Defects in the annulus fibrosus of the intervertebral disc lead to degeneration that may require discectomy or spinal fusion, surgical procedures with unfavorable long-term outcomes. Because the annulus fibrosus does not undergo spontaneous regeneration after injury, the need for an implant to facilitate regeneration is compelling. Our research focuses on a collagen-glycosaminoglycan matrix that could be implanted into an annular defect. The objectives of the proposed investigation are to determine the proliferative and biosynthetic effects of selected matrix variables on adult human and canine annulus fibrosus cells \textit{in vitro}. 