

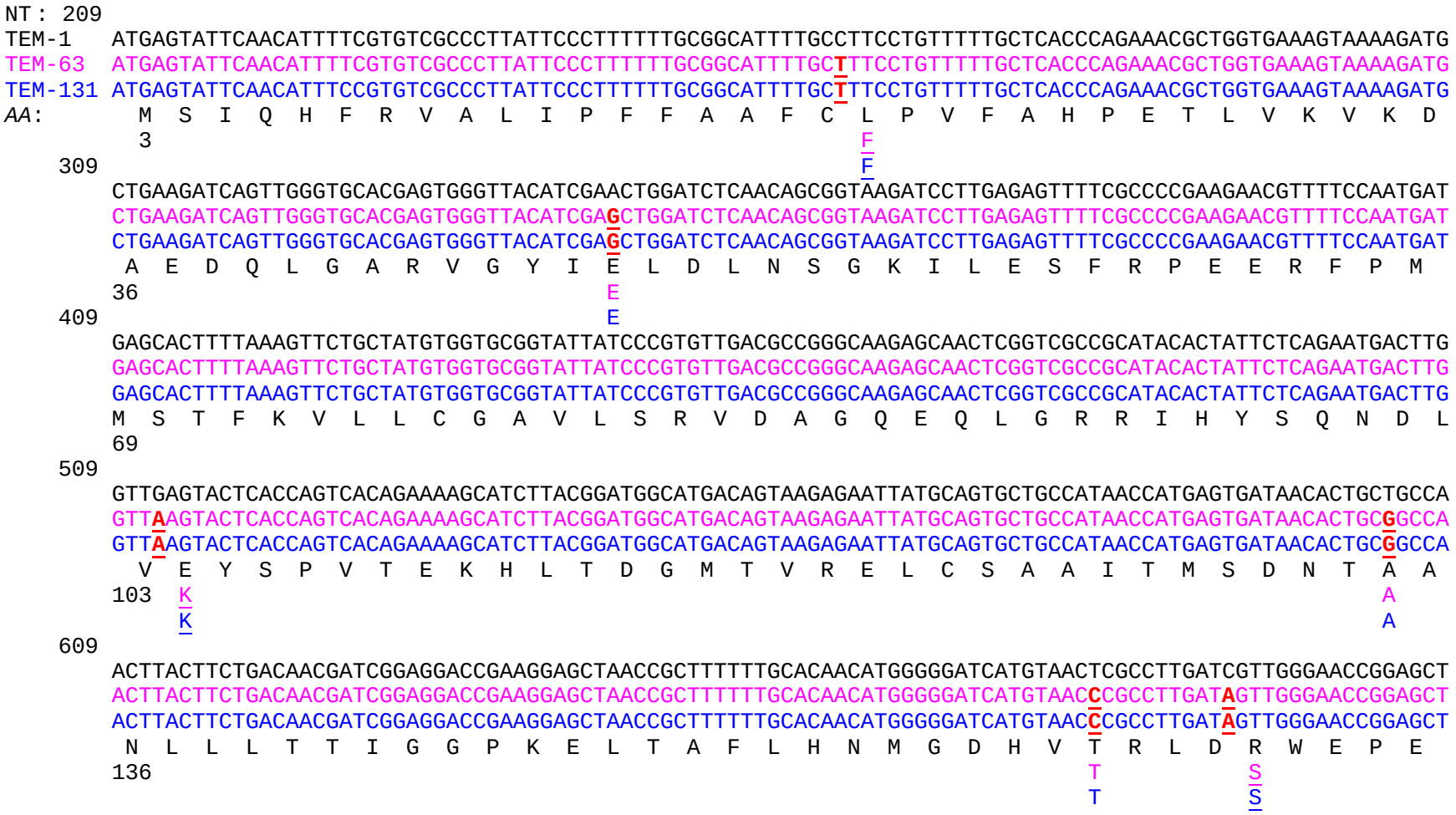
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Molecular characterization of multidrug-resistant Salmonella Isangi in hospitalized patients

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NT: 209
TEM-1 ATGAGTATTCAACATTTTCGTGTCGCCCTTATTCCCTTTTTTGCGGCATTTTGCCTTCCTGTTTTTGCTCACCCAGAAACGCTGGTGAAAGTAAAAGATG
TEM-63 ATGAGTATTCAACATTTTCGTGTCGCCCTTATTCCCTTTTTTGCGGCATTTTGCTTTCCTGTTTTTGCTCACCCAGAAACGCTGGTGAAAGTAAAAGATG
TEM-131 ATGAGTATTCAACATTTCCGTGTCGCCCTTATTCCCTTTTTTGCGGCATTTTGCTTTCCTGTTTTTGCTCACCCAGAAACGCTGGTGAAAGTAAAAGATG
AA: M S I Q H F R V A L I P F F A A F C L P V F A H P E T L V K V K D
3 F
309 F
CTGAAGATCAGTTGGGTGCACGAGTGGGTTACATCGAACTGGATCTCAACAGCGGTAAGATCCTTGAGAGTTTTCGCCCCGAAGAACGTTTTCCAATGAT
CTGAAGATCAGTTGGGTGCACGAGTGGGTTACATCGAGCTGGATCTCAACAGCGGTAAGATCCTTGAGAGTTTTCGCCCCGAAGAACGTTTTCCAATGAT
CTGAAGATCAGTTGGGTGCACGAGTGGGTTACATCGAGCTGGATCTCAACAGCGGTAAGATCCTTGAGAGTTTTCGCCCCGAAGAACGTTTTCCAATGAT
A E D Q L G A R V G Y I E L D L N S G K I L E S F R P E E R F P M
36 E
409 E
GAGCACTTTTAAAGTTCTGCTATGTGGTGCGGTATTATCCCGTGTTGACGCCGGGCAAGAGCAACTCGGTCGCCGCATACACTATTCTCAGAATGACTTG
GAGCACTTTTAAAGTTCTGCTATGTGGTGCGGTATTATCCCGTGTTGACGCCGGGCAAGAGCAACTCGGTCGCCGCATACACTATTCTCAGAATGACTTG
GAGCACTTTTAAAGTTCTGCTATGTGGTGCGGTATTATCCCGTGTTGACGCCGGGCAAGAGCAACTCGGTCGCCGCATACACTATTCTCAGAATGACTTG
M S T F K V L L C G A V L S R V D A G Q E Q L G R R I H Y S Q N D L
69
509
GTTGAGTACTCACCAGTCACAGAAAAGCATCTTACGGATGGCATGACAGTAAGAGAATTATGCAGTGCTGCCATAACCATGAGTGATAACACTGCTGCCA
GTTAAGTACTCACCAGTCACAGAAAAGCATCTTACGGATGGCATGACAGTAAGAGAATTATGCAGTGCTGCCATAACCATGAGTGATAACACTGCGGCCA
GTTAAGTACTCACCAGTCACAGAAAAGCATCTTACGGATGGCATGACAGTAAGAGAATTATGCAGTGCTGCCATAACCATGAGTGATAACACTGCGGCCA
V E Y S P V T E K H L T D G M T V R E L C S A A I T M S D N T A A
103 K A
K A
609
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136 T S
T S

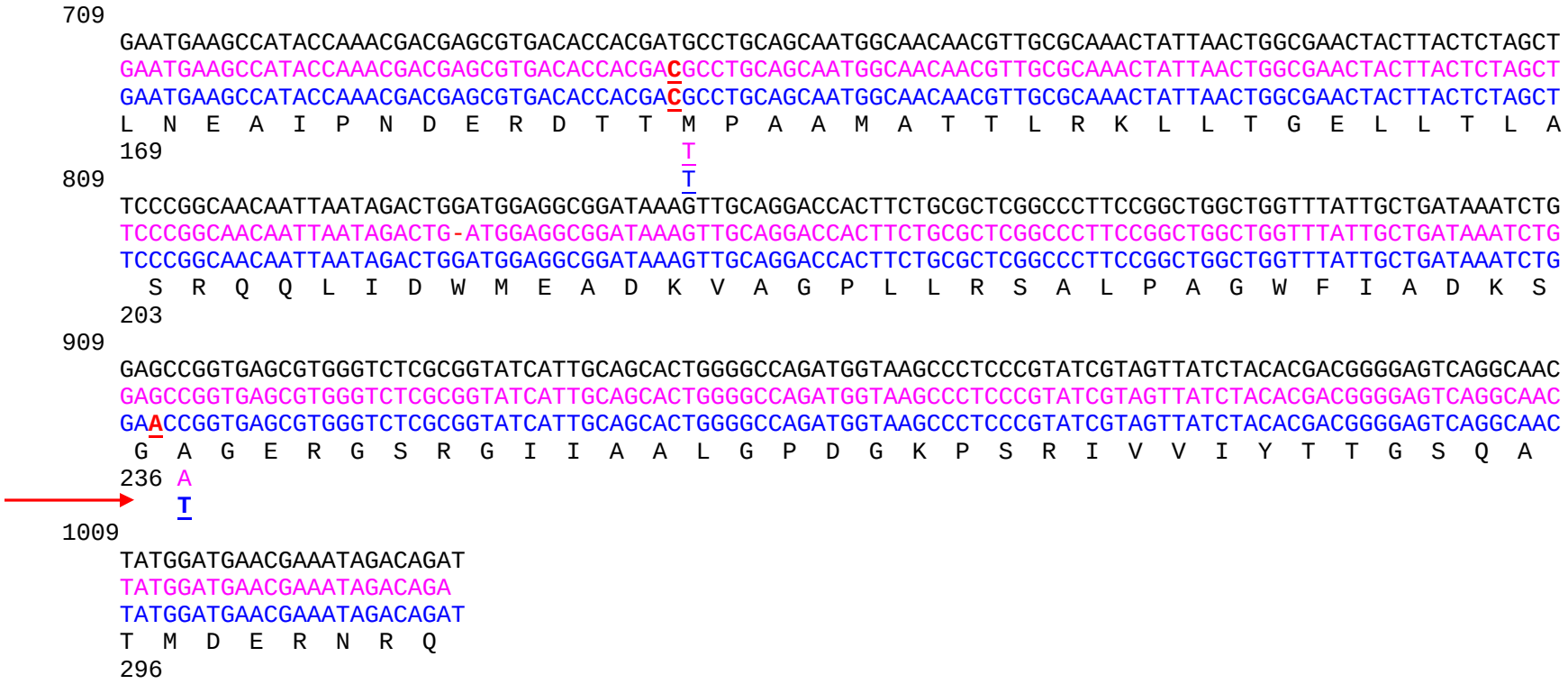


Figure 4.4 Partial nucleotide and amino acid sequences of TEM-1, TEM-63 and TEM-131 depicting the point mutations at amino acid positions 21, 104, 164, 182 and 237.

Nucleotide mutations are underlined in red and the resulting amino acid change underlined in blue.
The red arrow indicates the new mutation in TEM-131.
[a] Nucleotide numbering (NT) according to AGT codon start of previously reported TEM sequences.
[b] Amino acid (*AA*) residues are numbered according to the numbering system of Ambler *et al*., (1981).
The one-letter amino acid code is used as follows: A, alanine; C, cysteine; D, aspartic acid; E, glutamic acid; F, phenylalanine; G, glycine; H, histidine; I, isoleucine; K, lysine; L, leucine; M, methionine; N, asparagine; P, proline; Q, glutamine; R, arginine; S, serine; T, threonine; V, valine; W, tryptophan.