

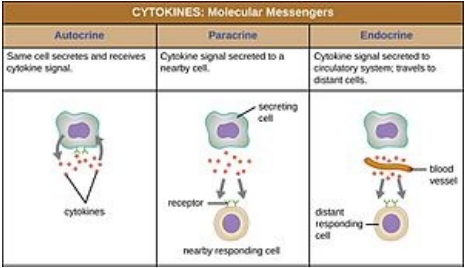
# Interleukins

The humoral signaling molecules that cells of the immune system use to communicate with each other are called cytokines. A very important group of cytokines are the **interleukins (ILs)**. These are mostly short peptide chains. Their effects are both **autocrine**, **paracrine** and **endocrine**. They serve as **humoral communication** between specific immunity and natural immunity cells. They are produced mostly by helper T-ly, APCs and macrophages.

## Function overview

Interleukins have very different functions. An overview of the most important ones is given in the table.

|       |  |
|-------|--|
| IL-1  | initiates inflammation response (fever), activates other cells                                       |
| IL-2  | activates T-lymphocytes and B-lymphocytes, macrophages, neutrophils                                  |
| IL-3  | promotes proliferation of <i>white blood cells</i> (myeloid and lymphoid progenitor cells) - see CSF |
| IL-4  | T <sub>h</sub> 2-ly subset support, plasma cell maturation and antibody class switching              |
| IL-5  | promotion of proliferation and differentiation of eosinophils and T-ly                               |
| IL-6  | systemic inflammatory response (fever), promotion of T-ly, B-ly                                      |
| IL-7  | proliferation and differentiation of lymphoid cells in the thymus                                    |
| IL-8  | chemotactic effects  |
| IL-10 | suppression of inflammatory response, promotion of T <sub>h</sub> 2-ly subset                        |
| IL-12 | increasing cytotoxicity (NK cells, T <sub>h</sub> 1-ly, macrophages, neutrophils)                    |
| IL-13 | attenuation of inflammatory reaction, inhibition of cytokine production                              |



## Links

### Related articles

- Cytokines
- Specific immunity
- Natural immunity
- Interferons
- CSF

### External links

- ŠTERZL, Ivan, et al. *Základy imunologie*. 1. edition. Praha : Karolinum, 2005. ISBN 80-246-0972-X.