

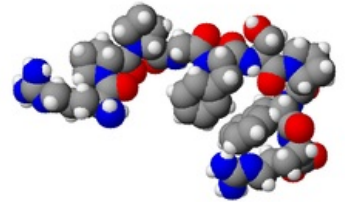
# Kinin cascade

The **kinin cascade** is the fourth important plasma cascade system, next to the coagulation, fibrinolytic and complement cascades. Its main end product is **bradykinin**, a substance with a number of physiological effects, which is mainly used in inflammation, edemas, and pain <sup>[1]</sup>.

## Bradykinin

Bradykinin is a nonapeptide with powerful biological activity that:

- causes **vasodilatation**,
- increases **vascular permeability**,
- causes **hypotension**,
- stimulates nociceptors, participates in pain perception,
- induces **smooth muscle contraction** in a number of locations,
- activates phospholipase A2 and cellular **metabolism arachidonic acids**.



Bradykinin

## Kinin Cascade Proteins

Four protein components are involved in the formation of bradykinin, which are synthesized in the liver:

- **coagulation factor XII (Hageman factor)**,
- **coagulation factor XI**,
- **prekallikrein**,
- **high molecular weight kininogen**.

## Links

### Related Articles

- Coagulation
- Fibrinolysis
- Complement

### References

1. SILBERNAGEL, S – LANG, F. *Atlas of human pathophysiology*. 1. edition. Prague : Grada Publishing, 2001. 404 pp. ISBN 80-7169-968-3.

### Literature

- STITES, Daniel P – TERR, Abba I. *Basic and Clinical Immunology*. 1. edition. Victoria Publishing, 1994. ISBN 80-85605-37-6.