# LIJING JIANG

Assistant Professor Department of the History of Science and Technology Johns Hopkins University

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# **EDUCATION**

# Doctor of Philosophy, Biology and Society, December 2013

Center for Biology and Society, Arizona State University

Committee: Jane Maienschein (Co-Chair), Manfred Laubichler (Co-Chair), Ben Hurlbut, Richard Creath, Michael White

Specialized Fields: History and Philosophy of Science; Chinese History; History of Medicine Dissertation: Degeneration in Miniature: History of Cell Death and Aging Research in the Twentieth Century

# Master of Science, Biology – Biology and Society, August 2011

Center for Biology and Society, Arizona State University

# Master of Science, Biochemistry, August 2009

Department of Chemistry and Biochemistry, Arizona State University
Thesis: Microbial Biodegradation of 7-Ketocholesterol and in vitro Studies of Medical Bioremediation of
Pathogenic Molecules in Age-Related Diseases

# Bachelor of Science, Biological Science, July 2006

School of Life Sciences, Peking University

Thesis: Protein Fragment Complementation of 5-Enolpyruvyl Shikimate 3-phosphate Synthase of Escherichia Coli

# PROFESSIONAL POSITIONS

- August 2021 Present **Assistant Professor**, Department of the History of Science and Technology, **Johns Hopkins University**
- September 2020 July 2021 **Visiting Assistant Professor**, Program in Science, Technology, and Society, **Colby College**
- July 2018 August 2020 **Postdoctoral Fellow**, Program in Science, Technology, and Society, **Colby College**
- June 2017 June 2018 **Haas Postdoctoral Fellow**, Beckman Center for the History of Chemistry, **Science History Institute** (the former Chemical Heritage Foundation)
- September 2016 May 2017 **ACLS/Henry Luce Postdoctoral Fellow in China Studies**, Program in the History of Science and Medicine and Program in Agrarian Studies, **Yale University**
- February 2015 August 2016 **Postdoctoral Fellow**, History Program/Humanities, Science, and

- Society Research Cluster, School of Humanities and Social Sciences, **Nanyang Technological University**
- April May 2015 **Visiting Postdoctoral Fellow**, Centre for History and Philosophy of Science, **University of Leeds**
- September 2013 October 2014 **D. Kim Postdoctoral Fellow** for History of Science and Technology in East Asia, Department of East Asian Studies, **Princeton University**

# **PUBLICATIONS**

# Peer-Reviewed Journal Articles

- "The Late Ascent of Darwin's *Descent*: Exploring Human Evolution between Sex, Biology, and the Chinese Nation, 1927–1957." Erika Milam and Suman Seth eds. Special Issue: *The Descent of Darwin, BJHS Themes*, 6 (September 2021), 201–220.
- With Vivian Ling, "A Different Kind of Synthesis: Artificial Synthesis of Insulin in Socialist China," *History and Technology*, 35: 4 (2019), 453–480.
- "Crafting Socialist Embryology: Dialectics, Aquaculture and the Diverging Discipline in Maoist China, 1950–1965," *History and Philosophy of the Life Sciences* 40: 3 (2018), 1–22. https://doi.org/10.1007/s40656-017-0166-x
- "The Socialist Origins of Artificial Carp Reproduction in Maoist China," in *Science, Technology & Society*, 22, no. 1 (March 2017): 59–77.
- "Retouching the Past with Living Things: Indigenous Species, Tradition, and Biological Research in Republican China, 1918-1937," *Historical Studies in the Natural Sciences* 46, no. 2 (April 2016): 154–206.
- With Hallam Stevens, "Chinese Biotech versus International Ethics? Accounting for the China-America CRISPR Ethical Divide." *BioSocieties* 10 (2015), 483–488.
- "IVF the Chinese Way: Zhang Lizhu and Post-Mao Human *in vitro* Fertilization Research," *East Asian Science, Technology and Society: An International Journal* 9, no. 1 (March 2015): 23–45 (Nominated for the 2015 Zhu Kezhen Award, International Society for the History of East Asian Science, Technology and Medicine).
- "Causes of Aging Are Likely to be Many: Robin Holliday and Changing Molecular Approaches to Cell Aging, 1963–1988," *Journal of the History of Biology* 47, no. 4 (November 2014): 547–584.
- John Schloendorn, Tim Webb, Kent Kemmish, Mark Hamalainen, David Jackemeyer, **Lijing Jiang**, Jacques Mathieu, Justin Rebo, Jonathan Sankman, Lindsey Sherman, Lauri Tontson, Ateef Qureshi, Pedro Alvarez, and Bruce Rittmann, "Medical Bioremediation: A Concept Moving toward Reality." *Rejuvenation Research* 12, no. 6 (December 2009): 411–419.
- Qiangbin Wang, Yang Xu, Xiaohang Zhao, Yung Chang, Yan Liu, **Lijing Jiang**, Jaswinder Sharma, Dong-Kyun Seo, and Hao Yan, "A Facile One-Step *in situ* Functionalization of Quantum Dots with Preserved Photoluminescence for Bioconjugation," *Journal of the American Chemical Society* 129, no. 20 (May 2007): 6380–6381.

### **Book Chapters**

- "The Dialectics of Species: Chen Shixiang, Insect Taxonomy, and 'the Species Program' in Socialist China," in David A. Bello and Daniel Burton-Rose, eds. *Insect Histories of East Asia* (University of Washington Press, 2023), 183–201.
- With Jeffrey Johnson and Yasu Furukawa, "Learning and Institutions: Global Developments since 1914." In Peter Morris, ed. A Cultural History of Chemistry in the Modern Age, (Bloomsbury 2022).
- "Global Epidemiology, Local Message: Sino-American Cooperation on Cancer Research, 1969-1990," in Patrick Manning and Mat Savelli, eds. *Global Transformations in the Life Sciences*, 1945–1980, University of Pittsburgh Press, 2018, pp. 78–98.
- "The Age of a Cell: Cell Aging in Cowdry's Problems of Ageing and Beyond," in Karl Matlin, Jane Maienschein, and Manfred Laubichler, *Visions of Cell Biology: Reflections on Cowdry's General Cytology*, University of Chicago Press, 2017, pp. 115–133.
- "Cellular and Molecular Biology," in Georgina M. Montgomery and Mark A. Largent eds., *A Companion to the History of American Science*, Wiley-Blackwell, 2016, pp. 174-185.
- "Viktor Hamburger," in Encyclopedia of Life Sciences, John Wiley & Sons Ltd, January 2014.
- "History of Apoptosis Research," in Encyclopedia of Life Sciences, John Wiley & Sons Ltd, June 2012.
- Articles in the Embryo Project Encyclopedia (<a href="http://embryo.asu.edu">http://embryo.asu.edu</a>, an online encyclopedia that was awarded the 2018 Hazen Prize by the History of Science Society)
- "Robert Geoffrey Edwards's Study of in vitro Mammalian Oocyte Maturation, 1960 to 1965," Embryo Project Encyclopedia (2014) ISSN: 1940-5030.
- "Cellular Death in Morphogenesis of the Avian Wing (1962),' by John W. Saunders Jr., et al.," *Embryo Project Encyclopedia* (2014) ISSN: 1940-5030.
- "On the Permanent Life of Tissues outside of the Organism (1912),' by Alexis Carrel," *Embryo Project Encyclopedia* (2012) ISSN: 1940-5030.
- With Karen Wellner, "Review of Icons of Life: A Cultural History of Human Embryos (2009) by Lynn M. Morgan," *Embryo Project Encyclopedia* (2012) ISSN: 1940-5030.
- "Alexis Carrel's Immortal Chick Heart Tissue Cultures (1912—1946)," *Embryo Project Encyclopedia* (2012) ISSN: 1940-5030.
- "The Discovery of p53 Protein," Embryo Project Encyclopedia (2011) ISSN: 1940-5030.
- "China's One-Child Policy," Embryo Project Encyclopedia (2011) ISSN: 1940-5030.
- "China's First Baby Conceived through *in vitro* Fertilization-Embryonic Transfer, by Zhang Lizhu's Research Team," *Embryo Project Encyclopedia* (2011) ISSN: 1940-5030.
- "Zhang Lizhu (1921–)," Embryo Project Encyclopedia (2011) ISSN: 1940-5030.
- "Robert Geoffrey Edwards's Study of Fertilization of Human Oocytes Matured *in vitro*, 1965 to 1969," *Embryo Project Encyclopedia* (2011) ISSN: 1940-5030.
- "Robert Geoffrey Edwards and Patrick Christopher Steptoe's Clinical Research in Human in vitro Fertilization and Embryo Transfer, 1969–1980," *Embryo Project Encyclopedia* (2011) ISSN: 1940-5030.
- "Apoptosis: A Basic Biological Phenomenon with Wide-Ranging Implications in Tissue Kinetics," by J. F. R. Kerr, A. H. Wyllie and A. R. Currie," *Embryo Project Encyclopedia* (2011) ISSN: 1940-5030.

- "Programmed Cell Death–II. Endocrine Potentiation of the Breakdown of the Intersegmental Muscles of Silkmoths,' by Richard A. Lockshin and Carroll M. Williams (1964)," *Embryo Project Encyclopedia* (2011) ISSN: 1940-5030.
- "Reassessment of Carrel's Immortal Tissue Culture Experiments," *Embryo Project Encyclopedia* (2010) ISSN: 1940-5030.
- "Advanced Cell Technology, Inc." Embryo Project Encyclopedia (2010) ISSN: 1940-5030.
- "Alexis Carrel's Tissue Culture Techniques," Embryo Project Encyclopedia (2010) ISSN: 1940-5030.
- "Viktor Hamburger's Study of Central-Peripheral Relations in the Development of Nervous System," *Embryo Project Encyclopedia* (2010) ISSN: 1940-5030.
- "The Effects of Wing Bud Extirpation on the Development of the Central Nervous System in Chick Embryos,' by Viktor Hamburger," *Embryo Project Encyclopedia* (2010) ISSN: 1940-5030.
- "Michael D. West," Embryo Project Encyclopedia (2010) ISSN: 1940-5030.
- "Cell Deaths in Normal Vertebrate Ontogeny,' by Alfred Glücksmann," *Embryo Project Encyclopedia* (2010) ISSN: 1940-5030.

#### **Editorials**

With Karen Rader and Marsha Richmond, "Introducing Biology in Culture' Reviews." *Journal of the History of Biology* 51 (2018), 407–209.

# **Review Essays**

- "The Old, the New and the State in the Making of Modern East Asian Medicine." An essay review of John DiMoia, Reconstructing Bodies: Biomedicine, Health, and Nation-Building in South Korea since 1945 (Stanford, 2013), Sean Hsiang-Lin Lei, Neither Donkey nor Horse: Medicine in the Struggle for China's Modernity (Chicago, 2014), and Bridie Andrews, The Making of Modern Chinese Medicine, 1850–1960 (UBC, 2015), Studies in History and Philosophy of Biological and Biomedical Sciences, 64 (2017): 88–91.
- "Taking Experiments Afresh Again," "A Second Look" review of Steven Shapin and Simon Schaffer, Leviathan and the Air-Pump: Hobbes, Boyle, and the Experimental Life (Princeton, NJ: Princeton University Press, 1985), Isis 28, no. 1 (March 2017): 133–135.

### **Book and Conference Reviews**

- Review of Nathan Crowe, Forgotten Clones: The Birth of Cloning and the Biological Revolution.

  (Pittsburgh, PA: University of Pittsburgh Press, 2021), The FASEB (Federation for American Societies for Experimental Biology) Journal 37, no. 6 (June 2023).
- Review of Anna Marie Roos. *Goldfish.* (London: Reaktion Books, 2019), *Isis* 112, no. 2 (March 2021): 171 –172.
- Review of Howard Chiang (ed.), *Psychiatry and Chinese History* (London and Vermont: Pickering & Chatto, 2014), *Social History of Medicine* 29, no. 2 (2016): 408–409.
- Review of Grace Yen Shen, *Unearthing the Nation: Modern Geology and Nationalism in Republican China* (Chicago: University of Chicago Press, 2014), *Twentieth-Century China* 40, no. 2 (May 2015): 166.

With Changming Wang, "A Conference Review of the Seventh British-North American Joint Meeting of BSHS, CSHPS and HSS (第七届英国—北美科学史学会联合会议纪要)," (in Chinese), Chinese Journal for the History of Science and Technology, 2012, 33(4), 495-498.

### **Online Exhibitions**

With Kate MacCord, "China at the MBL: 1920-1945," The Marine Biological Laboratory Digital Exhibit (July 2015). Available online: http://history.archives.mbl.edu/exploring/exhibits/china-mbl-1920-1945.

With Kate MacCord and Jane Maienschein, "The MBL Embryology Course 1939," The Marine Biological Laboratory Digital Exhibit (July 2015). Available online: http://history.archives.mbl.edu/exploring/exhibits/mbl-embryology-course-1939.

# Works under Review or in Progress

"The Troubled Escape from Chinese Lysenko: Pseudoscience in Transition in Post-War China." Manuscript in Preparation.

Book Manuscript, The Entangled Model Fish: Nations, Environments, and Ornamental Fish as Experimental Animals, 1913–1996, In Preparation.

## RESEARCH INTERESTS

History of Biology, Biotechnology, and Biomedicine China, Japan, Southeast Asia, Asian Americans Histories of Experimental/Model Organisms, Indigenous/Foreign Species Environmental History, Agricultural History, Animal Studies Experimentation, Research Material and Style, and the Transnational in the Life Sciences

### TEACHING INTERESTS

History of Biology; Introduction to Science and Society; History of East Asian Science and Medicine; Modern Science and Technology in East and Southeast Asia; Food, Health and Society; Animals in the Lab; Death, Aging and Immortality in Biomedicine; Science and Asian Americans; Environmental History; Animals and Plants in History; Genetics, Agriculture and Society; History of Medicine; Biology and Society in Literature; Science and Tradition in the Modern World; History of Science; Philosophy of Science.

# **TEACHING EXPERIENCE**

Department of the History of Science and Technology, Johns Hopkins University, 2021–2022-2023 Spring, AS140.302, Rise of Modern Science
AS140.708, Rise of Modern Science (Graduate Seminar)
2022-2023 Fall, AS.140.106, Health, Science, Environment
2021-2022 Spring, AS140.245, Biology and Society in Asia

# AS140.302, Rise of Modern Science

2021–2022 Fall, **AS140.178**, **History of Biology** 

AS140.232, Food, Environment, and Society

Program in Science, Technology and Society, Colby College, 2018–2021 2020-

2021, ST485/486/484, Senior Seminars for STS Thesis Writing

2020/2021 Spring, ST 237: History of Biology

2019 Fall, ST/EA223: Asian Science and Society

2019–2021 Spring, ST114: Introduction to Medicine and Society

2018 Fall, ST297: Global Food, Health and Society

2018 Fall, ST112: Science, Technology and Society

2018 JanPlan, ST297J A: World History of Biology

Guest Lecture, History, Wesleyan University, Fall 2016

Guest Lecture "Science and Technology in Modern China" in Ying Jia Tan's HIST 224 Modern China, 19 October 2016

**Instructor,** History Program and Philosophy Division, School of Humanities and Social Sciences, **Nanyang Technological University**, 2015-17

2016 Semester 1, HH9001: Transnational History: Theories, Methods, and Practices, Section Instructor: "The Needham Question and Transnational Darwinism"

2015 Semester 2, **HH4019: "Making Science, Refiguring Tradition": History and Philosophy of Science in the Modern World** 

2015 Semester 1, Guest Lecture "Civilization and Disease in Early Modern Society," in HH2007: Health and Illnesses in History

**Teaching Assistant**, Center for Biology and Society, School of Life Sciences, **Arizona State University**, 2010-2013.

HPS410/BIO416: Professional Values in Science

HPS322: History of Science [online and traditional] (3 lectures and 10 online discussion sessions)

HPS331/BIO318: History of Medicine (1 lecture and 4 discussion sessions)

HPS/PHI 314: Philosophy of Science (3 discussion sessions)

HPS340/BIO311: Biology and Society

# OTHER RESEARCH AFFILIATIONS

Affiliated Historian, Agency for Science, Technology and Research (A\*STAR), Singapore, January–August 2016.

Visiting Scholar. Institute for History of Natural Sciences, Chinese Academy of Science, January—May 2017, July—September 2014, March 2013, August 2011.

Resident Historian. Building the MBL Digital Community Archives and working on online exhibits, "History of MBL Embryology Course" and "Chinese Biologists at the MBL." Marine Biological Laboratory, Woods Hole, MA. May–August 2013.

Research Assistant. Embryo Project Encyclopedia, Arizona State University, Summer 2010.

- Research Associate. Medical Bioremediation of 7-Ketocholesterol Research, Rittmann Laboratory, Biodesign Institute, Arizona State University, 2007–2009.
- Research Associate in Lab Rotation. Research on Vaccine Production through Tobacco Plants, and in Adapting Nanotechnology for Biomedical Application, the Biodesign Institute, Arizona State University, 2006–2007.

# **CONFERENCES AND PRESENTATIONS**

# Conferences and Events Organized

- Co-Organizer, "Presence of the Past" Lecture Series, Center for Arts and Humanities, Colby College, Spring 2019.
- Co-Organizer, 48th Joint Atlantic Seminar for the History of Biology, Marine Biological Laboratory, Woods Hole, MA, April 2013.
- Co-Organizer, ASU-ISB 2012 ISHPSSB Off-Year Workshop, "What's New about Systems Biology?" Institute for Systems Biology, Seattle, WA, August 2012.
- Organizer, MBL-ASU History of Biogerontology Workshop: "Making Sense of Aging with Cells, Molecules and Development," Arizona State University, Tempe, AZ, October 2011.

# **Invited Public Talks**

- "Resources and Red Tape: Doing Science in Communist China," co-presented with Vivian Ling, Saturday Speaker Series, Science History Institute, 14 April 2018.
- "Peking University and the Making of Modern Biology in China," Peking University Bionet Conference, San Francisco, CA, 28 May 2016.

# **Invited Academic Talks**

- "Between Agricultural Education and Classroom Experimentation: Manual Labor in China's Middle School Biology, 1952–1965," International Workshop on Socialist Industrialization, Deskilling, and Efforts to Diminish the Gap between Mental and Manual Labor in China, Lingnan University, Hong Kong, 27–28 May 2023.
- "Material Cultures of Asian Aquaculture," D. Kim Foundation Workshop, Harvard University, 10 January 2020.
- "Ideology and Innovation in Fish Farming Technology across the Bamboo Curtain,' 1954–1965," Brown Bag Lunch Lecture, Science History Institute, Philadelphia, PA, 9 April 2018.
- "The Troubled Escape from Chinese Lysenko: Questioning Genetics and Society in Postwar Sino-American Contacts on Biology," Department of History of Science and Technology, Johns Hopkins University, Baltimore, MD, 8 March 2018.
- "The Late Ascent of Darwin's *Descent*: Exploring Human Evolution between Sex, Biology, and the Chinese Nation, 1927–1957," Descent of Darwin: A Workshop, co-organized by Erika Milam and Suman Seth, Program in the History of Science, Princeton University, Princeton, NJ, 9–10 February 2018.
- "Visions of Life in the Land of Change: The Goldfish as Pet and Experimental Organism in Twentieth-Century China," Science, Technology and Society, Stevens Institute of Technology, 4 December 2017.

- "Visions of Life in the Land of Change: The Goldfish as Pet and Experimental Organism in Twentieth-Century China," The Department of History and Sociology of Science, University of Pennsylvania, Philadelphia, PA, 27 November 2017.
- "The Goldfish and the History of Science in China," (in Mandarin Chinese) Department of the History of Science, Tsinghua University, Beijing, China, 26 April 2017.
- "The Troubled Escape from China's Lysenko: Sino-American Split of 'Pseudosciences' and Migrating Biologists, the 1950s versus the 1980s." The Hong Kong Institute for the Humanities and Social Sciences, The University of Hong Kong, Hong Kong, 21 February 2017.
- "Visions of Life in the Land of Change: The Goldfish as Pet and Experimental Organism in Twentieth-Century China," Program in Science, Technology, and Society, Colby College, Waterville, Maine, 20 June 2016.
- "Native Science or Colonial Science? Researching the Lady-Bird Beetle and Dawn Redwood Tree during the War of Resistance in China," Symposium on Science and Modern China, The History Department, The Science, Technology, and Society Program, Cal Poly Pomona, Pomona, CA, 1 June 2016.
- "The Filedscapes in Experimental Biology in Republican China," History Programme Seminar, held in conjunction with the Research Cluster in Humanities, Science and Society, School of Humanities and Social Sciences, Nanyang Technological University, Singapore, 11 February 2016.
- "How the Goldfish Became Chinese: Reframing Breeder's Arts in Late Qing," College of Humanities, Arts, and Social Sciences Postdoctoral Fellow Seminar Series, Nanyang Technological University, Singapore, 22 September 2015.
- "Visions of Life in the Land of Change: The Goldfish and the Place of Biology in Twentieth-Century China," Centre for History and Philosophy of Science, University of Leeds, Leeds, UK, 6 May 2015.
- "How Aging Became Part of Cellular Life," Workshop on the Past, Present, and Future of Cell Biology "Updating Cowdry at the MBL," Marine Biological Laboratory, Woods Hole, MA, October 2014.
- "Of Goldfish and Scientists: Experimental Biology in Modern China," Workshop on New Horizons in the History of Modern East Asian Science and Technology, Harvard University, Boston, MA, June 2014.
- "Aging Catastrophe Comes with Protein: Cytoplasmic Inheritance and Epigenetics in Robin Holliday's Cell Aging Research, 1963-1988," MBL-ASU History of Biogerontology Workshop: "Making Sense of Aging With Cells, Molecules and Development," Tempe, AZ, October 2011.
- "Designing an IVF Strategy for Chinese Circumstances: Zhang Lizhu and Human *in vitro* Fertilization Research in Peking University Third Hospital 1982 1988," East Asian Biosciences: Transnational Competition and Collaboration, A Science and Technology in the Pacific Century Initiative Conference, University of Illinois, Urbana-Champaign Center for East Asian and Pacific Studies, Urbana, IL, October 2010.

### **Conference Paper Presentations (Selected)**

- "Why study sex with medaka: Sexual states as biological indicators in Cold War Japan," in the panel (served as Panel Organizer) "Why Study Sex with X? Epistemic and Practical Landscapes of Animal Sex within and beyond the Laboratory," History of Science Society Annual Meeting, Portland, OR, November 2023.
- Commentator of the panel "The Global Animal House," organized by Brad Bolman, American Historical Association Annual Meeting, Philadelphia PA, January 2023.
- Organizer and Presenter, Roundtable: "Scientific Animals and Nations," History of Science Society Annual Meeting, Chicago, IL, November 2022.
- "Species, Efficiency, and Realities of Water Economy: Prawn Cultures in Japan and Thailand," in panel (served as Panel Organizer) "Fluid Technologies: Engineering Marine Space and Species," Society for the History of Technology Annual Meeting, New Orleans, LA, November 2022.
- "The High-tech Dreams and Hybrid Realities of the Butterfly Tail: Genetics and Production of Goldfish Varieties in China since the 1980s," Annual Conference of the Association for Asian Studies (virtual), March 2021.
- "Aquaculture and the East Asian (dis)Order: Social Imaginaries in Fish Farming Technology across the Bamboo Curtain, 1954–1976," Order and Disorder in Asia, Department of East Asian Studies, Tel Aviv University, Tel Aviv, Israel, 3–4 June 2019.
- "Three Views of the Goldfish: Genetics, Aquaculture and the Nation in Japan and China, 1928–1963," Workshop on Knowledge, Materiality, and Environment in Transpacific Histories of Oceanic Transformation, Humboldt University and Max Planck Institute for the History of Science, Berlin, Germany, 11–12 April 2019.
- "Power and Cultures of the Life Sciences in Twentieth-Century China: The Changing Imagination of Generations," Culture and Power in China's History Conference, Arizona State University, Tempe, AZ, 29–30 March 2019.
- "Borderlands, Marginalized People, and the Resurgence of Rice-Fish System in Twentieth-Century China," in panel "Landscapes in Motion: Coastal and Mountain Dynamics in China and Indonesia," Organized by Xiaofei Gao, Association for Asian Studies 2019 Conference, Denver, CO, 21–24 March 2019.
- "Fragments Reconnected: Fiction as an Exercise in the History of Science," in panel "Writing the History of Science" organized by Roger Launius, History of Science Society Annual Meeting, Seattle, WA, 1–4 November 2018.
- "Stories of the 'Living Fossil' across the Pacific: Narratives of Evolutionary History and Resource Management in Metasequoia Research," in panel "Narrative Technology" organized by Dominic Berry, Society for the History of Technology Annual Meeting, St. Louis, MI, 11–14 October 2018.
- "Bernard Read and Chinese Pharmaceuticals in Translation," Workshop on "Sociotechnical Systems of Pharmacotherapy in Modern East Asia, 1800–2020," The University of Hong Kong, Hong Kong, 23–24 June 2018.
- "The Troubled Escape from Lysenko's Shadow: Chinese Ameircan Biologists and Problems of Heredity and Patriotism during the Cold War," Conference on "Confronting Predicament: The Mentality and Patterns of Behavior of Chinese Intellectuals in the Second Millennium," The Chinese University of Hong Kong, Hong Kong, 25–26 May 2018.
- "How Aquaculture Became Socialist: Ideology and Innovation in Fish Farming Technology in Maoist China," in panel "Of Reds and Experts: Socialist Science, Technology, and

- Medicine in Maoist China," organized by Victor Seow, The Association of Asian Studies Annual Conference, Washington, D.C., 22–25 March 2018.
- With Vivian Ling, "The Great Leap Making and the Accumulative Knowing: Insulin Synthesis during the Early Cold War," in panel "Between Making and Knowing," organized by Daniel Liu, History of Science Society Annual Meeting, Toronto, Canada, 9–12 November 2017.
- "Exoticism Rationalization Admixture: Chinese Embryos and Drugs at the 'Hopkins in Peking,' 1922–1932," in panel "Understanding One Thousand Golden Drugs," organized by Yan Liu, Christine Luk, and Lijing Jiang, The 25th International Congress of History of Science and Technology, Rio de Janeiro, Brazil, 23–29 July 2017.
- "From Michurin Fish to Transgenic Carp: Material Legacies of Socialist Science in Chinese Biotech," in panel "Organisms and Us," organized by Rachel Ankeny, International Society for the History, Philosophy and Social Studies of Biology, Sao Paulo, Brazil, 16–21 July 2017.
- "Biology and Its Social Role in France and Zhu Xi's Science Popularization and Agricultural Embryology," in panel "Revisiting Legacies of the Sino-French Connection in Early Twentieth-Century China," organized by Ke Ren, The 6th French Network for Asian Studies International Conference, Sciences Po, Paris, 26–28 June 2017.
- "The Dialectics of Species: Practicing Taxonomy and Evolution in Socialist China" in panel "Making up individuals and species in twentieth-century China," organized by David Luesink, The Association of Asian Studies Annual Conference, Toronto, Canada, 16–19 March 2017.
- "The Fieldscapes of Experimental Biology in Republican China: Fruit Flies, the Lady-Bird Beetles and the Placeness of the Laboratory," in panel "Transnationalism & Transformation of Science in Modern East Asia," organized by Christine Yi Lai Luk; Discussion of "Fish Genomics and Cosmopolitanism in Singapore" at the Roundtable "Science and Cosmopolitanism in Asia", organized by Somaditya Banerjee, History of Science Society Annual Meeting 2016, Atlanta, GA, 3–6 November 2016.
- "Between Imperialism and Democratic Science: Reconsidering Mendel in Twentieth-Century China," in symposium "Mendel and the Uses and Abuses of the Scientific Past," organized by Gregory Radick and Ondrej Dostal, 7th International Conference of the European Society for the History of Science, Charles University, Prague, Czech Republic, 22–24 September 2016.
- "How the Goldfish Became Chinese: Breeders' Craft, French Natural History, and Transcultural Connoisseurship in Late Qing China," Joint East Asian Studies Conference, SOAS University of London, London, UK, 7–10 September 2016.
- "From Model Organisms to Indigenous Species: Historiography of Experimental Biology with a Global View (从模式生物到本土物种: 全球视野的实验生物科学史编史学)," The 6th National Conference on the Pedagogy in the History of Science and Technology and the 2nd National Forum on the Historiography of Science and Technology, Guangxi University of Nationalities, Nanning, China, 26 July 2016.
- "Crafting Socialist Embryology: Dialectics, Communist Science, and Aquaculture in Maoist China, 1950–1965," Youth Academic Forum: New Directions in the History of Science and Technology, The Institute for the History of Natural Sciences, Chinese Academy of Sciences, Beijing, China, 12 July 2016.

- "Ideology and Economics of Aquaculture Technology in China, Taiwan, and Philippines during the Cold War: A Comparative View," in session "Colonial Legacies of Technological Development in Asia, from the Age of Imperialism to the Cold War," organized by Wei Yi Leow, Society for the History of Technology Annual Meeting 2016, Tembusu College, National University of Singapore, Singapore, 22–26 June 2016.
- "The Field Biology at Yenching University and the Localization of Genetics in Republican China ( 燕京大学的野外生物学与民国遗传学的本土化)," (in Chinese) The Fifth Symposium on Peking University and Modern Chinese Science, Peking University, Beijing, 13 December 2015.
- With Weimin Xiong, "Crafting Embryology in Maoist China: Embryologists and Mass Cultivation of Silkworms and Fishes, 1950-1963," in session "New Directions in the History of the Life Sciences in Modern East Asia, organized by Howard Chiang and Tae-Ho Kim, The 14th International Conference on the History of Science in East Asia, Paris, 6–10 July 2015.
- "Traveling Seeds and Transnational Botany: Divergent Research on the 'Living Fossil' Metasequoia in China and the United States, 1944-1960," The Third Congress of the Asian Association of World Historians, Nanyang Technological University, Singapore, 29–31 May 2015.
- "Dialectics and Production as Fields of Concerns: Crafting Socialist Embryology in China," The 10th UK Integrated History and Philosophy of Science Conference, Durham, UK, 17 April 2015.
- "What Sciences on Chinese Fishes Tell Us about Globalization?" in session "Science and Medicine through Asian Perspectives," organized by Xixuan Collins, Asian Studies Development Program National Conference, "Rethinking Asian Studies: Asia as Method," Branson, MO, March 2015.
- "The Troubled Escape from Chinese Lysenko: Questioning Pseudoscience in Postwar Sino-American Contacts on Biology," in session "Transnational Biomedical Expertise in Modern China" (session organizer), History of Science Society Annual Meeting, Chicago, IL, November 2014.
- "Material Nativism and the Changing Relations between Chinese and American Biologists before 1950." International Conference on "Modern China in Global Contexts, 1600-Present," Institute of Modern History, Academia Sinica, Taipei, Taiwan, August 2014.
- "Global Epidemiology, Local Message: U.S.-China Collaborations on Cancer and Nutrition, 1969-1990," Workshop on "The Life Sciences after World War II: Institutional Change and International Connections," World History Center, University of Pittsburgh, PA, May 2014.
- "Goldfish, History and Progress: Material and Historical Nativism in Chen Zhen's Evolution and Genetics Research, 1920-1956." 2013 History of Science Society Annual Meeting, Boston, MA, November 2013.
- "Designing an IVF Strategy for Chinese Circumstances: Zhang Lizhu and the Human *in vitro* Fertilization Research in Peking University Third Hospital, 1982-1988," 2012 History of Science Society Annual Meeting, San Diego, CA, November 2012.
- "A Wormy Kind of Death: H. Robert Horvitz's Genetic Study of Cell Death in *C. elegans*," Seventh British-North American Joint Meeting of the BSHS, CSHPS, and HSS (Three-Society Meeting), Philadelphia, PA, July 2012.

- "Causes of Aging Are Likely to be Many': Cytoplasmic Inheritance, Epigenetics, and Integrative Approach in Robin Holliday's Research on Cell Aging, 1963-1988," The 47th Joint Annual Atlantic Seminar for History of Biology, University of Pennsylvania, Philadelphia, PA, April 2012.
- "Zhang Lizhu and the Human *in vitro* Fertilization Research in Peking University Third Hospital, 1982-1988," The 13th International Conference on the History of Science in East Asia, held by the International Society for the History of East Asian Science, Technology, and Medicine, Hefei, China, August 2011.
- "Seeing Experiments Differently: Viktor Hamburger and Rita Levi-Montalcini's Study of Neuron Development before 1950," in a co-proposed session "Experiments and Beyond: New Epistemological Perspectives in Biological Research," Biannual Meeting of the International Society for the History, Philosophy, and Social Studies of Biology, Salt Lake City, UT, July 2011.
- "Degeneration in Miniature: Making Sense of Cell Death and Aging in Twentieth Century Bioscience," 2011 ASU-MBL History of Biology Seminar: History of Cell Biology, Woods Hole, MA, May 2011.
- "From Induction to Degeneration: Viktor Hamburger's Study of Chick Neuron Development and the Emerging Concept of Programmed Cell Death in the mid-Twentieth Century US," History and Philosophy of Biology in the Desert, Arizona State University, Tempe, AZ, February 2011.
- "The Best Medicine for the Elderly: Drink and Food in *Shouqin Yanglao Xinshu* and the Transformation of Confucian *yangsheng* Literature from Song to Yuan," The 12th International Conference on the History of Science in China, Beijing, China, June 2010.
- "Researching Aging Under Glass: The Discovery of the Hayflick Limit and the Molecularization of Cellular Aging, 1961–1992," History of Science Society Annual Meeting, Phoenix, AZ, November 2009.
- "The Discovery of the Hayflick Limit and Shifting Grounds of Theories on Biology of Aging," 2009 ASU-MBL History of Biology Seminar: Theory in the Life Sciences, Woods Hole, MA, May 2009.

# Other Training Workshops Presented

- "Decolonizing Science in Asia," Asian Studies Summer Institute, Pennsylvania State University, State College, PA, 13–17 June 2016.
- "Molecular Biology of Aging," Summer Course, Marine Biological Laboratory, Woods Hole, MA, July 2012.
- "Science outside the Lab: A Policy Dis-Orientation", The Center for Nanotechnology in Society, the Consortium for Science, Policy and Outcomes, Washington D. C., July 2007.

# **SERVICE**

- Advisory Board Member, Program in Medicine, Science, and the Humanities, Johns Hopkins University, 2022–Present.
- Advisory Board Member, Program in East Asian Studies, Johns Hopkins University, 2021–Present. Co-Organizer, Colloquium in History of Science, Medicine, and Technology, Johns Hopkins

University, 2022–2023

Co-Convener, Environment Reading Group, Johns Hopkins University, 2022 Summer.

# Book Review Editor, Journal of the History of Biology, 2017-2022.

Editorial Board Member, Journal of the History of Biology, 2016-.

Editorial Board Member, Studies in History and Philosophy of Biological and Biomedical Sciences, 2017—.

External reviewer for journal manuscripts, The British Journal for the History of Science, Historical Studies in the Natural Sciences, Journal of the History of Biology, The Asian Review of World Histories, Endeavor, East Asian Science, Technology and Society, Science, Technology and Human Values, Journal of Medical Ethics, and 《自然科学史研究》(Studies in the History of Natural Sciences), 2016—.

External reviewer for fellowship evaluation, The Consortium for History of Science, Technology and Medicine, 2017, 2021.

External reviewer for book proposals, University of Chicago Press, 2017.

Editor, "Notes from the Field," Forum for the History of Science in Asia, an interest group of the History of Science Society, June 2014–2015.

Dr. Biology Correspondence, on History of Biology and Biochemistry, Ask-A-Biologist Educational Outreach (http://askabiologist.asu.edu), Arizona State University, 2012–2018.

Founding Organizer, Science and Society in East Asia Reading Group, Arizona State University, 2012–2013.

Docent, Chemical Heritage Foundation Museum, Philadelphia, PA, 2012–2013.

Fellow, Alternative Imaginations Research Cluster, the Consortium for Science, Policy and Outcomes, Arizona State University, 2009–2011.

Docent, Arizona State University Art Museum, Tempe, AZ, 2007–2008.

# **AWARDS AND GRANTS (Selected)**

**Fellow** in the theme "Environment and Climate," Shelby Cullom Davis Center, Department of History, Princeton University, Spring 2024.

**Postdoctoral Fellowship in China Studies**, Henry Luce Foundation and the American Council of Learned Societies (ACLS), awarded for 9 months between 2015 and 2017.

Grant-in-Aid, Rockefeller Archive Center, 2015-2016.

Short-Term Research Grant, American Philosophical Society, 2014-2015.

Sydney Brenner Scholarship, Cold Spring Harbor Laboratory, 2014.

Research Travel Grant, Association for Asian Studies, The China and Inner Asia Council, Summer 2014.

**D. Kim Postdoctoral Fellowship**, The D. Kim Foundation for the History of Science and Technology in East Asia, 2013-2014.

National Science Foundation Doctoral Dissertation Research Improvement Grants [Grant No. 13013185], Science, Technology and Society, National Science Foundation, 2012-2013.

Dissertation Research Fellowship, Philadelphia Area Center for History of Science, 2013.

Allington Fellowship, Chemical Heritage Foundation, July 2012 and January 2013.

Teaching Associate of the Year, Honorable Mention, School of Life Sciences, Arizona State

University, 2012–2013.

Ellison Medical Foundation Fellowship for Summer Course on the Molecular Biology of Aging, Marine Biological Laboratory, Woods Hole, MA, July-August 2012.

# PROFESSIONAL MEMBERSHIPS

**HSS** History of Science Society

**ISHPSSB** International Society for the History, Philosophy, and Social Studies of Biology **ISHEASTM** International Society for the History of East Asian Science, Technology, and

Medicine

SHOT Society for the History of Technology

AAS The Association for Asian Studies

# **LANGUAGES**

Mandarin Chinese (native), Japanese (advanced), German (reading)