

- [54] *E. COLI* BACTERIA CARRYING RECOMBINANT PLASMIDS AND THEIR USE IN THE FERMENTATIVE PRODUCTION OF L-TRYPTOPHAN
- [75] Inventors: **David M. Anderson**, Rockville, Md.; **Klaus M. Herrmann**; **Ronald L. Somerville**, both of West Lafayette, Ind.
- [73] Assignee: **Ajinomoto Co., Inc.**, Tokyo, Japan
- [21] Appl. No.: **180,296**
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- [51] Int. Cl.<sup>3</sup> ..... **C12N 1/00**; C12R 1/19; C12N 9/00; C12P 13/22; C12P 21/00; C12N 15/00; C12N 1/20
- [52] U.S. Cl. .... **435/108**; 435/317; 435/849; 435/183; 435/68; 435/172; 435/253
- [58] Field of Search ..... 435/108, 172, 317, 253

- [56] **References Cited**  
**U.S. PATENT DOCUMENTS**  
 4,237,224 12/1980 Cohen et al. .... 435/68

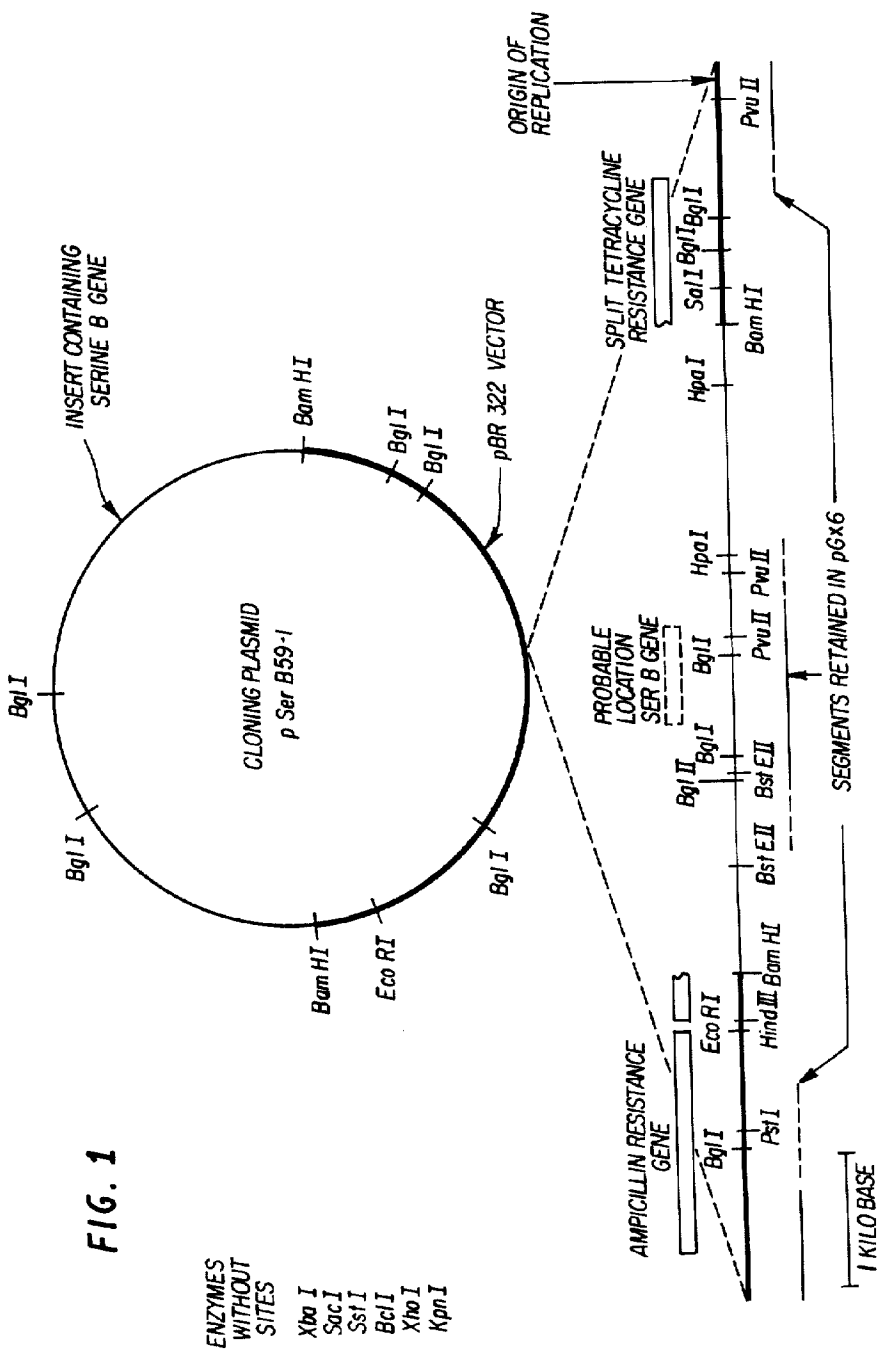
- OTHER PUBLICATIONS**  
 Tribe and Pittard, Applied and Environmental Microbiology, v. 38, pp. 181-190 (Aug. 1979).  
 Nagahari et al., Gene 1: 141-152 (1977).  
 Fredericq and Cornelis, Journal of General Microbiology 105: 357-349 (1978).  
 Oxender et al. Proceedings of the National Academy of Sciences USA V. 76 5524-5528 (Nov. 1979).

- Reznikoff and Thornton, Journal of Bacteriology V. 109: 526-532 (9172).
- Collins et al., Proceedings of the National Academy of Sciences USA vol. 73: 3838-3842 (1976).
- Enger-Valk et al. Gene 9: 69-85 (1980).
- Hershfield et al., Proceedings of the National Academy of Sciences USA V. 71: 3455-3459 (1974).
- Wagner Abstract of German Patent DT 2841642 Mar. 1980.
- Nagahari et al., Abstract of Mol. Gen. Genet. 171, 115 (1979) Chem. Abstr. 90:200102e (1979).
- Hallewell et al. Gene 9, 27-47 (1980).
- Somerville et al. Abstract of J. Mol. Biol. 11, 747 (1965) Chem. Abstr. 63:2152d.
- Watson, *Molecular Biology of the Gene*, W. A. Benjamin, Inc. (1977), pp. 398-400.
- Bertrand et al. Abstract of J. Mol. Biol. 117, 227-247 (1977) in Chem. Abstr. 88:85816k (1978).

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- [57] **ABSTRACT**  
 A bacterium which comprises a host of the genus *Escherichia* deficient in the enzyme tryptophanase carrying a plasmid with genetic information to control L-tryptophan production is useful for the fermentative production of L-tryptophan in high yields.

**34 Claims, 4 Drawing Figures**



CLONING STRATEGY FOR MTR #2 *trp* GENES FROM CELL DNA

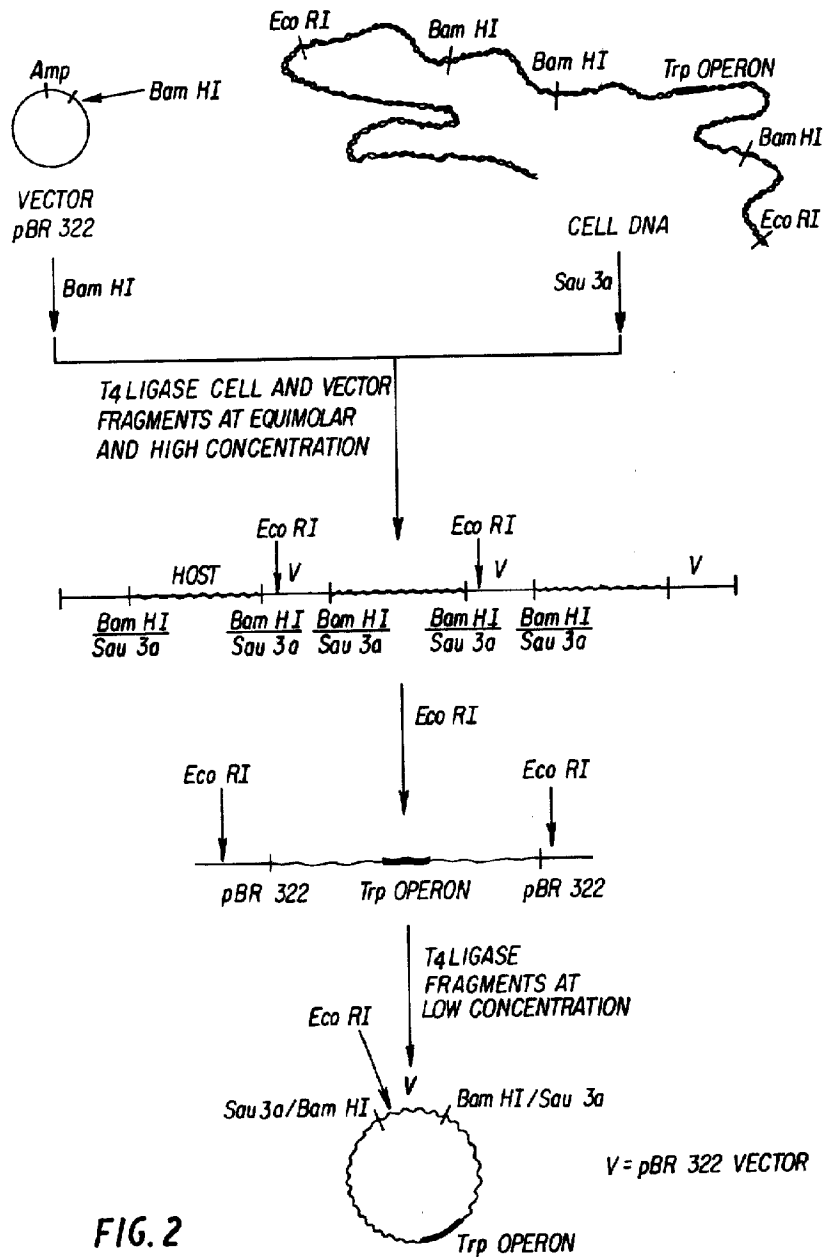


FIG. 2

CONSTRUCTION OF PLASMIDS

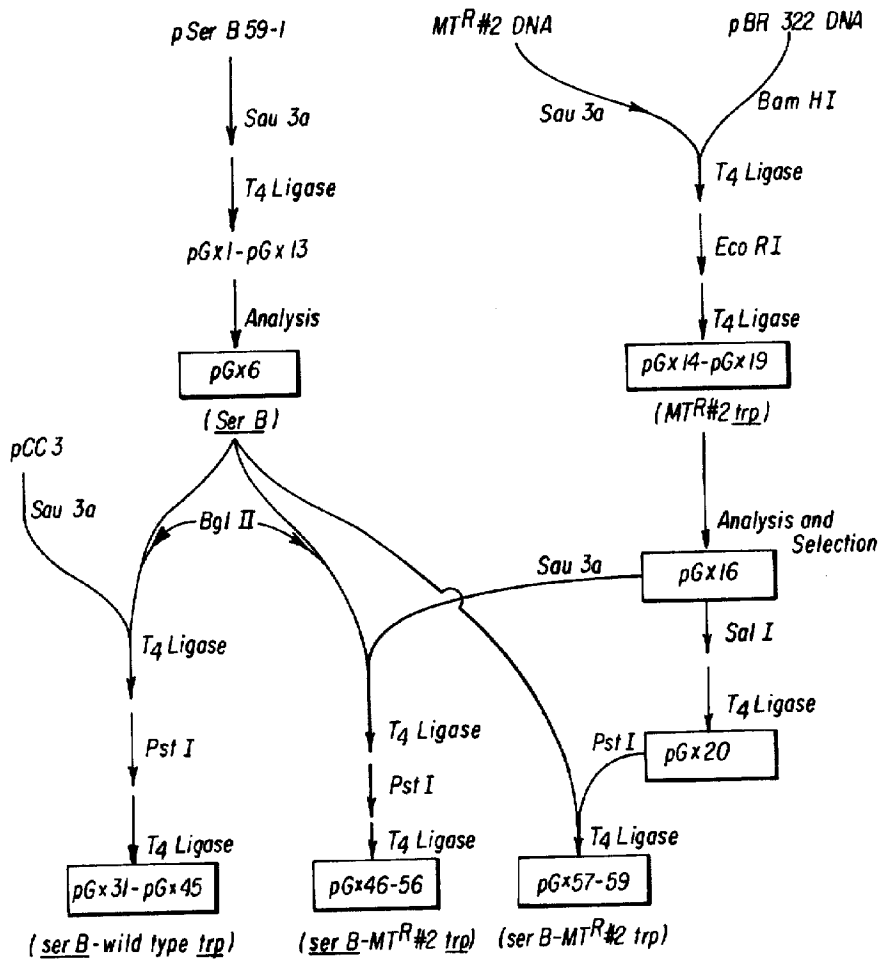


FIG. 3

CONSTRUCTION OF HOST STRAINS

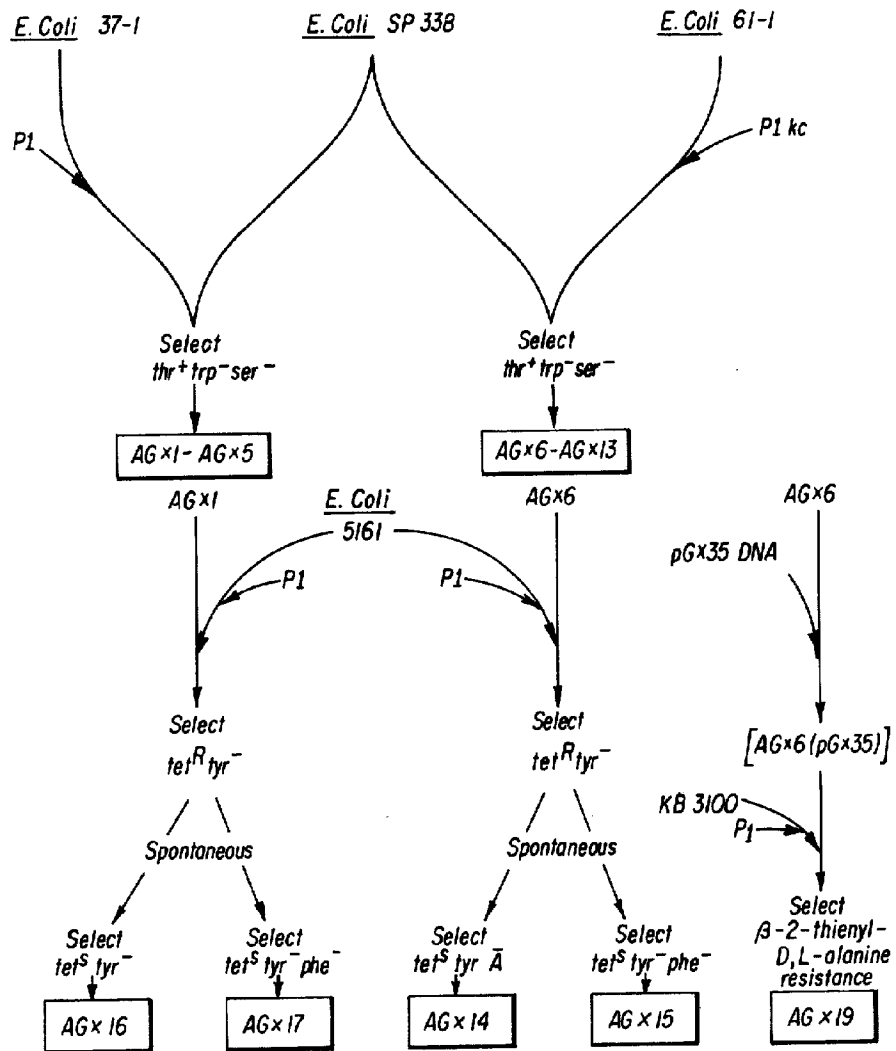


FIG. 4

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