

## Independent Learning Project (ILP)

The ILP is taken over a 32 week timeframe and is comprised of three consecutive enrolments: ILP 1 (8 Weeks), ILP 2 (16 weeks) and ILP 3 (weeks). Students also complete 12 units of extra Faculty courses concurrently with the ILP 2. For more information on the ILP, please see the ILP Web Page. [<p>]

### Administration

Status:	Archived
Date Created:	02/08/2006 07:29 PM
Start Date:	
Status Comment:	
Release to Web:	
Email Date Sent by Status:	04/12/2006 04:33 PM
Hons Comment:	

### Project Background

Project Code:	A1A-A15
Project Title:	Chemical communication between men: Is there a message ?
Primary location for project: (organisation)	Psychiatry, UNSW
Primary location for project: (town/suburb)	kensington
School/Centre for allocation of funds:	School of Psychiatry
Has this project been designed (negotiated) for a specific student?	Yes

### Student Details

Student ID:	
First Name:	Hasitha
Last Name:	Jayamaha

Year ILP will commence:

### Supervisor Details

Staff ID:

Title: Dr

First Name: Ute

Last Name: Vollmer-Conna

Contact Phone:

Contact Email:

Affiliation to UNSW: UNSW Staff

Have you previously supervised research students? Yes

Do you want a Co-Supervisor? Yes

### Co-Supervisor Details

Staff ID:

Title: A/Prof

First Name: Graham

Last Name: Bell

Contact Phone:

Contact Email:

Affiliation to UNSW: Conjoint

### Recommended Examiner

Staff ID:

Title: Dr

First Name: Gin

Last Name: Malhi

Contact Phone:

Contact Email:

Affiliation to UNSW: UNSW Staff

Has the recommended examiner agreed to this role?

Yes

## Project Details

Content Stream: Multi-stream

Discipline: Human Behaviour

Content Topic: Human behaviour

Aims of the project: To determine the psychological and physiological effects of male body odour on male and female subjects, and to assess whether current mood state affects these responses.

Background: Territorialism and olfactory marking has been intensely studied in male animals, including various behaviours in relation to proximity, agonistic interactions, and scent-marking (Huck, 2004, Mitani, 2005). However, these behaviours have not been truly determined in humans. Hierarchical and territorial behaviour are widespread in both animals and humans but are neglected in textbooks of human behaviour and psychology. (Rohde, 2001).  
Territorial behaviour in humans although not in the forefront of awareness, is still likely to influence interpersonal communication and interaction and may be transmitted by subliminal cues carried in body odour (Goel, 2004).  
This study will examine the possibility that components within male body odours can produce physiological and psychological reactions in others within the species. We hypothesize that these responses will be different in males and females, and that they will be influenced by current mood states.

## PROJECT PLAN

*Student tasks over 32 weeks. Please note that students will be enrolled in extra Faculty courses at the same time as the ILP. For more information on structure of the ILP over the 32 week timeframe.*

ILP 1:

Timeline:

1. To review current literature of odour preferences, interpersonal interaction and dominance and their associations, and produce a comprehensive literature review (weeks 1-8)
2. With the help of Graham Bell, refine study design ensuring feasibility and well-controlled methodology, followed by active data gathering and analysis (weeks 9-24).
3. Produce a 5,000 word report on research findings (weeks 25-32)

ILP 2:

Subjects

30 healthy male and 30 healthy female volunteers aged 20-25 years and recruited from student populations at UNSW will participate as subjects in the study. The axial odours of 10 healthy donor males will be collected, 5 aged 20-25 (students, pre-selected to ensure maximum variance in trait anger/ aggression - State-Trait Anger Expression Inventory, STAXI, Spielberger, 1988) and 5 pre-pubescent boys (recruited through family and friends). Written informed consent will be obtained from all participants. For participants under the age of consent, consent will be

obtained for a parent.

ILP 3:

The 60 subjects will take part in the odour sampling experiment. At the beginning of each odour sampling session, the subject's essential demographics (age, sex), current mood state (POMS), aggression (STAXI) and baseline autonomic response [heart rate (HR) and HR variability] will be obtained. The subjects will then be exposed to one odour at the time as adapted from Wedekind (1995) and autonomic responses will be recorded via a heart rate monitor (Polar, Finland). For each odour, subjective responses to the odour in terms of intensity, pleasantness, and masculinity will be obtained as a score on a scale from 0-100 (0 = "Extreme dislike" , 100 = "Extreme like". The subject will then be presented with a series of photographs (showing the odour donors and other individuals) and asked to indicate which individual they thought donated the odour. Before presenting the next odour there will be a break of sufficient duration (5min) to permit autonomic readings to return to baseline levels.

Project outcomes:

The results of this study will provide more insight into the factors (e.g., sex, current mood, attributes of the donor) that affect odour perception in humans. In addition the data may reveal whether subtle cues relating to physical dominance/aggression are conveyed in male body odour, and whether odours from sexually mature donors elicit different responses (physiological and attribute ratings) to those obtained from pre-pubescent boys.

Learning outcomes:

To familiarise student with basic research skills such as undertaking a literature review, ethics application, responsible and astute data collection, and a range of analytical and statistical techniques consistent with the project. To develop independent scholarship based on a critical and objective analysis and interpretation of the results of the present project.  
To provide a detailed account of the science (with support from literature) that may contribute to the findings of the experiment

Key References:

Goel N, Grasso DJ. (2004). Olfactory discrimination and transient mood change in young men and women: variation by season, mood state, and time of day. *Chronobiology International*. 21:691-719.  
Huck M et al (2004). Proximate mechanisms of reproductive monopolization in male moustached tamarins. *American Journal of Primatology*. 64:39-56.  
Joiner TE et al (2001). Territoriality and obsessive-compulsive symptoms. *Journal of Anxiety Disorders*. 15:471-99.  
Mummendey HD. (1978). Modelling instrumental aggression in adults in a laboratory setting. *Psychological Research*.40:189-93.  
Rohde P. (2001). The relevance of hierarchies, territories, defeat for depression in humans: hypotheses and clinical predictions. *Journal of Affective Disorders*. 65:221-30.  
Spielberger, C. (1988). *State-Trait Anger Expression Inventory*, Research Edition. Psychological Assessment Resources: Odessa, Florida  
Wedekind C et al. (1995). MHC-dependent mate preferences in humans. *Proceedings, Biological Sciences*. 260:245-9.

Has [ethics approval](#) been sought for this project?

No

Please outline what

This project is planned for 2007. Ethics approval from HREC at UNSW

measures will be undertaken to attain approval:

will be sought well before the commencement of this research

Is this project suitable to be considered for the [Bachelor of Science \(Medicine\) Honours Program](#)?

Yes

Special Note:

### Declaration

Declaration from supervisor:

I have understood the [roles and responsibilities](#) of the supervisor

Field Changes