

Plasmids isolated from *Pseudomonas aeruginosa* soil strains carry the genes providing antibiotic resistance

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Worldwide usage of antibiotics led to the spread of multidrug-resistant *P.aeruginosa* strains isolated from soil. It is well known that the major cause of antibiotic resistance is existence of bacterial genes encoding enzymes that have the ability to destroy antibiotics. These genes are often located on the plasmids. Due to plasmids this feature can be transformed to the sensitive strains. To overcome antibiotic resistance, it is important to reveal the reasons of this phenomenon.

Plasmid DNA has been isolated from multi-drug resistant *P.aeruginosa* strains, which were taken from MDC of SPC "Armbiotechnology" NAS RA. *P.aeruginosa* 9211 is Ap^r, PANSEF^r, Cm^r, Amox^r and is sensitive to augmentin and kanamycin; *P.aeruginosa* 5249 is Ap^r, PANSEF^r, Amox^r, Aug^r, Cm^r, Km^r. Plasmid from *P.aeruginosa* 9211 strain was used for transformation of sensitive *P. aeruginosa* 9650 strain as well as *E.coli* DH5 α strain. Ampicillin-resistant transformants were selected. Plasmids isolated from *P. aeruginosa* 9650 and *E.coli* DH5 α transformants were the size of plasmid from *P. aeruginosa* 9211 strain. Plasmid from *P.aeruginosa* 5249 strain was used for transformation of sensitive *P. aeruginosa* 9650 strain and *E.coli* DH5 α strain. Kanamycin-resistant transformants were selected. Both *P. aeruginosa* 9650 and *E.coli* DH5 α transformants possessed the plasmid of the size of plasmid from *P. aeruginosa* 5249 strain. It was suggested that ampicillin and kanamycin resistance be transformed to sensitive *P. aeruginosa* 9650 by plasmid.

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In silico

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