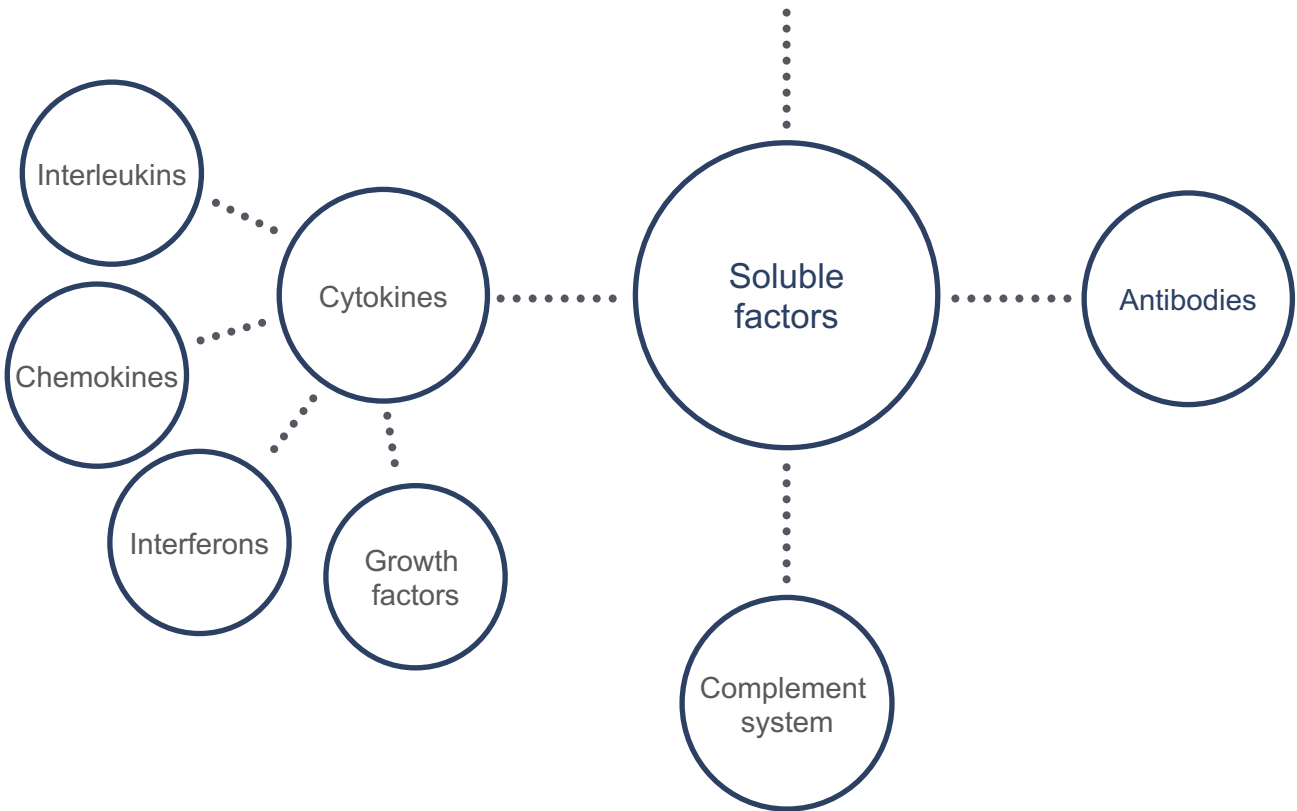


Circulation

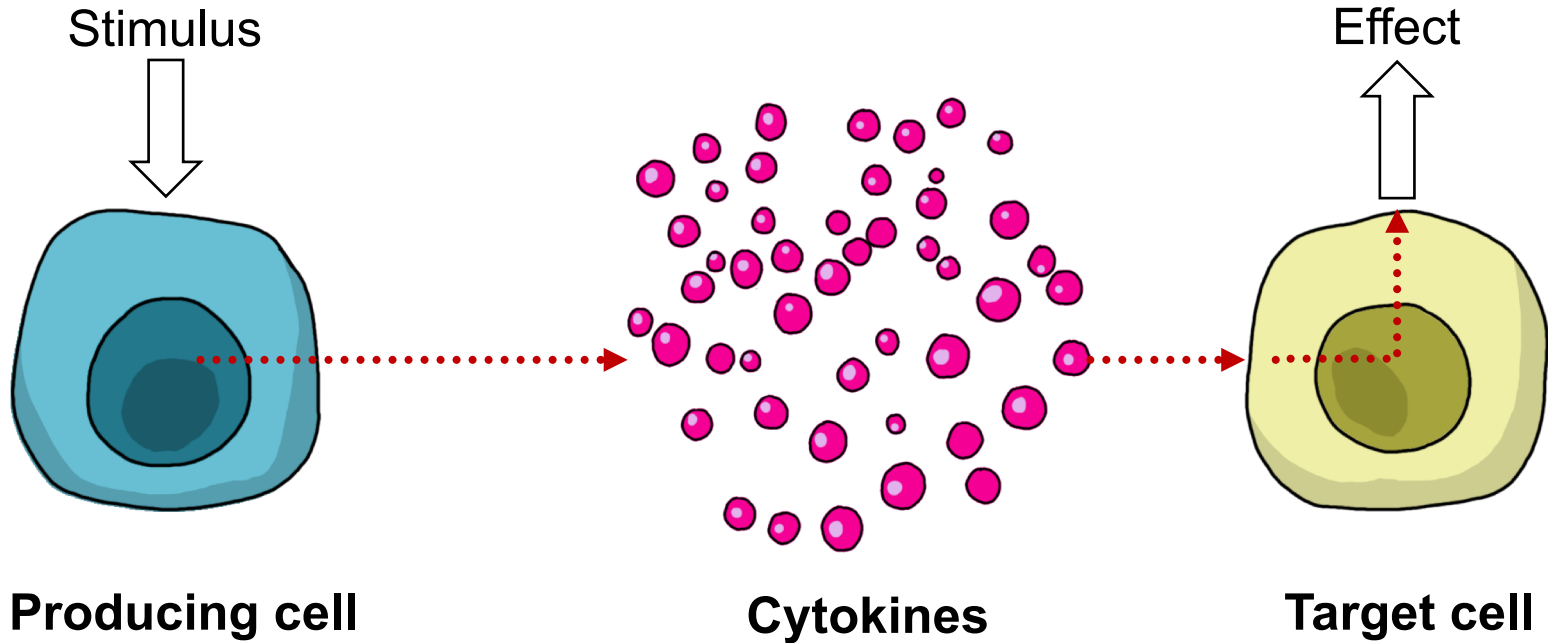


Natural
killer cell

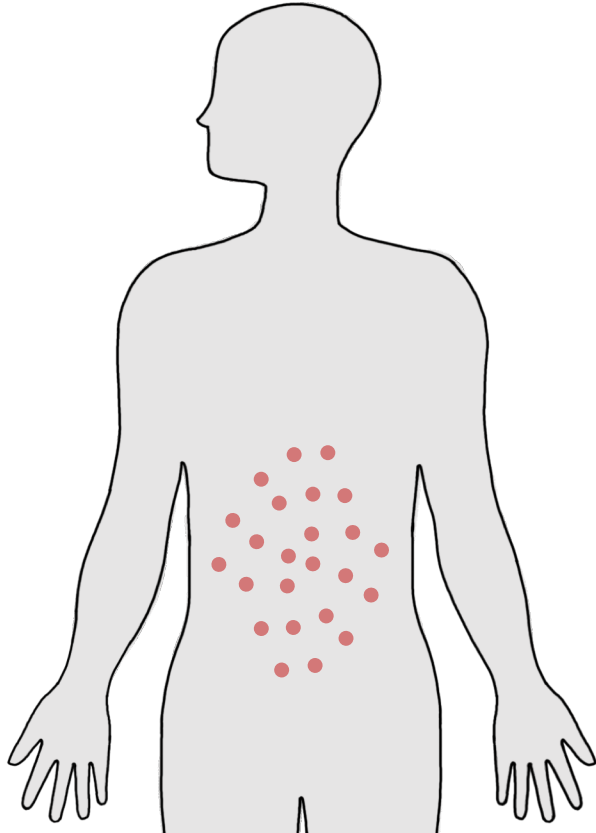
of the immune
defense



Mediating cytokines



Symptoms caused by mediators



Side-effects caused by mediation are local pain, redness, swelling.

Cytokines interferon gamma, interleukin 1 cause systemic inflammation (fever, myalgias, chills)

