

## **Curriculum Vitae - Kathy Takayama**

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### **PERSONAL DETAILS**

Name:	Kathy Mayumi Takayama
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Email:	Kathy_Takayama@brown.edu

### **EDUCATION**

1980 - 1984	Massachusetts Institute of Technology (MIT) Cambridge, Massachusetts, USA Thesis advisor: Professor Phillip Sharp Awarded: BSc, Biology
1985	State University of New York at Stony Brook Stony Brook, New York, USA Graduate research Thesis advisor: Professor Masayori Inouye
1986 - 1991	UMDNJ – Robert Wood Johnson Medical School (formerly Rutgers University Medical School) Piscataway, New Jersey, USA Graduate research Thesis advisor: Professor Masayori Inouye Awarded: PhD, Biochemistry and Molecular Biology

### **PRESENT POSITION**

Associate Director for Life and Physical Sciences  
The Harriet W. Sheridan Center for Teaching and Learning  
Adjunct Associate Professor  
Department of Molecular Biology, Cell Biology and Biochemistry  
Brown University

## PREVIOUS POSITIONS

- 2002-2007 Senior Lecturer, School of Biotechnology and Biomolecular Science, University of New South Wales (April 2002 – tenured)
- 2001-2002 Lecturer  
Microbiology and Immunology, School of Biotechnology and Biomolecular Science, University of New South Wales  
Sydney, NSW Australia
- 1995 - 2001 Australian Research Council Senior Research Associate  
School of Microbiology and Immunology, UNSW  
Sydney, NSW Australia  
*Research: Role of RNA processing mechanisms in the regulation of gene expression in bacteria*
- 1991 - 1994 NIH Postdoctoral Research Fellow  
(Laboratory of Prof. Marvin Wickens)  
Dept of Biochemistry, University of Wisconsin  
Madison, Wisconsin  
*Research: Regulation of cytoplasmic polyadenylation of mRNAs and gene expression during early development in Xenopus laevis*
- 1985 – 1991 Smith-Kline & French Graduate Fellowship  
Dept of Biochemistry, State University of NY at Stony Brook, New York, and  
UMDNJ-Robert Wood Johnson Medical School, Piscataway, New Jersey  
(Thesis advisor: Prof. Masayori Inouye)  
*Research: Inhibition of murine hepatitis viral replication by antisense RNA in mouse L2 fibroblasts and transgenic mice*
- 1984 – 1985 Research Assistant  
Biogen, Inc., Cambridge, Massachusetts  
*Research: Expression studies of tissue plasminogen activator in CHO cells*
- 1983 – 1984 Bachelor of Science Thesis Research  
Center for Cancer Research- MIT Department of Biology  
Cambridge, Massachusetts  
(Thesis advisor: Prof. Phillip Sharp)  
*Research: Regulation of gene expression by the adenovirus E1a promoter region*
- 1983 Summer Research Internship  
New England Biolabs, Beverly, Massachusetts  
*Research: Characterization of the Plasmodium falciparum genome*

## AWARDS AND FELLOWSHIPS

- 2008 – 2009 National Academies Education Fellow in the Life Sciences
- 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 UNSW Vice Chancellor's Award for Teaching Excellence
- 2003 – 2004 Carnegie Scholar
- 2002 - 2003 UNSW Vice Chancellor's Teaching and Research Award
- 2002 UNSW Innovative Teaching and Educational Technology Fellowship
- 1991 – 1994 National Institutes of Health Individual Research Fellowship
- 1987 – 1988 Smith-Kline & French Graduate Fellowship

## KEY INVITED PRESENTATIONS

- 2009 Invited speaker, Harvard University, LASPAU: Academic and Professional Programs for the Americas, April 2009
- 2009 Invited speaker, University of Massachusetts-Dartmouth, Center for Teaching Excellence, April 2009
- 2009 Keynote speaker, Scholarship of Teaching and Learning Commons Conference, Georgia Southern University, March 2009 (<http://academics.georgiasouthern.edu/ijstl/conference/2009/index.htm>).
- 2008 Invited speaker, Wellesley College, Pforzheimer Learning and Teaching Center, February 2009
- 2008 Invited speaker, New Mexico State University: i) Department of Biology; and ii) Teaching Academy, December 2008
- 2008 Invited speaker, The Spencer Forum in Art and Design Collegiate Teaching, Rhode Island School of Design, November 2008
- 2008 Invited plenary, 2008 Lilly East Conference on College and University Teaching, University of Delaware, Newark Delaware, April 2008 (<http://www.udel.edu/lillyeast/>).
- 2006 Invited plenary, International Society for the Scholarship of Teaching and Learning Third Annual Conference, Washington DC, November 2006.
- 2006 Invited plenary, American Society for Microbiology 106th General Meeting, Orlando, FL, May 2006.
- 2005 Invited plenary, International Society for the Scholarship of Teaching and Learning Second Annual Conference, Vancouver, B.C., October 2005.
- 2005 Invited speaker, International Gordon Conference on Visualization in Science and Education, Oxford University, UK, July 2005.
- 2005 Invited speaker, National Uniserve Conference on Science Teaching and Learning, The University of Sydney, Australia, September 2005.
- 2004 Invited speaker, National Uniserve Conference on Science Teaching and Learning, The University of Sydney, Australia, October 2004.
- 2004 Invited speaker, American Society for Biochemistry and Molecular Biology/ International Union of Biochemistry and Molecular Biology Joint Conference, June 2004.
- 2004 Invited speaker, Society for General Microbiology Educational Symposium, Trinity College, Dublin, UK, September 2004.
- 2004 Invited speaker, The Commonwealth Scientific and Industrial Research Organization Metis 2004 Symposium, National Museum of Canberra, ACT, Australia.
- 2004 Invited work, "Metis" Curated Exhibition of Science and Art: The Symbiotic Bacterial Light Project, Canberra Contemporary Art Space, ACT, Australia.
- 2003 Keynote speaker, International Gordon Conference on Visualization in Science and Education, Oxford University, UK
- 2002 Invited speaker, Australian Society for Microbiology Annual Scientific Meeting, Melbourne, Australia
- 2001 Selected participant, BioQUEST Curriculum Consortium Summer Workshop, Beloit College, Wisconsin, USA

- 2001 Invited Presenter, International Gordon Conference on Science Education & Visualization, Massachusetts, USA
- 2001 \*Invited Presenter and Session Chair, Jacques Monod Conference: "mRNA Enigmas: Transport, Silencing, Decay, and their Interplay with Translation", Aussois, France
- 1999 Invited Speaker, IXth International Congress of Bacteriology & Applied Microbiology, Sydney, Australia
- 1993 \*Invited Speaker, International Meeting: "RNA 3' Ends: Formation and Function", Oxford University, Oxford UK
- \*Conference attendance by invitation-only

## EDITORIAL BOARDS

- 2007 - 2010 Editorial Board, *The Journal of Microbiology and Biology Education* (ASM Press, Washington DC)
- 2006 - continuing Editorial Board, *International Journal for the Scholarship of Teaching and Learning*: <http://www.georgiasouthern.edu/ijstol/>
- 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)

## OTHER PROFESSIONAL ACTIVITIES

- 2009 – 2011 College Board Advanced Placement (AP®) Biology Curriculum Development & Assessment Committee
- 2008- 2011 Executive Committee: National Institutes of Health, Division of International Training and Research - Fogarty International Grant Award: "Framework Programs for Global Health"
- 2008- present Co-Chair, Biology Scholars Program Writing Residency, Washington DC (<http://biologyscholars.org/page03a.shtml>).
- 2008 National Science Foundation Review Panel: Biology Course, Curriculum and Laboratory Improvement Program
- 2008 Selected participant (with Prof Robert Reenan): 2008 National Academies Summer Institute on Undergraduate Education in Biology (University of Wisconsin-Madison)
- 2007 - continuing Steering Committee and Facilitator: Biology Scholars Program Scholarship of Teaching and Learning Institute ([BiologyScholars.org](http://BiologyScholars.org)), Washington DC
- 2007 Conference Chair and Organizer, International Society for the Scholarship of Teaching and Learning, Sydney, Australia
- 2006 Member of Faculty of Science Teaching Review Panel for Academic Promotion
- 2006 Selection to the UNSW Academic Women in Leadership Program
- 2006 Program Committee, International Society for the Scholarship of Teaching and Learning 2006 Conference, Washington DC, US
- 2005 - 2007 Regional Vice President (Australasia), International Society for the Scholarship of Teaching and Learning

2005 - 2007	Dean's Gender Equity Advisory Committee, UNSW Faculty of Science
2005 - 2007	Member of Sydney Network of University Science Educators
2005	Program Committee, International Society for the Scholarship of Teaching and Learning 2005 Conference, Vancouver, British Columbia
2005 - present	Co-organizer and Steering Committee, American Society for Microbiology Scholars-in-Residence Program
2005	Australian College of Educators Quality Teaching Award Assessor
2004 - present	Editorial Review Board, <i>MountainRise</i> , international e-journal on the scholarship of teaching and learning: <a href="http://mountainrise.wcu.edu/edBoard.html">http://mountainrise.wcu.edu/edBoard.html</a>
2004	Selection Committee, UNSW Vice Chancellor's Award for Teaching Excellence
2004	Co-organizer, Australian Society for Microbiology Annual Conference, Pre-conference Educational Special Interest Group Workshop
2004 - 2005	American Association for Higher Education Conference Review Panel
2004	External Peer Evaluation of Teaching Workshop for Australian Universities, hosted by UNSW, 23 September 2004, Sydney Australia
2003 - present	International affiliate of The Consortium for Research and Evaluation of Advanced Technologies in Education, New York University Steinhardt School of Education
2003	Member of 'Across UNSW Group': Vice-Chancellor's Academic Strategic Planning Process
2003 - 2005	Co-chair, Teaching Committee for curriculum revision for the UNSW School of Biotechnology and Biomolecular Sciences
2003 – present	Member of Organizing Committee; International Society for the Scholarship of Teaching and Learning
2002 – 2003	Member of Executive Committee, Clive and Vera Ramaciotti Centre for Gene Function Analysis
2002	Member of Strategic Plan Working Group for the UNSW Faculty of Science
2002 - present	Member of Management Committee for the UNSW Gifted Education, Research, Resource and Information Centre (GERRIC)
2002 – 2003	Member, Board of Directors, UNSW Tigger's Place Childcare Centre
1999	Member of Dean's Working Committee on the development of the BSc Communication Degree at UNSW
1997 – 2003	Founder and Organizer, UNSW School of Microbiology and Immunology Annual Symposium
1987 – 2001	MIT Admissions Committee Educational Counselor
Professional Society Memberships	International Society for the Scholarship of Teaching and Learning RNA Society American Society for Microbiology Australian Society for Microbiology

## TEACHING

2007 - ongoing	Professional Development Seminar for Life and Physical Sciences (Graduate Students and Postdoctoral Fellows), Brown University, Sheridan Center for Teaching and Learning
2007 - ongoing	Sheridan Teaching Seminar Certificate I Program (Graduate Students, Postdoctoral Fellows, Clinical Faculty; enrollment ~200) Brown University, Sheridan Center for Teaching and Learning
2003 - 2007	<i>Fundamentals of Microbiology and Immunology</i> (2 <sup>nd</sup> year course, 270 students), University of New South Wales (UNSW), Australia.
2001 - 2002	<i>Viruses and Disease</i> (3 <sup>rd</sup> year course, 60 students), UNSW, Australia.
2001	Director and Lecturer: <i>IT in the Science Classroom Teachers' Workshop</i> . Developed a 5-day residential workshop for high school science teachers on technology-based and visualization-based teaching resources.
1997 – 2007	<i>Environmental Microbiology</i> (3 <sup>rd</sup> year course, 70 students), UNSW
1997 - 2005	<i>Microbial Physiology- a Molecular Approach</i> (3 <sup>rd</sup> year course), UNSW
1998	Director & Instructor: <i>National Science Week Biotechnology Workshops</i> ; UNSW. Molecular biology laboratory workshops for K-12 students.
1997 – 2001	Workshop director & instructor: <i>Junior Scientia Challenge Program</i> , UNSW. Biotechnology laboratory workshops for gifted K-6 school students.
1996 - 2001	Workshop director & instructor: <i>Scientia Challenge Program</i> , UNSW. Forensic DNA laboratory workshops for gifted high school students.

## THESIS ADVISING

### Rhode Island School of Design

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

### University of New South Wales

Thesis date	Student
2009 (estimated)	PhD (Microbiology): Melissa Erce
2007	BS with Honours (Biotechnology): Jason Low
2005	BS with Honours (Microbiology): Melissa Erce BS with Honours (Microbiology): Karen See BS with Honours (Biotechnology): Edward Lau
2004	Research Diploma (Microbiology): Kristine Malabanan BS with Honours (Microbiology): Jonna Terkildsen BS Practicum (Bonn University, Germany): Claus Lang BS with Honours (Molecular Biology): Julia Tauber BS with Honours (Biotechnology): Jessica Ang
2003	PhD (Microbiology): Lan Gong BS with Honours (Microbiology): Miguel Oramas
1999	PhD (Microbiology): Sujatha Srinivasan
1998	BS with Honours (Microbiology): Kate Howell
1996	PhD (Microbiology): Erika Hild
2000	PhD (Microbiology): Rita Marouga

## PUBLICATIONS

### Scientific Journal articles:

1. 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.
2. 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.
3. 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.
4. 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*.
5. **Takayama, K.** & Kjelleberg, S. (2000) The role of RNA stability during bacterial stress responses and starvation. *Environmental Microbiology*, 2, 355-365.
6. 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.
7. 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.
8. 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.
9. Wickens, M. and **Takayama, K.** (1994) RNA:Deviant-or emissaries. *Nature*, 367, 17-18.
10. **Takayama, K.** and Inouye, M. (1990) Antisense RNA. *CRC Critical Reviews in Biochemistry*, 25, 155-184.
11. **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.
12. **Takayama, K.** and Inouye, M. (1989) Antisense RNA: a versatile and specific regulator. *Pharmaceutical Technology*, 13, 18-22.
13. **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.
14. **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.
15. **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.

### Journal articles in Science Education/Scholarship of Teaching and Learning:

16. Takayama, K. (2009) Communities, Voices and Portals of Engagement. *International Journal for the Scholarship of Teaching and Learning*, vol 3 no. 2 (July 2009). [http://academics.georgiasouthern.edu/ijsotl/v3n2/essays\\_about\\_sotl/Takayama/index.htm](http://academics.georgiasouthern.edu/ijsotl/v3n2/essays_about_sotl/Takayama/index.htm)
17. **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.
18. Whitaker, N. & **Takayama, K.** (2004) Computer-aided visualisation in teaching genomics and bioinformatics. *FASEB Journal*, 18, 6-7.
19. **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.
20. **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.
21. **Takayama, K.** (2003) Visualising the Science of Genomics – an international online research project. *Microbiology Australia*, 24, 32 - 33.

(publications – continued)

**Book Chapter:**

**Takayama, K.** (2005) Teaching visualizing the science of genomics, in Visualization in Science Education, John K. Gilbert (ed.), Dordrecht: Springer, pp 217-251.

**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.** (2005) The future of life science research: teaching our future scientists. *Australian Life Scientist*, March/April 2005, p.12.

**Takayama, K.** (ed) The University of New South Wales School of Microbiology and Immunology Annual symposium: program and abstracts. 1997 - 2003.

**University Reports:**

Report of the Dean's Working Committee on the development of the Faculty of Science Strategic Plan (2002)

The University of New South Wales Faculty of Science Report of the Working Party Established to Review Advanced Science Programs (May, 2002)

Report of the Dean's Working Committee on the development of the BSc Communication Degree at UNSW (1999)

## GRANTS AWARDED

- 2007 National Science Foundation  
Amy Chang (American Society for Microbiology), S. Benson (U. of Maryland), A. Darden (The Citadel), H. Elmendorf (Georgetown Univ.), K. Takayama (UNSW) (3 years: US\$200,000)  
“Enhancing Learning Improvements Through Evidence (ELITE) Scholars Program”
- 2006 Australian Carrick Institute for Learning and Teaching Competitive Grants Program  
University of Sydney: P. McGee (Project Leader), H. Drury, J. Jones, P. O'Carroll, D. Airey, R. Baker, A. Yalcin, K. Kuzmanovic  
UNSW: S. Starfield, P. Mort, P. Hagan, K. Takayama (1 year: AUS\$147,770)  
“Creating an integrated student-centered online learning environment for report writing in the sciences and engineering”
- 2006 Faculty of Science Learning and Teaching Grant  
G. Hatsidimitris and K. Takayama (AUS\$5000)  
“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. Takayama and J. Nicholson (Consultants) with K. Rogers and S. Ryan (Project Directors) (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”

(Grants - continued)

- 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 a 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 (ASM) 9<sup>th</sup> Undergraduate 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"

(Grants - continued)

- 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)  
"Regulation of the carbon starvation and outgrowth response in marine *Vibrio*"
- 1997 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*"