Lysosome granules

Enzymes

Granulocytes

These cells contain a large diversity of enzymes which perform specific and azurophilic functions. They are able to break down a number of substances, some of which may be plasma-derived proteins, allowing the enzymes to act as inflammatory mediators.

Histamine

Vasoactive amine

Mast cells, basophils, platelets

**Cell derived mediators**
Stored in preformed granules, histamine is released in response to various stimuli. It causes arteriole dilation and increased venous permeability.

**IFN-?**

**Cytokine**

T-cells, NK cells

Antiviral, immunoregulatory, and anti-tumour properties. This interferon was originally called macrophage-activating factor, and is especially important in the maintenance of chronic inflammation.

**IL-8**

**Chemokine**

Primarily macrophages

Activation and chemoattraction of neutrophils, with a weak effect on monocytes and eosinophils.

**Leukotriene B4**

**Eicosanoid**
Cell derived mediators

Leukocytes

Able to mediate leukocyte adhesion and activation, allowing them to bind to the endothelium and migrate.

Nitric oxide

Soluble gas

Macrophages, endothelial cells, some neurons

Potent vasodilator, relaxes smooth muscle, reduces platelet aggregation, aids in leukocyte recruitment, direct antimicrobial activity in high concentrations.

Prostaglandins

Eicosanoid

Mast cells

A group of lipids which can cause vasodilation, fever, and pain.

TNF-a and IL-1
Cell derived mediators

**Cytokines**

Primarily macrophages

Both affect a wide variety of cells to induce many similar inflammatory reactions: fever, production of cytokines, endothelial gene regulation, chemotaxis, leukocyte adherence, activation of fibroblasts. Responsible for the systemic effects of inflammation, such as loss of appetite and increased heart rate.

* Full article available from Wikipedia