Vale A/Prof Martin Lackmann, 3rd November 1956 – 22nd May 2014

Dear colleagues,

The end of May saw the sudden and tragic loss of our leading scientist, departmental colleague and great friend, Associate Professor Martin Lackmann. Along with many of you, I’m still trying to come to terms with his passing, and the light in his office no longer burning late into the evening. However, as I highlight later in this article, we’ve already taken major steps to ensure that Martin’s work and legacy lives on.

Martin established the Protein Interaction and Cancer Research Laboratory in the Department over 10 years ago. Over his career, he made major contributions to our understanding of how a particular family of cell signaling receptors, termed the Eph family of receptor tyrosine kinases, regulate cell-cell interactions, with major implications for our understanding of both normal development and cancer, and these findings were published in leading scientific journals including *Cell*, *J Cell Biol* and *PLoS Biol*. The paper that made the greatest impact on me was his 2005 publication in *Cell* that provided detailed molecular insights into how a complex between an Eph receptor, its ligand, and an ADAM protease, triggered cell-cell repulsion. However, I’m sure that Martin would tell me that his most important research was that undertaken more recently, that has led to the development of new therapeutic antibodies directed against the EphA3 receptor which are currently being tested in Phase II clinical trials. Indeed, in recent times Martin’s raison d’etre was exploiting new knowledge regarding Eph receptor expression and function in order to develop new treatments for cancer patients.

On the afternoon of June 13th we held a Memorial Service for Martin at the University Religious Centre. This service gave me the chance to recognize Martin’s scientific achievements, and also his exceptional personal attributes – he was a man of great dedication and integrity, was always extremely generous and supportive, and also extremely frank and honest. Moving tributes to Martin were also given by Professor John Carroll, his clinical collaborator Professor Andrew Scott, his senior scientist Dr Peter Janes, and his departmental colleague and close friend Professor Tony Tiganis, who also read a message from Martin’s early mentor, Professor Tony Burgess. The final tribute was a moving speech from Martin’s wife Beate, who highlighted for us the depth and variety of his talents – he was a brilliant pianist, and also an extremely talented craftsman. Indeed, the beautiful piano piece playing as we entered was Martin playing ‘Beethoven Sonata C Major & Opus 53 Waldstein Sonata’, and Beate brought a stunning music stand, hand crafted by Martin, to the service. What a brilliant and remarkable man.

Over the last week we’ve received the fantastic news that Martin’s translational research aimed at taking specific anti-Eph receptor antibodies into the clinic will be funded for a further two years by KaloBios, which means that the work that meant so much to Martin will be taken forward and will hopefully achieve the clinical impact that he so passionately desired. In addition, at the last meeting of the Departmental Executive, we decided that a fitting tribute to Martin will be the establishment of an annual award in the form of ‘The Martin Lackmann Medal for Translational Research’. This will acknowledge major achievements in translating research findings in any research area, not just cancer, into clinical benefit. I’m pleased to say that Beate is fully supportive of this initiative and has agreed to present the award in person. We will also hold a special symposium to recognize and celebrate Martin’s research, which will feature national and international collaborators of his laboratory.

So, as I said at the memorial service – Marty, congratulations on your many successes, thank-you for all your contributions, and rest assured that your work, and your memory, lives on.

Professor Roger Daly
Head, Department of Biochemistry and Molecular Biology
Tributes to A/Professor Martin Lackmann from Leaders in the Field

“Martin made many important contributions to our understanding of how EPH/ephrin signaling is regulated...and was excited about the possibility of using the accumulating knowledge about EPH signaling to develop new therapies for cancers overexpressing EPHs, and it is tragic that he did not live to see these goals realized. Whenever we met, we had a great discussion about his latest science, and I will miss these interactions with Martin.”

Professor Tony Hunter, Director of the Salk Institute Cancer Center, USA

“He was interested in the (scientific) frontier, and fearless in his adopting new technologies to attack that frontier. Consequently, he made important contributions to our understanding of the cell biology and biochemistry of the complex Eph/Ephrin system.”

Professor Benjamin Neel, Director of Research, Princess Margaret Cancer Centre, Ontario Cancer Institute, Canada

“The reason that he had such an influence over my scientific thinking was that he always pushed against the conventional wisdom, suggesting novel, but intrinsically very logical, explanations for phenomena that most scientist considered already settled. Because of this, discussing science with Marty was intellectually highly rewarding and had a huge impact on the research direction of my lab.”

Professor Dimitar B. Nikolov, Structural Biology Program, Memorial Sloan Kettering Cancer Centre, USA

“The HFSP project on how Eph receptors regulate cell-cell interactions with Tony, Ben and me was a child from your brain. Your mind was only one of your many wonderful characteristics. Above all, I valued your humanity and generous spirit. For you, it was not about personal success, it was about expanding our collective knowledge... The world has become a duller place without you, but your spirit I’ll carry with me to hopefully propagate how science can be done in an open, non-competitive and selfless way. I miss you my dear friend.”

Professor Philippe Bastiaens, Systemic Cell Biology, Max Planck Institute of Molecular Physiology, Germany

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‘Jekyll and Hyde’ protein linked to type 1 diabetes

Researchers are a step closer to establishing the link between a protein with a split personality and type 1 diabetes. New research, published today in the journal PNAS, shows how a protein, called GAD65, changes its shape when it turns itself on and off. Curiously, this characteristic may also link it to type 1 diabetes.

In the human brain, GAD65 performs an essential role, making neurotransmitters - chemicals that pass messages between brain cells.

GAD65 is also found in the pancreas and previous studies have linked it to type 1 diabetes because the body makes antibodies against the protein. However, the molecular details of what makes GAD65 ‘sticky’ to antibodies has remained a mystery until now.

The new research, led by School of Biomedical Sciences’ researchers, investigated how GAD65 regulates the production of neurotransmitters by changing its shape.

Principal Investigator Associate Professor Ashley Buckle, from the Department Biochemistry and Molecular Biology, said the findings showed that the normal function of the protein may come at a price.

“GAD65 has an unpredictable, almost ‘Jekyll and Hyde’ personality when it is turned on and off,” Associate Professor Buckle said.

“When it is active and making neurotransmitters, it is rigid and rather motionless. But ironically, when it is switched off, rather than resting as you might expect, it becomes mobile, dancing and jiggling around.”

“We suspected that this dual personality might affect how antibodies ‘see’ it. This turns out to be true - antibodies interact with it very differently depending on whether it’s on or off.”

GAD65 has previously been used in clinical trials as a vaccine for type 1 diabetes, with limited success. However, Associate Professor Buckle believes the discovery may ultimately lead to the development of better vaccines to potentially treat and prevent type 1 diabetes.

“The idea to immunise an individual with GAD65 to help the immune system develop tolerance against it, to stop or at least dampen the immune reaction,” he said.

“But so far these attempts have not been very successful.”

“This research could change that.”

The seven-year study used a combination of experimental and computational methods to understand what GAD65 looks like in its ‘off’ state and how human antibodies interact with both forms. Powerful beam lines at the Australian Synchrotron, as well as massive super computers at the Victorian Life Sciences Computation Initiative (VLSCI) and Monash, were used to accelerate the research.

Associate Professor Buckle said access to world-class facilities was critical to the research.

“Techniques like X-ray crystallography produce amazing, detailed pictures of large molecules, but these are often snapshots frozen in time.”

“In order to ‘see’ the molecules in action we needed to combine other techniques, such as molecular simulation, to produce a movie.”

“The Australian Synchrotron and the VLSCI played a major part in this work.”

In the next phase, the research team will visualise GAD65 as it interacts with a human antibody. As well as understanding why GAD65 is recognised and targeted by antibodies, it is hoped that this work will provide important basic knowledge that could be applied broadly to health and medicine.

Biochemistry education and research leader awarded AM

Emeritus Professor Phillip Nagley, an alumnus of the Monash Department of Biochemistry and Molecular Biology, was appointed a Member of the Order of Australia (AM) for his service to education in the field of biochemistry and molecular biology.

Professor Nagley, who has been overwhelmed with good wishes and congratulatory messages, is thrilled to be honoured this way.

“I want to thank many colleagues, both at Monash and in the biochemistry and molecular biology community worldwide. I immensely enjoy working with them; they provide valuable wisdom and advice, and make it possible for us to attain significant goals on collaborative projects,” he said.

“I’m proud to have introduced undergraduate students to the excitement and intellectual challenges of the topics that I love in biochemistry and molecular biology.

“I have also enjoyed supervising or mentoring hundreds of honours and postgraduate students in research laboratories, watching them develop into mature and successful biomedical scientists.”

After officially retiring from research, lecturing and education leadership positions at the School of Biomedical Sciences in 2012, Professor Nagley has continued to work as an Editorial Board member of the journal Biochemistry and Molecular Biology Education. He is also developing and supporting international education and training programs for early-career biochemists in his role as Secretary General of the Federation of Asian and Oceanian Biochemists and Molecular Biologists (FAOBMB).

“In this way, positive outcomes are obtained for students in many countries, not only Australia, who benefit through prizes, awards and travel fellowships,” Professor Nagley said.

“I have also developed research exchange fellowship and visiting lecturership programs, which FAOBMB will launch later this month.

“I get a lot of satisfaction from seeing programs progress from the planning stage to implementation, enabling participants in Australia and Asia to gain real benefits in their education, training and skill development - while also making national and international contributions to biochemistry and molecular biology.”

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Department of Biochemistry and Molecular Biology
Battle for the bulge occurs in the liver

An international team of scientists, led by researchers at the Monash School of Biomedical Sciences, has shown how free radicals contribute to type 2 diabetes, obesity and fatty liver disease.

Type 2 diabetes and non-alcoholic fatty liver disease are key complications of obesity as 80 per cent of patients with type 2 diabetes are obese, and 75 per cent of patients, who are obese or have type 2 diabetes, have fatty liver disease.

The team, led by Professor Tony Tiganis from the Monash Department of Biochemistry and Molecular Biology, has found that molecules called Reactive Oxygen Species (ROS) wage a battle with enzymes called protein tyrosine phosphatases, initiating a cascade of events that lead to devastating consequences.

The findings, published in the prestigious journal *Cell Metabolism*, explain how selective insulin resistance – a pathological feature of type 2 diabetes – occurs in the liver. The study identifies the molecular culprits involved, and reveals how they contribute to disease progression.

“We have shown for the very first time that these free radicals inactivate protein tyrosine phosphatases in the liver to activate rogue pathways that promote fatty liver disease and exacerbate the development of obesity and type 2 diabetes,” Professor Tiganis said.

“ROS and the inactivation of phosphatases might also be relevant to other diseases that are characterised by oxidative stress: ischaemia reperfusion injury, cardiovascular diseases and neurological diseases.”

In the preclinical research study, Professor Tiganis’ team found that obesity promoted ROS generation and that ROS inactivated a phosphatase called PTPN2. This in turn exacerbated obesity and the development of fatty liver disease.

While there is more work to be done to understand the causes of fatty liver disease, there are two potential therapeutic approaches that could be explored to tackle the development of selective insulin resistance and fatty liver disease in obesity and type 2 diabetes.

One option is to inactivate a protein in the STAT-5 pathway, using a JAK1/JAK2 inhibitor, which has been approved by the Food and Drug Administration in the US for patients with the bone marrow disorder myelofibrosis, psoriasis and rheumatoid arthritis. Professor Tiganis plans to test the effectiveness of this drug in type 2 diabetic and obese mice.

Another approach is to use a selective anti-oxidant to ‘mop up’ excess free radicals that would otherwise inactivate PTPN2, and decrease the risk of disease progression. As free radicals are generated by mitochondria in type 2 diabetes, this could be one way of ‘turning off’ this rogue pathway. A mitochondrial anti-oxidant, which is being tested in a Phase II clinical trial for its ability to limit tissue damage in heart attack patients, could be a candidate drug for Type 2 diabetes.

While free radicals play important roles in disease, Professor Tiganis advocates that anti-oxidants are not taken indiscriminately.

“Although we need to undertake further studies in humans, preclinical studies indicate that ROS also play important roles in biology,” he said.

“Therefore, the widespread use of anti-oxidants by the general public as a preventative measure is something that should be discouraged, particularly if you are otherwise healthy.”

Professor Tiganis led a team of Monash researchers and scientists from the University of Queensland, University of Melbourne, and University of Toronto, in Canada. His research study was funded by NHMRC and Worldwide Cancer Research.

The 29th International Association for Breast Cancer Research Conference

Understanding and exploiting tumour heterogeneity

14-17th September 2014, Manly, NSW

www.iabcr2014.org

The meeting will examine the most recent advances in many of the parameters that underlie tumor heterogeneity, from acquired mutations to the definition of the cells of origin of breast cancer, and show how the incorporation of these concepts into clinical practice can tailor treatments to produce better outcomes for breast cancer patients. Heterogeneity within and among breast tumors, in features as diverse as genome sequence, gene expression, invasion, metastasis, phenotypic plasticity, immune cell involvement and the tumor microenvironment, all contribute to a wide variety of individual therapeutic responses. Understanding the basis for tumor heterogeneity, and how this knowledge can be therapeutically exploited, is key to a personalised approach to breast cancer treatment. Several international and local speakers are now confirmed for the 2014 program, with 8 speakers still to be chosen from submitted abstracts. To see the preliminary program an for more information please visit www.iabcr2014.org
Mapping the early development of kidneys

The kidney is a vital organ, which filters blood through structures called nephrons. As their numbers vary significantly in people – from several hundred thousand to a couple of million – it is important to understand how and when nephrons develop and why this variation exists. This is now a step closer as a result of the efforts of Australian researchers who, for the first time in mammals, have mapped out how this occurs in three dimensions and across development. These studies will allow them to better determine the impact of maternal behaviour and genetic disease on kidney development.

Approximately 1.7 million Australian adults (1 in 10) have indicators of chronic kidney disease. One of the key causes of kidney disease is damage to the nephrons. It is thought that all of our nephrons are formed before full term birth, and the fewer nephrons we have, the greater the risk of developing kidney disease as an adult.

Now, Associate Professor Ian Smyth and Dr Kieran Short, from the Monash School of Biomedical Sciences and researchers at the University of Queensland Institute for Molecular Biosciences, have mapped for the first time the entire process of nephron development during pregnancy and shown how a kidney develops in 3D, work that was recently published in the international journal, Developmental Cell.

The researchers have also shown that nephron formation during pregnancy occurs in different phases. According to Associate Professor Smyth, factors including diet, alcohol consumption, antibiotics and drug use have been thought to have a negative impact on fetal kidney development and nephron formation.

"What we can do now is to study the mechanisms by which these compounds act with a view to better informing the public about risks during pregnancy and about their likelihood of developing kidney disease later in life," he said.

Novel drug for Dengue

An international team of researchers led by Professor David Jans, from the Department of Biochemistry and Molecular Biology, has identified a drug that could potentially treat patients infected with the mosquito-borne dengue virus, which causes an estimated 390 million infections worldwide each year. The disease can escalate from a severe flu-like illness to the deadly haemorrhagic fever form.

Currently, there are no effective drugs to treat dengue.

In a study published recently in the Journal of Infectious Diseases, scientists from the Monash School of Biomedical Sciences, Monash Institute of Pharmaceutical Sciences, University of Melbourne and La Trobe University, in Australia; and Duke-NUS Graduate Medical School, in Singapore, screened for drugs that could inhibit the association of two proteins that are essential for dengue to replicate successfully in cells. They identified a candidate drug called 4-HPR.

When the researchers tested this drug in a lethal infectious model, it provided 70 per cent protection as an antiviral treatment.

"There are many fantastic things about 4-HPR," said lead author Dr Johanna Fraser, from the Monash Department of Biochemistry and Molecular Biology.

"In contrast, 4-HPR has been around for almost 30 years, and shown to be safe following long-term follow up in Phase I, II and III clinical trials in cancer patients."

"Therefore, we have a lot of information about how this drug metabolises and performs in humans, which would help us fast-track 4-HPR to dengue clinical trials in the future."

In the interim, the researchers are working to find the optimal drug dose to use in preclinical studies and are applying for funding to conduct a randomised, double-blind Phase Ib clinical trial. If the scientists are successful, they could test the efficacy of 4-HPR in patients with suspected dengue infection in dengue endemic countries within a few years.

Dr Fraser also believes that 4-HPR need not be limited to a treatment for dengue, but could potentially also be taken orally as a preventative medication before travelling to dengue-endemic countries. She also advocates taking a multi-pronged approach to tackling this virus, which is now prevalent in Queensland.

"We need to limit dengue transmission through public health measures and explore mosquito control strategies such as introducing strains that carry the naturally occurring bacterium Wolbachia to limit the spread of dengue," she said.

"We need to continue to develop more effective vaccines, but it is vital that there are antiviral drugs available to treat the millions of people affected by this terrible disease each year."

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Top Monash researchers recognised with NHMRC Excellence Awards

Four of the NHMRC's 20 top prizes for excellence in health and medical research have been awarded to Monash researchers.

The National Health and Medical Research Council’s Research Excellence Awards are presented to the top-ranked applicants across NHMRC’s funding schemes.

Professor Jamie Rossjohn, Associate Professor Allen Cheng, Associate Professor Terry Haines and Dr Michael Roche all from the Faculty of Medicine, Nursing and Health Sciences, will accept their awards at the NHMRC’s 200th Council Dinner.

Federal Minister for Health Peter Dutton will present the awards, which highlight innovative and potentially transformative research.

NHMRC Australia Fellow Professor Rossjohn from the Department of Biochemistry and Molecular Biology, who is to receive the Highest Ranked Project Grant, is a leading international expert on processes central to infection and immunity.

The grant will allow him to further investigate a type of T-cell, termed MAIT cell, that is found in abundance in the gastrointestinal system. The research may pave the way for the development of drugs that could either stimulate or suppress activity of this type of T-cell, potentially improving treatments for conditions such as tuberculosis and inflammatory bowel disease.

"My colleagues and I were delighted to receive NHMRC project grant funding to continue our work on MAIT cells and by the subsequent recognition by the NHMRC," Professor Jamie Rossjohn said.

Associate Professor Allen Cheng from the Department of Epidemiology and Preventive Medicine receives the Highest Ranked Career Development Fellowship – Clinical, Level 2.

Based in the Department of Epidemiology & Preventative Medicine, Associate Professor Cheng is also Deputy Head of the Infection Prevention and Healthcare Epidemiology Unit at Alfred Health in Melbourne.

The Fellowship will enable Associate Professor Cheng to research ways to prevent and treat significant infections.

"I'm grateful to the NHMRC for their support in allowing me to combine research with my clinical work - I feel that it is important to provide evidence that supports clinical and public health practice. It's also great to work with colleagues at Alfred Health and Monash University who have been well represented amongst recipients of NHMRC Career Development Fellowships in recent years," Associate Professor Cheng said.

Associate Professor Terry Haines, Director of the Allied Health Research Unit at Monash Health and Director of Research for the Southern Physiotherapy, receives the Highest Ranked Career Development fellowship – Population Health, Level 2.

A physiotherapist and health economist, Associate Professor Haines focuses on health services research across a range of health care settings.

"It is a great honour to be recognised by the NHMRC with this award. In saying this, I would recognise that my success would not be possible without the contributions of staff at Monash Health where I am based, and the many colleagues who I collaborate with locally, nationally, and internationally," Associate Professor Haines said.

The Fellowship will see Associate Professor Haines lead several projects including a trial introducing GPs as staff at aged-care facilities to reduce hospital admissions and improve resident care. He will also evaluate the benefits and cost effectiveness of weekend allied health services on acute medical and surgical wards.

The NHMRC Research Excellence Awards also include some special categories to acknowledge highly promising up and coming researchers in NHMRC's Project Grants scheme.

Dr Michael Roche from the Department of Infectious Diseases will be awarded the Frank Fenner Early Career Fellowship.

Focusing on the earliest steps of the HIV life cycle, Dr Roche’s PhD looked at how the virus became resistant to a new antiviral drug, earning him the prestigious Mollie Holman Medal from the University.

"It’s quite an honour to receive this award from the NHMRC," Dr Roche said.

He added that the award is also a credit to his PhD supervisor Professor Paul Gorry at the Burnet Institute and reflected the high standing of Professor Sharon Lewin’s laboratory at the Department of Infectious Diseases.

Environmental Sustainability At Monash

Anyone concerned with any environmental issues should contact Shani Keleher (shani.keleher@monash.edu) or visit The Office of Environmental Sustainability (TOES) http://www.fsd.monash.edu.au/environmental-sustainability.
POSTGRADUATE MATTERS

PhD Graduates

Matthew Mangan
Thesis: “The role of SERPINB9 in the cellular immune response”
Supervisor: Professor Phil Bird

Natalie Rynkiewicz
Thesis: “Characterisation of inositol polyphosphate 4-phosphatase type 11 (INPP4B) enzyme activity, regulation and expression in prostate cancer.”
Supervisor: Professor Christina Mitchell

Min Yap
Thesis: “Characterisation of ESKAPE Biotin Protein Ligase and interaction partners: a novel antibiotic target”
Supervisor: Professor Matthew Wilce

All queries on Postgraduate matters:
Please contact Prof Mibel Aguilar mibel.aguilar@monash.edu

Notice

SOBS Infrastructure Faults and Repairs

ALL equipment repairs, building faults, quote requests, light failures, water leaks, lab coats, access requests, in fact anything and everything, apart from a genuine emergency, should be logged using this site:
https://sites.google.com/a/monash.edu/sobs-equipment-repairs/

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Royal Society of Victoria- Young Scientist Research Prizes

The Royal Society of Victoria has established four prestigious competitive prizes open to post-graduate and doctoral students in all areas of the Biomedical & Health Sciences, Biological Sciences (Non-human), Earth Sciences and Physical Sciences. The successful candidates will each receive a certificate and a cash prize of $1000, whilst runners-up receive a certificate and a cash prize of $250 plus free membership of the Royal Society of Victoria for a period of two years.

Eligibility: Application is open to candidates in the third or fourth year of their doctoral candidature at Universities in the State of Victoria at the time of application and who are members of the Royal Society of Victoria. Applicants who are not already members are required to join the Society.

Applications: Open 1st June 2014 and close on 31st July 2014.
For more information visit:

ComBio2014: 28 September – 2 October 2014, National Convention Centre, Canberra, ACT

ComBio2014 is the combined conference of the ASBMB (Australian Society for Biochemistry and Molecular Biology), the ASPS (Australian Society of Plant Scientists) and the ANZSCDB (Australia and New Zealand Society for Cell and Developmental Biology).
A full list of the plenary speakers (together with biographies and photographs) is available from:

For more Biochemistry news and events: please visit our website
www.med.monash.edu.au/biochem
HOW TO ACCESS CHEMWATCH
Go to Monash OHS web site at:

Click on the link listed under ‘MSDS Access’ Chemwatch MSDSs
Use this link to look up chemicals especially for storage & incompatibility purposes, First Aid info and how to handle spills.
If you use any chemicals no matter how safe you may think they are, you should know how to access Chemwatch to look up the Material Safety Data Sheets (MSDSs). Each lab group should also hold hard copies of all the MSDSs of chemicals they possess, in case there is no power to look up an MSDS electronically, if an Emergency situation arises.
All MSDSs should be kept up to date and <5 years old.

HOW TO STORE CHEMICALS IN YOUR LABORATORY
• Do you have an updated version of the MSDS of every chemical in a folder easily visible and accessible to all users?
• Do you have your chemicals segregated according to their classification & incompatibility sections in the MSDS?
• Do you have an updated list of chemicals visible at every location where you have chemicals stored? (Shelves, cupboards, cabinets, fridges, freezers, cool-rooms?)
• Do you have a standard operating procedure for ordering chemicals?
  • Do you really need it?
  • If high risk, is there an alternative of lower risk?
  • If high risk, to order the minimum amount?
  • Is it a Scheduled Poison? And how do you store it?
  • Do you have the appropriate storage location for it?
  • Do you have a Risk Management in place (Risk assessment) before using?

What do you do when.....

OXYGEN ALARM SOUNDING
• evacuate room immediately
• close door behind you
• notify First Aider (if feeling ill ASAP)
• notify Safety Officer
• do not allow anyone to enter till room is deemed safe.

SOLENT ALARM SOUNDI NG
• do not ignore
• do not walk away
• check all floor sensors to locate possible spill
• follow instructions sheet located near Solvent Alarm
• notify First Aider (if feeling ill)
• notify Safety Officer
• may require to vacate the area if toxic fumes are present

CHEMICAL SPILL
• NOTIFY SAFETY OFFICER OR OHS OFFICE IMMEDIATELY
• IF TOXIC FUMES, EVACUATE
• notify First Aider (if feeling ill)
• Safety Officer will instruct whether to isolate area and how to clean up spill
• ‘orange’ Wheelie Spill Kit bin to be used
• Paper Trail
  • hazard/incident report form to lodge ASAP
  • First Aid Injury Report form to send to OHS Nurse ASAP

FIRE ALARM SOUNDING
• prepare to stop work
• shutdown lab processes

FLOOR WARNER
• guides you to nearest safest exit point
• guided by Floor Warden
• notified when to re-enter building

EVACUATION MEETING POINTS
• notify First Aider (if feeling ill)
• notify Safety Officer
• visit Doctor
• notify Safety Officer
• Paper Trail
  • hazard/incident report form to lodge ASAP
  • First Aid Injury Report form to send to OHS Nurse ASAP

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