

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

**AGREEMENT OF MACULAR OEDEMA FEATURES  
BETWEEN FFA AND HRT II AND EVALUATION OF VISUAL  
FUNCTION, MACULAR OEDEMA INDEX AND QUALITY OF  
LIFE POST LASER PHOTOCOAGULATION IN DEABETIC  
MACULAR OEDEMA.**

**PENYELIDIK**

**PROFESSOR MADYA DATIN DR. ZUNAINA EMBONG**

**PENYELIDIK BERSAMA**

**PROFESSOR DR. SHATRIAH ISMAIL**

**DR. AZRIANI AB. RAHMAN**

**2016**

## RU GRANT FINAL REPORT CHECKLIST

**RUJUKAN**

Please use this checklist to self-assess your report before submitting to RCMO.  
Checklist should accompany the report.

NO.	ITEM	PLEASE CHECK (✓)		
		PI	JKPTJ	RCMO
1	Completed Final Report Form		✓	✓
2	Project Financial Account Statement (e-Statement)		✓	✓
3	Asset/Inventory Return Form ( <i>Borang Penyerahan Aset/Inventori</i> )		✓	✓
4	A copy of the publications/proceedings listed in Section D(ii) (Research Output)		✓	✓
5	Comprehensive Technical Report		✓	✓
6	Other supporting documents, if any		✓	✓
7	Project Leader's Signature		✓	✓
8	Endorsement of PTJ's Evaluation Committee		✓	✓
9	Endorsement of Dean/ Director of PTJ's		✓	✓

# **LAPORAN AKHIR**

## **GERAN PENYELIDIKAN UNIVERSITI**

### **(RUI)**



**Nama Penyelidik**

**Prof Madya Datin Dr Zunaina Embong**

**Tajuk Kajian**

**Agreement of macular oedema features between FFA And HRT II and evaluation of visual function, macular oedema index and quality of life post laser photocoagulation in diabetic macular oedema**

**No Akaun**

**1001/PPSP/812064**

UNIVERSITI SAINS MALAYSIA  
02 NOV 2015  
Pejabat Pengajian Sains Perubatan  
Pusat Pengajian Sains Perubatan



## RU GRANT FINAL REPORT FORM

Please email a softcopy of this report to [rcmo@usm.my](mailto:rcmo@usm.my)

<b>A</b>	<b>PROJECT DETAILS</b>
<b>i</b>	<p><b>Title of Research:</b></p> <p>Agreement of macular oedema features between FFA And HRT II and evaluation of visual function, macular oedema index and quality of life post laser photocoagulation in diabetic macular oedema</p>
<b>ii</b>	<p><b>Account Number:</b> 1001/PPSP/812064</p>
<b>iii</b>	<p><b>Name of Research Leader:</b> Prof Madya Datin Dr Zunaina Embong</p>
<b>iv</b>	<p><b>Name of Co-Researcher:</b></p> <ol style="list-style-type: none"> <li>1. Professor Dr Shatriah Ismail</li> <li>2. Dr Azriani Ab Rahman</li> </ol>
<b>v</b>	<p><b>Duration of this research:</b></p> <ol style="list-style-type: none"> <li>a) Start Date : 01 August 2010</li> <li>b) Completion Date : 31 July 2013</li> <li>c) Duration : 3 Years</li> <li>d) Revised Date (if any) : 6 Months (01 August 2013 – 31 Jan 2014) 6 Months (01 Feb 2014 – 31 July 2014)</li> </ol>
<b>B</b>	<b>ABSTRACT OF RESEARCH</b>
	<p><i>(An abstract of between 100 and 200 words must be prepared in Bahasa Malaysia and in English. This abstract will be included in the 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)</i></p> <p><b>Abstract</b></p> <p><b>Objectives:</b> To evaluate the agreement of macular edema features between FFA and HRT, and also to evaluate the visual function, macular edema index and quality of life between pre and post laser photocoagulation in diabetic macular edema.</p> <p><b>Methodology:</b> Sixty-seven patients were subjected to HRT, FFA (served as the gold standard) and laser photocoagulation. The visual function, macular edema index and quality of life measurements were done at baseline and three months post laser photocoagulation.</p>

**Results:** Topographic edema map of HRT has better sensitivity and specificity compare with other modules. There is a good agreement between topographic edema map and macular edema index (MEI) thickness map. There were improvement in visual function, macular edema index, and quality of life at 3 months post laser photocoagulation.

**Conclusion:** Topographic edema map of HRT has better sensitivity compared with other modules. Good agreement exists between topographic edema map and MEI thickness map. The visual function, macular edema index and quality of life were improved post laser photocoagulation.

**Abstrak**

**Objektif:** Untuk menilai perjanjian tanda-tanda bengkak makula antara FFA dan HRT, dan juga menilai fungsi penglihatan, index bengkak makula dan kualiti hidup sebelum dan selepas rawatan laser di kalangan diabetik bengkak makula.

**Tatacara:** Seramai 67 pesakit menjalani pemeriksaan HRT, FFA (digunakan sebagai rujukan) dan rawatan laser. Pengukuran fungsi penglihatan, index bengkak makula dan kualiti hidup dilakukan sebelum dan selepas rawatan laser.

**Keputusan:** Peta topografik bengkak HRT mempunyai sensitiviti dan spesifisiti yang lebih baik berbanding dengan modul lain. Didapati ada perjanjian yang bagus di antara peta topografik bengkak dan peta ketebalan index bengkak makula (MEI). Didapati peningkatan dalam fungsi penglihatan, index bengkak makula, and kualiti hidup selepas 3 bulan rawatan laser.

**Kesimpulan:** Peta topografik bengkak HRT mempunyai sensitiviti yang lebih baik berbanding dengan modul lain. Wujud perjanjian yang bagus antara peta topografik bengkak dan peta ketebalan MEI. Fungsi penglihatan, index bengkak makula dan kualiti hidup bertambah baik selepas rawatan laser.

**C BUDGET & EXPENDITURE**

<b>i</b>	<p><b>Total Approved Budget</b> : RM 235,661.00</p> <p style="text-align: right;"><u>Yearly Budget Distributed</u></p> <p style="text-align: right;">Year 1 : RM 42,047.00</p> <p style="text-align: right;">Year 2 : RM 44,902.00</p> <p style="text-align: right;">Year 3 : RM 148,712.00</p> <p><b>Total Expenditure</b> : RM 234,882.51</p> <p><b>Balance</b> : RM 778.49</p> <p><b>Percentage of Amount Spent (%)</b> : 99.7%</p> <p><i># Please attach final account statement (eStatement) to indicate the project expenditure</i></p>
----------	---

**ii Equipment Purchased Under Vot 35000**

No.	Name of Equipment	Amount (RM)	Location	Status
1.	Suturing forcep	5 902.40	Department of Ophthalmology, USM	Good
2.	Thermal cyclcer	26 300.00	Genetic Lab, USM	Good