



President's REPORT

Welcome to the third ACTRA newsletter for 2010, including details of some forthcoming events that you should note in your diaries.

Secretariat



Since the changeover in Secretariat arrangements earlier this year, Elisabethe Dank

has settled into her role in providing Secretariat support for ACTRA. Those of you who have had dealings with Elisabethe will attest to her zeal and efficiency in providing friendly and prompt assistance to members in all matters dealing with membership, registration for meetings and providing information on upcoming activities of interest to ACTRA members. I would like to give my personal thanks to Elisabethe for the way she has managed the smooth transition of the Secretariat arrangements, and I am sure I speak for all members, but in particular the ACTRA Committee.

One of Elisabethe's initiatives has been the updating of the ACTRA website, and putting arrangements in place for members to conduct financial transactions with ACTRA via credit card. These arrangements have certainly facilitated the renewal of annual subscriptions and registrations for meetings and workshops.

ACTRA Seminar on Managing Environmental Risks And Liabilities

This seminar was held at the Adelaide Convention centre in September 2010. Thanks are due to Ram Sharma, Sally McKinnon and Elisabethe Dank for organising this meeting, and to Colin Pitman for Chairing it. Speakers addressed health risk methodologies for assessing contaminated sites and groundwater, including some illustrative case studies. Featured in the seminar were two presentations on the legal and regulatory liabilities associated with management of these sites. The seminar ended with a "mixer" over drinks and nibbles, and this provided an opportunity for delegates to network. Once again, the number of registrants was somewhat disappointing, but tight financial management resulted in ACTRA avoiding a making a financial loss. If ACTRA is to mount such continuing education opportunities in the future, it is important that ACTRA members are well represented among the registrants, as well as providing non-members the opportunity to sample the benefits of ACTRA membership. Please see the "After Hours" section for some photos taken at the seminar.

IUTOX affiliation

In April 2010, ACTRA submitted its application to affiliate with IUTOX. Acceptance of this application will enhance the profile of ACTRA internationally, and allow for greater collaboration between ACTRA and other national toxicological societies. Currently, the IUTOX Membership Committee is considering the ACTRA application, in the light of an objection raised by the Australasian Society of Clinical & Experimental Pharmacologists and Toxicologists (ASCEPT), to which ACTRA has responded.

ACTRA at the 50th Anniversary meeting of the Society of Toxicology (SOT)

In March 2011, in Washington, the US Society of Toxicology (SOT) will celebrate its 50th anniversary at its annual scientific meeting (see elsewhere in the Newsletter for meeting details). I am pleased to report that your President and Vice-President have jointly submitted an abstract, with the view to presenting a poster describing ACTRA's registration program. We have also received approval from SOT to include an ACTRA poster in the "Global Gallery of Toxicology", a special section featuring information on worldwide toxicological societies.

Brian Priestly - President

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from the EDITOR

All praise to Mirella Goetzmann's creative side and new formatting style for the enews, I've tried to stay true the format Mirella developed in the last enews while focussing on content. Please keep the content coming even if it is a brief reference to a URL or interesting paper/abstract. Thank you to John Edwards for contributing the inaugural opinion piece in the September edition of enews. In the

absence of a contributed opinion piece from the membership, you will need to put up with mine for this edition! To avoid this happening in the future get your opinion pieces in.

Please forward any contributions for the next enews to -

mirella.goetzmann@health.wa.gov.au

[ACTRA secretariat@actra.org.au](mailto:ACTRA_secretariat@actra.org.au) or

johnfrangos@toxikos.com

The themes and potential speakers for the annual ACTRA scientific meeting for 2011 are currently being considered by the Management Committee. We welcome your ideas about themes and speakers for the annual meeting.

Opinion: EMERGING CONTAMINANTS



I recently attended a conference on chemical regulatory activities held in Philadelphia USA earlier this month and thought I'd share some information and thoughts on "emerging contaminants".

Emerging contaminants for the purposes of this opinion piece are chemicals or materials that are characterized by a perceived or real threat to human health or environment, a lack of published health standards, an evolving standard or new scientific studies revealing a previously unknown physiological or adverse effect. A contaminant may also be "emerging" because of the discovery of a new source, a new pathway to humans, or a new detection method or technology.

In particular these are contaminants that will be screened as shortlisted by a variety of regulatory organisations around the globe in the coming years.

The most significant review program underway is being coordinated by the European Chemicals Authority ECHA who

are managing a registration, evaluation and authorisation program called REACH. Under the mandatory legislation requirements of REACH the European Commission are expecting detailed reviews of approximately 35,000 chemicals and screening of greater than 80,000 chemicals. The detailed reviews include the identification of toxicity testing data gaps and a program of work to fill these gaps.

According to the ECHA's Director of Operation Dr Bjorn Hansen the benefit of the REACH program will be to reassure the public that the safety of chemicals in use are well understood and that the controls for hazardous chemicals are adequate to protect the safety of the general population. I would be surprised if the testing did not identify new adverse

effects for existing chemicals and produce an expanded list of chemicals requiring authorisation.

There are many other programs currently in progress or recently completed with similar objectives. The Canadian Chemical Management Program categorised chemicals in terms of persistence, bioaccumulation, and potential for human exposure. Approximately 23,000 existing chemicals were categorised, 4300 met the Canadian criteria for further attention and 500 were designated as "high priority". Australia (NICNAS) is developing a categorisation / screening program of its own and some of the scientific aspects of this program of work was highlighted at the ACTRA Annual Meeting in August 2010.

The US Congress is also considering legislation that will require identification of "chemicals of concern" Later on in the enews there is a short news item from the US EPA enumerating a list of 134 chemicals that will be screened for their potential to disrupt the endocrine system. The Californian Government has already enacted legislation requiring the identification of "chemicals of concern"

Eighteen years ago when I was studying toxicology phthalate esters were considered to be non hazardous these days many of these substances are severely restricted due to their developmental toxicity.

All in all as toxicologists and risk assessors the next 5 years will provide plenty of opportunity to learn and contribute to new developing methodologies on hazard identification. No doubt we will hear more about these at future ACTRA events and we will continue to follow these in the ACTRA enews.

Updated NEPM GUIDELINES FOR SITE CONTAMINATION

The National Environment Protection Measure (NEPM) Assessment of Site Contamination is the primary guidance document for the assessment of site contamination in Australia. First established in 1999, the NEPM was reviewed in 2005/2006 and has been recently released in draft format for public comment. A brief summary of the major updates to the NEPM, that may be of interest to those in the field of toxicology and risk assessment, is provided below.

Asbestos guidance is now based on the WA Department of Health 2009 Guidelines for the Assessment and Management of Asbestos Contaminated Sites in Western Australia. Asbestos cement material (ACM) in sound condition, even if broken or fragmented, is considered to represent a low risk to human health. In this instance, a screening level of 0.01% w/w asbestos in ACM is provided for residential use. If fibrous asbestos (FA) or asbestos fines (AF) are found to be present, a more stringent screening level of 0.001% is provided.

The Ecological Investigation Levels (EILs) and Health Investigation Levels (HILs) have been reviewed and updated following extensive revision of the methodology and landuse scenarios. Health and Ecological Screening Levels (HSLs and ESLs) for petroleum hydrocarbons have also been developed.

Screening levels are summarised in Schedule B1 with detail provided in Schedules B4, B5 and B7. The revised screening levels incorporate updated toxicity reference values based on best available science, Australian-specific exposure factors, additional exposure pathways and revised landuse scenarios. Specifically:

HILs provided in the 1999 NEPM have been updated and HILs are also provided for a wider range of organochlorine pesticides, phenols and metals with screening values for phenoxyacetic acid herbicides, other herbicides and PBDE flame retardants included.

- EILs are provided for 8 priority contaminants including arsenic, DDT, lead and naphthalene. The new screening values also consider whether 'fresh' and 'aged' (>2 years old) contamination is present and

include an estimation of background concentration.

- HSLs for petroleum hydrocarbons are provided for soil, groundwater and soil gas, with ESLs provided for soil. Management limits for petroleum hydrocarbons, and interim soil gas HILs for 5 VOCC (including TCE and vinyl chlorine) are also included.

The draft NEPM is available at www.ephc.gov.au/contam/pdocs. Submissions are invited and will be accepted until close of business Friday 26 November 2010. Submissions can be sent via e-mail (swhitehead@ephc.gov.au), fax (08 8224 0912) or post (Ms Susan Whitehead, NEPC Service Corporation, Level 5, 81 Flinders Street, Adelaide, SA, 5000).

Contribution by Ruth Jarman

WA Dept. of Health Guidance ON SCREENING AIR TOXICS

There are many chemicals present in air at very low concentrations that intuitively do not pose a health risk. However because these chemicals do not have health based air guidelines it is difficult to assuredly state the health risk, if any, is trivial and therefore the chemical is not a concern. For these chemicals, Toxikos developed a world first, new approach, based on a concept called Toxicology Threshold of Concern (TTC). The Toxikos approach has been published in the scientific literature (Drew & Frangos 2007) and we have applied the approach in several complex health based environmental health and occupational health risk assessments. It has also applied the process to derive screening

guidelines for chemicals potentially present in potable water. More recently the Western Australian Department of Health requested Toxikos to update and develop the TTC screening approach for application in Western Australia.

The WA Department of Health recently published the report accompanied by a simple to read guide to its application: http://www.public.health.wa.gov.au/3/1240/2/air_toxics.ppt

References

Drew R. (2010). Development and Application of the Threshold of Toxicological Concern to Screening Evaluation of Air Toxics. Published by the Department of Health, Western Australia.

[http://www.public.health.wa.gov.au/cproot/3280/2/11812%20AIR%20TOXINS%20\(Main%20Report\).pdf](http://www.public.health.wa.gov.au/cproot/3280/2/11812%20AIR%20TOXINS%20(Main%20Report).pdf)

Drew, R., and Frangos, J. (2007). The Concentration of No Toxicological Concern (CoNTC): A Risk Assessment Screening Tool for Air Toxics. Journal of Toxicology and Environmental Health, Part A. 70: 1584-1593. <http://www.informaworld.com/smpp/content~db=all-content=a781628584~frm=titlelink>

Contribution by John Frangos

Chris Portier moves FROM NIEHS TO ATSDR

In 2009 Chris gave an invited lecture at the ACTRA ASM we wish him success in his new role.



Senior Advisor Chris Portier, Ph.D., left NIEHS July 29 to serve as director of two high-profile programs at the Centers for Disease Control and Prevention (CDC). Portier, a 32-year veteran of the Institute, assumes duties as director of the Agency for Toxic Substances and Disease Registry

(ATSDR) and the National Center for Environmental Health (NCEH).

Portier said he was motivated to make the career change “due to my focus on direct public health issues during the last several years” and a commitment “to give back to my country and use what I have learned at the NIEHS to improve the health of the American public.”

In a congratulatory note about Portier’s new appointment, NIEHS/NTP Director

Linda Birnbaum, Ph.D. said, “Over the years, I have often marveled at Chris’ intellectual ability and what I would call brilliance when it comes to big picture visionary thinking. I know I can always count on Chris for new ideas and challenging discussion, which I believe has benefited our Institute in many ways.”

From NTP website
<http://ntp.niehs.nih.gov>

EPA to Expand Chemicals Testing FOR ENDOCRINE DISRUPTION

The U.S. Environmental Protection Agency (EPA) has identified a list of 134 chemicals that will be screened for their potential to disrupt the endocrine system.

The list includes chemicals that have been identified as priorities under the Safe Drinking Water Act (SDWA) and may be found in sources of drinking water where a substantial number of people may be exposed. The list also includes pesticide active ingredients that are being evaluated under EPA’s registration review program to ensure they meet current scientific and regulatory standards.

The data generated from the screens will provide robust and systematic scientific information to help EPA identify whether additional testing is necessary, or whether other steps are necessary to address potential endocrine disrupting chemicals.

The chemicals listed include those used in products such as solvents, gasoline, plastics, personal care products, pesticides, and pharmaceuticals, including benzene, perchlorate, urethane, ethylene glycol, and erythromycin.

Also the draft policies and procedures that EPA will follow to order testing, minimize duplicative testing, promote equitable cost-sharing, and to address issues that are unique to chemicals regulated under the SDWA have been



released as of the 18th November.

The US EPA is already screening an initial group of 67 pesticide chemicals. In October 2009, the agency issued orders to companies requiring endocrine disruptor screening program data for these chemicals. EPA will begin issuing orders for this second group of 134 chemicals beginning in 2011.

More information:
<http://www.epa.gov/endo>

Contributed by John Frangos from US EPA Press Release dated 17th November.

Revised LLNA OECD Test Guidelines for VALIDATED ALTERNATIVE (REDUCED ANIMAL USE) TOXICITY STUDIES

The OECD adopted the following revised murine local lymph node assay guidelines on the 22nd July 2010:

- **OECD Test Guideline (TG) 429, Skin Sensitization: Local Lymph Node Assay**, is an update of the version of TG 429 adopted in 2002. The updated method reduces animal use by 20% and provides improved reproducibility and accuracy compared to the original LLNA protocol. A reduced LLNA procedure included in the updated TG 429 allows additional animal use savings of 40% compared to the multi-dose LLNA. The updated TG 429 also provides a standardized approach and improved guidance for establishing the highest test dose, as well as performance standards that

can be used to expedite the validation of modified versions of the LLNA. These revisions of the LLNA are based on recommendations forwarded to U.S. Federal agencies by ICCVAM in September 2009.

- Two new test guidelines have protocols for nonradioactive versions of the traditional LLNA. The LLNA: DA, described in TG 442A, Skin Sensitization: Local Lymph Node Assay: DA, measures adenosine triphosphate content, while the LLNA: BrdU-ELISA, described in TG 442B, Skin Sensitization: Local Lymph Node Assay: BrdU-ELISA,

measures bromodeoxyuridine (BrdU) incorporation to quantitate lymphocyte proliferation. The availability of OECD test guidelines for these nonradioactive LLNA methods will broaden their use and the practical issues associated with using radioactivity, which prohibits testing in the traditional LLNA by some laboratories, can be avoided.

Guidelines are available from http://www.oecd.org/document/35/0,3343,en_2649_34377_45773411_1_1_1_1,00.html

Contributed by John Frangos

New book available on EPIGENETICS AND CANCER

For those trying to get to grips with the subject of Epigenetics this is likely to be a useful resource:

Epigenetics and Cancer, Part A and B

Recent conceptual breakthroughs and technological state-of-the-art in epigenetics and epigenomics are updated and summarised in a two part book titled "Epigenetics and Cancer, Volume A and B" (Herceg, Z, and Ushijima T, Eds). It is primarily intended to academic and professional audience; however, an attempt has been made to make it understandable by and appealing to a wider audience among healthcare workers. The main aim of this book is to produce an authoritative and comprehensive reference source in print

and online, covering all critical aspects of epigenetics and epigenomics and their implications in cancer research. Epigenetics and Cancer, discusses the state of science and determines the future research needs, covering most recent advances, both conceptual and technological, and their implication for better understanding of molecular mechanisms of cancer development and progression, early detection, risk assessment, and prevention of cancer. The book has 23 chapters split into 2 Volumes (A and B) in a logical way so that

each Volume represents a valuable book that can be read without the other.

Epigenetics and Cancer, Part A, 70

Zdenko Herceg, Toshikazu Ushijima
Hardbound, 394 pages
Elsevier Published: Oct-2010
ISBN 13: 978-0-12-380866-0

Epigenetics and Cancer, Part B, 71

Zdenko Herceg, Toshikazu Ushijima
Hardbound, 314 pages
Elsevier Published: Oct-2010
ISBN 13: 978-0-12-380864-6

Contributed by John Frangos with the help of IARC news.

Available from Wiley
http://www.elsevier.com/wps/find/bookdescription.cws_home/720848/description



Call for Papers – SPECIAL ISSUE OF INTERNATIONAL JOURNAL OF ENVIRONMENTAL RESEARCH AND PUBLIC HEALTH

The following Special Issue will be published in the International Journal of Environmental Research and Public Health - IJERPH (ISSN 1660-4601, <http://www.mdpi.com/journal/ijerph/>), and is now open to receive submissions of full research papers and comprehensive review articles for peer-review and possible publication:

Special Issue: “Environmental Health Risk Assessment”

Website: http://www.mdpi.com/si/ijerph/risk_assessment/

Guest Editor: Dr. Robert K. D. Peterson Deadline for manuscript submissions: 30 April 2011

You may send your manuscript now or up until the deadline.

Submitted papers should not have been published previously, nor be under consideration for publication elsewhere. We also encourage authors to send us their tentative title and short abstract by e-mail for approval to the editorial office at ijerph@mdpi.com

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For details see:
<http://www.mdpi.com/about/apc/>.

Please visit the Instructions for Authors before submitting a manuscript:
<http://www.mdpi.com/journal/ijerph/instructions/>.

Manuscripts should be submitted through the online manuscript submission and editorial system at <http://www.mdpi.com/user/manuscripts/upload/>.

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MDPI journals have increased their impact factors, see the recent Editorial “Continued Growth of the Impact Factors of MDPI Open Access Journals”, <http://www.mdpi.com/1420-3049/15/6/4450/>.

In case of questions, please contact the Editorial Office at: ijerph@mdpi.com

Contributed by Brian Priestly.



IARC – REQUEST FOR AUSTRALIAN SCIENTIST

Call for Postdoctoral Fellowship for Training in Cancer Research 2011-2012 exclusive to Australians – Application closes 30 November 2010

http://www.iarc.fr/en/education-training/iarcaustralia_postdoc.php

Applications for a training fellowship in 2011-2012 are invited from postdoctoral scientists who are Australian nationals, who intend to pursue a career in cancer research and wish to complete their training in those aspects of cancer research related to the Agency's mission and of priority for the Cancer Council Australia: to coordinate and conduct both epidemiological and laboratory research into the causes and prevention of cancer. Disciplines covered are: epidemiology (including genetic and molecular), biostatistics, bioinformatics, and areas related to mechanisms of carcinogenesis including molecular and cell biology, molecular genetics, epigenetics, and molecular pathology. There is an emphasis on interdisciplinary projects.

The Fellowship is tenable at the IARC in Lyon, France working in a research Group. The fellowship is for a period of one year, with the possibility of an extension for a second year subject to satisfactory appraisal. Candidates are required to have spent less than five years abroad (including doctoral studies) and have finished their doctoral degree within five years of the closing date for application or be in the final phase of completing their doctoral degree (M.D. or Ph.D.). The working languages at IARC are English and French. Candidates already working as a postdoctoral fellow at the Agency at the time of application or who have had any contractual relationship with IARC during the six months preceding the application

deadline or who have already spent more than one year at IARC cannot be considered. Candidates must contact the host Group of their choice at IARC before application in order to interact closely to establish a proposed programme of mutual interest. Contact with the Group Heads can be made through the Agency's web site: <http://www.iarc.fr>

The fellowship must be taken up by 30 November 2011. The annual stipend is currently 31 860 Euros. The cost of travel for the Fellow, and in certain circumstances for dependants, will be met, a dependant's allowance paid, and health insurance covered.

Contributed by John Frangos with help from the IARC website www.iarc.fr.

Benchmark Dose (BMD) GUIDELINES AND SOFTWARE

Davis, Gift and Zhao (in press, citation below) from the US EPA have recently prepared a timely review of the use of the benchmark dose (BMD). It is timely for two primary reasons. Firstly the BMD has become the method of choice for many health organizations world-wide (including the US EPA (US EPA 1995) and the European Food Safety Authority (EFSA 2009)) and secondly the US EPA BMDS software (BMDS v2.1.2) has recently been updated. The benchmark dose (BMD) method, originally proposed (in the US) as an alternative to the NOAEL methodology in the 1980s, addresses many of the limitations of the NOAEL method. It is less dependent on dose selection and spacing, and it takes into account the shape of the dose-response curve. In Australia a BMD method was established by the NHMRC (approximately 10 years ago) together with Australian specific software. The NHMRC guidance document has

since been rescinded. The US EPA have recently updated their Benchmark Dose Software (BMDS). The US EPA guidance and software and European Food Safety Authority guidance are described by Allen Davis, Gift and Zhao (2010). For those interested these authors will also be running an all-day training workshop titled "Benchmark Dose Modeling and Its Use in Risk Assessment - Application of EPA's Benchmark Dose Software (BMDS), Version 2.1.2" at the Society for Risk Analysis' 2010 Annual Meeting in Salt Lake City (http://www.sra.org/events_2010_meeting.php).

The latest version of the software can be found at:

<http://epa.gov/ncea/bmds/>.

The syllabus for the above mentioned course can be found at:

http://epa.gov/ncea/bmds/handson_training/syllabus.pdf

Contributed by Brian Priestly & John Frangos

References:

Davis, Gift, J. S. Zhao (In Press). Introduction to benchmark dose methods and U.S. EPA's benchmark dose software 2 (BMDS) version 2.1.1. Toxicology and Applied Pharmacology Accepted for Publication 24th October 2010.

EFSA (European Food Safety Authority), 2009. Use of benchmark dose approach in risk assessment. EFSA J. 1150, 1–72.

US EPA (2000). U.S. EPA (Environmental Protection Agency), 2000. Benchmark dose technical guidance document (External Peer Review draft). Risk Assessment Forum, Washington, DC; 961 EPA/630/R-00/001.

Upcoming COURSES, SEMINARS AND CONFERENCES

EVENT	DATE	CITY & URL
National Short Courses in Environmental Health	18 Nov– 1st Dec 2010	Adelaide www.nsceh.com
Annual Meeting Australian Institute of Occupational Hygienists. Note includes continuing education courses	4-8 December 2010	Hobart http://www.aioh.org.au/conference/2010/
Annual Meeting Society for Risk Analysis	5-8 December 2010	Salt Lake City http://www.sra.org/events_2010_meeting.php
Int. Conference on Biology, Environment and Chemistry (ICBEC 2010)	28-30 Dec 2010	Hong Kong www.icbec.org/
Annual Meeting of the Society of Toxicology	6-10 March 2011	Washington D.C. http://www.toxicology.org/ai/meet/am2011/
EcoForum Conference & Exhibition 2011 (incorporating ALGA 4th Annual Conference)	9-11 March	Sydney www.ecoforum.net.au/2011
Analyzing Risk: Science, Assessment, and Management. This short course covers the science and analysis of human health risk.	21-24 March 2011	Boston https://ccpe.sph.harvard.edu/programs.cfm?CSID=RISK0000&pg=cluster&CLID=1
EnviroTox 2011 – Annual Meeting of the Australasian Society for Ecotoxicology	17-20 April 2011	Darwin http://www.envirotox2011.org/
Indoor Air	5 -10 June, 2011	Austin, Texas http://lifelong.engr.utexas.edu/2011/
Clean Air Society Annual Meeting 20th Int. Clean Air and Environment Conference	5-8 July 2011	Christchurch http://www.casanz.org.au/
International Water Association: Assessment and control of micropollutants / hazardous substances in water	11-13 July 2011	Sydney http://www.micropol2011.org/
EUROTOX 2011	August 28–31	Paris, France www.eurotox.com
6th International Workshop on Chemical Bioavailability in the Terrestrial Environment	7-9 September	Adelaide http://www.cleanupconference.com/
CleanUP 2011. 4th International Contaminated Site Remediation Conference	11-15 September 2011	Adelaide http://www.cleanupconference.com/

SOT 2011 Annual Meeting - IS YOUR VISA APPLICATION IN PROCESS?

The Society of Toxicology (SOT) invites scientists from around the world to attend its 50th Anniversary Annual Meeting, March 6–10, 2010 in Washington, D.C. Please note that individual invitations are not required for attendance since the SOT meetings are open scientific events.

The meeting is only three and a half months away and international attendees should have started the process for traveling to this meeting, the largest gathering of toxicologists in the world.

You will need to complete a visa waiver application online here: https://esta.cbp.dhs.gov/esta/esta.html?_flowExecutionKey=_cC9140645-A795-5FAD-7A15-DAC9C4B3962C_kE20A6687-108E-7F46-12A7-83F56D82E2ED

If your travels require a visa, the U.S. is advising visa applicants to apply at least three to four months in advance of their travel date. To increase security for citizens and visitors, the U.S. has updated its policies for visas.

We request that you contact the United States Consulate/Embassy and Currency Exchange in your own country regarding documentation and necessary information for your visit to the United States.

If for visa purposes you need a formal invitation letter, you may request an invitation by sending your name, address, and fax number to the SOT Registration Department. If you have been accepted to make a presentation at the meeting, please include the name and date of

your presentation. You will need to make your own hotel reservations and register for the meeting. If you need assistance, please contact the SOT Registration Department at tel: 703.438.3115, fax: 703.438.3113, or e-mail SOT Headquarters.

Here are some sources of information to help you obtain a visa:

<http://travel.state.gov/visa>

A Web site designed with you in mind about current visa policies and procedures.

<http://www.nationalacademies.org/visas>

For additional visa information, contact International Visitors Office (IVO) of the National Academies of the Sciences at the above Web site. This should serve as a visa resource for all visiting scientists and scholars traveling to the United States. Additionally, a survey is available that can be used to assist future travelers with the visa process.

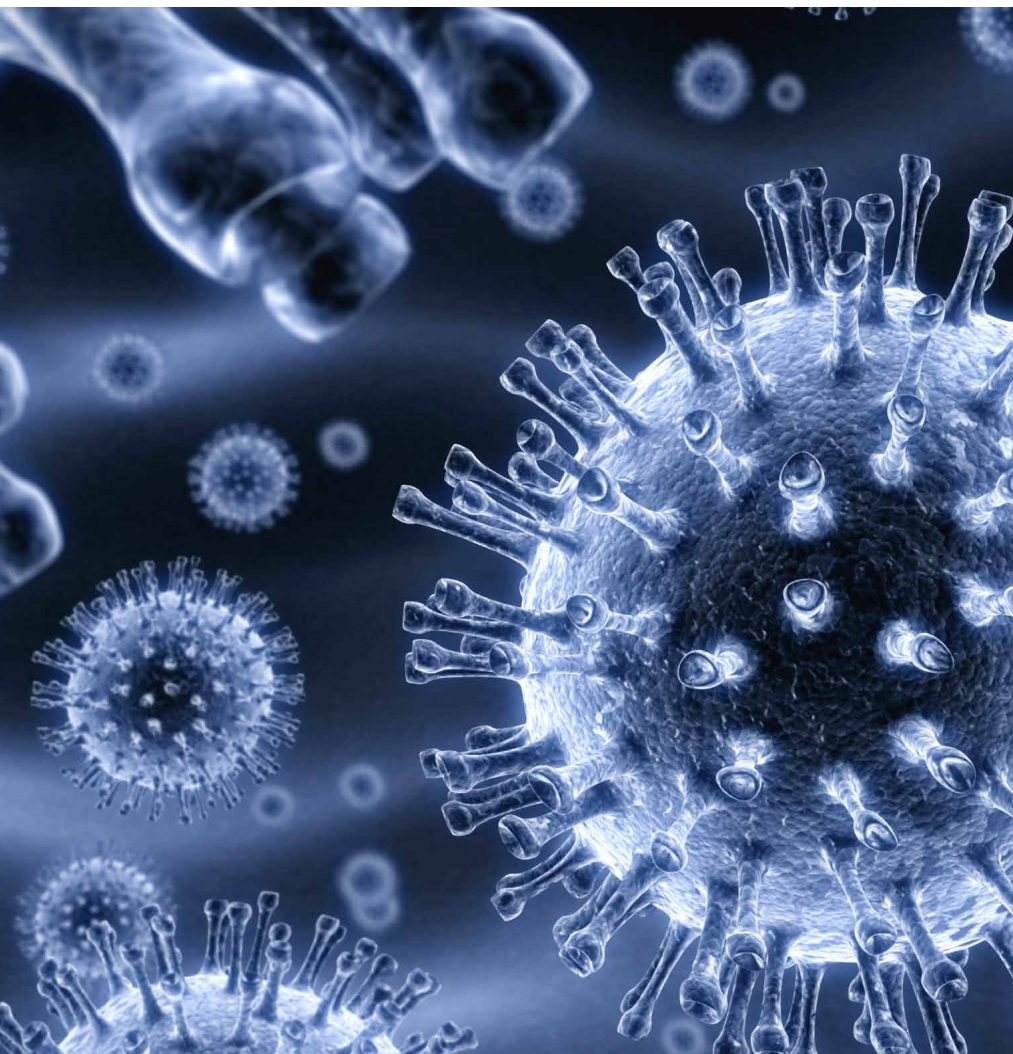
Make an appointment to visit the U.S. Embassy or Consulate. Make sure you ask if there are any fees required. Most fees must be paid before your appointment. Wait times for appointments may be longer than in the past. Schedule the appointment as soon as possible. Information on Visa wait times can be found at http://travel.his.com/visa/temp/wait/wait_4638.html.

Get your documents ready—Passport, applications, documents to support the application with employment details (reason for travel along with financial status), and proof of payment of fees.

Submit your application, passport along with supporting documents to the U.S. Embassy or Consulate.

Start early, additional reviews may be required—this could add an additional 4–6 weeks to the processing time.

SOT is dedicated to creating a safer and healthier world by advancing the science of toxicology.



After HOURS

Members please share with us any news about yourself. We would like to hear about awards, grants, collaborations, moves, promotions, interviews, journal/book reviews, jokes, stories, positions vacant and ideas for new items. This is YOUR section!

Answer to Quiz from last issue



'Step Up, Step Up, Get your miraculous elixir, eliminate disease', cried the snake oil salesman.

The salesman asked a man

from the front row of the gathering crowd to blow through a straw into a glass of clear liquid labelled pure-springwater.

The pure-spring-water turned cloudy. The salesman announced the reaction proved the man was suffering from diseased lungs. He then poured some of the liquid from his miraculous elixir into the glass containing the cloudy spring-water. It cleared instantly demonstrating the potent effect of the nostrum he was selling in eliminating the "disease".

Wot the?

Thanks to everyone who had a go at last months quiz – by your responses the 'After Hours' page was very popular.

Many submitted the correct answer, however the Gold Star goes to -

Dr. Akinola Adisa - Senior Regulatory Toxicologist/Scientist - Registration Section - Office of Chemical Safety and Environmental Health - Office of Health Protection - Department of Health and Ageing Canberra.

Akin was the first correct entry – here is Akins answer:

1. The pure (clear liquid) spring water is really not water. It is lime water or calcium hydroxide solution. It is a usually a clear solution and there is no visible distinction from clear water. However, if the audience of the snake oil salesman were smart, they could have requested to smell it because lime water has a slightly earthy smell.
2. Blowing air from your breath into lime water turn it cloudy because breath contains carbon dioxide, which in simple chemistry, turns lime water cloudy (or milky). The cloudy material is insoluble calcium carbonate (formed from reacting calcium hydroxide

with carbon dioxide). In fact today, this is the simplest test in the lab for the presence of carbon dioxide in the air. So what the snake oil man demonstrated with his 'pure spring water' turning cloudy is quite normal and would happen with anyone in the crowd blowing into the solution. It is not the presence of a disease but a normal chemical reaction.

3. Finally, the cloudy water turned clear after the snake oil man poured his miraculous elixir into it. How?

In fact any weak acid, such as vinegar or lime juice, would do the trick. Calcium carbonate responsible for the cloudiness can be dissolved by practically any weak acid. The reaction would produce a soluble salt of calcium, water and a release of carbon dioxide - a clear solution, again.

The snake oil sales must much have been a good chemist or an apothecary (as they were called those days). I wondered how much money he would have made because virtually everyone would have found out that they were 'sick' (many times over) by his standard and bought tonnes of his magic potion or miraculous elixir!

Managing Environmental Health Risk and Liabilities

Wednesday 15th September 2010 - Adelaide Convention Centre

