10-11 April 2009

Hortus Botanicus, Tuinkamer (Garden room),
Rapenburg 73, Leiden, The Netherlands

Convenor: Dr Margaret Sleeboom-Faulkner (University of Sussex / IIAS)

The Cultural Politics of the Life Sciences in Asia

Opportunities, risks and the changing body

Programme

International Institute for Asian Studies (IIAS) www.iias.nl | iias@iias.nl

IIAS International Institute for Asian Studies

NWO Nederlandse Organisatie voor Wetenschappelijk Onderzoek

The international conference *The Cultural Politics of the Life Sciences in Asia: Opportunities, risks and the changing body* is organised by:

International Institute for Asian Studies (IIAS)
Socio-Genetic Marginalisation in Asia Programme (SMAP)
Nonnensteeg 1-3
2311 VJ Leiden
The Netherlands
Tel: +31-71-5272227
Fax: +31-71-5274162
iias@iias.nl

Convenor:
Dr Margaret Sleeboom-Faulkner, *University of Sussex / IIAS*

The organisers of the international conference *The Cultural Politics of the Life Sciences in Asia: Opportunities, risks and the changing body* gratefully acknowledge the following sponsor:

Nederlandse Organisatie voor Wetenschappelijk Onderzoek

PROGRAMME

The Cultural Politics of the Life Sciences in Asia

Opportunities, risks and the changing body

10 – 11 April 2009

Friday 10 April

9.00-9.15	**Welcome and coffee**	
Session 1	**Chair: Seyoung Hwang, *University of Sussex***	
9.15-9.45	Bio-crossing a Dis-location: A Therapeutic Passage to India	Aditya Bharadwaj *University of Edinburgh*
9.45-10.10	Experimental stem cell therapy in Japan and India: Bionetworking, biohierarchies and boundary objects	Margaret Sleeboom-Faulkner, *University of Sussex / IIAS* & Prasanna Kumar Patra *IIAS*
10.10-10.35	Experimental adult stem cell therapy in India: bionetworking and patient recruitment	Prasanna Kumar Patra *IIAS* & Margaret Sleeboom-Faulkner, *University of Sussex / IIAS*
10.35-10.50	**Coffee / tea break**	
Session 2	**Chair: Seyoung Hwang, *University of Sussex***	
10.50-11.20	Intellectual Property, Pharmaceutical Logics, and Ideologies of Innovation in Indian Biomedicine	Kaushik Sunder Rajan *University of California, Irvine*
11.20-11.50	De/geneticising caste: population genetic research in South Asia	Yulia Egorova *University of Durham*
11.50-12.15	Discussant	Helen Lambert *University of Bristol*
12.15-12.45	General Discussion	
12.45-13.45	**Lunch**	

Session 3	**Chair: Jyotsna Agnihotri Gupta, *University for Humanistics, Utrecht / IIAS***	
13.45-14.15	Bodies and populations – life optimisation in Vietnam	Ayo Wahlberg *BIOS Centre, London School of Economics and Political Science*
14.15-14.45	Serve the People: Communist Ideology and Professional Ethics of Medicine in China	Jingqing Yang *University of Technology, Sydney*
14.45-15.15	Donor leverage and equitable access to essential medicines	Chee Khoon Chan *Universiti Sains Malaysia*
15.15-15.30	**Coffee / tea break**	
Session 4	**Chair: Masae Kato, *Leiden University / IIAS***	
15.30-16.00	Consuming Biotechnology and Risk	Nancy Chen *UCSC (on leave) & Scripps College*
16.00-16.25	Discussant	Stuart Blume *University of Amsterdam*
16.25-17.00	General Discussion	
18.00	**Conference dinner** *Restaurant het Prentenkabinet, Kloksteeg 25*	

Saturday 11 April

9.00-9.15	**Coffee**	
Session 5	**Chair: Achim Rosemann, *University of Sussex***	
9.15-9.45	Contesting National Socio-technical Imaginaries: The Politics of Human Embryonic Stem Cell Research in South Korea	Sang-Hyun Kim *Harvard University*
9.45-10.15	Whither Stem Cell Technologies?: Reconfiguration of Stem Cell Research, Medicine and Bio-industry in South Korea after the Hwang Scandal	Young-Gyung Paik *Korea Advanced Institute of Science and Technology / Johns Hopkins University*
10.15-10.45	Making Science Real for the Nation: Genomics and Drug Development in Japan and Taiwan	Wen-Hua Kuo *National Yang-Ming University, Taiwan*
10.45-11.00	**Coffee / tea break**	
Session 6	**Chair: Prasanna Kumar Patra, *IIAS***	
11.00-11.30	Prozac on the loose: Tracing antidepressants in South Asia	Stefan Ecks *University of Edinburgh*
11.30-12.00	Discussant	Ian Neary *Nissan Institute, Oxford University*
12.00-12.40	General Discussion	
12.40-13.00	Reflection - Closing	
13.00-15.00	**Boat trip and Lunch**	

The Cultural Politics of the Life Sciences in Asia: Opportunities, risks and the changing body

Bio-crossing a Dis-location: A Therapeutic Passage to India

Aditya Bharadwaj, *University of Edinburgh*

In this paper I wish to locate the ongoing global journeys to India in search of human embryonic stem cells at the intersections of ethnography and conceptual elaboration. The notion of bio-crossing and dis-location are employed to understand how illicit, unauthorised, 'maverick' agency may be understood in the larger bio-technical and bio-scientific contexts imbued with both normative authority and ideological influence. In the end the paper seeks to unpack the kinds of structural disruptions such incompliance brings about and how this alters what is to count as local and global in a hyper-mobile world.

Experimental adult stem cell therapy in India: bionetworking and patient recruitment

Prasanna Kumar Patra, *International Institute for Asian Studies*
Margaret Sleeboom-Faulkner, *University of Sussex / IIAS*

Over the last three to four years, an increasing number of private and public sector tertiary level hospitals and research centres in India have been using stem cell therapy, especially adult stem cell therapy, in the guise of experimental therapy for a variety of medical conditions. The promotion and growth of this experimental field across local and national borders traverses regulatory, ethical, social and financial boundaries. In this complex context, the article examines how health care centres in India negotiate bio-medical and health care circumstances in promoting a therapy that raises questionable medical, technical and ethical issues.

The process of promoting experimental stem cell therapy is explained here by employing the concept of bionetworking and illustrated by two case studies of hospital groups. The case studies show how through bionetworking a centre creates

and maintains novel networks of mutual exchanges with other collaborative bodies situated in local, national and global echelons.

Drawing on a three-month period of fieldwork and interviews in various locations in India, this article shows that: (1) Questionable stem cell therapy is promoted through bionetworks that resonate across local, national and global constellations; (2) Regulatory gaps facilitate the growth of such therapeutic practices; (3) The experimental stem cell therapies augment the health care divide in Indian society; (4) The weakening Indian state facilitates commercialization of health, indirectly supporting the 'bionetworking' practices of therapy providers.

Experimental stem cell therapy in Japan and India: Bionetworking, biohierarchies and boundary objects

Margaret Sleeboom-Faulkner, *University of Sussex / IIAS*
Prasanna Kumar Patra, *International Institute for Asian Studies*

This paper concerns the unequal development of autologous adult stem cell research in Japan and India. The authors aim to show how human subject research in Japan is turned into experimental stem cell therapies in India, and how the recruitment of patients and scientists is organised through bionetworking. We explore how experimental research in India with Japanese technologies is organised. A main question is how it is possible that the same therapy is discarded in one country as being of reputational risk to scientists and sold in another country as reputation enhancing, while scientists from both countries collaborate in the same bionetwork. To answer this question, we will make use of the concepts of biohierarchy and boundary object to indicate subjectivity in the valuation and framing of patients, science and research in India and in Japan.

This paper is based on fieldwork conducted by both authors during three months between September and December 2008 at two leading centres of India's private sector regenerative medicine initiatives: the X Institute for Regenerative Medicine (XIRM) and Z Centre for Regenerative Medicine (ZCRM) based in Chennai, and various stem cell research centres in Japan, including ZCRM, based in Tokyo, private clinics in Tokyo, and leading research institutes RIM in Kyoto and RIC in Kobe. Data for this paper were collected from a wide range of interviews with stem cell researchers, medical doctors, coordinators, managers and patients, primary and secondary sources gathered at these centres, and through web and archival research.

Intellectual Property, Pharmaceutical Logics, and Ideologies of Innovation in Indian Biomedicine

Kaushik Sunder Rajan, *University of California, Irvine*

In this paper, I trace interconnections between:

i. The outsourcing of global clinical trials to India, and the concomitant infrastructure building in India to attract these trials;

ii. Emergent epistemologies of biomedical research that bridge the gap between academe and industry, as well as lab and clinic (what is known as translational research); and

iii. Disputes around the interpretation of post-WTO intellectual property regimes in the Indian context.

I do so in order to look at the articulations between clinical research, biomedical epistemology, pharmaceutical development and property regimes, in a historical conjuncture in India that is marked simultaneously by attempts at global commensuration on the one hand, and the emergence of particular national legal and political trajectories on the other. I explore the ways in which developments in global biomedicine, as it touches down in an Indian context, are justified and underwritten by ideologies of innovation. Innovation, I argue, is a shifting referent, and the reason I call it "ideological" is precisely because the deployment of this notion, and the value-systems it implies, masks the ways in which it allows the logics of the multinational pharmaceutical economy to play out. These logics, I suggest, are not simply free market logics, but are logics that are potentially about the establishment and expansion of monopoly capitalism. These logics are in tension with other emergent institutional logics that are more experimental and open-ended, yet equally appropriable into logics of global capital. Hence, the paper traces how emergent forms of biomedicine are being established and contested in the Indian context, and what law, capital, ideology and epistemology have to do with these forms.

De/geneticising caste: population genetic research in South Asia

Yulia Egorova, *Durham University*

Recent years have witnessed a number of population genetics studies aiming to explore the 'genetic profile' of the South Asian population and to cast light on the 'ethnic' composition of the caste system. This paper examines four genetic studies and their mass media representations, as well as discusses interviews with leading historians and social scientists whose work focused on issues of the caste system. Similar to earlier commentators – from colonial scholars and administrators to Hindu reformers and nationalists – who provided different explanations for the origin of the caste system, recent genetic studies have offered conflicting inferences on the nature of castes and tribes of the subcontinent. These studies, the way they were received on the subcontinent, and assayed by historians of caste, tell a story about agendas of geneticization competing with forces of resistance. On the one hand, they signal a new interest in the debate about the relationship between caste and 'ethnicity'. On the other hand, they are used selectively by different social groups to strengthen their own political agendas, are denied cognitive validity by historians of caste, and they never reached a consensus about the history of caste formation.

Bodies and populations – life optimisation in Vietnam

Ayo Wahlberg, *BIOS Centre, London School of Economics and Political Science*

Vietnam has been described by many commentators as being about two decades 'behind' many of its East Asian neighbours in terms of economic and social development, although a series of economic reforms initiated in 1986 under a banner of *đổi mới* (renovation) are credited with closing the gap. At the same time, as has been the case in many other socialist countries, science and technology in Vietnam have been seen as central forces for national development, progress and health. Although molecular biology and genetics (especially in agricultural but also medical fields) have come to play an important role in successive government-sponsored science and technology programmes since the mid 1990s, Vietnam is not considered to be one of Asia's 'emerging biotech giants'. By analysing national efforts to revive traditional medicine in Vietnam, I propose in this paper to restore the concept of bio-politics as one of the poles of a bio-power that continues to administer, optimise and

multiply human vitality. I will show how the traditional medicine revival programme has been both bio-political (when contributing to the improvement of 'population health') and a case of bio-nationalism (when contributing to the 'building of national culture'). I conclude that it is unnecessarily limiting to suggest that the advanced life sciences are the only (or most potent for that matter) expert bodies of knowledge currently being mobilised in attempts to intervene upon collective human vitality.

Key words

Bio-politics, life optimisation, Vietnam, population, traditional medicine

Serve the People: Communist Ideology and Professional Ethics of Medicine in China

Jingqing Yang, *University of Technology, Sydney*

The article explores the communist ideology that has guided the formation of professional ethics of medicine in China. It first explores the constitutions of the People's Republic of China and the Chinese Communist Party and codes of practice for medicine enforced since 1949, showing that the core of the ideology in relation to health provision and doctor-patient relationship has always been 'serving the people wholeheartedly'. The ideological undertaking, however, has never been successfully exercised. In the pre-reform era, the bureaucratisation of health professionals led to the emergence of 'bureaucratic medicine' featuring negligence of patients' interests. In the reform era, the prevailing commercialisation of health care is in fundamental conflict with the ideological commitment to serving the people. As a result, the socialist professional ethics of medicine has not been satisfactorily practiced in reality.

Keywords: professional ethics, ideology, medical professionals, China, power

Donor leverage and equitable access to essential medicines

Chee-Khoon Chan, *Universiti Sains Malaysia*

In early 2007, the Indonesian government decided to withhold its avian flu virus samples from the WHO's collaborating centres pending a new global mechanism for virus sharing that had better terms for developing countries. At the 60th World Health Assembly in May 2007, a resolution was adopted mandating WHO to establish an international stockpile of avian flu vaccines, and to formulate

mechanisms and guidelines for equitable access to these vaccines. Beyond the immediate concerns of timely and affordable access to pandemic flu vaccines, the Indonesian initiative has also raised the intriguing possibility of other analogous instances where individuals or groups of donors of biological materials and personal data could utilize the leverage of their gift relationship in clinical trials or other research settings to advance health equity. Indeed, PXE International in the US, an advocacy group for patients with pseudoxanthoma elasticum had embarked upon an initiative along quite similar lines in the late 1990s. Pseudoxanthoma elasticum (PXE) is a genetic disorder, which is characterized by the calcification and fragmentation of elastic fibres in the skin, eyes, the cardiovascular system and gastrointestinal system. PXE International is a formal foundation established in 1995 by parents and family members of affected individuals. Over the last decade, it has established a modus vivendi with researchers, to whom they have provided financial and material support, most importantly, access to biological materials for research. In return, PXE International has obtained authorship rights in papers, which are published, as well as ownership rights in any patents that may be granted, through the use of material transfer agreements. This paper will explore the potential for extending analogous arrangements to other diseases and to other research settings as well.

Consuming Biotechnology and Risk

Nancy N. Chen, *UCSC (on leave) & Scripps College*

This paper will analyze the double helix of state and market in formations of Chinese biotechnology over the past decade. In 2002, scientists from the Beijing Genomics Institute surprised the world scientific community by publishing the Indica rice genome sequence. Large scale production of genetically modified (GM) rice may soon join GM cotton (while GM soy is imported from the U.S.) despite concerns for GM rice products already present in Europe. The projections of China as a major pharma producer and scientific force in the 21st century are juxtaposed against a backdrop of extensive concern for tainted food or fake medicines. Governance of contamination such as melamine laced pet food, diethylene glycol infused toothpaste, or unregulated heparin production entails complex tracking of local production and global commodity chains. National stories of endangerment, vunerability, and concerns for purity in food and drugs reflect ongoing reframings of

citizenship and increased risk from consumption. With rising fuel and food costs as well as increased riots, the politics of consumption will be examined in relation to the imaginaries of biotechnology.

Contesting National Socio-technical Imaginaries: The Politics of Human Embryonic Stem Cell Research in South Korea

Sang-Hyun Kim, *Harvard University*

Before the infamous Hwang Woo-Suk scandal, scientists and journalists in the West often argued that South Korea was able to progress in human embryonic stem cell (hESC) research more quickly than other countries because of its loose ethical restrictions. As it was revealed that Hwang's team not only violated ethical codes for egg procurement but also deliberately fabricated scientific data in their research, many commentators turned to the contradictory view that, after all, South Korea's low ethical awareness was its main problem. However, the debate over the social and ethical implications of hESC research was not absent in South Korea. In fact, it was the very existence of such debate that culminated in Hwang's downfall. What were then the major concerns in the debate? Given that a significant portion of the population is Christian, one may expect that the politics of hESC research in South Korea would revolve largely around religious concerns about the moral status of the human embryo. A close look at the South Korean scene suggests otherwise. Perhaps to the surprise of outside observers, the most serious and sustained challenges to the country's rapid move into hESC research came from a coalition of progressive civic NGOs, including feminist, environmentalist, consumer activist, and public health advocacy groups. Born out of a more general campaign to impose strict control on both medical and agri-food biotechnology, this coalition took a pro-reproductive rights stance and did not share the Christian understanding of the ontological status of the human embryo. It nevertheless staunchly opposed the South Korean government's support for hESC research. This paper examines how these progressive NGOs attempted to reframe and broaden the national debate on biotechnology, and how the controversies they stirred up shaped the unfolding socio-cultural and political landscape of hESC research. The paper argues that, although it was not recognized as such, the dispute over hESC research in South Korea was essentially a contest over dominant national "socio-technical imaginaries"—that is, collectively imagined forms of social life and social order through and within which

the meanings, purposes, and priorities of science and technology are co-produced with ideas of public good, citizenship and nationhood.

Whither Stem Cell Technologies? Reconfiguration of Stem Cell Research, Medicine and Bio-industry in South Korea after the Hwang Scandal

Young-Gyung Paik, *Korea Advanced Institute of Science and Technology*

Since the Hwang scandal, the South Korean state has expressed often-conflicting interests of encouraging stem cell research and the IVF industry to save the national economy and introducing the ethical regulation in conformity with "Global Standard." As the tightening ethical regulation of stem cell research has enervated the field of human Embryonic stem cell (hESC) research, somatic stem cells (re-)emerged as an alternative savior that could rescue the future of research communities, bio-industry, practicing doctors, patients and the nation itself from the crisis. The recent literature on Korean biotechnology, however, mainly focus on hESC and relatively little attention has been given to the rapidly growing field of research on somatic stem cells like haematopoietic stem cells (HSCs) or mesenchymal stem cells (MSCs). While the hESC treatment is often regarded as experimental and ethically controversial, the HSCs or MSCs therapies have already made their ways into people's everyday life without much public discussion. Many ordinary people in South Korea are familiar with the story of patients who survived leukemia with the HSCs treatment; the number of doctors who are actively marketing the MSCs therapies is on the rapid increase; the concept of cosmetic products made from MSCs is gaining popularity among consumers. In this context, this article argues that the current ethical debates solely focusing on hESC or on the state policy and research regulation are too limiting to fully illuminate the politics of stem cell technologies in South Korea. Therefore, by examining the less explored field of stem cells in the clinical practices and commercial products, this article aims to delineate how the meanings and practices of stem cells are constantly being challenged and reconstructed differently in regional settings.

Making Science Real for the Nation: Genomics and Drug Development in Japan and Taiwan

Wen-Hua Kuo, *National Yang-Ming University, Taiwan*

This paper aims to compare how life science is practiced as a part of state projects in Japan and Taiwan. Following Sheila Jasanoff's trajectory of analyzing the politics of science with a comparative perspective, this study focuses on genomics, exploring how it is applied to the advancement of pharmaceutical development. The current literature tends to extol pharmacogenomics (PGx) as nothing less than a powerful tool for the creation of medicines that are universally accessible and individual-based. However, this paper reveals national concerns about this trend, arguing that the application of genomic knowledge can be distinct from one state to another, even as they are similarly linked, scientifically, to the latest technologies.

The paper situates itself in two contexts concerning the use of PGx in the drug development process. One is the initiative of making bio-banks and their uses in research. Life science leaders in Japan and Taiwan both claim that bio-banks are necessity in order to create cutting edge science for the state's excellence. While doing so, they also employ nationalistic tropes to justify the state's huge involvement, thus inviting debate on research ethics and racism. The other context concerns the application of PGx in the current revision of global regulations for drug approvals.

Departing from criticisms that only focus on genomics as a "big business" designed to satisfy life scientists' curiosity, this paper will explore its application, or as I prefer to think of it, "science for society," and argue that how one incorporates genomic knowledge into existing regulatory repertoires and how this would change the way drugs are developed are, in fact, keys to developing science for the good of the state. These application strategies look nationalistic, but they are not empty promises; they can make a state science real.

Despite its transnational scale, this paper has no intention of providing a sketchy comparison of how genomics has emerged in the two states. Instead, by relying intensively on expert discussions and related medical literature, it presents a highly focused, empirical case study that helps us to look into the complexity of the interactions between science and society in the technical field of life science. As the title indicates, it is only by viewing scientific cultures as political cultures that can we move beyond simple interpretations of state science and discover how it functions

at the global level.

Prozac on the loose: Tracing antidepressants in South Asia

Stefan Ecks, *University of Edinburgh*

What role do networks of distribution play in the widening use of psychopharmaceuticals in South Asia? To date, the social effects of psychopharmaceuticals have mostly been studied on four levels: marketing strategies of companies, psychiatric diagnostics, prescription practices, and popular/patient understandings of drugs. The ways in which medications are distributed have never been studied in detail. In comparison to established topics of research, drug distribution appears as a purely technical job that needs to be done with any commodity: inventories, storage, shipping, taxes, and so forth. Yet psychotropic drugs are a special kind of commodity, and the precise ways in which the retail sector is organized has remarkable effects on all parts of the chain, including how doctors prescribe them and patients use them. The paper will present initial findings from the collaborative project "Tracing Pharmaceuticals in South Asia" on the distribution networks around fluoxetine (Prozac).