

Harvard Chinese Life Science Annual Research Symposium 2011

Saturday, April 30, 2011

9:30 AM-5:30 PM



Symposium Sponsors

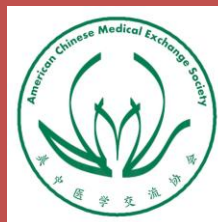


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Symposium Agenda

| Time | Description |
|--------------------|---|
| 9:30 am -9:50 am | Registration |
| 9:50 am-10:00 am | Opening Remarks Dr. Baoli Hu , President, HMS-CSSA |
| Session One | Keynote Addresses Moderators: Dr. Jie Ma / Dr. Chaoshe Guo |
| 10:00 am-10:30 am | Dr. Jianzhu Chen , Massachusetts Institute of Technology <i>"Modeling Diseases and Treatments in Humanized Mice"</i> |
| 10:35 am-11:05 am | Dr. Rurong Ji , Brigham & Women's Hospital, Harvard Medical School <i>"Chronic Pain Regulation by Glial Cells"</i> |
| 11:05 am-11:20 am | Morning Session Break |
| Session Two | Research Talks Moderator: Dr. Wenyu Song |
| 11:20 am-11:40 am | Dr. Jun Qi , Dana-Farber Cancer Institute, Harvard Medical School <i>"Small-molecule Bromodomain Inhibitors for Cancer Therapy"</i> |
| 11:45 am-12:05 am | Dr. Fangwei Wang , Brigham & Women's Hospital, Harvard Medical School <i>"A positive feedback loop involving Haspin and Aurora B promotes the Chromosomal Passenger Complex (CPC) accumulation at centromeres in mitosis"</i> |
| 12:05 pm - 1:30 pm | Lunch Break |
| Session Three | Keynote Addresses Moderators: Dr. Yi Hu / Lijuan Deng |
| 1:30 pm-2:00 pm | Dr. Yuanli Liu , Harvard School of Public Health <i>"Comparing Healthcare Reforms in China and U.S."</i> |
| 2:05 pm-2:35 pm | Dr. Jing Ma , Brigham & Women's Hospital, Harvard Medical School <i>"Selenium & Genes - Implications in the Era of Personalized Cancer Prevention"</i> |
| 2:35 pm-2:50 pm | Afternoon Session Break |
| Session Four | Research Talks Moderator: Dr. Long-Jun Wu |
| 2:50 pm-3:10 pm | Dr. Jihong Bai , Massachusetts General Hospital, Harvard Medical School <i>"Synapses in Motion: Exploring the dynamic regulation at synapses"</i> |
| 3:15 pm-3:35 pm | Dr. Zhen-Zhong Xu , Brigham & Women's Hospital, Harvard Medical School <i>"Resolution of inflammatory pain by Resolvin"</i> |
| 3:40 pm-4:00 pm | Dr. Wenjun Zhang , BCMP, Harvard Medical School <i>"Engineered Biosynthesis of Natural Products for Pharmaceutical Applications"</i> |
| 4:05 pm-4:15 pm | Harvard Chinese Life Science Annual Research Award Ceremony |
| 4:15 pm-4:30 pm | Closing Remarks Dr. Yu Fu , Co-President, HMS-CSSA |
| 4:30 pm-5:30 pm | Networking Chinese painting and calligraphy demonstration by Mr. Jinhu Ma |

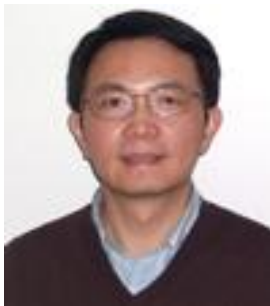
Keynote Speakers



Jianzhu Chen, PhD

Massachusetts Institute of Technology

Modeling Diseases and Treatments in Humanized Mice



Rurong Ji, PhD

Brigham & Women's Hospital, Harvard Medical School

Chronic Pain Regulation by Glial Cells



Yuanli Liu, PhD

Harvard School of Public Health

Comparing Healthcare Reforms in China and US



Jing Ma, MD, PhD

Brigham & Women's Hospital, Harvard Medical School

Selenium & Genes - Implications in the Era of Personalized Cancer Prevention

Speaker Abstracts & Introductions

Jianzhu Chen, PhD

Massachusetts Institute of Technology

Dr. Jianzhu Chen is the Ivan R. Cottrell Professor of Immunology and Professor of Biology at MIT. He is the lead Principle Investigator of the Infectious Diseases Interdisciplinary Research Group of Singapore-MIT Alliance for Research and Technology. Dr. Chen's research seeks fundamental understanding of the immune system as well as its application in vaccination and immunotherapy. Dr. Chen received a B.S. degree from Wuhan University and a Ph.D. degree from Stanford University. He was an instructor at Harvard Medical School before joining MIT. Teaching, research, international collaboration, and entrepreneurship continue to be the focus of his professional effort.

Talk Abstract: Modeling Diseases and Treatments in Humanized Mice

Humanized mice are animals with human blood lineage cells. The mice are constructed by adoptive transfer of human hematopoietic stem cells (HSCs) into immunodeficient mice lacking their own T cells, B cells and natural killer (NK) cells. Differentiation of HSCs gives rise to various human blood lineage cells in the recipient mice. We have improved the current humanized mouse model in significant ways. First, we have optimized methods to expand HSCs in vitro so that large numbers of humanized mice can be constructed from the same source of human HSCs. Second, the ability to expand HSCs in vitro offers the opportunity to genetically modify the cells by lentivirus-mediated transduction, making it possible to study specific gene function in immune responses, disease processes and target validation. As a proof-of-concept, we have introduced proto-oncogenes into HSCs and developed a human pre-B cell acute lymphoblastic leukemia (ALL) model in mice and evaluate potential therapeutics. Third, we have developed a simple and efficient method to enhance reconstitution of specific subset of myeloid cells and NK cells in the reconstituted mice, facilitating the development of more accurate human disease models. Finally, we have extended humanization to other organs. These developments open the door for preclinical applications of humanized mice in modeling human diseases, studying human immune responses to pathogens, and developing therapeutics and vaccines.

Rurong Ji, PhD

Brigham & Women's Hospital, Harvard Medical School

Dr. Rurong Ji received his PhD degree at Shanghai Institute of Physiology, Chinese Academy of Sciences. He had several postdoctoral trainings in Karolinska Institute, Johns Hopkins Medical School, and Massachusetts General Hospital. He is currently an Associate Professor at Brigham and Women's Hospital, Harvard Medical School and the director of Sensory Plasticity Laboratory. His long-term research interest has been cell signaling mechanisms of chronic pain such as inflammatory pain and neuropathic pain. Dr. Ji has published more than 100 papers. His work has demonstrated important roles of MAP kinase signaling pathways in chronic pain regulation. His recent work has also revealed the role of glial cells such as microglia and astrocytes in the pathogenesis of chronic pain.

Talk abstract: Chronic Pain Regulation by Glial Cells

(1) glial cells such as microglia and astrocytes in the spinal cord are activated in chronic pain conditions, and (2) glia-produced mediators such as cytokines and chemokines can enhance pain states via neuronal-glial interactions.

Yuanli Liu, PhD

Harvard School of Public Health

Dr. Yuanli Liu, a health system scientist, is on the faculty of the Department of Global Health and Population at Harvard School of Public Health, where he founded the China Initiative in 2005. The China Initiative aims at helping advance health and social development in China by carrying out series of applied research studies, regular policy dialogues and senior health executive education programs. He is also an Adjunct Professor of Health Policy and Management at Tsinghua University and director of Health and Development Institute at Tsinghua School of Public Policy and Management in Beijing. Professor Liu has been teaching and conducting research in the areas of health financing and health system analysis since 1994 at Harvard. He was profiled in 2003 as one of six “Future Leaders in Public Health”. He serves on the Expert Committee of Health Policy and Management and the Expert Committee on Healthy China 2020, both of which are established by the Chinese Ministry of Health to help inform the policy-making process for China’s healthcare reforms and development. Dr. Liu also served on the United Nations Millennium Development Taskforce on HIV/AIDS, Malaria, TB, and Access to Basic Medicines. He consulted for many international agencies including the World Bank, Asian Development Bank, UNDP, UNICEF, WHO as well as global corporations.

Talk abstract: Comparing Healthcare Reforms in China and US

Why have both China and the US embarked on healthcare reforms almost at the same time? I would argue that among multiple objectives, increasing affordability is the major goal of the reforms. While individual affordability is the major problem facing China, US healthcare reform focuses on improving upon social affordability. Both countries tried to expand insurance coverage and control cost escalation, but their approaches are different. The science and art of cross-country learning lies in our ability to distinguish generalizable knowledge from context-sensitive experiences.

Jing Ma, MD, PhD

Brigham & Women's Hospital, Harvard Medical School

Dr. Jing Ma, associate professor of medicine, Brigham & Women's Hospital, Harvard Medical School (HMS). Dr. Ma was graduated from Tongji Medical University, Wuhan, China. She studies epidemiology of chronic diseases at the University of Minnesota and obtained PhD in 1993. Dr. Ma started her career at Harvard Medical School in 1994 as a research associate and became as a faculty at the HMS in 1997. Dr. Ma has been studying biomarkers and chronic disease for over 20 years and her current focus is on biomarker and cancer research in the Harvard cohorts. Biologic samples have been collected in these cohort studies at baseline in the early 1980s and 1990s and then repeatedly among some of these participants 10 years later. Incidence and fatal outcomes have been closely followed up to the present date. Using a nested case-control design, we analyzed a variety of markers ranging from growth factors, metabolic factors, hormonal factors, and nutritional biomarkers to genetic polymorphisms and linked them to subsequent risk of cancer incidence and progression. Dr. Ma teaches “*Cancer Prevention*” course at the Harvard School of Public Health and serves as grant reviewer for many study section panels of the NIH, Department of Defense, and as associate editor for the journal of Cancer Causes & Control. Dr. Ma is an active investigator in the NIH Breast and Prostate Cancer Cohort Consortium (BPC3), a multi-collaborative research project on genetics and cancer involving the resources of twelve large prospective cohorts from the US, Europe and Australia. Dr. Ma is also a project leader of the study of “*Energetic factors, lethal prostate cancer, and survivorship*” in the newly funded Harvard Transdisciplinary Research in Energetics and Cancer (TREC) Center. This center is designed to increase the understanding of the determinants of obesity from the molecular to societal level and across the lifespan, to clarify the biological links of obesity with cancer risk and survivorship. Dr. Ma published 136 scientific papers in major journals.

Talk abstract: Selenium & Genes - Implications in the Era of Personalized Cancer Prevention

Available data suggest that low selenium (Se) status may be associated with cancer risk, whereas supplementation of this nutrient could protect against cancer. We will review evidence from epidemiological studies and clinical trials and discuss their implications in the era of personalized medicine.

Recipients of 2011 Harvard Chinese Life Science Research Award

Dr. Jihong Bai

Research Fellow, Massachusetts General Hospital, Harvard Medical School
Ph.D., Biophysics, University of Wisconsin-Madison

Dr. Boyi Gan

Instructor, Dana-Farber Cancer Institute, Harvard Medical School
Ph.D., Comparative Biomedical Sciences, Cornell University

Dr. Jun Qi

Research Scientist, Dana-Farber Cancer Institute, Harvard Medical School
Ph.D., Chemistry, University of Michigan

Dr. Fangwei Wang

Research Fellow, Brigham and Women's Hospital, Harvard Medical School
Ph.D., Cell Biology, Tokyo University of Agriculture and Technology, Japan

Dr. Zhen-Zhong Xu

Research Fellow, Brigham and Women's Hospital, Harvard Medical School
Ph.D., Neurobiology, Institute of Neuroscience, CAS, China

Dr. Wenjun Zhang

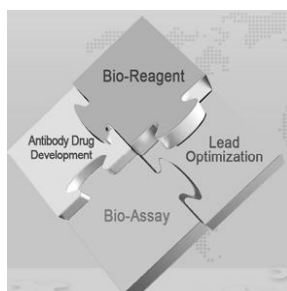
Research Fellow, Department of Biological Chemistry & Molecular
Pharmacology, Harvard Medical School
Ph.D., Chemical Engineering, University of California, Los Angeles

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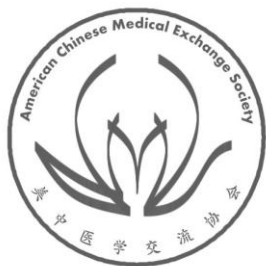
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Symposium Location

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