

**FACULTY OF MEDICINE AND HEALTH SCIENCES
UNIVERSITI PUTRA MALAYSIA
RESEARCH GROUP : ENVIRONMENTAL HEALTH**

TITLE OF RESEARCH : FOOD AND ENVIRONMENTAL DIOXINS CONTAMINATION AMONG SCHOOL CHILDREN IN INDUSTRIAL AND RURAL AREAS.

Overview	Dioxins has been Malaysian public concern when the imported products, such as meat, eggs, and dairy products, including infant formula, from European countries were detected to contain these chemicals in 1999. Since there are evidences of dioxins contamination in Malaysia as reported by Sudaryanto et al. (2005), we should more concern with dioxins contamination which originated from our local sources and the health effects that might follow. This study is investigating the current dioxins contamination level in the air, soil and food in the school children environment, and whether the dioxins exposure is related to the children health.
Research Area	ENVIRONMENTAL HEALTH
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Selected Publications	<ol style="list-style-type: none"> 1. Elias SM, Hashim Z, Marjan ZM, Abdullah AS & Hashim JH. 2007. Relationship between blood lead concentration and nutritional status among Malay primary school children in Kuala Lumpur, Malaysia. <i>Asia Pac J Public Health.</i> 19(3): 29-37. 2. Normalina Idris, Saliza Mohd Elias & Shaharuddin Md Sham (2005). A study of heat stress and physiological changes among male workers in petrochemical industry. <i>MJPHM</i> 5(supp:1): 46 3. Elias S, Hashim Z, Marjan Z, Abdullah AS and Hashim JH (2003). The relationship between blood lead concentration and nutritional status among primary school children in Kuala Lumpur. <i>Epidemiology</i> 14(5) :S37
Other Information	Funding: RUGS 2007-2009

RESEARCH TITLE : IMPACT OF AMBIENT AIR POLLUTION AND HAZE ON THE HEALTH OF SCHOOL CHILDREN.

Introduction	<p>A major air pollution episode, known locally as the haze, prevailed over much of Southeast Asia from late July to the middle of November 1997, April, 2001, September 2005 (1,2). Using satellites imagery, it was estimated that a total of 5 million hectares of land were scarred in Indonesia Kuala Lumpur, was one of the largely populated urban area in the region that was severely hit by the haze. The episode was characterized mainly by elevated concentrations of airborne particles. A review of the most recent publications on the acute effects of particulate pollution on pulmonary function by Pope <i>et al.</i> (3) found that negative associations were often observed between particulate pollution and pulmonary function parameters such as FVC and FEV₁. A review of the results from several studies of repeated measures of pulmonary function by Dockery and Pope (4) consistently showed a 0.15 % decrement in FEV₁ and a 0.08 % decrement in peak flow, to be associated with each 10 µg/m³ increase in daily mean PM10 concentration. Pulmonary function parameters, especially FEV₁, represent sensitive and accurate measures of the effects of particulate pollution on respiratory health.</p>
Information on research / field of research	<p>This study will examine the impact of air pollution on the pulmonary health of children and elderly by establishing a baseline data and comparing it before, during and after the haze episode to determine recovery rate. In addition, hospital admissions on vulnerable children with asthma, chronic bronchitis and emphysema and elderly with cardiovascular problems will be monitored before, during and after the haze episode to determine the trend. This is a prospective study which will be conducted for 2 years. A representative sample of the vulnerable group in various parts of Klang Valley and a rural area will be sampled. Sampling frame for children will be from schools. Statistical analysis will be conducted to determine the influence of the haze on the pulmonary and cardiovascular health, the risk factors associated with the health outcomes and the trend in hospital admissions or school absentisms with regard to the seasonal cycle (monsoon).</p> <p>Field of Research: Environmental Health</p>
Group members	<p>Name : Dr. Zailina Hashim (Programme Leader) Position : Professor Faculty : Medicine and Health Sciences No. Tel ephone: 03-8947-2406 Emel address: zailina@medic.edu.my</p>
	<p>Name : Dr. Saidi Moin Position : Assoc. Professor Faculty : Medicine and Health Sciences No. Tel ephone: 03-8947-2304 Emel address: saidi@medic.upm.edu.my</p>
Selected publications	<ol style="list-style-type: none"> 1. Saliza ME, Zailina H., Zamaliah MM, ASalam A and Jamal HH. (2007). Relationship Between Blood Lead Concentration And Nutritional Status Among Malay Primary School Children In Kuala Lumpur, Malaysia. <i>Asian Pacific Journal of Public Health</i> Volume 19;3, 2007 . 2. Zailina H. Juliana J. and Jamal HH. (2004). Comparative study of the lung functions between asthmatic children in K. Lumpur and Terengganu, Malaysia. <i>PERTANIKAJ. of Sci. and Technol.</i> 11:2 Feb. 3. Abdul Mujid A., Zailina H., Juliana J. and Shamsul BMT. (2003). Partikel ternafas (PM10) dan hubungannya dengan sistem respiratori di kalangan kanak-kanak sekolah di Sungai Siput Utara, Perak. <i>J. of Malaysian Public Health Medicine.</i> 3(2):23-32. 4. Shamsul BS. Zailina H., Jamal HH. dan Ariffin O. (2002). Kepekatan partikel ternafas (PM10) dan plumbum ternafas dalam udara ambien di kawasan bandar dan luar bandar (Concentrations of respirable particles (PM10) and respirable lead in the ambient air of urban and rural areas). <i>Sains Malaysiana,</i> 31(2002): 1-17. 5. Zailina H. Juliana J. Norzila MZ. Azizi HO. and Jamal HH. (1997). The relationship between K. Lumpur haze and asthmatic attacks in children. <i>Malaysian Journal of Child Health.</i> 9 (2): 151-159. 6. Jamal, H. H., Zailina H. Juliana J. Syarif, H.L. and Ridzuan, H. (1998). Respiratory functions of elementary school children exposed to the 1997 Kuala Lumpur Haze. Abstract. <i>Epidemiology.</i> (9)4: July 1998. S103.
Other information	<p>Grant allocation (RUGS): RM 133.00</p>