جمهورية العراق
وزارة التعليم العالي والبحث العلمي
جامعة ديالى
كلية التربية للعلوم الصرفة
قسم علـوم الحياة

# مقارنة بين تقنية الفحص الشريطي السريع وتقنية الاليزا و تفاعل البلمرة المتسلسل في تشخيص الاصابة بالتهاب الكبد الفيروسي ( ج )

رسالة مقدمة

إلى

مجلس كلية التربية للعلوم الصرفة – جامعة ديالى

وهي جزء من متطلبات نيل درجة الماجستير في

علوم الحياة / علم الحيوان

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**بـــإشـــــراف**

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HCV is an important blood-borne pathogen. It infects an estimated 2%to 3% of the world population, and it is a major cause of hepatitis, cirrhosis, and hepatocellular carcinoma (Mansoor *et al*.,2013; Stoddard *et al*.,2015).

Moreover, there are no commercial vaccines for hepatitis C prevention, which causes a very difficult problem (Dang *et al*.,2011). Screening of HCV infection is therefore mandatory in many high-risk epidemiologic Settings (Khuroo *et al*., 2015). Early diagnosis and intervention are very important to prevent infection (Cha *et al*.,2013) and the use of more sensitive and specific assays was essential for an efficient diagnosis of HCV infection (Petruzziello *et al*.,2013) .

For HCV infections, it is important to choose the most suitable laboratory method together with the clinical presentation of the patient in acute and chronic period ( Onal *et al*.,2013) .

Early and effective screening test of HCV was developed since the virus was first identified in 1989 (Kim ,2009) .Several diagnostic tests are available for detection of anti-HCV antibodies, core antigen, genomic RNA and viral typing (Menegazzi *et al*.,2008).

Anti-HCV detection by immunoassay screening tests is generally a first step in clinical diagnosis and screening of asymptomatic subjects. Screening tests have high false-positive rates, particularly among populations with a low (10%) prevalence of HCV infection (Moretti *et al*.,2012; Petruzziello *et al*.,2013) . Therefore, an HCV nucleic acid test (NAT) to detect viremia is necessary to confirm current (active) HCV infection and guide clinical management, including initiation of HCV treatment (Florea *et al*.,2014; IDSA, 2015). But, it remains rather expensive and relatively complex and unavailable in many clinical settings (Kim,

2009; Khuroo *et al*.,2015), so the availability of an accurate, cheaper test would be attractive (Florea *et al*.,2014) .

All previous studies carried out on selected groups in Diyala Province (blood donors, pregnancy, hemodialysis patients, ect…) and most had used polymerase chain reaction (PCR) only for confirmation of infection in cases with positive samples for HCV antibody (HCV Ab) not as screening test in all the studied patients. This study aimed at:

1. Assessing the results that obtained from two serologic assays (rapid strip and ELISA) in comparison with Real Time-PCR as gold standard.
2. Calculating sensitivity, specificity, efficiency, PPV and NPV for the two test.