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United States Patent [19]

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Murray

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[54] **PROTEASE RESISTANT PDGF AND METHODS OF USE**

0 259 632-A1 3/1988 European Pat. Off. C12N 15/00
0 282 317-A2 9/1988 European Pat. Off. C07K 13/00
90/04035 4/1990 WIPO C12N 15/00

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[73] Assignee: **ZymoGenetics, Inc.**, Seattle, Wash.

Johnsson et al., "The *c-sis* gene encodes a precursor of the B chain of platelet-derived growth factor," *EMBO J.* 3(5):921-928, 1984.

[21] Appl. No.: **08/436,140**

Betsholtz, et al., "cDNA sequence and chromosomal localization of human platelet-derived growth factor A-chain and its expression in tumour cell lines," *Nature* 320:695-699, 1986.

[22] Filed: **May 8, 1995**

Related U.S. Application Data

[62] Division of application No. 08/303,594, Sep. 9, 1994, which is a continuation of application No. 07/557,219, Jul. 23, 1990, abandoned.

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[51] **Int. Cl.**⁶ **C12N 15/18**; C07K 14/49

[52] **U.S. Cl.** **530/399**; 530/350

[58] **Field of Search** 530/350, 399;
514/12; 435/69.1, 69.4

[57] **ABSTRACT**

PDGF B-chain polypeptides characterized by the substitution or deletion of a lysine or arginine residue at position 27, 28, 32, 79, 80 or 81 of native B-chain are disclosed. Also disclosed are PDGF-like proteins containing the B-chain polypeptides. The polypeptides and proteins may be produced through the use of cultured cells transfected or transformed to express DNA molecules that encode the polypeptides. The PDGF-like proteins are useful as components of cell culture media and for accelerating the healing of wounds.

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15 Claims, 4 Drawing Sheets