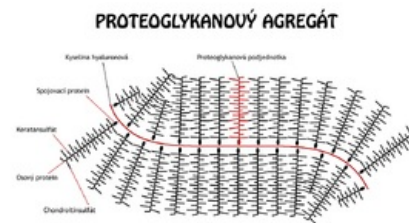


Mucopolysaccharides

They are also called "glycosaminoglycans" (GAGs). They include e.g.

- Hyaluronic acid
 - Chondroitin sulfate (CS)
 - Keratan sulfate I and II (KS I and KS II)
 - Heparan sulfate (HS)
 - Heparin
 - Dermatan sulfate (DS)
- They are formed by alternating hexosamine with uronic acid
 - Exception: keratan sulfate, which contains galactose instead of uronic acid
 - Uronic acids contain carboxyl groups and can also be sulfated (acidic character)
- They have numerous functions in the organism, especially structural ones as part of the extracellular matrix
 - They are bound to the protein skeleton (axis protein) by an O-glycosidic or N-glycosidic bond
 - Axial proteins bind to hyaluronic acid with the help of a connecting protein to form proteoglycan aggregates
 - The amount of carbohydrates in proteoglycans can be up to 95%
 - Degradation takes place partly extracellularly, shorter fragments bind to connective cell receptors, are pinocytosed and degraded by lysosomal endoglycosidases (*sulfatase, hyaluronidase*) and exoglycosidases ' (*β -glucuronidase, xylosidase, iduronidase, galactosidase, N-acetylglucosaminidase*)



Proteoglycan aggregate diagram

Links

Related Articles

- Mucopolysaccharidoses

External links

- [ws:Mukopolysacharidy](#)
- [Mucopolysaccharides \(Czech Wikipedia\)](#)
- [Glycosaminoglycan \(English Wikipedia\)](#)

References

- MURRAY, Robert K. – GRANNER, Daryl K. – MAYES, Peter A., et al. *Harper's Biochemistry*. 4. edition. Jinočany : H & H, 2002. 872 pp. ISBN 80-7319-013-3.

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