

## JULIUS CENTRE UNIVERSITY OF MALAYA

### Formation of the Centre

The Julius Centre University of Malaya was borne out of the collaboration between the University of Malaya (UM) and the University Medical Centre, Utrecht (UMCU). UMCU together with the Centre for Evidence-Based Medicine (CEBM), University of Oxford, the Rumah Sakit Cipto Mangunkusumo (RSCM) Hospital, Jakarta and UM had earlier won a bid under the Asia-Link project series funded by the European Union. The winning bid for this particular Asia-Link project was called the Asia-Europe Clinical Epidemiology and Evidence-Based Medicine project (fondly referred to as Asia-Link within JCUM) and required the collaboration of at least 2 European and 2 Asian partners. The project which ended in Dec 2010 lasted for 3 years (Nov 2007 to Dec 2010) and was officially launched on 19 Nov 2007 in UM. To further strengthen the ties between UMCU, CEBM, RSCM and UM, it was decided that the department would set up a centre which would further the collaboration beyond the remit of the Asia-Link project. Professor Awang Bulgiba presented the proposal to create this centre to the UM Management and the centre was approved by the UM Management on 9 Jan 2008.

Currently the centre has a Visiting Professor room, 3 work areas which are able to accommodate 16 doctoral students and 2 research officers, a utility room and a meeting room. The centre is currently equipped with 15 personal computers, printer/copier/fax and video-conferencing facilities.

The first project officer hired under the Asia-Link programme was Ms Celine Quek She Lin. She served as project officer from January to March 2008 and was succeeded by Ms Aimi Naira Mat Ruzlin who served from April to December 2008. Ms Aimi left to pursue her studies at the end of 2008 and she was succeeded by Ms Hamizwanis Abdul Hamid. Ms Devi Peramalah joined the centre as a Research Officer in 2009. Another project officer, Ms Lee Pek Ling and a Research Assistant for the STeMM Programme (Mr Jonathan Dass) were hired in 2011. The future is bright for JCUM as it is an officially recognised research centre in the Faculty of Medicine and is expected to grow to be the referral centre for epidemiology and evidence-based medicine in Malaysia.

### Aims

The aims of the JCUM are:

1. To carry out research in the field of epidemiology and evidence-based medicine
2. To develop the field of epidemiology and evidence-based medicine in Malaysia
3. To train medical staff in the field of epidemiology and evidence-based medicine

4. To improve the quality of epidemiological and evidence-based medicine research in Malaysia
5. To develop training and activity development programmes in epidemiology and evidence-based medicine in the University of Malaya
6. To act as the centre for problem solving in research methodology and medical statistics in the country

### **Strengths and Expertise**

The strengths of the centre lie in its expertise in statistics, evidence-based medicine, epidemiology and research. As a young centre, it is still growing in stature but has proven itself capable of organising itself very well. The other main strength of the centre is its close links to its partners in the Netherlands, the United Kingdom, Indonesia and the United Arab Emirates.

### **Centre Activities**

The activities of the JCUM are:

1. Managing research activities in the field of clinical epidemiology and evidence-based medicine.
2. Managing the Asia-Europe Clinical Epidemiology and Evidence-Based Medicine Programme.
3. Organising short courses in the field of clinical epidemiology and evidence-based medicine.
4. Coordinating student exchange programmes amongst PhD candidates between Utrecht, Oxford and Jakarta.
5. Developing the curriculum in the field of clinical epidemiology and evidence-based medicine.
6. Acting as a reference and advisory centre in the field of clinical epidemiology and evidence-based medicine.

Since its inception, the centre has been active in carrying out activities both under the Asia-Link programme as well as its own activities separately from the Asia-link programme. These activities include maintaining the Asia-Europe CE & EBM website (<http://www.asialink-ce.org>), organising short courses (with UMCU, CEBM and RSCM partners), selecting PhD fellows destined for UMCU and CEBM Oxford and coming out with the clinical epidemiology and evidence-based medicine module for the MBBS programme. Dr Ng Chong Guan and Dr Sharmini Selvarajah (Asia-Link PhD fellows selected in 2009) have both returned to Malaysia to complete their PhDs. Dr Nirmala Bhoo Pathy has published a number of papers and has completed her PhD from Utrecht. The following research projects were carried out by JCUM in 2011.

## Research Projects

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### STeMM – Spatio-Temporal Modelling and Meta-analysis

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Investigators:	Prof Awang Bulgiba Awang Mahmud Associate Prof Karuthan Chinna (Infectious Disease Modelling) Associate Prof Noran Naqiah Hairi (MyCaRDIO) Dr Moy Foong Ming (Meta-analysis) +19 others
Funding agency:	Ministry of Higher Education Malaysia
Grant:	MOHE-UM High Impact Research (HIR) Grant
Reference number:	E000010-20001
Amount:	RM2.47 million
Period:	July 2011 – December 2015

This project is divided into 3 parts (Infectious Disease Modelling, MyCaRDIO and Meta-analysis). It aims at producing models in space and time for at least one infectious disease (dengue), cardiovascular registry based models and meta-analysis/systematic reviews of conditions related to these 2 diseases. The study is expected to offer new insights into these diseases. Data collection into these diseases has started. The project is expected to fund research (in parts) of at least 2 PhD candidates. The project has resulted in the following outputs in 2011:

1. Hairi NN, Bulgiba A, Cumming RG, Naganathan V, Mudla I. Depressive symptoms, visual impairment, and its influence on physical disability and functional limitation. *J Am Geriatr Soc.* 2011; 59(3): 557-9.

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### The process of smoking cessation in smokers attending Quit Smoking Clinics in Malaysia

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Investigators:	Ms Wee Lei Hum Prof Dr Awang Bulgiba Awang Mahmud Prof Dr Robert West (Health Behaviour Research Centre, Department of Epidemiology and Public Health, University College London) – Advisor
Funding agency:	Ministry of Health Malaysia
Grant:	Ninth Malaysia Plan (Research and Development)
Reference number:	53-02-03-1016 (Oracle 8531016)
Amount spent:	RM520, 000
Period:	January 2007 – June 2011

This project attempts to test a new motivational theory called the PRIME theory in understanding how smokers prepare their quit attempts. This groundbreaking theory marks a significant shift in understanding the process and determinants of behavioural change. Despite the evidence on the effectiveness of various tobacco control strategies to improve the quit rates, there appear to be gaps in understanding the processes involve in smokers'

decisions to stop smoking. The study is expected to offer new insights into the process of smoking cessation and also set to discover new predictors and improve intervention strategies. The project is funded by the Ministry of Health and is expected to cost about RM520,000 over 4 years. Data collection for the project has been completed and the project is on schedule for completion in June 2011. The project has funded research by one PhD candidate (Ms Wee Lei Hum). In 2010 the project resulted in an online database system for smoking cessation clinics which was completed in 2011 and is currently in use by Tanglin Clinic. The project also resulted in the following outputs in 2011:

1. Wee LH, West R, Bulgiba A, Shahab L. Predictors of 3-month abstinence in smokers attending stop-smoking clinics in Malaysia. *Nicotine Tob Res.* 2011; 13(2): 151-6.
2. Wee LH, Shahab L, Bulgiba A, West R. Stop smoking clinics in Malaysia: characteristics of attendees and predictors of success. *Addict Behav.* 2011; 36(4): 400-3.

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#### **Mathematical Modelling in Tuberculosis Transmission and Impact on Early intervention (Chemoprophylaxis) in Malaysia**

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Investigators: Dr. Nurhuda Ismail  
 Prof. Dr. Awang Bulgiba Awang Mahmud  
 Prof. Dr. Nicolaas J.D. Nagelkerke

Funding agency: University of Malaya

Grant: UM Postgraduate Research Fund

Reference number: PS386/2009B

Amount: RM10,100.00

Period: June 2009 - May 2011

Epidemic modelling generates estimates and projections of disease morbidity and mortality over time. This project aims to apply the use of deterministic mathematical models to study the progression of latent tuberculosis infection in high risk sub-populations in Malaysia, and to assess the impact of chemoprophylaxis i.e. Isoniazid Preventive Therapy on reducing incidence. It is hoped that the result will demonstrate that treatment of infectives is more effective in the first years of implementation as treatment results in clearing active tuberculosis immediately and there after chemoprophylaxis will do better in controlling the number of infectives due to reduced progression to active tuberculosis. The model also suggests that this recommended chemoprophylaxis which identify and treat persons recently infected may have a substantial effect on controlling tuberculosis epidemics. The project is funding research by one DrPH candidate (Dr. Nurhuda Ismail), currently is being written up. The completion of the project should result in 2 journal papers, 2 conference papers and 1 DrPH thesis.

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#### **Factors affecting adherence to anti-retroviral treatment in HIV patients in Malaysia**

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Investigators: Prof Awang Bulgiba Awang Mahmud  
 Dr Umar Yagoub Mohammed  
 Dr Zamri bin Chik

Dr Christopher KC lee  
 Devi Peramalah  
 Funding agency: University of Malaya  
 Grant: University of Malaya Research Grant  
 Reference number: UMRG/RG006/09HTM  
 Amount: RM 222,200  
 Period: April 2009-March 2012

This project aims to determine the true level and determinants of adherence to anti-retroviral treatments in HIV positive patients in Sungai Buloh Hospital, Malaysia. It will also be used to validate self-reporting instruments as a means of testing adherence. This is the first study on adherence to antiretroviral treatment in Malaysia and expected to help in improving the clinical management of HIV/ AIDS patients, reduce drug resistance and treatment failure and more importantly provide the different pharmacy departments with sufficient information about the effect of their prescribed medications which will enable the country to avoid wastage of expensive medication. The study is a combined retrospective and prospective cohort in which a self-reported medication adherence questionnaire is administered and blood samples collected for analysis by mass spectrometry, while pharmacy records and medical test results are collected from medical electronic records retrospectively. The project is funding research by one PhD candidate (Dr Umar Yagoub Mohammed). Primary data collection for the project has been completed and the blood samples have been analysed. The data is currently being analysed and are currently undergoing analysis. The completion of the project should result in 3 journal papers, 3 conference papers and 1 PhD thesis. In 2011 the project resulted in the following outputs:

1. Umar Yagoub, Awang M Bulgiba, Didi EM, Mustafa AM, Peramalah D, Christopher Lee, Chik Z. Validation and analysis of Efavirenz in human plasma using high-performance liquid chromatographic-mass spectrometric (LC-MS-MS). *International Journal Of Natural Product and Pharmaceutical Sciences (IJNPPS)*. 2011; 2(2): 72-81.
2. Umar Yagoub, Awang M Bulgiba, Zamri Chik, Christopher Lee, Devi Peramalah. Socio-Demographic Characteristics of Patients Diagnosed with HIV/AIDS in Sungai Buloh Hospital, Malaysia. *Proceedings of the 43rd Asia Pacific Academic Consortium for Public Health (APACPH) Conference, 2011: Seoul, Korea: 2011. p368-9.*

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#### **Survival analysis of Highly Active Anti-Retroviral Therapy (HAART) recipients at Sungai Buloh Hospital: 1997 - 2008**

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Investigators: Dr. Narimah Hanim Ibrahim  
 Prof. Dr. Awang Bulgiba bin Awang Mahmud  
 Funding agency: University of Malaya  
 Grant: Supported by UMRG/RG006/09HTM  
 Amount: Shared with UMRG/RG006/09HTM  
 Period: Jul 2010-Jun 2012

This study aims to ascertain the efficacy of the HAART regime for survival of HIV/AIDS patients, to determine the prognostic factors for survival, the incidence of adverse effects of HAART and the incidence of AIDS-related mortality. It is a retrospective cohort study involving all HIV/AIDS patients registered at the Infectious Disease Clinic, Sungai Buloh Hospital between 1997 and 2008. Prognostic factors of interest are predictors for better survival for example younger age group, no history of existing co-morbidities, non-smoking patients, no history of alcohol use, good social support and normal biochemical data (normal liver enzymes levels, normal creatinine level, normal cholesterol level, no Hepatitis B, no Hepatitis C). This study will produce models to predict the survival probabilities of HIV/AIDS patients on HAART. This will be very useful especially to the healthcare provider to improve the management of HIV/AIDS patients and also the Ministry of Health and other agencies which contribute to the service in terms of planning and expanding the services in future. The project will fund research by one DrPH candidate (Dr Narimah Hanim Ibrahim). The completion of the project should result in 2 journal papers and 1 DrPH thesis.

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#### **Methods of determining agreement and reliability in some medical applications**

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Investigator:	Dr Rafdzah Ahmad Zaki Prof Awang Bulgiba Awang Mahmud
Funding agency:	University of Malaya
Grant:	UM Postgraduate Research Grant
Reference number:	PS162/2009B
Amount:	RM15,910
Period:	June 2009 - June 2011

The purpose of this study is to compare different statistical methods of measuring agreement and reliability, and to propose a method using regression analysis for measuring agreement. This study will present a direct comparison of commonly used statistical methods to measure agreement and reliability. This study aims to make recommendations on which method is the most appropriate method to use to measure agreement and reliability. This is a cross-sectional study, where the study population comes from the UM Wellness programme and community-based health screening program. Data collection has been completed (variables: Systolic BP, Diastolic BP, Heart Rate, Glucose level, CO level, Peak Flow Rate, Weight and Temperature). The investigators are now analysing the data. This study is funding research by one DrPH candidate (Dr Rafdzah Ahmad Zaki). This study already resulted with four international conferences presentation study last year. The completion of this project should result in at least 3 journal papers, and 1 DrPH thesis. In 2011 the project resulted in the following outputs:

- Papers submitted for publication:
  1. Turkish Journal of Medical Sciences
    - a. Manuscript title: How accurate is your medical instrument?
    - b. Authors: Rafdzah Zaki, Bulgiba Awang, Roshidi Ismail and NoorAzina Ismail
  2. BMC Medical Research Methodology

- a. Manuscript title: Knowledge on analysis of method comparison study in medicine: a review of studies.
- b. Authors: Rafdzah Zaki, Bulgiba Awang, Noorhaire Nordin and NoorAzina Ismail
- 3. Journal of the Korean Medical Association.
  - a. Manuscript title: Education on method comparison study should not be neglected in medical training
  - b. Authors: Rafdzah Zaki, Bulgiba Awang, Roshidi Ismail and NoorAzina Ismail
- 4. PLoS ONE
  - a. Manuscript title: Overestimation of bias in the Bland-Altman analysis
  - b. Authors: Rafdzah Zaki, Bulgiba Awang and NoorAzina Ismail
- 5. PLoS ONE
  - a. Manuscript title: A systematic review of statistical method used to test for agreement of medical instruments measuring continuous variable in method comparison study
  - b. Authors: Rafdzah Zaki, Bulgiba Awang, Roshidi Ismail and NoorAzina Ismail

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**UMMC Health risk behaviours and needs of Mat Sikal: an exploratory study.**

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Investigators: Assoc. Prof. Dr Wong Li Ping  
 Funding agency: University of Malaya  
 Grant: UMRG  
 Reference number: RG337/11HTM  
 Amount: RM 26,800  
 Period: 2011-2012

The aim of this study is to undertake detailed investigation of the activities and needs of adolescents involved in bicycle street racing. Such study has not been reported in local published research. Specific objectives are 1) to gain in-depth understanding of street cycling culture of this cohort (Mat Sikal) and to investigate factors associated to risk behaviours. 2) to identify the needs within this cohort, and participants' viewpoints on how to address their needs 3) to assess perception and experiences of street cyclists about street cycling and racing 4) to assess demographic profile (socio-economic background) of 'Mat Sikal'/street cyclists 5) to investigate association between street cycling and associated health risk behaviors such as substance abuse (alcohol, cigarette and drug use). The study is hoped to provide explanation to this new street cycling culture. The factors that promote street cycling will be identified. The needs and viewpoints of this cohort will be determined.

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**Knowledge, beliefs, and practices (KBPs) related to dengue fever**

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Investigators: Assoc. Prof. Dr Wong Li Ping  
 Prof Dr Sazaly Bin Abu Bakar  
 Funding agency: Ministry of Higher Education  
 Grant: LRGS  
 Reference number: (LRGS) 2011 FASA 1I2O1I

Amount: RM 219,360

Period: 2011-2014

The aims of this study are to determine 1) knowledge, beliefs, practices (KBPs), experience, and perceived susceptibility and severity of dengue fever 2) to assess associations among knowledge, beliefs, practices (KBPs), experience, and perceived susceptibility and severity of dengue fever 3) to identify predictive factors for knowledge, beliefs, practices (KBPs), experience, and perceived susceptibility and severity of dengue fever. Study population are 1) lay public 2) Orang Asli. Assessment of knowledge, beliefs and practices (KAPs), and perceived susceptibility and severity of dengue fever among the general lay public, patients, and Orang Asli communities may identify its shortcomings, hence inform community-oriented programs. Identification of predictive factors may help inform interventions to target at specific segment of the populations. The results of this study can be used as guidelines for health workers in the training and promotion of community preventive behaviours in the formulation of administrative policies and programs defined at reducing incidence of dengue fever for general Malaysian public and Orang Asli populations.

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#### **Characteristics, treatment outcome and survival of TB/HIV co-infected patients in Kuala Lumpur and Selangor**

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Investigators: Dr Ismawati Ismail  
 Prof Awang Bulgiba Awang Mahmud

Funding Agency: University of Malaya

Grant: Postgraduate Research Fund (PPP)

Reference number: PS 230/2010A

Amount: RM 6,736

Period: April 2010 to April 2012

Worldwide, more than 38 million people are currently infected with HIV/AIDS. In high HIV prevalence countries, HIV/AIDS is the main reason for failure to meet Tuberculosis (TB) control targets and TB is the leading cause of morbidity and mortality among persons living with HIV/AIDS. This study will be able to highlight the characteristics of TB/HIV co-infected patients in Malaysia; their treatment outcomes and the predictors of survival thus providing beneficial information that can be used to improve the outcome. The study population comes from the Institute of Respiratory Medicine, Kuala Lumpur, Sungai Buloh Hospital, Kajang Hospital and Hospital Tuanku Ampuan Rahimah, Klang. The evidence from this study can be used to guide the development of appropriate strategies in addressing the TB/HIV epidemic in Malaysia. The data is currently being analysed and are currently undergoing analysis. In 2011, the project resulted in the following outputs:

1. Ismail I, Magaji BA, Bulgiba A. Systematic review – Predictors of mortality in HIV-associated tuberculosis. Proceedings of the International Health Conference IIUM 7-8 Dec 2011: Kuantan, Malaysia: 2011. p115.

2. Ismail I, Bulgiba A. Systematic review – Characteristics of Tuberculosis/HIV co-infected patients in Klang Valley, Malaysia. Proceedings of the International Health Conference IIUM 7-8 Dec 2011: Kuantan, Malaysia: 2011. p116.

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#### **Translational research in primary prevention of chronic diseases in a workplace**

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Investigators:	Dr Moy Foong Ming Prof Awang Bulgiba Awang Mahmud Assoc. Prof Sanjay Rampal Dr Victor Hoe Chee Wai Abdullah
Funding agency:	University of Malaya
Grant:	Research University Grant
Reference number:	RG051/09HTM
Amount:	RM 97,300 / RM60,000
Period:	March 2009 - Mac 2012

Primary prevention of chronic diseases is proven to be much more cost effective than secondary and tertiary prevention. Multiple approaches at different settings are needed to combat the increase burden of these diseases. Worksite health promotion which is comprehensive with multiple approaches has been associated with a reduction in health risks and promotion of healthy lifestyles, improvements in economic and productivity factors including medical costs, compensation benefits, employee absenteeism and job satisfaction. This proposed study will try to translate evidences from clinical trials to the worksite setting through health education with behavioural change, environmental support and participation from the management of the university. This study is supporting 2 DrPH and 1 Master candidates. In 2011 the project resulted in the following outputs:

- Publications:
  1. Moy FM, Awang Bulgiba. High prevalence of vitamin D insufficiency and its association with obesity and metabolic syndrome among Malay adults in Kuala Lumpur, Malaysia. BMC Public Health. 2011; 11: 735.
  2. FM Moy, Vitamin D status and its associated factors of free living Malay adults in a tropical country, Malaysia, J. Photochem. Photobiol. B. Biol. 2011; doi:10.1016/j.jphotobiol.2011.05.002
- Proceedings:
  1. FM Moy. Association of vitamin D and cardiometabolic risk factors among a Malay cohort in Kuala Lumpur, Malaysia. Journal of Epidemiology and Community Health. 2011: A277.
  2. Moy FM, Awang Bulgiba. Association of obesity and metabolic syndrome with vitamin D insufficiency among Malay adults in Kuala Lumpur. Proceeding MASO 2011 Scientific Conference on Obesity: 2011. p23.
  3. FM Moy, AM Bulgiba. Results of a 3-year workplace wellness program among a work cohort in Kuala Lumpur, Malaysia. J Epidemiology and Community Health: 2011. p A389.

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**Association of candidate genes predisposing to obesity in Malaysian subjects**

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Investigators:	Professor Awang Bulgiba Awang Mahmud Associate Professor Dr.Sanjay Rampal Professor Datin Dr.Zahurin Mohamed Dr. Moy Foong Ming Professor Dr. Rosmawati Mohamed Ms.Yamunah Devi Apalatomy
Funding Agency:	University Malaya
Grant:	Research University Grant
Reference number:	RG075/09HTM
Amount:	RM 200,000
Period:	April 2009 to March 2011 (Extended till 30/9/2012)

Obesity is becoming a major problem in Malaysia as it worldwide. Obesity is a multi-factorial disease that occurs due to complex interactions between genetic and environmental factors. Many studies have shown that genetic susceptibility is likely to vary among different ethnic groups. Large numbers of genes and single nucleotide polymorphisms associated with obesity have been tested in studies among various heterogenous populations worldwide. Mutations in genes involved in food intake, energy metabolism, energy expenditure, lipid and glucose metabolism and adipose tissue metabolism are found to be associated with obesity in humans. Study on the influence of genetics on obesity is still new in Malaysia and yet to be carried out. Hence, it would be great interest if we can establish a DNA profile for obesity in our population. This study is aimed to investigate association between various single nucleotide polymorphisms with obesity parameters in the Malaysian subjects. In 2011 the project resulted in the following outputs:

1. Apalatomy YD, Ming MF, Rampal S, Bulgiba A, Mohamed Z. Gender-Dependent Association of a beta2- Adrenergic Gene Variant With Obesity Parameters in Malaysian Malays. *Asia Pac J Public Health*. 2011.
2. Yamunah DA, FM Moy, S Rampal, AM Bulgiba, Z Mohamed. Association of a FTO Gene Variant with Obesity in Malaysian Malays. 2011 Scientific Conference on Obesity, 28-29 June 2011: MASO. (*Oral presentation-symposium*)
3. Apalatomy Yamunah Devi, Mohamed Zahurin, Rampal Sanjay, Bulgiba Awang, Moy Foong Ming. Melanocortin – 4 receptor gene polymorphism and association with cholesterol levels in Malaysian Malays. 4<sup>th</sup> Pan Arab Human Genetics Conference and the Human Genome Meeting, 14-17 March 2011: Dubai, UAE (*Poster*).
4. Mohamed Zahurin, Apalatomy Yamunah Devi, Rampal Sanjay, Bulgiba Awang, Moy Foong Ming. Association of INSIG2 RS7566605 Polymorphism with Obesity-Related Parameters in Malaysian Malays. 4<sup>th</sup> Pan Arab Human Genetics Conference and the Human Genome Meeting, 14-17 March 2011: Dubai, UAE. (*Poster*)

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**The impact of applied progressive deep muscle relaxation training (APMRT) to the level of depression, anxiety, stress and quality of life among prostate cancer patients**

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Investigators: Dr Mohamad Rodi bin Isa  
Dr Moy Foong Ming,  
Funding Agency: University of Malaya  
Grant: PPP  
Reference number: PS228/2010A  
Amount: RM 11,500  
Period: 2010-2012

Receiving a diagnosis or treatment for prostate cancer is highly likely to be a significant distressing occasion for a substantial proportion of these men. This situation leads to an increase in anxiety, depression and sadness in patients, consequently affects in their quality of life. Consultation-liaison psychiatrists and physician need to be aware of the psychological sequelae of both prostate cancer and treatment-related side effects. It represents an important and innovative contribution to psychiatric practice is to target psychiatric services to those in need. The need for identifying psychological morbidity and patient reported outcomes along with conventional cancer treatment is well known. Progressive Muscle Relaxation (PMR) is a technique to create a state of deep relaxation and was developed by American physician, Dr. Edmund Jacobson in 1934 based on the theory that a psychobiological state called neuromuscular hypertension is basis for a variety of negative emotional states and psychosomatic diseases and based on a theory that the body's muscle tension is from anxiety-provoking thoughts and events. Progressive muscle relaxation involves alternately tensing and relaxing the muscles. Evidences had shown that relaxation therapy may improve psychological outcomes in many diseases like after coronary artery bypass graft surgery, bronchial asthma, after hysterectomy etc. The study involved two phases of study which are the cross-sectional study and quasi-experimental study. The cross-sectional study conducted to determine the prevalence of depression, anxiety and stress and its relationship to the health related quality of life (HRQOL) and quasi-experimental study conducted to determine the impact of applied progressive deep muscle relaxation training (APMRT) to the level of depression, anxiety, stress and quality of life among prostate cancer patients. Data collection for this project still not completed for the control group for the follow up study. This project is funding research by one DrPH candidate (Dr Mohamad Rodi bin Isa). It is on schedule for completion in May 2012. In 2011, the project resulted in the following outputs:

1. Mohamad Rodi Isa, Moy FM, Azad Hassan Abdul Razack, Nur Zuraida Zainal. The prevalence of depression and its associated factors among prostate cancer patients in University Malaya Medical Centre (UMMC), Kuala Lumpur. 6<sup>th</sup> Public Health Conference 11 – 13 July, 2011: Seremban, Negeri Sembilan.
2. Mohamad Rodi, I, Moy FM, Azad Hassan Abdul Razack. The General Health Related Quality of Life among Prostate Cancer Patients in University Malaya Medical Centre: A Cross-Sectional Study. 43<sup>rd</sup> Asia Pacific Academic Consortium of Public Health, 20 – 22 October 2011: Yonsei University Seoul, Republic of Korea.

3. Mohamad Rodi Isa, Moy FM, Azad Hassan Abdul Razack, Nur Zuraida Zainal, Zulkifli Md Zainuddin. The Impact of Applied Progressive Muscle Relaxation Training to the Level of Depression, Anxiety, Stress and Quality of Life of Prostate Cancer Patients – Protocol of a Quasi-Experimental Study (IRCT201103176085N1). 43<sup>rd</sup> Asia Pacific Academic Consortium of Public Health, 20 – 22 October 2011: Yonsei University Seoul, Republic of Korea.
4. Mohamad Rodi Isa, Moy FM, Azad Hassan Abdul Razack, Nur Zuraida Zainal The Prevalence of Anxiety and Its Relationship with General Health Related Quality of Life among Prostate Cancer Patients in a Tertiary Medical Centre in Kuala Lumpur. 1st International Symposium on Health Research and Development and the 3rd Western Pacific Regional Conference on Public Health 16 – 18 November 2011: Sanur Paradise, Bali, Indonesia.
5. Mohamad Rodi Isa, Moy FM, Azad Hassan Abdul Razack, Nur Zuraida Zainal. A Study of Stress Status and its Relationship with General Health Related Quality of Life among Prostate Cancer Patients in a Tertiary Centre in Kuala Lumpur. International Health Conference International Islamic University Malaysia (IIUM), 7 – 8 December 2011: Kuantan, Pahang, Malaysia.
6. Mohamad Rodi Isa, Moy Foong Ming, Azad Hassan Abdul Razack, Nor Zuraida Zainal. The prevalence of depression and its associated factors among prostate cancer patients in University Malaya Medical Centre (UMMC), Kuala Lumpur. Malaysian Journal of Public Health Medicine 2011; 11(Suppl 4). (*Non-ISI/Non-SCOPUS Cited Publication*)

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**Pattern, predictors of survival and health related quality of life among colorectal cancer patients in UMMC**

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Investigators:	Dr Bello Arkilla Magaji Dr Moy Foong Ming Assoc Prof Law Chee Wei Assoc Prof April Camilla Roslani
Funding Agency:	University of Malaya
Grant:	Postgraduate Research Fund (PPP)
Reference number:	PS 212/2010A/PV015/2011B
Amount:	RM 8,500/ RM 29,000
Period:	April 2010 to April 2011

The aim of this research project is to determine the pattern of distribution, predictors of survival, and health related quality of life among colorectal cancer patients attending University of Malaya Medical Centre. This study is divided into three phases; phase one involves the use of the database from the Colorectal Surgery Unit to answer the questions on the pattern of distribution of the colorectal cancer and survival study. The second phase, involves the validation of colorectal cancer specific health related quality of life instruments acquired from the European Organisation for Research and Treatment of Cancer while

phase three is a fieldwork to determine the quality of life of the patients using the validated instruments. In 2011, the project resulted in the following outputs:

1. Magaji BA, Moy FM, Roslani AC, Law CW, Buckley BS. Closed versus open approach in laparoscopic colorectal surgery. *Cochrane Database of Systematic Reviews* 2011; 2: Art. No.: CD003547. DOI: 10.1002/14651858.CD003547.pub3.
2. An abstract titled Poster 459: "Demographic and Histopathological Features of Colorectal Cancers Managed at the University of Malaya Medical Centre, Kuala Lumpur, Malaysia 2005-2009" was submitted and published in the book of abstract for the African Organization for Research and Training in Cancer (AORTIC) held in Cairo Egypt 2011.
3. Finalized the translation of instruments into the three Malaysian languages, a final draft of questionnaire has been approved by the European Organization for Research and Treatment of Cancer Quality of Life Group.
4. Bello Arkilla Magaji was invited by the Breast Cancer Group to present a talk on the "Validation of European Organization for Research and Treatment of Cancer Quality of Life Instrument (EORTC QLQ-C30)" November, 2011.

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**Employee Assistance Program (EAP) for occupational stress: An intervention study on psychological symptoms and sickness absence.**

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Investigators:	Dr Marzuki Isahak Dr Azlan Darus Dr Moy Foong Ming
Funding Agency:	University of Malaya
Grant:	PPP Grant
Reference number:	PS175/2009B
Amount:	RM 17,620

Occupational stress has becoming an important entity to be tackled by Occupational Physician as its taking its toll on human lives and organizational effectiveness. University staff reported significantly higher levels of stress relating to work relationships, control, resources and communication and significantly lower level of commitment both from and to their organization. Physiological response to a threatening or difficult aspect of work and can be measured objectively with serum cortisol level. Employee Assistance Program (EAP) is a worksite-based program designed to assist work organizations in addressing productivity issues, and employee in identifying and resolving personal concerns, including, but not limited to, health, marital, family, financial, alcohol, drug, legal, emotional, stress, or other personal issues that may affect job performance. EAP for stress is specially designed to overcome occupational stress. The objective of this study is to determine the effectiveness of EAP for occupational stress in reduction psychological symptoms and sickness absence. In 2011 the project resulted in the following outputs:

1. Isahak M, Darus A, Moy FM, Retneswari M. Employee Assistance Programme for Stress: The Impact on Workers Health in a Public University. *Malaysian Journal of Public Health Medicine*. 2011; 11(2) : 33

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**Postgraduate supporting grant – combined projects**

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Funding Agency:	University Malaya
Grant:	Postgraduate Research Grant (PPP)
Reference number:	PV065/2011A
Amount:	RM 110,000 (supporting 3 projects as below)
Period:	August 2011 – June 2013

**(1) Reliability and validity of IPAQ measuring physical activity of adults in UM**

Investigators: Ms Anne Chu Hin Yee

Dr. Moy Foong Ming

The International Physical Activity Questionnaire (IPAQ) was developed to assess physical activities across countries and settings. However, the IPAQ long form was not validated in the Malay language. We aim to translate and validate a Malay version of the IPAQ long form (IPAQ-M) for the usage of Malay speaking users. A satisfying-good consistency indicates that the IPAQ-M could be used for research purposes for collecting data on the levels of total physical activity among the Malay population. The validated IPAQ-M will be used to study the association of physical activity level with the prevalence of metabolic syndrome in Malay adults. In 2011, the project resulted in the following output:

(i) Poster presentation entitled “Reliability and validity of IPAQ for measuring physical activity among Malay adults” at the 26th Scientific Conference & Annual General Meeting organized by the Nutrition Society of Malaysia on 24th – 25th of March 2011.

**(2) A community based healthy lifestyle intervention amongst high risk adults to prevent diabetes (Co-Help)**

Investigators: Dr Norliza Ibrahim

Dr. Moy Foong Ming

Despite significant advances in Medicine, Diabetes Mellitus remains a major global health problem. The increasing prevalence of type 2 diabetes is due to a combination of factors such as population growth, increasing life span, urbanization, increasing prevalence of obesity and physical inactivity. Malaysia is similarly affected due to a major shift in the lifestyles and longevity of the population. Globally, Malaysia is placed at number ten amongst countries with high diabetes prevalence. Therefore a community based healthy lifestyle intervention trial was initiated amongst high risk adults to prevent diabetes in Negeri Sembilan. The general objective of this study is to assess the effectiveness of lifestyle modification intervention as compared to usual care (conventional intervention) in reducing the modifiable risk factors of type 2 diabetes among high risk adults. Currently the study is in data collection phase.

**(3) Group support lifestyle modification (G-Slim) programme versus dietary counseling for obese adults in UM- A Randomised Controlled Trial**

Investigators: Dr. Siti Noraida Jamal  
 Dr. Moy Foong Ming  
 Dr. Mohd Nahar Azmi Mohamed  
 Dr. Hajjah Firdaus Mukhtar  
 Dr. Zulkarnain Jaafar

Overweight and obesity prevalence has increased by 154% within 10 years in Malaysia. Addressing obesity within community remains a challenge. From dietetic to lifestyle modification which integrates dietetic counselling had been the current approaches to overcome this challenge. Effect of group support as part of lifestyle modification offers a potential to improve effects of lifestyle modification in obesity management within community. This study is aimed to investigate the difference in effects between group support lifestyle modifications as compared to minimal dietetic counselling which is currently offered in among obese employees in a public university in Kuala Lumpur. The project is still in its data collection phase.

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#### **Nutritional Optimization With Specific Nutrients In Colorectal Cancer Patients Receiving Chemotherapy: A Randomised Double-Blinded Trial**

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Investigators: Dr. Babak Golkhalkhali  
 Prof. Chin Kin Fah  
 Dr. Moy Foong Ming  
 Dr. Ho Gwo Fuang  
 Dr. Wan Zamaniah

Funding Agency: University of Malaya  
 Grant: Postgraduate Research Fund (PPP)  
 Reference number: PV082 /2011A  
 Amount: RM 55,000  
 Period: Sep.2010 to Sep. 2013

The aim of this research project is to determine the effectiveness of nutritional optimization on the health quality of life, body composition and side effect of colorectal cancer patients undergoing chemotherapy. This study is a randomised controlled trial where the intervention group will receive the nutritional supplementation (fish oil and probiotics), while the other group will be on placebo. The participants will be followed up for 6 months and the above measurements will be evaluated. Currently, this study is in data collection phase.

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#### **Determinants of clinical outcomes among ACS patients following PCI in UMMC**

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Investigators: Dr. Noorhaire Sumarlie B. Nordin  
 Dr. Moy Foong Ming  
 Assoc. Prof. Imran Zainal Abidin

Funding agency: University of Malaya  
 Grant: UM Postgraduate Research Grant

Reference number: PS172/2009B & PS275/2010B

Amount: RM 5,000 & RM 3,600

Period: August 2009 – Dec 2010

The aims of this study are to identify different determinants or predictors of clinical outcomes following PCI among ACS patients in UMMC, Malaysia as well as develop a prognostic model for the risk of these outcomes following PCI. Besides that this study plans to describe the HRQOL outcome following PCI in UMMC. This study will be the first study to identify the predictors of outcomes of PCI and provide knowledge in terms of local management in Malaysia. The prognostic model can be used as a tool for stratifying patients according to the risk of outcomes and as a simple bedside scoring system. The study design is a prospective cohort study. The study population is selected from all ACS patients who are admitted to the cardiology ward and undergo PCI in the UMMC. Data collection for the study is still ongoing. The project has funded research on one DrPH candidate. The completion of the study should result in 1 DrPH thesis and 3 journal papers. In 2011 the project resulted in the following outputs:

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**Investigation of individual, social and built environment factors affecting suburban and semi-rural Malaysian adolescents' physical activity behaviour**

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Investigators: Rosalia Saimon  
 Prof Awang Bulgiba Awang Mahmud  
 Dr Claire Choo Wan Yuen

Funding agency: University of Malaya

Grant: UM Postgraduate Research Fund

Reference number: PS200/2009C

Amount: RM 16,000

Period: January 2010 – December 2012

As sedentary lifestyles become more inevitable, there are concerns that adolescent's PA and obesity prevalence may continue to increase rapidly. This study aimed to investigate the habitual physical activity relating to individual, social and built environment factors of Malaysian adolescents living in suburban and semi-rural in Kuching, Sarawak. A mixed method research applied a sequential transformative design. The grounded theory framework developed in qualitative phase informed the subsequent survey designed for larger samples in the quantitative phase. Ecological model guided a structural equation modelling (SEM) to examine the relationship between latent individual, social and physical environment variables affecting adolescent physical activity. The project will support one PhD student and is expected to result in 3 journal papers and 1 PhD thesis. In 2011 the project resulted in the following outputs:

1. One qualitative paper - "There is a ghost": Exploring neighbourhood barriers in adolescents' physical activity in a developing Asian country. Submitted to Ethnicity & Health Journal

2. One paper entitled – Pedometer-determined physical activity, self-reported screen time and weight status of suburban and semi-rural adolescents in Malaysia. To be submitted to the 1st Asia Pacific Clinical Epidemiology and Evidence Based Medicine Conference, 6 – 8 July 2012, Kuala Lumpur
3. One abstract for oral presentation has been submitted to the 8th Design & Health World Congress will be held in Kuala Lumpur, Malaysia from 27 June-1 July 2012.

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**Identification of determinants for progression to AIDS in HIV patients receiving anti-retroviral treatment**

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Investigators: Prof Awang Bulgiba Awang Mahmud  
 Dr Rahayu Lubis  
 Prof Adeeba Kamarulzaman  
 Devi Peramalah

Funding agency: Ministry of Higher Education

Grant: Fundamental Research Grant Scheme

Reference number: FP080/2006A

Amount: RM145,000

Period: Dec 2006-Dec 2009

This project aimed at determining the predictors for progression to AIDS in HIV patients receiving anti-retroviral treatment. The study is expected to offer badly needed new knowledge and understanding of the prognosis and survival of HIV-infected patients in Malaysia. The study design is a combined retrospective and prospective cohort. The study population comes from the UMMC. The project was completed at the end of 2009 but publications are still being produced from this project. The project has funded research by one PhD candidate. In 2011 the project resulted in the following outputs:

1. Send a paper entitle “Predicting time to achieving viral load  $\leq$  50 copies/ml in HIV infected patients on antiviral therapy” to Singapore Medical Journal on 11 October 2011 with current status decision in process

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**Smoking cessation at the workplace: the dynamic process of relapse after administration of NRT**

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Investigators: Dr Siti Munira Yasin  
 Associate Professor Dr Retneswari Masilamani  
 Dr Moy Foong Ming

Funding agency: University of Malaya

Grant: UM Postgraduate Research Fund

Reference number: PS161/2009B

Amount: RM 30,000

Period: August 2009 – February 2011

Many initiatives have been implemented by the Ministry of Health in combating smoking among adults in Malaysia, nevertheless results do not appear promising. One of the areas

that are causing problems worldwide is smoking relapse. Relapse is by far the most likely event in any smoking cessation attempt. This study aim to identify risk factors for smoking relapse, sustained cessation and main behavioural factors involved in a quit attempt. This study also examines whether Trans theoretical model (TTM) measures could predict relapse at the action stage, (i.e. the first 6 months of smoking cessation) and explores whether factors associated with relapse in an early quit attempt. The study involved a prospective cohort, which was conducted among workers in two public universities in Klang Valley. Smokers were given a course of Nicotine Replacement Therapy and Behavioural Therapy during a cessation attempt and were followed up for six months. Data collection for the project has been completed; currently it is undergoing final write-up stage. This project is funding research by one DrPH candidate (Dr Siti Munira Yasin). It is on schedule for completion in February 2012. In 2011-early 2012, the project resulted in the following research outputs:

1. Yasin SM, Retneswari M, Moy FM, Koh D. Predictors of Smoking Cessation Among Staff in Public Universities in Klang Valley, Malaysia. *Asian Pacific J Cancer Prev.* 2011; 12 (3): 811-6. *(ISI-cited)*
  2. Yasin SM, Khairul Mizan T, Rafdzah Ahmad Z. Reliability and Construct Validity of the Bahasa Malaysia Version of Transtheoretical Model (TTM) Questionnaire for Smoking Cessation and Relapse among Malaysian Adult Smokers. *Asian Pacific J Cancer Prev.* 2011; 12 (6): 1439-1443. *(ISI-cited)*
  3. Yasin SM, Retneswari M, Moy FM, Koh D. Does change in perception following counseling result in improved quitting outcome among Malaysian smokers? *Asia-Pacific Journal of Public Health.* 2011: DOI: 10.1177/1010539511426472. *(ISI-cited)*
  4. Yasin SM, Retneswari M, Moy FM, Koh D, Marzuki I. Smokers can quit regardless of motivation in a worksite smoking cessation programme. *Asian Pacific J Cancer Prev.* 2011; 12 (9), 2193-2198. *(ISI-cited)*
  5. Yasin SM, Retneswari M, Moy FM, Darus A, Koh D. Job stressors in relation to smoking cessation among Malaysian male employees in Worksite Smoking Cessation Programmes. (In press) Accepted by *Occupational Medicine* on 20<sup>th</sup> December 2011. *(ISI-Cited)*
  6. Yasin SM, Moy FM, Retneswari M, Isahak M, Koh D. Timing to smoking relapse and its associated risk factors among smokers attending Worksite Smoking Cessation Programme. (In press) Accepted by *The International Journal of Tuberculosis and Lung Disease* on 5<sup>th</sup> January 2012. *(ISI-Cited)*
  7. Yasin SM, Retneswari M, Moy FM, Koh D. Can perceived risk and benefits of quitting predict smoking cessation? Malaysian experience. (In press) Accepted by *Southeast Asian Journal of Tropical Medicine and Public Health* 2012) *(ISI-Cited)*
- Journal Abstract Proceedings
    1. Siti Munira Y, Retneswari M, Moy FM, Azlan D, David K. Job Stressors in Relation to Smoking Cessation among Malaysian Male Employees in Worksite Smoking Cessation

- Programme (abstract only). *Malaysian Journal of Public Health Medicine*. 2011; 11 (Suppl 2): 34-35. ISSN: 1675-0306. *(Non ISI/ Non Scopus cited)*
2. Siti Munira Y, Retneswari M, Moy FM, David K. Risk factors for smoking relapse among Malaysian smokers attending worksite smoking cessation programme (abstract only). *Malaysian Journal of Public Health Medicine*. 2011; 11 (Suppl 4): 22-23. ISSN: 1675-0306. *(Non ISI/ Non Scopus cited)*
  3. Siti Munira Y. Smokers can quit regardless of motivation in a worksite smoking cessation programme in Malaysia. (abstract only). *Malaysian Journal of Community Health (Jurnal Kesihatan Kemasyarakatan)*. 2011; 17 (Suppl 1): ISSN: 1675-1663. *(Non ISI/ Non Scopus cited)*
- Conference (Oral Presentations):
    1. Yasin SM, Masilamani R, Moy FM, Koh D. Changes in Decisional Balance After Counseling is Associated with Improved Quit Rates Among Malaysian Smokers. Asia Pacific Academic Consortium of Public Health. Nusa Dua, Bali, Indonesia. 24- 27 November 2010.
    2. Yasin SM, Masilamani R, Moy FM, Koh D. Predictors of Smoking Cessation Among Staff in Public Universities in Klang Valley, Malaysia. AsiaLink International Conference, Kuta, Bali, Indonesia. 27-28 November 2010. p. 20-21.
    3. Yasin SM, Masilamani R, Moy FM, Koh D. Can Perceived Risk and Benefit of Quitting Predict Smoking Cessation Outcome? ; Malaysian Experience. First Regional Health Science and Nursing Conference, SACC, Shah Alam, Malaysia. 22-24 February 2011. p. 16.
    4. Yasin SM, Retneswari M, Moy FM, Azlan D, David K. Job Stressors in Relation to Smoking Cessation among Malaysian Male Employees in Worksite Smoking Cessation Programme. 4<sup>th</sup> Regional Conference of Occupational Medicine, Kuala Lumpur, Malaysia. 23-25 June 2011.
    5. Yasin SM, Retneswari M, Moy FM, Koh D. Risk factors for smoking relapse among Malaysian smokers attending worksite smoking cessation programme. 6<sup>th</sup> National Public Health Conference, Klana Resort, Seremban, Malaysia, Malaysia 11-13 July 2011.
    6. Yasin SM. Smokers can quit regardless of motivation stage in a worksite smoking cessation programme in Malaysia. First International Public Health Conference & 18<sup>th</sup> National Public Health Cllloquium, Kuala Lumpur 27-28 September 2011.
  - Conference (Poster Presentations and Research Awards):
    1. Yasin SM, Masilamani R, Moy FM, Koh D. Factors contributing to quitting success, early lapses and 50% cigarette reduction in a worksite smoking cessation programme in Malaysia. Asia Pacific Conference on Tobacco or Health, Sydney, Australia. 6-9 October 2010. p. 187-188 *(Awarded Scholarship Travel Award from Global Dialogue for Effective Stop-Smoking Campaigns, US)*
    2. Yasin SM, Masilamani R, Moy FM, Koh D. Can Perception About Qutting Predict Smoking Cessation Outcome? Malaysian Experience. Cancer Research Exhibition, University Putra

- Malaysia, Malaysia 23-24 February 2011. p. 243-244 (*Awarded 2<sup>nd</sup> Prize for Best Poster Presentation (Category: Epidemiology and Environmental research)*)
3. Yasin SM, Masilamani R, Moy FM, Koh D. Timing to smoking relapse and risk factors associated with relapse among Malaysian smokers. The 4<sup>th</sup> International Cancer Control Congress, National Cancer Center, Korea. 3-5 November 2011. (*Awarded Scholarship Travel Award from the 4<sup>th</sup> International Cancer Control Congress, Korea*)
  4. Yasin SM, Masilamani R, Moy FM, Koh D. Risk factors for smoking relapse among Malaysian smokers attending worksite smoking cessation programme. 15<sup>th</sup> World Conference on Tobacco or Health, Singapore 20-24 March 2012. (*Awarded Scholarship Travel Award from the 15<sup>th</sup> World Conference on Tobacco or Health, Singapore*)

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**Effects of stress management techniques-breathing exercise and progressive muscle relaxation technique to alleviate job stress among malaysian automotive assembly line workers**

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Investigators: Dr Bala Murali a/l Sundram (Primary Investigator)

A/P Dr Retneswari Masilamani

A/P Dr Maznah Dahlui

Funding: Self-funded by Primary Investigator

Period: January 2012- December 2012

This study explores Stress Management Training (SMT) that is designed to help employees modify their appraisal of stressful situations or to deal more effectively with the symptoms of stress or both. It examines the effects of short duration SMT at the Primary Level on stressful workers which are seriously lacking. Most employers presume that SMT are time-consuming, expensive and workers cannot spare the time to practice any coping skills. Given the high stress levels reported among automotive workers in previous studies these reasons are not sufficient to ignore the well-being of automotive assembly workers. Therefore, short duration intervention programs such as SMT are needed for automotive workers in Malaysia.

These techniques namely breathing exercise and progressive muscle relaxation can be incorporated into the Employee Assistant Programme (EAP) for alleviation of stress at the workplace. These techniques are inexpensive and easy to implement. It can also help initiate a safety health policy concerning occupational stress at the assembly line by encouraging and organizing regular workshops, seminars or talks to spread the effects of this psychosocial hazard and thus empowerment of the workers with self-administered relaxation techniques to curb stress. The ultimate goal of these stress management techniques are to enhance employee morale and motivation, improving productivity, decreasing financial costs of medical and disability claims and indirectly promotes the image of the employer for implementing such interventions as part of their safety health policy on stress at work.

This study is expected to offer new insights into alleviating occupational stress at the automotive assembly line and also set to discover the effectiveness of Deep Breathing Exercise and Progressive Muscle Relaxation techniques at the Primary Level of Prevention.

This project is self-funded by the principal investigator under the Ministry of Health with publication rights reserved by University of Malaya. Data collection for the project has commenced and the project is on schedule till date. Several SCI ISI publications are expected from this project.

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#### **Salivary cortisol and IgA as markers for psychological stress: a study of workplace stress among police officers**

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Investigators: Associate Professor Dr Retneswari Masilamani  
 Professor Awang Bulgiba Awang Mahmud  
 Professor David Koh- content consultant (Universiti Brunei)

Funding Agency: Ministry of Higher Education

Grant: Fundamental Research Grant Scheme

Reference number: FP022/2008C

Amount Spent: RM170,000

Period: September 2011-September 2014

Despite numerous studies done on police stress, very little has been explored relating to organisations factors causing occupational stress. Thus this study attempts to study policing stress by using an Operational and Organisational police stress questionnaire which has incorporated both components. The study will also attempt to establish the association between different levels of (biomarkers) salivary cortisol and IgA and job strain levels based on questionnaire among the study subjects. Finally, to validate the Operational and Organisational police stress questionnaire. The project is funded by the Ministry of Higher Education through an Fundamental Research Grant Scheme and is expected to cost about RM 171, 000 over 4 years. Data collection for the project has been completed and the project is on schedule for completion by September 2014. This projected has enabled me to register for a Ph.D programme and a minimum of 5 SCI ISI publications are expected as outcomes of this project.

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#### **Progressivity of health financing in Malaysia**

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Investigators: Dr. Ng Chiu Wan  
 Prof Shyamala Nagaraj  
 A/Prof Saimy Ismail  
 Dato' Dr. S. Noor Ghani  
 Dr. Maznah Dahlui

Funding agency: University of Malaya

Grant: UM Short term Grant

Reference number: FS1128/2008A

Amount: RM 75,000

Period: March 2008-March 2010

One of the stated objectives of the health system as enshrined in the MOH's Vision for Health is for the maintenance of a health system which is affordable and equitable. It has

been argued that in an equitable and fair system, the rich should pay more for health care than the poor as the latter is less likely to be in a position to afford all needed care. The financing of health care in Malaysia is derived from many sources. In 2004, a total of RM21.4 billion was spent on health care in Malaysia, of which 49.1% came from taxation. The rest were from mainly private sources such as household out-of-pocket (OOP) payments and private health insurance. Previous work on the Malaysian health financing system has shown that at least the private household OOP payments have to a certain extent been protective of the poor, in other words equitable. This study was intended to extend the equity analysis to include all sources of health financing in Malaysia. The project has funded research by one PhD candidate. In 2011 the project resulted in the following outputs:

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#### **Explorations of methods for adult health inequalities**

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Investigators: Dr. Ng Chiu Wan  
 Funding agency: International Development Research Centre (IDRC), Canada  
 Reference number: Grant No. 105231  
 Amount: RM 31,500 (C\$ 10,250)  
 Period: April 2009-December 2010

This study was intended to test the feasibility of using mortality data combined with census data to assess socioeconomic differentials in overall and adult mortality in Malaysia. National mortality data were used to estimate mortality rates by small areas (administrative districts), and then national census data, which contain data on living and environmental conditions, occupation and education of households in each small area, were used to rank each area by average socio-economic status, thus allowing mortality rates at the level of areas to be stratified according to the socioeconomic ranking of the areas. Rankings of areas by socioeconomic level were performed either using principle components analysis alone or in combination with econometric analysis of other sample socioeconomic surveys. This approach allowed examination of socioeconomic differentials in overall mortality as well as differentials in specific groups of diseases of interest. The results would contribute to a comparative study of the socioeconomic differentials in mortality in Sri Lanka, Malaysia, Vietnam and Hong Kong SAR, currently being undertaken by the Equity in Asia Pacific Health Systems (EQUITAP) research collaboration.

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#### **Increasing breast cancer awareness and enhancing practice of BSE among female staff of UM**

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Investigators: Dr. Maznah Dahlui  
 Dr. Ng Chiu Wan  
 A/P Nabilla Al Sadat  
 A/P Saimy Ismail  
 Funding agency: University of Malaya  
 Grant: Short Term Grant  
 Reference number: FS276/2008B

Amount: RM69, 000  
 Period: August 2008 – July 2010

This project was conducted in 3 phases. The 1<sup>st</sup> phase was to determine the level of knowledge on breast cancer and the uptake of any of the breast cancer screening program among UM staff. The 2<sup>nd</sup> phase was the intervention phase whereby seminars on breast cancer and workshops to train BSE were conducted in UM. At the same UM female staffs with breast abnormality were called for breast check up (CBE). The 3<sup>rd</sup> phase was the re-evaluation on their knowledge and measurement of the uptake of BSE after the interventions. The project resulted in presentation on the results in the phase 1 (2009) and was completed in July 2010. . In 2011 the project resulted in the following outputs:

1. Dahlui M, Ramli S, Bulgiba AM. Breast cancer prevention and control programs in malaysia. Asian Pac J Cancer Prev. 2011; 12(6): 1631-4.
2. Dahlui M, Ng C, Al-Sadat N, Ismail S, Bulgiba A. Is breast self examination (BSE) still relevant? A study on BSE performance among female staff of University of Malaya. Asian Pac J Cancer Prev. 2011; 12(2): 369-72.

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#### **UMMC costing analysis: Estimating the unit cost for outpatient, inpatient and day-care services**

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Investigators: Dr. Maznah Dahlui  
 Dr. Ng Chiu Wan  
 Prof. Dato' Dr. Patrick Tan  
 Funding agency: University of Malaya  
 Grant: UMRG  
 Reference number: RG243/10HTM  
 Amount: RM26, 200  
 Period: October 2010 – February 2012

This cost analysis study aims at determining the actual costs of outpatient and inpatient (including theatre) at University Malaya Medical Centre (UMMC). The primary rationale for this study was to address the limitations of existing approaches to cost estimation, to compensate for lack of data in the hospital, provide findings that inform policy regarding hospital performance, and ultimately to use the results on resource use and costs as a first step in estimating the cost of each treatment package by the various disciplines.

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#### **Return on investment of NSEP in Peninsular Malaysia**

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Investigators: Dr. Maznah Dahlui  
 Funding agency: World Bank  
 Grant: HIV/AIDs Program  
 Reference number:  
 Amount: RM 60, 000  
 Period: December 2011 – November 2012

The study aims to analyse the effectiveness of needle and syringe programs in preventing

transmission of HIV and hepatitis C in Malaysia since the introduction of the NSEP program in 2006 and to calculate the return on investment in NSEPs from 2006 to present. An epidemiological model developed by University of New South Wales, Sydney Australia which was designed for evaluation of needle-syringe exchange programs in Australia will be used whereby local data related to NSEP activities will be applied. The Needle Exchange Program Evaluation Model (or NEPEM) is a HIV and HCV epidemiological model that simulates the number of people in the population who become infected with HIV and/or HCV over time and the extent of disease progression in people living with these infections. In order to monitor the extent of infection in the population and calculate the expected demand for healthcare, the NEPEM categorizes the population of people living with HIV by CD4 count groupings and the population of people living with HCV by stage of liver fibrosis.

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#### **Developing Malaysia as healthcare service hub in ASEAN and South East Asia**

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Investigators: Dr. Maznah Dahlui  
 Funding agency: Economic Research Institutes of ASEAN and Asia (ERIA)  
 Grant: ERIA  
 Reference number:  
 Amount: RM 21, 000  
 Period: August 2011 – Mac 2012

This is a study which assesses the readiness of Malaysia to be the healthcare service hub in the ASEAN and ASIA regions. The final draft of the country report will be presented at Yogyakarta, 3-4<sup>th</sup> February, 2012.

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#### **MENCARE! Male Support of Breast Cancer Screening: Evaluation Research**

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Investigators: Associate Prof Wong Yut Lin  
 Funding agency: NCWO/Pfizer  
 Grant:  
 Reference number:  
 Amount: RM 50, 000  
 Period: August 2008 – Oct 2011

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#### **Review of Hospital-Based One Stop Crisis Centre Services**

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Investigators: Associate Prof Wong Yut Lin  
 Funding agency: UNFPA/WIM  
 Grant:  
 Reference number:  
 Amount: RM 50, 000  
 Period: October 2008 – October 2012

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#### **Reproductive Rights and Choice: Insights from Women on Pregnancy Termination**

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Investigators: Associate Prof Wong Yut Lin (Co-researcher)  
 Funding agency: WHO  
 Grant:  
 Reference number:  
 Amount: RM 35, 000  
 Period: December 2010 – December 2011

### Short Courses

No	Title	Date	Speaker	Participants	Organised by
1	Using EndNote Workshop	6 Jan 2011	Dr. Moy Foong Ming, Dr. Anselm Su Ting	47	Dr. Moy Foong Ming
2	Regression Analysis	1-2 Mar 2011	Assoc.Prof Dr. Karuthan Chinna	50	A.Prof. Karuthan Chinna
3	The 5th JCU M Evidence-Based Medicine Workshop	12-14 Apr 2011	Prof. Dr. Awang Bulgiba Awang Mahmud, Dr. Liew Su May, Dr. Moy Foong Ming, Dr. Nirmala Bhoo Pathy, Dr. Sharmini Selvarajah, Assoc. Prof. Dr. Ng Chirk Jenn, Dr. Noran Naqiah	23	Prof. Dr. Awang Bulgiba Awang Mahmud
4	Proposal Writing Workshop - in collaboration with Malaysia Health Promotion Board	26-28 Apr 2011	Prof. Dr. Lekhraj Rampal, Assoc.Prof.Dr. Karuthan Chinna, Prof. Dr. Awang Bulgiba Awang Mahmud, Dr. Mas Ayu, Dr. Noran Hairi, Dr. Moy Foong Ming, Dr. Yahya Baba		Prof. Dr. Awang Bulgiba Awang Mahmud
5	Introduction to Survival Anlysis	14-15 Jun 2011	Assoc.Prof. Dr Karuthan Chinna	21	A.Prof. Karuthan Chinna
6	Cochrane Systematic Preview	4-8 Jul 2011	Prof. Prathap Tharyan	50	Dr. Moy Foong Ming

	Protocol Development Workshop				
7	Clinical Epidemiology - Evidence Based Medicine Research Workshop 2011	20-21 Jul 2011	Prof. Dr. Awang Bulgiba Awang Mahmud, Dr. Moy Foong Ming, Dr. Ng Chong Guan, Dr. Sharmini Selvarajah, Dr. Rafdzah Ahamd Zaki, Dr. Marzuki bin Isahak,	20	Dr. Moy Foong Ming
8	CRC - Workshop Forecasting Analysis Registry Data	29-30 Nov 2011	A.Prof. Karuthan Chinna	20	A.Prof. Karuthan Chinna
9	STEM Workshop (Spatio-Temporal Epidemiological Modelling)	19-23 Dec 2011	Dr. Kameshwaran Sampath (Analytics and Optimization, IBM Research - India, Bangalore	26	A.Prof. Karuthan Chinna

In 2012, JCUM is expected to mature further. JCUM was awarded a new MOHE-UM High Impact Research Grant project in 2011 called STeMM (Spatio-Temporal Modelling and Meta-analysis). This new RM2.47 million project will take 5 years to complete with at least 25 Tier 1 SCI-indexed papers expected from the project. A new addition to JCUM is the STeMM base room which is expected to house the video-conferencing facilities and work room for STEMM. JCUM is also organising the 1<sup>st</sup> Asia Pacific Clinical Epidemiology and Evidence-Based Medicine Conference (<http://apceebm.um.edu.my>) which is scheduled to take place from 6-8 July 2012 in Kuala Lumpur.

#### Miscellaneous and special projects

- Invited engagements

##### 1. Prof Awang Bulgiba Awang Mahmud

Date	Type	Function/place	Title
13 Jul 2011	Keynote speaker	UM-QUB Public Health Research Symposium, Kuala Lumpur, Malaysia	Improving population health through translational research
15 Sept 2011	Invited speaker	Asian Conference of University Presidents, Jakarta, Indonesia	Intellectual social responsibility- Contributing to national development
27 Sept	Keynote	1 <sup>st</sup> International Public Health	Connecting the dots

2011	address	Conference, Kuala Lumpur, Malaysia	
13 Oct 2011	Plenary speaker	Australian International Education Conference in Adelaide, Australia	The global future of international education – facilitated dialogue
13 Oct 2011	Plenary speaker	Australian International Education Conference in Adelaide, Australia	Deep internationalization

## 2. Associate Prof Retneswari Masilamani

Date	Type	Function/place	Title
25-28 May 2011	Invited speaker	Society of Occupational and Environmental Medicine MMA Pre AGM Seminar	Walk Through Survey-Dicing with Hazards and Risks
23-25 Jun 2011	Invited speaker	4th Regional Conference on Occupational Health (RCOH), 23 Jun 2011 to 25 Jun 2011, SOEM-MMA	Sexual Harassment
23-25 Jun 2011	Invited speaker	4th Regional Conference on Occupational Health (RCOH), 23 Jun 2011 to 25 Jun 2011, SOEM-MMA	Latent Tuberculosis Infection Among Healthcare Workers,

### Consultancies & Special Services: (e.g. consultant, reviewer, etc):

- Consultancies

1. Prof Awang Bulgiba

- R076477SCH3022 Study: An Open-label Prospective Trial to Explore the Tolerability, Safety and Efficacy of Flexibly Dosed Paliperidone ER in Subjects With Schizophrenia. Janssen-Cilag (completed).

2. Associate Prof Retneswari Masilamani

- Policy changes related to Invalidity Pension to Social Security Organisation, December 2011
- Occupational health Advisor to Unilever Malaysia Sdn Bhd - 2011

- Board and reviewer roles

Staff	Journal	Role
Prof Awang Bulgiba	Asia Pacific Journal of Public Health	Associate Editor
Awang Mahmud	Journal of Experimental and Clinical Medicine	International Advisory Panel
	Malaysian Orthopaedic Journal	Editor
	1. Medical Journal of Malaysia	Ad hoc reviewer
	2. Journal of University of Malaya Medical Centre	
3. Journal of Health Management		
4. Medical and Health Reviews		

Dr Noran Hairi	1. Asia Pacific Journal of Public Health 2. Internet Journal of Mental Health 3. Applied Research in Quality of Life	Ad hoc reviewer
Dr Moy Foong Ming	Malaysian Journal of Nutrition	Member of editorial board
	1. Asia Pacific Journal of Public Health 2. Journal of University of Malaya Medical Centre 3. The Journal of Nutrition, Health and Aging 4. International Journal of Food Sciences & Nutrition 5. Industrial Health	Ad hoc reviewer
Assoc Professor Retneswari Masilamani	Malaysian Journal of Public Health Medicine, Malaysia Medicine	Member of editorial board
	Asia Pacific Journal of Public Health Malaysian Journal of Public Health Medicine Malaysia Medicine	Reviewer

- Other roles

1. Associate Prof Retneswari Masilamani.
  - Overseas Examiner for Faculty examinations (membership examinations) of Royal College of Physicians of Ireland, May 2011
  - External Examiner for the International Medical University. End of Semester 5 Examination (Bachelor of Medicine & Bachelor of Surgery 2011).

**List of publications and achievements by JCUM members**

- Journal publications

1. Wee LH, Shahab L, Bulgiba A, West R. Conflict about quitting predicts the decision to stop smoking gradually or abruptly: evidence from stop smoking clinics in Malaysia. *Journal of Smoking Cessation*. 2011; 6(1). doi: 10.1375/jsv.6.1. <http://www.atypon-link.com/AAP/doi/abs/10.1375/jsc.6.1.37>
2. Hairi NN, Bulgiba A, Cumming RG, Naganathan V, & Mudla I. Depressive symptoms, visual impairment, and its influence on physical disability and functional limitation. *J Am Geriatr Soc*. 2011; 59(3): 557-9.
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1. Noran N Hairi, Awang Bulgiba, GH Tee, Izzuna Mudla. Sarcopenia in older people. In: Craig S. Atwood editor. Geriatrics. InTech Publisher. (In press).
2. Noran N Hairi, GH Tee, Awang Bulgiba, Izzuna Mudla. Physical Function in Older People. In Craig S Atwood editor. Geriatrics. InTech Publisher. (In press).
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4. Wong Yut Lin. Hospital-based One-Stop Crisis Centres (OSCC): Health Sector Response to Gender-Based Violence in Peninsular Malaysia. 2011, United Nations Population Fund (UNPFA), Malaysia. ISBN 978-983-3055-07-4.

### Awards

Associate Prof Retneswari Masilamani. Fellow Of Public Health Medicine Malaysia (FPHMM), Malaysian Public Health Physicians' Association (PPPKAM), 2011

### Members

- Academic staff / internal membership

Name	Department	Membership type
Prof. Dr. Awang Bulgiba Awang Mahmud	SPM	Full Member
Assoc. Prof. Dr. Maznah Dahlui	SPM	Full Member
Assoc. Prof. Dr. Sanjay Rampal	SPM	Full Member
Assoc. Prof. Dr. Retneswari Masilamani	SPM	Full Member
Assoc. Prof. Dr. Wong Yut Lin	SPM	Full Member
Assoc. Prof. Dr. Wong Li Ping	SPM	Full Member
Assoc. Prof. Dr. Noran Naqiah Mohd Hairi	SPM	Full Member
Assoc. Prof. Dr. Ng Chiu Wan	SPM	Full Member
Dr. Moy Foong Ming	SPM	Full Member
Dr. Claire Choo Wan Yuen	SPM	Full Member
Dr. Mas Ayu Said	SPM	Full Member
Dr. Azlan Darus	SPM	Full Member
Dr. Anselm Su Ting	SPM	Full Member
Dr. Si Lay Khaing	O&G	Full Member
Dr. Liew Su-May	SPM	Full Member
Dr. Pathmawati Subramaniam	Nursing	Full Member
Dr. Nirmala Bhoopathy	SPM	UM Student
Dr. Rafdzah Ahmad Zaki	SPM	UM Student
Dr. Ng Chong Guan	SPM	UM Student
Dr. Sharmini Selavarajah	SPM	UM Student

Dr. Rahayu Lubis	SPM	UM Student
Dr. Noorhaire Sumarlie	SPM	UM Student
Dr. Mohamad Rodi Isa	SPM	UM Student
Dr. Bello Arkilla Magaji	SPM	UM Student
Dr. Nurhuda Ismail	SPM	UM Student
Dr. Narimah Hanim Ibrahim	SPM	UM Student
Dr. Rosalia Saimon	SPM	UM Student
Dr. Umar Yagoub Mohammed	SPM	UM Student

- External Membership

No	Name	Name of Agency
1	Prof Yolanda van der Graaf	Julius Centre, University Medical Centre, Utrecht, The Netherlands
2	Prof Diedrick Groebbe	Julius Centre, University Medical Centre, Utrecht, The Netherlands
3	Prof Arno Hoes	Julius Centre, University Medical Centre, Utrecht, The Netherlands
4	Prof Paul Glasziou	Centre for Evidence-Based Medicine, University of Oxford, United Kingdom
5	Associate Prof Cuno Uiterwaal	Julius Centre, University Medical Centre, Utrecht, The Netherlands

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