City of London - Application for Appointment to City of London Community Advisory Committees

Application

Committee you are interested in serving on: **Ecological Community Advisory Committee**

If applying for the Accessibility Community Advisory Committee, please select: **No, I am not an applicant with a disability.**

If applying for the Ecological Community Advisory Committee, a professional designation, education or experience in related fields is a requirement based on the technical nature of the committee work. Please indicate your area(s) of expertise: **Biology; Ecology; Limnology; Other**

If you selected 'Other', please specify: Oceanography, Microbiology

Contact Information

Name: Vera Tai

City: London

Province: ON

Postal Code: N6G 2R5

Experience and Qualifications

If you have experience on a London Advisory Committee, please provide dates and details. (max. 250 characters): **No prior experience.**

What do you hope to contribute or learn as part of a Community Advisory Committee? (max. 250 characters: I hope to contribute my expertise in Biology, Aquatic Ecology, and Environmental Science in reviewing technical reports and environmental assessments to provide guidance to the City of London's environmental stewardship and adaptations to climate change. I have lived in many places in North America, and London is unique in its accessibility to natural spaces and trails integrated within the City. But the City also faces the common challenges of balancing development and economic development with environmental sustainability. I have always wanted to integrate my professional role as a scientist with policy making to guide actionable changes in building environmentally sustainable communities. As part of this Community Advisory Committee, I am hoping to learn more about conservation issues faced by the City, how environmental assessments are used and translated to impact decisions taken by the City of London, and how to promote a sustainability mindset and culture.

How will you support the work of a Community Advisory Committee? (max. 250 characters): I have the technical expertise and knowledge base to synthesize environmental studies or assessment reports, review educational materials, and translate this knowledge to guide policy makers. I am prepared to commit a few hours monthly to meet with this Committee or Working Groups as needed, and contribute to reports or otherwise learn how this Committee works to pass on recommendations to the City of London to protect natural spaces and native biodiversity, and making sustainability a priority.

Please describe additional experience, training, or community involvement that will help you in your role as a Community Advisory Committee Member. (max. 250 characters): I have extensive experience as a researcher and educator in environmental science, aquatic ecology, and environmental microbiology, including research of freshwater harmful algal blooms and agricultural soils, which are more locally relevant to this advisory committee. Aside from my professional training as a biologist, I also have had active community roles in science outreach, coaching soccer, and multiculturalism, which I not only enjoy to create engaged and vibrant communities, but also in gaining diverse perspectives in community building.

Attach resume or other document here, if needed: VTai-CV_updateApr2022.pdf

Attach more files here, if needed:

Confirmations

I declare the following: I am a resident of London.; I am at least 18 years old.; I am not a City employee or Council member.; I understand that the commitment may be up to 4 hours per month to attend meetings and prepare.; I understand that my application and any attachments will be included on a public agenda that is published on the City website.

To help inform our outreach activities, please tell us how you heard about this opportunity: (optional): **Professional or community organization**

If you selected 'Other', please specify:

Submitted on: 4/3/2022 12:44:27 AM

Vera Tai, M.Sc., Ph.D.

Assistant Professor
Department of Biology
University of Western Ontario
1151 Richmond Street
London, ON N6A 5B7
Canada

EDUCATION

2009 **Ph.D.**, Marine Biology

Scripps Institution of Oceanography University of California, San Diego

La Jolla, CA, USA

2001 **M.Sc.**, Botany

University of British Columbia Vancouver, BC, Canada

1998 **B.Sc. (Honours)**, Biology

University of New Brunswick Fredericton, NB, Canada

EMPLOYMENT

2020 - present Assistant Professor

Department of Biology Western University London, ON, Canada

2016 - 2020 Assistant Professor

Departments of Biology and Statistical and Actuarial Sciences

Western University London, ON, Canada

2015 - 2016 Research Scientist

BC Centre for Excellence in HIV/AIDS

Providence Health Care / University of British Columbia

Vancouver, BC, Canada

2013 - 2015 Postdoctoral Fellow

Natural Sciences and Engineering Research Council of Canada

Department of Botany

University of British Columbia Vancouver, BC, Canada

2013 Postdoctoral Teaching Fellow

Faculty of Science

University of British Columbia Vancouver, BC, Canada

2010 - 2012 Global Scholar

Canadian Institute for Advanced Research

Department of Botany

University of British Columbia Vancouver, BC, Canada

2003 - 2004 Research Laboratory Coordinator

Institute for Conservation Research

San Diego Zoo San Diego, CA, USA

2002 - 2003 Research Assistant

The Scripps Research Institute

La Jolla, CA, USA

HONORS and AWARDS

2013 - 2015 Postdoctoral Fellowship

Natural Sciences and Engineering Research Council of Canada

2010 - 2012 Global Scholar Fellowship

Integrated Microbial Biodiversity

Canadian Institute for Advanced Research

2012 and 2014 Holz-Conner Award

International Society of Protistologists

2008 ZoBell Fellowship

Scripps Institution of Oceanography University of California, San Diego

2006 Best Student Poster

Gordon Research Conference - Marine Microbes

2004 - 2008	Scripps Graduate Scholarship Scripps Institution of Oceanography University of California, San Diego
2001	Nominated for Outstanding Master's Thesis University of British Columbia
1998 - 2000	Post Graduate Scholarship Natural Sciences and Engineering Research Council of Canada
1998	Lieutenant Governor's Silver Medal in Science University of New Brunswick

RESEARCH

Publications, peer reviewed:

- Okamoto, N., Keeling, P. J., Leander, B. S., and **Tai, V.** 2022. Microbial communities in sandy beaches from the three domains of life differ by microhabitat and intertidal location. *Molecular Ecol.* In press.
- Brown, L. P., Murray, R. Scott, A., Tien, Y.-C., Lau, C. H.-F., **Tai, V.**, Topp, E. 2022. Responses of the soil bacterial community, resistome, and mobilome to a decade of annual exposure to macrolide antibiotics. *Appl. Environ. Microbiology.* In press.
- Erratt, K., Creed, I., Favot, E. J., Todoran, I., **Tai, V.**, Smol, J., Trick, C. 2021. Paleolimnological evidence reveals climate-induced preeminence of cyanobacteria in a temperate meromictic lake. *Canadian Journal of Fisheries and Aquatic Sciences*. doi: 10.1139/cjfas-2021-0095.
- Erratt, K., Creed, C., Chemali, C., Ferrara, A. J., **Tai, V.**, and Trick, C. 2021. Performance and competitiveness of red vs. green phenotypes of a cyanobacterium grown under artificial lake browning. *Algae*. 36: 195-206. doi: 10.4490/algae.2021.36.7.19
- Kolísko, K., Flegontova, O., Karnkowska, A., Lax, G., Maritz, J., Pánek, T., Táborský, P., Carlton, J., Cepička, I., Horák, A., Lukeš, J., Simpson, A., and **Tai, V.** 2020. EukRef Excavates: Six curated SSU ribosomal RNA gene databases. *Databases*. 2020:baaa080. doi:10.1093/database/baaa080

Olmstead, A. D., Montoya, V., Chui, C. K., Dong, W., Joy, J. B., **Tai, V**, Poon, A. F. Y., Nguyen, T., Brumme, C. J., Martinello, M., Matthews, G. V., Harrigan, P. R., Dore, G. J., Applegate, T. L., Grebely, J., and Howe, A. 2019. A systematic, deep sequencing-based methodology for identification of mixed-genotype hepatitis C virus infections. *Infection, Genetics and Evolution.* 69: 76-84. doi: 10.1016/j.meegid.2019.01.016

- Ysseldyk, R., Greenaway, K. H., Hassinger, E., Zutrauen, S., Lintz, J., Bhatia, M. P., Frye, M., Starkenburg, E. and **Tai, V.** 2019. A leak in the academic pipeline: identity and health among postdoctoral women. *Frontiers in Psychology*. 10:1297. doi: 10.3389/fpsyg.2019.01297
- Gile G. H., James, E. R., **Tai, V.**, Harper, J. T., Merrell, T. L., Boscaro, V., Husnik, F., Scheffrahn, R. H. and Keeling, P. J. 2018. New species of *Spirotrichonympha* from *Reticulitermes* and the relationships among genera in Spirotrichonymphea (Parabasalia). *Journal of Eukaryotic Microbiology*. 65:159-169. doi: 10.1111/jeu.12447
- Thompson, L. R., Sanders, J. G., McDonald, D., Amir, A., Ladau, J., Locey, K. J. et al. 2017. A communal catalogue reveals Earth's multiscale microbial diversity. *Nature*. 551: 457-463. doi: 10.1038/nature24621.
- Tai, V., Carpenter, K. J., Weber, P. K., Nalepa, C. A., Perlman, S. J., and Keeling, P. J. 2016. Genome evolution and nitrogen fixation in bacterial ectosymbionts of a protist inhabiting wood-feeding cockroaches. *Applied and Environmental Microbiology*. 82: 4682-4695. doi: 10.1128/AEM.00611-16
- Strassert, J. F. H, Tikhonenkov, D. V., Pombert, J.-F., Kolisko, M., **Tai, V.**, Mylnikov, A. P., and Keeling, P. J. 2016. *Moramonas marocensis* gen. nov., sp. nov.: a jakobid flagellate isolated from desert soil with a bacteria-like, but bloated mitochondrial genome. *Open Biology*. 6: 150239. doi: 10.1098/rsob.150239
- **Tai, V.**, James, E. R., Nalepa, C. A., Scheffrahn, R. H., Perlman, S. J., and Keeling, P. J. 2015. The role of host phylogeny varies in structuring the microbial communities in the hindguts of lower termites. *Applied and Environmental Microbiology.* 81: 1059-1070. doi: 10.1128/AEM.02945-14
- **Tai, V.**, Gile, G. H., Pan, J., James, E. R., Carpenter, K. J., Scheffrahn, R. H., Keeling, P. J. 2014. The phylogenetic position of *Kofoidia loriculata* (Parabasalia) and its implications for the evolution of the Cristamonadea. *Journal of Eukaryotic Microbiology.* 62: 255-259. doi: 10.1111/jeu.12163

Tai, V., James, E. R., Perlman, S. J., and Keeling, P. J. 2013. Single-cell barcoding using sequences from the small subunit rRNA and internal transcribed spacer region identifies new species of *Trichonympha* and *Trichomitopsis* from the hindgut of the termite *Zootermopsis angusticollis*. *PLoS ONE*. 8: e58728. doi: 10.1371/journal.pone.0058728

- James, E. R., **Tai, V.,** Scheffrahn, R. H., and Keeling, P. J. 2013. *Trichonympha burlesquei* from *Reticulitermes virginicus* and evidence against a cosmopolitan distribution of *Trichonympha agilis* in many termite hosts. *International Journal of Systematic and Evolutionary Microbiology*. 63: 3873-3876. doi:10.1099/ijs.0.054874-0
- **Tai, V.**, Poon, A. F. Y., Paulsen, I. T., and Palenik, B. 2011. Selection in coastal *Synechococcus* (Cyanobacteria) populations evaluated from environmental metagenomes. *PLoS ONE* 6(9): e24249. doi: 10.1371/journal.pone.0024249
- **Tai, V.**, Burton, R. S., and Palenik, B. 2011. Temporal and spatial distributions of marine *Synechococcus* in the Southern California Bight assessed by hybridization to bead-arrays. *Marine Ecology Progress Series*. 426: 133-147. doi: 10.3354/meps09030
- Lucas, A. J. Dupont, C. L., **Tai, V.**, Largier, J. L., Palenik, B., and Franks, P. J. S. 2011. The green ribbon: Multi-scale physical control of phytoplankton productivity and community structure over a narrow continental shelf. *Limnology and Oceanography*. 56: 611-626. doi: 10.4319/lo.2011.56.2.0611
- **Tai, V.**, Paulsen, I. T., Phillipy, K., Johnson D. A., and Palenik, B. 2009. Whole genome microarray analyses of *Synechococcus-Vibrio* interactions. *Environmental Microbiology*. 11: 2698-2709. doi: 10.1111/j.1462-2920.2009.01997.x
- **Tai, V.** and Palenik, B. 2009. Temporal variation of *Synechococcus* clades at a coastal Pacific Ocean monitoring site. *The ISME Journal*. 3: 903-915. doi: 10.1038/ismej.2009.35
- Tetu, S. G., Brahamsha, B., Johnson, D. A., **Tai, V.**, Phillippy, K., Palenik, B., and Paulsen, I. T. Microarray analysis of phosphate regulation in the marine cyanobacterium *Synechococcus* sp. WH8102. 2009. *The ISME Journal*. 3: 835-849. doi: 10.1111/j.1365-2958.1993.tb00914.x
- Palenik, B., Ren, Q., **Tai, V.**, and Paulsen, I. T. 2009. Coastal *Synechococcus* metagenome reveals major roles for horizontal gene transfer and plasmids in population diversity. *Environmental Microbiology*. 11: 349-359. doi: 10.1111/j.1462-2920.2008.01772.x

Palenik, B., Grimwood, J., Aerts, A., Rouze, P., Salamovd, A., Putnam, N., Dupont, C., Jorgensen, R., Derelle, E., Rombauts, S., Zhou, K., Otillar, R., Merchant, S. S., Podell, S., Gaasterland, T., Napoli, C., Gendler, K., Manuell, A., Tai, V., Vallon, O., Piganeau, G., Jancek, S., Heijde, M., Jabbari, K., Bowler, C., Lohr, M., Robbens, S., Werner, G., Dubchak, I., Pazour, G. J., Ren, Q., Paulsen, I., Delwiche, C., Schmutz, J., Rokhsar, D., Van de Peer, Y., Moreau, H., and Grigoriev, I. V. 2007. The tiny eukaryote *Ostreococcus* provides genomic insights into the paradox of plankton speciation. *Proceedings of the National Academy of Sciences, U. S. A.* 104: 7705-7710. doi: 10.1073/pnas.0611046104

- Calderwood, D. A., **Tai, V.**, Di Paolo, G., De Camilli, P., and Ginsberg, M. H. 2004. Competition for talin results in trans-dominant inhibition of integrin activation. *Journal of Biological Chemistry.* 279: 28889-28895. doi: 10.1074/jbc.M402161200
- Tadokoro, S., Shattil, S. J., Eto, K., **Tai, V.**, Liddington, R. C., de Pereda, J. M., Ginsberg, M. H., and Calderwood, D. A. 2003. Talin binding to integrin β tails: a final common step in integrin activation. *Science*. 302: 103-106. doi: 10.1126/science.1086652
- **Tai, V.**, Lawrence, J. E., Lang, A. S., Chan, A. C., Culley, A. I., and Suttle, C. A. 2003. Characterization of HaRNAV, a novel single-stranded RNA virus causing lysis of *Heterosigma akashiwo* (Raphidophyceae). *Journal of Phycology*. 39: 343-352. doi: 10.1046/j.1529-8817.2003.01162.x
- **Tai, V.**, Lindstrom, S. C., and Saunders, G. W. 2001. Phylogeny of the Dumontiaceae (Gigartinales, Rhodophyta) and associated families based on SSU rDNA and internal transcribed spacer sequence data. *Journal of Phycology*. 37: 184-196. doi: 10.1046/j.1529-8817.2001.037001184.x

Publications, non-peer reviewed:

- **Tai, V.** and Keeling, P. J. 2013. Termite hindguts and the ecology of microbial communities in the sequencing age. *Journal Eukaryotic Microbiology*. 60: 421-428. doi: 10.1111/jeu.12048.
- Benham, C. Cawood, A. M., Cook, G. S., Darnell, A., Davison, P. C., Goldstein, M. C., Johnson, A. E., Konotchick, T., Maldonado, E. M., Pasulka, A. L., Prairie, J. C., Moseman, S. M., **Tai, V.**, Tanner, C. A., Vardi, T., Whitty, T. S., and Levin, L. A. 2008. Marine Metapopulations (book review). *Marine Ecology*. 29: 319-320. doi: 10.1111/j.1439-0485.2008.00243.x.

Presentations (selected)

Savage, R.-L., Maud, J. L., Kellogg, C. T. E., Hunt, B. P. V., and **Tai, V.** 2021. The eukaryotic microbiome of crustacean zooplankton from the Strait of Georgia, BC large dominated by symbiotic Alveolata. 70th Annual Conference of the Canadian Society of Microbiologists, online, June 2021. (poster)

- Brown, L. P., Murray, R., Scott, A., Tien, Y.-C., Lau, C. H.-F., **Tai, V.**, & Topp, E. 2021. A decade of macrolide antibiotic exposure impacts the soil bacterial community, resistome, and mobilome. 70th Annual Conference of the Canadian Society of Microbiologists, online, June 2021. (poster)
- Brown, L. P., **Tai, V.**, Topp, E. 2021. The impact of long-term antibiotic exposure on soil bacteria: A human health perspective. Western Research Forum, London, Canada, March 2021. (oral, keynote)
- Maud J., Hunt B., Kellogg C., and **Tai V.** 2019. Marine food webs: what can metabarcoding tell us about the true trophic pathways of the dominant mesozooplankton of the Strait of Georgia. The North Pacific Marine Science Organization (PICES) Meeting, Victoria, Canada, October 2019. (oral)
- Ysseldyk, R., Bhatia, M., Frye, M., Greenaway, K., Hassinger, E., Starkenburg, E., and **Tai, V.** 2017. The postdoc: The leak for women in the pipeline— Identity, work attitudes, and well-being among early career researchers. Centre for Research on Education, Women, and Work Research Forum, Ottawa, Canada, October 2017. (oral)
- **Tai V.**, Okamoto N, Keeling P. 2017. Sand harbours distinct communities of attached and interstitial bacteria and protists. 15th International Congress of Protistology, Prague, Czech Republic, July 2017. (oral)
- **Tai V.**, Okamoto N, Keeling P. 2017. Sand harbours distinct communities of attached and interstitial bacteria and protists. 67th Canadian Society of Microbiologists Annual Conference, Waterloo, Canada. June 2017. (oral)
- **Tai V.,** Okamoto, N., and Keeling, P. J. 2016. Sand harbours distinct communities of attached and interstitial bacteria and protists. The 16th International Symposium on Microbial Ecology, Montreal, Canada, August, 2016. (poster)
- **Tai V.,** Okamoto, N., and Keeling, P. J. 2015. Distinct microbiomes along beach transects. Hakai Research Exchange. Nanaimo, Canada, October, 2015. (poster)
- **Tai V.,** James, E.R., and Keeling, P. J. 2015. Parabasalia. EukRef Workshop. Vancouver, Canada, July, 2015. (poster)

Tai V., Carpenter, K. J., Perlman, S. J., Keeling, P. J. 2014. Genomic analysis of the *Bacteroidales* ectosymbionts from single cells of the protist *Barbulanympha*, a handgun symbol of a wood-eating cockroach. Sackler Colloquium - Symbioses becoming permanent: the origins and evolutionary trajectories of organelles. Irvine, USA, October 2014. (poster)

- **Tai V.** and Keeling, P. J. 2014. Can microbes in the hindguts of termites and woodeating cockroaches be used to study speciation? Protist2014. Banff, Canada, August 2014. (oral)
- **Tai, V.**, Perlman, S. J., and Keeling, P. J. 2013. The "meta" genome of *Barbulanympha*, a parabasalid with Bacteroidetes ectosymbionts from the hindgut of a woodeating cockroach. International Congress of Protistology. Vancouver, Canada, July 2013. (oral)
- **Tai, V.**, Perlman, S. J., and Keeling, P. J. 2013. The diversity and co-evolution of protistan and bacterial hindgut symbionts across the lower termites as assessed using 454 pyrosequencing. Yosemite Symbiosis Workshop. Sierra Nevada Research Institute, USA, May 2013. (oral)
- **Tai, V.** and Keeling, P. J. 2012. From single cells to communities deciphering the ecology and evolution of microbial symbionts in termite/cockroach hindguts using multiple sequencing approaches. Protist2012. Oslo, Norway, July 2012. (oral)
- **Tai, V.**, and Keeling, P. J. 2012. Genomic analysis of the Bacteroidetes ectosymbiont from a single protist cell from the hindgut of the wood-eating cockroach *Cryptocercus punctulatus*. 62nd Annual Conference of the Canadian Society of Microbiologists. Vancouver, Canada, June 2012. (poster)
- Tai, V., Poon, A. F. Y., Palenik, B. 2010. Selection in coastal Synechococcus (Cyanobacteria) populations evaluated from environmental metagenomes. 13th International Symposium on Microbial Ecology. Seattle, WA, August 2010. (poster)
- **Tai, V.**, Burton, R. S., and Palenik, B. 2010. Temporal and spatial distributions of marine *Synechococcus* (Cyanobacteria). 13th International Symposium on Microbial Ecology. Seattle, WA, August 2010. (poster)
- **Tai, V.**, Ren, Q., Paulsen, I. T., and Palenik, B. 2008. Dominance of *Synechococcus* clades I and IV during a coastal marine time-series. American Society of Microbiology, General Meeting. Boston, MA, USA, June 2008. (poster)
- **Tai, V.**, Ren, Q., Paulsen, I. T., and Palenik, B. 2008. Metagenomics and the pangenome of a coastal marine *Synechococcus* population. NSF Microbial Genome Sequencing Program Awardee Workshop Plant and Animal Genome Conference. San Diego, CA, USA, January 2008. (poster)

Tai, V., Paulsen, I. T., and Palenik, B. 2006. Whole genome microarray analyses of *Synechococcus-Vibrio* interactions. Gordon Research Conference – Marine Microbes. University of New England, Biddeford ME, USA, July 2006. (poster, awarded Best Student Poster)

- **Tai, V.**, Lang, A. S., and Suttle, C. A. 2002. Genomic analysis of a novel marine virus associated with lysis of the toxic bloom former, *Heterosigma akashiwo*. American Society of Limnology and Oceanography (ASLO) Ocean Sciences Meeting in Honolulu, Hawaii, USA, February 2002. (oral)
- **Tai, V.** and Suttle, C. A. 2001. Characterization of two novel viruses causing lysis of the toxic bloom-forming alga *Heterosigma akashiwo* (Raphidophyceae). American Society of Limnology and Oceanography (ASLO) Aquatic Sciences Meeting in Albuquerque, NM, USA, February 2001. (oral)

Research funding:

2021 - 2027 Co-investigator

Natural Sciences and Engineering Research Council of Canada (NSERC) New Frontiers in Research Fund

Protection of Metallic Surfaces from Bulk to Nano Through Molecular-level Innovation Grant

Total Funding: \$24,000,000

Portion of Funding Received: \$100,000

2018 - 2022 Co-investigator

Natural Sciences and Engineering Research Council of Canada (NSERC) Strategic Partnership Grants for Projects

Changes in Ginsenosides and Soil Biodiversity Related to Management of Ginseng Replant Disease

Total Funding: \$660,802

Portion of Funding Received: \$165,200

2018 - 2020 Principal Investigator

Western Strategic Support For NSERC Success, Seed Grant

The ecology of zooplankton death and decomposition

Total Funding: \$24,730

Portion of Funding Received: \$24,730

Other professional activities:

Grant Reviewer:

Natural Sciences and Engineering Research Council of Canada (NSERC) Environmental Protection Agency, United States (EPA) France-Canada Research Fund Canadian Foundation for Innovation (CFI) Czech Science Foundation

Journal Reviewer:

Environmental Entomology
European Journal of Protistology
Frontiers in Marine Science
Frontiers in Microbiology
Insectes Sociaux
Journal of Eukaryotic Microbiology
Journal of Plankton Research
mSystems
Molecular Ecology
Scientific Reports

Membership in professional associations:

International Society for Microbial Ecology International Society of Protistologists American Society for Microbiology Canadian Society of Microbiologists

TEACHING

Courses taught at the University of Western Ontario:

2021 - present	BIOL4289 - Systematics and Phylogenetics (30 students, full)
2020 - present	BIOL1001A - Biology for Science I (2100 students, full)
2020 - present	BIOL3415G - Aquatic Ecology (avg. 55 students, full)
2019 - present	BIOL9919B/PATH9577B - Applied Bioinformatics
	(avg. 15 students, full)
2016 - 2019	BIOL1201A - General Biology (avg. 700 students, full)
2017 - 2019	BIOL3222G - Introduction to Freshwater and Marine Environments
	(avg. 50 students, full)

Courses taught at the University of British Columbia:

2013 SCIE120 - Topics in Sustainability Science (20 students, full)

OUTREACH and COMMUNITY SERVICE

2018 - present Preview Days

Faculty of Science, University of Western Ontario

2020 Girl Guides of Canada

Women in Science

2013 - 2015 Community Scientist

Science World, Vancouver, BC, Canada

2013 - 2015 Microbe Hunt - creator/producer/host

(https://www.youtube.com/watch?v=1iNv -ZRR Q)

an educational video series

Faculty of Science, University of British Columbia

2012 Seminar speaker

WayCool Biodiversity Series

Beaty Biodiversity Museum, Vancouver, BC, Canada

2005 Consultant/Designer

Sea of Genes Exhibit

Birch Aquarium at Scripps, La Jolla, CA

2005 Instructor

Teacher's Workshop in Biological Oceanography Birch Aquarium at Scripps, La Jolla, CA, USA