

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

**ABSTRACT**

**Background:** *Escherichia coli* is one of pathogen bacteria that caused nosocomial infection. Levofloxacin 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 gen *gyrA* among *Escherichia coli* were resistant to levofloxacin.

**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 levofloxacin 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 levofloxacin.

**Keyword:** *gyrA*, Levofloxacin, *Escherichia coli*, mutation, codon