CURRICULUM VITAE

William G. Wright
Associate Professor
Department of Biological Sciences
Chapman University
One University Drive
Orange, California 92866
wwright@chapman.edu

EDUCATION:

Associate Professor

	2002-Present:	Department of Biological Sciences, Chapman University		
		1996-2002: Department of Biology, Colorado State University		
	Assistant Professor			
	1990-1996:	Department of Biology, Colorado State University		
	Postdoctoral			
	1986-1990:	Department of Psychology, Yale University		
	1985-1986:	Friday Harbor Laboratories, Univ. Washington		
	Graduate			
	1979-1985:	Scripps Inst. Oceanogr. PhD, Oceanography, August 1985; J. T. Enright, Advisor		
	1975-1979:	Moss Landing Mar. Labs, J. Nybakken, advisor		
	Undergraduate	•		
	1969-1973:	Univ. of Calif. Santa Cruz, B.A. Biology		
GRANTS:				
2011-2013	"LTER: Land	ocean interactions and the dynamics of kelp forest P.I., Daniel Reed, UCSB.		
2007-2011	National Scien	nce Foundation. \$363,000. Predation-induced		
2002-2006	National Scien neuromodulati	in <i>Aplysia californica</i> (IOS-0721800; no-cost extension). Ince Foundation. \$338,000. Evolutionary role of ion in associative memory (IBN-0131743). Research		
1996-99	National Scien	Experience for Undergraduates \$14,000. National Science Foundation. \$210,000 Evolution of learning-related neuromodulation (IBN-9632069).		
1997, 1999	Colorado State	Research Experience for Undergraduates \$5000 Colorado State Mathematics and Science Education, \$500 each year. Experimental trial small group studies in large (ca 400 students) lecture.		
1995-96	National Scier neuromodulat	nce Foundation. \$60,000 Evolution of learning-related ion (IBN-9511215). Research Experience for		
1995-97		es \$5000 andation, Inc. \$80,000; The role of serotonin in a parasite- ge in behavior (#W94-11).		

1991-95	Hughes Summer Scholar Fellowship. \$15,000. Salary for six separate fellows during four summers.
1991-95	Hughes Foundation. \$3000. Supplement for Hughes Fellows.
1994	Graduate School, Col. St. Univ. Faculty Research Grant. \$4,500. Organization of Neuromodulation.
1992	Graduate School, Col. St. Univ. Faculty Research Grant. \$4,000. Phylogenetic analysis of neural substrates of learning.
1991	John H. Venable Memorial Scholarship. Equipment grant, \$700
1986-89	National Institutes of Mental Health. \$63996. The development of sensitization in <i>Aplysia</i> : Temporal emergence and effects of early experience.
HONORS:	
May 2019-	2018-2019 Award in Mentorship of Undergraduate Research and Creative Activity. Chapman University
August 2017	Invited Speaker, Chapman University "Chap-ed" talk to incoming first-year students.
May, 2016	Invited speaker, Southern California Academy of Sciences 2016 Annual Meeting, special symposium, "50 years of research at the USC Wrigley Institute."
Spring, 2014	Invited Panelist, <i>Town Hall Meeting on Grades</i> , Sponsored by Institute for Excellence in Teaching, Chapman University
Fall, 2013	National Academies, <i>Nominated Education Fellow</i> in Life Sciences
Fall, 2013	Invited Panelist, Success in Academia, Society for Neuroscience, Annual meeting San Diego
Spring, 2011	Invited Panelist, Nature of Reality, Chapman University
Fall, 2010	J. Neurosci. publication highlighted in Nature (V467, p8).
Spring, 2006	Valerie Scudder Award of Excellence, Chapman University
Spring, 2006	Outstanding Faculty Award, Residence Life, Chapman University
Spring, 2005	Outstanding Faculty Award, Residence Life, Chapman University
Spring, 2004	Outstanding Faculty Award, Residence Life, Chapman University
Spring, 2000 Spring, 1995	Undergraduate Mentor of the Year, Biology Dept. Col. St. Univ. Undergraduate Teacher of the Year, College Nat. Sci., Col. St. Univ.
Fall, 1994	Undergraduate Teacher of the Year, Biology Dept., Col. St. Univ.
1986-90	National Inst. Mental Health Postdoctoral Fellow, Yale University.
1985-1986	Friday Harbor Laboratories Postdoctoral Fellow
1979-1980	Regents Fellowship, Univ. of Calif.

TEACHING EXPERIENCE:

2002-pres. Chapman University, Biological Sciences: Professor Biostatistics (Biol 250) Introduction to Life Science (Biol 103) General Biology First Semester (Biol 204) General Biology Second Semester (Biol 205)

Marine Biology (Biol 440)

Biology of Learning and Memory (Biol 329) Global Change and Marine Biology (Biol 329) Senior Capstone (Learning and Memory, Biol 498)

2001 University of Puerto Rico, Institute of Neurobiology, Visiting Professor Tropical Neuroethology

1990-2002 Colorado State University, Department of Biology: Professor

Cellular Basis of Behavior (Z536) Principles of Animal Biology (Z110)

Marine Ecology (Z315).

1988-1989 Yale University, Guest Lecture Neuroethology

1988-1989 Marine Biological Laboratories, Woods Hole, Mass. Teaching Assistant. Neural Systems & Behavior.

PUBLICATIONS (names in **bold** indicate undergraduate or post baccalaureate collaborators).

Manuscripts In Preparation

Gould, N., and W. G. Wright. Nonlethal heat shock compromises the behavior of an ecosystem engineer.

Thomas, H. A, S. Da Silva, and W. G. Wright. Hermit crabs are enthusiastic predators of small sea hares.

Sunoo, M., J. Liu, and W. G. Wright. Growing aware: Ontogenetic change in olfactory response to predators.

Sidun, A., and W. G. Wright. Acute weak acidification blocks chemically-mediated predator response in an intertidal hermit crab.

Wright, W. G. Adaptive evolution of learning and memory in a model lineage. *In* Krause, M., K. Hollis, M. Papini. Evolution of Learning and Memory Mechanisms. Cambridge University Press. Slated to be published, Fall 2020.

Manuscripts <u>Published</u> in Peer Reviewed Journals **Bold** names were undergraduate collaborators

41. Wright, W.G. Adaptive evolution of learning and memory in a model lineage. In Krause, M., K. L. Hollis, & M. R. Papini (Eds.) *Evolution of Learning and Memory Mechanisms*. Cambridge University Press. *In Press*.

- 40. **Kabala, R. T., N. A. Swinford, M. J. Mason,** and W.G. Wright. The role of dislodgement in the territorial ecology of the owl limpet, *Lottia gigantea*. Ethology Ecology & Evolution: 1-15.
- 39. Mason, M. J., V. A. Zachary, **J. Berriman**, A. B. Mason, C. Rakovski, and W. G. Wright. Reduced tenacity during "high-speed" territorial encounters in the intertidal owl limpet, *Lottia gigantea*: Agonistic escalation increases risk of wash-off. J. exp. mar. Biol. Ecol. 509:71-81.
 - **38. Himstead, A**, and W.G. Wright. Precise foraging schedule in an intertidal euopisthobranch mollusk. Mar. Freshw. Behav. Physiol. 51(2): 131-141. abstract
- **37. Berriman, J. S.**, M. Kay, D. Reed, A. Rassweiler, **D. Goldstein**, and W.G. Wright. Shifts in attack behavior of an important kelp forest predator within marine reserves. Mar. Ecol. Progr. Ser. 522: 193-201.
- **36.** M. J. Mason, A. J. Watkins, **M. Brown, J. Wakabayashi, J. Buechler, and** W. G. Wright. Connecting model species to nature: predator-induced long-term sensitization in *Aplysia californica*. <u>Learning & Memory</u>: 21: 363-367.
- 35. A. J. Watkins, D. A. Goldstein, L. C. Lee, C. J. Pepino, S. L. Tillett, F. E. Ross, E. L. Wilder, V. A. Zachary, and W. G. Wright. Lobster attack induces sensitization in the sea hare, *Aplysia californica*. J. Neurosci. 30: 11028 –11031.
 - 34. **K. K. Takagi, N., N. Ono**, W. G. Wright. Interspecific variation in palatability suggests co-specialization of anti-predator defenses in a sea hares. <u>Mar. Ecol. Progr. Ser.</u> 416:137-144.
- **33.** Wright, W. G. and J. W. Nybakken. Effect of wave action on movement in the owl limpet, *Lottia gigantea*. Bull. Mar. Sci.81: 235-244.
 - 32. **Jami, S. A.**, Wright, W. G., and D. L. Glanzman. Differential classical conditioning of the gill-withdrawal reflex in *Aplysia* recruits both NMDA receptor-dependent enhancement and NMDA receptor-dependent depression of the reflex. J. Neurosci. 2007 27: 3064-3068.
- **31. Hoover, B. A., H. Nguyen, L. Thompson**, and W. G. Wright. Associative memory in three aplysiids: Correlation with heterosynaptic modulation. <u>Learn. Mem. 13</u>: 820-826.
- **30.** Marinesco, S. K.L. Duran, and W. G. Wright. Evolution of learning in three aplysiid species: Differences in heterosynaptic plasticity contrast with conservation in serotonergic pathways. <u>J. Physiology-London 550 (1): 241-253.</u>

- 29. Wright, W. G. Neuronal and behavioral plasticity in evolution: Experiments in a model lineage. <u>Bioscience</u>. 50: 883-894.
 - 28. Shivik, J. A., W. G. Wright, and L. Clark. Seasonal variability in brown treesnake (Boiga irregularis) response to lures. <u>Can. J. Zool.</u> 78: 79-84.
- **27. Erixon, N. J., L. J. DeMartini**, and W. G. Wright. Dissociation between sensitization and learning-related neuromodulation in an aplysiid species. <u>J. Comp. Neurol.</u> 408: 506-514.
- 1998 26. Maynard, B.J., T.A. Wellnitz, N. Zanini, W.G. Wright, , B.S. Dezfuli. Parasite-altered behavior in a crustacean intermediate host: field and laboratory studies. Journal of Parasitology. 84:1102-1106
 - 25. Wright, W. G. Evolution of nonassociative learning: Behavioral analysis of a "phylogenetic lesion". Neurobiology of Learning and Memory 69:326-337. abstract
- 24. Wright, W. G., **D. Kirschman, D. Rozen**, & B. Maynard. Phylogenetic analysis of learning-related neuromodulation in molluscan mechanosensory neurons. Evolution 50: 2248-2263.
 - 23. Maynard, B.J., **DeMartini, L**. & Wright, W.G. *Gammarus lacustris* harboring *Polymorphus marilis* and *Polymorphus paradoxus* show altered patterns of serotonin-like immunoreactivity. J. Parasitology 82: 663-666.
 - 22. Wright, W.G., **E. McCance**, and T.J. Carew. Developmental emergence of long-term memory for sensitization in *Aplysia*. Neurobiology of Learning and Memory 65: 261-268.
- 21. Wright, W. G., **K. Jones**, **P. Sharp**, and **B. Maynard**. Widespread anatomical projections of the serotonergic modulatory neuron, CB1, in *Aplysia*. Invert. Neurosci. 1: 173-183. abstract
 - 20. Wright, W. G. and A. L. Shanks. Interspecific association between bail-out behavior and habitat is geographically and phylogenetically widespread. <u>J. exp. mar. Biol. Ecol. 188:</u> 133-143.
 - 19. Wright, W. G. & **D. Kirschman**. Direct comparison of serotonin effects on siphon versus tail sensory neurons in *Aplysia*. <u>Learning and Memory 2:178-184</u>. 18. Wright, W. G. and T. J. Carew. A single identified interneuron gates tail-shock induced inhibition in the siphon withdrawal reflex of *Aplysia*. <u>J. Neurosc.</u> 15: 790-797.

- 17. Wright, W.G., and A.L. Shanks. Previous experience determines territorial behavior in an archaeogastropod limpet. J. exp. mar. Biol. Ecol. 166: 217-229. abstract
- 16. Wright, W.G., E. McCance, T. Lu, and T.J. Carew. Delayed-onset sensitization emerges after dishabituation in developing *Aplysia*. Behavioral and Neural Biology. 57: 170-174. abstract
- **15.** Wright, W. G., E. A. Marcus, T. J. Carew. A cellular analysis of inhibition in the siphon withdrawal reflex of *Aplysia*. J. Neurosc. 11: 2498-2509.
- **14.** Fitzgerald, K., W. G. Wright, **E.A. Marcus**, T. J. Carew. Multiple forms of non-associative plasticity in *Aplysia*: a behavioural, cellular, and pharmacological analysis. *Phil.Trans.R.Soc.Lond.B* 329: 171-178.
- **13. Wright, W. G.** Intraspecific density mediates sex change in in the territorial patellacean limpet, *Lottia gigantea*. Marine Biology. 100:353-364. <u>abstract</u>
 - **12**. Wright, W. G., E. A. Marcus, and T. J. Carew. Facilitation and inhibition in the siphon withdrawal reflex of *Aplysia*: A behavioral and cellular analysis. <u>In</u> Carew, T. J. and D. B. Kelly. *Perspectives in Neural Systems and Behavior*. New York Alan R. Liss, Inc.
- **11.** Wright, W.G. Sex change in the Mollusca. Trends in Ecology and Evolution 3: 137-140. abstract
- 10. Shanks, A.L. and W.G. Wright. Internal-wave-mediated shoreward transport of cyprids, megalopae, and gammarids, and correlated longshore differences in settling rate of intertidal barnacles. J. exp. mar. Biol. Ecol. 114:1-13. abstract
- **9.** Shanks, A.L., W.G. Wright, and **G. Maltz**. What triggers the "bail out" behaviour in the limpet *Lottia gigantea*? Mar. Behav. Physiol. 12: 71-79.
 - 8. Shanks, A.L., and W.G. Wright. Adding teeth to wave action: the destructive effects of wave-borne rocks on intertidal organisms. Oecologia 69: 420-428. abstract
 - 7. Huber, M. E., W.G. Wright, and R. A. Lewin. Divalent cations and flagellar autotomy in *Chlamydomonas reinhardtii*. Phycologia 25: 408-411. (<u>no abstract</u>)
- 6. Wright, W. G. The behavioral ecology of the limpet Lottia gigantea: interaction between territoriality, demography, and protandric hermaphroditism. PhD. Thesis. University of California San Diego.
 - **5.** Lindberg, D.R. and W.G. Wright. Patterns of sex change of the protandric patellacean *Lottia gigantea* (Mollusca: Gastropoda) Veliger 27(3): 261-265.

- **4.** Wright, W.G. Ritualized behavior in a territorial limpet. J. exp. mar. Biol. Ecol. 50 245-251. abstract
 - 3. Wright, W.G. and D.R. Lindberg. Direct observation of sex change in the patellacean limpet *Lottia gigantea*. J. mar. biol. Ass. U.K. 62: 737-738. abstract
- 2. Wright, W.G. and D.R. Lindberg. A nonfatal method of sex determination for patellacean gastropods. J. mar. biol. Ass. U.K. 59: 803. abstract
- 1. Wright, W.G. and J.A. Raymond. Air breathing in a California sculpin. J. exp. Zool. 203: 171-176. abstract

Book Chapters (also listed under Publications

- 41. Wright, W.G. Adaptive evolution of learning and memory in a model lineage. In Krause, M., K. L. Hollis, & M. R. Papini (Eds.) *Evolution of Learning and Memory Mechanisms*. Cambridge University Press. *In Press*.
- W. M. Timpson & Wright, B. G. From big water to reflective pools: Study groups in large lecture classes. In H. Edwards, B. Smith, & G. Webb (Eds.), Lecturing: Case Studies, Experience and Practice London: Kogan Page Publ. Ltd. 192 pp.
- Wright, W. G., E. A. Marcus, and T. J. Carew. Facilitation and inhibition in the siphon withdrawal reflex of <u>Aplysia</u>: A behavioral and cellular analysis. <u>In</u> Carew, T. J. and D.B. Kelly (eds.), <u>Perspectives in Neural Systems and Behavior</u>.

Book Review

Wright, W. G., 2003. Book Review. Ron Chase. Behavior and its Neural Control in Gastropod Molluscs. Comp. Bioch. Physiol. A. 136: 791-792

Abstracts in Scientific Meetings

- 2016 **Sidun, A.F.**, and W. G. Wright. Slight acidity abolishes chemically mediated avoidance behavior in an intertidal hermit crab. West. Soc. Nat. Ann Meeting. 162.
 - **Himstead, A.H.,** and W. G. Wright. Survival without a shell: Evolutionary loss of chemical and cognitive defenses associated with precise predator avoidance. West. Soc. Nat. Ann Meeting. 79.
- 2015 **Gould, N. G., T. Gunanto, J. Martinez**, W.G. Wright. Field experiments demonstrate that heat spells can reduce territory defense in the owl limpet, *Lottia gigantea*. West. Soc. Nat. Ann Meeting. 40.

- 2013 **Gomez, S. F., K. K. Takagi**, and W. G. Wright. Hermit-crab assay reveals heterogeneity in deterrence by actively secreted chemical defenses in *Aplysia californica*. Soc. Integr. Comp. Biol. Ann. Meeting P1.44.
 - **Takagi, K. K., C. R. James,** and W. G. Wright. A model system for predicting the effects of global warming: Acute and chronic effects of warm temperature on feeding behavior of *Pagurus samuelis*. Soc. Integr. Comp. Biol. Ann. Meeting P3.33.
- Berriman, J. S., M. C. Kay, D. C. Reed, W.G. Wright. Prey depletion in marine reserves consistently broadens predator diet. West. Soc. Nat. Ann Meeting. 8
 - **Swinford, N. A.**, M. J. Mason, **R.T. Kabala**, W. G. Wright. Risk of dislodgment during territorial encounters in *Lottia gigantea* is negligible, save for the youngest combatants. West. Soc. Nat. Ann Meeting. 96.
 - **Triebnig, C. J.**, **K. K. Takagi**, W. G. Wright. Hermit crabs avoid predator cues, regardless of the strength of their protective shell. West. Soc. Nat. Ann Meeting. 100.
- Mason, M.J., A. J. Watkins, M. Brown, J. Buechler, J. Wakabayashi, and W. G. Wright. Repeated lobster attack, like repeated electric shock, produces long-lasting sensitization and reduces spike threshold of tail mechanosensory neurons. Soc. Neurosci. Ann Meeting. 297.29.
- Goldstein, D. A., J. S. Berriman, and W. G. Wright. Spiny lobsters, *Panulirus interruptus*, from inside marine life protected areas, exhibit unprecedented attack behavior on sea hares (*Aplysia californica*). West. Soc. Nat. Ann Meeting.
 - **Berriman**, J. S., and W. G. Wright. Do territorial owl limpets (*Lottia gigantea*) assess risk? Tenacity and speed of chase behavior correlate with local neighborhood. West. Soc. Nat. Ann Meeting.
- Zachary, V.A., M. J. Mason, and W. G. Wright. Battles against competitors and waves in the California rocky intertidal: A study of the tenacity of the territorial owl limpet, *Lottia gigantea*. West. Soc. Nat. Ann Meeting
 - **Berriman, J. S.**, M. J., Mason, M. W. Denny, and W.G. Wright. Water cannon discharges that mimic moderate waves reveal elevated risk of dislodgment during territorial encounters in the intertidal limpet, *Lottia gigantea*. West. Soc. Nat. Ann Meeting

- Thomas, C. S., A. Rodriguez, S. L. Tillett, and W. G. Wright. Sublethal attack by *Navanax inermis* (Phylum, Mollusca) produces sensitization in *Aplysia californica*. Program No. 813.11. 2006 Neuroscience Meeting Planner Atlanta GA: Society for Neuroscience, 2006. Online.
 - Ross, F, E. L. Wilder, S. L. Tillet, and W. G. Wright. Sub-lethal attack by *Panulirus interuptus* (Crustacea) produces sensitization in *Aplysia californica*. Program No. 813.12. 2006 Neuroscience Meeting Planner Atlanta GA: Society for Neuroscience, 2006. Online.
- Takagi, K. K., N. Reihanifam, B. Freitas, and W. G. Wright. Chemical versus cognitive defenses in opisthobranch mollusks. Soc. Integr. Comp. Biol. Ann. Meeting: 23.4, pg42.
- 2004 **Koltavary, E., B. Hoover, K. Koltavary,** T. Capo, and W. G. Wright. Experimentally compromised chemical defenses enhances sensitization in *Aplysia*. Soc. Neurosci. Abstr. 34. 778.15
- Takagi, K., & W. G. Wright. Chemical versus cognitive defenses in opisthobranch mollusks. West. Soc. Naturalists. Annual Meeting.
 - Marinesco, S., K.L. Duran, & W. G. Wright. Evolution of learning in three aplysiid species: Differences in heterosynaptic plasticity contrast with conservation in serotonergic pathways. Cold Spring Harbor Symposium on Learning and Memory.
 - **Shekib, A.**, W. G. Wright, D. L., Glanzman. Differential classical conditioning of the *Aplysia* gill-withdrawal reflex depends upon NMDA receptor activation and a competitive interaction between the neural pathways. Soc. For Neurosc. Abstr 28: 520.4.
- 2001 **Hoover, B.**, **L. Thompson**, W. G. Wright. Evolutionary loss of modulation by serotonin is correlated with shorter memory of classical conditioning in an aplysiid clade. Soc. Neurosci. Abstr. 27: 644.24
- Wright, W. G., and D. L. Glanzman. Synaptic plasticity depends upon synaptic milieu: Observations from co-cultures of *Aplysia* neurons. Soc. Neurosci. Abstr. Soc. Neurosc. Abstr. 26: 1525
 - Wright, W. G. A phylogenetic analysis of non-associative learning mechanisms in a molluscan lineage. The XVIIIth (New) International Congress of Zoology.
- Wright, W.G., **R. Yong**, and D. L. Glanzman. Synaptic competition at the *Aplysia* sensorimotor synapse: Tetanic stimulation of one presynaptic input depresses a second presynaptic input. Soc. Neurosc. Abstr. 25: 1314.

- Duran, K. L., J. W. Kinney, and W. G. Wright. Site-specific sensitization in a species lacking generalized sensitization. Soc. Neurosc. Abstr. 24: 1190
 - Maynard, B. J., N. J. Erixon, L. J. DeMartini, and W. G. Wright. Dissociation between sensitization and learning-related neuromodulattion in an aplysiid species. Soc. Neurosc. Abstr. 24: 1190.
- Wright, W. G. 1997. Evolution of non-associative learning: Behavioral analysis of an evolution-induced neuromodulatory lesion. Soc. Neurosc. Abstr. 23: 1959.
- Wright, W. G., **K. Jones, P. Sharp**, and B. Maynard. Does the serotonergic neuron, CB1, modulate multiple reflexes in *Aplsyia*? Anatomical evidence. Soc. Neurosc. Abstr. 21: 1024.
- Wright, W. G., and B. Maynard. Evolution of learning-related neuromodulation in opisthobranch molluscs. Soc. Neurosc. Abstr. 20: 230.
- Wright, W. G., **D. Kirschman**, and **D. Rozen**. Evolution of serotonin-induced changes in firing properties of opisthobranch mechanosensory neurons. Cold Spring Harbor Symposium: Neurobiology of *Aplysia*.
- Wright, W. G., and **D. Kirschmann**. Serotonin-induced increases in excitability and action potential duration in mechanosensory neurons: similarity across ganglia and between species. Soc. Neurosc. Abstr. 18: 16.
- Wright, W. G. and T. J. Carew. Contributions of interneurons to tail-shock induced inhibition of the siphon withdrawal reflex in *Aplysia*. Soc. Neurosc. Abstr. <u>16</u>: 20.
 - Wright, W. G., E. M. Marcus, and T. J. Carew. Multiple sites of synaptic modulation mediate behavioral plasticity in *Aplysia*. Am. Malacol. Un. 56th Ann. meeting.
- Wright, W.G., E. A. Marcus, and T.J. Carew. Dissociation of monosynaptic and polysynaptic contributions to dishabituation, sensitization, and inhibition in *Aplysia*. Soc. Neurosci. 15: 1265.
 - Carew, T.J., W. G. Wright, and **E. McCance**. Development of long-term memory in <u>Aplysia</u>: Long-term sensitization is present when short-term sensitization first emerges. Soc. Neurosci 15: 1285.
- Marcus, E.A., W.G. Wright, and T.J.Carew. Behavioral and cellular dissociation of multiple components of nonassociative learning in *Aplysia*. Cold Spring Harbor Symposium: Cell and Molecular Neurobiology of <u>Aplysia</u>: 50.

- Wright, W.G., E.A.Marcus, **H. Thaker**, and T.J. Carew 1988. A cellular analysis of tail-shock induced inhibition in the siphon withdrawal reflex of *Aplysia*. Soc. Neurosci. 14: 841.
- Wright, W. G. An indirect method to detect predation of the owl limpet, *Lottia gigantea*. 2nd Calif. Isl. Symposium, St. Barbara, Calif.
- Wright, W. G. Fight or flee in a territorial limpet: Substratum cues and previous experience. Am Zool. 24: 101A.
 - Wright, W. G. Is sex change in limpets socially mediated? Am. Zool. 24: 60A.
- Wright, W.G. Ritualized behavior in a territorial limpet. West.Soc.Natur. 62nd Ann. Meeting.: 47.
 - Wright, W.G. Behavioral plasticity in a territorial limpet. West. Soc. Natur. 63rd Ann. Meeting: 57.
- Wright, W.G. Aspects of the ecology and behavior of the owl limpet, *Lottia gigantea*. West. Soc Malacol. Ann. Rep. 11: 7.
- 1977 Wright, W.G. Avoidance and ecape: Two responses of Intertidal limpets to the presence of the territorial owl limpet *Lottia gigantea*. West. Soc. Nat. 58th Ann. Meeting: 50.
 - Wright, W.G. and J. A. Raymond. Air-breathing in California sculpin. West. Soc. Nat. 58th Ann. Meeting: 55.

INVITED SEMINARS

III VII LD SEI	VIIIVAIXO	
	Spring, 2016	Invited speaker, Chapman Summer Undergraduate
		Research Fellows Speaker Series.
	Spring, 2016	Invited speaker, Chapman Faculty Forum
	Spring, 2016	Invited speaker, Oregon Institute of Marine Biology
	Spring, 2016	Invited speaker, Southern California Academy of
		Science Annual Meeting Special Symposium: 50 years
		of research at the USC Wrigley Institute.
	Spring, 2014	Invited Panelist, Town Hall Meeting on Grades,
		Institute for Excellence in Teaching, Chapman Univ.
	Fall, 2013	Invited Panelist, Success in Academia, Soc. Neurosc.
		Annual meeting San Diego
	Spring, 2011	Invited Panelist, Nature of Reality, Chapman Univ.
	Fall, 2010	Invited speaker, California State University, Fullerton,
		Biology
	Spring, 2010	Invited speaker, Univ. Calif., Santa Cruz, Ecol. Evol.

Biol.

	Dioi.
Spring, 2007	University of Oregon, Or. Inst. Mar. Bi
Spring, 2006	Univ. Calif., Santa Cruz, Conf celebrating John Pearse
Fall 2004	Northern Arizona University, Tucson, AR
Fall 2004	California State University Fullerton, CA
Spring 2004	University of Idaho, Biological Sciences
Spring, 2002	Cornell University, Neurob. & Behav.
Spring, 2002	University of Maryland, Psychology
Fall, 2001	Ohio University, Athens, Ohio
Spring, 2001	Southampton College, NY
Spring, 2001	Caltech, Biology Department
Summer, 2000	Am. Psych. Ass., Washington D. C.
Summer, 2000	International Congress Zoology, Athens, Greece
Fall, 1999	UCLA, Psychology
Spring, 1998	University of Denver, Biology
Spring, 1998	University of Oregon, Inst. Mar. Biol.
Summer, 1995	Krasnow Inst. Workshop, Fairfax, VA
Winter, 1995	NSF Workshop, Arlington, VA
Fall, 1994	Dept. Anat.Neurobiol., Col. St. Un.
Spring, 1994	Ev. Pop. Org. Biol., CU, Boulder
Winter, 1994	Wint. An. Behav. Conf., Jackson
Winter, 1994	Col. St. Univ., Psychology
Spring 1993	Biology Dept., Col.St.Univ.
Spring 1993	Univ.Oregon Institute of Neuroscience.
Summer 1991	Univ. Calif. Irvine, CntrNeurLearnMemory
Fall 1990	Col. St. Univ., Prgm Neur. Growth Devel.
Summer 1990	Am. Mal. U., Symp Neurobiol Moll., Woods Hole
Spring 1990	Cornell Medical School, NY
Fall 1989	SUNY, Brooklyn, Neural Behavioral Sciences
Fall 1987	SUNY, Stonybrook, Oceanography

PROFESSIONAL SERVICES

Grant reviewer:

National Science Foundation

Served on NSF grant evaluation panels Spring, 2004, 2005, 2008, 2010,

National Institute of Health

West Coast National Undersea Research Center

Israel Science Foundation

Journal reviewer:

American Naturalist

American Zoologist

Aquatic Biology

Behavioral and Neural Biology

Behavioral Ecology Biological Bulletin

Brain, Behavior, and Evolution

Ecology

Frontiers in Neuroscience

Invertebrate Neuroscience

Journal of Comparative Physiology

Journal of Neuroscience

Journal of Neurophysiology

Journal of Parasitology

Learning and Memory

Marine Biology

PLOS ONE

Neurobiology of Learning and Memory

Systematic Biology

Veliger

Professional Societies:

Society for Neuroscience

American Society of Zoologists

Western Society of Naturalists

Honor Society

Phi Kappa Phi