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Synthesis and antimicrobial activity of Nalkyl substituted p-methyl (E)-3- and 4-azachalconium bromides Nurettin YAYLI<sup>1</sup>, Gülbin MISIR<sup>1</sup>, Nuran YAYLI<sup>1</sup>, Ahmet YAŞAR<sup>1</sup>, Emine DEMIR<sup>2</sup>, Zihni DEMIRBAĞ<sup>2</sup> <sup>1</sup>Department of Chemistry, Faculty of Arts and Sciences, Karadeniz Technical University, 61080, Trabzon-TURKEY e-mail: yayli@ktu.edu.tr <sup>2</sup>Department of Biology, Faculty of Arts and Sciences, Karadeniz Technical University, 61080, Trabzon-TURKEY

Abstract: Twenty new N-alkyl substituted pmethyl (E)-3- and 4-azachalcones (1a-j, 2aj){3-[(1E)-3-(4-methylp-henyl)-3- oxoprop-1en-1-yl]-1-alkyl (C {5-12, {14-15) pyridinium bromides (1a-j) and 4-[(1E)-3-(4-methylphenyl)-3-oxoprop-1-en-1-yl]-1-alkyl (C\_{5-12, {14-15) pyridinium bromides (2a-j)} were synthesized and tested for antimicrobial activities against Staphylococcus aureus, Staphylococcus epidermidis, Bacillus subtilis, Enterococcus faecalis, Proteus vulgaris, and Escherichia coli. They showed good antimicrobial activity especially against the gram-positive bacteria tested with minimal inhibitory concentration (MIC) values less than 4.7  $\mu$  g/mL in most cases.