BioMed Research International

Special Issue on

Proteoglycans/Glycosaminoglycans: From Basic Research to Clinical Practice

Call for Papers

Extracellular matrices (ECM) represent a complex network of proteins and glycosaminoglycans (GAGs) constituting the cell microenvironment. Most important among the matrix proteins are the collagens, elastin, laminins, fibronectin as well as GAG decorated proteoglycans (PGs). PGs are composed of independent structural domains, the sequences and arrangements of which are highly conserved and discretely glycosylated, thus determining a varying degree of matrices organization. On the other hand, both bound GAG chains and free GAGs such as hyaluronan (HA) bestow voluminosity to the ECM, due to the negative charges they carry and to their subsequent water binding ability. Therefore, these molecules participate in maintaining the bulk, shape, and strength of tissues in vivo. However, PGs/GAGs provide much more than just mechanical and structural support, they are critically important for cell growth, survival, and differentiation as well as key to various disease processes including inflammation, atherosclerosis, autoimmune diseases, and cancer. Moreover, GAG/PG effects are clearly dependent on the specific correlation among their abundance, distribution, and disease type/stage. The evidence that PGs/GAGs have a key role in various pathological conditions have led to the conclusion that understanding the changes in PG/GAG expression and fine structure that occur in disease may lead to opportunities to develop innovative and selective therapies. We invite authors to submit original research and review articles that seek to designate discrete roles for GAGs/PGs as diagnostic markers and/or therapy targets for specific disease types and grades. We are interested in articles that explore the utilization of pluripotent characteristics of PGs/GAGs in the ongoing battle against disease. Potential topics include, but are not limited to:

- Mechanisms of GAG/PG action and their potential application
- Development of novel disease markers
- Roles of PGs/GAGs in wound healing-therapeutical aspects
- Development of immunotherapeutic strategies involving GAGs/PGs
- Roles of PGs/GAGs in tissue engineering
- Potential application of PGs/GAGs in axon regeneration
- Roles of PGs/GAGs in cartilage regeneration
- Safe and effective systems for modulating the expression and subsequent activity of GAGs/PGs in disease
- Synthesis of reliable carriers specifically designed to deliver discrete GAGs/PGs to target disease tissues
- Utilization of GAGs/PGs as carriers for targeted therapy delivery

Before submission authors should carefully read over the journal's Author Guidelines, which are located at http://www.hindawi.com/journals/bmri/guidelines/. Prospective authors should submit an electronic copy of their complete manuscript through the journal Manuscript Tracking System at http://mts.hindawi.com/submit/journals/bmri/pharmacology/pgfb/ according to the following timetable:

Manuscript Due	Friday, 25 July 2014
First Round of Reviews	Friday, 17 October 2014
Publication Date	Friday, 12 December 2014

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