Barbara Elan Taylor, PhD

Executive Research Leadership Profile

Senior research administrator and neuroscientist with extensive leadership experience within the California State University and University of Alaska systems. Currently serving as Interim Associate Vice President, Office of Research and Economic Development at CSU Long Beach, providing strategic oversight of research growth, compliance, academic centers and institutes, sponsored programs, industry engagement, and workforce development. Proven record of fiscal stewardship, operational modernization, interdisciplinary initiative development, undergraduate research program development, research security compliance, and institutional resilience during the COVID pandemic and the federal funding disruption. Currently overseeing submission of ~300 proposals annually, administration of ~300 active grants, and annual research expenditures of about $45 million, which positions the University for sustained research growth and impact. Manages a $4 million office budget and leads a team of 28 staff members, ensuring effective operations, resource allocation, and organizational performance across a comprehensive portfolio.

Academic & Administrative Appointments

- Interim Associate Vice President, Office of Research & Economic Development (ORED), CSULB *(2024–present)*
- Associate Dean for Research, CNSM, CSULB *(2016–2024)*
- Professor, CSULB *(2016–present)*
- Director University Honors Program, University of Alaska Fairbanks (UAF) *(2013–2014)*
- Director, Undergraduate Research and Scholarly Activity, UAF *(2011–2016)*
- Associate Professor, UAF *(2010–2016)*
- Assistant Professor, UAF *(2004–2010)*
- Lecturer, UAF *(2004)*
- Research Associate, Dartmouth Medical School *(2000– 2003)*
- Postdoctoral Fellow, University of Calgary Medical School *(1999–2000)*

Education

- PhD, Zoology, University of British Columbia (UBC) *(1998)*
- MSc, Zoology, UBC, *(1990)*
- BSc, Biology, UBC, *(1987)*

Theses

Taylor, BE 1990 (MSc) Mussel culture in British Columbia: the influence of salmon farms on mussel growth and biochemical composition. University of British Columbia. Retrieved from https://open.library.ubc.ca/cIRcle/collections/831/items/1.0098113.

Taylor, BE 1998 (PhD) Protein utilization, hormone treatment and nutrient metabolism as they apply to culture of abalone Haliotis kamtschatkana. University of British Columbia. Retrieved from https://open.library.ubc.ca/cIRcle/collections/831/items/1.0088764.

Research Funding

1. Project Leader for NIH-NINDS U54 Advancing UAF Specialized Neuroscience Research Program (Principal Investigator Duffy, L) $ 6,234,776 *(2006–2012)*.
2. Principal Investigator for NSF-IOS Development of a Respiratory Neural Circuit: Ontogeny of respiratory drive $ 692,123 *(2010–2014)*.
3. Project Leader for Faculty Pilot Grant under NIH through INBRE2 program grant P20RR016466 (Principal

Investigator Frye, C) $17,727,939 *(2009–2014)*.

4. Principal Investigator for NIH P20MD008710 BUILDing Bridges in Alaska $149,795 *(2013–2014)*
5. Co-Investigator for NSF S-STEM Resilience and Adaptation in Environmental and Natural Sciences; $493,501 *(2014-2019)*.
6. Program Core Leader for NIH Idea Network for Biomedical Research Excellence, Environmental Agents and Disease; $18,827,571 *(2014-2019)*.
7. Principal Investigator for NIH Building Infrastructure Leading to Diversity; Alaskan Biomedical Learning and Student Training; $23,879,258 *(2014-2019)*.
8. Principal Investigator for University of California Tobacco-Related Disease Research Program; Cigarette Butt-derived Pollutants in the Coastal Environment; $200,000 *(2017-2018)*.
9. Principal Investigator for CA State Water Resources Control Board; Newport Bay Copper Pollution from Boat Hull Cleaning; $150, 000 *(2017-2019)*.
10. Principal Investigator for WM Keck Foundation Award, Keck Undergraduate Research Experience Incubator; $2,500,000 *(2022-2026)*.
11. Co-Principal Investigator for CA State funding, R&D Gateway Initiative at the Beach; $25,000 *(2022–2024)*.
12. Co-Principal Investigator for CA State funding, A Hydrogen Hub Blueprint for the California Supply Chain; $30,000 *(2024–2025)*.

Leadership & Research Administration — CSULB unless noted otherwise

ASSOCIATE VICE PRESIDENT (AVP), OFFICE OF RESEARCH AND ECONOMIC DEVELOPMENT (ORED) *(2024–present)*

1. Chief Research Officer

- Led CSULB faculty, students, and staff in research, scholarly, and creative activities (RSCA).
- Led CSULB RSCA during the federal funding crisis (*January 2025-present*).
  - Worked closely with principal investigators (PIs) to manage termination of affected.
  - Preserve as much student and staff support as possible.
  - Supported faculty in preparing appeals to federal agencies to restore lost funding.
  - Collaborated with the CSU Chancellor's Office and research leaders system-wide to support the California State Attorney General's legal action contesting grant rescissions and advocating for researchers.
- Preparation for anticipated changes in federal research funding policy.
  - Participated in a Chancellor's Office Working Group analyzing proposed revisions to federal F&A cost reimbursement models, including a potential FAIR model and a 15% cap on F&A recovery.
  - Purpose: to understand impacts on CSULB budget and advise faculty and senior leadership accordingly.

2. Institutional Official *(2024–present)*

- Oversaw for research compliance and research security for the campus.
- Oversaw conduct of research activities to maintain federally required accreditation for research with human (IRB) and animal subjects (OLAW).
- Oversaw measures to ensure PIs complete Conflict of Interest training and Financial Conflict of Interest certifications.
- Served as AVP overseeing ORED during CSULB's first research security audit conducted by the CSU Chancellor's Office—the pilot audit for the CSU system.
  - Required close cooperation with the Division of Information Technology and ongoing collaboration to establish research data security guidelines and processes.

3. Member, Senate Review Panel for Academic Centers & Institutes *(2021–present; start as ADR continue as AVP)*.

- Conducted 5-year reviews for 16 of CSULB's 28 academic centers and institutes.
- In current role, oversee operations of centers/institutes in partnership with Academic Senate; work directly with the Institute for Innovation & Entrepreneurship (housed in ORED).

4. Member of CSULB's President's Commission on Economic and Workforce Development

- Established to align CSULB's strengths with the evolving economic and workforce needs of our students, our

city, and the broader region.

5. **High-Performance Computing (HPC) Governance Committee** *(2019–present; start as ADR continue as AVP)*.

- Represent faculty research needs in governance of the Central HPC environment (Tier 3 data center, professional sysadmin, shared clusters/software).
- Advocate for equitable access; support PI-investor priority while enabling broad campus use.

6. **California Desert Studies Consortium (CDSC), Board of Governors** *(2016–present; start as ADR continue as AVP)*.

- Provide guidance to multicampus consortium that operates the Desert Studies Center (Zzyzx, CA) in the Mojave National Preserve.
- Advance CSU-wide interdisciplinary research/education in arid-land ecosystems, grant development, and scalable, cross-campus collaborations.

ASSOCIATE DEAN FOR RESEARCH (ADR), COLLEGE OF NATURAL SCIENCES & MATHEMATICS *(2016–2024)*

1. **CNSM Leadership**

- Led CNSM faculty, students, and staff in research.
- Participated in 21 faculty recruitments, prioritizing research potential and guiding start-up negotiations.
- Led College Beach 2030 initiatives.
- Led COVID Research Continuity *(2020-2022)*.
  - Led CNSM research shutdown → safe hibernation → phased reopening.
  - Co-developed CNSM-specific occupancy limits aligned to campus policy; implemented equitable weekly research schedules; authored lab/field recovery applications, building occupancy surveys, training materials (COVID Awareness & Prevention), fieldwork checklists, vendor visit protocols, and CNSM web guidance; managed approvals and tracking.

2. **Director, Institute for Integrated Research Materials, Environments, and Society** *(2017-2024)*

- Directed a university-wide interdisciplinary core analytical facility serving CSULB and other CSU campuses.
  - Managed personnel, budget, client engagement (academic, corporate, state); led financial turnaround from a $300K deficit.
  - Oversaw advanced instrumentation enabling multimodal, micro-chemical analyses and proteomic analyses; ensured shared-use, training, and self-service time.

3. **Member, University Research Advisory Committee** *(2016–2024)*

- Recommended research policies, procedures, internal funding allocations (faculty/students), and recognition programs.

4. **Member, IRB External Review Committee** *(2022)*

- Evaluated IRB strengths/weaknesses against national standards; recommended improvements to enhance research quality and support student success; delivered oral briefing and formal written report.

5. **Beach 2030 Liaison, Master Planning Advisory Committee** *(2017-2024)*

- Advised on long-range planning for academic/research spaces and campus infrastructure.

LEADERSHIP AT UNIVERSITY OF ALASKA FAIRBANKS (UAF) *(2016–2024)*

1. **Founding Director, Office of Undergraduate Research & Scholarly Activity (URSA)** UAF *(2011–2016)*

- Built the central undergraduate research office; managed 1 staff, 8-member faculty board, $300K budget.
- Launched Fairbanks Research Day and RFPs for undergraduate researchers and graduate/faculty mentors.

2. **UAF Honors Program Leadership**

- Member, Advisory Board *(2005–2012)*.
- Interim Director *(2012–2013)*.
  - Led 2 staff, $200K annual budget; oversaw coursework, undergraduate theses, and the Honors House and events.

3. **Member, UAF Department of Veterinary Medicine Founding Committee** (*2009-2013)*

- Established a 2+2 veterinary medicine program in partnership with Colorado State University.

STRATEGIC PLANNING COMMITTEES *(CSU; CSULB; UAF)*

- CSU Council of Chief Research Officers — Strategic Planning Committee, Strategic Thrust 3: Fund-Seeking Initiatives *2026*.
- Beach 2030: led CNSM and now ORED planning and initiatives *(2019–present)*.
- Strategic Planning: Chaired the Student Research Committee UAF *(2013-2014)*.

Programs and Initiatives (organized by highest impact) — CSULB unless noted otherwise

Biomedical Learning and Student Training Program (NIH BUILD) UAF *(2013–2016)*

- PI for $24M NIH BUILD award and preceding planning grant.
- Built an Alaska-wide MSTEM research and education network across 10 campuses (2 four-year + 8 two-year).
- Supported curriculum, research training, internal funding, and partnerships; emphasized inclusion of Alaska Native and rural students and other underrepresented populations.

Keck Undergraduate Research Experience (KURE) Incubator *(2022–present)*

- PI $2.5M WM Keck Foundation award.
- KURE supported CNSM faculty in developing, piloting, and delivering authentic research modules for lower division courses and supporting faculty-mentored research experiences for lower division undergraduate students.
- 3400 students and 27 faculty supported.

Open-Access Publication Award *(2019-present)*

- Authored and championed campus-wide policy/process for ORED funding for open-access publication publishing fees.

Multidisciplinary Mixer *(2017–2019)*

- Designed and launched cross-campus faculty collaboration event.
- Tripled ORED multidisciplinary award submissions; funded “follow-up lunches” to mature teams; planned as a recurring event but paused by COVID.

Transformational Skills Gap / Talent Pipeline Management Initiative *(2022–present)*

- Co-developing a multi-campus CSU program with Professional & Continuing Education to address rapidly evolving skills gaps in the workforce.
- Focus on university–industry partnerships (UIPs) and targeted talent pipeline management strategies across 5 Southern California CSUs.

Alliance for Renewable Clean Hydrogen Energy Systems (ARCHES) *(2023–present)*

- Member of the CSU5 + CSU Fullerton working group (convened by CSULA) for hydrogen workforce development and education.
- Despite federal cancellation in 2025, the working group continues collaborating and has submitted 4 proposals to support hydrogen-sector training.

Faculty Development & Staff Supervision — CSULB unless noted otherwise

Research Proposal Mentoring/Coaching

- CSU Chancellors Office Proposal Mentoring Program *(2018-2022)*.
  - Mentored 10 proposals across disciplines a5 5 CSU campuses; multiple awards resulted.
  - Panelist on 3 CSU online proposal writing workshops.
- Mentor for California Alliance for Hispanic-Serving Social Science Advancement (CAHSS)A *(2023)*.
  - Facilitated a 3-day writing retreat guiding an NSF Build and Broaden proposal team (CSU–UC collaboration).
- Freelance Proposal Writing Consultant for McAllister & Quinn *(2023-present)*.
  - McAllister & Quinn is premier federal grant consulting and government relations firm in Washington, DC.
- Faculty Workshop Presenter at CSUBIOTECH *(2026)*.
  - *How to Make Proposal Writing Easier with AI Tools*.

ORED Operational Oversight

- Outreach & Grant Development; 2 staff.
  - Identifies funding opportunities, builds partnerships, and helps faculty develop competitive grant proposals through training, strategic planning, and proposal support.
  - 4 annual publications promoting CSULB research.
- Pre-Award Services; 4 staff.
  - Assists with proposal preparation, budget development, internal routing, sponsor guidelines interpretation, and submission coordination.
  - Reviews and approves proposal submissions to ensure budgets, compliance requirements, and institutional policies are accurate and complete before submission to sponsors.
- Post-Award Services; 8 staff.
  - Manages awarded grants after funding, including account setup, financial monitoring, reporting, budget revisions, and sponsor communications.
- Project Support Services; 2 staff.
  - Provides operational assistance to funded projects, such as hiring coordination, purchasing and travel, subcontract management, and milestone tracking.
- Compliance; 4 staff.
  - Ensure research activities meet federal, state, sponsor, and institutional regulations (e.g., IRB, IACUC, import/export controls, conflict of interest, research security).
  - Oversee university vivarium; 4 staff.
- Innovation and Economic Development; 1 staff.
  - Supports commercialization of research, industry partnerships, technology transfer, startups, and initiatives that drive regional economic growth.
  - Oversee Institute for Innovation and Entrepreneurship.
- Office of Undergraduate Research Services (OURS); 4 staff.
  - Promotes and administers undergraduate research opportunities, including student funding, mentorship coordination, and research programs.
  - Administer Student Research Competition.

CNSM Operational Oversight

- Science Shop: 2 staff; machining/fabrication, diagnostics/repair for teaching/research *(2018–2024)*.
- IIRMES Core Lab (2018–2024): operational and strategic oversight of shared-use facility *(2018–2024)*.
- CNSM IT Desktop/Web Support: 4 staff; leadership mentoring, morale rebuilding, improved project management; passed campuswide cybersecurity audit *(2022–2023)*.

Teaching, Course Development & Trainee Mentoring

- 77 UAF courses taught across cell biology, physiology, neuroscience, First Year Experience, research methods, scientific writing, and 42 separate independent research / directed studies courses.
- 2 CSULB courses taught in in cell biology and research methods.
- UAF courses created for the URSA program.
  - URSA 192 – Undergraduate Research & Scholarly Activities Opportunities Seminar.
  - URSA 292 & 492 – Undergraduate Research and Scholarly Experiences.
  - Museum Research Apprenticeship Program (MRAP 292 &492).
- UAF course created for Department of Biology & Wildlife, BIOL 490 Cell Biology Capstone.
- 90 student researchers mentored: PhD (6); MSc (7; 1 CSULB); undergraduate (73; 4 CSULB), high school (9).
- 2 postdoctoral researchers mentored.

Career-Relevant Certifications & Special Training

- University Leadership Program, UAF *(2011-2012)*.

- Leadership Fellows Program, CSULB *(2016-2018)*.
- Center for Research, Excellence, and Diversity in Team Scholarship Training *(2016)*.
  - Cross-disciplinary collaboration; agreements on IP/data, feedback mechanisms; organizational and team dynamics supporting 21st-century science.
- Public Knowledge Media Training *(2016)*.
  - 5 workshops on best practices for communicating science via print, broadcast, digital, and social media.
- Foresight Practitioner Certification, Institute for the Future (IFTF) *(2017)*.
  - Strategic foresight, signals scanning, scenario development.
  - contributed to Beach 2030 foresight processes and trainings**.**
- Inclusive Leadership & Bias Reduction Training, NeuroLeadership Institute *(2021)*.
  - INCLUDE (inclusive collaboration) and DECIDE (breaking bias).
  - Apply principles (status, certainty, autonomy, relatedness, fairness; and similarity/expedience/experience/distance/safety biases) to team-building and decision-making.
- AI in Research Administration badges I and II, University of Buffalo *(2025)*.

Professional Service

- Grant Review Panelist: NIH, NSF, NSERC *(2005-present)*.
- NIH Diversity Program Consortium Publications and Presentations SubCommittee Co-Chair *(2015-2016)*.
- Steering Committee Member, Respiratory Section, American Physiological Society *(2010-2014)*.
- President, Society for Neuroscience, Alaska Chapter *(2010-2012)*.
- Division Representative, Arctic Division, AAAS *(2015)*.
- Assistant Director of the Alaska Statewide High School Science Symposium *(2010, 2012).*
- Peer reviewer, 14 separate scientific journals.

Awards

- Outstanding Teaching Award, College of Natural Sciences and Mathematics, UAF *(2007)*.
- Outstanding Teaching Award, College of Natural Sciences and Mathematics, UAF *(2010)*.
- Sven Ebbeson Award for Excellence in Neuroscience *(2010)*.

Patents & Publications

Patents

U.S. Provisional Patent Application "nematode Sieve" No. 62/521,066, filed June 16, 2017.

U.S. Non-Provisional Patent "Device for Obtaining Age/Size-Matched Nematodes and Use" No. 16/009,542, filed June 15, 2018.

Peer-Reviewed Publications

Google Scholar Profile https://scholar.google.com/citations?user=tms3km8AAAAJ&hl=en

51 publications 1988-2026; 1183 citations; h-index = 19; i10-index = 34

author key: (undergraduate student; graduate student; *postdoctoral trainee*)

51. Reeb TD and Taylor BE. 2025. A hydrogen hub blueprint for the California supply chain. Mineta Transportation Institute, CSU Transportation Consortium. https://doi.org/10.31979/mti.2025.2461
50. Reeb TD, Taylor BE, Reuter J. 2024. L&D on-ramps and off-ramps for the mobility workforce: A blueprint for knowledge ecosystem formation in the Fourth Industrial Revolution. Mineta Transportation Institute, CSU Transportation Consortium. https://doi.org/10.31979/mti.2024.2333
49. Reeb TD, Taylor BE, Swarat C. 2024. Talent pipelines for the Fourth Industrial Revolution: How California PaCE units can bridge critical KSA gaps. Research & Occasional Paper Series: *UC Berkeley: Center for Studies in Higher Education*. Retrieved from https://escholarship.org/uc/item/5hh3904k
48. ***Janes TA,* Rousseau JP, Fournier S, Kiernan EA**, Harris MB, Taylor BE, Kinkead R. 2019. Development of central respiratory control in anurans: The role of neurochemicals in the emergence of air-breathing and the hypoxic response. *Respir Physiol Neurobiol* 270, 103266 https://doi.org/10.1016/j.resp.2019.103266
47. **Maulik M, Mitra S**, **Basmayor AM**, **Lu B**, Taylor BE, Bult-Ito A. 2019. Genetic silencing of fatty acid desaturases modulates α-synuclein toxicity and neuronal loss in Parkinson-like models of *C elegans Frontiers in Aging Neuroscience* 11, 207

https://doi.org/10.3389/fnagi.2019.00207

46. **Reed MD**, Iceman KE, Harris MB, Taylor BE. 2019. Buccal rhythmogenesis and CO_2 sensitivity in *Lithobates catesbeianus* tadpole brainstems across metamorphosis. *Respir Physiol Neurobiol* 268, 103251 https://doi.org/10.1016/j.resp.2019.103251
45. **Maulik M**, **Mitra S**, **Sweeney M**, **Lu B**, Taylor BE, Bult-Ito A. 2019. Complex interaction of dietary fat and Alaskan bog blueberry supplementation influences manganese mediated neurotoxicity and behavioral impairments. *J Functional Foods* 53:306-317, https://doi.org/10.1016/j.jff.2018.12.028
44. **Reed MD**, ***Iceman KE***, Harris MB, Taylor BE. 2018. The rostral medulla of bullfrog tadpoles contains critical lung rhythmogenic and chemosensitive regions across metamorphosis. *Comp Biochem Physiol A 225*:7-15, https://doi.org/10.1016/j.cbpa.2018.05.024
43. **Hunter S**, **Maulik M**, **Scerbak C**, ***Vayndorf E***, Taylor BE. 2018. *Caenorhabditis* sieve: A low-tech instrument and methodology for sorting small multicellular organisms. *J Vis Exp* 137, e58014, http://dx.doi.org/10.3791/58014 https://www.jove.com/video/58014/caenorhabditis-sieve-low-tech-instrument-methodology-for-sorting
42. **Maulik M**, Mitra S, **Hunter S**, **Hunstiger M**, **Oliver SR**, Bult-Ito A, Taylor BE. 2018 Sir-2.1 mediated attenuation of α-synuclein expression by Alaskan bog blueberry polyphenols in a transgenic model of *Caenorhabditis elegans*. *Scientific Reports* 8, art. # 10216 https://doi.org/10.1038/s41598-018-26905-4
41. **Scerbak CR**, ***Vayndorf EM***, **Hernandez AM**, McGill CM, Taylor BE. 2018. Lowbush cranberry activates DAF-16/FOXO to promote increased lifespan and axon branching in aging posterior touch receptor neurons. *GeroScience* 40(2):151-162. https://doi.org/10.1007/s11357-018-0016-0
40. Taylor BE, Reynolds AJ, Etz KE, MacCalla NMG, Cotter PA, DeRuyter TL, Hueffer K. 2017. BUILDing BLaST: Promoting rural students' biomedical research careers using a culturally responsive, one health approach. *BMC Proceedings* 11(suppl 12):13. https://doi.org/10.1186/s12919-017-0092-7
39. **Maulik M**, **Mitra S**, Bult-Ito, A, Taylor BE, ***Vayndorf EM***. 2017. Behavioral phenotyping and pathological indicators of Parkinson's disease in *C elegans* models. *Frontiers in Genetics* 13 June 2017 https://doi.org/10.3389/fgene.2017.00077
38. **Scerbak CR**, ***Vayndorf E***, **Hernandez AM**, McGill CM, Taylor BE. 2016. Mechanosensory neuron aging: differential trajectories with lifespan-extending alaskan berry and fungal treatments in *Caenorhabditis elegans*. *Frontiers Aging Neurosci* 8,173 https://doi.org/10.1038/npjamd.2016.1
37. ***Vayndorf E***, **Scerbak CR**, **Hunter** SC, Neuswanger J, Toth M, Parker JA, Neri C, Driscoll M, Taylor BE. 2016. Morphological remodeling of *C elegans* neurons during aging is modified by compromised protein homeostasis. *Nature P. J. Aging Mech. Disease* 2: 16001. https://doi:10.1038/npjamd.2016.1
36. Hueffer K, Reynolds A, Taylor B. Subsistence Health as an approach to engage students in rural communities in biomedical research. One Health Newsletter 9:1: http://media.news.health.ufl.edu/misc/egh/One%20Health%20Newsletter/OHNL_Vol9_Issue1.pdf
35. Hoffman M, Taylor BE, Harris MB. 2016. Evolution of lung breathing from a lungless primitive vertebrate. *Respir Physiol Neurobiol* 224:11-16 https://doi.org/10.1016/j.resp.2015.09.016
34. **Johansen SL**, **Iceman KE**, Iceman CR, Taylor BE, Harris MB. 2015. Isoflurane causes concentration-dependent inhibition of medullary raphé 5-HT neurons *in situ*. *Auton. Neurosci.* 2015 193: 51-56. PMID: 26213357 https://doi:10.1016/j.autneu.2015.07.002
33. **Iceman KE**, Corcoran A, Taylor BE, Harris MB. 2014. CO_2-inhibited neurons in the medullary raphé are GABAergic. *Resp. Physiol. Neurobiol.* 203:28-34. https://doi:10.1016/j.resp.2014.07.016
32. **Scerbak CR**, ***Vayndorf E***, Parker A, Neri, C, Driscoll M, Taylor BE. 2014. Insulin signaling in the aging of healthy and proteotoxically stressed mechanosensory neurons. *Frontiers in Genetics* 5:212. https://doi.org/10.3389/fgene.2014.00212
31. **Mosher BP**, Taylor BE, Harris MB. 2014 Intermittent hypercapnia enhances CO_2 responsiveness and overcomes serotonergic dysfunction. *Resp. Physiol. Neurobiol.* 200:33-39. https://doi:10.1016/j.resp.2014.05.005
30. Taylor BE, **Brundage CM**, **McLane LH**. 2013. Chronic nicotine and ethanol exposure both disrupt central ventilatory responses to hypoxia in bullfrog tadpoles *Resp. Physiol. Neurobiol.* 187(3):234-243. https://doi.org/10.1016/j.resp.2013.04.004
29. Taylor BE, **Brundage CM**. 2013. Chronic, but not acute, ethanol exposure during development impairs central hypercapnic ventilatory drive in bullfrog tadpoles. *Resp. Physiol. Neurobiol.* 185:533-542. http://dx.doi.org/10.1016/j.resp.2012.11.006
28. **Brundage CM**, Taylor BE. 2010. Neuroplasticity of the central hypercapnic response: Teratogen-induced impairment and subsequent recovery during development. *Dev. Neurobiol.* 70:726-735. https://doi.org/10.1002/dneu.20806
27. **Brundage CM**, **Cartagena CM**, **Potter EA**, Taylor BE. 2010. Nicotine elicits a developmentally dependent depression in bullfrog neuroventilatory response to CO_2 *Respir. Physiol. Neurobiol.* 170:226-235. https://doi.org/10.1016/j.resp.2010.01.003
26. **Brundage CM**, **Nelson CA**, Taylor BE. 2010. Cholinergic sensitivity of the developing bullfrog (*Rana catesbeiana*) does not explain early vulnerability to chronic nicotine exposure. In: *Adv. Exp. Med. Biol*. 669:103-107. https://doi.org/10.1007/978-1-4419-5692-7_21
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24. **Davies BL**, **Brundage CM**, Harris MB, Taylor BE. 2009. Lung respiratory rhythm and pattern generation in the bullfrog: role of neurokinin-1 and μ-opioid receptors. *J. Comp. Physiol. B* 179:579-592. https://doi.org/10.1007/s00360-009-0339-3

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22. Taylor BE, **Croll AE**, **Drucker ML**, **Wilson AL**. 2008. Developmental exposure to ethanol or nicotine inhibits the hypercapnic ventilatory response in tadpoles. *Resp. Physiol. Neurobiol.* 160:83-90. https://doi.org/10.1016/j.resp.2007.08.011
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20. ***Taylor BE***, ***Harris MB***, Leiter JC, Gdovin MJ. 2003. Ontogeny of central CO_2 chemoreception: chemosensitivity in the ventral medulla of developing bullfrogs. *Am. J. Physiol. Regul. Integr. Comp. Physiol.* 285:R1461-1472. https://doi.org/10.1152/ajpregu.00256.2003
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18. ***Taylor BE***, ***Harris MB***, **Burk M**, **Smyth K**, Lukowiak K, Remmers JE. 2003. Nitric oxide mediates metabolism as well as respiratory and cardiac responses to hypoxia in the snail *Lymnaea stagnalis*. *J. Exp. Zool.* 295:37-46. https://doi.org/10.1002/jez.a.10174
17. ***Harris MB***, ***Wilson RJA***, **Vasilakos K**, ***Taylor BE***, Remmers JE. 2002. Central respiratory activity of the tadpole in vitro brain stem is modulated diversely by nitric oxide. *Am. J. Physiol.* 283:R417-428. https://doi.org/10.1152/ajpregu.00513.2001
16. ***Taylor BE***, **Smyth K**, Remmers JE, Lukowiak K. 2001. Metabolic consequences of hypoxic conditioning in *Lymnaea stagnalis*, pp 225-230. In: *Adv. Exp. Med. Biol.*: Frontiers in Modeling and Control of Breathing. https://doi.org/10.1007/978-1-4615-1375-9_35
15. ***Taylor BE***, K Lukowiak. 2000. The respiratory central pattern generator of *Lymnaea*: a model, measured and malleable. *Resp. Phys.* 122:197-207. https://doi.org/10.1016/S0034-5687(00)00159-6
14. Carefoot TH, **Taylor BE**, **Land S**. 2000. Use of isolated digestive-gland cells in the study of biochemical and physiological processes in gastropod molluscs. *Comp. Biochem. Physiol. A* 125:497-502. https://doi.org/10.1016/S1095-6433(00)00181-1
13. Carefoot TH, **Taylor BE**, **Donovan DA**. 1998. Seasonality in digestive-gland size and metabolism in relation to reproduction in abalone *Haliotis kamtschatkana*. *J. Shellfish Res*. 17:713-716.
12. Carefoot TH, **Harris MB**, **Taylor BE**, **Donovan DA**, Karentz D. 1998. Mycosporine-like amino acids: possible UV-protection on eggs of the sea hare *Aplysia dactylomela*. *Marine Biology* 130:389-396. https://doi.org/10.1007/s002270050259
11. Carefoot TH, **Taylor BE**, **Brett K**. 1998. A day in the life of an isopod: 24-hour time and energy allocations in the semiterrestrial isopod *Ligia pallasii*. *Israel J Ecology Evolution* 44:463-471. https://doi.org/10.1080/00212210.1998.10688969
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