

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

**STUDY ON THE POTENCY OF CRUDE AQUEOUS  
EXTRACTS OF ARECA CATECHU FOR THE CONTROL OF  
STEGOMYIA AEGYPTI LARVAE BY COMMUNITY**

**PENYELIDIK**

**EN. JAHANGIR KAMALDIN**

**PENYELIDIK BERSAMA**

**DR. HASMAH ABDULLAH**

**2013**



1. Nama Projek Penyelidikan: Bahan-bahan Kompleks  
*Name of the Project*

2. Pusat Tanggungjawab (PTJ): School of Health Science  
*School/Department*

3. Nama Penyelidik/Dozentor: Dr. Ibrahim Abdul Halim  
*Name of the Researcher*

4. Tajuk Projek: Study on the potency of crude aqueous extracts of Areca catechu for the control of Stegomyia aegypti larvae by community  
*Title of Project*

Indikator Penilaian (Criteria)	Tinggi	Sederhana	Rendah
i) Pencapaian objektif projek: <i>Achievement of project objectives</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> / <input type="checkbox"/>
ii) Kualiti output: <i>Quality of outputs</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> / <input type="checkbox"/>
iii) Kualiti impak: <i>Quality of impacts</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> / <input type="checkbox"/>
iv) Pemindahan teknologi/potensi pengkomersialan: <i>Technology transfer/commercialization potential</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> / <input type="checkbox"/>
v) Kualiti dan usahasama: <i>Quality and intensity of collaboration</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> / <input type="checkbox"/>
vi) Penilaian kepentingan secara keseluruhan: <i>Overall assessment of benefits</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> / <input type="checkbox"/>

6. **Gambaran Penyelidikan**

Penyedia maklumat ini mengandungi maklumat mengenai projek penyelidikan dalam Bahasa Melayu mengenai kajian mengenai Impaksi Kapsul Isotripterin (Amplifon) terhadap larva nyamuk *Aedes aegypti* dan *Aedes albopictus* sebagai alternatif kepada bahan kimia sintetik untuk kawalan vektor penyakit berjangkit.

**Abstract of Research**

*Amplifon (Isotripterin) has been tested against the larvae of the mosquito *Aedes albopictus* and *Aedes aegypti*. The study will be published in the *Journal of the Research on Mosquitoes and Malaria*. The results will be available in the proceedings of the conference on the *Control of Mosquitoes and Malaria*.*

Please refer Annex 1

7. **Sila sediakan laporan teknikal lengkap yang menerangkan keseluruhan projek ini.**

[Sila gunakan kertas berasingan]

*Applicant are required to prepare a Comprehensive Technical Report explaining the project. (This report must be appended separately)*

Please refer Annex 2

Senaraikan kata kunci yang mencerminkan penyelidikan anda:

*List the key words that reflects your research:*

**Bahasa Malaysia**

**Bahasa Inggeris**

Buah Pinang

Betel Nut

Larvisida

Larvicide

*Aedes aegypti*

*Aedes aegypti*

8. **Daftar Rujukan**

*Reference of Project*

**Daftar Rujukan**

*Reference of Project*

(Sila sediakan maklumat mengenai projek penyelidikan dalam Bahasa Melayu dan Inggeris)

Jabangrak, SRS Langkat, Nozain, W. & Abd. Rahim, M. Z. (2007). *Efficacy of aqueous extracts of betel nut against larvae of *Aedes albopictus* and *Aedes aegypti*. The 32nd Annual Scientific Conference of MAMPU, 24-25 March 2007, Kuala Lumpur, Malaysia. (Abstract)*

Jabangrak, SRS Langkat, Nozain, W. & Abd. Rahim, M. Z. (2007). *Efficacy of aqueous extracts of betel nut against larvae of *Aedes albopictus* and *Aedes aegypti*. The 32nd Annual Scientific Conference of MAMPU, 24-25 March 2007, Kuala Lumpur, Malaysia. (Abstract)*

Jabangrak & Nozain, W. (2007). *Larvicidal activity of betel nut (betel nut) against*

**Aedes albopictus* larvae. The 32nd Annual Scientific Conference of MAMPU and Semangat (celebration) of the Royal Society of Tropical Medicine and Hygiene of London, 24-25 March 2007, Kuala Lumpur, Malaysia. (Abstract)*

6. Penelitian telah menghasilkan produk-produk komersial dan/atau publikasi ilmiah yang menunjukkan dampak dan kontribusi sosial yang signifikan.

During the application of grant approximately Rp 110,000,000 was requested to conduct a collaborative research that will result in commercialization of the research (collaboration with Research Banding division). Unfortunately, only Rp 12,500,000 was approved. The amount was not sufficient to continue research to prepare a commercial license and marketing analysis of future Research Institute of Waluyo, Jember and finally does not result in a product. The findings were positive that the amount of funding that the amount of Rp 110,000,000 was not sufficient to continue research to prepare a commercial license and marketing analysis of future Research Institute of Waluyo, Jember and finally does not result in a product.

Sebelumnya terimakasih

7. Apakah Sudah Terwujud  
Dampak Sosial yang Signifikan?

8. Apakah Sudah Terwujud  
Dampak Sosial yang Signifikan?  
Dampak Sosial yang Signifikan  
Dampak Sosial yang Signifikan  
Dampak Sosial yang Signifikan  
No significant R & D results achieved, linear is still in progress.

9. Apakah Sudah Terwujud  
Dampak Sosial yang Signifikan?  
Dampak Sosial yang Signifikan

9. Peralatan yang Telah Dibeli:  
Equipment that has been purchased

No

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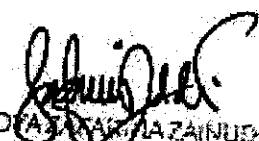
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Tandatangan Penyelidik  
Signature of Researcher

7/3/2012  
Tanggal  
Date

Opinion/Jawatan Kuasa Penyelidikan Pusat Pengajian/Pusat  
Comments by the Research Committees of Schools/Centres

This study has shown some preliminary result of *Areca* catchu aqueous extracts on *S. aegypti* larvae growth. But the active compound was not identified. The output of this research was also inadequate. Only 2 abstracts were presented in conference. No graduate student or publications were produced from this research.

  
PROF. MADAYA FARHANA ZAINUDDIN  
Timbalan Dekan  
(Penyelidikan & Pengajian Sains Sesejarah)  
Pusat Pengajian Sains Keahazan  
Kampus Kesihatan  
Universiti Sains Malaysia

TANDATANGAN Pengerusi  
JAWATANKUASA PENYELIDIKAN  
PUSAT PENGAJIAN/PUSAT  
Signature of Chairman  
[Research Committee of School/Centre]

8/4/2012

Tarikh  
Date

UNIVERSITI SAINS MALAYSIA  
 JABATAN BENDAHARI  
 KUMPULAN WANG PENYELIDIKAN CERAN USM(2008)  
 PENYATA PERBELANJAAN SEHINGGA 31 MAC 2012

penyerta akaun geran  
 yang perlu disempurnakan  
 berdasarkan laporan akhir



Jumlah Ceran	RM	17,916.00	Kerus Projek:	BN, JAHANGIR KAMALUDIN
Peruntukan 2007 (Tahun 1)	RM	10,150.00	Tajuk Projek:	Study on the Potency of Crude Aqueous Extracts of Arec Catechu for the Control of Stegomyia Aegypti Larvae by Community
Peruntukan 2008 (Tahun 2)	RM	7,766.00	Tangguh:	01 Julai 07 - 30 Jun 09
Peruntukan 2009 (Tahun 3)	RM	0.00	No. Akuan:	504/PTSK/6131543

Kwag	Akaun	PTI	Projek	Doktor	Peruntukan Projek	Perbelanjaan Tumpung Hingga Tahun Lalu	Peruntukan Semasa	Tanggungjawab Semasa	Bayaran Tahun Semasa	Belanja Tahun Semasa	(Kali) Projek
304	11000	PTSK	6131543		-	-	-	-	-	-	-
304	14000	PTSK	6131543		-	-	-	-	-	-	-
304	18000	PTSK	6131543		-	-	-	-	-	-	-
304	21000	PTSK	6131543		2,000.00	6,344.75	(4,544.75)	-	-	-	(4,544.75)
304	22000	PTSK	6131543		150.00	-	150.00	-	-	-	150.00
304	24000	PTSK	6131543		-	-	-	-	-	-	-
304	25000	PTSK	6131543		500.00	-	500.00	-	-	-	500.00
304	26000	PTSK	6131543		11,500.00	10,096.00	804.00	-	-	-	804.00
304	27000	PTSK	6131543		1,000.00	-	1,000.00	-	-	-	1,000.00
304	28000	PTSK	6131543		2,766.00	564.00	2,202.00	-	-	-	2,202.00
304	32000	PTSK	6131543		-	-	-	-	-	-	-
304	35000	PTSK	6131543		-	-	-	-	-	-	-
					17,916.00	17,804.75	111.25	-	-	-	111.25

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**Fwd: LAPORAN AKHIR GERAN PENYELIDIKAN JANGKA PENDEK  
304/PPSK/6131543**

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LEE KEAT TEONG <chktlee@eng.usm.my>  
To: Angie CPY <angie.usm2013@gmail.com>

29 July 2013 16:50

— Forwarded Message —

From: "Jahangir bin Kamaldin" <jahangir@amdi.usm.edu.my>  
To: "LEE KEAT TEONG" <chktlee@eng.usm.my>, aimran@usm.my  
Cc: "Abd. Aziz Tajuddin" <aziz\_tajuddin@amdi.usm.edu.my>, "Narazah Mohd. Yusoff"  
<Narazah@amdi.usm.edu.my>, "Prabadevi a/p Narayanasamy" <Prabadevi@amdi.usm.edu.my>, "Nurul Izni  
Ilias" <izni@amdi.usm.edu.my>  
Sent: Friday, July 19, 2013 11:40:05 AM  
Subject: LAPORAN AKHIR GERAN PENYELIDIKAN JANGKA PENDEK 304/PPSK/6131543

Prof. Madya Dr. Lee Keat Teong  
Pengarah  
Pejabat Pengurusan & Kreativiti Penyelidikan

Tuan,

Salam.

Semoga tuan & staf tuan di RCMO berada dalam keadaan sihat walafiat.

Merujuk kepada surat tuan bertarikh 12 Julai 2013 (Ruj Tuan: P2878) berhubung laporan akhir geran penyelidikan jangka pendek bertajuk "Study on the potency of crude aqueous extracts of Areca cathechu for the Control of Stegomyia aegypti larvae by community" (No. akaun: 304/PPSK/6131543, Tempoh projek: 1 Julai 2007 - 30 June 2009).

Saya agak terkejut menerima peringatan ini kerana pegawai sains di PPS Kesihatan yang meguruskan hal ehwal geran (Pn. Wan Suriati) telahpun mengesahkan bahawa laporan saya telah dihantar kepada Pelantar Bioperubatan & Sains Kesihatan menerusi emel bertarikh 12 April 2012 (salinan emel dilampirkan).

Saya tidak dapat merujuk kepada salinan laporan akhir asal yang telah dihantar memandangkan saya dalam proses pemindahan lokasi bilik dan fail-fail saya masih dalam kotak-kotak. Namun begitu saya sertakan bersama ini laporan akhir yang telah dihantar kepada Pn. Wan Suriati sebelum ini berdasarkan salinan elektronik dalam komputer saya.

Bantuan pihak tuan untuk selesaikan permasalahan ini amat dihargai.

Sekian. Terima kasih :)

DR. JAHANGIR BIN KAMALDIN  
Pensyarah Kanan & Penasihat  
Bioesei Keselamatan Kimia & Jaminan Kualiti  
IPPT-USM

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## 2 attachments



**AcceptanceOfReport.txt**

3K



**EndOfProject-Areca catechu-signed.pdf**

3592K



AcceptanceOfReport.txt

From: Jahangir bin Kamaldin  
Sent: 16 April 2012 10:13  
To: wsuriati@kck.usm.my  
Cc: Prabadevi a/p Narayanasamy  
Subject: RE: Grant Account Statement

Dear Mdm. Suriati,

Salam. Semoga puan sekeluarga sihat sejahtera.  
Terima kasih atas kerjasama berhubung laporan akhir geran jangka pendek tersebut.

Wassalam  
Jahangir Kamaldin  
AMDI-USM

-----Original Message-----

From: Prabadevi a/p Narayanasamy  
Sent: Thursday, 12 April, 2012 5:23 PM  
To: Jahangir bin Kamaldin  
Subject: FW: statement

Dear Sir,

FYI...

-----Original Message-----

From: Wan Suriati [mailto:wsuriati@kck.usm.my]  
Sent: Thursday, 12 April, 2012 1:44 PM  
To: Prabadevi a/p Narayanasamy  
Subject: Fwd: statement

Prabadevi,  
saya merujuk kepada emel saya sebelum ini mengenai penyata akaun geran untuk  
Laporan Geran Jangka  
Pendek En Jahangir. Borang laporan dan penyata akaun telah dimajukan kepada  
Pelantar Bioperubatan  
& Sains Kesihatan. Saya kepilkan penyata akaun tersebut untuk rekod. Terima  
kasih

Wan Suriati  
Unit Penyelidikan PPSK  
Ext: 7545

----- Forwarded Message -----

From: "Hanisah Mohamed @ Omar" <mhanisah@kck.usm.my>  
To: wsuriati@kck.usm.my  
Sent: Thursday, April 12, 2012 12:59:34 PM GMT +08:00 Beijing / Chongqing / Hong  
Kong / Urumqi  
Subject: statement

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# ***Annex 1***

## ***Abstract of***

***“Study on the potency of  
crude aqueous extracts of  
Areca catechu for the  
control of Stegomyia  
aegypti larvae by  
community”***