



To News Editor
For Immediate Release

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New Bioethics Centre at CUHK Will Explore the Intersection of Biomedical Science, Clinical Practice and Society

In January 2014, a San Diego-based company, Illumina Inc., unveiled a genomic sequencer that could sequence 20,000 genomes a year at a cost of US\$1,000 each, introducing a phase shift in the quest for personalized medicine. In 2003, when the first human genome map was published, the cost was US\$1 billion. Although Illumina sells its machine for US\$10 million, it seems only a matter of time before prices fall for genetic sequencing, setting off a dramatic increase in demand for services that anticipate what a human being may become, as well as diagnose and treat disease.

Non-invasive prenatal genetic and genomic testing is being used not only to screen chromosomal anomalies such as Down syndrome. The flip side of genetic screening for defects is enhancement of embryos created through in vitro fertilization by deliberate selection, with its own set of controversies. Genetically-based early diagnosis of Alzheimer's disease and dementia is making it possible to map out the needs of health systems in advance of Hong Kong's anticipated ageing crisis or 'silver tsunami'.

The bold new world of biotechnology creates profound and challenging ethical, legal, and social issues for educators, researchers, healthcare workers, policy makers and the public. To answer these challenges, the Faculty of Medicine of The Chinese University of Hong Kong (CUHK) is establishing **Hong Kong's first interdisciplinary centre for bioethics** housed in a leading medical school.

CUHK's Faculty of Medicine has been a pioneer in medical education, biomedical and clinical research for more than 30 years. Its scientists are producing some of the world's leading research on genetic testing for fetal aneuploidies such as Down syndrome and other conditions. **The CUHK Centre for Bioethics will add a critically important dimension to its existing strengths by providing a values-oriented, biotechnology-sensitive resource for exploring the impact of these new technologies on society and health systems.**

'The universal principle behind bioethics is respect for persons, defined broadly,' said CUHK Pro-Vice-Chancellor Fok Tai-fai, who is interim director of the new CUHK Centre for Bioethics.

'Why is bioethics important to Hong Kong? When you look at the speed of developments in life sciences, and the applications to medicine and health, it very quickly becomes clear that we are not keeping up in terms of what these things mean to us as a society. For example, we have tests now for the genetic markers for psychiatric, neurological, and behavioral traits and disorders, such as Alzheimer's and Huntington's disease. Who should take them? When? And what do you do next?'

‘What genetic conditions should be revealed to patients and what types of testing should be promoted? What are the roles and responsibilities of healthcare services and policy makers in light of advances in genomics? These are the kinds of issues that we plan to explore as the new centre takes shape, and translate into medical education for the next generation of doctors.’

Hong Kong faces unique challenges in bioethics as a global city, Prof. Fok added. ‘Hong Kong has one of the most rapidly ageing populations in the world, with an imminent surge in the number of elderly comparable to Japan, Singapore, and South Korea. What lessons can we learn, and then share, in developing the health systems that we need to prepare for our own “silver tsunami”? There are economic issues, but what about social justice, when our young people are paying the bill for elderly care? Beyond biomedical sciences, **at the new CUHK Centre for Bioethics we plan to examine the full range of ethical, social, and legal issues in medicine, public health, and clinical research.** We believe this will make us better educators, and reinforce CUHK as a platform for cutting edge research and clinical practice.’

‘To take another example, because of its role as an aviation hub and the high levels of human and animal traffic with mainland China, Hong Kong has been on the front line of global pandemics and is likely to suffer that distinction again. Now is the time to consider ethical and social dimensions of the next pandemic.’

CUHK is working with one of the world’s leading institutes for bioethics, the Hastings Center, as well as the Centre for Biomedical Ethics (CBmE) at the Yong Loo Lin School of Medicine at the National University of Singapore to establish best practice in mission development, educational approaches, best practice, and recruitment. It will preview some of these themes at a workshop from July 15-16, 2014, and a conference on population ageing and global cities from January 9-10, 2015. Details of the workshop can be found at: http://www.med.cuhk.edu.hk/eng/home/news_events/2014_07_15.jsp.

Some of the world’s leading bioethicists and public health experts will gather for these events, including Josephine Johnston, Erik Parens, Karen Maschke, Michael Gusmano, and Nancy Berlinger from the Hastings Center; Michael Dunn from the Ethox Centre at Oxford University; Alastair Campbell and Jacqueline Chin from CBmE; Alexandre Kalache from the International Longevity Centre; Benjamin Berkman from the National Institutes of Health (NIH); Victor Rodwin from New York University, and William Nelson from Dartmouth University.

Speakers from CUHK will include the world renowned geneticist Dennis Lo, a member of the Royal Society and the United States National Academy of Sciences; Prof. Wai-Yee Chan, head of the School of Biomedical Science; Prof. Jean Woo, director, S.H. Ho Centre for Gerontology and Geriatrics; Ethical, Legal, and Social Implications (ELSI) specialist Huso Yi; Prof. Hon-Lam Li of the Department of Philosophy; and Vice-Chancellor Joseph Sung.

The team working to set up the new CUHK Centre for Bioethics includes Prof. Fok; Prof. Francis Chan, dean of the Faculty of Medicine; Prof. Wai-Yee Chan; Prof. Hon-Lam Li; Prof. Jean Woo; Prof. Huso Yi; and Dr. Edgar Cheng Wai-kin, former Chairman of the Council of CUHK.

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新聞稿 PRESS RELEASE

致新聞編輯
請即發布

中大成立生命倫理中心 開創生物醫學、臨床試驗、社會道德互融新紀元

2003 年，首個人類基因組圖譜面世，共花了 10 億美元成本及十三年時間完成；2014 年，美國 Illumina 公司發明了一套基因組測序機，可以以每組 1,000 美元的成本，每年為 20,000 個基因組排序。此項技術突破，標誌了個人化醫療的新紀元。儘管這套機器現時的售價仍高達 1 千萬美元，但在可以預見的將來，基因組排序所需的時間及金錢還會進一步下降。屆時，無論是為了研究人類發展或是診斷和治療疾病，此服務的需求將會大幅提升。

生物科技的進步改善人類健康之餘，亦帶來了不少具爭議性的問題，引起各界的關注。譬如無創性產前基因和基因組檢測，已應用於檢驗如唐氏綜合症等染色體異常疾病，同時也無可避免的引發了優化人工受孕胚胎的爭議。但此項技術亦可望有助早期診斷老年認知障礙症，協助制定香港醫療系統的政策方針，應付本港人口急劇老化的危機。

生物科技的急促發展，固然為人類帶來福祉，但同時亦衍生不少涉及道德、法律、社會等深遠問題，為教育工作者、研究人員、醫護人員、立法人員和公眾帶來挑戰。為應對這些挑戰，香港中文大學（中大）成立全港首間由醫學院管轄的跨學科的生命倫理中心。

中大醫學院在醫學教育、生物醫學、臨床研究的發展超過 30 年，在多個科研領域，尤其是基因研究方面，處世界領導地位。中大生命倫理中心將以人文倫理為本，從多學科角度，探討生物科技對社會和醫療系統的影響，為醫學院增添重要的新視野。

中大副校長、生命倫理中心暫任總監霍泰輝教授指出：「生命倫理學的根本是對人類的尊敬，對生命的尊重。」

「香港為何需要生命倫理？放眼當今世界，生命科學發展一日千里，已廣泛應用於醫療和健康層面，但對社會有何影響，我們所知甚微。例如，我們現在可以檢測精神病、神經系統失調、行為偏差或障礙等疾病的遺傳標記，如老人認知障礙症、亨丁頓舞蹈症，但問題是哪些人需要接受此等測試？何時進行？如何跟進？」

「應該向病人披露哪些遺傳病？應該推薦哪些測試？在基因組學的領域，醫護界和立法機關擔當什麼角色？生命倫理中心的宗旨之一，是要逐一探討這些問題，然後轉化為醫學教育，灌輸給下一代的醫療工作者。」

霍教授續說：「本港人口老化的速度在全球數一數二，長者人口急速增長，情況與日本、新加坡、南韓相若，對香港帶來什麼啟示？香港應怎樣發展切合本土需要的醫療系統，以應付人口老化問題？由年青人承擔長者的醫療開支，除了經濟上的考量，是否兼顧了社會公義呢？中大生命倫理中心會廣泛探討醫療、公共衛生、臨床研究的道德、社會和法律問題。中心的建立會幫助老師們更好的育才，同時進一步鞏固中大在科研和臨床研究方面的領先地位。」

「舉另一個例子，香港是航空運輸的樞紐，與中國內地之間的人員往來、牲畜運輸都相當頻密，香港在傳染病方面一直處於世界最前線的位置，將來亦很有可能再受到傳染病的侵擾。我們現在就必須開始思考，下一次疫症發生時有可能面對的道德和社會挑戰了。」

中大生命倫理中心正與全球首屈一指的生命倫理研究所——Hastings Center 以及新加坡國立大學醫學院(Yong Loo Lin School of Medicine) 的 Centre for Biomedical Ethics 合作，為中心的長遠發展包括使命的拓展、教育方針、最佳實踐方案和人才招聘等各方面奠定基石。部分議題將會在 2014 年 7 月 15 至 16 日舉行的工作坊和在 2015 年 1 月 9 至 10 日舉行的人口老化和國際城市為主題的論壇上率先探討。有關工作坊的詳情，請瀏覽 http://www.med.cuhk.edu.hk/tch/home/news_events/2014_07_15.jsp。

多位國際頂尖的生命倫理學家及公共衛生專家將出席是次活動，包括 Hastings Center 的 Josephine Johnston、Erik Parens、Karen Maschke、Michael Gusmano 及 Nancy Berlinger；牛津大學 Ethox Centre 的 Michael Dunn；新加坡國立大學 Centre for Biomedical Ethics 的 Alastair Campbell 和陳韻玲(Jacqueline Chin)；International Longevity Centre 的 Alexandre Kalache；美國國立衛生研究所 (National Institutes of Health) 的 Benjamin Berkman；紐約大學的 Victor Rodwin；以及達特茅斯學院(Dartmouth University) William Nelson。

中大講者將包括知名遺傳學者、英國皇家學會及美國國家科學院院士盧煜明教授；生物醫學學院院長陳偉儀教授；何善衡老年學及老年病學研究中心主任胡令芳教授；ELSI（道德、法律及社會影響）問題專家李湖樹教授；哲學系李翰林教授，以及校長沈祖堯教授。

中大特別成立工作小組為生命倫理中心制定方向和推動其發展，成員包括霍泰輝教授、醫學院院長陳家亮教授、陳偉儀教授、李翰林教授、胡令芳教授、李湖樹教授及中大校董會前主席鄭維健博士。

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