

# レプトスピラの溶血因子遺伝子の分離 および大腸菌・酵母内での発現

森田 全\*, 福長将仁, 三沢一二, 柳原保武\*

*Leptospirosis* 345-357, 1991, Ed. Y. Kobayashi Univ. Tokyo Press

## Cloning and Expression of *Leptospira interrogans* Hemolytic Factor Gene in *E coli* and Yeast,

T. Morita\*, M. Fukunaga, I. Mifuchi, and Y. Yanagihara\*

**ABSTRACT** A DNA fragment encoding a hemolytic factor was cloned from a parasitic spirochete *Leptospira interrogans* serovar autumnalis strain Congo 21-543. Initial clones were isolated by screening a genomic library in pBR322 in *Escherichia coli* for hemolytic activity. The hemolytic activity was coded by a 4.5-kilobase *Bam*HI/*Hind*III fragment (LHG1). Southern hybridization with DNA from other strains of *Leptospira* using LHG1 as a probe showed that DNA from non-parasitic strains failed to hybridize with the probe, while those from all parasitic strains tested had the sequence which hybridize to the probe.

The 4.5-kb fragment was also ligated into *Bam*HI/*Hind*III site of YEpl3, yeast/*E. coli* shuttle vector, and incorporated into fragile cell wall mutant of yeast. Though, intact transformants of the yeast failed to show hemolytic activity, cell-free extracts from these transformants made clear beta-hemolytic zone on the blood agar plates.

抄録 レプトスピラの溶血性因子の遺伝子をクローニングし、この遺伝子が、大腸菌や酵母内で発現し、溶血因子が合成される事を示した。

\* 静岡県立大, 薬学部