**Table 1.** Growth factors evaluated for their effects on chondrocyte growth and matrix production.

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| **Growth factors** | **Chondrocyte growth** | **Matrix production** |
| IGF-1 | Mitogenic differentiation | Matrix synthesis |
| FGF-α | Mitogenic differentiation | Matrix synthesis |
| PDGF(platelet derived growth factors) | Mitogenic differentiation | Matrix synthesis |
| TGF-β | Promotes differentiation | Proteoglycan synthesis |
| BMP-1 | Cartilage proliferation | Collagen synthesis |
| BMP-2 | Promotes cartilage formation by inducing production of cartilage matrix. | Collagen synthesis |
| BMP-4 | Promotes cartilage formation by inducing MSCs to become chondroprogenitors andchondrocyte maturation. | Matrix synthesis |
| BMP-5 | Chondrocyte proliferation | Matrix synthesis |
| BMP-9 | Potent anabolic factor for juvenile cartilage | Matrix synthesis |
| BMP-12 (GDF7) | Modulates in vitro cartilageformation in a similar fashion as BMP-2 does | Collagen synthesis |