PROFILE OF *gyrA* GENE MUTATION IN CLINICAL ISOLATE OF LEVOFLOXACIN RESISTANT *Escherichia coli*

**ABSTRACT**

**Background:** *Escherichia coli* is one of the pathogens that caused nosocomial infection. Levofoxacin is one of the fluoroquinolones group antibiotics which is a broad-spectrum antibiotic that works effectively against *Escherichia coli*. This study aimed at identifying mutation in gene *gyrA* among *Escherichia coli* were resistant to levofoxacin.

**Methods:** The susceptibility of *Escherichia coli* was determined by disk diffusion. PCR and sequencing were performed to identify mutation in *gyrA*.

**Result:** A total 10 isolate showed result resistance to levofoxacin and *gyrA* gene mutation in the amino acid changes. Nucleotide sequence analysis revealed point mutation in QRDR of *gyrA* Ser83→Leu, Asp87→Asn. Silent mutation were also found at codon Val85, Arg91, Ser111, Thr123.

**Conclusion:** Mutation in *gyrA* gene affect the occurrence of bacterial resistance of *Escherichia coli* to levofoxacin.

**Keyword:** *gyrA*, Levofoxacin, Eschericia coli, mutation, codon