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Role of *Musca domestica* and *Stomoxys calcitrans* as a vector of *Escherichia coli* O157:H7 from different sites in Baghdad/ Iraq

Aseel M H Abed AL-Rhada^{1*} ¹Zoonotic disease unit / Veterinary Medicine College / Baghdad University, Iraq

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*Corresponding author: Email address: <u>sh2012ah1980@yahoo.com</u>

Abstract

This study was designed to approve the roles of house fly (HF) *Musca domestica* and Stable fly (SF) *Stomoxys calcitrans* as a vector for *Escherichia coli* O157: H7. For

this purpose, (200) flies were collected from (4) different sites (3 locations near farmland and one residential area) in Baghdad/ Iraq to isolate and identify Escherichia coli and Escherichia coli O157:H7 from the external surface of the flies. Eosin Methylene Blue agar (EMB), Sorbitol MacConkey agar supplemented with Cefixime and Potassium tellurite (CT-SMAC) agar and Chrome agar, were used for isolation of E. Coli. The biochemical tests (IMVC) and (KCN) broth and serological test using Latex agglutination test (Oxoid) were used to identify the isolates. E. coli O157: H7 was identified in (62.5%) from houseflies and (40%) from stable flies with different isolation percentage between farmland location and residential area. In conclusion, the results of this study approved the isolation of E. coli O157: H7 from the external surface of Musca domestica and Stomoxys calcitrans for the first time in Iraq. The result was also determined the potential role of flies as carriers of pathogenic bacterial agents. The author recommends taking a high precautions procedures to reduce the risk of Musca domestica and Stomoxys calcitrans as sources of Escherichia coli, Escherichia coli O157: H7.

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