

Gene control and the significance of apoptosis in ontogeny

Embryo development involves:

1. cell growth, proliferation and migration,
2. cell differentiation,
3. apoptosis.

[[Apoptosis is a physiological process that leads to the programmed death of cells without the development of an inflammatory reaction, in the event that the cell has been somehow damaged, changed or is no longer needed.

Examples of the importance of apoptosis in ontogeny:

1. Limbs - death of cells on the autopodium, which leads to the development of individual fingers (disorder: syndactyly - AD).
2. Müllerian or Wolffian ducts depending on which sex develops. In men, they disappear due to the influence of Müller's inhibitory substance, which is produced by Sertoli cells, Müller's ducts, in women, Wolf's ducts.
3. Kidneys - morphogenesis of tubules and glomeruli - a little apoptosis takes place here throughout life (pathologically, even hypotrophy).
4. PNS - peripheral nerves are based in excess. Only those that connect with muscles survive.
5. Apoptosis is also important for heart development.

Links

Related Articles

- Apoptosis

References

- KAPRAS, Jan – KOHOUTOVÁ, Milada. *Kapitoly z lékařské biologie a genetiky III*. 1. edition. Karolinum, 2009. 101 pp. ISBN 80-246-0001-3.