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Isolation of the Leptospira spp. from the Rice Farming Lands in the North of Iran by EMJH Media

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Abstract : Leptospirosis is one the most important common diseases between human and live stock occurred by different species of Leptospira. This disease has been construed as the native in the northern provinces of Iran and risk of the infection with pathogenic is high. One hundred fifteen samples of water (67), soil (36) and feces of rodents (12) were collected from the rice fields of the suburbs of Tonekabon Township situated in northern part of Iran in 2012. The samples, after passage from membranous filters, were cultured in the liquid and solid EMJH medium and incubated at 30°C for 1 month. Leptospira spp. were isolated using culture technique, and the plates were studied from viewpoint of colony formation, microscopic observations and then identified by phenotyping tests. Finally, the identification of Leptospira genus was verified by PCR technique and 16S rRNA gene sequencing. Of 115 samples totally, 55 samples (47.82%) became positive by use of the culture technique which the positive cases included 47 water samples (70.14%) and 8 soil samples (22.22%), while the isolation was not accomplished from the sample of the rodents feces. Overall, according to these data, Leptospira spp. exists with high frequency in North Iran. Hence, based on foregoing evidence environments in the north of Iran are vehicles of Leptospira spp.

Keywords: EMJH Medium, Leptospira, Northern of Iran, rice fields

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