

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

**DISTRIBUTION OF ANTI-NUCLEAR ANTIBODIES (ANA),  
ANTI-DSDNA AND EXTRACTABLE NUCLEAR ANTIGENS  
(ENA) ANTIBODIES AMONG APPARENTLY HEALTHY  
MALAY WOMEN AND DETERMINATION OF ANA CUT-  
OFF TITRE**

**PENYELIDIK**

**PROF. MADYA DR. CHE MARAINA CHE HUSSIN**

**PENYELIDIK BERSAMA**

**DR. SARIMAH ABDULLAH  
JAMARUDDIN MAT ASAN  
AINUL SOFIAH ABDUL AZIZ**

**2013**

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Sila emel salinan laporan ini ke [rcmo@usm.my](mailto:rcmo@usm.my)

<b>A.</b>	<b>PARTICULARS OF RESEARCH / MAKLUMAT PENYELIDIKAN:</b>
(i)	<b>Title of Research:</b> <i>Tajuk Penyelidikan:</i> Distribution of anti-nuclear antibodies (ANA), anti-dsDNA and extractable nuclear antigens (ENA) antibodies among apparently healthy Malay women and determination of ANA cut-off titre.
(ii)	<b>Account Number:</b> <i>Nombor Akaun:</i> 1001/PPSP/812043
<b>B.</b>	<b>PERSONAL PARTICULARS OF RESEARCHER / MAKLUMAT PENYELIDIK:</b>
(i)	<b>Name of Research Leader:</b> <i>Nama Ketua Penyelidik:</i> Associate Professor Dr. Che Maraina Che Hussin
	<b>Name of Co-Researcher</b> <i>Nama Penyelidik Bersama:</i> Dr. Sarimah Abdullah Mr. Jamaruddin Mat Asan Mrs. Ainul Sofiah Abdul Aziz
(ii)	<b>School/Institute/Centre/Unit :</b> <i>Pusat Pengajian /Institut/Pusat/Unit :</i> School of Medical Sciences/ Department of Immunology

<p><b>C.</b></p>	<p><b>Research Platform (Please tick (/) the appropriate box):</b>  <i>Pelantar Penyelidikan (Sila tanda (/) kotak berkenaan):</i></p> <p> <input type="checkbox"/> <b>A. Life Sciences</b>  <i>Sains Hayat</i> </p> <p> <input type="checkbox"/> <b>B. Fundamental</b>  <i>Fundamental</i> </p> <p> <input type="checkbox"/> <b>C. Engineering &amp; Technology</b>  <i>Kejuruteraan &amp; Teknologi</i> </p> <p> <input type="checkbox"/> <b>D. Social Transformation</b>  <i>Transformasi Sosial</i> </p> <p> <input type="checkbox"/> <b>E. Information &amp; Communications Technology (ICT)</b>  <i>Teknologi Maklumat &amp; Komunikasi</i> </p> <p> <input checked="" type="checkbox"/> <b>F. Clinical Sciences</b>  <i>Sains Klinikal</i> </p> <p> <input type="checkbox"/> <b>G. Biomedical &amp; Health Sciences</b>  <i>Bioperubatan Sains Kesihatan</i> </p>
<p><b>D.</b></p>	<p><b>Duration of this research :</b>  <i>Tempoh masa penyelidikan ini :</i></p> <p><b>*Duration :</b> 36 months  <i>Tempoh :</i></p> <p><b>From :</b> 15 December 2009      <b>To :</b> 14 December 2012  <i>Dari:</i>                                      <i>Ke :</i></p>
<p><b>E.</b></p>	<p><b>ABSTRACT OF RESEARCH</b>  (An abstract of between 100 and 200 words must be prepared in <b>Bahasa Malaysia and in English.</b> This abstract will be included in the Annual Report of the Research and Innovation Section at a later date as a means of presenting the project findings of the researcher/s to the University and the community at large)</p> <p><b><i>Abstrak Penyelidikan</i></b>  (Perlu disediakan di antara 100 - 200 perkataan di dalam <b>Bahasa Malaysia dan juga Bahasa Inggeris.</b>  Abstrak ini akan dimuatkan dalam Laporan Tahunan Bahagian Penyelidikan &amp; Inovasi sebagai satu cara untuk menyampaikan dapatan projek tuan/puan kepada pihak Universiti &amp; masyarakat luar).</p>

**F. SUMMARY OF RESEARCH FINDINGS**

*Ringkasan dapatan Projek Penyelidikan*

1. We determined that the cut-off titre for ANA was in favour of 1:80 as opposed to 1:40 that is currently being practised.
2. In healthy Malay women, the positivity of ANA, anti-dsDNA and ENA antibodies were 3.0%, 0% and 5.0% respectively.
3. In healthy Malay women, seroconversion of ANA occurred. Three subjects had circulating ANA in their bloodstream occurred at fluctuating dilutions over 18-month period. Eleven subjects had detectable ANA at least once. The highest dilution of ANA was detected at 1:80.

**G. COMPREHENSIVE TECHNICAL REPORT**

*Laporan Teknikal Lengkap*

Applicants are required to prepare a comprehensive technical report explaining the project.

(This report must be attached separately)

Sila sediakan laporan teknikal lengkap yang menerangkan keseluruhan projek ini.

[Laporan ini mesti dikepalkan]

**List the key words that reflect our research:**

*Senaraikan kata kunci yang mencerminkan penyelidikan anda:*

English	Bahasa Malaysia
Antinuclear antibody (ANA)	Antibodi kepada nuklear
Anti-dsDNA antibody	Antibodi kepada dsDNA
Extractable nuclear antigen (ENA) antibody	Antibodi kepada ENA
Systemic lupus erythematosus (SLE)	Sistemik Lupus Eritematosus

H. a) Results/Benefits of this research

*Hasil Penyelidikan*

No. Bil:	Category/Number: <i>Kategori/ Bilangan:</i>	Promised	Achieved
1.	<b>Research Publications (Specify target journals)</b> <i>Penerbitan Penyelidikan (Nyatakan sasaran jurnal)</i>	2	
2.	<b>Human Capital Development</b>		
	a. <b>Ph. D Students</b>		
	b. <b>Masters Students</b>	1	
	c. <b>Undergraduates (Final Year Project)</b>		
	d. <b>Research Officers</b>		
	e. <b>Research Assistants</b>		
	f. <b>Other: Please specify</b>		
3.	<b>Patents</b> <i>Paten</i>		
4.	<b>Specific / Potential Applications</b> <i>Spesifik/Potensi aplikasin</i>		
5.	<b>Networking &amp; Linkages</b> <i>Jaringan &amp; Jalinan</i>		
6.	<b>Possible External Research Grants to be Acquired</b> <i>Jangkaan Geran Penyelidikan Luar Diperoleh</i>		

- Kindly provide copies/evidence for Category 1 to 6.

b) Equipment used for this research.

*Peralatan yang telah digunakan dalam penyelidikan ini.*

Items <i>Perkara</i>	Approved Equipment	Approved Requested Equipment	Location
<b>Specialized Equipment</b> <i>Peralatan khusus</i>	1. HAEMATOLOGY COUNTER (Sysmex XS-800i) 2. VORTEX MACHINE (Vortex-2 Genie G 560E) 3. CENTRIFUGE MACHINE (Eppendorf centrifuge 5810 R)		Immunology Laboratory
<b>Facility</b> <i>Kemudahan</i>	1. COLD ROOM 2. REFRIGERATOR (Ilshin deep freezer)		Immunology Laboratory
<b>Infrastructure</b> <i>Infrastruktur</i>	1. RESEARCH LAB		Immunology Department

- Please attach appendix if necessary.

I. **BUDGET / BAJET**

**Total Approved Budget** : RM 83535.00  
**Total Additional Budget** : RM  
**Grand Total of Approved Budget** : RM 83535.00

**Yearly Budget Distributed**

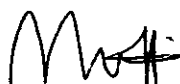
Year 1 : RM 66245.00  
Year 2 : RM 17290.00  
Year 3 : RM

**Additional Budget Approved**

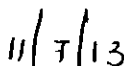
Year 1 : RM  
Year 2 : RM  
Year 3 : RM

**Total Expenditure** : RM 83,073.97  
**Balance** : RM 461.03

- **Please attach final account statement from Treasury**



**Signature of Researcher**  
**Tandatangan Penyelidik**



**Date**  
**Tarikh**

**PROF. MADYA DR. CHE MARAINA CHE HUSSIN**  
(No. Pendaftaran Penuh MPM 32408)  
Pensyarah Perubatan  
Jabatan Imunologi  
Hospital Universiti Sains Malaysia  
16150 Kubang Kerian, Kelantan

**H. COMMENTS OF PTJ'S RESEARCH COMMITTEE**  
**KOMEN JAWATANKUASA PENYELIDIKAN PERINGKAT PTJ**

**General Comments:**

Ulasan Umum:

*Boleh diperlembah*




**PROFESOR (DR) NIK SORIANI YAACOB**  
Chairman Of Research Committee  
School Of Medical Sciences  
Health Campus  
Universiti Sains Malaysia  
16150 Kubang Kerian, Kelantan.

**Signature and Stamp of Chairperson of PTJ's Evaluation Committee**  
*Tandatangan dan Cop Pengerusi Jawatankuasa Penilaian PTJ*

Date : *18/7/13*  
Tarikh : .....

**Signature and Stamp of Dean/ Director of PTJ**  
*Tandatangan dan Cop Dekan/ Pengarah PTJ*

Date : *18/7/13*  
Tarikh : .....



**PROFESOR (DR) AHMAD SUKARI HALIM**  
Dekan  
Pusat Pengajian Sains Perubatan  
Kampus Kedah  
Universiti Sains Malaysia  
16150 Kubang Kerian, Kelantan.