

# **Asian Bioethics Association Ninth Asian Bioethics Conference**

## ***Bioethics in Asia: Healthy and productive life in harmony with nature***

Hotel University Sunan Kalijaga  
Yogyakarta, Indonesia

3 - 7 November 2008

Organized by the Asian Bioethics Association ([www.eubios.info/ABA.htm](http://www.eubios.info/ABA.htm)), the Indonesian National Bioethics Commission, the Indonesian Institute of Sciences, Universitas Islam Negeri Sunan Kalijaga, and is also the Third UNESCO Asia-Pacific School of Ethics Bioethics Roundtable. Please refer to the Actual Program to see the final presentation list of papers. The index in this version refers to the pre-conference program. Not all abstracts were presented in the final conference.

The secretariat: [kbnindonesia@gmail.com](mailto:kbnindonesia@gmail.com) and [d.macer@unesco.org](mailto:d.macer@unesco.org).

# **ABSTRACTS**

## **01. *Bioethics and Global Policy***

### **Bioethics in Asia: healthy and productive life in harmony with nature**

**Sahin Aksoy**, PhD, MD, Harran University, Turkey

[abstract not available]

### **Bioethics in Science and Technology Development**

Kusmayanto Kadiman, PhD. Minister of Research and Technology of Indonesia

[abstract not available]

### **Bioethics, human rights and health**

Beth E. Rivin, M.D., M.P.H., Program Director, Global Health and Justice Project;  
University of Washington, Seattle, USA

[abstract not available]

## **02. Bioethics and inclusion of moral agents**

### **02.1 Wu Wei of Tao and Buddhist Ethics to Save Nature in the 21<sup>st</sup> Century** **Chutatip Umavijani**, PhD, Thailand

In this technological world we are living in, we have used up the natural environment for our own gain in everyday life. The modern time motto is fast, easy, and ready made. This century's way of life leads people not to know the meaning of the here and now. We always look forward to something in the future, not really appreciating the present, the longest moment of our life. Tao and Buddhism introduce simple ideas to live a life that is meaningful, where every single moment is a very important moment of our life.

The concept of Wu Wei means doing nothing, or non action. It is a basic way to harmonize with nature, which does not mean laziness or lack of thought, but does mean not indulging in useless effort and not doing anything that contradicts nature. Then people and the environment will be able to coexist together well.

Buddhism introduces the idea of concentration upon the present moment, by being mindful in what we are doing at all times. In doing so, one becomes one with the present moment. This oneness leads one to be able to absorb the natural flow of everything.

Tao and Buddhist's ideas of the present moment enable man to live life to the fullest by enjoying the peace of mind that is present in one's life at all times. One is then able to cope with the materialistic way of life in the 21<sup>st</sup> Century, as the effect of this mindfulness.

### **02.2 Is Bio-Ethics Possible Without The Morality of Right?: The Priority of De-Ontologism and the Limits of Bio-Ethics Discourse**

**Abdul Wahab Suri**, MD, Asst. Prof., Dept. of Philosophy, University of Karachi, Pakistan

The applicatory ethics for instance Business ethics, Entertainment ethics, Media ethics and of course Bio-ethics facing different intellectual challenges .Out of these intellectual challenges three are generally being discussed i.e. The challenge posed by Logical Positivists, The challenge posed by the Rightists, The challenge posed by the Leftists. The logical positivists claim that since ethical statements are not empirically verifiable therefore they are all meaningless. The Rightist claim that there is an invisible hand is operating in the market and all the mishaps, inequalities, exploitations, and injustices etc. will be adjusted, eliminated and settled by the free functioning of the demand and supply mechanism. It means that there is no question of what ought to be and what ought not to be raised. Thirdly the Leftists claim that the whole system is inherently exploitative, so it will be meaningless to seek any good within the system. In this article we are trying to explicate another kind of emerging challenge to the applicatory ethics in general and bio-ethics in particular. The challenge has been named as **De-ontological challenge**. The de-ontological challenge has actually abandoned the line of demarcation between the legality and morality. It is basically the institutionalized mechanism to question the moral legitimacy of any moral position through the formalization of the **Priority of right over good**. The priority of right over good **not** only justifies the liberal conception of justice but it also contests any moral and ethical principle which acknowledges **the priority good over right**. In this way the formalization of de-ontological liberalism not only provides the justification for **the morality of rights** but it also provides the rationale for de-legitimizing any morality which does not acknowledge the priority of de-ontologism. In this article we will try to establish **the morality of right** as the limit of Bio-Ethics discourse. The paper will be divided into two major sections; in the first section we will briefly discuss the ontological basis of de-ontologism. In the

second section we will try to explore the theoretical corollaries of de-ontologism as a challenge to bio-ethics discourse.

### **02.3 Positioning Asian Bioethics in Transnational Eco-Advocacies Networking: Any Learning From Animal Rights Movement?**

**On-Kwok Lai**, PhD, Professor, School of Policy Studies, Kwansei Gakuin University, Japan

Focusing on Asian bioethics and their complex interfacing with (hyper-) modernism, we draw on animal rights movement of non-governmental organizations (NGOs), highlighting their communicative action strategies, while exploiting new media technologies, in transnational advocacies, in shaping global-local (glocal) bioethics, norms, and actions for sustainable development. We argue that bioethical discourses in Asia, for both policy making and NGOs' advocacies, have been embedded with, and representing upon, their socio-cultural diversities and complexity – this is more even so with the 'animal rights'.

Our research question: who have the right to define and decide animals' rights in Asia – the equivalence of the destiny for the Earth? In Asia, the learning and praxis of bioethics have been underdeveloped, but new policy initiatives are mooted for sustainable development; all these are redefining the boundaries between, yet the autonomy of, individuals and their communities. After discussing the context-contours of globalization in the information age, Part 2 of the presentation examines the electronic mobilizations of NGOs in defining, shaping and articulating their ideologies for (the differentiated forms and ethics of) ecological modernization. It ends with remarks on NGOs' critical engagements in bioethics: as a representation of the enhancing, and the enlightened, humanity towards a new modernity in/beyond Asia.

## **03. *Enhancement and Neuroethics***

### **03.1 Does Inequality of Ability Justify Techno-enhancement?**

**Tsuyoshi Awaya**, B.Sc., LL.M., Ph.D., Professor and Chairman, Department of Bioethics, Graduate School of Medicine, Dentistry and Pharmaceutical Sciences, Okayama University, Japan

We humans have innate inequality of abilities. Social order, especially the role-sharing in society, has been constructed based on inequality of abilities. And it goes without saying that we live in meritocracy, which seems to have some degree of positive rationality. The time of 'techno-enhancement' – reinforcement of abilities with the technologies of gene manipulation, 'cyborgization', brain manipulation, etc. – is coming soon. What will happen as the consequence of this techno-enhancement? Occupational hierarchy, that is, the social order of role-sharing mentioned above will collapse. However, in the midst of emerging technologies of enhancement that can fix inequality, it is difficult to propose that the inequality of abilities should remain just to be able to maintain the occupational hierarchy. In this context, the equal security of the "right to access abilities" could be an inevitable issue. Once the right is secured, superior abilities possessed only in part by a few people will be made available to the general public. This is the opening of the 'ability market'.

### **03.2 Human enhancement and body re-construction: prospects from the East**

**Natallia Aniskovich**, Interdisciplinary Center BRAIN, Department of Physiology and Pathology, University of Trieste, Trieste, Italy; and

**Oleg Artemenko**, Department of Japanese and Korean Studies, Faculty of Foreign Relations, Belarusian State University, Belarus

Human enhancement, a term widely used by transhumanists means using modern nanotechnologies to enhance our bodies and mind. Among many menaces here there is a problem of human identity transition, that means lack of natural "body identity" and alteration of personal "self" in modified bodies.

Modern biotechnologies rely on restoration of body identity in biological unity in new surroundings, but artificial components utilized for body re-construction may result in a harmful break in self identity, thus making it necessary to search for new identity definition. However, from the standpoint of eastern paradigm, "body identity" could be understood in cardinally different manner overcoming Cartesian dualism. In fact, the body in eastern medicine is not a "solid" object, but rather a flowing entity comprising the universal vital constituent *qi* of Nature according to Chinese philosophy.

Thus we can speculate about the tempting possibility of human body artificial re-construction with subsequent reviving its functionality via *qi*-flow reinforcement by traditional longevity techniques adopted in eastern cultures. As result, the break in "self identity" is avoided by making the body-mind system functioning in totally holistic regime.

### **03.3 Neuroethics of deep brain stimulation**

**Miyako Okada-Takagi**, PhD, University Research Center, Nihon University, Tokyo, Japan

Deep brain stimulation (DBS) is a surgical treatment involving the implantation of a medical device, which sends electrical impulses to specific parts of the brain. DBS directly changes brain activity in a controlled manner, its effects are reversible. Lately DBS treatment is starting for various affective disorders. However DBS therapies for clinical depression are still at their experimental stage and some scientists point out that there may be a risk that the device implanted in a person's brain may alter that person's brain function and hence his personal identity. Our project conducted international research on the effects of DBS therapies for psychiatric disorders, and examined the ethical issues of such therapy.

### **03.4 Neuroethics: A Welfarist Perspective on Brain-Machine Interfaces in the Context of Japanese Health Care Culture**

**Michio Miyasaka**, MD, Associate Professor at School of Health Sciences, Faculty of Medicine, Niigata University, Japan

I examine neuroethical arguments about brain-machine interfaces (BMI) from a welfarist perspective of human enhancement. BMI has been accepted as a category of new technology which enables to convert internal/neural information into external/functional control and to transduce external/functional information into internal/neural activities. Recent trial of clinical applications of BMI to paralyzed patients in Japan has opened a new horizon of welfarist perspectives of BMI and human enhancement. On one hand, BMI can be regarded as *treatment* or *prosthesis* for paralyzed patients who have no other means to recover their physical performance. On the other hand, it can also be regarded as human *enhancement* for patient's family caregivers who are entitled to require BMI as a tool to lighten the burden of their caregivings; even older caregivers can carry patients on their arms very easily. Here BMI can be regarded as social resources to enhance their *capability* in the context of Japanese health care culture in the near future.

### **03.5 Neuroethics: The Pros and Cons**

**Priya Chatterjee**, Vellore Institute of Technology, Vellore, Tamil Nadu, India

Neuroethics is a subject that has "arrived." It emerged as new techniques and insights into human brain function and gave us a dramatically revised notion of what

might be possible. The successes of psychopharmacology in altering brain states and behavior have raised new problems of their own, not least in terms of how we may feel about the chemical manipulation of innate capacities. The list is long and ever growing: antidepressants, methylphenidate (Ritalin) for attention deficit hyperactivity disorder (ADHD), compounds that enhance alertness, and a new wave of drugs that may enhance memory formation and heighten cognitive ability.

Perhaps it is our belief that the playing field should be level. We worry about the students who can't access the drug. What about the kids who can't afford a preparatory course for taking a standardized test? And suppose that we make the playing field level: All kids get the drugs, and all the sprinters get the steroids. Risks aside, are we comfortable with competition run in this way? Will the winners examine their enhanced selves and wonder "Was that really me?"

Special issues arise when we penetrate into the philosophical territory where dualists and determinists debate over free will. The ability to peer into brain processes also intensifies old privacy questions. If everything we do is physically caused by our brains, which are in turn a product of our genes and our life experiences, how can we be held responsible for our actions? The question of whether and how personal responsibility is compatible with neuroscience is a central issue for neuroethics.

### **03.6 Assessing the impact of brain enhancement technologies on the concept of self**

**Shuhei Taguchi**, Kumamoto University, Japan

As the discipline of neuroscience advances, many ethical issues have arisen and neuroethics has attracted much attention. A certain researcher categorizes Neuroethics into "ethics of neuroscience", which addresses practical ethical problems in applying neuroscience, and "neuroscience of ethics", which addresses theoretical ethical problems from the knowledge of neuroscience. Although neuroethics encompasses many issues, the concept of self lies at the heart of the field. Modifications of the human brain raise concerns about altering the self. Reading and imaging the brain may mean taking out information which we have been considering private. The knowledge of neuroscience promotes understandings of our morality and it may affect some ideas of self which underlie normative theories. We need to reconsider the concept of self today at a time when neuroscience greatly affects human brain. In this presentation, as a part of this attempt, I examine the concept of self by focusing on brain enhancement technologies. To do this, I will (1) glance at enhancement technologies and their possibilities; (2) examine what characters of the self the technologies affect; (3) consider the relation between these characters and the concept of self, and examine the impact of brain enhancement technologies on the concept of self.

As the discipline of neuroscience advances, many ethical issues have arisen and neuroethics has attracted much attention. A certain researcher categorizes Neuroethics into "ethics of neuroscience", which addresses practical ethical problems in applying neuroscience, and "neuroscience of ethics", which addresses theoretical ethical problems from the knowledge of neuroscience. Although neuroethics encompasses many issues, the concept of self lies at the heart of the field. Modifications of the human brain raise concerns about altering the self. Reading and imaging the brain may mean taking out information which we have been considering private. The knowledge of neuroscience promotes understandings of our morality and it may affect some ideas of self which underlie normative theories. We need to reconsider the concept of self today at a time when neuroscience greatly affects human brain. In this presentation, as a part of this attempt, I examine the concept of self by focusing on brain enhancement technologies. To do this, I will (1) glance at enhancement technologies and their possibilities; (2) examine what characters of the self the technologies affect; (3) consider the relation between these characters and the concept of self, and examine the impact of brain enhancement technologies on the concept of self.

## **04. Descriptive Bioethics and Research**

### **04.1 Knowledge, Attitude and Safety Practices of Paramedical Staff about Modes of Transmission of HIV/AIDS in a Public Sector Teaching Hospital of Karachi**

**Nabila Khan**, MBBS, DCPS (Health Care Systems Management)

The Objectives of the study were to (1) to measure the knowledge level of paramedical staff about modes of transmission of HIV; (2) to determine the attitude of paramedical staff towards the HIV positive persons; (3) to record the safety levels practiced by paramedics in dealing with HIV positive patients.

The sampling technique was simple random, as all the paramedics name were taken in a lottery and all the staff has an equal chance of being selected. They were given self administered questionnaires in their respective shifts and a brief introduction of the purposes of the study given and their well informed consent was acquired. The sample size was 196, out of which 168 agreed to respond. Data was converted to variables and analyzed by using SPSS version 10.

The results showed that 122 i.e. 72.6% respondents knew all the recognized modes of transmission of HIV virus. 50% responded that HIV positive test means that patient is dying.

81% of the respondents knew about the Universal precautions to be followed when dealing with all patients. 75% of respondents felt afraid to handle used needles and blood of HIV positive patients. 69% respondents felt that consent for carrying out an HIV test should be taken from patients. 33.3% respondents felt that hospital staff infected with HIV in private live should be dismissed from job.

Only 51.2% respondents felt that patient's confidentiality regarding HIV positive status should be protected. 78% of respondents felt that ward assistants, house keeping and dietary staff should know HIV positive status of a patient. Only 66.1% of the respondents knew about any organizations working for providing counseling support to HIV positive patients.

### **04.2 Survey Research and Ethics**

**Noriko Kataoka**, Kumamoto University, Japan

Faced with evermore advancing medical technologies, bioethicists are asked to provide insights but the difficulty faced by bioethicists is that there is a wide gap between ethics, which tends to appreciate universal values more, as a discipline and the real situation, in which values appear to be in a constant flux. However, values are not so much changing over time but what is changing is the emphasis placed on each value. This presentation suggests incorporating survey research into the discipline of ethics as its method. This will allow for adjusting abstract top-down approaches and concrete bottom-up approaches to formulate effective approaches to current bioethical issues. I will first present results from a survey conducted on attitudes towards end-of-life care in Kumamoto, Japan as an example. Then, I will argue how such attitude survey contributes to the field of ethics as a new method.

### **04.3 Urgency of traditional knowledge protection in research activities in Indonesia**

**Theofransus Litaay**, Lecturer at Faculty of Law and Researcher at Centre of Eastern Indonesia Studies Satya Wacana Christian University Salatiga

Indonesian forest biodiversity has been long utilized by the surrounding communities for their living needs, from food to traditional medicine. Various food and medicine productions are the results of traditional knowledge endeavours. For multi-national corporations or trans-national corporations, such knowledge **is highly prized as**

**intellectual capital for developing** further medical and other products. The problem is new product will be labeled as "new" protected by intellectual property rights mechanism. The challenge for Indonesia is how to protect traditional knowledge while at the same time able to provide traditional community with added value of their own traditional knowledge.

This paper explores the need for a body of law in intellectual property rights which can support the protection of pre-existing traditional knowledge reapplied for modern science and commercial needs. From an ethics perspective, this is key in combating the marginalization of indigenous peoples and the recognition of knowledge not only in the written form. It relates also to issues of power and literacy etc. As input to policy, such protection of rights also can enhance the position of indigenous peoples to be seen not as a burden to state, but actually as a key component in economic development of Indonesia which is recognized as the world's most biodiverse region.

#### **04.4 Public understanding of science, research and informed consent: a Sri Lankan perspective**

**Chesmal Siriwardhana**, Junior Research Fellow – Medical Research, Institute for Research & Development, Battaramulla, Sri Lanka; and

**Athula Sumathipala, Sisira Siribaddana, Suwin Hewage, Manura Lekamwattage, Manjula Athukorale, Joanna Murray, Martin Prince**

**Introduction.** International research community has discussed, debated and promoted the issue of informed consent in human subject research for a considerable time. However, a considerable gap still exists between research participants and investigators, particularly so in the developing world where an authoritative position is held by the academia. Lack of proper understanding about what and how the public understand about science, research and consent processes will only widen this existing gap and create more opportunities for various malpractices in conducting research and exploitation of vulnerable subjects, especially in the developing world setting. Assessing the public understanding of the research may vary depending on many factors. Education, existence of a research culture, literacy rate are few of the main factors while the value placed on individual informed consent practices may have certain cultural variations.

**Objective.** The aim was to measure the public understanding about health research by capturing views and assessing perspectives of healthcare professionals, research participants, and nonresearch participating lay public in the developing country setting of Sri Lanka.

**Methodology.** This was part of a larger study on informed consent in Sri Lanka. Ethical approval was obtained from UK and Sri Lanka. A series of focus group meetings were conducted where ethical dilemmas in recruiting participants for the study were discussed in depth. An interview based on an open-ended questionnaire was conducted with participants selected from a pool of persons with/without previous research experience.

**Results.** A total of 66 persons participated. These included 30 previous research project participants and 36 persons without prior research participation including selected clinic attendees in the government and GP settings, researchers (medical and non-medical), research assistants and teachers. To 23 (34.8%) participants, the word 'research' meant searching/finding out. Considering that the study focused on health research, 39 (59.1%) said that doctors conduct research while 14 (21.2%) said scientists conduct research. Thirty one (47%) said health research is carried out in order to discover new knowledge about diseases, new drugs and treatments. According to 45 (68.2%), there are bad effects from any research and 15 (33.3%) out of them mentioned harmful effects from clinical trials as an example. Participants understood (32, 48.5%) that they will be selected only if they match specific criteria of the research.

Willingness to participate in research if invited in the future was shown by 59 (89.4%). Thirty six (75%) said that they will consult their family and friends before

taking part in research if asked. Research involving a new drug or a treatment method was mentioned by most participants as the category of research that they do not want to take part in. Over 50% of respondents said that project description, researchers and the reason for selection were most important in making a decision to participate. Finally, 61 (92.4%) acknowledged they were participating in a research by answering this study's questionnaire.

**Conclusions.** The results show that with or without prior participation, members of public have an understanding on core ideas about research. These core ideas included what is research, why research is conducted, why members of the public are selected, the outcome of participation is beneficial or may bring harm and the decision of participation is affected by knowledge about research and researchers. Also the study shows that a decision about taking part in research is not only dependent on the knowledge, education or psycho-social state of the participant but also on his social support network of family and friends.

#### **04.5 The Regulation of Informed Consent in Indonesia**

**Anna Haroen Admodirono**, Member of Bioethics and Humanities, Unit of Medical Faculty, Airlangga University

Informed consent is a consent that is given by a patient or his/her close relative or somebody who has authority to act on his/her behalf after adequate information of the purpose procedure that has been explained. The consent could be given either implied or express and must be given freely, rationally and voluntary. The regulation of informed consent has been issued in Indonesia since 1989 under the Regulation of Minister of Health No. 585. The Implementation of the regulation was issued by General Director of Medical Service, Department of Health, under the Letter of Decree on April 21, 1999 and serves as guidelines. The regulation is also regulated in the Law of Medical Practice that went into effect on October 6, 2005. According to the regulation, conscious, mentally sound adult can give consent herself/himself. Adult in this consent is 21 years of age or married. A physician who treats or operates upon a patient without obtaining consent from him/her, commits an assault and battery for which he maybe prosecuted criminally, civilly and administrative sanctions.

#### **04.6 Technology and Culture**

**S. Panneerselvam**, PhD, Professor, Department of Philosophy, University of Madras, Chennai 600 005, India

The concept of culture is one of two or three most complicated words in the English language, says Raymond Williams. It is argued that culture is a lived experience; the texts, practices and meanings of all people as they conduct their lives within the totality of whole way of life. Culture adopts itself to the situation. It takes into account the changes that are taking place outside. It is slow but steady. Culture unites men into one cultural group. Cultural sustainability as the sustainability of economic activities must concentrate on both individual as well as community. Though community integrates its values with the individual, it should be understood that the individual values cannot be sacrificed. Moreover the culture carries the values to the future generation and hence the values of it must be preserved. Individual as well as the social values constitute the culture. Culture is the guardian of the people. It reacts whenever there is a threat to it. When the rights of the cultural group are affected or violated there is always protest. The culture of people takes into account the language, ideas, customs, taboos and other related components. Whereas nature has no history, culture as value-seeking is inherently historical as it is bound up with a social and symbolic tradition within which it's dialectical and developmental process operated.

Technology is always has been part of the social structure, belonging to a larger cultural framework in which man functions as human being. There is and always has been a continuous dialogue concerning society, its needs and aspirations and the



technical means potentially contained in technology for satisfying those needs and fulfilling those aspirations. The nature of technology cannot be understood without understanding the nature of this dialogue. The place of technology in the scope of human knowledge is determined by the nature of the dialogue concerning the aspirations of society and the potentials of technology. It is in this sense that we can talk about the dialectical approach to technology. In technology, we create a reality according to our designs. It is a man made reality. Marcuse shows that not only the application of technology, but technology itself is domination. He says: "Specific purposes and interests of domination...enter the very construction of the technical apparatus. Technology is always a historical-social project; in it is projected what a society and its ruling interests intend to do with men and things. Such a purpose of domination ...belongs to the very structure of technical reason."

We need alternative view of knowledge. For example, philosophers, futurists, and others who are interested in the future of technology and thus with the future of culture would be benefited by a dialogue with the alternative world views of Indian culture in which alternative basis for knowledge and of life is admitted. Indian tradition explains the need to understand technology from the stand point of quality of life and culture, thus explaining the significance of culture in technology.

#### **04.7 Are human rights and health care universal?**

**M. Selvanayagam**, PhD and

**Francis P Xavier**, Loyola Institute of Frontier Energy (LIFE), Loyola College, Chennai, India

Human rights and right to health care have explicit intrinsic connections and have emerged as powerful concepts with regard to human dignity and fullness of life. A rights-based approach to health uses International Human Rights treaties and proposes norms to hold governments accountable for their obligations. It recognizes the fact that the right to health is a fundamental right of every human being and it implies the enjoyment of the highest attainable standard of health that governments have the bounden responsibility for the health of the citizens which can be fulfilled only through the provision of adequate health care and social concern. The same should get integrated into research, advocacy strategies and research tools, including monitoring; community education and mobilization; litigation and policy formulation. Right to the highest attainable standard is encapsulated in Article 12 of the International Covenant on Economic, Social and Cultural Rights.

The enjoyment of the highest standard, in any given milieu, is one of the fundamental human rights of every human being, without distinction of race, religion, political belief or social condition. Article 25 of the Universal Declaration of Human Rights is concerned with the right to health. According to this article, everyone has the right to a standard of living with reasonable health of oneself, including food, clothing, housing, medical care as necessary to ensure fullness of life. The preamble of the World Health Organization states that the enjoyment of the highest standard of health is a fundamental right of every human being. Aristotelian philosophy is based on the principle that it is society's obligation to maintain and improve people's health. Therefore, public health should focus on the individual's capacity to function, and health policy should aim to maintain and improve this capacity by meeting health needs. The relationship between health and economic development is two-directional. Health affects labor productivity as well as investments in physical and human capital and savings rates. In the other direction, income can affect health and demography by improving the ability to obtain food, sanitation and housing and by providing incentives to reduce the family size.

As we are in the later part of the first decade of 21<sup>st</sup> Century, the awareness on health care has increased enormously and everyone wants to lead a healthy life. National Governments and state governments should be positive to provide medical care for all. But, do these facilities and benefits reach out or are they available to all the citizens of the country? What are the existing draw backs and problems? How to

overcome such problems to universalize the health care to all irrespective of their economical and social status? These would be discussed in the paper.

#### **04.8 The Relationship of Ethics and Philosophy Teaching to Suicide prevention in Japan**

**Arthur Wolf**, MA, RUSHSAP, UNESCO Bangkok

This paper addresses the importance of philosophy in primary and secondary education through examining the dynamics behind suicide in Japan. The suicide rate in Japan is among the highest in the developed world. After a sharp increase following the Asian economic crisis in the mid-nineties it has been relatively stable over the past ten years. Its stability reflects a lack of effective prevention and intervention programmes at all levels of society. When looked at from a critical theory perspective within philosophy, suicide becomes the "liberation of human being from the circumstances that enslave them" (Horkheimer, 1982). The perceived social exclusion experienced before suicide, through for example job loss is dependent on the way of coping with the loss of cultural relevant identities. Coping with identity loss requires a philosophical understanding of its dynamics. The use of philosophy in primary, secondary and higher education can stimulate the development of such dispositions as critical thinking, solidarity, the use of reason, empathy and cultural sensitivity. The author therefore argues that philosophy and ethics education can play a role in the prevention of suicide and make a significant contribution to the cultivation of humanity in general.

#### **04.9 Teaching Medical ethics through video dramas**

**Kenji Hattori**, MD, Gunma University School of Medicine, Maebashi, Japan  
[abstract not available]

### **05. *Health and Bioethics***

#### **Keynote speech by the Minister of Health of Indonesia**

[abstract not available]

### **06. *Public health ethics***

#### **06.1 Mass Public Health Interventions in the Developing World: Some Ethical Issues**

**Angus Dawson**, PhD., Keele University, UK and University of Toronto, Canada

This paper explores some of the ethical issues that arise during the implementation of mass public health interventions in the developing world. The focus of discussion is upon the use of arguments appealing to the idea of preventing harm. This idea is intuitively appealing as it is often felt to be better to seek to prevent harm from occurring than treat it once it emerges. However, preventive interventions can also be ethically contentious, mainly because they are introduced into asymptomatic populations. This means that even if the risk of harm from the intervention is very low, significant harm can result from a mass programme because of the numbers of people involved. Whilst many such programmes might, all things considered, turn out to be justified, there are many ethical and policy problems that require careful exploration and consideration. The arguments are illustrated by discussing the case of the mass Vitamin A supplementation programme in Assam, India during 2001. This particular example is used to illustrate these general public health ethics arguments because it has been subject to much criticism and a legal case.

## **06.2 Ethical Considerations in the Articles Published in Nursing Journals in the Republic of Korea**

**Young-Rhan Um**, RN, PhD, Department of Nursing, College of Medicine, Soonchunhyang University, Chonan, Republic of Korea and

**Ihnsook Jeong**, PhD College of Nursing, Pusan National University, Busan, Republic of Korea

**Purpose:** This study was aimed to identify the presence/absence of ethical considerations in the published articles of the nursing journals.

**Methods:** Ethical considerations of 331 articles published in six nursing journals having ethical considerations in their "instruction for authors". Ethical considerations reviewed was the compliance with Declaration of Helsinki, approval by the independent ethical review committee (IRB), obtaining informed consent, protection of privacy and confidentiality, and notification of conflict of interest.

**Results:** Two hundred seventy three of 331 (82.2%) articles had at least one ethical consideration. The most common consideration was obtaining informed consent (80.1%). However, none of the articles included compliance with Declaration of Helsinki, and 15.7% of the articles included obtaining written informed consent. The articles written in English showed more ethical considerations than those written in Korean in the aspects of IRB approval ( $p < 0.0001$ ) and obtaining written informed consent ( $p = 0.050$ ). For research methodology, qualitative researches had more ethical considerations than experimental or survey researches did in terms of keeping privacy and confidentiality ( $p = 0.022$ ), and obtaining written informed consent ( $p = 0.011$ ).

**Conclusion:** The ethical consideration in the articles published in the nursing journals didn't match well with those in the Instruction for Authors. Editors should pay more attention to check whether the articles submitted follow the ethical consideration in the Instruction for Authors.

## **06.3 Ethical Considerations for the Protection of Human Subjects in the Instruction for Authors of Nursing Related Journals in Korea**

**Ihnsook Jeong**, PhD College of Nursing, Pusan National University, Busan, Republic of Korea; and

**Young-Rhan Um**, RN, PhD, Department of Nursing, College of Medicine, Soonchunhyang University, Chonan, Republic of Korea and

[abstract not available]

## **06.4 The Causes of China's Abnormal Sex Ratio and Improved Approaches**

**Yanguang Wang**, PhD, Professor, Center for Applied Ethics, Chinese Academy of Social Sciences, Beijing, China

Based on a data from national population and reproductive health survey in the end of 2005, the male and female's sex ratio of age from birthing has been 118.88: 100 and has closed to 120 : 100. The male and female' sex ratio reported had risen to above normal of 107: 100 by international standard. More seriously, the male and female' sex ratio reported in provinces of Jiangxi, Guangdong, Hainan, Anhui, and Henan has been 130:100. In a report in July 2007, the number of man larger than women in China has been 37,000,000, and the number of man larger than women of age from 0-15 has been 18,000,000. The abnormal sex ratio should be changed, an unbalanced sex ratio would eventually produce serious social problems and endanger the long-term stability of the nation, and constitute a serious breach of social and medical ethics on the part of the women involved.

This article try to show that the causes of China's abnormal sex ratio are the traditional cause of China's shortage of females and the underlying cause of the son preference in Chinese culture and; China's Ultrasound technology abused also should be blamed; China's economic system reform and women discrimination are reasons on the shortage of daughters; China's one or two-child policy is not the main cause

of abnormal sex ratio, but was related the couples' sons fever and shortage of girls. Female infanticide and the prohibiting the sex-selection laws and regulations failed to balance the male and female sex ratio were also the causes abnormal sex ratio. This article also discussed the approaches to prevent further losses of daughters. It is stressed that the major requirements are to ultimately overcome the deep preference for sons and reform the social insurance structures related to women.

### **06.5 Public Health can not be Integrated in the Classical Approaches to Medicine**

**Elangovan Thiruvalluvan**, health researcher (HIV/AIDS/TB) in Tuberculosis Research Centre, Chennai, India

Public health is primarily concerned with the health of the entire population, rather than the health of individuals. Roy Bayer a leader in the field of public health ethics from Columbia university judges, public health to be 20 years behind clinical ethics (\*S. R. Leader 2004). Public health is primarily concerned with the health of entire population, rather than the health of individuals (\*\*P.Schotsmans 2007). This is totally different from clinical or medical ethics. Public health relies on the promotion and the prevention of disease and disability. Public health extensively uses epidemiological data, population surveillance and other forms of empirical quantitative assessment. It also recognizes multidimensional nature of the determinants of health. That means public health is a specialized field by itself which is different from classical medicine in many ways. Classical medicine relies on four common ethical principles: autonomy, non-maleficence, beneficence, and justice. Whereas, Public health operating principles are Autonomy, Solidarity, Fair reciprocity, Harm principle, Consent and Trust. Though public health ethics partially overlaps the medical ethics, the place where they overlap shows that they both relate to health but have different objectives altogether. Hence, I am of the opinion that Public health ethics cannot be integrated in the classical approaches to medicine and is partially independent to make its own contribution to the well-being of the society.

### **06.6 Prevention with Positives: view from health care provider**

**Sakchai Chaiyamahapurk**, Office of Disease Control and Prevention Region 9 Phitsanulok, Thailand; PhD. Student, Faculty of Medicine, Naresuan University.

A cross-sectional survey was done during a national workshop for Prevention with Positives in Thailand. 560 health care providers were asked about their provision of sexual health promotion activities to people living with HIV and AIDS (PWHAs) in their clinics. The majority 74% are nurses working in HIV clinics. Median working experience was 5 years. For attitude towards disease prevention, 96% agreed that they had duty to provide prevention messages and measures for prevention of HIV transmission. 16% did not agree that they could talk about sex freely with patient. 21% felt that counseling did not work for behavior modification on safe sex and 36% were unsure or did not agree that they could effectively provide counseling for prevention of transmission. Less than half (44%) had enough time for counseling. Health provider discussing about safe sex was slightly more prevalent than discussing about disclosure (74% vs. 63%). Asking health provider to estimate rates in their patients, the highest voted estimation of abstinence rate, unsafe sex rate and partner disclosure rate were 0-10%, 21-40% and 41-60% respectively. More than half (59%) considered public health benefit more than patient benefit and in practice 9% did notify directly or indirectly to patients' partner when patients did not disclose their HIV status to partner by themselves. Most reasons for not notifying were patient's rights and fear of adverse effect on patients. Most reasons for notifying were preventing of HIV transmission and rights of partner to be informed. 78% believed that counseling could solve disclosure problems. Less than half (47%) agreed that health provider should have rights protected by law to inform third party in case there were risk that HIV transmission could occur. 79% agreed to have law

for disclosure of HIV status to sexual partner on intending sexual partner and 93% agree to have law for disclosure of HIV status for husband, wife or regular partner. This study showed that prevention among HIV patients is needed as evidence shows low abstinence rate, remarkable unsafe sex and nondisclosure from view of providers. In Thailand counseling is an only available tool for disease prevention in PWHAs. In 2006, there is a movement for legislation of health law regarding HIV transmission, it was not legislated and not accepted from many groups regarding as violating human right. Ethical dilemma is continuing to be an issue since there are conflicts between confidentiality of patients and right to be informed of their partner and it is worth for extensive discussion to find the solution for both sides.

## **07. Protection of Women and Vulnerable Persons**

### **07.1 The Legal and Ethical Aspects of Human Experimentation in Malaysia**

**Anisah Che Ngah**, PhD, Faculty of Law, Universiti Kebangsaan Malaysia 43600, Bangi Selangor, Darul Ehsan, Malaysia; and

**Yuhanif Yusof**, Kolej Undang-undang, Kerajaan & Pengajian Antarabangsa, Universiti Utara Malaysia, Sintok 06010 Kedah, Darul Aman, Malaysia

The Universal Declaration of Human Rights has put in place the value of a human life. As such, each person has a right to self-determination and is entitled to have their autonomy respected. The laws in Malaysia have recognized this right through various rules, guidelines and judicial decisions. One such example is the Guidelines on Good clinical practice which assist researchers in their efforts to conduct clinical trials in accordance to international standards. It will also prevent studies with improper designs, from being performed. Further, human subjects involved in the trials will be adequately protected. The article will discuss fully the application of these guidelines and the legal and ethical challenges in this area.

Keywords: Good clinical practice, patients rights, clinical trial, laws and regulations.

### **07.2 How to Safeguard Vulnerable Patients in Biomedical Research in Case of Lacking of Funding in Developing Countries**

**Di Xiao**, Institute of Pharmacology, Institutes of Biomedicine, Tsinghua University, Beijing, China; and

**Paola Arslan**, Department of Medical-diagnostic Science and Special Therapies, University of Padua, Italy

Lack of funding for biomedical research and shortage of research ethics knowledge may represent an enormous problem for young physicians in career in developing countries. In the paper we will discuss one case, that really happened in a well known university hospital in a less developed Asian country, pointing out how vulnerable patients can become if they are not safeguarded by official Ethics Committees, patient right associations, and government rules and procedures. The argument in the article is trying to state that the guidelines and rules for biomedical research must be in place, acknowledged in developing countries to safeguard the vulnerable populations in research, in particular when research funding is lacking. Furthermore, we will discuss the absolute necessity that hospitals and research institutions with human subjects will be provided by law of an Ethics Committee in developing countries. Beside the application of Helsinki/Oviedo Declaration, the Government needs to have its own guidelines and tentative guidelines in biomedical research. The possible solutions for the issues will be proposed at conclusions of the paper. (This paper was supported by "Erasmus Mundus Master of Bioethics" sponsored by the European Commission in 2006-2007)

### **07.3 Factors for Gender Discrepancy in Kidney Transplantation and Ethical Issues**

**Shamima Parvin Lasker**, Professor, City Dental College, Dhaka, Bangladesh

Renal transplantation is the best treatment for end stage renal disease for longer life expectancy, better quality of life and lower the health care costs than the maintenance of dialysis. It has been observed that women are more likely to donate and less likely to receive kidney transplantation than men. This gender discrimination in transplantation medicine has raised medico-legal problem. Little attention has been given in this field. Thus the present study has been taken to find out possible causes for this disparity and whether they are medically and ethically sound. It may in turn reduce the disparities and can protect this vulnerable group.

#### **07.4 Gender Discrepancy in Kidney Donation vs. Reception Globally**

**Rishad Raihan**, Junior Research Assistant, World University, Bangladesh; and  
**Shamima Parvin Lasker**, Professor, City Dental College, Dhaka, Bangladesh

Renal transplantation has become a routine and efficient treatment for end stage renal disease as for longer life expectancy, better quality of life and lower health care costs than maintenance of dialysis. Although cadaveric kidneys are used in majority of transplantation, living related donor such as sibling, parents, spouse are widely used. Available literature shown that gender discrimination in renal transpiration is very pronounced. However, few studies have analyzed the relationships between gender and donations as well as recipients rates among renal transplant patients. Thus the present survey has been taken to chalk out how far this discrepancy is and whether this discrepancy is ethically sound.

### **08. *Organ Transplant Ethics***

#### **08.1 Womb Transplants: The Next Radical Breakthrough in the Arena Of Artificial Reproductive Technologies?**

**Amel Alghrani**, Centre for Social Ethics and Policy, University of Manchester, UK.

Scientific advances in the field of artificial reproductive technologies rarely fail to shock and the latest advance to hit the headlines is no exception. Fertility doctors around the world are researching how to attain the first human pregnancy following a womb transplant. Womb transplantation offers hope to women who greatly desire to conceive and gestate their own child but are barred from doing so due to the absence of a womb, or the presence of a malformed womb.

Controversially, womb transplantation creates the possibility that such a procedure may also be scientifically possible in transsexual women and men. A womb could be implanted in to the male body, and an embryo created via In Vitro Fertilization (IVF) could then be implanted in the donated womb: therein the fetus could safely gestate before being delivered via caesarean section, thus raising the unique possibility that pregnancy may become a unisex experience. Men who may relish the opportunity to gestate their own children may be those in a same sex relationship, men whose female partner is infertile, or simply men who wish to experience pregnancy.

If womb transplants are successful, and there is no reason to believe they won't be, this advance will raise a host of questions. This paper considers the legal and ethical ramifications of womb transplants and whether the experience of pregnancy and gestation should be open to all once it becomes a safe possibility.

#### **08.2 Kidney Transplantation in Bangladesh: Opportunities and Challenges**

**Chanda Sanchoy Kumar**, Institute of Social Science and Public Health, Dhaka, Bangladesh, and **Chowdhury Sajeda**, Holy Family Red Crescent Medical College, Dhaka, Bangladesh; Molla Musaraf Husain, Rajshahi University, Rajshahi

About 2 million people in Bangladesh suffer from kidney disease, 40,000 patients die and 15,000-20,000 suffer from End-Stage Renal Disease (ESRD) every year in a country with population of 140 million, only 2-3% has access to dialysis or transplantation. Factors responsible for that are i) financial constraints, ii) inadequate facilities iii) ignorance and iv) non-availability of the suitable donor. A total of 60-70 transplantation is carried out annually in five or six centers, and good number of patients move overseas for transplantation, mostly receive kidney from unrelated donors. No law is required in case of live related donor transplantation; however it is essential for living unrelated donor transplantation and cadaver donor transplantation, to prevent abuses of the donors and to protect the professor from unnecessary harassment and litigation.

Kidney transplantation is a better option for treatment of ESRD patients compared to maintenance dialysis in terms of economy and quality of life. Efforts should be made to promote transplantation in the country and to promote live related donor pool by encouraging relatives to donate. Also live related donor pool needs to be expanded by including first and second degree cousins. This requires amendments of the present Organ Transplantation Act of 1999.

### **08.3 Global Efforts Against Organ Trafficking**

**Alireza Bagheri** MD, PhD, Medical Ethics Center, Tehran, Iran

Organ shortage for transplantation has been documented worldwide. Patients have to travel beyond geographical borders to receive transplants, either because they cannot find a donor at home or because transplant technology has not been well established in their country. Although the morality of individual organ sales is surrounded by controversy and doubt, there is a consensus on the immorality of organ trafficking, especially across borders. The problem of organ trafficking and trade is no longer a domestic but an international issue. Asia has become notorious as a hub for patients from other countries. The paper presents Asian Task Force on Organ Trafficking initiative and also some other international efforts against organ trafficking. By emphasizes on the importance of global cooperation in tackling organ trafficking the paper calls for a global action to tackle the issue of international trade in human body parts.

## **09. *Panel on Regulating Organ Transplantation: Experiences from Asia***

Contact persons: **Anant Bhan**, MD, Independent Researcher, Bioethics & Public Health, Pune, India; and **Aamir Jafarey**, FRCS, Centre for Biomedical Ethics & Culture, Sindh Institute of Urology & Transplantation, Karachi, Pakistan

## **10. *Ethics, Energy and Environment***

### **10.1 Ethics of Energy Technologies**

Darryl Macer, Ph.D., Regional Adviser for Social and Human Sciences in Asia and Pacific, RUSHSAP, UNESCO Bangkok

The Regional Unit in Social and Human Sciences in Asia and the Pacific (RUSHSAP) at UNESCO Bangkok launched the Ethics of Energy Technologies in Asia and the Pacific Project in September 2007. The launch conference was held also with the cooperation of the Ministry of Energy and Ministry of Science and Technology of Thailand. A full report of that conference is available on the web, as well as the abstracts of the three day meeting, attended by a hundred people from about 20 countries from many sectors and backgrounds. Since then there have been a number

of subsequent conferences and working group sessions organized in different countries, and a summary of these will be presented.

Following on from that conference fourteen working groups have been formed on the following topics (more details appear in the project introduction document)

[<http://www.unescobkk.org/index.php?id=energyethics>]:

- Universalism and environmental values
- Ethical worldviews of nature
- Visions and hopes of the future
- Representation and who decides
- Community engagement
- Stakeholder responsibilities
- Energy equity and human security
- Cost-benefit analysis and economic constructions
- Adoption & development of energy technologies (state of the art review)
- Ethical frameworks for research agendas and policy
- Educational frameworks for environmental ethics
- Nuclear dialogues
- Energy flow, environment, and ethical implications of meat production
- Water ethics and water resource management

The aim of the working groups is to develop dialogue around these particular issues with a focus on environmental ethics and human security. Each group will produce a report with policy options that can be used by policy makers, philosophers, scientists and researchers to consider the ethical dimensions of energy policy. All can follow the report development through the individual websites. The reports will also feed into the COMEST considerations on the ethics of climate change. There are approximately 200 persons who are currently members of the working groups, from young and old, many disciplines, professions and country. This overview will introduce some of the working group results, and some working group sessions will be held at the time of the ABC2008 conference.

### **10.2 Environment and Health: From Ethical Perspective**

**Xiao Wei**, PhD, Professor, Philosophy Department, School of Humanities and Social Sciences, Tsinghua University, Beijing, China

The Earth Charter is a declaration of fundamental principles for building a just, sustainable, and peaceful global society in the 21st century. It seeks to inspire all peoples to have a new sense of global interdependence and shared responsibility for the well being of the human family and the larger living world. Based on the declaration, my article will discuss the relationship between environment and health from ethical perspective. From my point of view, similar to the health of human being, environmental health also has the essential meaning. Therefore, the relationship between environment and health, actually, means the relationship between environment health and human being health. The article will discuss the conception and ethical significance of environmental health. It also tries to answer some related questions as followings: How can concerns about health be properly integrated into concerns about development and sustainability? Is sustainable development an appropriate way of integrating environmental health concerns? How can we reach the goal of human being health harmony with environmental health? What is mission of ethics for the ideal?

### **10.3 Ethics of Energy Security and the Question of Fossil Fuel Dependency**

**Celia Helen Thorheim**, MA International Relations and Diplomacy; RUSHSAP, UNESCO Bangkok.

The Fourth Assessment Report by the Intergovernmental Panel on Climate Change (2007) reiterates the case of its three previous reports; namely that the planet's climate is indeed getting warmer and that this will have serious negative effects on



our environment and society in the years to come. The Panel is still highly confident that the main cause of the climate change is the increasing emissions of greenhouse gasses (GHG) into the atmosphere, of which more than 60 percent stems from anthropogenic burning of fossil fuels. Most states have agreed to gradually reduce their GHG emissions within the framework of the Kyoto Protocol; however, due to the global dependency on fossil fuels as the main driver of economic growth, most states are still basing their energy security strategies on a continuous consumption of oil, gas and coal. Given the widespread knowledge of the negative effects of fossil fuel consumption on our environment and the quality of life of future generations, can the actions of these states be defended ethically? Do people have inherent rights to energy equity and economic development that should be fulfilled even if this means continuing to emit GHGs and depleting our nonrenewable resources? This paper discusses whether these questions can be answered through the ethical approaches of utilitarianism or deontology, and focuses in particular on the objectives and actions of the two largest consumers of fossil fuels today, namely China and the United States.

#### **10.4 Environmental Education and Environmental Ethics of Some Philippine Food Companies as Stakeholders of the Environment**

**Lea Ivy O. Manzanero**, Philippines Communications and Information Officer, Asia Pacific Regional Resource Center for Human Rights Education (ARRC), c/o SEACSUCs Unit 1501 Future Point Plaza 1, Panay Avenue, Quezon City, Philippines

Food companies are major contributors of pollution in the Philippines. Integrating Environmental Education and environmental ethics in these food companies has potential to transform the highly polluting companies into stewards of the environment. A key challenge is enhancing their environmental transparency. Out of fifteen food companies examined, all were unwilling to disclose information pertaining to variables of Responsible Environmental Behavior. Nine out of fifteen food companies (60%) were not willing to disclose information on their existing values, norms, policies and programs related to the environment. This case study examines these internal and external characteristics. It uses the ethics of care approach as framework to strengthen the role of Responsible Environmental Behavior in environmental problem-solving.

### **11. *Environmental Ethics***

#### **11.1 Environmental Ethics: The Case of Wildlife Animals**

**Shah Jahan Assanarkutty** and

**Siti Nurani Mohd Nor**, Department of Science & Technology Studies, University of Malaya, Kuala Lumpur, Malaysia

This paper presents findings from a research on environmental ethics. A study was conducted to examine moral reasoning patterns among schoolchildren on environmental issues relating to the wellbeing of wildlife in Malaysia.

The study was conducted on two groups -13 year old and 16 year olds from schools situated along the Perak River in the District of Perak Tengah. Incidentally, the Bota Kanan River Terrapin Wildlife Conservation Centre of the Department of Wildlife and National Park is located nearby so students practically live side-by-side with wild animals. Moral reasoning regarding wildlife provides a relevant locus for exploring the students' environmental ethical perception in inculcating the importance of environmental awareness and preservation. Structured survey and open-ended questions regarding wildlife dilemmas (or problems) offer insights into the way the children react and respond to issues dealing with environmental problems for example, respect towards animals and their surroundings or habitat, concern over endangered species or the overall welfare of this non-human species.

The research started with the hypothesis that the students' perception may differ from the perspective that is found within school textbooks namely the anthropocentric view and to a certain extent the bio-centric perspective. This study concludes that environmental education in Malaysia is better represented by a theocentric disposition and this is demonstrated from this study.

### **11.2 Saving endangered species: who owes a duty to whom and why?**

**Sarah Chan**, Institute for Science, Ethics and Innovation, School of Law, University of Manchester, United Kingdom; and Daniela Cutas, Department of Philosophy, University of Gothenburg, Sweden

The preservation of endangered biological species is usually considered to be an unarguably worthwhile aim. Why, however, should this be so? Is saving species from extinction a moral good? And if we have a moral duty to save endangered species, then in virtue of what does this duty arise and to whom – or what – is it owed?

In this paper we analyze moral arguments relating to species conservation, in order to determine whether or not there is a moral obligation to preserve endangered species and to consider what the scope of such an obligation might be. We argue that if there is a duty of preservation towards endangered species, it is owed to individual members of a species in virtue of their interests rather than to the species as a whole: species cannot have moral interests.

Additionally, we explore whether there might be obligations to preserve biological species arising from the interests of other entities; and question whether conservation might be said to be a moral good in itself, considering arguments of environmental harm and natural ecological equilibrium. We also investigate whether and to what degree our own responsibility for the demise of a species should play a part in the extent of our conservation (or revival) efforts. We conclude that species diversity is an instrumental rather than intrinsic good, but that we may have obligations to conserve species in view of our own interests in doing so.

### **11.3 Environmental ethics – a foundation for sustainable development**

**Endang Sukara**, Indonesian Institute of Sciences (LIPI), Jl. Jenderal Gatot Subroto No. 10, Jakarta 12170, Indonesia

Before 1980s, Indonesia had at least 121 million ha of natural forest. Today however, the total natural forest is only 19 million ha. The rate of forest destruction is reaching more than 2 million ha per year. Commercial (industrial-type) agriculture and forestry have been based on developing simple, even monocultural, systems to replace the complex species richness of the natural vegetation. Species, ecosystems, and valuable genes have been lost in this process. The root of the matter have to do with stewardship, equity, justice, and the inherent worth of living things. Ethics, cultural values, and religions are keys to the necessary altered attitudes and behaviors. Environmental ethics is a part of environmental philosophy which considers the ethical relationship between human beings and the natural environment. Ethical rationality draws its themes and its legitimation from two distinct sources. The first is a holistic belief system (a religion, philosophy, world view, symbolic code, or cultural universe of meanings) and the second is the world of daily life experienced by people lacking power, status, or expertise who demand respect as beings of worth independently for their usefulness to others. We do not know how many species are needed to keep the planet green and healthy. It is imperative for us to search and instrumentally applied mechanisms to guide mankind in developing decision-making process. Religious discourse, politicians, and interdisciplinary academic study – a new model of authentic dialogue is needed where exchanges are circular and reciprocal, not vertical and reductionist to ensure a better life now and the future.

#### **11.4 Spiritual dimension for Indonesian inland water management: case from resolution of conflict in Lake Maninjau**

**Dede Irving Hartoto**, Research Center for Limnology, LIPI Life Science Center, Jl. Raya Jakarta-Bogor, Indonesia

Before 1980s, Indonesia had at least 121 million ha of natural forest. Today however, the total natural forest is only 19 million ha. The rate of forest destruction is reaching more than 2 million ha per year. Commercial (industrial-type) agriculture and forestry have been based on developing simple, even monocultural, systems to replace the complex species richness of the natural vegetation. Species, ecosystems, and valuable genes have been lost in this process. The root of the matter have to do with stewardship, equity, justice, and the inherent worth of living things. Ethics, cultural values, and religions are keys to the necessary altered attitudes and behaviors. Environmental ethics is a part of environmental philosophy which considers the ethical relationship between human beings and the natural environment. Ethical rationality draws its themes and its legitimation from two distinct sources. The first is a holistic belief system (a religion, philosophy, world view, symbolic code, or cultural universe of meanings) and the second is the world of daily life experienced by people lacking power, status, or expertise who demand respect as beings of worth independently for their usefulness to others. We do not know how many species are needed to keep the planet green and healthy. It is imperative for us to search and instrumentally applied mechanisms to guide mankind in developing decision-making process. Religious discourse, politicians, and interdisciplinary academic study – a new model of authentic dialogue is needed where exchanges are circular and reciprocal, not vertical and reductionist to ensure a better life now and the future.

#### **11.5 Agricultural bioethics in a perspective of endogenous knowledge for rural development in Indonesia**

**Ashari**, Indonesian Research Institute for Animal Production, PO Box 221, Bogor, Indonesia

This paper aims to understand the role of endogenous agricultural bioethics and to search appreciation for development opportunity. Ethics in Javanese culture is "a relationship /communication rules" which is called *tata krama* divided into three categories: *firstly*, relationship rule to God witch is called moral (*akhlak*), *secondly*, relationship rule to other livings (human non human) which is called politeness (*sopan santun*), and *thirdly*, relationship rule to formal social community or state which is called law (*wewaler*). Therefore ethics are more precisely understood and practiced in the *three in one* meaning: morality, politeness and law enforcement. The terms engage a contract meaning. Contract is an agreement between two or more parties, whereby legal or illegal rights and obligations are created which the spirit, the social norms and or the law will enforce. Politeness is social value (norm) of individual relationship to the others which is classified into three aspects : politeness with considering the place where you are which is called *empan papan*, politeness with considering to whom you face to communicate which is called *unggah ungguh* and politeness with considering the situation time of social environment witch is called *angon tinon*. Javanese and Balinese in the past had the same cultural background and most Balinese understand and practice in their daily life the three aspects of the Javanese politeness, which they call *patra* for *unggah ungguh*, *desa* for *empan papan* and *kala* for *angon tinon*... Agricultural bioethics is defined as ethical behaviour of human to manage agricultural components (human as subject, plants, animals, soil, water, and air as the objects) in wise attitude to maintain environmentally sound, in sustainable, productive and equitable way for the welfare of the people. Indonesia is the largest archipelago in the world with the total number of islands is 17,506, an agricultural country with uneven distribution of human population of 232 million in 2002, which is concentrated on Java. Java is a 6 % the

country area, which supplies 60 % of national agricultural (food) products. There are 742 local native languages spoken in Indonesia with different cultures and their local wisdoms. Cultural erosion has likely been occurring in most Indonesian ethnical cultures, except for the Balinese. Of the local languages, about 169 with their local wisdoms are endangered as the specific unique of cultural diversity. There is a number of cultural agricultural bioethics of this country which is potential in strengthening participation of the local people for rural economic development. An example of *subak* organization of the Balinese cultural agricultural bioethics shows a significant role in water, land and forest protection for rice (food) production with very minimum government involvement. Traditional communal lands of Minangkabau are another example of potential land conservation systems in the west part of this country under the control of tribal maternal systems. The present conditions of the tribal lands are likely to be considered as constrains for investment development. Under a collaborative programs between the endogenous (tribal) agricultural wisdom and local (district) government authorities in a four smart points program of administrative, law enforcement status, proper uses and management sustainability which is called a *catur tertib*, potentially creates acceleration changes in agricultural rural development. A case of Danamon Award 2008 to Datuak Pirak Murti Syarief for his successful tribal action on greenery and livelihood improvement of the *nagari* people was a self creativity awareness of the traditional tribal community head on communal land conservation and optimizing utilization, located in Bukit Baris Sub District of Solok District of West Sumatera. From the east part of Indonesia, Marind ethnic, the very tiny tribal community contributes a concept of sago (natural resource for local food) conservation from its agricultural bioethics/ norms. From those examples, this paper take important notes for pro-poor and change policy appreciation. There are many social resources of specific cultural agricultural bioethics in this country which are bestowed by God the Almighty have potential role for human life. Endogenous agricultural bioethics need to be managed and developed for the welfare of the present and the future generations. Analysis which involves in maintaining and developing the existing potential agricultural bioethics are suggested to be well understood and managed nationally for development benefit.

**Keywords:** endogenous culture, appreciation of agricultural bioethics, pro-poor development.

## **12. Ethics of using animals**

### **12.1 Ethical Issues in Biomedical Research: The Primate Research Center - IPB Experiences.**

**Joko Pamungkas** and

**Yasmina A. Paramastri**, Primate Research Center at Bogor Agricultural University, Indonesia

Activities in biomedical research, testing and teaching occasionally involve the use of live animal. Based on the nature of the study and animal of choice, in-proper care and use, also in-humane and un-ethical treatment for the animal showed potential to jeopardize the animal wellbeing, as well as validation of research findings. Common ethical issues exist in biomedical research institution ranges from Institution itself, the care and use program. Institution responsibility and commitment to support the program and activity is one of the critical aspects. Ethical issues that rise concern may be related to care, such as housing, behavior, as well as veterinary care. The last but not the least, ethical concern could result from the use of the animal; The issue varies from type of procedure, un-established animal model, justification of animal numbers, and importantly investigator issues. Lack of awareness, knowledge, and training are commonly seen. Understandably, in developing countries, limitation of guidelines and regulation becomes a challenge to promote the ethical aspect in the

activity. This paper will discuss our institution experiences, an academic setting in Indonesia, in the process to establish program to promote ethical procedure in biomedical research, testing, and teaching activities. By reducing ethical problems to minimal, our main goal is to enhance "quality of research" and the "welfare of animal". This journey resulted in earning accreditation from high standard international accreditation organization: AAALAC-International.

### **12.2 Bioethics of animal husbandry in relation to culture, management and livestock use in Indonesia**

**Kusuma Diwyanto**, Indonesian Centre for Animal Research and Development, Bogor, Indonesia; and

**Yulvian Sani**, Indonesian Research Centre for Veterinary Science, Bogor, Indonesia

### **12.3 Constructing "Humans" and "Animals": an ethnographic study of meaning creation in biomedical ethics and law**

**W. Calvin Ho**, JSD Candidate, Cornell University (USA), Senior Research Association, Secretariat of the Singapore Bioethics Advisory Committee

This paper, drawn from an on-going ethnographic study of the documents and documentary practices of the Singapore Bioethics Advisory Committee (BAC), analyses the construction of such ethical-legal definitions as "humans" and "animals" necessitated by the creation of human-animal chimeras in biomedical research.

Human-animal chimeras are developed by introducing human or animal (often stem) cells into an animal or a human (including human embryo). Such biological "artifacts" challenge conventional moral understanding of humankind, which, as a species, is placed at the top rung of a moral hierarchy while other species occupy lower rungs according to how close they are to us in terms of anatomical and psychological development. What qualifies a living creature as "humankind" is dependent on elusive functional features such as human consciousness or intelligence.

In studying meaning construction of fundamental concepts like "humans" as opposed to "animals" in the documents and documentary practices of the BAC, as well as other ethical bodies such as the UK Academy of Medical Sciences and the Danish Council of Ethics on the subject of human-animal chimeras, the epistemological role of ethics and law is examined. In particular, this paper will explore the broader symbolic (as opposed to the functional) role of ethics and law vis-à-vis emerging biomedical technologies in modern societies.

### **12.4 Ethical Considerations in the use of Laboratory Animals for Biomedical and Bioscience Research**

**Dondin Sajuthi** and

**Ikin Mansjoer**, Primate Research Center of Bogor Agricultural University

"Ethics in the use of laboratory animals" is an important course given to all graduate students at the Primatology Program of Graduate School at Bogor Agricultural University. It is imperative that student understands the philosophy and reasons of ethical approach in handling and managing laboratory animals.

The main objective of using laboratory animal is for the benefit of mankind. Therefore, laboratory animal welfare with the 3 R's should be highly considered, including 5 F's stating freedoms for the animal welfare. To achieve that goal, it is essential to establish an Institutional Animal Care and Use Committee (IACUC) in any institution using animals for academic and research purposes. Through this committee, ethical issues in biomedical and biosciences research using laboratory animal can produce reliable and responsible results.

Keywords: Ethics, 3R's, 5F's, IACUC

### **12.5 Expression of Recombinant Protein JSU in pGEX system: Producing the greatest good for greatest numbers - Implementation of utilitarianism principle**

**Endang T. Margawati** and

**Muhamad Ridwan**, Research Centre for Biotechnology, the Indonesian Institute of Sciences (LIPI), Cibinong, Indonesia

The unique of Jembrana disease is only infecting in Bali cattle, it indicates that Bali cattle may have a receptor for the Jembrana viral infection. Up to present, vaccination of Jembrana disease in Bali cattle is performed by using crude vaccine that produced by a conventional means from lymph organs that acutely infected by Jembrana viruses. Availability of the crude vaccine is limited due to limitation of infected Bali cattle and producing such vaccine is costly due to the Bali cattle needs to be treated then killed in prior to its processing. This experiment was designed to optimize the yield of recombinant protein Superficial Unit of viral Jembrana (J-SU) either expressed through single or double cell lyses in p-GEX system under a flask scale of 100 ml culture medium. Those cell lyses were Freeze-Thaw (FT) method and combination of the FT and sonication method. The lysed cells were then solublized using solubilization buffer. The solublized cells of JSU were purified in pGEX system by a bath capture method. The purified JSU was characterized and identified by SDS-PAGE and Western blotting then quantified by using a GeneQuant machine for protein. The result reported that both methods of cell lyses showed at the right molecule weight of 60kDa for JSU recombinant protein in pGEX system. However, the purified JSU derived from a single cell lyses resulted averagely higher yield (0.812ng/ul) compared to that derived from double cell lyses (0.486ng/ul). This research suggests that J-SU pGEX recombinant protein could be produced better, greater and more efficient to meet with bioethics theory for Jembrana vaccine development.

Keywords: Recombinant protein, Jembrana disease virus (JDV), J-SU, expression, utilitarianism principle

## **13. *Agriculture and Ethics***

### **Keynote speech by the Minister of Agriculture of Indonesia**

[abstract not available]

## **14. *Medical Genetics and Ethics***

### **14.1 Bioethical Aspect in Medical Genetics Research and Services**

**Sultana M. H. Faradz**, MD, PhD; Professor, Division of Human Genetics; Center for Biomedical Research (CEBIOR); Faculty of Medicine, Diponegoro University, Indonesia

Diverse problems arise in connection with the clinical examination of patients with genetic diseases. Genetic testing were ethically the most problematic laboratory examinations. Genetic laboratory examination is used more often for the diagnosis, prediction of diseases, pre symptomatic testing, carrier testing and paternity.

The problems appear when the examination results should be informed to the patients and their families. Conflicts can be caused by different opinions about the risks and benefits of the examination, about the rights and duties of patients, relatives, health professionals. In developing countries Cultural beliefs and values may hamper in passing on the information to the patient and families. Many of the parents and families will avoid to disclose the information to the patient them self and relative, therefore maintaining confidentiality of genetic testing result is the

other ethical problem. Further investigation for genetic diseases in other family members would not be easy.

In the developed country where health insurance is compulsory, results of the test are used for discrimination and stigmatization. Understanding ethics is very important and needed to deal with research and services for genetic diseases.

#### **14.2 Bioethical overview of congenital anomalies cases**

**Moersintowarti B. Narendra**, Bioethics and Humaniora Unit, School of Medicine Airlangga University; Surabaya, Indonesia

Children with serious congenital abnormalities are related to social emergency and clinical judgment that should be solved through family counseling carefully. They account for approximately one third of all patients seen on the ward and in out patient clinics of a busy paediatric service. Neural Tube Disorders such as hydrocephalus, is one of the most serious congenital anomaly that should be detected earlier, but many cases came at a very late stage that brought experts to a difficult situation in treating the case and counseling the parents. Congenital malformations of the kidney and lower urinary tract are common causes of renal failure in infants and young children. Some considerations of how mutations alter gene expression during development to cause human urinary tract malformations. Ambiguous genitalia as one of prominent endocrinological cases many times could not be solved quickly, because of late recognition by the parents and cultural background is a complex consideration. Early detection and monitoring during the process of growth and development is mandatory to be done by every health personnel. A teamwork to deal with either correction or conservative treatment is needed to prevent the abnormal behaviour during adulthood of the child. Some ethical problems should be considered, it is a need to involve a solid multidisciplinary team in decision making and genetic counseling. At Airlangga University School of Medicine and Dr. Soetomo Academic Hospital a Study group on Growth and Development of Children have been working to establish an interdisciplinary teamwork to solve ethical problems related to congenital disorders and other Growth and Developmental disorders.

#### **14.3 Issues in recruiting members of IRB on embryo research in Korea**

**Bang-Ook Jun**, President, Korean Bioethics Association

The Korean Bioethics and Biosafety Act requires embryo research institutions to set up their own institutional review board (IRB), consisting of more than or equal to 5 persons. The Act also asks for including at least two mandatory members, one who is not engaged in the fields of life science or medical science and the other who does not belong to the institution.

Since the IRBs were established in 2005, they did not receive general attention until Hwang's stem cell research became internationally scandalized. While arguing Hwang's research misconduct, it was also revealed that the IRBs that reviewed his research did not follow any legal procedure. Although Hwang's scandal provided an opportunity to improve the IRB operation in Korea, it is not clear whether the IRB fully represents its original *raison d'être* or not.

Therefore, this study aims to analyze current conditions and tries to find out some plausible problems of the IRB, largely focusing on recruiting members. Some data provided by the Ministry of Health, Welfare, and Family Affairs show that the IRB members are 6.24 persons on average, and embryo producing medical institutions occupy 70.1 percent in total, whereas embryo research institutions and somatic cell embryo clones research institutions represent 27.0 percent and 2.9 percent respectively.

Preliminary results reveal that, among 209 persons recruited from outside, 55.5 percent of them (116 persons) are from medical practitioners and life scientists. Considering academic environment in Korea, it is very likely that these members are

selected from peer groups in favor of reviewed research. The analysis also indicates that 71.6 percent of nonprofessional members are employees of the institution, which makes it hard to expect them to review a research proposal without any conflict of interest. Therefore, although most institutions seem to follow the law at first glance, current conditions of the IRBs in Korea are still far from what the law originally intended to achieve.

## **15. Ethics and biotechnology**

### **15.1 Ethical Concerns and Risk Perception Associated with Different Applications of Modern Biotechnology Applications in Malaysia**

**Latifah Amin<sup>1</sup>,**

**Jamaluddin Md. Jahi<sup>2</sup>, Abd Rahim Md. Nor<sup>2</sup>, Mohamad Osman<sup>3</sup> and**

**Nor Muhammad Mahadi<sup>4</sup>**

<sup>1</sup>Centre for General Studies, <sup>2</sup>Faculty of Social Sciences & Humanities, <sup>3</sup>Faculty of Science and Technology, Universiti Kebangsaan Malaysi, 43600 UKM, Bangi, Selangor Darul Ehsan, Malaysia, <sup>4</sup>Malaysia Genome Institute, Heliks Emas Block, UKM-MTDC, Smart Technology Centre, 43600 UKM, Bangi, Selangor Darul Ehsan, Malaysia

Biotechnology has been identified as one of the five core technologies that will accelerate Malaysia's transformation into a highly industrialized nation by 2020. The future development and commercialization of modern biotechnology products in Malaysia depends heavily on public acceptance. Consumer acceptance of modern biotechnology is driven by a number of inter-related factors. Of the many variables studied by earlier researchers, it was found that moral acceptability was an important predictor or sometimes referred to as 'a veto' of support for biotechnology. The purpose of this paper is to examine how the Malaysian public in the Klang Valley region perceive the ethical aspects of three applications of modern biotechnology and to study the relationship between moral concern and other risk perception determinants. Results of the survey showed that GM soybean and GM insulin which involved inter-species gene transfer was perceived as having higher moral concern compared to GM palm oil which only involved the modification of its own genes. Although moral concerns played as a "veto" role in determining the encouragement of modern biotechnology applications, its role has to be delicately balanced with other risk determinants predominantly perceived benefit. GM palm oil (reduced saturated fat content) ranked the highest in perceived benefit, transforming it into being the most encouraged. Next, GM insulin which has clear direct benefit to consumers was more encouraged compared to herbicide resistant GM soybean.

### **15.2 Ethics of commercialization of individualism and public health in genomics: some reflections on nutrigenomics**

**Mina Bhardwaj**, Cesagen, Cardiff University, UK

Food and medicine are intrinsically linked to health and have a long history of common origin for sustenance and well being. In some cultures, particularly in the field of traditional medicine, such as in Chinese medicine and Ayurveda, historically the focus has been on the medicinal properties of food. The developments in genomics has somewhat brought back this concept with an additional association of genomics, and particularly with promissory claims on personalized health based on individual genome profiling. The hype of personalization on one hand has increased expectations; parallel to it is that health is also becoming an increasing source of anxiety and confusion even for 'worried well' people. The kinds of foods and the ways we eat symbolize our individualism, social and cultural values to certain extent. Nutrigenomics raises concerns in terms of choices, images of food, the distinction between food and drugs and at philosophical level body and lifestyle.



The ethics debates on personalization have recognized that 'more individualized the promises, more collective action is needed'. The term collective is open to be interpreted, from research, policy, academia, and stakeholders perspectives. However, the issues raised in this paper focus on 'food' in relation to 'public health' which is considered as a collective term with complex implications for health management. The paper would trace how the concept of individual and public health is used in the commercialization and development of different kinds of health based foods. The paper will present initial results and ethical interpretations of a small study on the commercialization of health-foods; and how nutrigenomics may influence the current trends towards personalization of health.

## **16. Ethics and Disasters**

### **16.1 Panel on Ethical Issues in Post Disaster Research: Taking the Agenda Forwards**

The Working Group on Disaster Research and Ethics (WGDRE) for the Asian Bioethics Conference 2008: Aasim Ahmad, Aamir Jafarey, Darryl Macer, Sandya Srinivasan, Nandini Kumar, Sriyakanthi Beneragama, Chandrani Jayasekera, Saratha Edirisingha, Dananjaya Waidyaratne, Sisira Siribaddana, Leonardo Catro, Sutaryo, Athula Sumathipala

#### **Ethical Issues in Post Disaster Research: Taking the Agenda Forwards**

Asia has witnessed quite a few large scale disasters in the last few years. Along with humanitarian aid, there have been concerns that research has been carried out without in these disaster struck areas without proper scientific rigor or ethical standards.

Even under normal circumstances informed consent alone is not protective enough, because of the asymmetry in knowledge and authority between researchers and participants, particularly in the developing world. When research is combined with aid, relief and at times clinical care, there is great possibility of undue inducement for participation in this vulnerable population. Additional safe guards are needed to protect the vulnerable as well as to facilitate high quality research given the nature and the scale of the disaster and the complexities of the issues related to healthcare and research.

A Working Group for Disaster Research and Ethics (WGDRE) met in Colombo on 15<sup>th</sup> and 16<sup>th</sup> January 2007 to draft a consensus statement agreed among the participants. The draft guidelines have since been widely circulated to gain international feedback.

The WGDRE proposes to present a panel of 4 to 5 speakers at the ABC. The speakers will highlight the various ethical issues in conducting research in disaster struck areas. The panel will also present the draft guidelines on research in disaster situations after having obtained feedback from key bioethicists as well as a wider group of stakeholders.

### **16.2 Arsenic contamination of groundwater in Asia: health implications and ethical perspectives**

**Abhik Gupta**, PhD, Dept. of Ecology & Environmental Science, Assam University, Silchar – 788011, India

Arsenic contamination of groundwater has emerged as an important environmental problem with serious health implications in extensive areas of several Asian countries such as India, Bangladesh, Taiwan, P.R. China, Inner Mongolia, Laos, Cambodia, Thailand, Iran, Nepal, Vietnam, Myanmar, Sri Lanka and Pakistan. In India and Bangladesh, it appears that a large portion of the Ganga-Meghna-Brahmaputra (GMB) plain with a geographical area of 569749 km<sup>2</sup> and a dense population of over 500 million may be at risk from groundwater arsenic contamination. Traditionally

groundwater was never used for drinking purposes in these areas except that in shallow dug wells. As the region receives high rainfall during monsoon and have a multitude of freshwater ecosystems like rivers, ponds, tanks and wetlands that store this water, people tapped surface water sources for drinking, cooking and other household chores. However, with increase in population density and poor sanitation, most of the surface water sources became increasingly contaminated with pathogenic organisms, leading to high incidences of water-borne enteric diseases like diarrhea. The governments and the international agencies, therefore, recommended use of groundwater, which was visualized as "safe", being largely free from pathogenic contamination. Consequently, numerous "tubewells" (borewells) were drilled in West Bengal and Bangladesh. Although the people were initially reluctant to change over to groundwater, especially because in many places it had a high iron content that imparted bad odour, taste and colour, they gradually got used to it and started using it on a large scale. Unfortunately, nobody could predict the presence of arsenic and starting with late 1970s and early 1980s, the problem was detected in one area after another, with devastating consequences for a large number of users. More and more people started showing visible symptoms of arsenicosis including dermal keratosis, carcinoma and even internal malignant tumours. The problem is far from resolved till date, and groundwater analysis is leading to detection of arsenic beyond permissible levels in newer areas. This paper outlines the genesis and spread of the problem and raises several ethical questions on the choice of drinking water sources, setting of arsenic standards, mitigation strategies, and treatment and rehabilitation of affected people with special reference to the arsenic-contaminated Indian states.

### **16.3 Ethical Issues in Disaster Research and Management**

**Konstantin G. Gurevich**, MD, PhD, DrSci, Prof; and

**Ekaterina G. Fabrikant**, MD, Moscow State University of Medicine and Dentistry (MSUMD), Russia

When emergency humanitarian or medical care is provided abroad, conflict situations are quite frequent. We interviewed 36 employees of the Tsentrosapas Aeromobile Force of the Russian Ministry of Emergency Situations. The average age of the interviewed employees was  $36 \pm 8$ , average work experience in the Russian Ministry of Emergency Situations was  $11 \pm 4$  years, average number of flights abroad  $5 \pm 4$ . 34 interviewed employees worked as rescuers, 2 as doctors.

Most frequently it was difficult to work with local people because of the absence of translators or because of the impossibility to understand the local dialect. Quite often the Russian rescuers had to face difficulties caused by racial differences with local people. As often the interviewed employees faced religious conflicts. Usually religion-related problems arose in Muslim countries.

Such conflict situations reduced the efficiency of the rescuers' work. In some cases medical care was rejected, sometimes local people wholly rejected any interference and sometimes any aid at all, apart from emergency medical treatment.

The rescuers tried to find different ways of solving the conflict situations. Most of them gave explanations to relatives or to the victims themselves. Fewer employees continued their work in spite of the conflicts or tried to make an agreement with the local religious or spiritual leaders, or with the elders. At the same time most interviewed employees doubt if they found the right solution in the conflict situation.

### **16.4 Post Tsunami Rehabilitation in Aceh: issues on health management of barrack**

**Zinatul Hayati** MD, PhD and

**Saifuddin Bantasyam**, MD, Faculty of Medicine, University of Syah Kuala, Banda Aceh, Indonesia

The government decides to build the temporary shelters (barracks) in amount of 2,160 units to secure victims who survived from the earthquake and tsunami hitting

Aceh on Dec 26, 2004. More than 14,317 families have stayed in barracks spreading on 190 points in Aceh. Many needs should be supplied for them, i.e. food, cloths, the education for children. Nevertheless, the government then is overcome on difficult conditions due to this disaster taking away many medical staffs and hundreds of primary health cares (Puskesmas) with broken facilities and medicines. The building of the barracks generally do not meet the health requirements. On each barracks, the windows are very limited so that the air circulation is also very limited. The water sources (well) and toilets are not sufficient in numbers if compared to the number of the users that it makes the users to keep in queue in a long time. The clean water tanks are also unavailable to supply water sufficiently for daily needs either for bathing or washing of food and cloths. For instance, in barracks in Bakoi, Banda Aceh which are built in amount of 29 units which of each divides into 12 rooms with 4x5 meters in square per-room. Each room is stayed by 1 family comprising of some children even married sons/daughters. While the toilets on the back of barracks are used in together of which is provided for 10 families. In case of 1 family comprises of 4 people meaning that each is used by 40 people. Commonly for bathing and washing, the people make emergency sites in front of rooms. The preparedness of health management is weak and unintegrated leading the barracks users getting risky upon diseases either physical, mental or social. The life density and well arranged barracks has deviated the life norms and ethics of community. The Aceh's disaster insist that that the government must prepare well integrated health management of barracks, supported by enough money, besides looking the social aspects as well as community's psychological in the disaster affected areas.

Keywords: tsunami, barrack, health, management

## **17. Health and Ethics**

### **17.1 Ethics Controversy of Death Choice in Chinese Hospice**

**Lifang Zhaolili**, China Capital Medical University

Since 1980s, Hospice has been developed smoothly and orderly in china. Influenced by Chinese traditional culture, however, there is dilemma in Ethics perspective of death choice and palliative treatment. The mortal patients suffered various shackle because of the effects of traditional Chinese death philosophy, traditional moral and absence of Euthanasia legislation support. We suggest to refine the perception of Hospice in China, reduce the obstacle of traditional thinking, enforce personnel training, increase foundation, and enhance legislation support to improve the quality of Hospice.

### **17.2 Ethics and Obesity: Am I my Obese Brother's Keeper?**

**Leonardo D. de Castro**, PhD, University of the Philippines

According to various accounts, obesity has reached epidemic proportions – the situation is so bad that if it is not properly managed, we can expect to be faced with a global 'public health disaster'. Public health experts and policy makers are calling on people to change lifestyles, shift to low-cholesterol diets and acquire a healthy taste. In the face of growing worries about the possible health outcomes of obesity for individuals, proposed remedies and management regimens are becoming more paternalistic, restrictive and intrusive. The trend raises concerns about autonomy in food selection, lifestyle choices, and other behavioural options.

## **18. Panel on Islamic Bioethics**

### **18.1 Islamic bioethics and its dilemma**

**Ahmed Binsumeit Khitamy Badawy**, Chief Biomedical Technologist, Dept. of Microbiology, College of Medicine & Health Sciences, Sultan Qaboos University, Oman

One of the hottest issues in medicine these days is the subject of bioethics, morality and liability. In Islam, the medical bioethics is an independent branch of philosophy where bioethical decision-making is carried out within the framework of values derived from broad ethical teachings of the Qur'an and the tradition of Prophet Muhammad, and thus relies on the interpretation of the Islamic law. The International Fiqhi Academy under the umbrella of Organization of Islamic Conference (OIC) holds annual workshops where renowned Muslim scholars, jurists, physicians, intellectuals, researchers, humanities and *muftis* from all over the Muslim world meet to discuss bioethical issues and come up with Islamic guidelines and *Fatwas*. Hence, more than any other professional, the Muslim medical doctor is confronted more frequently with issues that demand Islamic legitimacy of his actions. He is always confronted with controversial ethical issues which he is supposed to decide upon: e.g. embryonic stem cell research, fetal rights with respect to the woman's autonomy, "therapeutic cloning", opposite sex hormonal injections, transsexual operations, plastic cosmetic surgery, extra-uterine conception, etc. These recurrent controversial and problematic issues sometimes puts a Muslim doctor in dilemma between the current medico-legal issues which could contradict the Islamic guidelines and principles.

In this paper two views will be explored from Islamic perspective. The first case is of a pregnant woman intending to make a decision or acting in a manner that may be detrimental to the health and well-being of her fetus. What is the Islamic position with regard to the woman's autonomy, "fetal rights" or the fetus as a patient?

The second case is the Islamic position regarding stem cell research that promises a wide variety of benefits for humanity, adult stem cell research and the so called therapeutic cloning and the reproductive cloning.

### **18.2 Maqhasid Syaria as basic reasoning on implementing syaria in bioethics** **Munawar Ahmad**, UIN Sunan Kalijaga, Yogyakarta, Indonesia

Applying bioethics, Muslims scholars have a set of values used as a reference and consideration pointers, from *dharar*, *mashlahah*, *maqashd*, to *mashaqqat*. Words from *dharar*, *mashlahah*, *maqashd*, to *mashaqqat* has a single definition of a virtue. The word "virtue" refers to an action both orally and practically which has a positive tendency to humankind itself or in short means human's welfare and virtues. Still there is a debate on who creates a 'useful' standard. The essence of virtues is relatively considered as a gracious aspect for those who execute and accept it. The 'useful' standard contained in itself a pragmatic-scale aspect, from individual, community to the wholeness of human beings.

In *Ushul Fiqh*, it is comprehensively explained the term '*Mashlahah*'. The Asya'ariahs opposed strictly *mashlahah* concept that has a causality to God's existence, meaning they rejected God's authority limitation. This explained the core that the group has an opposition on *maslahah* concept as a *illat al syar'i*, but as a God's grace. To Mu'tazilah, who proclaimed that God has a duty to execute virtues, *mashlahah* is identical to *illat al syar'i* (the essence of syaria). This concept is basically a consideration and method on syaria. Law subject indicates that human's free action should be related to human itself, if it is legally responsible on the action. Obedience to God is based on human's will, therefore an order should be responsible on his behavior. Finally, the *mashlahah* concept should be considered as motive and purpose of *Syaria*, especially the application *syaria* in bio-engineering cases, such as cloning, euthanasia, and abortion.

Keywords : *Mashlahah*, *The essence of syaria*, bio-engineering

### **18.3 The need of fatwa for contemporary medical issues: a moslem medical practitioner's view**

**M. Sajid Darmadipura**, Bioethics and Humanities Unit, Airlangga University, School of Medicine, Surabaya, Indonesia

Indonesia with 88% of its population are Moslem and ca. 70% are devoted to *syareeat*, needs fatwa as a firm basis for the medical practitioners and scientists. While *syareeat* is based on the Koran and *Hadeeth*, there is an open way to state the law on the new medical issues. The Ulama have the authority to do *ijtihad*.

Bioethics alone may contradict the *syareeat*. National law, cultures, local beliefs may effect the fatwa produced. It is unique that there are several Islamic organizations, each with its own body of fatwa. To note some we have The *Bahtsul Masaail*, *Majlis Tarjih*, *Dewan Hisbah*, and two other bodies associated to the government i.e. The MUI, and The MPKS. The problem is that the fatwa produced may differ from one to the other on the same issue. It is proposed therefore that only one authoritative body including all the principal Islamic organizations may produce fatwa, an intense communication should be built among the body, the medical profession, and the government.

Keywords:

contemporary medical issues, bioethics, Islamic law, fatwa.

#### **18.4 The Flood and Human-Environment Relation in Post-Disaster Muslim Community: An Assessment for Sustainability**

**Fuad Faizi**, Center for the Study of Islam and Social Transformation, State Islamic University (UIN) Sunan Kalijaga, Yogyakarta, Indonesia

In the context of post-disaster community, this research questioned and reviewed the local sustainability of particular Muslim community after the flood. In so doing, the perceptions of the human-environment relation were utilized as, (1) a way of comprehending their environmental consciousness. At the same time, the participants' experiences of the flood (as a natural phenomenon) and their search for solutions were discussed as (2) a way of developing a basis for assessing the local sustainability.

It was found that, after the recent flood, the local community had increasing concern towards forests preservation as a natural form of security from floods. More than that, there was a significant ethical shift of community in perceiving the welfare of the forest after the flood.

It was also identified that the anthropocentric worldview was greatly underlying the way the participants perceive their relationship with their immediate forests. The forests were seen as extrinsically valuable to sustain the amount of local welfare, whether from economic benefits or security from future floods.

In conclusion, participants' perception of causes for the flood, and their search for solutions, were classified into three categories: Acts of **God**, **Human** and **Nature**. The assessment for sustainability was performed by evaluating the impacts of each category on future generations. From the assessment, it was considered that the belief that the flood was an act of God was more jeopardizing than the belief of Human or Nature causes. Acts of God might very likely increase the vulnerability of local people as its fatalistic characteristic was regarded as disempowering the efforts of disaster mitigation, preparedness, and risks reductions.

#### **18.5 Bioethics in Iran: A Two-Decade Report**

**Bagher Larijani**, MD, Chancellor, Tehran University of Medical Sciences, Iran  
[abstract not available]

### **19. Ethics Review Committees**

#### **19.1 Exploring the Structure, Processes and Principles of Ethics Review Committees**

**Sriyakanthi Beneragama and  
Yin Thet Nu Oo, Sri Lanka**

The primary objective of this study was to understand the structure and function of human research ethics committees as well as the processes of application, approval and monitoring research. The increase in the numbers and scope of biomedical research around the world has highlighted the importance of effective systems and processes of ethical review of research projects. A review of existing literature with regard to policies and practices in Australia revealed the strengths and limitations of the system and provide some suggestions for improvement. The study was qualitative in nature. Observation visits at three participating health research ethics committee (HREC) meetings, as well as interviews with specific members form the basis for the findings reported. HRECs in Australia are set up mainly to fulfil the requirements of the National Health and Medical Research Council (NHMRC), which is the primary funding body for research in Australia. All HRECs follow the guidelines laid down by the National Statement on Research Involving Humans, mandated by the NHMRC. The main function of the HRECs is to protect the welfare and rights of the participants of the research as well as promote advancement in scientific knowledge. The study showed that HRECs are both committed as well as skilled in the area of ethical review. This includes review of ethical as well as scientific validity. However the preponderance of scientific/medical professionals on many HRECs results in greater attention to the scientific aspects of a study as compared to the ethical aspects. This is compounded by the lack of time and other resources that can allow greater knowledge and skills in the practice of ethical review. Other issues that the study identified as requiring further consideration include processes of informed consent, composition of HRECs, compensation for members and monitoring systems.

**19.2 Developing a Capacity-building Approach to Ethical Review in Central Asia**

**Bakhyt Sarymsakova, MD,** Central Asian Centre on Health Research for Development, National Research Center for Mother and Child Health, Astana, Kazakhstan

Kazakhstan and other Central Asian republics (Kyrgyzstan, Tajikistan, Uzbekistan) urgently need to improve their health care systems in order to address the complex health problems affecting the population in the region. The countries currently in the process of health sector reform and development. Health research for development is a key issue that is central to this process. Biomedical research in this region is now developing at a rapid pace. Still, the status of health research in Kazakhstan and the region is far from optimal. International health research efforts are being established in the region, mostly through NGOs (on health equity, food and nutrition), multinational organizations like the WHO (infectious diseases, sentinel systems) and multi-national pharmaceutical companies.

Alongside this rapid and important growth of health research, however, we find a near absence of well defined and locally accepted ethical standards, norms, practices and regulations. Even a country as large and important as Kazakhstan has limited capacity and only a few institutional ethical review mechanisms. Among the challenges are a lack of experienced IRBs, a lack of comprehensive training programs, limited expertise, limited experience with implementing informed consent, and few resources.

The ministries of health in the region are interested to promote sound research, but they lack the know-how and capacity for developing state-of-the-art national ethical review systems. Although there is consensus across government, universities, and research institutions that institutional review boards and ethical review expertise need to be developed, there is little guidance on the implementation of the review procedures or the development of local expertise. In particular, the existing human

capacity and training materials are simply insufficient to address these challenges in the short term, or to provide a long term perspective on their solutions.

There is a need for a "critical mass" of experts who are trained and can sustain the work of human subjects' protections, research ethics, and related disciplines in their respective institutions. In order to meet this need Central Asian centre on Health Research for Development in partnership with different organizations is developing a long-term program of Capacity Development on Ethical Review for Central Asia. This program is intended to develop and maintain such a "critical mass", one that will allow us to implement international standards for human subjects' protections and research ethics in Kazakhstan and Central Asia as a whole.

This program consists of several components and steps:

- a. An analysis will be done of existing modules, courses and teaching materials on international research ethics and Ethics Committee administration available in Russian and local languages (Kazakh, Tajik, Uzbek and Kyrgyz);
- b. A needs analysis will be undertaken, i.e. a survey of training needs using questionnaires and focus group discussions, to identify gaps, actual topics, and target groups for training;
- c. Goal setting (teaching aims and objectives) and syllabus design will be done jointly with representatives from different research organizations and (current and potential) members of Ethics Committees; partners from the region are included in this process;
- d. Training material development and translation into Russian and local languages;
- e. Training of trainers
- f. Training and workshop on different topics on bioethics and ethical review
- g. Establishment of Learning-Recourse Center for region.

A partnership agreement involving the heads of research ethics committees will be developed. At this stage, Kazakhstan, Tajikistan, and Kyrgyzstan support this program

There is clearly much to be learned from others who have been active in this field. It would be useful to have international Advisory Council which can advise the Central Asia group through electronic interaction or joint meetings. Central Asian Centre will need external expertise, advise and teaching contribution in developing and running ethics educational program to an acceptable international standard.

### **19.3 Uzbeki doctors and confidentiality issues**

**Feruz Zagirtdinova**, DSc, Associate Professor, Ethics and Aesthetics Department, National University of Republic of Uzbekistan.

Transformation of social and medical model of development and commercialization of healthcare system, contributed to the rapid transition of medical and public health system in Uzbekistan to the issues of surrounding informed consent. There are no evidence based research studies in the countries of the Former Soviet Union (FSU) on the issues of doctor patient interactions. The report outlines the analysis of survey results, where a group of doctors responded to series of questions on patient information, informed consent, and confidentiality. Findings of the study can be partially applied to other republics of Central Asia when one considers the similarities of ethnic origin, cultural identity, and approximately the same level of social and economical development. Despite the fact that confidentiality and hiding the diagnosis from the patient used to be a norm of ethical conduct, doctors and patients in Uzbekistan are spontaneously reverting to the new norms of informed consent. Legal basis for the norms of informed consent are becoming available. The ethical norm of confidentiality, previously viewed as hiding diagnosis from the patient, underwent the process of modernization. Currently, this term means keeping confidentiality about patient information, but not FROM the patient. The situation has

been changed by market economy model of societal development, and ideology of patient rights, leading to changing values in society and growing concern of citizens about their own health. Market is a great lever changing the ethical priorities and is slowly changing doctors' perceptions about their confidentiality believes.

#### **19.4 National Bioethics Committee in Tajikistan**

**Firuz Nasyrova**, PhD, Bioethics Committee under Tajik Academy of Sciences (BC TAS), Professor, Institute of Plant Physiology and Genetics of the Tajik Academy of Sciences (IPPG TAS), Dushanbe, Tajikistan

The main scientific work in promotion of ethics in science and technology in Tajikistan is provided by the Tajik Academy of Sciences. Ethical aspects of health research are under control of the Ministry of Health of the Tajikistan and Tajik State Medical University named after Abuali ibn Sino. Besides them we have some professional organizations promotion science and technology education in various institutes. In 2004 the Medical Ethics Committee was established in the Ministry of Health of Tajikistan. Head of the MEC is Professor Ahrorova Zuhra. MEC consist of the seven members – leading specialists in ophthalmology, dermatology, gynecology, psychology, path physiology and two lawyers. At this moment the MEC has been created and ratified the important and adapted documents, as Statement of MEC; Clinical Practice and Laboratory Practice rules. Also MEC has been prepared draft of the Law on Protection of human rights and dignity, which now is under consideration of the Government of Tajikistan. Medical doctor's inquiry which was done by MEC has been showed very weak knowledge of patient and doctors rights. So, the organization of trainings and study seminars of doctors is very important for Tajikistan needs and for MEC particularly. To raise awareness of Bioethics in Tajikistan the next work is conducted by BC members:

1. In 2007 have been established Bioethical Committee under Tajik Academy of Sciences to promote ethic issues in the country at whole. The BC providing research on three directions: modern biotechnologies, ethical education and ethical aspects of health.
2. Preparing of educational material for teaching of Ethics as discipline in the Universities of Tajikistan, such as study guide, educational books, etc. Keeping in mind the local oriental mentalities of Tajiks it should be include into the university or school discipline curriculum "Ethics" traditional customs and norms of Islamic religion behavior (shariat).
3. Elaboration of manuals for ethic expertise of scientific research.
4. Carrying out of seminars among medical doctors and biologists on their rights, civil rights and patient rights in cause of new technologies in modern biology.

Members of working group of bioethics in Central Asian region are working together in policy formulation and rule-making.

#### **19.5 Ethical Review of Research: Experience of a "National" Review Committee**

**Anoja I. Fernando**, BA, MBBS, FRCP, Faculty of Medicine, University of Ruhuna, Sri Lanka

Ethics Committees to review research protocols were first established in Sri Lanka in the late 1970s, at the two oldest medical faculties in Colombo and Kandy. By 2007, there were twenty committees that together form the Forum for Ethical Review Committees in Sri Lanka (FERCSL), working towards capacity building and quality improvement of Ethics Committees in the country. The Sri Lanka Medical Association (SLMA) is the oldest and the most prestigious of all the professional associations related to medicine in Sri Lanka, attracting the largest number of research papers at its annual academic sessions. An Ethical Review Committee (ERC) was established in the SLMA in 1998, in order to help researchers not belonging to the medical faculties. In the absence of a "National" Research Ethics Committee, the SLMA ERC comes



closest to one. This paper describes the experience of the Ethical Review Committee of the Sri Lanka Medical Association, highlighting some of the problems and constraints faced by the committee, and assessing its performance during the nine years of its existence. The paper also identifies some of the common ethical issues that need to be addressed by research ethics committees in Sri Lanka where biomedical research is not adequately covered by national ethical guidelines or regulations.

### **19.6 Institutional Review Boards, Worldwide**

**Jayapaul Azariah**, PhD, President, Asian Bioethics Association

The concept of Bioethical Committees was evolved due to mistreatment of human beings during the periods of war as well as to find a medical treatment-cure for syphilis. Bioethics committee addresses ethical and moral issues raised due to the advancement of science and technology in the fields of Life Sciences, Biosciences and Medical Sciences. There is also a need to develop a mechanism to address ethically burdened issues and provide an impetus to governments and policy makers for ethical governance. Such a body which provides such logistic mechanism goes by the umbrella term of Bioethics Committees. Bioethics Committee has taken various dimensions such as Institutional Review Boards (IRB), Research Ethics Committee, National Bioethics Advisory Committee, Policy-making Bioethics Committee, Hospital and Health Care Bioethics Committee and Medical-Health professional bioethics Committees. An analysis has been made to record the number of countries which have IRBs –out of a total of 245 countries. A few countries have more than one hundred IRBs and about 99 countries have no bioethical committees. Special attention has been paid to Indian national and regional scenarios. The need to address upcoming biotechnological issues in Asian countries, in the context of IRBs, has been pointed out. The importance of recognizing medical ethics and bioethics as academic disciplines has been pointed out.

### **19.7 Guidelines For Embryonic Stem Cell Research at Sindh Institute of Urology and Transplantation (SIUT)**

**Tashmeem Razzaki**. Professor Molecular Biology/Biotechnology, Sindh Institute of Urology and Transplantation (SIUT), Karachi-74200, Pakistan

SIUT is a tertiary care public sector hospital which provides absolutely free comprehensive care to hundreds of thousands of patients afflicted with kidney, liver and G.I. diseases from all over the country. It has recently been awarded a grant to establish a Stem Cell Research Laboratory for Kidney and Related Diseases. In view of importance of human embryonic and adult stem cells for research and therapy we have developed institutional guidelines. While we have benefited from guidelines developed in the West and in India we have been cognizant of the differences and similarities between Islam and other religions with reference to ensoulment and its timing. Amongst other things the guidelines aim to:

- Protect the rights and privacy of donors&/ patients
- Compliance with GMP and GLP
- Participation of members of c\*ivil society\* particularly lawyers to actively ensure compliance with ethical norms and highest standards of professional integrity at all levels of procurement of biological materials and subsequent processing and storage for research&/therapy.

## **20. *Panel on The Implementation of ELSI Policy in Biobank Development and Ethical Governance of Innovative Medical Research***

After a long march in biomedical research embarked from the completion of Human Genome Project, the biomedical research of various institutes are now competing for the harvest through the positioning efforts to include each of their inventions in the value chain of new biomedical industries. Taking the human materials as the "raw materials" for industry development purpose has been, by essence, a convergence of humanity and materialism. Enabled by the capital market power, more and more market driven biomedical researches are now reaching the clinical trial stage. Facing the challenge of Darwinism, not only the major medicine development corporation, but also the research supporting institutes positioning somewhere throughout the whole biomedical related value chain are competing for probably the only champion in such a knowledge based market. In turns, the long lasting, high risky and serious competition industrial features of maturing biomedical market increase the moral risk of the researcher and the institutes and bring up the new issues concerning the effectiveness of ethics review system.

First of all, it's the evolving speed of new biomedical technology that affect the effectiveness and/or efficiency of the contemporary IRB system. The government and scientists tend to back up the industrial development policy and treat most of the ELIS review in slow move as the barriers to the welfare goals. Therefore, this symposium will start from a deliberation regarding the exploration of ideological conflict in different disciplinary methodologies. In the paper "**The Communication of Law & Science in Innovative Medical Research,**" the need and the way of cross-disciplinary communication will be encouraged.

Also, it's believable that the dual status of a physician who conducts a biomedical trial in a university operating hospital will confuse the regulators the legal relationship between the physician and the patient or subject. In turns, said physician's obligation to inform becomes vague. This is especially true, when the case in dispute is a biomedicine related clinical trial. Should we take the physician as a traditional medical doctor, or, just a researcher? What does the context of inform should be? Could a physician be capable of completing the duty of inform? How well a patient and/or subject be able to understand the context of inform regarding the uncertain risk and profound function of the biomaterials?

In this symposium, two papers will be presented, in this regard, to introduce the recent development in China, especially from the legal and ethical viewpoints. One is titled by "**The Legal Issues Concerning Biomedical Research in China**" and the other one is "**The Contemporary Medical Ethics Governance and Related Issues in China**"

In additions, the recent progress regarding the bioinformatics technology cast even more impacts on the ELSI development side. The global trend in developing variety types of genetic database; or, more accurately the biobank can be the most extreme case to be studied.

A Biobank is the one aims to collect the DNA of a large group of people on the population base and track their health and lifestyle for at least ten years. It's hoped that the information collected, containing the secrets of how genes and environmental factors conspire to make us ill, will benefit the society in variable ways, including a new generation of treatments that show in advance those most vulnerable and the preventive measures they should take to avoid getting ill in the first place. However, the involvement of large scale population base gene data collection also triggered out serious ethical, legal and social concerns. In turns, an innovative Ethical & Legal Governance Framework becomes necessary, so does the public consultation/communication. In early 2005, the creation of "Taiwan Biobank" has been included as a part of Taiwan's strategic development in promoting herself as an island of biomedicine.

In this symposium, the special ELSI planning of Taiwan Biobank will be briefly introduced and/or reviewed, and the focus will be placed on the special arrangement to provide a mechanism of group consent not in conflict with normal ethic principles. One of the paper "**Structuring Group Consent Mechanisms for Large-Scale Biobanks with Community Building and Advancing Health Literacy**" will be

addressed for the purpose. Also, the special concern regarding the social citizenship of indigenous people and the protection of their fundamental right imposed by Constitution will be highlighted in the paper "**Advocating Social Citizenship & Fundamental Right Protection for Indigenous Peoples in the Genomic Era: A Taiwan Experience**" as well.

As a whole, when biomedicine development reach the market, variety types of the interests laid behind the scene awaiting for the harvests would conflict with each other and confuse the integrity of so called "Common Goods" and/or "Social Welfare." Right at the front end of the market, a biomedical researcher function more like an venturer trying to explore a human treasure. On the other hand, the ELSI researchers tend to be taken as the gate keeper trying to safeguard the domain welfare and set up the entrance rules. It's our belief that not until both sides find the way to communicate with each other faithfully, and not until the rules are sound enough to be effectively enforced, people will all suffer and the technology fail the welfare goals, too. These also tell the reason how this symposium got its topic.

**The Communication of Law and Science in Innovative Medical Research**

FAN, Chien Te, Professor of Law & Director; Bioethics and Law Center, National Tsing Hua University, Taiwan

CHEN, Ju Yin, Assistant Professor, Law school, Hsuan Chuang University

**Structuring Group Consent Mechanisms for Large-Scale Biobanks with Community Building and Advancing Health Literacy**

TSAI, Duu Jian, Professor & Director; Graduate Institute of Humanities in Medicine

**Advocating Social Citizenship & Fundamental Right Protection for Indigenous Peoples in the Genomic Era: A Taiwan Experience**

CHEN, Yu Chia, Office Director of SEA

**The Legal Issues Concerning Biomedical Research in China**

**Jiao Hongtao**, Associate Professor of Law & Sub Director; Institute of Science and Technology Law, Law School, Huazhong University of Science and Technology, Wuhan, 430074, P.R. China.

**The Contemporary Medical Ethics Governance and Related Issues in China**

**Wu Chunyan**, Senior Lecturer & Office Director; Medical Ethics and Law Center, College of Law, Huazhong University of Science and Technology, Wuhan, 430074, P.R. China.

## **21. Medical Ethics Education**

### **21.1 Teaching Biomedical Ethics to the Undergraduates at a Medical University in Pakistan – A One Year Experience**

**Faisal Ghani Siddiqui**, MBBS, FCPS, PGD-Bioethics, Assistant Professor of Surgery, Liaquat University of Medical & Health Sciences, Jamshoro, Pakistan

Biomedical Ethics has always been ignored in medical science teaching in the third world countries including Pakistan. No formal undergraduate teaching exists in any of the Medical college or University in Pakistan despite clear instructions and guidelines from the Pakistan Medical & Dental Council (PMDC), the licensing body of the country. In this backdrop, the Liaquat University of Medical & Health Sciences, Jamshoro, a public sector Medical University took a giant step and introduced Biomedical Ethics in its curriculum for the first year MBBS students in October 2007. The formal teaching in the discipline started from November, 2007. This study has been conducted to assess the acceptance of this relatively new subject for both the medical students and the faculty of the University. It also assesses the success of this experiment by evaluating any change in behavior of the first year medical students. The pitfalls and difficulties encountered have also been discussed.

### **21.2 Prima-faciism in problem-based learning for medical students in Indonesia**

**Agus Purwadianto**, dr, SpF, PhD, Faculty of Medicine, University of Indonesia

Medical ethics teaching can not be separated from bioethics. In all medical schools throughout Indonesia, we use principle-based ethics model to cognitively approach medical ethics teaching. The modified principlism - which was initiated by the University of Indonesia School of Medicine since 1995 - is widely being used as one Indonesian model after the Directorate General of Higher Education, Ministry of National Education provided the TOT for the 7<sup>th</sup> area of competency of medical doctor. To achieve competencies in Medical Professionalism (the ultimate integrity of Medical Ethics, Medical Law, and Health & Human Rights) Indonesia use the Dr. Tenar's hypothetical case as a tool, combined with each principle characteristic's check list implementing the prima facie. Competent tutors in each medical school give this module to the freshmen students as the way to enhance their creativity thinking capacity while they have early clinical exposures. This "Tenar's module" uses the specification as well as balancing of the principles: beneficence, non-maleficence, autonomy and justice. They also learn prima facie concept using the simple quadrant of principles on the whole to select the most relevant one via the Tenar's trigger's case without difficulty. After elaborating each principles using their own cases consecutively via group discussions, the students should analyze Tenar's case until they can achieve the prima facie's principle i.e. "the change into" concept from one principle to the other by reason of their relevant and reasonable arguments. Our method can help them analyze the WHO SEARO's raw materials of ethical cases as their take-home exams, as well as their competencies to analyze what rule or principle is behind each article of the Indonesian Medical Ethics Code. Prima faciism of principle based ethics is a relevant method for enhancing student's reasoning analysis of moral justification.

Keywords: prima facie, principle based ethics, specification, medical ethics' teaching.

### **21.3 Teaching Virtue through Role Models in Medical School**

**Sintak Gunawan**, MD, MA in Applied Ethics, Indonesia

One of the most important criticisms to our medical profession today is the statement that physicians are no longer humanist. Our technical skill is sophisticated, but in its application we are said to be insensitive to human values. The criticism is especially pointed to medical educators; those who should take responsibility in teaching human values to medical students. The situation in medical school such as recent trend to shorten medical education, the rigidity of current curricula and testing methods may result in dehumanization of the students. What is virtue? What are the virtues? Can they be taught? How? These are still the fundamental question since the Socrates period. To answer this question, Socrates said to Meno, we must know what virtue is and, then by what method we should teach it. Virtue is not simply a passion, or a function. For Aristotle's virtue is a state of character which makes a man good and makes him do his own work well. The virtues person is someone we can trust to act habitually in a good way. How about the virtues physician? The virtues physician is the one who has the ability to be a good physician that is a right and good healing action for a particular patient. He has appropriate dispositions, emotions, and sensitivities in a medical care context. There are eight important virtues in medical practice: Fidelity to Trust, Compassion, Phronesis, Justice, Fortitude, Temperance, Integrity, and Self-Effacement. I believe virtue can be taught by the study of ethics, by example, by training, and by practice. The purpose of medical education is to transmit the knowledge, train the skills, and instill values, good characters and behaviors. Medical schools have traditionally depended on good role models as part of an informal curriculum to inculcate professional values, attitudes, and behaviors in students and young doctors. The power of a faculty model to shape behavior for good or evil is enormous. It far exceeds the power of a lecture or course in ethics. Excellent performance as a teacher, researcher, or clinician naturally stimulates the interest of students with some concept of what they would like to become

professionally. The character traits of the faculty model are unconsciously imitated as well. In each of their contacts with students and patients the faculty must exhibit genuine care. One careless action at the bedside will undo hours of lecturing about the dignity of patients. The saddest aspect of professional ethics today is the frequency with which senior and respected teachers have showed and justified such as acts as conflicts of interest, insensitivity to patient's needs, and lack of communication with patient.

Keywords: virtue, physician, medical school, student

## **22. Bioethics Education**

### **22.1 Ecofeminism in Environmental Education: a bioethics education**

**Nurul Kamilati**, M.Pd., M.Ed., Balai Diklat Keagamaan, Semarang, Indonesia

Although environmental education is not a separate subject in the Indonesian curriculum, however some topics in the science curriculum have possibilities to be integrated in the environmental education. The ecofeminism can be implemented into the Indonesian schools using model of inquiry learning approach. The women participation is very important so that they can determine the appropriate topics for them, solve the problems based on their interests and their experience, and do the substantial environmental actions. Moreover, bioethics education can be included in ecofeminism in environmental education through learning science. "When girls learn about health, nutrition, water safety, and sanitation: they develop into women capable of contributing to sustainable development" (United Nations Department of Public Information, 1995). This statement is relevant with the United Nations Conference on the Environment and Development (UNCED) stated in the Rio Declaration: "The full participation of women is essential for the achievement of sustainable development" (UNEP, 1992).

### **22.2 A Faculty Development program in Bioethics to encourage infusion of ethical thinking into teaching activities**

**Dena Hsin-Chen Hsin** and

**Chao-Yu Chen**; Center of Faculty Development, China Medical University

Rapid advances in medical technology make it essential that faculty in medical universities and teaching hospital staffs should take consensus-driven actions on the ethical issues of today's real world. Opportunities and incentives are needed to encourage faculty development and to generate the infusion of ethical thinking into their existing curricula or teaching activities. A pilot program of Bioethics training held by the Center of Faculty Development (CFD) at China Medical University and Taiwan Bioethics Association (TBA) first began in the spring of 2007. This program was designed to cover 12 topics in six full days (48 hours). There are a total of 529 Faculty members from university and affiliated hospital attended the program, 124 of them completed minimal requirements (8 topics in the program), and each get a primary level certification to enable him/her to serve to promote bioethics learning in their department. 97 of these 124 certificated attendances (78%) responded to our questionnaire; out of these 98% attendance strongly welcomed the suggestion to have an advance program in the near future. Although the effectiveness of the program was difficult to evaluate because of its short term nature, according to the feedback of attendance, the morale of the faculty has conspicuously been greatly enhanced by the program and the outcome may be addressed by the attendants' commitment to be developed as a reflective practitioner. With such an experience, we suggest bioethics learning as a regular program for faculty educational development in medical universities. This poster presentation is aimed to share the experience of holding a bioethics program and to describe a model of connecting CFD

and Bioethics Association to educate a wider population of multidisciplinary profession.

Keywords : bioethics, faculty development, multidisciplinary profession, ethical issues

### **22.3 Bioethics Goes To School: module design for high school students in Indonesia**

**Sherly Kurnia Dewi** (Third year student), Biotechnology Faculty, Atma Jaya Indonesia Catholic University, Jalan Jenderal Sudirman 51 Jakarta 12930 Indonesia;

**Elizabeth Citra Wening Prasanti** (fourth year student), English Department Faculty of Education, Atma Jaya Indonesia Catholic University, Jalan Jenderal Sudirman 51 Jakarta 12930 Indonesia

Advancing technology often create dilemma when faced with religion and folk culture. The technology sometimes also can harm the environment. Bioethics is a multidisciplinary knowledge to moderate these problems. Bioethics contains not only biology but also sociology, anthropology, economy, religion, environmental issues, psychology, and philosophy. If someone has studied bioethics for a long time, they can use bioethics to solve problem in a better way, thus it is important for us to study bioethics from an early age. In Indonesia, bioethics is taught in university. In high schools, bioethics is taught in integration with biology. The objective of this module is to teach applied bioethics to high school students. This module has four subjects: basic bioethics, environmental and biodiversity bioethics, design baby experiment issue, and euthanasia. To make the learning exciting, this module contains games, drama, and case study. The design module would be tested to high school students on July.

Keywords: bioethics teaching, high school students

### **22.4 Blogs: alternative media to teach bioethics**

**Eka Sulistiyowati**, MA, lecturer, Faculty of Science and Technology, Islamic State University Sunan Kalijaga (UIN Sunan Kalijaga), Jogjakarta

The rapid development in science and technology on the one hand has increased human health and wealth. On the other hand, it has also increased fear and worries that such development would create ethical dilemmas. Answering to this problem, bioethics comes as a discipline that stands as a bridge between science and ethics. However, it has long been known that bioethics teaching creates confusion, fear, and resentment mainly when students were asked to state their opinions. Therefore, this paper tried to introduce the usefulness of new media that based on the internet to teach bioethics. The media were blogs. The usage of blogs as media to teach bioethics is proliferating. At least, there are 16,000 blogs that talks about bioethics and some of them are mainly dedicated for education. In this paper, I choose to analyze two blogs, those are: The Bioethics Weblog (<http://blog.bioethics.net/>) and Bioethics Discussion Weblog (<http://bioethicsdiscussion.blogspot.com>). From my analysis, those two blogs enable students to express their true opinions from the comments that they left in the blogs. From these comments, teachers can understand students' philosophical stances, books that students have read, and moral experience that they had had.

Keywords: bioethics, bioethics teaching, blogs

### **22.5 Evaluation of feedback from Museum Displays on Bioethics and Biotechnology**

**Amarbayasgalan Dorjderem**, and Darryl Macer, Ph.D., Regional Adviser for Social and Human Sciences in Asia and Pacific, RUSHSAP, UNESCO Bangkok

A bioethics and biotechnology exhibition is established at the Science Centre for Education (SCE) with the cooperation of UNESCO Bangkok and BIOTEC from February 2008 to June 2009 (and beyond). This display has objectives including

improving the understanding of citizens about the ethics of science and technology. In order to achieve that goal, consensus on what criteria indicate an improved understanding of the ethics of science and technology need to be researched. This paper will present some of the evaluation results from research conducted through activity sheets on the impact of methods, materials and strategies being tested to empower learners in making choices and dialoguing about ethics of science and technology.

It is also planned to follow up in several months with questions to the students who answered the activity sheet so that we can assess the impact of the museum visit with comparison to control schools. Among the 7 Thai schools, teachers from 6 of the schools had attended 3 day training workshops on ethics education. Only one school, a private school, had not participated in the training. This paper will present selected results a series of 16 open-ended questions on ethical issues seeking student's opinions. More than three quarters of the students answered the question on "What is bioethics". The most common responses fell into the category "discussions of the use of life", with 40% of persons including that type of reason. In two schools 90% of the students also mentioned it was an issue of "personal ethics", whereas in two other schools no one gave that type of comment. Only about 10% of students mentioned it was about "animal rights", similar to the proportion who mentioned "human rights". At least most students could write something in response to the question, and when taken with the specific comments given in the questionnaire we can see that students at all grades who visited the museum exhibition could write about ethical issues.

The students were concerned about both environmental issues and medical issues affecting their own lives and those of others. Many also wrote about the ethical principles for government in general. Students did not answer well the question on what moral choices they face, either because they did not understand the question or they did not know how to apply the descriptive knowledge in the displays to their own personal life, or that they thought that question was private. Examples such as this suggest we need further understanding of the students reasoning, which will be done by interviews with some students.

The majority of students thought that traits such as body shape were affected by both genes and environmental factors, and thus had gained a holistic understanding of the way genes and lifestyle choices affect our life. More students supported animal experiments than rejected them. In response to specific examples of technology some students were able to give complex comments, but other students copied the responses or left the answer sheet blank. Overall however, more students answered these questions than did not answer, so the trials show that Thai students can respond to a complex and detailed exhibition. The impact will have to be emphasized however by teacher training and teacher reinforcement in the classroom.

<http://www.unescobkk.org/index.php?id=museum>.

## **22.6 Implementing UNESCO Bioethics Education Regional Action Plan**

Darryl Macer, Ph.D., Regional Adviser for Social and Human Sciences in Asia and Pacific, RUSHSAP, UNESCO Bangkok

The rationale for Bioethics education and a regional action plan to deliver was outlined in the document, "Joint Plan of Action for Regional Networking in Bioethics Education Towards Better Bioethics Education", developed at the UNESCO Asia-Pacific Conference on Bioethics Education in 2006. This project continues the goals of the International Bioethics Education Network. The main products and the current strategies will be discussed including:

- 1) Increase the amount of free on-line teaching materials for bioethics education in different countries. Production of cross cultural materials. Improvement via expert meetings. Adapted and translated in different languages to teach school and university classes about bioethics.

- 2) A network of teachers in different countries that have tried the materials, and created bioethics curricula for their local school, bioethics clubs and other endeavours.
- 3) Implementation of the joint regional action plan (July 2006)
- 4) Testing of evaluation methods
- 5) Sharing of museum displays and evaluation on teaching
- 6) Development of moral games and participatory methods
- 7) Conducting teacher training workshops with UNESCO national commissions and colleges
- 8) Curriculum review and development
- 9) Mainstreaming of ethics

### **22.7 Bioethics Education in Indonesia**

**Soenarto Sastrowijoto**, MD, Center for Bioethics and Medical Humanities, School of Medicine UGM; Member of Indonesian National Bioethics Commission; Member of International Bioethics Committee (UNESCO)

In the implementation of the Universal Declaration on Bioethics and Human Rights (UNESCO 2005), it is suggested that Bioethics should be taught not only for medical students, but also for the other field of studies in higher Education. World-widely, the implementation of Bioethics education was mainly for medical students. It might be related to the International Standards in Medical Education (WFME, 2003), that promoted the highest scientific and ethical standards, new methods and instructional tools, and innovative management in teaching-learning process. Interest in the legal and ethical aspects of medicine also has increased due to science and technological advance, such as genetic therapy, cloning technology, human reproduction, organ transplantation, etc. The Indonesia Medical Council (2004) have developed a standard areas of competencies for undergraduate Medical Education, based on ethics, morals, medico-legal aspects and professionalism, as well as patient safety (area competency number 7). On the other hand, The Indonesia National Bioethics Commission (2005), through the Working Group on Bioethics Education, stated that Bioethics Education in tertiary/higher, secondary, and primary education is a must. So that why the basic standards of content, process or approach, student assessment, and who will be the teacher have to be developed. In responding to the issue of Bioethics education in Indonesia a National Workshop on Bioethics Education for Medical Students has been carried-out, December 10-12, 2007, at the School of Medicine UGM. This workshop was joined by 51 out of 52 Schools of Medicine around Indonesia. They would like to have the other workshop to strengthening the development of a Unit, Center of Department of Bioethics in their School, to manage the Bioethics Teaching. School of Medicine University of Indonesia (UI) and University of Gadjah Mada (UGM) have implemented Bioethics Education for undergraduate students in different strategy. They also have emerging and developing post graduate programme (Certificate, Diploma, Master, and Doctorate) study in Bioethics. At UGM, teaching Bioethics for non medical students is starting for undergraduate programmes. Gadjah Mada Medical School has an experience in teaching bioethics through block system, in Block VI, at the end of year-one. After programme evaluation (5-year period), the students were not satisfied, due to the more theory rather has practice of Bioethics. In the Following 5-year period, the education strategy was change to the embodied system in each of block, mostly through scenario in small group discussion, and small part of expert lectures. In the University level at UGM, planning in Bioethics Education is started, not only for health, but also for the other clusters of engineering, agriculture, and socio-economics, political sciences and humanities. In conclusion, in Indonesia, Bioethics Education has been implemented, particularly for medical students and it is to start for the other field of studies.



## **22.8 Effects of Additional Small Group Discussion to Cognitive Achievement and Retention in Principle-based Bioethics Teaching Method**

**Dedi Afandi**, DFM, Department of Forensic Medicine and Medico-legal, Faculty of Medicine, University of Riau, Pekanbaru, Indonesia;

**Yuli Budiningsih, Oktavinda Safitry, Agus Purwadianto and Ivan Riyanto**, Department of Forensic Medicine and Medico-legal, Faculty of Medicine, University of Indonesia, Jakarta;

**Dwi Novitasari**, Department of Health Republic of Indonesia;

**Widjaja**, S.Ked, Sixth year medical student, Faculty of Medicine, University of Indonesia.

The place of ethics in undergraduate medical curricula is essential but the methods of teaching medical ethics have changed little. Principle-based of bioethics is the best method to develop student's reasoning analysis of medical ethics with cognitive approach in medical school. We try to investigate effects of additional small group discussion in principles-based of bioethics conventional lecture methods to cognitive achievement and retention. This study was randomized controlled trial with parallel designed. Score of cognitive of principles based of bioethics as a parameter was measured using Kaidah Dasar Bioetika (KDB=basic bioethical norms) test. Both groups were attending conventional lecture then the intervention group got additional small group discussion. This study showed that conventional lecture with or without small group discussion can significantly create cognitive achievement of principles-based of bioethics ( $p = 0.001$  and  $p=0.000$ , respectively). There were significant association of teaching's methods to cognitive achievement and retention ( $p = 0.000$  and  $p =0.000$ , respectively). This study suggests that small group discussion with checklist specification's methods can be used to improve cognitive achievement and retention of principles based of bioethics.

Keywords: small group discussion, cognitive achievement, cognitive retention, principles based of bioethics.

## **23. Nurturing Bioethics Education and Professionalism**

### **23.1 Teaching bioethics to clinical research students in India: challenges & opportunities**

**Anant Bhan**, MD, Flat 405, Building A-11, Planet Millennium, Aundh Camp, Pune-411027, Maharashtra, India

Clinical research is increasingly being outsourced from developed to less and middle-income countries. India is one of the favored destinations. There has been a proliferation of clinical research organizations (CROs) fueled by this trend. Demand created by this growth has also led to the establishment of several institutes which offer clinical research and data management courses. Designed as diploma courses for graduates, these courses aim to produce trained personnel to serve the needs of the clinical research organizations in India. The presentation will highlight the experiences of mainstreaming ethics into clinical research education at one of the institutes. The curriculum and methodology used to teach bioethics, especially research ethics and the ethics of drug trials would be outlined. The experience of having a focus on participatory methods like using case based discussions, group tasks, and use of documentaries etc. as ways of engaging students in the field of clinical research would be shared. The challenges of working with students of diverse backgrounds and large class size will be presented. Interactions with the conference participants will help provide constructive feedback about the teaching curriculum and methodology. This will help in restructuring the course for future batches of students.

### **23.2 Knowledge and attitudes towards plagiarism: Views from Karachi**

**Bushra Shirazi**, MD, Ziauddin Medical University, Karachi; and  
**Aamir Jafarey**, MD, Centre of Biomedical Ethics and Culture, SIUT, Pakistan

Plagiarism, literally translated from Latin, means stealing. Easy availability of electronic resources has made it all the more easier for those inclined to take this route. This issue has gained a lot of prominence in Pakistan in the recent months because of a strict and uncompromising stance adopted by Pakistan's Higher Education Commission which has brought erring individuals and institutions in direct confrontation with it. Although ignorance of the law is no defense, but most people when confronted plead that they were unaware of doing anything wrong. Based on the author's own experience and on informal information gathering, from students in schools to qualified physicians, on conducting research relevant for their work, there is little or no emphasis placed on avoiding plagiarism. In fact, teachers themselves may be unaware of the various well established dimensions of plagiarism. This study aims to eliciting information regarding the extent of knowledge as well as prevailing attitudes towards plagiarism among five key groups of stake holders. This will be done through interviewer lead questionnaire conducted among high school students, medical students, medical trainees and medical college faculty. The data will help us come to a better understanding of the issues surrounding plagiarism in this society so that appropriate educational strategies can be recommended to curtail this practice.

### **23.3 Bioethical aspects and regulation concerning cadaver utilization in medical education**

**M. Mansyur Romi**, Department of Anatomy, Embryology & Anthropology, Faculty of Medicine, Gadjah Mada University, Yogyakarta, INDONESIA

Cadaver utilization is very critical in medical and health education in general, especially for anatomy learning by dissection. Several alternative learning resources have been developed and proven to be helpful, but inadequate substitutes for the use of human cadaver. The new emerging medical institutions in Indonesia are demanding cadavers need to be fulfilled along with its possible consequences. Various bioethical aspects and regulation concerning utilization of human cadavers in medical and health education will be generally discussed in this review article.

Keywords: bioethics, cadaver, anatomy, dissection, medical education

## **24. Ethics and Governance of Cloning and Stem Cell Research**

### **24.1 UNESCO Responses to the United Nations University Report on Governance of Human Cloning**

Darryl Macer, Ph.D., Regional Adviser for Social and Human Sciences in Asia and Pacific, RUSHSAP, UNESCO Bangkok

Subsequent to the publication of the 2007 report *Is Human Reproductive Cloning Inevitable: Future options for UN Governance* by the Institute of Advanced Studies (UNU-IAS), United Nations University, the Director-General of UNESCO expressed his wish that the International Bioethics Committee (IBC) add the examination of this report to its agenda. At its meeting in January 2008, the Bureau of IBC therefore decided to add the issue of human cloning and international governance to the work programme of IBC for 2008-2009 and to establish a working group on this topic. After considerations the IBC and IGBC considered the topics at the Fifteenth Session of the IBC in Paris in October 2008.

The Working Group held its first meeting at UNESCO Headquarters in Paris, from 30 June to 2 July 2008 and devoted one day to a public hearing involving a broad-based group of experts in the field. These hearings open to the participation of Member States, constituted a starting point for the deliberations of the Working Group and

allowed transparency and clarity as per the mandate and the work of the Committee. This paper will present the brief conclusions of that debate and the working group, and consider the issues raised by the UNU-IAS report relating to the possibility of developing an international convention against human reproductive cloning.

#### **24.2 Understanding stem cells**

**Pratiwi Sudarmono**, dr, SpMK, PhD, Department of Microbiology, University of Indonesia and

**A. A. Loedin**, dr, SpB, PhD, KNEPK Indonesia

Recently, stem cell research becomes the most interesting research in biology. The research are aimed to give better understanding about embryogenesis, and how a certain group of cells, a whole healthy cells can potentially be used to replace tissue damaged or destroyed by disease or injury.

Stem cells are cells that characterized by the ability to renew themselves and differentiating into a diverse range of specialized cell types. From its potency stem cells can be divided into totipotent, pluripotent, and multipotent stem cells. Totipotent stem cells can differentiate into embryonic and extraembryonic cell types. These cells usually can be found in embryonic stem cells derived from inner mass cells of the very early stage of embryo development. Adult stem cells derived, for example, from cord blood cells can become pluripotent stem cells which are able to differentiate into cells originated from any of the three germ layers. A certain adult cells can become multipotent stem cells which produce only cells of a closely related family of cells (e.g. hematopoietic stem cells differentiate into red blood cells, white blood cells, platelets, etc.).

Sources of Embryonic Stem Cells can come from In Vitro Fertilization or from Somatic Cell Nuclear Transfer. Sources of Adult Stem Cells can come from cord blood cells or from organs that need a constant supply of cells, such as the blood, skin, or adipose cells. Recently, scientists are able to reprogram adult cells to behave as embryonic cells, and produce totipotent cells.

Medical researchers believe that stem cell therapy has the potential to dramatically change the treatment of human diseases. Bone marrow transplants to treat leukemia is the first example. A number of adult stem cell therapies have undergone clinical trials in many countries. In the future, medical researchers anticipate a new era of regenerative medicine using technologies derived from stem cell research to treat a wider variety of diseases including diabetes mellitus, Parkinson's disease, spinal cord injuries, myocard infarct, sclerosis and muscle damage. However, there still exists a great deal of social and scientific uncertainty surrounding stem cell research, which could possibly be overcome through public debate and future research, and further education of the public.

#### **24.3 The Ethics of Stem Cell Research**

**Kees Bertens**, Indonesia

Stem cell research is among the most intensively discussed topics in present bioethics. Ethical questions differ considerably when we compare the two kinds of stem cells that are the object of this research: adult stem cells and embryonic stem cells. In the context of adult stem cell research, ethical problems do not differ much from similar research using human biological material. As to embryonic stem cell research, ethical problems are far more complicated, since during this research human embryos are destructed. The question arises: do we not cross here a moral border that should be respected? Two very different positions are taken. The first position states that this kind of research is to be justified because of its extraordinary utility (new prospects for incurable diseases). Moreover, we can use spare embryos that are left over in *in vitro* fertilization programmes. Another reason is that the moral status of the preimplantation embryo is not so clear. This first position is dominant among the scientists. The opposite position stresses our obligation to

respect every human life. It cannot be doubted that the embryo is new human life. We are not allowed to victimize human life even for a very respectful purpose. This position is held by many religious people, by critics of scientific progress, but it also suits with the traditional ethos of the medical profession, since according to *The Declaration of Geneva* (1983), the new doctor pledges: "I will maintain the utmost respect for human life from its beginning". An ethical analysis should give special attention to the notion of human dignity. Here will appear that human life ought not to be instrumentalised. A consequence may be that scientific research should practice more patience. Then there may arise ethically unproblematic possibilities, for instance, induced pluripotent stems cells.

#### **24.4 Ethical Aspects of Stem Cell Research and Its Application**

**A. A. Loedin**, dr, SpB, PhD, KNEPK Indonesia and

**Pratiwi Sudarmono**, dr, SpMK, PhD, Department of Microbiology, University of Indonesia

Stem cells are undifferentiated cells with the ability of self-renewal in culture and to generate differentiated progeny. The potency of stem cells to generate all cell types of the human body has attracted the attention of biomedical sciences and medicine. Medicine born at the end of the 19th century has made tremendous progress. Many diseases can be effectively prevented, treated and cured. But there are still diseases, such as degenerative diseases, only receiving symptomatically treatment. The prevalence of degenerative diseases is expected to increase in an older growing society. Many of these diseases are caused by the impaired function or dead of specific type of cells. Good examples are Parkinson disease and diabetic mellitus. The existence of stem cells has generated new hope and expectations. Research and clinical trials have shown encouraging results but safe and effective cell therapy is still far away. Stem cell research is indeed on the cutting edge of biomedical sciences, but is still in its infancy. The hope and expectations generated by stem cells have lead to some less laudable acts. Commercial medical services are offered without any scientific credibility, for instance cell therapy for spinal cord injury and cord blood banking. Scientists have also been involved in unethical acts, such as we have learned from the South Korean scandal.