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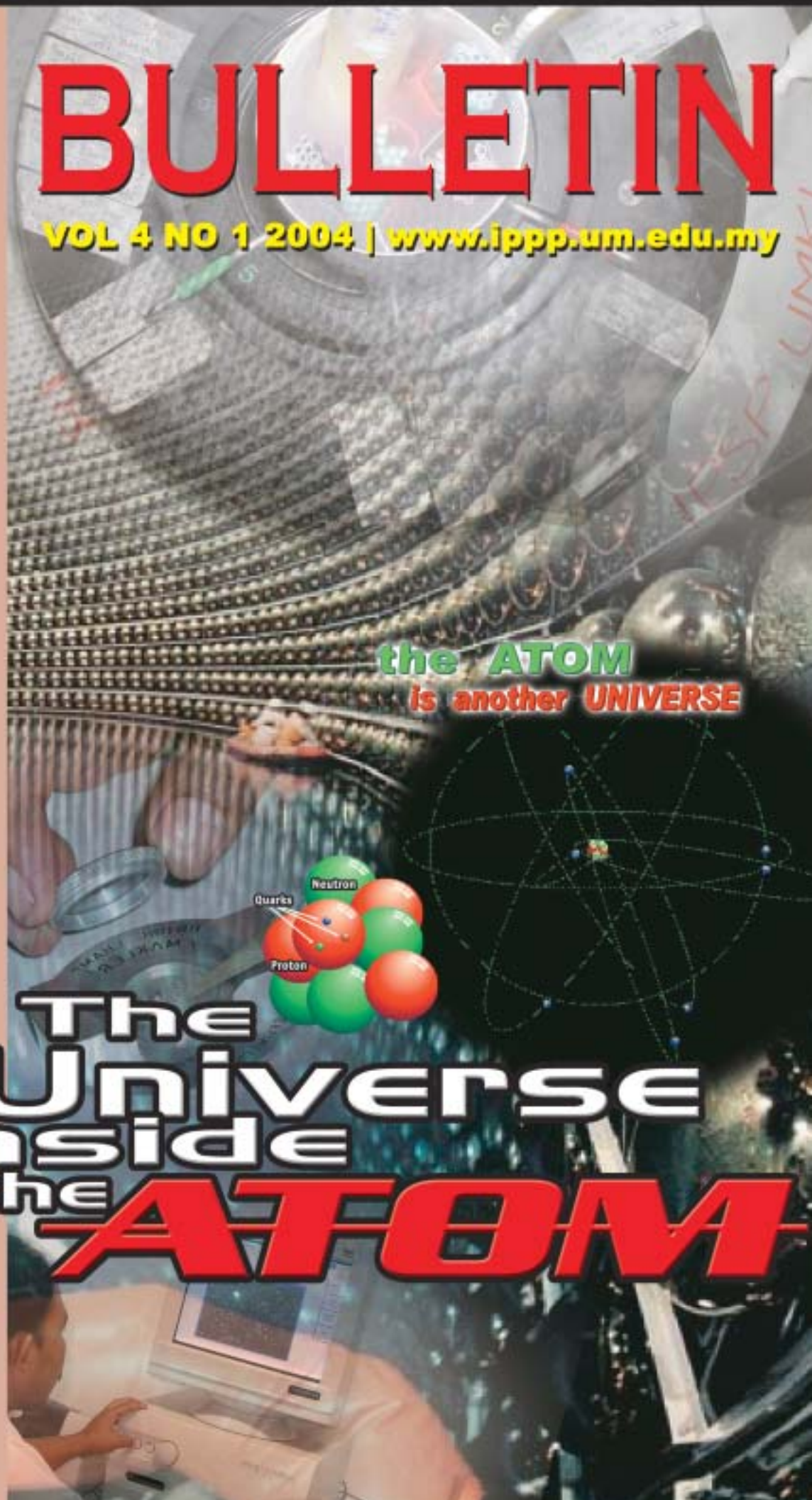


BULLETIN

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is another **UNIVERSE**

The
Universe
Inside
the **ATOM**



EDITORIAL

The Bulletin is back after a rather long hiatus. We have been working very hard to come up with at least three issues for 2004, although we must apologise for not being able to get the Bulletin in print according to the normal schedule. Nevertheless it is our fervent hope that the contents of these upcoming issues will be beneficial and will add value to your research capital and knowledge.

As they say, change is the only constant thing in life, so changes are occurring on all fronts in our lives, including the research world. So in response to feedback from our readers, the Bulletin now has a new look and a revised content menu. You can expect regular features such as UM's research personalities, excerpts from the Professorial Inaugural Lecture Series as well as research write-ups from faculties. In addition, each quarterly issue will also dwell on research highlights of that particular period.

As this Bulletin belongs to you and you are the ones that make things happen, please contact us with your articles, events and views that are relevant to research matters.

Till then, happy reading!

From the Editor.

Letters to the Editor

Please convey your comments, suggestions for improvements regarding issues on R&D to the editor. Articles may be edited for clarity and space before publication.

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NOBEL PRIZE WINNERS VISIT UNIVERSITY OF MALAYA

The Institute of Research Management and Consultancy hosted three important events in 2004, the first being a Public Lecture by Professor Gerardus 't Hooft, 1999 Nobel Prize Winner for Physics, the second was the visit of Professor Malcolm Grant, Provost and President of University College of London, United Kingdom and the third was the special forum on "Advances of Chemistry Research in Malaysia" held in conjunction with the visit of Nobel Laureate in Chemistry, Professor Richard R. Ernst.



Professor Gerardus 't Hooft, Nobel laureate, who won the **1999 Nobel Prize for Physics** for his work on "*elucidating the quantum structure of electroweak interactions in physics*" hailed from a distinguished scientific family of physicists. Professor 't Hooft who obtained his doctorate in theoretical physics in 1972 from the University of Utrecht on the subject of "Renormalization Procedure for Yang-Mills fields" gained international recognition as one of the most influential particle theorists in history. He also plays a leading role in the renaissance of high-energy physics in the late 20th century. Together with his thesis advisor Martinus Veltman, Professor 't Hooft won the Nobel Prize in Physics for their work on "renormalization and gauge invariance in quantum field theory" which became the backbone of what is known as the "standard model of the elementary particles". He continues his work on gravitation and blackholes which inspires many advances aimed at quantizing gravity and has published more than 180 scholarly works in scientific books and journals.

During his visit to University of Malaya Professor 't Hooft gave an interesting public lecture entitled "**The Universe Inside The Atom**" on 2nd March 2004 at the Asia-Europe Institute Auditorium. This lecture, one of the many exciting events held in Malaysia in conjunction with the Nobel Prize Centennial Exhibition, was well attended by the staff of University of Malaya, the public and also secondary school students. The

lecture was also taped live via CCTV to enable others outside the packed Auditorium to listen to the lecture.

The abstract of Professor 't Hooft's lecture is as follows:

"Before 1970, most of the forces that keep the subatomic particles together were not well understood. Only the effects that have an exclusively electro-magnetic origin could be computed in detail and compared with the observations. Forces that were known as "the strong force" and "the weak force" were still to a large extent mysterious. Then, physicists discovered that these other forces can actually be regarded as generalizations of the electro-magnetic force. Although these generalizations had already been proposed by Yang and Mills in 1954, their curious effects in the subatomic world became apparent not before the early 1970's. Models were proposed that allow us to compare theoretical predictions with experimental observations. One of these models, now called "The Standard Model", agrees with the observations so well, that deviations from this model have never been detected, in spite of elaborate attempts. Yet, we know that the Standard Model cannot be perfect! In particular, it does not account for the gravitational force in a satisfactory manner. So, elementary particle research continues."

A quote from Professor 't Hooft:

"To me, Nature is a big jig-saw puzzle, and I see it as my task to try to fit pieces of it together".

Professor Malcolm Grant, who is the Provost and President of the prestigious University College London, visited University of Malaya on 1st April 2004.

University College London is the first University to be set up in London (or rather the third university in England) after Oxford and Cambridge. UCL is the first university in England to admit students of any race, class, religion or sex. UCL has produced a number of famous alumni, amongst whom is none other than the inventor of the telephone (Alexander Graham Bell) and has to-date produced at least 18 Nobel Prize Winners. University College London is one of the ivy-league universities of the world, ranked presently number four in the world.

A presentation of the academic and research activities of University of Malaya was made by Professor Dr. Muhamad Rasat Muhammad, Director of the Institute of Research Management and Consultancy, at *Bilik Wawasan, Rumah Universiti*, University of Malaya to welcome Professor Malcolm Grant.

A special forum on “Advances of Chemistry Research in Malaysia” was held during the visit of Nobel Laureate in Chemistry, **Professor Richard R. Ernst** on 20th July 2004 in *Bilik Wawasan, Rumah Universiti*, which was well attended by staff of University of Malaya as well as those from outside the campus.

At this forum three presentations, one on “Glycolipids: From Informatic Science to Synthesis” by Professor Dr. Rauzah Hashim, another on “Rational Approach in Catalyst Design” by Associate Professor Dr. Sharifah Bee Abdul Hamid, both from University of Malaya and the third on “Solid State NMR Studies of Nanostructured Materials” by Professor Dr. Halimatun Hamdan University of Technology Malaysia”, were presented and discussed. A visit to the NMR Laboratory belonging to COMBICAT marked the end of the visit.



Short Biography of Professor Dr. Richard R. Ernst

Born on 14th August 1933 in Switzerland, Professor Ernst completed his studies in 1962 at the ETH Zurich with a dissertation on nuclear magnetic resonance in the discipline of physical chemistry. In 1963, he joined the Varian Associates as a scientist and developed a Fourier-transform NMR, noise decoupling and computer methods. In 1968, he returned to ETH Zurich as a lecturer and became a Professor in 1976 and retired in 1988. Since 1968, he headed a research group concentrating on methodological developments in liquid and solid state NMR. He developed a two-dimensional NMR and many novel pulse techniques. He contributed to the development of medical magnetic resonance tomography and in collaboration with Professor Kurt Wuthrich, they worked on the development of the NMR structure determination of biopolymers in solution. Currently he is involved in the study on intramolecular dynamics and he is engaged in numerous activities. He is one of the editorial boards of 10 scientific journals.

He has received numerous honours, including the Marcel Benoist Prize (1986), The Nobel Prize for Chemistry (1991), the Wolf Prize for Chemistry (1991) and the Horwitz Prize (1991). He has also received numerous honorary doctor's degrees from various universities around the world.

MSTF AWARD WINNER

PAINLESS LUMP, SWOLLEN GLANDS OR DEADLY CANCER?

Lymphoma is one of the less-known types of cancer that affects many people. It is a type of cancer that affects the lymphatic system of the body. It happens when the body's cells grow out of control, often causing tumors to develop. These tumors can often be felt as a painless lump or swollen gland almost anywhere in the body. Like all cancers, lymphoma is most likely curable if it is diagnosed early and treated promptly.



Tai Yan Chin with the microscope she uses for the research.

29 years old University of Malaya Research Assistant Tai Yan Chin embarked on a project to have a better understanding of the disease. Armed with a grant worth RM30, 000 from the Malaysia Toray Science Foundation (MTSF), Tai presented her research project entitled, "Characterization of Genetic Alteration in Lymphoma of Mucosa-associated Lymphoid Tissue (MALT)" during the MTSF 2003 Research report, held at the University of Malaya on 10 December 2003. A total of six researchers from different universities-universities, colleges and institutes also presented their research findings during the event.

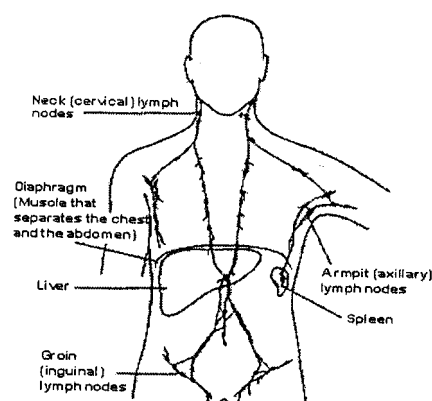
"The project concentrates on the genetics of one type of B-cell lymphoma, extranodal marginal zone B-cell lymphoma of mucosa-associated lymphoid tissue (MALT lymphoma)," she said.

"There are three major stages in the development of MALT lymphoma. In the normal individual, MALT is accumulated at sites that are subjected to antigens or autoimmune antibodies, as a defense mechanism. Therefore, the first stage of the development involves the accumulation of MALT. This specialized group of

lymphoid tissues, under the continuous stimulation from the antigen or autoimmune antibodies, is more prone to genetic changes." "The second stage involves specific genetic alterations that transform these lymphoid cells into tumors. The known genetic alterations are t(11;18)(q21;q21) translocation, trisomy 3, trisomy 18."

"MALT lymphoma is usually presented as low-grade tumor. However, as the tumors acquire more genetic alterations, such as p53 gene mutation and other aneuploidy, the tumors are transformed into high-grade tumors, which marked the third stage of the development of MALT lymphoma," Tai explained. To analyze lymphoma, Tai used a method called the FISH (Fluorescence in situ Hybridization) technique, an expensive and tedious genetics research process that requires genetic probes to be attached (or hybridized) to the chromosome, and then seen through a fluorescent microscope, using special filters. This means the genes can be seen in different colours on the chromosome, so that researchers have a much clearer idea about what is going on. The FISH technique shows the chromosomes as they appear in the cell.

"The research could be applied in the patient-specific therapy. Specific genetic alterations, especially translocations in lymphoma is linked to different response treatment. In the case of gastric MALT lymphoma, tumor carrying t(11;18) (q21;q21) are more likely to be unresponsive to Helicobacter pylori antibiotic therapy, and therefore should be subjected to chemotherapy instead," she added.



A diagram showing the main groups of lymph nodes



A person with several weeks of dysphagia (difficulty swallowing) and dyspepsia (indigestion).

Histology on the resected specimen was consistent with a low grade B cell malignant lymphoma of the mucosa associated lymphoid tissue (MALT) type.



Asymptomatic iron-deficiency anemia, consistent with a low grade malignant lymphoma of mucosa-associated lymphoid tissue (MALT).



Gastric fundic tumor, the lesion was focally ulcerated and bleeding. Histology was consistent with a large B-cell lymphoma or MALT.

MSTF AWARD WINNER OCEANS MAY YIELD MEDICINES FOR THE FUTURE

After penicillin was discovered, the search for additional antibiotics focused on the many fungi and bacteria that called the soil home. One particular family of microbe grabbed the attention of scientists is the **actinomycetes** – a type of bacteria that can form branching filaments.

The soil-dwelling bacteria give us a variety of antibiotics including streptomycin, aureomycin, terramycin, and chloromycetin.

Recently, marine biotechnology scientists have learned that actinomycetes living in the coral reef sponges and marine sediments could be a rich source of future medical drugs. It is a group that is generally considered to be terrestrial, but more research needs to be done to discover the full potentials of the marine resources.

Tan Chin Jye, a Research Assistant from the Institute of Biological Sciences, Faculty of Science, University of Malaya, under the supervision of Prof. Dr. Vikineswary Sabaratnam, is conducting a research entitled, **‘Chemical and Biological Characterization of Indigenous Actinomycetes Isolated from Marine Organisms of West Coast of Peninsular Malaysia’**.

“The research is to study the potential of actinomycetes as bio control agents against *Ganoderma boninense* (a plant pathogenic fungus causing white-rot stem on oil palm trees) and *Candida albicans*, *Candida parapsilosis* (opportunistic human pathogens),” said the 28-year-old researcher.

A total of 299 actinomycete strains were isolated from various marine organisms collected off the shore of Port Dickson and Teluk Nipah at Pangkor Island. The marine organisms included seaweeds, sponges, soft corals and sea cucumbers; some of which were identified to genus level.



Tan receiving his award from Tan Sri Prof. Dr. Augustine Ong

Standard cultural methods using starch-casein and raffinose-histidine agars were employed for the selective isolation of the strains. Majority of the isolates were obtained from sponges (46%), followed by seaweeds (29%), soft corals (17%), and sea cucumbers (5%). Based on colour grouping and culture morphology, the isolates were tentatively identified as streptomycetes and non-streptomycetes.

“To understand its taxonomic and genetic biodiversity, the isolated actinomycete strains are characterized by micro-morphological studies using scanning electron microscopy, biochemical studies on cell wall composition and physiological studies on carbon utilization and sodium chloride tolerance. Molecular biological studies of the isolates by Restriction Fragment Length Polymorphism (RFLP) and 16S rDNA sequencing are also being carried out for taxonomical purposes,” he added.

Isolation of this micro organism from marine life is one of the first studies undertaken in Malaysia.

The research was funded by a short-term research grant from the University of Malaya and is currently being funded by the Malaysia Toray Science Foundation (MTSF) Science & Technology Research Grant.



Actinomycetes that lives in the coral reef sponges



The marine organisms collected for the research. From the left are: the soft coral, marine sponges and seaweeds

RESEARCH PERSONALITIES – From AI to Cloning



**PROFESSOR DR.
RAMLI ABDULLAH**

Professor Dr. Ramli is a US trained thorough-bred from Louisiana State University in animal science and later specialized in Reproductive Physiology. He joined University of Malaya as lecturer in the then Department of Zoology in 1973 and is currently the Deputy Dean of the Institute of Postgraduate Studies. He was made Professor in the Institute of Biological Sciences in 1998.

Prof. Dr. Ramli Abdullah is well known for his research on animal reproduction and biotechnology and has received a number of international awards such as the Japanese Scientific and Promotion of Science (JSPS) for 3 years (1987, 1989, 1992) and the Duetscher Akademischer Austauschdiens (DAAD) in 1989. He had supervised many postgraduate students in the field of animal reproduction.

He has been involved in Jermasia goat reproductive biotechnology since 1980 and his research group has developed the current Jermasia breed in 1990 from the original German Fawn crossed with the local Katjang goat. He has research collaboration in goat cloning with Prof. Dr. Ng Soon Chye from National University of Singapore. Currently, he is coordinating a UM-industrial link project with RISDA, DVS and private entrepreneurs on the commercialisation of Jermasia goats. He has been appointed by the Prime Minister of Malaysia as a Scientific and Technical Consultant for the “Rural Wealth Creation Project” for the commercialisation of goats in Malaysia.

Professor Dr. Wan Khadijah is also trained in animal science from Louisiana State University and later obtained her PhD in animal breeding and genetics from Universiti Malaya. She is presently a lecturer at the Division of Biotechnology, Institute of Biological Sciences, teaching both undergraduates and postgraduates in the fields of animal breeding, genetics and reproduction.

She has been actively involved in animal science research ranging from animal breeding, genetics and reproduction and is currently the technical consultant to the “Rural wealth creation project” with PERDA for the commercialization of goats in Malaysia.

She has also won awards from JSPS and is a recognized technical expert in animal production, in particular, the Germasia goats.



**PROFESSOR DR.
WAN KHADIJAH
WAN EMBONG**

THE APPLICATION OF CUTTING-EDGE TECHNOLOGY IN JERMASIA GOAT BREEDING

Professor Dr. Ramli Abdullah & Professor Dr. Wan Khadijah Wan Embong

Introduction

In Malaysia, goat farming industry is accorded high priority in the Third National Agriculture Plan (NAP3), especially in meeting the country's demand for goat meat. To date, the Malaysian government has emphasized on agricultural development following the 1997 economic downturn in which food import exceeded RM 12 billion per year. In addition, 15,000 ton metric goat meat, which forms 95% of the country demand, is imported every year to meet the local demand of 700,000 goats per year. However, the population of the goats in Malaysia stands at only 200,000 and this figure is expected to decrease every year.

The selling price of goat meat is RM15-20 per kg and the consumption per capita is 0.5 kg. In Malaysia, goat meat is edible to all races and faith. Goat meat is also low in fat (3%) compared to other meats such as cattle and sheep (16%). Based on Malaysia's supply and demand, social and cultural background, hence, commercialization of goat farming promises exciting opportunities and returns.

Currently, the development of goat farming in Malaysia is restricted by the insufficient number of suitable breeds of commercial purposes. At present, live goats are imported and bred in Malaysia.

However, this poses a variety of problems such as the high cost of imported breeds, inconsistent stock quality and inability to adapt to tropical climate. As a result, the goats have low resistance to diseases and thus, higher mortality rate.

To ensure success in the commercialization plan, a few criteria have to be fulfilled. The criteria includes selection of goats breed that is adaptable to tropical climate and yields higher growth rate per unit exchange of feed, nutritional requirement, i.e., optimal balance between concentrate and grass, and disease-free status, which involves good farm management and practices.

Jermasia Genotype

Since 1980, University of Malaya has established research collaboration in goat farming with the



Technical University of Berlin, Germany. Then, in 1990 University of Malaya invented the hybrid goat genotype, Jermasia, as a product of systematic crossbreeding between German Fawn and the local Katjang goat. German Fawn chosen due to its high production of meat and milk and the local Katjang for its resistance to diseases and adaptability in tropical climate.

Advantages of Jermasia Goat

The Jermasia goat is found to be far more superior to Katjang goat in terms of body weight, milk production, carcass and semen quality as illustrated in the table below:

Traits	Jermasia	Katjang
1. Body weight (kg) at 9 mth old		
– Male	35	20
– Female	25	15
2. Mating Age (mth)	8	8
3. Twinning Rate (%)	45	60
4. Milk Production (l)	120	40
5. Carcass Quality	Excellent	Excellent
6. Semen Quality	Excellent	Excellent
7. Taste	Excellent	Excellent

Assisted Reproductive Technology (ART)

Early efforts in the propagation and development of the Jermasia genotype utilized cutting-edge technologies such as Artificial Insemination (AI) with cryopreserved sperm (a technology developed by the University of Malaya) in addition to natural mating. Other ART technologies such as In Vitro Matura- tion, Fertilization

and Culture (IVMFC), Intra-cytoplasmic Sperm Injection (ICSI), Nuclear Transfer (NT), Embryo Sexing, Embryo Cryopreservation and Gene Transfer (GT) will be applied for future routine practices and goat and management once the existing technologies are perfected.

Future of Jermasia

University of Malaya has undertaken various strategies in preparation for Jermasia commercialisation in the future. Amongst the strategies undertaken are conducting intensive research to propagate the nucleus herd in University of Malaya, obtaining research funding from Implementation Coordination Unit (ICU), Prime Minister's Department Malaysia (JPM), the setting up of "Jermasia Excellence Centre" in University of Malaya and the signing of Memorandum of Understanding (MOU) with various agencies for commercial application.

Conclusion

The continuous research conducted by UM's team of scientists to develop the Jermasia genotype serves not only to generate knowledge for teaching and research purposes, but also as a contribution to society through commercialisation. This can be achieved by applying

advanced technology to continuously propagate and develop Jermasia. Future advances in Jermasia development may even provide opportunities in the pharmaceutical and medical sectors.

Awards & Recognitions

University of Malaya has aggressively conducted research and development on the Jermasia goat genotype and has gained recognition and endorsement from the government, various livestock agencies, the private sector and the general public. Past contributions, participation and recognition for the success of Jermasia include participation in MAHA 2000 to 2002, Science and Technology Expo (MOSTE) Years 2002 and 2003 (Gold Medals were awarded in both years), news coverage in local newspapers and television network on "Commercial Potential of Jermasia" and Malaysia's Fifth Prime Minister, Y.A.B. Dato' Seri Abdullah bin Ahmad Badawi's inaugural visit to the University of Malaya Farm in year 2000 (the then Deputy Prime Minister). This project has also been categorized as the Cabinet's Special R&D Project. To add another feather to the cap, Jermasia won a silver medal in the recently concluded 32nd International Exhibition of Inventions, New Techniques & Products 2004 in Geneva, Switzerland.

Excerpts from Inaugural lectures:

THE GROWTH AND CHALLENGES OF COUNSELLING IN MALAYSIA: TOWARDS A POSITIVE SOCIETY

Counselling is one of the least understood, or most misunderstood fields in the country. Most people cannot tell the difference between counselling, psychology and psychiatry. It is this misunderstanding that gives the field of counselling a negative image among Malaysians, and consequently discourage people who may need help from seeking it. Professor Dr Suradi Salim of University of Malaya's Educational Psychology & Counselling Department at the Faculty of Education, explains that it is absolutely important to establish the definitions of – and differences between – the three terms, in order to explore the subject further.

Psychology is basically the science of the human mind. It categorically analyses how we think and react to situations, and organises the subject for better understanding.



"Counselling in this country is still in its infancy,"
said **Professor Dr Suradi Salim**

Psychiatry is part of the medical field, except it specifically focuses on the treatment of the mental health problems instead of physical disorders. But like how physicians treat patients with physical ailments, psychiatrists would normally prescribe medicines for mental patients. However, psychiatry works only for people with abnormal mental problems; this leaves a lot of room for people who are still normal, but merely have problems thinking straight and making proper decisions in their lives. Therefore, this is where counselling comes in.

Counsellors work with normal people who have emotional and psychological problems, but are still mentally competent to make sound decisions in society. Their psychological problems might stem from traumatic experiences, stress or any other factors, and counsellors treat these patients not with physical medicines, but by discussing, listening and giving sound advice, so that the patients may see things in a new light and be able to think clearly and positively again.



Stressed? Counselling may help you deal with your problems.

In short, says Prof. Suradi, “Psychology is the science of the human mind and mental state, psychiatry is a medical field that deals with patients with abnormal mental problems, while counselling is a method of treating normal people who suffer from psychological difficulties that hamper their ability to live comfortably and happily. Nevertheless, these people still have mental competence to function appropriately in society. For instance, a person who shows that he is suffering from a mental problem by walking naked in public, would be best treated by a psychiatrist, while a normal person who, for example is having difficulty dealing with a death of a loved one, or a severe case of shyness that is impeding on his enjoyment of life, would best be treated by a counsellor.”

The ignorance about the differences between these three subjects is the direct result of our society’s lack of psychological education. We grow up not aware about the importance of mental well-being, and unfortunately have placed negative connotations to anyone who even think of exploring it. It is a taboo in most of our communities, with words like “Gila” or “Crazy” is being branded on people who suffer from any form of mental or psychological problem, no matter how serious or mild. Prof Suradi says, “Counselling in this country is still in its infancy, and it’s apparent in the behaviour of the average Malaysian. While most of us struggle to deal with everyday situations and people, people of more developed nations are generally more self-confident and have more positive attitudes towards life, due to proper psychological education since young.”



“I am listening.” There are many reasons for seeking the help of a counsellor: from seeking personal growth to difficulties in work or relationships.

It is this very problem that pushes Prof. Suradi to bring more understanding about psychology and counselling to the Malaysian public. It has been a long and tireless drive, with him being part of the team that spearheads the field in UM in order to produce more qualified psychological counsellors in the country.

Prof Suradi stresses on the term “qualified” in his discussion on counsellors. “A counsellor who is not certified by the authorities as a qualified professional cannot be considered a counsellor proper,” says Prof Suradi. “There is a serious need for adherence to a high standard in the practice in the country, and not just anybody can provide counselling services. Like in the field of medicine: anyone can learn medicine, but without taking exams and getting licences via high standards set by the government, no hospital in the country would let the doctor practice. In order for the counselling field to be practiced properly, such standards must be applied.”

A professional counsellor needs adequate training in psychology, plus the knowledge of the methods of counselling. In UM, Prof Suradi started this drive to produce more professional counsellors. “Every year, about one hundred undergraduate students opt to pursue their studies in educational counselling and psychology.

However in the graduate level, there are only forty students every year, due to limitations in human resource,” he said. Many of these graduates would enter the market providing their services in schools, companies or any working environment where human resource is vital.

In schools, many of the student counsellors now are really regular teachers who are given the responsibility but lack the proper training. These unqualified counsellors may use inappropriate methods and give incorrect evaluations and advice – so, although in the short term it seems a good deal to give the responsibility to someone with no license, in the long run it might actually be quite damaging to the students,” says Prof Suradi. So by raising the standards of counselling in the country, and with proper psychological education of people young and old, Prof Suradi hopes to make counselling more positive – so that people who need it will be less hesitant to seek professional help. This will consequently produce more Malaysians with high self confidence and positive attitudes toward life and its challenges.

Excerpts From Inaugural Lectures: OF CATS AND MEN

Cat lovers, beware! If your cat likes to catch birds and rodents for meals, then your feline friend might catch a very dangerous protozoa parasite (single-celled animals) known as *Toxoplasma gondii* or *T.gondii*, in the process.

Toxoplasmosis is an infection caused by the parasite. A parasite lives inside another living organism (the host) and takes all of its nutrients from the host.

Though commonly found in many animals, including rodents, birds, sheep, swine and cattle, cats is the definitive host for *T. gondii*.

T.gondii's life cycle comprises two phases called the intestinal and extraintestinal phases. The intestinal phase occurs in wild as well as domesticated cats only and produces "oocysts". The extraintestinal phase occurs in all infected animals (including cats) and produces "tachyzoites" and, eventually, "bradyzoites" or "zoitocysts." The disease toxoplasmosis can be transmitted by ingestion of oocysts (in cat feces) or bradyzoites (in raw or undercooked meat).

"There are indications that the parasite can lead to personality changes, like aggressiveness, depressiveness and others.

"But up until now, there are no thorough research that says the *T.gondii* parasite is the cause of the changes," said Prof. Datuk Dr. Khairul Anuar Abdullah of the Department of Parasitology, Faculty of Medicine, University of Malaya.

It is unusual for otherwise healthy people to be ill when infection occurs. The most common symptoms are a viral, glandular fever-like illness or swollen glands in the neck. However, under some conditions, toxoplasmosis can cause serious pathology, including hepatitis, pneumonia, blindness, and severe neurological disorders. This is especially true in individuals whose immune systems are compromised, like in AIDS patients.

According to his latest research published in the Singaporean Medical Journal last year, 30% of the Acquired Immune Deficiency Syndrome (AIDS) patients died due to parasite infections in the brain.

His astounding research in 1985 revealed that in Malaysia, 30% of the Malay ethnic group has positive *T.gondii* parasite antibodies. This is followed by 25% in Indians and 22% in Chinese.

"This proves that infections of *T.gondii* is not uncommon, it just means that not many people know about it, he explains.

First observed in animals in 1908 and in humans in 1923, toxoplasmosis is one of the most common infections in the world, affecting roughly 50% of the world's human population, regardless of gender.



Hydrocephalus, the baby's mother could have been infected by the *T.gondii* parasite.

Meow! Cats are the main hosts for the *T.gondii* parasite



**PROFESSOR DR.
KHAIRUL ANUAR
ABDULLAH**

formerly from
Department of
Parasitology,
Faculty of Medicine,
University of Malaya

The professor added that pregnant mothers have cause of concern since infection of *T.gondii* in foetus can lead to death in unborn children or the birth of the child that is severely handicapped mentally and/ or physically.

Toxoplasmosis infection may lead to miscarriage, stillbirth, or survival with growth problems, blindness, water in the brain (hydrocephalus), brain damage, epilepsy, deafness or even jaundice. This often develops after birth, so even normally born infants of women with known infection should be kept under observation for some time," he explains.

In the US, every year, approximately 4000 babies or one case in every 1000 live births in born with Toxoplasmosis.

According to Professor Khairul Anuar's research in 1999, there are 8.2 cases of this parasite infections occurring in every 1000 births in Malaysia.

Therefore, it is advisable for pregnant women to stay away from cats during the pregnancy period.

However, said the professor, it does not mean that pregnant women must give up their feline companions completely. By following basic preventative measures, especially with regards to keeping cats as indoor-only pets and disposing of dirty cat litter daily, cats can remain in the loving homes of those who care for them well beyond any pregnancy term.

Many cats are unlikely to be at risk at all. Since cats normally contract *T.gondii* by eating infected rodents and birds, if a cat has remained as an inside-only pet and has maintained a diet of dry, canned, or boiled food, then there is no avenue for primary exposure. Cats rarely contract *T.gondii* from other cat's faeces.

"It is best that you take your cats for regular check-ups," he says.

RESEARCH ACTIVITIES AT THE FACULTY OF LANGUAGES AND LINGUISTICS

Since its establishment in 1996, the Faculty of Languages and Linguistics (FLL) has been committed to research and curriculum development of the undergraduate and postgraduate programmes. FLL was first set up in 1972 as a Language Centre responsible for conducting language courses relevant to the needs of the Faculties and the other centres of the University. In 1984, the Faculty started its first postgraduate programme. There are now more than 500 students in the postgraduate programmes; about 70 in the Doctoral programme and 450 in the three Masters' programmes. Sensitive to student needs, all programmes are periodically reviewed. Courses on Arabic Linguistics are included in the Master of Modern Language Studies programme. The Faculty comprises 140 academic staff members; who are well qualified and experienced in research, language teaching and various fields of linguistics.

The Faculty teaches 18 languages: an undergraduate degree in languages and linguistics in each of the following languages: Arabic, Chinese (Mandarin), English, French, German, Italian, Japanese, Spanish, and Tamil and elective courses in Burmese, Dutch, Iban, Malay, Tagalog, Portuguese, Russian, Thai and Vietnamese.

The Faculty of Languages and Linguistics aims to be a leading teaching and research institution for the study of languages and linguistics. Our objectives are to provide students with good communication skills and knowledge in a range of linguistic disciplines through high quality teaching and research and to advance the knowledge and understanding of the languages and cultures of different countries of the world.

The programmes offered by the Faculty include the following:

- **Bachelor of Languages and Linguistics**
- **Bachelor of Languages and Linguistics with Education (Chinese)**
- **Master of Modern Language Studies**
- **Master of English as a Second Language**
- **Master of Speech Pathology**
- **Master of Linguistics**
- **PhD**

The areas of research include the following:

- **Bilingualism/ Language Contact**
- **Contrastive Analysis and Error Analysis**
- **Corpus Linguistics**
- **Discourse Analysis**
- **English for Specific Purposes**
- **First and Second Language Acquisition**
- **Indigenous Languages of Malaysia**
- **Intercultural Communication**
- **Language and Gender**
- **Language and Literature**
- **Language Testing and Evaluation**
- **Language Variation and Change**

- **Lexicology and Lexicography**
- **Phonetics and Phonology**
- **Pragmatics**
- **Semantics**
- **Semiotics**
- **Sociolinguistics**
- **Speech Pathology/ Language Disorders**
- **Syntax and Language Typology**
- **Translation and Interpreting**

Major Research Projects

More recently, the Faculty carried out several major research projects, which include the following:

A. The Mah Meri Language Project

The project commenced on April 2001 and is the first project ever carried out on the Mah Meri language. The earlier works on Mah Meri focused more on the arts and culture and the development of the community.

In Malaysia, there are a few aslian languages, which can be described as endangered and will be extinct if measures are not taken to preserve these languages. Therefore, these languages need to be given a linguistic description and a writing system.



Team Members

Team Members

Professor Dr. Choi Kim Yok (*Head*)
Associate Professor Dr. Maya Khemlani David
Associate Professor Dr. Hajjah Jariah Mohd. Jan
Associate Professor Dr. Faridah Noor Mohd Noor
Associate Professor Dr. Kamila Ghazali
Associate Professor Dr. Siti Ikbal Sheikh Salleh
Dr. Sakina Sahuri Sufian
Abdul Malek Shaari
Ahmad Fikri Hussin
Ainun Rozana Mohd Zaid
Fauziah Taib
Khatijah Shamsuddin
Noor Aishah Salleh
Norafidah Tajuddin
Norliza Amin
Roshidah Hassan
Samsur Rijal Yahaya
Sathiadevi Kanagasabai

Aims of the Project

- To train FBL staff in the various methods of field research in language study to enable them to collect and interpret data about the language community being researched.
- To describe the Mah Meri language in terms of phonetic/phonology, grammar and semantics.
- To collect songs, descriptions of cultural practices, beliefs and folk tales of the Mah Meri community.

Focus of Research

This research focuses on the analysis of the Mah Meri language in terms of phonology, grammar, sociolinguistic situation, ethnolinguistic description, and collection of a list of words that could be expanded to be compiled into a dictionary.



Research Techniques

Techniques used are from the upstream and downstream field research methods as proposed by Professor Emeritus Dato' Dr Asmah Hj Omar. Researchers are divided into two groups. The upstream research group collected data and described and analysed the Mah Meri language in terms of

Phonology, Morphology, Syntax, word groups and types of words, in addition to concepts and beliefs in ethnolinguistic analysis. The downstream research group collected and analysed data in terms of macrosociolinguistic and macrosociolinguistic aspects.

Findings

As a result of language and culture contact, many Malay words are found in this language. Apart from that, the Malay language is influencing its many structures. Therefore, there is a possibility that the Mah Meri language will lose its importance amongst the new generation who is proficient in the Malay language due to the education they received, job requirements and other reasons.

Activities of the Project

The activities of the project are as follows:

- 3 – 5 April 2001 Course on field research training conducted by the consultant, Professor Emeritus Dato' Dr. Asmah Hj Omar, at FBL.

- 6–13 April 2001 Fieldwork at Kampung Bukit Bangkong, Sepang, a village of the Mah Meri community.
- 16–18 April 2001 Interpretation of data at FBL.
- 15–19 October 2001 Presentation of the findings of the Mah Meri research project at FBL.
- 11–12 January 2002 Seminar of the Mah Meri language at Equatorial Hotel Bangi.
- 16–18 October 2001 Poster exhibition at the international conference *Language, Linguistics and the Real World* at Hotel Hilton, Petaling Jaya.
- 17 October 2002 Exhibition of the Mah Meri research project at Asia Europe Institute.

Publication

A book entitled *Bahasa Mah Meri* will be published by the University of Malaya Press in the year 2003.

*Report prepared by
Professor Dr. Choi Kim Yok
and Fauziah Taib*

B. The Centre of Economic Development and Ethnic Relations (CEDER) Project

A criticism on the decline in the command of the English language among the Malay students is an issue that has generated much discussion today. Various parties including the government and the private sector have expressed their disappointment and regret over this development.

As such, a pioneer research funded by the Centre of Economic Development and Ethnic Relations (CEDER) was carried out in February 2001 to identify the cause of the weakness of the Malay students in efficiently and effectively acquiring the English language. Among the factors, which became the focus of the study, were socioeconomic background, attitude, motivation, anxiety and other challenges, which affect the learning of the language.

In obtaining the data for the study, a survey on the Malay students in the University of Malaya and interviews with the school teachers were carried out. It is hoped that the results of the study could provide a clear description on the actual situation in the efforts to seek a solution and to rethink the learning objectives of the English language in schools as well as in the institutes of higher learning.



Team Members

Professor Datin Dr. Jamaliah Mohd. Ali (*Head*)
Associate Professor Dr. Hajjah Jariah Mohd Jan
Associate Professor Dr. Faridah Noor Mohd Noor
Ainun Rozana Mohd Zaid
Fauziah Taib
Khatijah Shamsuddin
Norafidah Tajuddin

*Report prepared by
Fauziah Taib and*

Associate Professor Dr. Hajjah Jariah Mohd Jan

C. The Malaysian Corpus of Learner English (MACLE) Project

The Malaysian Corpus of Learner English (MACLE) project represents the first part of a long-term English 2020 programme involving corpus linguistics. A corpus is a large body of natural language texts held on a computer, and the general idea of corpus linguistics is to compile and analyse large amounts of data in order to solve language problems. What we are trying to find out is what Malaysian learners of English are able to do and what they find difficult. Using traditional methods, it is possible to identify learner errors, but it is difficult to make a systematic and quantitative study.

Our immediate aim is to collect 200,000 words of non-technical English written by students from different Faculties at University of Malaya (UM). For most purposes we would want edited and corrected text, but for this purpose we want what students actually write and as they write it. By September, we are hoping to send it as the Malaysian contribution to the International Corpus of English in Belgium, and in return we will have the use of tools for computer analysis, and also access to learner corpora from Europe and Hong Kong. This will bring UM into a global research community using modern methods of applied linguistics research. Computer-based research is rapidly becoming the standard paradigm in linguistics, and the long-term goal is to ensure that UM is recognised as a centre of excellence in this field.



Team Members

Professor Dr. Gerry Knowles (*Advisor/Consultant*)
Associate Professor Dr. Zuraidah Mohd. Don (*Head*)
Associate Professor Dr. Hajjah Jariah Mohd. Jan
Associate Professor Dr. Karen Kow Yip Cheng
Associate Professor Dr. Rajeswary Sargunan
Associate Professor Dr. Asha Doshi
Associate Professor Dr. Su'ad Awab
Ms Janet Yong Yang Eng
Ms Sathiadevi Kanagasabai

*Report prepared by
Professor Dr. Gerry Knowles
and Associate Professor Dr. Zuraidah Mohd. Don*

D. The E – Learning in Bahasa Melayu: Development of Interactive Courseware

The project started in August 2003 and is currently at stage 1 where questionnaires are being distributed and interviews are being conducted with foreign students.

Background of Project

The development of Computer Assisted Language Learning (CALL) and the related Technology Enhanced Language Learning (TELL) has reflected both advances in the technology and changing styles in language education (itself, drawing on psychology and linguistics). During 1980s and 90s, increasingly sophisticated and user-friendly systems became available: word processing packages, authoring programs, compact disks, networks and, more recently, the internet and voice-activated systems (Garrett 1991). These led to more innovative and interactive learning packages, which gave students and teachers access not only to the language as an abstract code but as a contextually defined communication system.

For the first time, learners in the classroom were exposed to real, everyday language and to the society and culture in which it was used. Multimedia packages provided problem-solving exercises, competitions, games, role-play and simulations which allowed the teacher to become a facilitator supporting the semi-autonomous learner who now had substantial control over what to learn and how (Vincent and Hah 1996).

There is currently a growing market for BM interactive packages matching the increase of interest in the language among international communities. For instance, international students, especially at public universities, require a pass in a BM paper as a graduation requirement. In addition, BM is also a popular choice among expatriates as evident from the population of students

attending intensive Malay language courses at the University of Malaya for the past 20 years.

However, there is a lack of interactive self-access materials for the teaching and learning of the language. This project aims to meet both the challenges of maximizing the potential of technology in ways which serve to make learning 'easier, faster, more enjoyable, self-directed, efficient and transferable to new situations' (Oxford 1990), and capitalize on what is known worldwide, adapt and innovate in ways which are locally appropriate.

Objectives

- To survey and identify existing *Bahasa Melayu* as a foreign language course (distant learning, on-line, classroom method)
- To assess users' needs – foreign students, expatriates, local adult learners
- To design and develop interactive instructional online modules for BM for adult learners – local and foreign
- To evaluate the developed modules

Methodology

This research, which will utilize three instrumentations, (questionnaire, interviews and pre/post test) involves three levels of adult foreign learners: elementary, intermediate and advanced. In stage one, data will be collected from a total of 500 foreign students, expatriates and diplomats to obtain a needs analysis for learning and using *Bahasa Melayu*. In stage two, and based on the findings, a syllabus will be designed incorporating the four skills of reading, writing, listening and speaking. The syllabus will be validated by experts in the field and refined. In stage three, a total of four content experts, one ID and one Malay corpus experts will produce the learning instructional modules. In stage four (using pre/post test method), the developed modules will be evaluated by randomly selected end-users. Feedback will be used in revising and refining the final product.

Beneficiaries Project

- Learners: adult learners foreign and local, expatriates, diplomats and professionals, post-graduate students
- Teachers, educators, implementers of language teaching programmes
- Institutions of higher learning, research agencies and software development industry; sharing of knowledge and research findings
- Ministry of Education (Department of Educational Technology)
- Ministry of Culture, Arts and Tourism (Tourism)

Technology Transfer/Diffusion Approach

The proposed programme would be diffused through:

- Institutions of higher learning and research agencies short courses, seminar and publications
- Software industries – consultancy
- Ministry of Education (Department of Educational Technology) – short courses, training, consultancy, advisory, seminars and publications
- Academics, students and the general public – the

product is made available through the World Wide Web

- Presentation and dissemination of product materials

National Impacts

- Availability of self-access on-line modules for learning BM
- Cost – saving method of learning and teaching
- International linkages
- Globalisation and internationalization of Bahasa Melayu

Team Members

Professor Datin Dr. Jamaliah Mohd. Ali (*Head*)

Associate Professor Dr. Zubaidah Ibrahim

Abdul Malek Saidin

Abdul Rahim b. Mohd. Yassim

Mohd. Zaid b. Hussein

*Report prepared by
Professor Datin Dr. Jamaliah Mohd. Ali*

E. Language and the Internet – Emergence of a New Dialect?

Background

The Internet is an electronic, global and interactive medium and each of these properties has consequences for the kind of language found here. The most fundamental influence arises out of the electronic character of the channel. Most obviously, a user's communicative options are constrained by the nature of the hardware needed in order to gain access to the Internet for example, the keyboard, the software, size and configuration of the screen etc. There are certain linguistic activities that this medium can facilitate very well, and others it cannot handle. How do users respond to these and compensate linguistically?

Objective

The main aim of this project is to explore the ways in which the nature of the electronic medium along with the Internet's global scale and intensity of use is having an effect on language in general, and on individual languages in particular. This involves a task to investigate whether the Internet is emerging as a homogeneous linguistic medium or whether it is a collection of distinct dialects, reflecting different backgrounds, needs, purposes and attitudes of its users or whether it is just an aggregation of trends that defy classification.

Data Collection

Data will be collected from Chat groups at particular Internet sites through the Internet Relay Chat (IRC). About 10 hours of chatroom interaction will be collected for analysis.

Theoretical Framework

The framework is based on Conversational Analysis SSJ (1974) and Allwood's Communicative Activity Analysis (1976).

Conclusion

It is hoped that the findings of this study will provide a linguistic perspective on the role of language in the Internet and the effect of the Internet on language.

Team Members

Professor Datin Dr. Jamaliah Mohd. Ali (*Head*)
Robeah Yusof

*Report prepared by
Professor Datin Dr. Jamaliah Mohd. Ali*

F. Construction of Gender: Views from Different Perspectives

This is an interdisciplinary research project in the area of *Language and Gender* by members of the Gender Research Group (GREG). This research focuses on issues pertaining to the construction of gender from

various perspectives. Issues that are addressed include the following:

- language, gender and power
- gender and young children
- gender and media studies
- gender and inter-cultural issues
- the influence of work and technology in the formation / construction of gender

GREG Members

Associate Professor Dr. Hajjah Jariah Mohd. Jan (*Head*)
Associate Professor Dr. Karen Kow Yip Cheng
Professor Dr. Maya Khemlani David
Associate Professor Dr. Suraiya Mohd Ali
Associate Professor Dr. Zuraidah Mohd Don

*Report prepared by
Associate Professor Dr. Hajjah Jariah Mohd. Jan*

e-IRPA ROADSHOWS IN 2004

The Research Promotion Unit (UPP) of IPPP, in fulfilling the aspiration of its establishment, has conducted a series of roadshow talks for the purpose of exposing and training researchers, especially those who are new to the university, in the preparation of their research proposal papers for IRPA grants.

In line with the implementation of "online IRPA" applications (known as e-IRPA) with effect from 1 February 2004, UPP has been actively promoting this mode of IRPA application through a series of workshops upon the invitation of Faculties.



Prof. Nik Meriam explaining what the new e-irpa is all about



*Any problem with e-irpa,
I'm the man to see*

The series of IRPA Talks and Workshops rolled off to a good start with the one held by the Faculty of Engineering from 18 – 20 June 2004. This session was held in the greenery and cold ambience of Awana Golf and Country Resort in Genting Highlands, which was very conducive for encouraging interest and motivation. The Faculty of Engineering through its own effort managed to attract many of their researchers. The objective of this workshop was attained as 20 IRPA proposals were submitted to the Director of IPPP at the end of the workshop.

This was followed by a presentation on the research and development activities of UM by IPPP in the Pre-Clinical Auditorium of the Dental Faculty. Apart from the talk and explanation on other research grants, talk on eIRPA was also slotted in this presentation. This talk was held in the afternoon of 30 June witnessed very encouraging attendance from the campus population.



The Medical Faculty members listening attentively to Dr. Sahar's explanation

On Saturday, 10 July 2004 another talk on eIRPA was held in *Dewan Jemerlang*, Faculty of Medicine. This was done at the invitation of the Faculty to help the staff of the Faculty of Medicine to familiarize themselves with e-IRPA. The hall which can accommodate more than a hundred people was almost filled to capacity that morning with 'seasoned' as well as new researchers.

The Faculty of Arts and Social Sciences, in its efforts to boost the number of applications through IRPA was also not left behind in arranging for the e-IRPA talk to be held. This talk was held on 30th July 2004 in Lecture Hall C of the Faculty. The question and answer session was very encouraging although the attendance was limited.

Apart from the usual invitations from the Faculties, UPP through IPPP was also invited by QAMU to hold talk at the monthly SPK session on 23 October 2004 at the Tun Mohd. Suffian Auditorium in the Law Faculty, which was well attended. Many questions were raised, especially pertaining to issues on the use of the grant after its approval.

Because of the minimal number of eIRPA applications up till today compared to the time prior to its implementation, UPP proposes to continue conducting these talks in the future. UPP also aims to hold periodic talks which will be the monthly activity of its commitment to the campus fraternity in encouraging and supporting academic staff to apply and make full use of government grant.

MONITORING OF IRPA PROJECTS BY THE MONITORING UNIT, SCIENCE AND TECHNOLOGY DIVISION OF MOSTI

The Monitoring Unit, Division of the Science and Technology Ministry of Science, Technology and Innovation (MOSTI) as part of their requirements will be carrying out monitoring and assessment of IRPA research projects (Priority Research) and (Strategic Research) through the presentation of the projects by the researcher(s) and also visits to the laboratories concerned. So far three top-down projects had been monitored/assessed and they were as follows:

- (1) Project: "Upgrading of Natural Gas and Palm Oil to Higher Added Value Specialty Chemicals Using Combinatorial Technology and Catalysis" (33-02-03-3010) was monitored from 19 – 20 July 2004.
- (2) Project: "Optical Planar Waveguide Technology (03-02-03-3021)" was monitored on 16 August 2004.
- (3) Project: "Development of Glycolipids as Functional Materials for Lyotropic Using Palm Oil and Carbohydrate Sources" (09-02-03-9010) was monitored on 26 October 2004.



THE COMBICAT TEAM



THE PLANAR WAVEGUIDE PROJECT

THE GLYCOLIPID PROJECT GROUP



**Assoc. Prof. Dr.
Ahmad Sazali
Hamzah**



Dr. K. Nadarajah



**Assoc. Prof. Dr.
Misni Misran**



**Assoc. Prof. Dr.
Shahidan
Radiman**



**Prof. Rauzah
Hashim**

NIH RESEARCH AWARD

Professor Dr. Adeeba Kamarulzaman of the Department of Medicine, Faculty of Medicine has recently been awarded a CIPRA Grant of US\$54,000/- by the National Institute of Allergy and Infectious Diseases (NIAID), NIH for the second year for her research on HIV/Aids.

AUDIT VISIT

Mr. N. Keith Romwall, the representative from the National Institute of Allergy and Infectious Diseases (NIAID), NIH made a financial management site visit to IPPP from 12 – 16 April 2004 for the purpose of auditing and monitoring the utilization of the CIPRA grant as part of their fiscal (grant and contract) management review requirement and under the Foreign Organization System Survey. During this period Mr. Romwall met with the principal researcher and the management staff of IPPP.

NEWS FROM IPPP IPPP TO MANAGE THE LABORATORIES

This year marks another milestone in the expansion and development of Institute of Research Management and Consultancy (IPPP). 1st April 2003 was significant as on this historic day IPPP took over the management of more than 30 laboratories, together with the staff and equipment, previously belonging to the Institute of Postgraduate Studies (IPS).

These laboratories were housed as the Science Complex of the previously known Institute of Advanced Studies (IPT), which then evolved into the Institute of Postgraduate Studies and Research (IPSP) and is presently known as the Institute of Postgraduate Studies (IPS).

The laboratories are established to enable postgraduate students and researchers in the campus to undertake multi-disciplinary studies in various fields such as biotechnology, bio-medical science, mycology, solid waste, algae and marine, environment, animal genetics, molecular biology, parasitology, microbiology, NPC, polymer chemistry, materials science and lasers.

Each laboratory is placed under the charge of a co-ordinator who usually represents the main researcher of the laboratory. The co-ordinators for these laboratories come from the various faculties within the campus.

There are also the Central Facilities Laboratories with equipment such as NMR, scanning and transmission electron microscopes, freeze dryer, particle size analyser, gas liquid chromatograph and total organic carbon analyzer. The following pictures show some of the research

equipment available in the Central Facilities Laboratories.

Along with the laboratories, 12 staff members have also been placed in IPPP, comprising laboratory assistants and science officers. They have been entrusted to assist research projects using the laboratory facilities.

It is envisaged that with this new change-over in the administration and management of laboratories, the existing equipment and facilities would be enhanced and further upgraded. This would enable more researchers to make use of them, especially now with the greater emphasis placed on research and development by the Government.



Encik Jasmi, Lab. Assistant operating the Nuclear Magnetic Resonance (270 MHz FT-NMR) Spectrometer



Mr. Ragu at the Transmission Electron Microscope



Particle Size Analyser



Total Organic Carbon Analyser



Fermenters



Total Organic Carbon Analyser



Encik Zulhizam, Lab. Assistant handling the Scanning Electron Microscope



Encik Osman, Lab. Assistant operating a Freeze-Dryer



Transmission Electron Microscope

CHANGES AT IPPP

WELCOME



Professor Dr. Muhamad Rasat bin Muhamad, the name synonymous with leading IPPP since its inception in 2001 has his service continued as the Director of IPPP until beginning of May 2005.



Puan Yeoh Siew Wan, the former Principal Assistant Registrar of Faculty of Medicine joined IPPP as its new Principal Assistant Registrar on 1 October 2004. We hope her previous experience in other administrative duties will help to further boost IPPP's service to researchers on campus.



Professor Dr. Nik Meriam Nik Sulaiman, the former Deputy Dean of Engineering Faculty (Research) has been appointed as the Deputy Director of IPPP beginning April 2004. We wish her luck and may she serve IPPP with commitment and zeal to propel research activities to greater heights.



Professor Dr. Faisal Haji Ali, finished his term as the Head of Sponsored Research Unit in August 2004. We thank him for the excellent service rendered during his tenure.



Professor Ng Kwan Hoong from the Department of Radiology joined IPPP as Head of the Radiation Protection & Services Unit on July 2004. He is in charge of this unit with the help of two assistants. This unit was previously placed under the Registrar's Office and has now joined the stable of IPPP.



Professor Dr. Agamuthu Periathamby left IPPP as Deputy Head of the Sponsored Research Unit in July 2004 as this post is no longer available. We thank him for his support while serving in IPPP.



Associate Professor Dr Mohd Rais Mustafa, from the Department of Pharmacology, Faculty of Medicine joined IPPP on 1 October 2004 as Head of Sponsored Research Unit. We warmly welcome him as a key member of the IPPP team.



Puan Wong Lee Lan was promoted to Senior Principal Assistant Registrar and was transferred to the Faculty of Medicine in late September 2004. Congratulations, thank you and best wishes in her new post.

.....and GOODBYES

CONTRACT STAFF – NEW APPOINTMENTS



Mohd. Rushdan
Administrative Officer



Halimah Halim
Administrative Assistant



Shazli Shuib
Administrative Assistant



Mohd. Affendi
Administrative Assistant

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ABOUT THIS BULLETIN

The Bulletin is the official R&D magazine of Universiti Malaya and is published by IPPP. It covers research issues and events that take place across the university campus. It also features special topics that are of relevance and interest to researchers in various fields of studies and disciplines. It is hoped that this bulletin provides the platform for interaction between researchers and management. The opinions and views in this bulletin are not necessarily those of IPPP. Acceptance and publication of articles in this bulletin does not imply recommendation from IPPP.



Institute of Research Management and Consultancy

Universiti Malaya
C313 The Director's Office
Institute of Postgraduate Studies Building
Universiti Malaya
Lembah Pantai
50603 Kuala Lumpur

Tel+603 7967 5299/
+603 7967 4643
Fax+603 7967 4699

Email: tpen_ippp@um.edu.my

Website: www.ippp.um.edu.my

Readership

Academicians, researchers, students,
research institutions, entrepreneurs and
general public.