

**UNIVERSITI SAINS MALAYSIA
GERAN PENYELIDIKAN UNIVERSITI
PENYELIDIKAN
LAPORAN AKHIR**

**CONSTRUCTION AND EVALUATION OF IN HOUSE PCR-
BASED DIAGNOSTIC METHOD FOR DETECTION OF
HELICOBACTER PYLORI INFECTION**

PENYELIDIK

DR. SITI SURAIYA MD NOOR

PENYELIDIK BERSAMA

2013

From: Jeffiz Ezuer Shafii
Sent: 23 July 2013 10:48 AM
To: Ahmad Imran Kamis
Subject: FW: Laporan akhir geran jangka pendek untuk tahun 2007

Salam Sejahtera

Dear Dr Lee


Saya telahpun menamatkan geran jangka pendek untuk tahun 2005-2007. Saya merasakan bahawa saya telahpun menghantar laporan akhir pada tahun 2008, dan pembentangan akhir telahpun dibuat di PPSP pada 31 July 2008.

Walaupun bagaimanapun, semakan pihak tuan mengatakan saya tidak menghantar laporan akhir tersebut.

Bersama-sama ini, saya sertakan soft copy laporan yang telah saya hantar (format lama). Saya juga menyertakan pembentangan akhir diperingkat School.

Jutaan maaf diatas kekeliruan yang timbul.


Sekian terima kasih

Dr Siti Suraiya Md Noor
Jabatan Mikrobiologi dan parasitologi Perubatan PPSP, USM
 [FW_Laporan_akhir_geran_jangka_pendek_untuk_tahun_2007.zip](#)
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24/8/13

**BAHAGIAN PENYELIDIKAN & PEMBANGUNAN
CANSITORI
UNIVERSITI SAINS MALAYSIA**

Laporan Kemajuan Penyelidikan

Nama Penyelidik/Penyelaras: Dr Siti Suraiya Md Noor

Pusat Pengajian: School of Medical Sciences

Tajuk Projek Penyelidikan: Construction and evaluation of in house PCR-based
diagnostic method for detection of *Helicobacter pylori* infection

Jumlah Geran Diluluskan: RM 16 700.00

Geran Tambahan yang diluluskan: _____

Baki yang ada: Sila rujuk lampiran dari Jabatan Bendahari

Tarikh projek bermula dan dijangka siap: 15 Jun 2005-14 Jun 2007

Lanjutan tempoh yang diluluskan (sekiranya berkaitan):

(i) _____

(ii) _____

(iii) _____

Laporan Kemajuan dari segi kerja-kerja yang telah dijalankan:
(Sila beri Laporan Kemajuan yang terperinci setakat mana yang boleh)

Please see the attached report**

**TANDATANGAN Pengerusi
Jawatankuasa Penyelidikan
Pusat Pengajian**

Fail RCMO : Laporan Kemajuan J/Pendek

Progress report

Construction and evaluation of in house PCR-based diagnostic method for detection of *Helicobacter pylori* infection

Siti Suraiya MN, Nurhaslindawaty AR, Rapeah S, Amry AR, Syed Hassan SAZ, Effat
O and Salzihan S.

School of Medical Sciences, Health Campus, Universiti Sains Malaysia, Kelantan,
Malaysia.

Abstract

The specific primers for *Helicobacter pylori* were constructed. The primer were standardized and optimized by using ATCC strains. The PCR were performed to eighty-nine antral biopsy samples from patients suspected to have gastric ulcer. Simultaneously, histopathological examination was performed on the biopsy samples. The agreement between the two test methods was measured.

Introduction

Helicobacter pylori, first isolated by Warren and Marshall in 1983, has been shown to play an important role in gastritis, peptic ulcer disease, and gastric malignancies.

Currently there are few diagnostic methods available to diagnose the *H pylori* infection. The most popular invasive method is gastroscopy and biopsy of the gastric mucosa tissue, followed by histological examination by Hematoxylin and Eosin stain. In some center, a culture of the tissue also performs and this will allow for the bacterial isolation and the determination of antibiotic sensitivity.

Noninvasive diagnosis can be made in conjunction with a biopsy test to support findings or confirm eradication after treatment. One method of noninvasive testing is the urease breath test. The entire stomach is sampled with this test. The patient drinks a solution with C-13 or C-14 labeled urea with a meal. In an infected person, labeled CO₂ is detected in the breath which is measured with a beta counter. Other methods of testing include testing for antibodies in serum or saliva of a patient.

ELISA can be used to measure IgG in serum.

It takes few days to have the result of the tissue biopsy for histological examination. Culture is even worst because it takes more than 5 days to have a complete report because *H. pylori* is fastidious, slow growing and require specific culture condition to grow. The urea breath test is not sensitive and may not be specific in the presence of other urease-producing bacteria. Other methods also have their own drawbacks.