Degenerative disc disease begins in the central nucleus pulposus region and is implicated as a major component of spine pathology.

Currently, the two major clinical procedures for treating disc degeneration are disc excision and spinal fusion. Although these procedures offer relatively good short-term clinical results in relief of pain, in many instances they are disappointing because of altered spinal mechanics that leads to subsequent degeneration at adjacent disc levels.

Biological repair of the degenerate disc would be the ideal treatment and recent advances in tissue engineering offer the unique opportunity to repair, or at least retard, further degeneration of the nucleus pulposus.

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