



applied sciences



Special Issue Reprint

Intervertebral Disc Regeneration II

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This second volume on the subject of intervertebral disc (IVD) regeneration ranges from in vitro IVD cell culture studies on cytokines, such as TGF β 3, GDF5, GDF6, ANG1, and ANG2, to diffuse idiopathic skeletal hyperostosis (DISH) to novel advances in the diagnosis of painful discs in reports using natural language processing (NLP). This diverse issue consists of seven articles that provide a comprehensive overview of recently applied research insights. Three original articles focus on the effects of cytokines in primary cell culture. Then, two original articles report on transcriptomics data, i.e., single-cell RNA-sequencing data of in vivo rat animal models of IVD degeneration, and human prime PCR data comparing trauma versus DISH-IVDs. One original article addresses the correct diagnosis of lumbosacral transitional vertebrae (LSTV) in scoliotic patients, and another original article addresses the usage of NLP to improve the diagnosis of painful IVDs. The Special Issue is concluded with a review on the importance of the relatively recent “hot topic” of extracellular vesicles (EVs) for regenerative purposes in IVDs.



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