

## Curriculum Vitae - Kathy M. Takayama

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### EDUCATION

Ph.D. Biochemistry and Molecular Biology, Rutgers University Medical School, Piscataway, New Jersey  
B.Sc. Biology, Massachusetts Institute of Technology (MIT), Cambridge, Massachusetts

### PROFESSIONAL EXPERIENCE

2025 - current **Director, Center for Inclusive Excellence in Teaching**, The College of the Holy Cross, Worcester, Massachusetts, USA

2023 - 2025 **Executive Director for Diversity, Equity, and Inclusion**, Okinawa Institute of Science and Technology Graduate University, Okinawa, Japan

2021 - 2025 **Executive Director, Center for Professional Development and Inclusive Excellence**, Okinawa Institute of Science and Technology Graduate University, Okinawa, Japan

2020 - 2021 **Visiting Fellow**, Center for Teaching and Learning, Amherst College, Amherst, Massachusetts, USA

2019 - 2020 **Executive Director**, Teaching and Learning Transformation Center, University of Maryland College Park, USA

2018 - 2019 **Senior Science Education Fellow**  
Howard Hughes Medical Institute, Chevy Chase, Maryland, USA

2016 - 2018 **Director**  
Center for Advancing Teaching & Learning through Research, Northeastern University, USA

2015 - 2016 **Associate Provost & Founding Executive Director**, Center for Teaching and Learning, and **Adjunct Professor**, Department of Biological Sciences, Columbia University, USA

2010 - 2015 **Executive Director**, The Harriet W. Sheridan Center for Teaching & Learning, Brown University; **Adjunct Professor**, Department of Molecular Biology, Cell Biology & Biochemistry, Brown University, USA

2007 - 2010 **Associate Director**, The Harriet W. Sheridan Center for Teaching & Learning, Brown University, USA; **Adjunct Associate Professor** of Molecular Biology, Cell Biology & Biochemistry

2002 - 2007 **Senior Lecturer**, School of Biotechnology and Biomolecular Sciences, University of New South Wales (UNSW), Sydney, NSW, Australia (April 2002 – tenured)

2001 - 2002 **Lecturer**, Microbiology and Immunology, School of Biotechnology and Biomolecular Sciences, University of New South Wales, Sydney, NSW, Australia

1995 - 2001 **Australian Research Council Senior Research Associate**, School of Microbiology and Immunology, University of New South Wales, Sydney, NSW, Australia

1991 - 1994 **NIH Postdoctoral Research Fellow**, Department of Biochemistry, University of Wisconsin-Madison, Wisconsin, USA

### AWARDS AND RECOGNITION

2023 National University of Singapore, [Educator-in-Residence](#)

2008 - 2009 National Academies Education Fellow in the Life Sciences, USA

2005 Australian Society for Microbiology [David White Award for Excellence in Teaching](#)

2004 Australian College of Educators State of New South Wales Quality Teaching Award

2003 University of New South Wales Vice Chancellor's Award for Teaching Excellence, Australia

2003 - 2004 [Carnegie Scholar](#), Carnegie Foundation for the Advancement of Teaching, USA

2002 - 2003 University of New South Wales Vice Chancellor's Teaching and Research Award, Australia

2002 University of New South Wales Innovative Teaching and Educational Technology Fellowship

1991 - 1994 National Institutes of Health Individual Research Fellowship, USA

## EDITORIAL BOARDS

- 2016 - current Editorial Board, *Teaching & Learning Inquiry* (official journal of the International Society for the Scholarship of Teaching and Learning) <http://tljournal.com/>
- 2010 - 2014 Research Editor, *The Journal of Microbiology and Biology Education* (ASM Press, Washington DC)
- 2007 - 2010 Editorial Board, *The Journal of Microbiology and Biology Education* (ASM Press, Washington DC)
- 2006 - 2014 Editorial Board, *International Journal for the Scholarship of Teaching and Learning*
- 2006 - 2007 Editorial Review Panel, *The Journal of Microbiology and Biology Education*
- 2001 - 2003 Editorial review panel for MERLOT (Multimedia Educational Resource for Learning and Online Teaching)
- 2004 - 2005 Editorial Review Board, *MountainRise*, international e-journal on the scholarship of teaching and learning

## PROFESSIONAL LEADERSHIP

- 2025 - 2027 National University of Singapore External Review Panel for the Evaluation of Appointments and Promotions to Associate Professor/Professor on the NUS Educator Track
- 2023 US-Japan Women Leaders Dialogue on STEM Leadership in Higher Education
- 2021 - current External Curriculum Advisor for National Institutes of General Medical Sciences “Building Mentoring Capacity”, Harvard Medical School, USA
- 2021 - current External Advisory Board for National Institutes of Health “Advancing the Research Careers of Women & PEERS in Brain Science”, Brown University Carney Institute for Brain Science, USA
- 2019 - 2021 International Advisory Board, Fulbright University–Vietnam; joint initiative between US State Department and the government of Vietnam
- 2017 - 2018 Chair, Northeastern University New England Association of Schools and Colleges (NEASC) Accreditation Committee on Teaching, Learning, and Scholarship, USA
- 2013 - 2016 President-Elect / President / Past President, The International Society for the Scholarship of Teaching and Learning
- 2014 - 2015 Chair, Online Course Subcommittee, Brown University College Curriculum Council, USA
- 2013 - 2020 International Advisor, Ireland National Forum for Enhancing Teaching and Learning
- 2012 - 2018 International Advisor, University of Fukui Curriculum Reform Initiative, Japan
- 2009 - 2011 College Board Advanced Placement (AP®) Biology Curriculum Development & Assessment Committee, USA
- 2008 - 2011 Executive Committee: National Institutes of Health, Division of International Training and Research - Fogarty International Grant Award: “Framework Programs for Global Health”, Brown University, USA
- 2008 - 2011 Co-Chair, Biology Scholars Program Scholarship of Teaching and Learning Transitions Residency, Washington DC, USA
- 2007 - 2011 Steering Committee and Facilitator: Biology Scholars Program Scholarship of Teaching and Learning Institute, Washington DC, USA
- 2007 Conference Chair and Organizer, International Society for the Scholarship of Teaching and Learning, Sydney, Australia
- 2005 - 2007 Regional Vice President (Australasia), International Society for the Scholarship of Teaching and Learning
- 2004 Founding Committee, International Society for the Scholarship of Teaching and Learning

## INVITED KEYNOTE AND PLENARY PRESENTATIONS

- 2024 Invited speaker, University of California–Berkeley, USA: “The development of mentoring constellations for international postdoctoral fellows”

- 2024 Invited speaker, Nanyang Technological University, Singapore: “Inclusive Pedagogy”
- 2024 Invited speaker, Nanyang Technological University, Singapore: “The development of mentoring structures and networks”
- 2023 Invited speaker, University of Tokyo Office for Gender Equality, Japan: “Research and Lessons Learned from Faculty Search Processes”
- 2023 Invited speaker, RIKEN Center for Brain Science, Japan: “Diversity, Equity, & Inclusion in Science”
- 2023 Invited speaker, Harvard Medical School Department of Neurobiology, USA: “Inclusive Faculty Mentorship”
- 2023 Invited speaker, Tokyo Institute of Technology Institute of Innovative Research, Japan: “Inclusive Leadership and Responsible Conduct of Research”
- 2022 Invited speaker, Kyoto University, Japan: “Creating inclusive, productive academic environments: Bold opportunities for the future of universities”
- 2022 Invited speaker, Harvard Medical School, USA: “Diversity, equity, inclusion, justice, and belonging considerations and approaches in peer mentoring”
- 2022 Keynote speaker, American Society for Biochemistry and Molecular Biology, USA: “Creating an Inclusive Learning Environment”
- 2021 Keynote speaker, Scholarship of Teaching and Learning Virtual Symposium 2021 Teikyo University, Japan: “*The Importance of SoTL in Creating More Inclusive Institutional Climates*”
- 2020 Keynote speaker, Harvard Medical School, USA: “*Inclusive Excellence in Research: Creation of a Vibrant, Scientific Global Community*”
- 2020 Invited panelist, Academic Resilience Consortium Conference, USA
- 2019 Invited speaker, The Best Teachers Institute, New Jersey, USA
- 2018 Invited speaker, Globalizing the Liberal Arts Conference, Soka University, California, USA: “*Toward inclusive learning cultures in STEM: Integrating embodied understanding of diversity and identity through self-authored narratives and theatre*”
- 2017 Keynote speaker, Chinese Higher Education Development Network Conference, Shanghai, China: “*Creating personal learning experiences through collaborative learning*”
- 2016 Keynote speaker, IUPUI Assessment Institute, Indianapolis, Indiana, USA: “*Cultivating learning cultures: Reflective habits of mind and the value of uncertainty*”
- 2016 Keynote speaker, Global Learning Council Symposium, *Technology-Enhanced Learning in Asia: Promises and Challenges*, National University of Singapore, Singapore: “*The value of uncertainty in the learning sciences: Intersections of technology and student engagement*”
- 2015 Keynote speaker, Euro-SoTL Conference, University College Cork, Cork, Ireland: “*Authentic inquiry in STEM through collaborative e-Portfolios*”
- 2015 Keynote speaker, University of Waterloo Annual ePortfolio Conference, Waterloo, ON, Canada: “*Cultivating learning cultures: Reflective habits of mind and the value of uncertainty*”
- 2015 Invited speaker, Auburn University, Auburn, Mississippi, USA: “*Cultivating learning cultures: Reflective habits of mind and the value of uncertainty*”
- 2015 Invited speaker, Dominican University, Chicago, Illinois, USA: “*Cultivating Integrative Thinking: Reflective habits of mind and the value of uncertainty*”
- 2015 Keynote speaker, Nanyang Technological University Annual Learning and Teaching Seminar, Singapore, Changing Identities in University Teaching
- 2014 Keynote speaker, AAEEBL (Association for Authentic, Experiential and Evidence-Based Learning) Conference, Boston, MA, USA: “*Cultivating learning cultures: Reflective habits of mind and the value of uncertainty*”
- 2014 Invited speaker, Association of American Universities (AAU) STEM Conference, Washington D.C., USA: “*Using collaborative ePortfolios to foster metacognitive inquiry thinking*”
- 2014 Invited speaker, Association of American Colleges & Universities (AAC&U) STEM Conference, Atlanta, Georgia, USA: “*Using collaborative ePortfolios to foster metacognitive inquiry thinking*”
- 2014 Invited plenary, Harvard Business School Dynamic 23<sup>rd</sup> Annual Women in Business Conference, Cambridge, Massachusetts, USA: “*Education Reform Challenges and Solutions from All Angles*”
- 2013 Invited plenary, Howard Hughes Medical Institute Science Education Advisory Board, Bethesda,

- Maryland, USA: *“Experiments in online teaching and learning at Brown University”*
- 2013 Keynote speaker, eLearning Forum Asia 2013, Hong Kong: Learning Outcomes – Impact on Next Generation Learners
- 2013 Keynote speaker, AAEEBL (Association for Authentic, Experiential and Evidence-Based Learning) Conference, Providence, Rhode Island, USA: ePortfolios in an Altered Learning Landscape
- 2013 Keynote speaker, Framingham State University, Center for Excellence in Learning, Teaching, Scholarship, and Service, Framingham, Massachusetts, USA
- 2012 Invited speaker, Rice University, Houston, Texas, USA: *“Teaching Ideas Worth Spreading (with apologies to TED): Learning to teach by learning to learn”*
- 2012 Keynote speaker, 2012 Higher Education Research and Development Society of Australasia Annual Conference, Hobart, Australia: *“Cultivating Connections throughout the Academe: Learning to Teach by Learning to Learn”*
- 2011 Keynote speaker, 2011 Centennial Symposium on the Scholarship of Teaching and Learning, Banff, Alberta, Canada: *“Integrative Paths in the Scholarship of Teaching and Learning”*
- 2011 Invited plenary, Harvard University LASPAU, USA: *“Institutional Strategies for Improving Learning”*
- 2011 Invited speaker, Colgate University, Hamilton, NY, USA: *“Visualizations in Teaching and Learning”*
- 2011 Invited plenary, Hong Kong Institute of Education: *“Supporting Teaching and Learning through e-Portfolios”*
- 2011 Invited plenary, 2011 Nanyang Technological University (NTU) Learning and Teaching Seminar: Our Global Challenge: Preparing Our Students for the 21<sup>st</sup> Century, Singapore: Crossing Boundaries: *“How Integrative Experiences in Faculty Development can Contribute to Interdisciplinarity”*
- 2011 Invited speaker, Yale University, USA, National Academy of Sciences Summer Institute on Undergraduate Education in Biology: *“How People Learn: Visualizations & Scientific Teaching”*
- 2011 Keynote speaker, Babson-Olin-Wellesley 3 College Consortium for Faculty Development, USA: *“Interdisciplinary Conversations in Teaching and Learning”*
- 2011 Keynote speaker, Furman University Teaching and Learning Forum, USA: *“Interdisciplinary Conversations in Teaching and Learning”*
- 2010 Keynote speaker, James Madison University Visiting Scholar: *“Visualizing the Science of Genomics”*
- 2010 Keynote speaker, American Academy for Optometrists Educational Symposium, USA: *“The Scholarship of Teaching & Learning”*
- 2010 Invited plenary, American Society for Microbiology Conference for Undergraduate Educators, USA: *“The Scholarship of Teaching and Learning”*
- 2009 Invited speaker, Harvard University, USA; 10,000 Women Faculty Development Program: Seminar on Effective Teaching and Learning in Business Education: *“Scientific Teaching and the Scholarship of Teaching & Learning”*
- 2009 Keynote speaker, Scholarship of Teaching and Learning Commons Conference, Georgia Southern University, USA: *“Communities, voices, and portals of engagement”*
- 2008 Invited plenary, Wellesley College, USA, Pforzheimer Learning and Teaching Center: *“The scholarship of teaching & learning- a microbiologist’s journey “*
- 2008 Invited plenary, The Spencer Forum in Art and Design Collegiate Teaching, Rhode Island School of Design, a USA: *“Art + Science: Collaborative Research, Teaching & Learning”*
- 2008 Invited plenary, 2008 Lilly East Conference on College and University Teaching, University of Delaware, Newark, Delaware, USA: *“International Perspectives on the Scholarship of Teaching and Learning”*
- 2006 Invited plenary, International Society for the Scholarship of Teaching and Learning Third Annual Conference, Washington DC, USA: *“A framework for mapping collaborative inquiry”*
- 2006 Invited plenary, American Society for Microbiology 106th Meeting, Orlando, Florida, USA: *“Challenging paradigms in Microbiology: New techniques, new perspectives and new approaches to student learning”*

- 2005 Invited plenary, International Gordon Conference on Visualization in Science and Education, Oxford University, UK: *“Learning from 2D vs. 3D molecular visualizations”*
- 2004 Invited plenary, Society for General Microbiology Educational Symposium, Trinity College, Dublin, UK: *“Visualising the science of genomics: an international online collaborative research project”*
- 2004 Invited plenary, The Commonwealth Scientific and Industrial Research Organization Metis 2004 Symposium, National Museum of Canberra, ACT, Australia: *“The symbiotic bacterial light project”*
- 2003 Keynote speaker, International Gordon Conference on Visualization in Science and Education, Oxford University, UK: *“The power of computer-aided 3-dimensional visualisation in teaching genomics and bioinformatics”*

#### **OTHER INVITED TALKS, WORKSHOPS AND CONFERENCE PRESENTATIONS**

- 2025 International Society for the Scholarship of Teaching and Learning, Christchurch, New Zealand: *“Science Reconsidered: Re-Discovering Ways of Knowing Through Disruption of Dominant Narratives”* (with T. Tan)
- 2024 National Postdoctoral Association Conference, Seattle, Washington, USA: *“The development of international mentoring structures and constellations”*
- 2022 International Society for the Scholarship of Teaching & Learning Conference, Kelowna, B.C., Canada: *“Embodying Perspectives: Exploring Epistemic Justice through Co-Creation in Participatory Performance Practice”* (with A. Santucci)
- 2022 International Consortium for Educational Development Conference, Aarhus, Denmark: *“Embodied Stories: Human-Centered Sustainable Educational Development”*; (with R. Caldwell-O’Keefe & A. Santucci)
- 2021 Creating an Inclusive Learning Environment Workshop, Boston University, Boston Massachusetts, USA
- 2020 Bold Spaces for Uncertainty and Change Workshop, Boston Conservatory, Boston Massachusetts, USA
- 2020 Communities, Voices, and Portals of Engagement, University of South Alabama 10<sup>th</sup> Annual Conference on Teaching and Learning, USA
- 2018 Inclusive Syllabus Design in STEM Courses Workshop, Skidmore College, New York, USA
- 2015 Tools for Evidence-Based Action Conference, University of California-Davis, USA: *“Catalyzing institutional Change: Connecting Learning Outcomes Across the Curriculum”*
- 2014 International Consortium for Educational Development Conference, Stockholm, Sweden: *“Catalyzing Institutional Change by Targeting Departments: Connecting Learning Outcomes Across the Curriculum”*
- 2014 International Consortium for Educational Development Conference, Stockholm, Sweden: *“Integrating metacognition into disciplinary thinking through ePortfolios”*
- 2014 London Symposium, London, UK, *“Using MOOCs on Campus: Blended Learning and Beyond”* (with J. Melson)
- 2013 International Society for the Scholarship of Teaching and Learning Annual Conference, Raleigh, North Carolina, USA: *“Preserving the hybrid spaces of SoTL: Cross-disciplinary exchange as catalysts for creativity”* (with D. Reichard)
- 2013 Professional and Organizational Development Network in Higher Education 36th Annual Conference, Pittsburgh, Pennsylvania, USA: *“Catalyzing Institutional Change: Connecting Learning Outcomes across the Curriculum”* (with C. Cardamone)
- 2013 Association of American Colleges & Universities Annual Conference, Atlanta, Georgia: *“Innovations in Collaborative Faculty Development”* (with J. Ottenhoff, K. Wirth & D. Schodt)
- 2013 Coursera Partners’ Conference, University of Pennsylvania, USA: *“Flipping the classroom: using open learning to improve on-campus teaching”*
- 2012 University of Ghana-Brown University Partnership to address HIV/AIDS in Ghana, Accra, Ghana: *“How People Learn”*
- 2012 University of Fukui, Fukui, Japan: *“The role of faculty development in higher education”*

- 2012 Invited speaker, School of Medicine, University of Tasmania, Hobart, Australia: *“Visualizations in Teaching and Learning”*
- 2012 Invited speaker, University of Sydney, Sydney, Australia: *“Scaffolding for a Successful Inquiry-based Learning Experience”*
- 2012 Professional and Organizational Development Network in Higher Education 35<sup>th</sup> Annual Conference, Seattle, Washington, USA: *“Targeting Junior Faculty: Responsive & Effective Strategies for Teaching Centers”* (with C. Bo-Linn & J. Bandy)
- 2012 Professional and Organizational Development Network in Higher Education 35<sup>th</sup> Annual Conference, Seattle, Washington, USA: *“Faculty Development in a World of Constant Change”* (with C. Cook, M. Marincovich & D. Langley)
- 2011 Gordon Conference on Visualization in Science and Education, Bryant University, Rhode Island, USA: *“Toward a Pedagogical Framework for Visual Literacy”*
- 2011 Invited speaker, University of New South Wales, Sydney, Australia: *“How People Learn: Visualizations in Teaching and Learning”*
- 2009 Professional and Organizational Development Network in Higher Education 34<sup>th</sup> Annual Conference, Houston, Texas, USA: *“Developing visual literacy across the disciplines: from metacognition to metavisualization”*
- 2009 Invited speaker, University of Massachusetts-Dartmouth, Center for Teaching Excellence, Dartmouth, Massachusetts, USA: *“The Scholarship of Teaching and Learning: Dialogue and Engagement across Disciplines”*
- 2008 Invited speaker, New Mexico State University, USA: i) Department of Biology: *“Pasteur and the prepared mind - Scientific inquiry and the scholarship of teaching & learning”*; and ii) Teaching Academy: *“Scaffolding for a successful inquiry-based learning experience”*
- 2008 American Association of College and Universities Engaging Science, Advancing Learning Conference, Providence, Rhode Island, USA: *“Enhancing Student Engagement in Collaborative Inquiry - Thinking about Thinking”*
- 2006 Australian Society for Microbiology Annual Conference, Queensland, Australia: Educational Special Interest Group Workshop: *“Authentic Inquiry in Microbiology Education”*
- 2006 Carnegie Academy for the Scholarship of Teaching and Learning Colloquium on the Scholarship of Teaching and Learning: Evidence, Impact and Momentum, Madison, Wisconsin, USA: *“Mapping student learning throughout the collaborative inquiry process: the progressive e-poster”*
- 2005 Carnegie Academy for the Scholarship of Teaching and Learning Colloquium on the Scholarship of Teaching and Learning: Evidence of Student Learning, Atlanta, Georgia, USA
- 2005 Invited speaker, International Society for the Scholarship of Teaching and Learning Second Annual Conference, Vancouver, BC: *“Mapping SoTL advocacy and leadership: the Living Diagram”*
- 2005 Invited speaker, National Uniserve Conference on Science Teaching and Learning, The University of Sydney, Australia
- 2004 Invited speaker, American Society for Biochemistry & Molecular Biology/ International Union of Biochemistry & Molecular Biology Conference, USA
- 2002 American Society for Microbiology Conference for Undergraduate Educators, Salt Lake City, Utah, USA: *“The power of visualization in teaching genomics and bioinformatics: Mutations in HIV envelope proteins and their consequences for vaccine design”*
- 2002 Invited speaker, Australian Society for Microbiology Annual Scientific Meeting, Melbourne, Australia: *“The power of visualization in teaching genomics”*
- 2001 Invited presenter, International Gordon Conference on Science Education & Visualization, Massachusetts, USA: *“Science education through real-life applications and visualization in the classroom”*

## **SERVICE and PROFESSIONAL ACTIVITIES**

### **Grant and Award Review Panels**

- 2014 - 2018 Howard Hughes Medical Institute (HHMI) Science Education Grant Review Panel, USA

- 2012 Council of Graduate Schools (CGS): Preparing Future Faculty to Assess Student Learning Grant Review Panel, USA
- 2008 National Science Foundation Course, Curriculum, and Laboratory Improvement (CCLI) Grant Review Panel, USA

**National and International Committees**

- 2021 - current Advisory Committee, Harvard Medical School, NIH NIGMS Graduate Career Training Program, USA
- 2021 - current Advisory Committee, Robert J. & Nancy D. Carney Institute for Brain Science Program: Advancing the Research Careers of Women and PEERs in Brain Science (National Institute of Neurological Disorders and Stroke R25 Program), USA
- 2017 National Advisory Committee of the John Gardner Institute, USA
- 2016 Ivy League Universities Teaching and Learning Centers Meeting Organizer and Chair, USA
- 2008 2008 National Academies Summer Institute on Undergraduate Education in Biology, University of Wisconsin-Madison, USA
- 2006 Program Committee, International Society for the Scholarship of Teaching and Learning 2006 Conference, Washington DC, USA
- 2005 – 2007 Sydney Network of Australian University Science Educators
- 2005 Program Committee, International Society for the Scholarship of Teaching and Learning 2005 Conference, Vancouver, British Columbia
- 2005 Australian College of Educators Quality Teaching Award Assessor
- 2004 – 2005 American Association for Higher Education Conference Review Panel, USA
- 2004 Co-organizer, Australian Society for Microbiology Annual Conference, Pre-conference Educational Special Interest Group Workshop
- 2003 – 2005 International affiliate of The Consortium for Research and Evaluation of Advanced Technologies in Education, New York University Steinhardt School of Education, USA
- 1987 – 2013 Massachusetts Institute of Technology (MIT) Educational Counselor, USA

**University Service**

- 2023 – current Okinawa Institute of Science & Technology Graduate University (OIST) Faculty Awards Committee, Japan
- 2023 – current Okinawa Institute of Science & Technology Graduate University (OIST) Faculty Search Committee Diversity Officer, Japan
- 2023 – 2024 OIST Strategic Planning Working Group on Graduate Education, Japan
- 2023 – 2024 OIST Strategic Planning Working Group on University Culture, Japan
- 2023 – 2024 OIST Strategic Planning Working Group on Research Units, Japan
- 2023 – 2024 OIST Strategic Planning Working Group on Human Resources Support Systems, Japan
- 2022 – current OIST Committee on Review of Harassment Investigation Procedures, Japan
- 2022 – current OIST Committee on Review of Scientific Misconduct Investigation Procedures, Japan
- 2022 – current OIST Culture Committee, Japan
- 2022 – 2023 OIST Provost's Committee on Ethical Guidelines, Japan
- 2019 – 2020 University of Maryland Senate Working Group for Revision of Course Evaluation Forms, USA
- 2019 – 2020 University of Maryland Senate Educational Affairs Committee
- 2017 – 2018 Northeastern University Honors Advisory Committee
- 2015 – 2016 Vice Provost for Faculty Diversity and Inclusion Mentoring Committee, Columbia University
- 2015 – 2016 Educational Policy and Planning Committee, School of Arts & Sciences, Columbia University
- 2015 – 2016 University Senate Education Committee, Columbia University
- 2014 – 2015 Provost's Rapid Planning Group for Online Learning, Brown University
- 2012 – 2013 Provost's University Strategic Planning Committee for Online Learning, Brown University
- 2012 – 2013 Brown University Medical School Faculty Development Oversight Committee
- 2013 Brown University Meiklejohn Leadership Training Workshop Director

2012 – 2014	Brown Executive Scholars Training Program Mentor
2011 – 2015	Library Advisory Board, Brown University
2011 – 2013	Academic Technology Steering Committee, Brown University
2010 – 2015	NIH Initiative to Maximize Student Diversity Advisory Board, Brown University
2009	Ethical and Responsible Conduct of Research Curriculum Development Committee, Brown University
2009 – 2010	Writing Advisory Board, Brown University
2008 – 2015	Undergraduate Science Resource Center Advisory Board, Brown University
2006	University of New South Wales Faculty of Science Teaching Review Panel for Academic Promotion
2006	University of New South Wales Academic Women in Leadership Program
2005 – 2007	Dean's Gender Equity Advisory Committee, University of New South Wales Faculty of Science
2004	Selection Committee, UNSW Vice Chancellor's Award for Teaching Excellence
2004	External Peer Evaluation of Teaching Workshop for Australian Universities, Sydney Australia
2003	University of New South Wales Vice-Chancellor's Academic Strategic Planning Advisory Group
2002	Strategic Plan Working Group, University of New South Wales Faculty of Science
2002 – 2007	Advisory Committee for the University of New South Wales Gifted Education, Research, Resource and Information Centre (GERRIC)
2003 – 2005	Co-chair, Curriculum Revision Committee, University of New South Wales School of Biotechnology & Biomolecular Sciences
2002 – 2003	Executive Committee, UNSW Clive and Vera Ramaciotti Centre for Gene Function Analysis
2002 – 2003	Member, Board of Directors, University of New South Wales Tigger's Place Childcare Centre
1999	Dean's Working Committee on the development of the BSc Communication Degree at UNSW

## PROFESSIONAL SOCIETY MEMBERSHIPS

International Society for the Scholarship of Teaching and Learning  
 HERDSA (Higher Education Research and Development Society of Australasia)  
 Professional and Organizational Development Network in Higher Education  
 National Postdoctoral Association, US  
 Graduate Career Consortium, US  
 American Society for Microbiology  
 Australian Society for Microbiology

## PUBLICATIONS

### Journal articles in the Scholarship of Teaching and Learning, and Higher Education:

- Takayama, K., Kaplan, M., Cook-Sather, A., & Felten, P. (2017) Advancing diversity through strategic micro, meso and macro-level leadership. *AAC&U Liberal Learning*, v103 n3-4 Sum-Fall 2017.
- Takayama, K. (2014) A metacognitive approach to mapping collaborative inquiry through e-portfolios. *AAC&U Peer Review*, vol 16 no.1
- Takayama, K. (2010) Facilitating group discussions: understanding group development and dynamics. *POD Essays on Teaching Excellence*, vol21 no.1
- Takayama, K. (2010) Catalyzing interdisciplinary and integrative thinking through the scholarship of teaching and learning. *Microbiology Australia*, vol 31 no. 1
- Takayama, K. (2009) Communities, Voices and Portals of Engagement. *International Journal for the Scholarship of Teaching and Learning*, vol 3 no. 2 (July 2009).
- Takayama, K. & Wilson, J. (2005) Mapping student learning throughout the collaborative inquiry process: the progressive e-poster. *Proceedings of the Blended Learning in Science Teaching and Learning Symposium, The University of Sydney, 2005*, 111-116.
- Whitaker, N. & Takayama, K. (2004) Computer-aided visualisation in teaching genomics and bioinformatics. *FASEB Journal*, 18, 6-7.
- Takayama, K. (2004) Three-dimensional visualizations in teaching genomics and bioinformatics: Mutations in HIV envelope proteins and their consequences for vaccine design. *Microbiology Education*, 5, 3 - 12.

- Takayama, K. (2004) Visualising the science of genomics: cognitive and social interactions that promote learning in an online collaborative research project. *Proceedings of the Scholarly Inquiry in Flexible Science Teaching and Learning Symposium*, The University of Sydney, 2004, 65-71.
- Takayama, K. (2003) Visualising the Science of Genomics – an international online research project. *Microbiology Australia*, 24, 32 - 33.

#### Book Chapters:

- Reichard, D. & Takayama, K. (2012) Exploring Student Learning in Unfamiliar Territory: A Humanist and a Scientist Compare Notes, *in* The Scholarship of Teaching and Learning In and Across the Disciplines, Kathleen McKinney (ed.), Bloomington: Indiana University Press.
- Takayama, K. (2005) Teaching visualizing the science of genomics, in *Visualization in Science Education*, John K. Gilbert (ed.), Dordrecht: Springer, pp 217-251.

#### Scientific Journal articles:

- Erce, M.A., Low, J.K., March, P.E., Wilkins, M., Takayama, K. (2009) Identification and functional analysis of RNase E of *Vibrio angustum* S14 and two-hybrid analysis of its interaction partners. *Biochimica et Biophysica Acta (BBA)- Proteins and Proteomics*, 1794, 1107–1114.
- McDougald D., Gong L., Srinivasan S., Hild E., Thompson L., Takayama K., Rice S.A., Kjelleberg S. (2002) Defences against oxidative stress during starvation in bacteria. *Antonie van Leeuwenhoek International Journal of General and Molecular Microbiology*, 81, 3-13.
- Gong, L., Takayama, K. & Kjelleberg, S. (2002) Role of *spoT*-dependent ppGpp accumulation in the survival of light-exposed starved bacteria. *Microbiology*, 148, 559-570.
- McDougald, D., Gong, L., Srinivasan, S., Hild, E., Thompson, L., Takayama, K., Rice, S., and Kjelleberg, S. (2001) Defences against oxidative stress during starvation in marine bacteria. *Proceedings from the Ninth International Symposium on Microbial Ecology*.
- Takayama, K. & Kjelleberg, S. (2000) The role of RNA stability during bacterial stress responses and starvation. *Environmental Microbiology*, 2, 355-365.
- Hild, E., Takayama, K., Olsson, R. & Kjelleberg, S. (2000) Evidence for a role of *rpoE* in stressed and unstressed cells of marine *Vibrio angustum* strain S14. *Journal of Bacteriology*, 182, 6964-6974.
- Srinivasan, S., Ostling, J., Charlton, T., de Nys, R., Takayama, K., and Kjelleberg, S. (1998) Extracellular signal molecule(s) are involved in the carbon starvation response of marine *Vibrio* sp. strain S14. *Journal of Bacteriology*, 180, 201-209.
- Thieringer, H., Takayama, K., Kang, C. and Inouye, M. (1995) Antisense RNA-mediated inhibition of mouse hepatitis virus replication in L2 cells. *Antisense Research and Development*, 5, 289-294.
- Wickens, M. and Takayama, K. (1994) RNA:Deviant-or emissaries. *Nature*, 367, 17-18.
- Takayama, K. and Inouye, M. (1990) Antisense RNA. *CRC Critical Reviews in Biochemistry*, 25, 155-184.
- Takayama, K., Kuriyama, S., Weiss, S., Chada, K., Inouye, S. and Inouye, M. (1989) Antisense RNA - mediated inhibition of viral infection in tissue culture and transgenic mice. *Proceedings from the UCLA Symposium on the Molecular Biology of RNA*, T. Cech, Ed., 94, 299-310.
- Takayama, K. and Inouye, M. (1989) Antisense RNA: a versatile and specific regulator. *Pharmaceutical Technology*, 13, 18-22.
- Takayama, K. and Inouye, M. (1988) Antisense RNA as a tool for regulation of gene expression. *Proceedings from the 8th International Biotechnology Symposium*, 1, 97-112.
- Takayama, K., Weiss, S., Kuriyama, S., Chada, K., Inouye, S., Hirashima, A., Sawaki, S., Mizuno, T., Houba-Herlin, N. and Inouye, M. (1988) Antisense RNA as a tool in viral immune systems. *Current Communications in Molecular Biology, Antisense RNA and DNA*, 29-34.
- Takayama, K., Houba-Herlin, N. and Inouye, M. (1987) Overproduction of an antisense RNA containing the *oop* RNA sequence of bacteriophage I induces clear plaque formation. *Mol. Gen. Genet.*, 210, 184-186.

#### Other Refereed Work:

Takayama, K. and Nicholson, J. (2004) The Symbiotic Bacterial Light Project: Luxcorp. Installation, Canberra Contemporary Art Space. Invited solo exhibition for the CSIRO Metis Arts-Science Festival. May 15 - June 19, 2004, Canberra, ACT Australia.

#### Other publications:

- Takayama, K. (2009) Research and teaching as a postgraduate student: emphasizing integration over balance. Australian Society for Microbiology Student Newsletter, July 2009.
- Takayama, K. (2005) The future of life science research: teaching our future scientists. Australian Life Scientist, March/April 2005, p.12.

## TEACHING

- 2026 *Science Reconsidered* (undergraduate elective), The College of the Holy Cross
- 2021 – 2025 *Teaching Certificate*, Okinawa Institute of Science and Technology, Japan
- 2013 – 2015 *Certificate V: Principles & Practice in Reflective Mentorship* (Graduate students; enrollment ~10), Brown University, Sheridan Center for Teaching and Learning
- 2009 – 2015 *Certificate IV: Teaching Consultant Program* (Graduate students, postdocs, faculty; enrollment ~40), Brown University, Sheridan Center for Teaching and Learning
- 2007 – 2012 *Certificate III Program: Professional Development Seminar for Life & Physical Sciences* (Graduate students & Postdoctoral fellows; enrollment ~15), Brown University, Sheridan Center for Teaching and Learning
- 2007 – 2012 *Certificate I: Sheridan Teaching Seminar* (Graduate students, Postdoctoral fellows, faculty & staff; enrollment ~140) Brown University, Sheridan Center for Teaching and Learning
- 2001 – 2007 *Fundamentals of Microbiology and Immunology* (2<sup>nd</sup> year course, 270 students), University of New South Wales (UNSW), Australia.
- 2001 – 2002 *Viruses and Disease* (3<sup>rd</sup> year course, 60 students), University of New South Wales, Australia.
- 1997 – 2007 *Environmental Microbiology* (3<sup>rd</sup> year course, 70 students), University of New South Wales, Australia
- 1997 – 2005 *Microbial Physiology- a Molecular Approach* (3<sup>rd</sup> year course), University of New South Wales, Australia

## GRANTS AWARDED

- 2014 Howard Hughes Medical Institute STEM Education Award (5 yrs: US\$1.5 M)  
M. Johnson (P.I.); Co-leaders: K. Takayama, D. Targan: "Bridging engaged activities for retention in STEM at Brown"
- 2011 National Science Foundation Visionary Grant (1 yr: US\$6000)  
K. Takayama, B. Wong (MIT-Harvard Broad Institute) & N. Woolridge (U. of Toronto): "Crowd-sourcing salience ratings for scientific images"
- 2011 Teagle Foundation (2 yrs: US\$200,000)  
T. Luxon (Dartmouth College) & K. Takayama: "Engaging Evidence: Programs for Improving Student Learning"
- 2010 National Science Foundation (4 yrs: US\$599,595)  
A. Chang (American Society for Microbiology), A. Darden (University of Oklahoma), K. Takayama "Biology Scholars Program - 2"
- 2006 Australian Carrick Institute for Learning & Teaching Grants Program (1 yr: AUS\$147,770)  
University of Sydney: P. McGee, H. Drury, J. Jones, P. O'Carroll, D. Airey, R. Baker, A. Yalcin, K. Kuzmanovic; UNSW: S. Starfield, P. Mort, P. Hagan, K. Takayama  
"Creating an integrated student-centered online learning environment for report writing in the sciences and engineering"
- 2006 Faculty of Science Learning and Teaching Grant (1 yr: AUS\$5000)  
G. Hatsidimitris and K. Takayama  
"Integrative learning to enhance school-university transition: Collaborating with high school teachers in the production of multimedia learning resources to promote conceptual understanding and application of challenging concepts in the biology curriculum"
- 2006 Department of Education, Science and Technology Australian School Innovation in Science, Technology and Mathematics Project Grant  
K. Rogers, S. Ryan, K. Takayama, J. Nicholson (1 year: AUS\$65,000)  
"Development of arts-infused science challenges in non-traditional education settings for primary students talented in science"
- 2005 UNSW Learning and Teaching Award  
K. Takayama and J. Wilson (AUS\$7,500) "Mapping student learning throughout the collaborative inquiry process: the progressive e-poster"
- 2004 UNSW Faculty Research Grants Program  
K. Takayama (AUS\$4,000)

- “Regulation of mRNA stability during high pressure adaptation in the piezophile *Photobacterium profundum* SS9”
- 2004 UNSW UCommittee Grant  
K. Takayama and J. Nicholson (AUS\$4000) “The Symbiotic Bacterial Light Project”
- 2003 US National Science Foundation  
B. Tversky, K. Takayama, J. Plass (US\$5,000)  
“Learning from 2D vs 3D molecular visualizations: Effects of individual learner characteristics and design factors”
- 2003 Carnegie Foundation for the Advancement of Teaching Carnegie Scholars Program  
K. Takayama (US\$5,000) “The contextual role of technology in liberal education”
- 2003 UNSW Faculty Research Grant  
K. Takayama (AUS\$20,000) “The role of RNA stability and modification mechanisms during carbon starvation and outgrowth in *Vibrio angustum* S14”
- 2003 UNSW First Year Teaching Award  
M. Cooley, N. Whitaker, and K. Takayama (AUS\$15,000)  
“Getting students to think like scientists (Integration of science-specific graduate attributes into the curriculum)”
- 2002 UNSW First Year Teaching Award  
K. Takayama and W. Rifkin (AUS\$15,000)  
“Collaborative experiential learning linked to production of student-run online science journal”
- 2002 UNSW Vice-Chancellor’s Teaching and Research Award  
K. Takayama (3 years: AUS\$160,000)  
“State-of-the-art ‘Fundamentals of Microbiology and Immunology’: small group strategies in a large lecture subject”
- 2002 American Society for Microbiology 9<sup>th</sup> Microbiology Education Conference Travel Grant  
K. Takayama (US\$500)  
“The power of visualization in teaching genomics and bioinformatics: Mutations in HIV envelope proteins and their consequences for vaccine design”
- 2002 UNSW University Research Support Program Grant (URSP)  
K. Takayama (AUS\$8,650)  
“Mutation patterns in HIV envelope proteins and consequences for vaccine and drug design: the role of bioinformatics and computer modeling”
- 2001 The Ian Potter-George Alexander Foundation Project Grant  
K. Takayama (AUS\$3,000)  
“IT in the Science Classroom”
- 2001 International Gordon Conference on Science Education and Visualization Travel Grant  
K. Takayama (US\$550)  
“Science Education Through Real-Life Applications and Visualization in the Classroom”
- 2001 UNSW Faculty of Science Project Support  
K. Takayama (AUS\$5,000)  
“IT in the Science Classroom”
- 2001 UNSW Faculty of Life Sciences Teaching Development Grant  
K. Takayama (AUS\$6,000)  
“Incorporation of visualisation technologies into the undergraduate curriculum”
- 2001 Jacques Monod Conference Grant  
K. Takayama (FRF1270)  
“Regulation of mRNA turnover in bacteria during carbon starvation and outgrowth”
- 1998 The Ian Potter Foundation Travel Grant to present a paper at the Gordon Research Conference on Science Education, Oxford University, UK  
K. Takayama (AUS\$1,000)  
“Science education through mobile outreach: development of ‘real-life science’ workshop modules”
- 1998 Department of Industry, Science and Tourism National Science Week Grant  
K. Takayama (AUS\$3,000)  
“Real-life science: Hands-on Biotechnology Workshops”
- 1998 Australian Research Council Large Research Grant  
S. Kjelleberg & K. Takayama (3 years: AUS\$256,894)

- 1997 "Regulation of the carbon starvation and outgrowth response in marine *Vibrio*"  
 Australian Research Council Small Research Grant  
 S. Kjelleberg & K. Takayama (AUS\$19,860)  
 "The regulation of mRNA stability during carbon starvation and recovery in bacteria"
- 1996 Faculty of Biological & Behavioural Sciences Special Research Grant  
 S. Kjelleberg & K. Takayama (AUS\$2,000)  
 "Post-transcriptional regulation of starvation and recovery responses in *Vibrio* S14"
- 1991 National Institutes of Health Individual Research Fellowship Award  
 K. Takayama (US\$72,900)  
 "Regulation of polyadenylation & deadenylation during early development in *Xenopus laevis*"

## THESIS ADVISING

### Brown University

- 2014 BA Honors (Science and Society); Jessica Brodsky\*  
 \*awarded Brown's Science and Technology Studies Undergraduate Thesis Prize

### Rhode Island School of Design

Quaternary Advisor for Gigi Gatewood, Master of Fine Arts in Photography, Dept of Photography (2009)

### University of New South Wales

- 2011 PhD: Jason Low  
 2010 PhD: Melissa Erce  
 2007 BS with Honours: Jason Low  
 2005 BS with Honours: Melissa Erce; Karen See; Edward Lau  
 2004 BS with Honours: Jonna Terkildsen; Julia Tauber; Jessica Ang  
 Research Diploma: Kristine Malabanan  
 BS Practicum (Bonn University, Germany): Claus Lang  
 2003 PhD: Lan Gong  
 BS with Honours: Miguel Oramas  
 1999 PhD: Sujatha Srinivasan  
 1998 BS with Honours: Kate Howell  
 1996 PhD: Erika Hild  
 2000 PhD: Rita Marouga