

DEVELOPMENT OF PRIMARY HUMAN FIBROBLAST CELL CULTURES FOR MODELING INTESTINAL FIBROSIS

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Poster

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Human primary intestinal fibroblast cultures from Crohn's disease patients maintain fibrotic phenotype at passage 3, distinguished by elevated protein markers and altered cytokine secretion but not gene expression.

KEY POINTS

- Primary fibroblast cultures were successfully generated from colonic biopsies of 4 IBD patients and 4 controls and maintained to passage 3 (approximately one month)
- Crohn's disease-derived fibroblasts showed significantly higher fluorescent intensity of fibrotic markers COL1A1, TGF- β 1, and PAI-1, and higher proliferation marker PHH3, compared to controls
- CD fibroblasts secreted higher quantities of HGF and DPPIV (cytokines connected to fibrosis induction), while controls showed higher ANG, BDNF, PTX-3, VEGF, and VCAM-1
- No significant differences in gene expression were detected by qRT-PCR between diseased and control cultures at passage 3
- The authors conclude this model could be useful for in vitro fibrosis modeling and plan to examine earlier passages

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