CHN: First textbook on alternatives in Chinese published

This is not a review. I would love to read this book by Cheng Shujun and Jiao Hong entitled “Alternative Laboratory Animal Methods – Principles and Applications” (www.sciencep.com) (Fig. 1) but I can read no more than a few acronyms and English words sprinkled in the book written in Chinese. The reader might be surprised that it contains a preface written by me, but I was so excited about the fact that this book materialized that I accepted this invitation. From what I can judge from discussions, illustrations, and key words, I would love to see a similar comprehensive and up-to-date book made available in English.

Dr. Cheng is a young toxicologist from China, whom I met for the first time in December of 2006. At the time as the director of the European Centre for the Validation of Alternative Methods (ECVAM), I hosted a Chinese delegation to visit the Joint Research Centre in Ispra, Italy, after the second annual meeting of the European Partnership for Alternative Approaches (EPAA). In January 2010, Chinese cosmetics regulators visited the Institute for In-Vitro Sciences (IIVS), and I met Dr. Cheng in Gaithersburg, MD, USA, for a second time. When I learned that his book would be the first academic monograph to comprehensively introduce the principles and applications of the 3Rs in China, I accepted the invitation to write the preface for it. I strongly believe that the publication of this book will push the further development of new toxicological approaches and alternative methods of animal testing in China.

We are witnessing an impressive recognition of alternative approaches in China. When I first had the opportunity to lecture in Beijing in 2005, at the invitation of P&G, I frankly had the impression of arriving on a different planet. But the sincere interest of our Chinese colleagues was evident. About two years later, a similar symposium organized by L’Oréal included presentations from Chinese researchers, some of them from the audience two years earlier, with their first practical experiences. The Beijing satellite meeting of the Tokyo World Congress in 2007 further demonstrated how quickly alternatives had been embraced. I think this is clear evidence of the globalization of our field.

A funny but perhaps also symbolic detail: I smiled when I saw my signature under the preface … upside down (Fig. 2). We still have a lot to learn from each others’ cultures…

Thomas Hartung

Thomas Hartung, was head of ECVAM in Italy (2002 - 2008), now is director of the Center for Alternatives to Animal Testing (CAAT) and the Doerenkamp-Zbinden Professor and Chair for Evidence-based Toxicology in the Department of Environmental Health Sciences at the Johns Hopkins Bloomberg School of Public Health in Baltimore, USA.

Fig. 2

Fig. 1
EU: Animal use statistics for 2008 published

The European Commission has published the sixth statistical report on the number of animals used for experimental and other scientific purposes in the 27 Member States of the European Union during the year 2008. The total number of experimental animals reported is 12.0 million, i.e. 1% less than in the previous report, which gave figures for 2005. More than 80% of the animals were rodents and rabbits, of which mice made up 59% and rats 18%. Cold-blooded animals – i.e. reptiles, amphibians and fish – accounted for 10% and birds for 6%. As in the previous two reports, no Great Apes were used in experiments in 2008.

The proportion of rodents and rabbits has remained fairly constant at 80% over the six reports, while the proportion of cold-blooded animals has now decreased, and the proportion of birds has increased somewhat. The majority of the animals originated from EU countries, but a sizeable proportion of cats, dogs, ferrets and Old World monkeys originated from other countries.

30% of the animals were used in fundamental biological studies (half a million more than in the previous report), while 23% of the animals were used in research and development for human medicine, veterinary medicine, and dentistry (one million less than in 2005). Production and quality control of products and devices in human medicine required the use of 15%, while toxicological and other safety assessments represented 8.7% (one million) of the total animals used for experimental purposes.

Of the animals used for toxicological and other safety assessments, 51% were used for safety evaluations of products or devices for human medicine, veterinary medicine, or dentistry; 1.2% were used to test food additives, cosmetics, and household products.

Acute and sub-acute toxicity tests account for almost 45% of the animals used in toxicological and other safety evaluations, while sub-chronic and chronic toxicity make up 10% and carcinogenicity, mutagenicity, and reproductive toxicity testing require 14%.

For more information see: http://ec.europa.eu/environment/chemicals/lab_animals/pdf/com_2010_511.pdf

EU: Decision on postponement of 2013 ban of animal testing for cosmetics expected

The European Commission is set to decide whether to postpone the 2013 final deadline for the testing on animals of chemicals used for cosmetics. The deadline would entail the ban of the sale in Europe of any cosmetics tested on animals anywhere in the world.

The revised experts’ report, which is scheduled for publication this spring, will serve as the basis for the decision on whether to postpone the ban. The draft experts’ report consists of five chapters covering repeated dose, skin sensitization, carcinogenicity, toxicokinetics, and reproductive toxicity, as well as estimates of the time necessary to achieve full replacement of animal testing. The draft report, published in July 2010, has now been revised after a round of public consultation ending in October 2010.

The Cosmetics Regulation 1223/2009 (a recast of the Cosmetics Directive 76/768/EEC) contains a clause allowing the delay of the ban if insufficient alternative methods are available. The Commission must inform the European Parliament and Council in this year’s annual report on alternatives to animal testing if alternative non-animal methods will not be developed and validated before March 2013. Skin sensitization and carcinogenicity testing have been banned since March 2009 but were nonetheless included in the draft experts’ report.

The European Coalition to End Animal Experiments (ECEAE) and various states’ national bodies initiated an EU-wide petition to prevent a postponement of the deadline. The reasons given are that, in their opinion, the experts’ report is too cautious and does not consider all existing alternatives, that the delay is unacceptable on ethical grounds, and that a delay would reduce the urgency to develop and accept alternative methods. Upholding the deadline could delay the introduction of new ingredients in cosmetics but would not affect the use of the approximately 10,000 ingredients that already are on the list of permitted substances.

See the article by Taylor et al. from the ECEAE on pp. 131

The final experts’ report entitled “Alternative (non-animal) methods for cosmetics testing: current status and future prospects – 2010” by Adler et al. was published online ahead of print on May 1, 2011 in Arch. Toxicol.
EU: ECHA calls for information to avoid unnecessary animal testing

Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) requires that information on toxic effects of substances be obtained by manufacturers and importers of substances. They can then assess the hazards of those substances and ensure that the risks are documented and controlled during their manufacture, use, and disposal. REACH also requires, however, that new testing of a substance involving vertebrate animals be carried out only as a last resort.

To ensure that the best use has been made of existing information, particularly information on existing vertebrate tests, the European Chemicals Agency (ECHA) publishes all test proposals involving vertebrate animals, for endpoints specified in Annexes IX and X under REACH, before the testing is carried out. These proposals are published on the ECHA webpage (http://echa.europa.eu/consultations/test_proposals/test_prop_cons_en.asp). After a testing proposal has been published, third parties have 45 days to submit “scientifically valid information and studies that address the relevant substance and hazard endpoint, relating to the testing proposal” (REACH, Article 40 (2)).

The table given on the website presents the substances, hazard endpoints, deadlines for submitting information, and links to the submission format for which ECHA is currently requesting “scientifically valid information” from third parties. The substance name presented in the first column may not, in some cases, provide sufficient description of the substance identity, as manufacturers and importers can, in specific cases, request that the substance name, including the IUPAC name, be kept confidential. In those cases, ECHA cannot disclose the detailed substance name.

ECHA requests that a non-confidential version of the information be provided. Confidential details may be added to support the non-confidential information, but the manufacturer or importer must offer justification for the confidentiality. ECHA confirms that any scientifically valid information and studies received from third parties will be taken into account in preparing the final decisions, which will be published by ECHA.

ECHA e-News
26 January 2011

EU: Six dangerous substances to be phased out by the EU

Six substances of very high concern will be banned within the next three to five years unless an authorisation has been granted to individual companies for their use. These substances are carcinogenic, toxic for reproduction, or persist in the environment and accumulate in living organisms. Operators wishing to sell or use these substances will need to demonstrate that the required safety measures have been taken to adequately control the risks, or that the benefits for the economy and society outweigh the risks.

Where feasible alternative substances or techniques exist, a timetable for substitution must also be submitted. The Commission decision follows the successful first phase of registration and notification of chemicals (see IP/10/1632, IP/11/2). It is part of REACH, Europe’s initiative to make the use of chemicals safer.

The substances were moved from the candidate list to the authorisation list, known as Annex XIV, under the EU’s REACH regulation (Regulation No 1907/2006 for Registration, Evaluation, Authorisation and Restriction of Chemicals). Substances in Annex XIV cannot be placed on the market or used unless authorisation has been granted for a specific use.

The adopted measures constitute a first step in the implementation of the authorisation requirement laid down in the REACH Regulation. It is part of an ongoing process whereby additional substances will be added to Annex XIV in the future. The objective is to ensure that the risks from substances of very high concern are properly controlled and that these substances are progressively replaced by economically and technically viable alternatives.

The following six chemicals are the first entrants in the Annex XIV: 5-ter-butyl-2,4,6-trinito-m-xylene (musk xylene), 4,4’-diaminodiphenylmethane (MDA), hexabromocyclododecane (HBCDD), bis(2-ethylhexyl) phthalate (DEHP), benzyl butyl phthalate (BBP) and dibutyl phthalate (DBP).

Europa press release
Brussels, Belgium
17 February 2011
GER: Hildegard Doerenkamp passed away

After a short, severe illness, Ms. Hildegard Doerenkamp, cofounder of the Doerenkamp-Zbinden Foundation, passed away on 21 February, 2011 at the age of 90. She had been living by herself in a private home in the Black Forest, Germany, no longer wanting to endure living in retirement homes or hotels. She was self-sufficient and had finally regained her independence, which she had valued highly all her life.

Ms. Doerenkamp loved the outdoors. She enjoyed farming and managed farms in the lower Rhine area, Germany, in Graubünden, Switzerland, and in Nova Scotia, Canada. Looking back, she always called the fifteen years she spent in Canada, where she also gained Canadian citizenship, the best years of her life. Her Canadian neighbors, who were very sad to hear of her sudden death, wrote: “She was a great lady with a zest for life and great determination. We are very sad to have lost a good old friend."

After Hildegard Doerenkamp first met Professor Gerhard Zbinden in 1982 (he died far too soon in 1993), she became increasingly fascinated by animal protection in science. Together with him, she founded the Doerenkamp-Zbinden Foundation (DZF) in 1985. In recent years, six university chairs for alternatives to animal experiments were established in Erlangen (Germany), Konstanz (Germany), Utrecht (The Netherlands), Baltimore (USA), Geneva (Switzerland), and Tiruchirappalli (India), with the support of the DZF. The history of the Doerenkamp-Zbinden Foundation is detailed at www.doerenkamp.ch.

It was her highest maxim that the DZF should always be completely independent. It collects no donations and accepts no money from the state or from industry. This independence from political fashions and other pressures, which result from external financing, will be upheld after her death in accordance with her wishes. Ms Doerenkamp gladly accepted advice and suggestions, but never without an in-depth analysis of them. She read a lot (an enthusiastic ALTEX reader from the first hour) and asked a lot. Often, her highly specific questions even led one to question whether one had really understood all details of the subject oneself. She made no secret of her special love of dogs and, with the sovereignty of age, she flouted philosophical objections to preferring one species over another. She enjoyed baffling her discussion partners with her statement that she cared least about primates—they being too similar to humans, with whom she really did not get along at all (though of course she never missed qualifying such statements with irony). She was also confident enough to laugh about herself. Ms. Doerenkamp suffered from poor hearing. When the Allies attacked Cologne, she refused to use the air raid shelter and lay down in the grass in her parents’ garden. The shock waves from the bombs severely damaged her hearing. Conversations with her were always conducted with pencil and paper, and the work of the Foundation was managed over the years by an almost daily exchange of faxes.

The Foundation was her life’s work; she regularly, especially in the years of the global economic crisis, asked about the financial state of the Foundation and was relieved that the careful investment strategy she had demanded let the Foundation glide easily through these difficult years. She was glad to repeatedly add additional donations from her private fortune when the Foundation would have been unable to fund a university chair from its own reserves.

With Hildegard Doerenkamp’s passing we have lost a great lady. She was honorary senator of the University of Erlangen/Nürnberg, memorial plaques honor her at the Institute for Companion Animals at the Faculty for Veterinary Medicine in Utrecht and the Bloomberg School of Public Health in Baltimore. In India the newly built Center for Alternative Methods, which was financed by the Foundation, was named the Mahatma Gandhi-Doerenkamp-Center. But apart from these honors, she has the far greater gratitude of all those whose life she influenced decisively, and of those in whom her convictions and support changed their (scientific) direction. In this it was always important to her that her contribution led not only to the protection of animals but also to better medicine for humans developed using more humane research methods.

Ms. Doerenkamp prepared her passing in detail. She categorically refused intensive medical care to prolong her life. Her urn will be buried on her former farm in Canada. Our trip to perform this last mandate will be a melancholy one. May she smile down upon the further progress of her life’s work with ever increasing pride.

Our sympathy is with Ms. Doerenkamp’s daughter.

Franz Paul Gruber, in the name of the foundation board, the scientific advisory committee, and the office staff of the Doerenkamp-Zbinden Foundation as well as the Doerenkamp chairs in Erlangen, Konstanz, Utrecht, Baltimore, Genf, and Tiruchirappalli.
GER: Development of alternative cardiac pacemaker test funded

The University Hospital Heidelberg – Institute of Human Genetics and the Institute for Biological Interfaces 1 of the Karlsruhe Institute for Technology (KIT) have undertaken a cooperative project on the development of alternatives to animal experiments. The project will be funded by the Ministry for Environment, Forests and Consumer Protection of the State of Rhineland-Palatinate, Germany. This two-year project entitled “Development of an in vitro (animalfree) model system for the characterisation of sinu-atrial node function in health and disease” is led by Dr. Katja U. Schneider (Heidelberg) and Dr. Alexandra Rolletschek (Karlsruhe). It aims to reduce in vivo experiments on transgenic and knock-out mice by facilitating the identification of molecular and genetic processes underlying cardiac arrhythmia in vitro.

Press release
Ministerium für Umwelt, Forsten und Verbraucherschutz Rheinland-Pfalz, Germany
5 February 2011

IND: First IdMOC workshop conducted in India

A national workshop on In Vitro Toxicology Adopting Integrated Discrete Multiple Organ Co-culture (IdMOC) was conducted on behalf of the MGDC, India, at the Department of Endocrinology, Dr. ALM Post-Graduate Institute of Basic Medical Sciences (PGIBMS), University of Madras, Taramani Campus, Chennai, India, on 16-18 February 2011.

The workshop was aimed at popularizing advanced practices of cell culture techniques in drug development and toxicology in India, one of the mandates given to the MGDC by its funding body, the Doerenkamp-Zbinden Foundation, Switzerland. The workshop aimed to demonstrate the importance of cell-based models in enhancing the screening of chemical entities in the drug development process.

At the inaugural session of the workshop the organizing secretary, Dr. Jagadeesan Arunakaran, introduced the theme of the workshop. Dr. Mohammad A. Akbarsha, Gandhi-Gruber-Doerenkamp Chair, and Director, MGDC, introduced the background of the workshop, its genesis and the trainer, Dr. Albert P. Li, Executive Director, AP Sciences Inc., Columbia, USA. Dr. Albert P. Li expressed his gratitude to the organizers of the workshop for the opportunity provided to him. Prof. Peranaidu Govindarajulu, Former Director, PGIBMS, and Former Registrar, University of Madras, praised the relevance and timing of the workshop in light of the increasing concern about the use of animals in research and testing. Dr. Michael M. Aruldhas, Dr. N. Sriniwasan and Dr. P. Raveeshankar offered felicitations.

In traditional in vitro toxicity testing the effect of a drug/toxicant is observed in a particular cell line/culture without addressing its possible effects (either synergistic or deleterious) on the other cells of the body. The IdMOC is a novel technology developed in the AP Sciences laboratory as an in vitro experimental system for the evaluation of human xenobiotic metabolism, distribution, and toxicity. It is based on the concept that the human body has multiple organs that are physically separated but are interconnected by the systemic circulation, thus allowing organ interactions. An example of multiple organ interaction is the metabolism of a toxicant by the liver, with the resulting...
metabolites entering the systemic circulation, leading to the exposure of distal, non-hepatic organs to these metabolites, resulting in toxicity to these distal organs. The IdMOC technique makes use of cryopreserved human primary hepatocytes and specially designed culture plates that provide for culturing three or more cell types at a time. The cells are cultured first independently and then interactively by circulating the culture medium, simulating the in vivo circulatory system.

Dr. Albert P. Li, who developed this technology, gave detailed talks on the various perspectives of the technique. The participants were comprised of scientists, research scholars, graduate students, teachers and technical personnel from pharmaceutical industry. The workshop entailed lectures and lab sessions of equal length. The participants were trained in the basics of mammalian cell culture, and the nuances of cytotoxicity assays. The IdMOC was demonstrated to the participants using three different cell lines, i.e. PC3 (a prostate cancer cell line), HCP (a small cell lung carcinoma cell line) and NPA87 (papillary thyroid carcinoma). Quercetin and crude extract of Azadirachta indica (Neem) were used as the cytotoxic substances. Dr. Albert Li and Prof. Akbarsha frequently interacted with the participants and ensured that the participants acquired a thorough understanding of the principles as well as practice of IdMOC technology. They discussed with the participants how each could adopt this technology for his or her research. The workshop was a grand success as all participants expressed their satisfaction with the training imparted and the knowledge gained.

The program was supported with funds from the Doerenkamp-Zbinden Foundation (Switzerland), the University of Madras (Chennai, India), the Council of Industrial Research (CSIR, New Delhi, India), and the Mahatma Gandhi Doerenkamp Center (Bharathidasan University, Tiruchrappalli, India). AP Sciences Inc. generously provided the culture wares and media free of cost. Prof. Akbarsha expressed the hope that more IdMOC training workshops could be offered in India with support from AP Sciences Inc.

Mohammad Zeeshan and Mohammad A. Akbarsha
Mahatma Gandhi Doerenkamp Center Bharathidasan University Tiruchrappalli, India

INT: Guidelines to improve reporting of animal experiments

The NC3Rs has developed and published guidelines to improve the reporting of animal experiments in PLoS Biology (Kilkenny et al., 2010) and other journals. Poor reporting makes it difficult to derive the maximum scientific knowledge from animal research and may result in the unnecessary use of additional animals. Previous work by the NC3Rs has shown that many publications reporting publicly funded animal research from the UK and the US lack key information on how the study was designed, conducted, and analysed, which limits their value in informing future scientific studies and policy.

The survey (Kilkenny et al., 2009), commissioned by the NC3Rs and co-funded by the National Institutes for Health/Office of Laboratory Animal Welfare (NIH/OLAW), found that only 59% of the 271 randomly chosen articles included all three of the following important pieces of information: the hypothesis or objective of the study; the number of animals used; and characteristics of the animals (i.e., species/strain, sex, and age/weight). Most of the papers surveyed did not report using randomisation (87%) or blinding (86%) to reduce bias in animal selection and outcome assessment. Only 70% of the publications that used statistical methods fully described them and presented the results with a measure of precision or variability.

The ARRIVE (Animal Research: Reporting In Vivo Experiments) guidelines (http://www.nc3rs.org.uk/ARRIVE) have been developed by the NC3Rs to improve standards of reporting and ensure that the data from animal experiments can be fully scrutinised and utilised. The guidelines are intended for scientists writing up their research for publication or involved in peer review.

Developed in consultation with the scientific community, including researchers, statisticians, journal editors, and funders of animal research, these guidelines consist of a 20-point checklist of the essential information that should be included in publications reporting animal research. ARRIVE has been endorsed by a number of leading scientific journals, including ALTEX, along with the major funders of animal research in the UK.

References

NC3Rs press release published in PLoS Biology
SUI: Egon Naef Foundation Research Prize for Gilbert D. Greub

On January 15, 2011 the Prize of the Egon Naef Foundation (Fondation Egon Naef pour la recherche in vitro) was awarded to Gilbert D. Greub, MD, PhD. The award presentation took place in the Hotel Royal Manotel, Geneva, Switzerland.

Greub works on infectious diseases using amoebae as an alternative tool for the study of strictly intracellular bacterial pathogens. He also is interested in discovering new human or veterinary pathogens. Thus, his group at the University of Lausanne Institute of Microbiology implemented an amoebal co-culture approach that may be used to grow pathogenic bacteria selectively, i.e. bacteria that may resist the microbial effects of different professional phagocytes, i.e. amoebae (the evolutionary crib where virulence traits are selected) and macrophages (the first line of innate immune defense of mammals against invading micro-organisms).

“Growing evidence supports the role of free-living amoebae as an evolutionary crib, leading to the acquisition of virulence traits and the adaptation to human macrophages. Amoebae represent a reservoir for pathogenic intracellular bacteria such as Parachlamydia and Waddlia, accounting for the selection of virulent strains, their resistance to decontamination, and, since amoebae are largely present in water-networks, their spread to humans. Therefore, amoebae are a relevant research platform for the development of simple methods to study bacterial virulence and could represent in a near future a credible alternative to animal testing recognized by the scientific community” (G. D. Greub).

At the same ceremony, Pierre Cosson, Doerenkamp-Naef Professor at Geneva University and winner of the Egon-Naef award in 2004, presented an update of his work with the amoebae “Dictostelium discoideum.”

Egon Naef, founder and president of the Egon-Naef Foundation since 1998, retired as president during the ceremony and bestowed the honorary post on his son, Marcel Naef.

SUI: Swiss Ethics Committee defines dignity of animals and evaluation of interests

The Ethics Committee for Animal Experimentation of the Swiss Academies of Arts and Sciences has issued a position paper giving its interpretation of the term “dignity of animals.” This definition shall clarify the requirement of the Swiss Animal Protection Act to protect the dignity of animals and to evaluate conflicting interests.

The term “dignity of living beings” is enshrined in the Swiss Federal Constitution. The Swiss Animal Protection Act of 2005 protects animal welfare and dignity, which it defines as “the inherent value of the animal, which is to be respected by anyone who handles it; the dignity of animals is not duly respected if they are subjected to stress which cannot be justified by overriding interests; stress involves in particular the infliction of pain, suffering or harm on animals, frightening or degrading them, profoundly altering their appearance or capacities, or unduly instrumentalizing them.” Not performing an evaluation of interests or following through with an experiment despite a negative outcome of the evaluation of interests thus constitute cases in which the animals’ dignity is not respected.

The Committee states that although the severity of individual stress factors that an animal is subjected to in an experiment can be gauged, the dignity of animals can only be either respected or not respected. Its views are formulated as follows:

For any handling of animals, the following is applicable:
– Animals are endowed with dignity.
– Taking account of the dignity of animals means that, whenever animals are handled, it is imperative that their interests are considered in an evaluation of interests.
– If the evaluation of interests shows that the stresses for animals are not offset by overriding interests, the dignity of animals is respected when the planned action is carried out.
– If the evaluation of interests shows that the stresses for animals are not offset by overriding interests, the planned action involving animals...
In April 2011 the University of Illinois press, in collaboration with the Oxford Centre for Animal Ethics, announced publication of the first issue of a new biannual journal on animal ethics. The Journal of Animal Ethics (JAE) is jointly edited by the theologian the Reverend Professor Andrew Linzey, Director of the Oxford Centre for Animal Ethics, and Professor Priscilla Cohn, Emeritus Professor of Philosophy at Penn State University and Associate Professor at the Centre. The journal aims to publish articles, reviews, and book reviews regarding theoretical and applied aspects of animal ethics from a wide range of disciplines, including anthropology, ethics, history, law, literature, linguistics, political theory, religion and science. Contributions to the journal are welcomed.

UK/USA: Journal of Animal Ethics launched

For more information see: http://www.press.uiillinois.edu/journals → Journal of Animal Ethics

ALTEX welcomes this English language sister journal to ALTEXethik, which is devoted to the bioethics of the complex relationship between humans and animals. ALTEXethik is published once a year in German (www.altex-edition.org → ALTEXethik).


sva
USA: EPA removes confidentiality claims on chemical studies under TSCA

The U.S. Environmental Protection Agency has notified five companies that the identities of 14 chemicals associated with a number of health and safety studies submitted under the Toxic Substances Control Act (TSCA) and claimed as confidential are not eligible for confidential treatment.

This is part of an ongoing review of confidentiality claims for the name of chemicals addressed in health and safety studies. The agency plans to deny confidentiality claims for chemical identity in health and safety studies provided under TSCA unless the chemical identity contains process or mixture information that is expressly protected by the law.

Under TSCA, companies may claim that information they submit to EPA should be treated as confidential business information (CBI) and not be disclosed to the public. Companies that manufacture, process, or distribute chemicals are required to immediately provide notice to EPA if they learn that a chemical presents a substantial risk of injury to health or the environment. The reports are made available on EPA’s website, but when the identity of the chemical has been claimed confidential by a company, the name of the chemical has been removed from the copy of the report that is made public.

For more information on EPA’s efforts to increase transparency, a copy of the letter, and additional information on the notifications on declassifications, visit: http://www.epa.gov/oppt/existingchemicals/pubs/transparency.html

EPA news release (HQ)
10 February 2011