

Extracellular Matrix: Pathobiology And Signaling

[DOWNLOAD HERE](#)

1;Preface;19 2;Comments on the book Extracellular Matrix: Pathobiology & Signaling by Dick Heinegrd;23 3;About the Editor/Section Editors;25 4;List of contributing authors;29 5;Abbreviations and acronyms used;39 6;1 An introduction to the extracellular matrix molecules and their importance in pathobiology and signaling;51 6.1;1.1 Extracellular matrix: a functional scaffold;53 6.1.1;1.1.1 ECM components: structural and functional properties;54 6.1.2;1.1.2 Matrix remodeling is accomplished by proteolytic enzymes;62 6.1.3;1.1.3 Cell surface receptors mediate cell-cell and cell-matrix interactions;64 6.1.4;1.1.4 Take-home message;67 7;2 Insights into the function of glycans;71 7.1;2.1 Introduction;73 7.2;2.2 Metabolic control of hyaluronan synthesis;76 7.2.1;2.2.1 Introduction;76 7.2.2;2.2.2 Transcription of hyaluronan synthases;77 7.2.3;2.2.3 UDP-sugar substrates as limiting factors in hyaluronan synthesis;79 7.2.4;2.2.4 Posttranslational processing of HAS;82 7.2.5;2.2.5 Challenges and future prospects;85 7.2.6;2.2.6 Take-home message;85 7.3;2.3 Multiple roles of hyaluronan as a target and modifier of the inflammatory response;89 7.3.1;2.3.1 Introduction;89 7.3.2;2.3.2 Endothelial permeability;90 7.3.3;2.3.3 Angiogenesis;90 7.3.4;2.3.4 Mechanisms of hyaluronan degradation;91 7.3.5;2.3.5 Consequences of hyaluronan fragmentation;91 7.3.6;2.3.6 Hyaluronan cross-talk with leukocytes;92 7.3.7;2.3.7 Adhesion of leukocytes to hyaluronan;96 7.3.8;2.3.8 Hyaluronan removal in the late phase of inflammation;98 7.3.9;2.3.9 Local clearance of hyaluronan;98 7.3.10;2.3.10 Chronic inflammation;99 7.3.11;2.3.11 Hyaluronan increase in wounds;100 7.3.12;2.3.12 Support of migration and proliferation;101 7.3.13;2.3.13 TGF- and myofibroblasts;102 7.3.14;2.3.14 Therapeutic applications;103 7.3.15;2.3.15 Future perspectives;103 7.3.16;2.3.16 Take-home message;104 7.4;2.4 Roles of sulfated and nonsulfated glycosaminoglycans in cancer growth and progression-therapeutic implications;116 7.4.1;2.4.1 Introduction;116 7.4.2;2.4.2 Heparin and heparan sulfate affect key tumor cell functions;117 7.4.3;2.4.3 Chondroitin sulfate participates in cancer cell, tumor stroma, and tumor microenvironment interactions to affect cancer progression;120 7.4.4;2.4.4 HA synthesis is correlated to cancer progression;122 7.4.5;2.4.5 Challenges and future prospects;124 7.4.6;2.4.6 Take-home message;126 7.5;2.5 Heparan sulfate design: regulation of biosynthesis;134 7.5.1;2.5.1 Heparan sulfate an

extracellular component with variable structure;134 7.5.2;2.5.2 How is heparan sulfate synthesized and which enzymes contribute?;135 7.5.3;2.5.3 Fine-tuning of heparan sulfate structure in the right place, at the right time;138 7.5.4;2.5.4 Disturbed heparan sulfate biosynthesis in human pathobiology;142 7.5.5;2.5.5 Take-home message;143 7.6;2.6 Bone and skin disorders caused by a disturbance in the biosynthesis of chondroitin sulfate and dermatan sulfate;148 7.6.1;2.6.1 Introduction;148 7.6.2;2.6.2 Biosynthetic pathways of CS and DS chains;150 7.6.3;2.6.3 Human congenital disorders caused by mutations of the enzymes involved in the biosynthesis of CS and DS;155 7.6.4;2.6.4 Challenges and future prospects;158 7.6.5;2.6.5 Take-home message;162 7.6.6;2.6.6 Abbreviations;162 7.7;2.7 Biological functions of branched N-glycans related to physiology and pathology of extracellular matrix;169 7.7.1;2.7.1 Introduction;169 7.7.2;2.7.2 Synthesis of branched N-glycans;169 7.7.3;2.7.3 Effect of N-glycosylation on ECM formation;172 7.7.4;2.7.4 Complexity of N-glycan branch modulates cellular functions via clustering cell surface proteins;173 7.7.5;2.7.5 Branched N-glycans regulate the biological functions of integrins;174 7.7.6;2.7.6 The mutual regulation of N-glycosylation and cadherins;175 7.7.7;2.7.7 Challenges and future prospects;176 7.7.8;2.7.8 Take-home message;177 8;3 Proteoglycans: structure, pathobiology, and signaling;183 EAN/ISBN : 9783110258776 Publisher(s): De Gruyter Format: ePub/PDF Author(s): Karamanos, Nikos

[DOWNLOAD HERE](#)

Similar manuals: