

Prophage Induction in *Escherichia Coli* K-12(λ) by Some Plants from Iran

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ABSTRACT The test of induction of lambda-phage formation in lysogenic *Escherichia coli* K-12(λ) was used in a study of some medicinal plants from Iran. In this study, 19 plants from North-eastern of Iran (Turkmen Sahra) were chosen based on ethnobotanical information and screened for biologic activity. 100 μ g of dried extract dissolved in DMSO were spotted to the surface of the plates including *E. coli*, strain K12 (λ). Mitomycin C is used as positive control to check the efficiency of the experiment. The active extract cause the prophage to be released from the host genome and the phage reverts to the lytic mode and lyses cells. Production of plaque shows this effect. Extract from roots of *Ferula szowitsiana*, *Stachys turcomanica* Trautv, *Satureja mutica* Fisch, *Echium italicum*, *Hymenocrater platystegius*, *Glycyrrhiza glabra* showed positive effect. One of the 6 effective plants, *Ferula szowitsiana*, was chosen for fractionation and further studies. The induction test may provide a useful screen for the detection of potential DNA-reactive agents.