Andrés G. Vidal-Gadea, Ph.D.
Associate Professor of Molecular Neuroethology
School of Biological Sciences, Illinois State University
Campus Box 4120, Normal, IL 61790-4120
E-mail: avidal@ilstu.edu
https://about.illinoisstate.edu/avidal/

RESEARCH INTERESTS

Behavior is the outcome of the interaction between an animal's environment and the needs associated with its survival. Animals must detect relevant environmental information, integrate it in the context of their dynamic physiological needs, select, and execute adaptive outputs (i.e. behavior). My laboratory studies the genetic and cellular basis of behavior, and neural and muscular disorders that impair its performance. Our research program focuses on three topics emphasizing different aspects contributing to the performance of behavior:

1) Sensation: Neuromolecular basis for magnetic field orientation in *C. elegans*.
2) Integration: Molecular basis of neuromodulation in the Marbled crayfish, *P. virginalis*.
3) Output: Pathophysiology of Duchenne muscular dystrophy in *C. elegans* and human cell lines.

To serve the community that supports our efforts we are actively engaged in science communication and outreach within and beyond the walls of our institution. We believe in leveraging funding and research opportunities to increase science awareness in our society, and to help form the next generation of scientists. To this end we provide numerous high school and undergraduate research internships and participate in other outreach activities.

POSITIONS

2020 –	Associate Professor of Molecular Neuroethology – Illinois State University	Normal, IL
2015 – 2019	Assistant Professor of Molecular Neuroethology – Illinois State University	Normal, IL
2009 – 2014	Postdoctoral Fellow – University of Texas at Austin *Studied the genetic and neural bases of adaptive behavior in C. elegans.*	Austin, TX
2008 – 2009	Postdoctoral Fellow – Southampton University *Studied the coding characteristics of sensory neurons in the legs of desert locusts.*	Southampton, UK
2003 – 2008	Teaching Assistant – Louisiana State University *Primarily responsible for teaching and running a vertebrate physiology lab.*	Baton Rouge, LA
1999 – 2003	Special Needs Assistant – Jura Ventures *Living assistant to adults with Duchenne muscular dystrophy, and individuals with autism.*	Victoria, BC, Canada

EDUCATION

2008	Ph.D. Biology - Louisiana State University *Dissertation: Comparative Aspects of the Control of Posture and Locomotion in the Spider Crab Libinia emarginata.*	Baton Rouge, LA
2003	B.Sc. Biology - University of Victoria	Victoria, BC, Canada

AWARDS

2021	**Million Dollar Club**, *Illinois State University*	Normal, IL
2020	**Researchers to Know**. *Illinois Science & Technology Coalition*	Chicago, IL
2019	**Research Initiative Award**, *Illinois State University*	Normal, IL
2018	**Outstanding STEM Professional Award**. *McLean County Chamber of Commerce*	McLean County, IL
2018	**Faculty Mentor Award**. *Louis Stokes Alliance for Minority Participation*	Normal, IL
2014	**Best Poster Award**. 18th Annual INS Symposium, *University of Texas at Austin*	Austin, TX
2012	**Poster presentation award**, *10th International Society for Neuroethology Congress*	College Park, MD
2012	**High Flyer Postdoc Award**, School of Biological Sciences, *University of Texas at Austin*	Austin, TX
2011	**Best Poster Award**, 18th International *C. elegans* Meeting, *UCLA*	Los Angeles, CA
2006	**Best Poster Award**, Biograds Annual Symposium, *LSU*	Baton Rouge, LA
2005	**Best Presentation Award**, Biograds Annual Symposium, *LSU*	Baton Rouge, LA
2002	**Blinks Summer Research Fellowship**, Friday Harbour Labs, *University of Washington*	Seattle, WA
1993	**International Baccalaureate Full Scholarship** to Lester B. Pearson College	Victoria, BC, Canada

FUNDING **Total: $2.322.047.00**

2023-2025	ISU (ARCS), Co-PI:	$200,000.00
2022-2025	NIH (NIAMS), PI:	$375,393.00
2018-2024	NSF (MCB), PI:	$638,606.00
2018-2021	NSF (MRI) Grant, Major User:	$650,939.00
2018	ISU (PFIG), PI:	$ 3,500.00
2018	ISU, College of Arts and Sciences Interdisciplinary Grant, PI:	$ 6,000.00
2016-2019	NIH (NIAMS) R15 Grant, PI:	$403,109.00
2016	ISU (NFIG), PI:	$ 3,500.00
1993	United World Colleges, Full Scholarship to Lester B. Pearson College	$ 41,000.00

FEATURED RESEARCH

2021	Wild Connection Podcast
2021	LatinxCan Podcast
2020	STEAM Podcast
2019	Medical Press
2018	The Scientist
2015	Nature Reviews; F1000; NPR; NBC; RAI (Italy); El País (Uruguay)
2012	NPR's Science Friday (Spanish version)
2011	Scientific American; KEYE TV (Austin CBS Affiliate)
2009	F1000 Biology "Must read" evaluation by Dr. Ron Calabrese for SFN Abstract.
2008	Science News

TEACHING

BSC204: Biological Investigations; **BSC220**: Molecular Genetics & Cell Biology Lab; **BSC283:** Animal Physiology; **BSC290**: Research in Biology; **BSC299**: Independent Honor Study; **BSC343**: Introduction to Neurobiology; **BSC353**: Biotechnology Lab; **BSC420**: Seminar in Neurobiology; **BSC450:** Sensory Neuroscience.

MENTORING

I presently mentor 10 students in my lab (6 graduate students, 3 undergraduate researchers, 1 high school intern). Since our lab's inception (01/2015), I personally mentored over 150 students (including 60 high school, 70 undergraduate, 14 graduate, and 2 postdoctoral students). Students are involved in every aspect of research and work alone or in small groups under my supervision. Students publish and present their findings at scientific meetings, producing over 100 scientific abstracts and earning numerous awards.

INTERNAL SERVICE

Associate Director of Undergraduate Studies. Chair undergraduate studies committee, coordinate undergraduate recruitment and admissions, coordinate student orientation, advisement and tutoring, coordinate recruitment events, oversee degree requirements, thesis options, maintain program integration, promote and develop funding sources to enhance undergraduate program. (2020 – present).

Scheduling Committee (member). Schedule courses for Biology students. (2017, 2023 – present).

Biosafety Committee (member). Develop, review, and updates guidelines describing standard procedures for the use of biohazards. Protect the integrity of experiment being conducted at the University. (2022 – present)

Mechanical Engineering faculty search. Search for new assistant professors of mechanical Engineering (2023 – present).

Immunology faculty search (chair). Chair search for new assistant professor of immunology. (2023 – present).

Chair of Mechanical Engineer search (chair). Chaired the search for the director of new Mechanical Engineering Department. (2023).

School Faculty Status Committee (SFSC). Elected (twice) to serve in committee dealing with annual performance evaluations, tenure and promotion, salary increases, policy and procedures, etc.

College of Arts and Science Council. Elected to board providing advise to the dean of Arts and Science in matters including curriculum, selection of distinguished lecturers/professors, selection of departmental chairpersons, developing and reviewing university guidelines, etc.

Faculty Diversity Recruitment and Retention Committee. Developed and provided a critical examination of ISU's Education Diversity Enhancement Program, conducted literature review and report on best practices recruiting and retaining diverse faculty, identified actionable strategies for recruiting Black, Indigenous, People of Color (BIPOC) faculty, etc.

Office of Student Research Board. Founding board member of a campus-wide office for the advocation, facilitation, and promotion of undergraduate and graduate student research, scholarly creativity, and innovation.

Center for Mathematics, Science, and Technology Advisory Board. Provide feedback and guidance to CeMAST strategic plan and performance.

OUTREACH

High school internships. In partnership with Normal Community High School our lab provides (graded) semester-long internships for 4 students where students run independent projects and present their work (**2018** – present).

Illinois Summer Research Academy. Our lab runs a week-long summer research boot camp for 10-16 high school students providing them with unique research experience and career planning and mentorship (2016 - present).

High school volunteers. Our lab also welcomes independent student volunteers throughout the year to perform research and take part in all parts of our research program (2015 – present).

K6 Programs. Our lab regularly participates in outreach activities in collaboration with College Mentors for Kids (1st through 6th graders), various Boy Scout troops, and by attending local Day-Cares and School science fairs.

ACADEMIC REVIEWER

Grant reviewer:

NSF; DoD; NIH; BBSR (UK); ISF (Israel); and ANR (France).

Journal reviewer:

Current Biology; World J. Surgical Oncology; Earth-Science Reviews; J Neuroscience Methods; eNeuro; Current Opinion in Neurobiology; Neuroscience Letters; *Biology Open*; *Environmental Pollution*; *Scientific Reports* (Nature); *Genes, Brain and Behavior*; *PLOS Genetics*; *PLOS One*; *PLOS Computational Biology*; *Heliyon*; *Human Molecular Genetics; J Neuroscience* (validated list available at: https://www.webofscience.com/wos/author/record/U-2225-2019)

SOCIETIES

International Society for Neuroethology
Society for Neuroscience
Genetic Society of America
Society for Advancement of Chicanos/Hispanics and Native Americans in Science (SACNAS)
Sociedad de Biofísicos Latinos (SOBLA)

INVITED TALKS

"Linking loss of dystrophin to the pathophysiology of Duchenne muscular dystrophy". Department of Pharmacology and Toxicology, Michigan State University, **MI**, **2021**.

"Modelagem de distúrbios neuromusculares usando *Caenorhabditis elegans*". Second Pernambucan *C. elegans* Meeting, Recife, Pernambuco, **Brazil**, **2021**.

"Pathophysiology of Duchenne's muscular dystrophy". Baylor University, Wako, **TX**, **2021**.

"Nematodes and their use in research". New England College, Henniker, **NH**, **2021**.

"Using the nematode *C. elegans* to model Duchenne muscular dystrophy". Illinois Science and Technology Coalition Annual Meeting. Chicago, **IL**, **2020**.

"Using the burrowing behavior of *C. elegans* to study the pathophysiology of Duchenne muscular dystrophy". Second Latin American Worm Meeting, Rosario, **Argentina**, **2020**.

"Harnessing the natural behaviors of the nematode *C. elegans* to model neural and muscular disorders". University of Wisconsin Milwaukee, Milwaukee, **WI**, **2020**.

"Using worms to model human disorders". Illinois State University, Normal, **IL**, **2020**.

"Animal magnetoreception: How worms harness the earth's magnetic field". University of Illinois, Urbana, **IL**, **2019**.

"Of magnets and muscles: using worms to study the genetic and cellular underpinnings of natural behavior and disease". Tenure & Promotion Talk. Illinois State University, Normal, **IL**, **2019**.

"Neuroethology of magnetic field orientation by a nematode worm". Case Western Reserve University, Cleveland, **OH**, **2019**.

"Neuroethology with the worm: insights into magnetic field navigation and muscular dystrophy." L'Université du Québec à Montréal, QC, **Canada**, **2019**.

"Detection and orientation to magnetic fields by a multimodal sensory neuron." Gordon Research Conference, Neuroethology: Behavior, Evolution, and Neurobiology. Multimodal Strategies for Behavioral Control: Molecules, Neurons, Circuits and Behavior, **VT**, **2019**.

"Investigating the biological basis for magnetic field detection". Texas Tech University Health Sciences Center, Lubbock, **TX**, **2018**.

"Behavioral, cellular, and neural bases of magnetic orientation in the nematode *C. elegans*." Murray State University, **KY**, **2018**.

"Using the nematode *C. elegans* to study the behavioral, cellular, and molecular basis of magnetic field detection and orientation" 1st Latin American Worm Meeting, Montevideo, **Uruguay**, **2017**.

"Genetic and behavioral basis of magnetic orientation in the nematode *C. elegans*" 114th International Titisee Conference: Molecules and mechanisms of magneto, thermo, and mechano sensation. Titisee, Black Forest, **Germany**, **2016**.

"Detection and orientation to Earth's magnetic field by the nematode *C. elegans*" II Meeting of Neuroethology in the Southern Cone, Montevideo, **Uruguay**, **2016**.

"Investigation of the neural and molecular basis of magnetic orientation in the nematode *C. elegans*" Albert Einstein College of Medicine, New York, **NY**, **2015**.

"Molecular and neuronal basis of magnetic field detection" University of Illinois at Chicago, Rockford, **IL**, **2015**.

"Geographical tuning in magnetotactic response across *C. elegans* wild-type isolates" 20th International *C. elegans* Meeting, UCLA, Los Angeles, **CA**, **2015**.

"Magnetic orientation in *C. elegans* is mediated by a pair of magnetosensitive neurons" Society for Integrative and Comparative Biology Annual Meeting. Austin, **TX**, **2014**.

"Dopamine and serotonin are responsible for locomotor gait transitions in *C. elegans*" Society for Integrative and Comparative Biology Annual Meeting. Austin, **TX**, **2014**.

"Magnetic orientation in worms: behavior, neurons, and molecules" Brain, Behavior and Evolution Seminar. UT Austin, **TX**, **2013**.

"Biogenic amines mediate the transition between motor gaits" Brain, Behavior and Evolution Lecture. UT Austin, **TX**, **2013**.

"Magnetotaxis in *C. elegans*" 19th International *C. elegans* Meeting. UCLA, Los Angeles, **CA**, **2013** (Plenary Talk).

"Detection and orientation to Earth's magnetic field by the nematode *C. elegans*" Department of Biology, Louisiana State University, Baton Rouge, **LA**, **2013**.

"C. elegans selects distinct crawling and swimming gaits via dopamine and serotonin" 18th International *C. elegans* Meeting, UCLA, Los Angeles, **CA**, **2011**.

PUBLICATIONS

*Undergraduate student; **High school student; §contributed equally, red denotes ISU student

28. Marchiafava D, Jazireian P, Hughes-Wiles, Fazyl A, Stein W, Engelke M, **Vidal-Gadea AG**. **2023**. Two independent mechanisms are responsible for increased cytosolic calcium in developing dystrophic muscles. (***in prep***).
27. Awe T, Aalimah A, Niha S, Kelly L**, Adams J, Stein W, **Vidal-Gadea AG**. **2023**. The AMsh glia of *C. elegans* modulates the duration of touch-induced escape responses. bioRxiv. 2023:2023-12. DOI: https://doi.org/10.1101/2023.12.13.571291 (***revising for PNAS***).
26. Komandur A**§, Fazyl A§, Stein W, **Vidal-Gadea AG**. **2023**. The mechanoreceptor *pezo-1* is required for normal crawling locomotion in the nematode *C. elegans*. microPublication Biology. 10.17912/micropub.biology.001085. PMC ID: PMC10765246.
25. Stein M, Torres G, Giménez L, Espinoso-Novo, Geißel JP, **Vidal-Gadea AG**, Harzsch S. **2023**. Thermal acclimation and habitat-dependent differences in temperature robustness of a crustacean motor circuit. Frontiers in Cellular Neuroscience 17 DOI: https://doi.org/10.3389/fncel.2023.1263591.
24. Mobile Z, Follmann R, **Vidal-Gadea AG**, Rosa E. **2022**. Quantitative description of neuronal calcium dynamics in *C. elegans*' thermoreception. BioSystems. DOI: 10.1016/j.biosystems.2022.104814
23. Stein W, DeMaegd M, Benson A, Roy R, **Vidal-Gadea AG**. **2022**. Combining old and new tricks: the study of genes, neurons, and behavior in crayfish. Frontiers in Physiology DOI: 10.3389/fphys.2022.947598
22. Hughes K, **Vidal-Gadea AG**. **2022**. Methods for modulating and measuring neuromuscular exertion in *C. elegans*. in *C. elegans*: Methods and Applications. 3rd edition; Haspel G, Hart AC, editors. Pub. Springer/Nature; New York. DOI: 10.1007/978-1-0716-2180-6_19.
21. Stein W, DeMaegd ML, Braun LY, **Vidal-Gadea AG**, Harris AL, Städele C. **2022**. The dynamic range of voltage-dependent gap junction signaling is maintained by Ih-induced membrane potential depolarization. J Neurophys DOI:

https://doi.org/10.1101/2021.12.16.472972

20. Hughes K, Shah A*, Bai X, Adams J, Bauer R, Jackson J*, Harris E*, Ficca A**, Freebairn P, Mohammed S*, Fernández EM, Bainbridge C, Brocco MA, Stein W, **Vidal-Gadea AG**. **2021**. Distinct mechanoreceptor *pezo-1* isoforms modulate food intake in the nematode *Caenorhabditis elegans*. Genes, Genomes, Genetics (DOI: 10.1093/g3journal/jkab429).
19. Fernández EM, Cutraro YB, Adams J, Monteleone MC, Hughes K, Frasch AC, **Vidal-Gadea AG**, Brocco MA. **2021**. Neuronal membrane glycoprotein (*nmgp-1*) gene deficiency affects chemosensation-related behaviors, dauer exit and egg-laying in *Caenorhabditis elegans*. J. Neurochem. DOI: 10.1111/jnc.15543.
18. Leonard N**, **Vidal-Gadea AG. 2021**. Affordable *Caenorhabditis elegans* tracking system for classroom use. MicroPublications Biology. (DOI: https://doi.org/10.17912/micropub.biology.000377).
17. Stein W, Talasu S*, **Vidal-Gadea AG**, DeMaegd. **2020**. Physiologists turned geneticists: Identifying transcripts and genes for neuronal function in the Marbled Crayfish, *Procambarus virginalis*. JUNE. 17(1):1-15.
16. Bainbridge C, Clites B, Caldart CS, Palacios B, Rollins K, Golombek DA, Pierce JT, **Vidal-Gadea AG**. **2020**. Factors that influence magnetic orientation in *C. elegans*. JCPA. DOI: https://doi.org/10.1007/s00359-019-01364-y
15. Hughes K, Rodriguez A, Flatt K, Sneha R, Schuler A*, Rodemoyer B*, Veerappan V, Cuciarone K*, Kullman A**, Lim C**, Gutta N**, Vemuri S*, Andriulis V*, Niswonger D*, Barickman L*, Stein W, Singhvi A, Schroeder N, **Vidal-Gadea AG**. **2019**. Physical exertion exacerbates decline in the musculature of an animal model of Duchenne muscular dystrophy. PNAS. DOI: https://doi.org/10.1073/pnas.1811379116
14. Gährs C, **Vidal-Gadea AG**. **2019**. "Locomotion." in *Encyclopedia of Animal Cognition and Behavior*, Eds. Vonk J, Shackelford T. Springer, ISBN: 978-3-319-55066-4.
13. **Vidal-Gadea AG**, Bainbridge C, Clites B, Palacios B, Bakhtiari L, Gordon V, Pierce J. **2018**. Response to Comment on "Magnetosensitive neurons mediate geomagnetic orientation in *Caenorhabditis elegans*". eLife. eLife **2018**;7:e31414 DOI: 10.7554/eLife.31414.
12. Bainbridge C, Rodriguez A, Schuler A*, Cisneros M*, **Vidal-Gadea AG**. **2016**. Magnetic orientation in *C. elegans* relies on the integrity of the villi of the AFD magnetosensory neurons. *J Physiology Paris* 110:76-82. DOI: 10.1016/j.jphysparis.2016.12.002
11. Bainbridge C, Schuler A*, **Vidal-Gadea AG**. **2016**. Method for the assessment of neuromuscular integrity and burrowing choice in vermiform animals. *J Neurosci Methods* 264:40-46. DOI: 10.1016/j.jneumeth.2016.02.023
10. **Vidal-Gadea AG**, Ward K*, Beron C*, Ghorashian N, Gokce S, Russell J, Truong N**, Parikh A*, Gadea OE, Ben-Yakar A, Pierce-Shimomura JT. **2015**. Magnetosensitive neurons mediate geomagnetic orientation in *Caenorhabditis elegans*. *eLife*. DOI: 10.7554/eLife.07493
9. Beron C*[§], **Vidal-Gadea AG**[§], Cohen J, Parikh A*, Hwang G*, Pierce-Shimomura JT. **2015.** The burrowing behaviour of the nematode *Caenorhabditis elegans*: A new assay for the study of neuromuscular disorders *Genes, Brain and Behavior* 14(4):357-368. DOI: 10.1111/gbb.12217

Published since joining Illinois State University

8. Russell J, **Vidal-Gadea AG**, Makay A, Laham R, Pierce-Shimomura JT. **2014**. Humidity sensation requires both mechanosensory and thermosensory pathways in *C. elegans*. *PNAS*, 111(22):8269-8274.
7. **Vidal-Gadea AG,** Belanger JH. **2013**. The evolutionary transition to sideway-walking gaits in brachyurans was accompanied by a reduction in the number of motor neurons innervating proximal leg musculature. *Arthropod Structure and Development*. 42(6):443-454.
6. **Vidal-Gadea AG,** Pierce-Shimomura JT. **2012**. Conserved role of dopamine in the modulation of behavior. *Journal of Communicative and Integrative Biology*, 5(5):1-8.
5. **Vidal-Gadea AG,** Davis S, Becker L*, Pierce-Shimomura JT. **2012**. Coordination of behavioral hierarchies during environmental transitions in *Caenorhabditis elegans. Worm*, 1(1):4-10.
4. **Vidal-Gadea AG,** Topper S, Young L, Crisp A, Kressin L*, Elbel E*, Maples T*, Brauner M, Erbguth K, Axelrod A, Gottschalk A, Siegel D, and Pierce-Shimomura JT. **2011**. *Caenorhabditis elegans* selects distinct crawling and swimming gaits via dopamine and serotonin. *PNAS*, 108(42):17504-17509. *[Featured in KEYE TV, CBS affiliate (11/10/11); e! Science News (11/10/11); Neuroscience News (11/10/11); Medical Express (11/10/11); Science Daily (11/12/11); Dementia News (11/12/11); Scientific American's The Scicurious Blog (12/05/11)]*
3. **Vidal-Gadea AG,** Xingjian J, Simpson D, Kondoh Y, Allen R, Newland PL. **2010**. Coding characteristics of spiking local interneurons during imposed limb movements in the locust. *J Neurophysiology*, 103:603-615.
2. **Vidal-Gadea AG,** Belanger JH. **2009**. Muscular anatomy of the legs of the forward walking crab, *Libinia emarginata* (Decapoda, Brachyura, Majoidea). *Arthropod Structure and Development* 38(3):179-194.
1. **Vidal-Gadea AG,** Rinehart MD, Belanger JH. **2008**. Skeletal adaptations for sideways and forwards walking by three decapod species. *Arthropod Structure and Development* 37(2):95-108. *[Featured in Science News Magazine, Vol.173(13), pp.206; Listed in Science Direct Top25 Hottest Arthropod Structure and Development Articles (#3), January-March 2008.]*

POSTER PRESENTATIONS

*Undergraduate student; **High school student; §contributed equally, red denotes ISU student

123. Akinosho A, **Vidal-Gadea AG. 2023**. Investigation of the mechanisms of magnetic transduction by *C. elegans*. Phi Sigma Symposium. Illinois State University, Normal, IL.
122. Roy R, **Vidal-Gadea AG**, Stein W. **2023**. Identification of gap junction genes involved in the tail-flip escape circuit of marbled crayfish. Phi Sigma Symposium. Illinois State University, Normal, IL.
121. Aidoo E*, **Vidal-Gadea AG. 2023**. Determining Molecular Targets of Corticosteroid Mediated Improvement of Dystrophic Muscles. Graduate School Symposium. Illinois State University, Normal, IL.
120. Awe T, **Vidal-Gadea AG. 2023**. The AMsh glia of *C. elegans* modulates touch-induced escape responses. Society for Neuroscience Meeting. Washington D.C.
119. Fazyl A, **Vidal-Gadea AG. 2023**. Co-expression of multiple dystrophin isoforms in striated muscle. Advances in Skeletal Muscle Biology Conference. University of Florida, Gainesville, FL.
118. Niha S, Fazyl A, **Vidal-Gadea AG. 2023**. Function of dystrophin isoforms in the nervous system. Phi Sigma Symposium. Illinois State University, Normal, IL.
117. Akinosho A, **Vidal-Gadea AG. 2023**. Investigation of the mechanisms of magnetic transduction by *C. elegans*. SACNAS NDISTEM Conference, Portland, OR.
116. Marchiafava D, Engelke M, **Vidal-Gadea AG. 2023**. Investigating calcium dynamics in early dystrophic human myocytes. Advances in Skeletal Muscle Biology Conference. University of Florida, Gainesville, FL.
115. Jazireian P, **Vidal-Gadea AG. 2023**. Pathophysiological changes during myogenesis in dystrophic muscles. Advances in Skeletal Muscle Biology Conference. University of Florida, Gainesville, FL.
114. Aidoo E*, **Vidal-Gadea AG. 2023**. Determining Molecular Targets of Corticosteroid Mediated Improvement of Dystrophic Muscles. NexSTEM Symposium. Heartland Community College, Normal, IL.
113. Awe T, **Vidal-Gadea AG. 2023**. The Molecular Mechanism of AMsh Glia Response to Touch in *C. elegans*. Midwest *C. elegans* Meeting. Wayne State University, Detroit, MI.
112. Akinosho A, **Vidal-Gadea AG. 2023**. Investigation of the mechanisms of magnetic transduction by *C. elegans*. Graduate School Symposium. Illinois State University, Normal, IL.
111. Fazyl A, **Vidal-Gadea AG. 2023**. Distinct functional responsibilities of various dystrophin isoforms in striated muscle. Phi Sigma Symposium. Illinois State University, Normal, IL.
110. Aidoo E*, **Vidal-Gadea AG. 2023**. Determining Molecular Targets of Corticosteroid Mediated Improvement of Dystrophic Muscles. Midwest *C. elegans* Meeting. Wayne State University, Detroit, MI.
109. Niha S, **Vidal-Gadea AG. 2023**. Neuronal expression of dystrophin and its role in regulating behavior in *C. elegans*. Fourth Chicago Area Worm Meeting, University of Illinois, Chicago, IL.
108. Marchiafava D, Engelke M, **Vidal-Gadea AG. 2023**. Investigating calcium dynamics in early dystrophic human myocytes. Phi Sigma Symposium. Illinois State University, Normal, IL.
107. Jazireian P, **Vidal-Gadea AG. 2023**. Physiological Alterations in Muscles During Myogenesis in Dystrophic Conditions. Midwest *C. elegans* Meeting. Wayne State University, Detroit, MI.
106. Awe T, **Vidal-Gadea AG. 2023**. *Caenorhabditis elegans*' amphid sheath glia modulates touch-induced escape responses. Phi Sigma Symposium. Illinois State University, Normal, IL.
105. Fazyl A, **Vidal-Gadea AG. 2023**. Uncovering the different functional roles of dystrophin isoforms in striated muscle. Graduate School Symposium. Illinois State University, Normal, IL.
104. Niha S, **Vidal-Gadea AG. 2023**. Function of dystrophin isoforms in the nervous system. Graduate School Symposium. Illinois State University, Normal, IL.
103. Marchiafava D, Engelke M, **Vidal-Gadea AG. 2023**. Pathophysiological changes during myogenesis in dystrophic muscles. American Society for Cell Biology Meeting. Boston, MA.
102. Jazireian P, **Vidal-Gadea AG. 2023**. Pathophysiological alterations in dystrophic muscles during myogenesis. Graduate School Symposium. Illinois State University, Normal, IL.
101. Awe T, **Vidal-Gadea AG. 2023**. The AMsh glia modulate touch-induced escape responses in *C. elegans*. Graduate School Symposium. Illinois State University, Normal, IL.
100. Fazyl A, **Vidal-Gadea AG. 2023**. Dystrophin isoform co-expression patterns and functional roles in striated muscles. Fourth Chicago Area Worm Meeting, University of Illinois, Chicago, IL.
99. Niha S, **Vidal-Gadea AG. 2023**. Function of dystrophin isoforms in the nervous system. Midwest *C. elegans* Meeting. Wayne State University, Detroit, MI.
98. Fazyl A, **Vidal-Gadea AG. 2023**. Investigating the expression and function of dystrophin isoforms in musculature. Midwest *C. elegans* Meeting. Wayne State University, Detroit, MI.
97. Aidoo E*, **Vidal-Gadea AG. 2022.** Determining Molecular Targets of Corticosteroid Mediated Improvement of Dystrophic Muscles. NexSTEM Symposium. Heartland Community College, Normal, IL.

96. Sawilchik E*, Hughes-Wiles, **Vidal-Gadea AG**. **2022**. Neuronal reduction in long *pezo-1* isoform expression leads to food accumulation in the anterior intestinal tract of *C. elegans*. Phi Sigma Symposium. Illinois State University, Normal, IL.
95. Aidoo E*, Hughes-Wiles KJ, **Vidal-Gadea AG**. **2022**. Molecular mechanisms responsible for the corticosteroid-mediated improvement of dystrophic muscles. Phi Sigma Symposium. Illinois State University, Normal, IL.
94. Roy R, Stein W, **Vidal-Gadea AG**. **2022**. Identification of gap junction genes involved in the tail-flip escape circuit of marbled crayfish. Phi Sigma Symposium. Illinois State University, Normal, IL.
93. Hughes-Wiles KJ, Shah A*, Bai X, Adams J, Bauer R, Jackson J*, Bainbridge C, Harris E*, Ficca A**, Freebairn P, Mohammed S*, Fernandez EM, Brocco MA, Stein W, **Vidal-Gadea AG**. **2022**. Long isoforms of the mechanoreceptor *pezo-1* are involved in feeding in *C. elegans*. Phi Sigma Symposium. Illinois State University, Normal, IL.
92. Awe T, Adams J, Oblinger-Hammond D*, **Vidal-Gadea AG**. **2022**. *mec-12* is required for the sensory response to touch of *Caenorhabditis elegans* amphid sheath glia. Phi Sigma Symposium. Illinois State University, Normal, IL.
91. Awe T, Adams J, Oblinger-Hammond D*, **Vidal-Gadea AG**. **2022**. Sensory response to touch of *Caenorhabditis elegans* Amphid Sheath is dependent on the expression of *mec-12* gene. Graduate School Symposium. Illinois State University, Normal, IL.
90. Aidoo E*, Hughes-Wiles KJ, **Vidal-Gadea AG**. **2022**. Identifying molecular targets of steroids on Duchenne muscular dystrophy patients. NexSTEM Alliance Symposium. Heartland Community College, Normal, IL.
89. Zack T*, Hughes-Wiles KJ, **Vidal-Gadea AG**. **2022**. Muscular dystrophy: the connection between humans and *C. elegans*. NexSTEM Alliance Symposium. Heartland Community College, Normal, IL.
88. Awe T, **Vidal-Gadea AG**. **2022**. Alpha-tubulin MEC-12 and TRPV channel OSM-9 are required for amphid sheath's response to nose-touch in *Caenorhabditis elegans*. SACNAS NDISTEM Conference, San Juan, Puerto Rico.
87. Awe T, Bainbridge C, Freebairn P, **Vidal-Gadea AG**. **2021**. Resolving between two models of magnetic particle-based mechanisms of magnet stimulus transduction in *C. elegans*. Chicago Area Worm Meeting, Chicago, IL.
86. Hughes KJ, Rivera B, Killian E*, Carlock P**, Ahmed H**, Leonard N**, **Vidal-Gadea AG**. **2021**. Understanding the early pathophysiology of Duchenne muscular dystrophy in a nematode model. Chicago Area Worm Meeting, Chicago, IL.
85. Rivera B, Adams J, Hughes KJ, Sawilchick E*, Aidoo E*, Gantert J**, Carlock P**, **Vidal-Gadea AG**. **2021**. Generation of in vivo humanized nematode and in vitro human myocyte culture systems for the study of muscular dystrophy. Chicago Area Worm Meeting, Chicago, IL.
84. Fernandez EM, Cutraro Y, Monteleone M, Hughes KJ, **Vidal-Gadea AG**, Brocco M. **2021**. Investigating the neuronal membrane glycoprotein 1 role using Caenorhabditis elegans Chicago Area Worm Meeting, Chicago, IL.
83. Awe T, Bainbridge C, Freebairn P, **Vidal-Gadea AG**. **2021**. Investigating a potential magnetocaloric mechanism for magnetic field transduction by *C. elegans*. Society for Neuroscience, Chicago, IL.
82. Fernandez EM, Cutraro Y, Adams J, Monteleone M, Hughes KJ, **Vidal-Gadea AG**, Brocco M. **2021**. *C. elegans* as tool to study chronic stress effects. Society for Neuroscience, Chicago, IL.
81. Hughes KJ, Shah A*, Bai X, Adams J, Bauer R, Jackson J*, Bainbridge C, Harris E*, Ficca A**, Freebairn P, Mohammed S*, Fernandez EM, Brocco MA, Stein W, **Vidal-Gadea AG**. **2021**. As. Society for Neuroscience, Chicago, IL.
80. Fernandez EM, Cutraro Y, Adams J, Monteleone M, Hughes KJ, **Vidal-Gadea AG**, Brocco M. **2021**. *C. elegans* as tool to study chronic stress effects. Society for Neuroscience, Chicago, IL.
79. Hughes KJ, Rodriguez A, Flatt KM, Ray S, Schuler A*, Rodemoyer B*, Veerappan V, Cuciarone K*, Kullman A**, Lim C**, Gutta N**, Vemuri S*, Andriulis V*, Niswonger D*, Barickman L*, Stein W, Singhvi A, Schroeder NE, **Vidal-Gadea AG**. **2020**. Muscular exertion is detrimental to viability in a nematode model of Duchenne muscular dystrophy. Chicago Area Worm Meeting, Chicago, IL.
78. Owoyemi T*, Owoyemi K*, **Vidal-Gadea AG**. **2019**. High throughput analysis of magnetic orientation using the nematode *C. elegans*. Chicago Area Worm Meeting, Chicago, IL.
77. Gährs C, Stein W, **Vidal-Gadea AG**. **2019**. Characterization of serotonin receptor expression in the marbled crayfish stomatogastric ganglion. Graduate Research Symposium, Illinois State University, Normal, IL.
76. Ahmed H**, Hughes KJ, **Vidal-Gadea AG**. **2019**. Calcium dysregulation in a *C. elegans* model of Duchenne Muscular Dystrophy. Chicago Area Worm Meeting, Chicago, IL.
75. **Vidal-Gadea AG**, Gährs C, Staedele C, Coutinho V, Lyko F, Stein W. **2019**. Developing the marbled crayfish as a novel genetic model system for the study of neural network dynamics. New Genetic Tools for Non-Model Organisms, Janelia Research Campus, Ashburn, VA.
74. Hughes KJ, Rodriguez A, Flatt KM, Ray S, Schuler A*, Rodemoyer B*, Veerappan V, Cuciarone K*, Kullman A**, Lim C**, Gutta N**, Vemuri S*, Andriulis V*, Niswonger D*, Barickman L*, Stein W, Singhvi A, Schroeder NE,

Vidal-Gadea AG. **2019**. Muscular exertion exacerbates decline in an animal model of Duchenne muscular dystrophy. MDA Clinical and Scientific Conference, Orlando, FL.

73. Gährs C, Stein W, **Vidal-Gadea AG**. **2019**. Characterization of serotonin receptors in the pyloric circuit of the stomatogastric ganglion. 20th Annual Phi Sigma Research Symposium, Illinois State University, Normal, IL.
72. Hughes KJ, Rodriguez A, Flatt KM, Ray S, Schuler A*, Rodemoyer B*, Veerappan V, Cuciarone K*, Kullman A**, Lim C**, Gutta N**, Vemuri S*, Andriulis V*, Niswonger D*, Barickman L*, Stein W, Singhvi A, Schroeder NE, **Vidal-Gadea AG**. **2019**. Physical exertion in a nematode model of Duchenne muscular dystrophy exacerbates degeneration. Graduate Research Symposium, Normal, IL.
71. Benefield Z*, Willis B*, Fritz A*, Barickman L*, **Vidal-Gadea AG**. **2018**. Effects of Martian physics on terrestrial organisms. Chicago Area Worm Meeting, Chicago, IL.
70. Hughes K, Rodriguez AM, Tragesser K*, Schweickert J*, Kullman A**, **Vidal-Gadea AG**. **2018**. *C. elegans* as a Neurological Model for Duchenne Muscular Dystrophy. Chicago Area Worm Meeting, Chicago, IL.
69. Owoyemi T*, Owoyemi K*, Paluzzi B*, Bainbridge C, Hall D, **Vidal-Gadea AG**. **2018**. The search for magnetic particles in *C. elegans*. Illinois LSAMP Symposium, Lisle, IL.
68. Gährs C, Benson A, Stein W, **Vidal-Gadea AG**. **2018**. Transgenic crustaceans: Adaptation of modern molecular technology to the study of neural function in decapods. Genes, Brain, & Behavior Meeting, Rochester, MN.
67. Benson A, Gährs C, **Vidal-Gadea AG**, Stein W. **2018**. Behavioral consequences of RNAi-mediated suppression of electrical coupling in Marbled crayfish. Graduate Research Symposium, Normal, IL.
66. Benefield Z*, Willis B*, **Vidal-Gadea AG**. **2018**. Effects of the Mars magnetic field on survival rates in *C. elegans*. McLean County STEM Gala, Normal, IL.
65. Lim C**, Singaraju S**, Malavia M**, Rodriguez AM, **Vidal-Gadea AG**. **2018**. Swimming delays loss of mobility in animals modeling Duchenne muscular dystrophy. McLean County STEM Gala, Normal, IL.
64. Kullman A**, Gutta N**, Sathyamurthy L**, Rodriguez AM, **Vidal-Gadea AG**. **2018**. The effect of varying the level of exercise on animals modeling muscular dystrophy. McLean County STEM Gala, Normal, IL.
63. Bainbridge C, McDonald J*, Benefield Z*, Barickman L*, Stein W, **Vidal-Gadea AG. 2018**. Optimization of behavioral search strategies to cues of distinct physical natures. Genes, Brain, & Behavior Meeting, Rochester, MN.
62. Risi G, Ausmus E*, Salinas G, **Vidal-Gadea AG**. **2018**. Development of a novel assay to identify genes involved in host infection by parasitic nematodes. Chicago Area Worm Meeting, Chicago, IL.
61. Owoyemi T*, Owoyemi K*, McDonald J*, Barickman L*, **Vidal-Gadea AG**. **2018**. The search for magnetic particles in *C. elegans*. Chicago Area Worm Meeting, Chicago, IL.
60. Villarreal M*, Goel S*, Seitz N*, Vidal-Gadea A, Edwards K. **2018**. Characterizing dystrophin's organization and functional network in Drosophila egg chamber development. Society for Developmental Biology Meeting, Portland OR
59. Gährs C, Benson A, Stein W, **Vidal-Gadea AG**. **2018**. Construction of molecular tools for the study of gene and neural function in Decapods. Graduate Research Symposium, Normal, IL.
58. Bainbridge C, Caldart C, Clites B, Palacios B, Bakhtiari L, Stein W, Golombek A, Pierce J, **Vidal-Gadea AG**. **2018**. Investigating internal state driven decision-making using *C. elegans* magnetic orientation. Graduate Symposium, Normal IL.
57. Hughes K, Ahlers S*, Arteman C*, Burdette H*, Hanrahan D*, Kurczewski J*, Malinski J*, Melvin R*, Mota J*, Niswonger D*, Olszowy P*, Omotunwashe S*, Packard C*, Penza M*, Perry R*, Robledo S*, Shawd K*, Smith T*, Webb T*, Westbrook M*, Winter H*, **Vidal-Gadea AG**. **2018** Using *C. elegans* to teach the genetic basis of disease and behavior. Chicago Area Worm Meeting, Chicago, IL.
56. Benson A, Gährs C, **Vidal-Gadea AG**, Stein W. **2018**. Behavioral effects of RNAi-mediated silencing of gap junction proteins in Marbled crayfish. Genes, Brain, & Behavior Meeting, Rochester, MN.
55. Jackson J*, Patel P*, Ahssan U*, **Vidal-Gadea AG**. **2018**. The role of the nematode homolog of the mechanoreceptor PIEZO2 (*pezo-1*) in proprioception. Illinois LSAMP Symposium, Lisle, IL.
54. Burrell N*, Ashford M, Collins M*, Rasmussen S*, Khalil M*, **Vidal-Gadea AG**. **2018**. Construction of RNA interference plasmids to silence isoforms of *herc-1* in *C. elegans* to investigate Angelman Syndrome. Illinois LSAMP Symposium, Lisle, IL.
53. Risi G, Ausmus E*, Salinas G, **Vidal-Gadea AG**. **2018**. Development of a novel assay to identify genes involved in host infection by parasitic nematodes. Genes, Brain, & Behavior Meeting, Rochester, MN.
52. Tragesser K*, Rodriguez AM, **Vidal-Gadea AG**. **2017**. Modeling the Neurological Effects of Duchenne Muscular Dystrophy. BSSA Symposium, Normal, IL.
51. Sutter B*, **Vidal-Gadea AG. 2017**. Role of mechanoreceptors in the production of rhythmic locomotion. BSSA Symposium, Normal, IL.

50. Bainbridge C, McDonald J*, Benefield Z*, Padia S*, Barickman L*, Jackson J*, Hall D, **Vidal-Gadea AG. 2017**. Investigation of the behavioral and cellular basis for magnetotaxis in *C. elegans*. International *C. elegans* Meeting, UCLA, CA.
49. Gährs C, Benson A, Städele C, Stein W, **Vidal-Gadea AG. 2017**. Marbled crayfish: a new genetic model organism for understanding neuromodulator influence on network dynamics. Society for Neuroscience, Chicago Chapter, Chicago, IL.
48. Benson A, Städele C, Gährs C, **Vidal-Gadea AG,** Stein W. **2017.** Behavioral consequences of RNAi-mediated suppression of innexin gene expression in Marbled Crayfish. Graduate Research Symposium, Normal, IL.
47. Bainbridge C, McDonald J*, Benfield Z*, Padia S*, **Vidal-Gadea AG. 2017**. Behavioral motifs for magnetic orientation in the nematode *C. elegans*. Graduate Symposium, Normal, IL.
46. Megeff B*, Haines K*, **Vidal-Gadea AG. 2017**. Angelman Syndrome. Graduate Symposium, Normal, IL.
45. Bainbridge C, McDonald J*, Benfield Z*, Padia S*, **Vidal-Gadea AG. 2017**. Investigating behavioral strategies for magnetic orientation in *C. elegans*. Phi Sigma Research Symposium, Normal, IL.
44. Rodriguez AM, Schuler A*, Cuciarone K*, Hannan S*, Vemuri S*, **Vidal-Gadea AG. 2017**. Effect of exercise on the musculature of nematodes modeling Duchenne muscular dystrophy. 21st International *C. elegans* Meeting at UCLA, CA.
43. Gährs C, Städele C, Benson A, Stein W, **Vidal-Gadea AG. 2017**. Establishing genetic transformation for comparative studies of neuromodulator actions in marbled crayfish. Phi Sigma Research Symposium, Normal, IL.
42. Benson A, Städele C, Gährs C, **Vidal-Gadea AG,** Stein W. **2017**. Behavioral consequences of RNAi-mediated suppression of innexin gene expression in Marbled Crayfish. Phi Sigma Research Symposium, Normal, IL.
41. Fritz A*, Akahome O*, **Vidal-Gadea AG. 2017**. Investigating the effect of the Martian Magnetic field on terrestrial organisms. Midwest *C. elegans* Meeting, Grand Rapids, MI.
40. McDonald J*, Benefield Z*, Padia S*, Bainbridge C, **Vidal-Gadea AG. 2017**. Behavioral motifs underlying orientation to distinct environmental stimuli in *C. elegans*. Midwest *C. elegans* Meeting, Grand Rapids, MI.
39. Rodriguez AM, Schuler A*, Hannan S*, Cuciarone K*, Vemuri S*, **Vidal-Gadea AG. 2017**. Modeling the muscular and neurological effects of Duchenne muscular dystrophy using in *C. elegans*. Midwest *C. elegans* Meeting, Grand Rapids, MI.
38. Fritz A*, Barickman L*, **Vidal-Gadea AG. 2016**. Investigating the effect of the Martian Magnetic field on terrestrial organisms. Biological Sciences Student Association Symposium, Normal, IL.
37. Gährs C*, Benson A, Hernandez J*, Städele C, Stein W, **Vidal-Gadea AG. 2016**. Marbled crayfish as a new genetic model organism for the study of causal relationships between genes, neuronal physiology, and behavior. Biological Sciences Student Association Symposium, Normal, IL.
36. Khalil M*, **Vidal-Gadea AG. 2016**. A *C. elegans* model for Angelman syndrome. Graduate Research Symposium, Normal, IL.
35. Bainbridge C, Barickman L*, Bracht B*, **Vidal-Gadea AG. 2016**. Magnetotactic behavior of the nematode *C. elegans*. Illinois State University Graduate Symposium, Normal, IL.
34. Barickman L*, Bracht B*, Bainbridge C, **Vidal-Gadea AG. 2016**. Proximate causes of biological magnetic orientation investigated in *C. elegans*. Illinois State University Graduate Symposium, Normal, IL.
33. Gährs C, **Vidal-Gadea A**, Stein W, Städele C. **2016**, The parthenogenetic marbled crayfish: a new model system for studying molecular underpinnings of neuromodulation. International Congress of Neuroethology, Montevideo, Uruguay
32. Gährs C*, **Vidal-Gadea AG**, Stein W, Städele C. **2016**. The parthenogenetic marbled crayfish: a new model system for studying molecular underpinnings of neuromodulation. Graduate Symposium, Normal, IL.
31. Rodriguez AM, Barickman L*, Goel S*, Schuler A*, DeVries P*, Cisneros M*, Alvarado G*, Anastitis A*, Barsanti B*, DePerez J, Dickens S*, Esfahanian M, Jarris M*, Larson C, Mathis C*, Mecidor R, Mills S*, Oates B*, Pascalis T, Quintana E*, Telander T*, Young J*, **Vidal-Gadea AG. 2016**. *C. elegans* suppressor mutant rescues muscular degeneration in the nematode model of Duchenne muscular dystrophy. Illinois State University Graduate Symposium, Normal, IL.
30. Barickman L*, Bracht B*, Bainbridge C, **Vidal-Gadea AG. 2016**. AFD villi integrity is necessary for magnetic orientation by *C. elegans*. Animal Behavior Conference at Indiana University, Bloomington, IN.
29. Khalil M*, **Vidal-Gadea AG. 2016**. Loss of function in the nematode UBE3A ortholog leads to neurological impairments in a *C. elegans* model of Angelman Syndrome. Animal Behavior Conference at Indiana University, Bloomington, IN.
28. Bainbridge C, Barickman L*, Ahlert A*, Bracht B*, **Vidal-Gadea AG. 2016**. Behavioral characterization of magnetotaxis in the nematode *C. elegans*. Society for Neuroscience, San Diego, CA.

27. Bainbridge C, Barickman L*, Bracht B*, **Vidal-Gadea AG. 2016**. Magnetotactic behavior of the nematode *C. elegans*. Graduate Symposium, Normal, IL.
26. Rodriguez AM, Barickman L*, Goel S*, Schuler A*, DeVries P*, Cisneros M*, Alvarado G*, Anastitis A*, Barsanti B*, DePerez J, Dickens S*, Esfahanian M, Jarris M*, Larson C, Mathis C*, Mecidor R, Mills S*, Oates B*, Pascalis T, Quintana E*, Telander T*, Young J*, **Vidal-Gadea AG. 2016**. *C. elegans* suppressor mutant rescues muscular degeneration in the nematode model of Duchenne muscular dystrophy. Animal Behavior Conference at Indiana University, Bloomington, IN.
25. Rodemoyer BB*, **Vidal-Gadea AG. 2016**. Investigating the effects of exercise on the health of dystrophic musculature in *C. elegans*. Phi Sigma Research Symposium, Normal, IL.
24. Rodriguez AM, Barickman L*, Goel S*, Schuler A*, DeVries P*, Cisneros M*, Alvarado G*, Anastitis A*, Barsanti B*, DePerez J, Dickens S*, Esfahanian M, Jarris M*, Larson C, Mathis C*, Mecidor R, Mills S*, Oates B*, Pascalis T, Quintana E*, Telander T*, Young J*, **Vidal-Gadea AG. 2016**. Rescue of muscular degeneration in an animal modeling Duchenne muscular dystrophy. Phi Sigma Research Symposium, Normal, IL.
23. Bainbridge C, **Vidal-Gadea AG**, Pierce-Shimomura JT. **2015**. Investigating the molecular mechanism for magneto-transduction in *C. elegans*. 20th International *C. elegans* Meeting at UCLA, CA.
22. Rickerd T*, Khalil M*, **Vidal-Gadea AG. 2015**. Identification of proteins involved in the magnetotactic behavior of *C. elegans*. Graduate School Symposium, Normal, IL.
21. Nuccio D, Barickman L*, **Vidal-Gadea AG. 2015**. Is there a safe level of exercise for patients with Duchenne muscular dystrophy? Illinois State University Graduate Symposium, Normal, IL.
20. Bainbridge C, Papoulas O, Boutz D, Marcotte E, Pierce-Shimomura JT, **Vidal-Gadea AG. 2015**. Magnetic transduction in *Caenorhabditis elegans*: identifying the molecular components necessary for magnetic field detection. Illinois State University Graduate Symposium, Normal, IL.
19. Khalil M*, **Vidal-Gadea AG. 2015**. Investigation of the role of the nematode UBE3A ortholog leads to severe neurological impairments in a *C. elegans* model of Angelman syndrome. Annual Animal Behavior Symposium, Indiana University, Bloomington, IN.
18. Bainbridge C, Khalil M*, Rickerd T*, Ward K*, Beron C*, Ghoashian N, Gokce S, Papoulas O, Boutz D, Marcotte E, Ben-Yakar A, Pierce-Shimomura JT, **Vidal-Gadea AG. 2015**. Magnetic orientation behavior of the nematode *C. elegans*. Annual Animal Behavior Symposium, Indiana University, Bloomington, IN.
17. Bainbridge C, Rickerd T*, **Vidal-Gadea AG. 2015**. Dissecting the molecular basis for magnetic transduction in *C. elegans*. Phi Sigma Research Symposium, Normal, IL.
16. Bainbridge C, Papoulas O, Boutz D, Marcotte E, Pierce-Shimomura JT, **Vidal-Gadea AG. 2015**. The magnetotactic response of *C. elegans* wild-type isolates displays adaptations across different geographical regions. Society for Neuroscience, Chicago, IL.
15. Nuccio D, Barickman L*, **Vidal-Gadea AG. 2015**. Examining the cellular and motor effects of exercise in an animal model of Duchenne Muscular dystrophy. Phi Sigma Research Symposium, Normal, IL.
14. Khalil M*, **Vidal-Gadea AG. 2015**. Molecular machinery responsible for *C. elegans* detection of earth's magnetic fields. Phi Sigma Research Symposium, Normal, IL.
13. **Vidal-Gadea AG**, Beron C*, Pierce-Shimomura JT. **2015**. Burrowing in *C. elegans* used to study neuromuscular disorder models. 20th International *C. elegans* Meeting at UCLA, CA.
12. Beron C*, Cohn J, Pierce-Shimomura JT, **Vidal-Gadea AG. 2015**. Prevention of muscle decline in an animal model of Duchenne muscular dystrophy. Phi Sigma Research Symposium, Normal, IL.

Presented since joining Illinois State University

11. **Vidal-Gadea AG. 2012**. Geomagnetotactic behavior in a nematode. Society for Neuroscience Annual Meeting, New Orleans, LA.
10. **Vidal-Gadea AG. 2012**. *Caenorhabditis elegans* selects distinct crawling and swimming gaits via dopamine and serotonin. 10th International Congress of Neuroethology, College Park, MD.
9. **Vidal-Gadea AG. 2012.** Variability in magnetotactic ability correlates with global field properties. 10th International Congress of Neuroethology, College Park, MD.
8. **Vidal-Gadea AG. 2010.** A Role for Dopamine in Switching Locomotory Patterns in *C. elegans*. Neuronal Development, Synaptic Function & Behavior *C. elegans* Topic Meeting, Madison, WI.
7. **Vidal-Gadea AG. 2009**. Neural Mechanisms for Switching Locomotory Patterns in *C. elegans*. Society for Neuroscience Annual Meeting, Chicago, IL.
6. **Vidal-Gadea AG. 2009**. Processing of proprioceptive inputs in the locust: quantitative analysis of the responses of spiking local interneurones in the metathoracic ganglion. Eighth Göttingen Meeting of the German Neuroscience Society, Göttingen, Germany.

5. **Vidal-Gadea AG. 2007**. Forwards locomotion in spider crabs. Eighth International Congress of Neuroethology, Vancouver, Canada.
4. **Vidal-Gadea AG. 2005**. Innervation of the walking legs of the crab *Libinia emarginata*. Society for Neuroscience Annual Meeting, Washington DC.
3. **Vidal-Gadea AG. 2004**. Comparative studies of walking in crabs: I. Neuromuscular anatomy. Society for Neuroscience Annual Meeting, San Diego CA, USA.
2. **Vidal-Gadea AG. 2003**. The remotor neuromusculature of the uropod propodite in crayfish: Differential innervation and activation of heads. Society for Neuroscience Annual Meeting, New Orleans, LA.
1. **Vidal-Gadea AG. 2003**. Isolation of magnetic particles from the tissue of the sea slug, *Tritonia Diomedea*. Society for Integrative and Comparative Biology, Toronto ON, Canada.

ORAL PRESENTATIONS

*Undergraduate student; **High school student; §contributed equally, red denotes ISU student

29. Akinosho A, **Vidal-Gadea AG. 2023**. Deciphering magnetic transduction in *C. elegans*: A journey into sensory mechanisms. Neurophysiology Seminar, Illinois State University, Normal, IL.
28. Niha S, **Vidal-Gadea AG. 2023**. Neuronal expression of dystrophin and its role in regulating behavior in *C. elegans*. Neurophysiology Seminar, Illinois State University, Normal, IL.
27. Marchiafava D, **Vidal-Gadea AG. 2023**. Understanding calcium dynamics in dystrophic muscle. Neurophysiology Seminar, Illinois State University, Normal, IL.
26. Fazyl A, **Vidal-Gadea AG. 2023**. Role of dystrophin isoforms in Duchenne muscular dystrophy. Neurophysiology Seminar, Illinois State University, Normal, IL.
25. Jazireian P, **Vidal-Gadea AG. 2023**. Pathophysiological changes in dystrophic muscle myogenesis using *C. elegans* as a model. Neurophysiology Seminar, Illinois State University, Normal, IL.
24. Niha S, **Vidal-Gadea AG. 2023**. Neuronal expression and function of dystrophin in *C. elegans*. Neurophysiology Seminar, Illinois State University, Normal, IL.
23. Fazyl A, **Vidal-Gadea AG. 2023**. Roles of force detection and transmission in muscle plasticity in *C. elegans*. Neurophysiology Seminar, Illinois State University, Normal, IL.
22. Akinosho A, **Vidal-Gadea AG. 2023**. Investigation of the mechanism of magnetic transduction in *C. elegans*. Neurophysiology Seminar, Illinois State University, Normal, IL.
21. Jazireian P, **Vidal-Gadea AG. 2023**. Pathophysiological Changes in dystrophic muscle myogenesis using *C. elegans* as a model. Molecular and Cellular Biology Seminar, Illinois State University, Normal, IL.
20. Hughes-Wiles KJ, **Vidal-Gadea AG. 2022**. Using *C. elegans* to study the pathophysiology of Duchenne muscular dystrophy. Defense seminar, Illinois State University, Normal, IL.
19. Aidoo E*, **Vidal-Gadea AG. 2021**. Identifying molecular targets of steroids on Duchenne muscular dystrophy patients. NexSTEM Research Symposium, Heartland Community College, Normal, IL.
18. Zack T*, **Vidal-Gadea AG. 2021**. Muscular dystrophy in *C. elegans* and humans. NexSTEM Research Symposium, Heartland Community College, Normal, IL.
17. Hughes KJ, **Vidal-Gadea AG. 2021**. Using *C. elegans* to study the pathophysiology of Duchenne muscular dystrophy. Neuroscience and Physiology seminar, Normal, IL.
16. Roy R, **Vidal-Gadea AG. 2021**. Gap junction genes involved in the escape circuit of marbled crayfish. Neuroscience and Physiology seminar, Normal, IL.
15. Awe 'T, **Vidal-Gadea AG. 2021**. Exploring the cellular basis of magnetic orientation behavior in *C. elegans*. Neuroscience and Physiology seminar, Normal, IL.
14. Hughes KJ, **Vidal-Gadea AG. 2021**. Using *C. elegans* to study the pathophysiology of Duchenne muscular dystrophy. Scripps Research Institute, La Joya, CA.
13. Bainbridge C, **Vidal-Gadea AG. 2019**. Investigating behavioral strategies and neuromolecular mechanism underlying magnetic orientation in *C. elegans*. Northwestern University. Evanston, IL.
12. Hughes KJ, **Vidal-Gadea AG. 2019**. Using nematode burrowing to challenge and assess neuromuscular integrity. 22nd International *C. elegans* Meeting. UCLA, Los Angeles, CA.
11. Hughes KJ, **Vidal-Gadea AG. 2019**. Progression of Duchenne muscular dystrophy in a nematode model. Neuroscience and Physiology seminar, Normal, IL.
10. Ahmed H**, Hughes KJ, **Vidal-Gadea AG. 2019**. Internship capstone presentation. Normal, IL.
9. Hughes KJ, **Vidal-Gadea AG. 2018**. Exercise-induced hypertrophy effects on non-contractile muscle machinery. Neuroscience and Physiology seminar, Normal, IL.

8. Gährs C, Stein W, **Vidal-Gadea AG**. **2018**. Can we create transgenic crayfish to study neuromodulation in the stomatogastric ganglion? Dynamic Neural Networks Satellite Meeting at the Society for Neuroscience, San Diego, California.
7. Rodriguez AM, **Vidal-Gadea AG**. **2018**. Using *C. elegans* to model muscular and neurological deficits of Duchenne muscular dystrophy. Neuroscience and Physiology Seminar, Normal, IL.
6. Gährs C, Stein W, **Vidal-Gadea AG. 2018**. Towards crustacean transgenesis: characterization and localization of invertebrate serotonin receptor subtypes in the marbled crayfish. Neuroscience and Physiology Seminar, Illinois State University, Normal, IL
5. Bainbridge C, McDonald J*, Benefield Z*, Barickman L*, Stein W, **Vidal-Gadea A**. **2018**. Behavioral search strategy optimization to cues of distinct physical nature. Chicago Area Worm Meeting, University of Illinois, Chicago IL.
4. Gährs C, Stein W, **Vidal-Gadea AG**. **2017**. Genomic Integration and Germline Transmission of Plasmid Injected into Crustacean Eggs. Neuroscience and Physiology Seminar, Illinois State University, Normal, IL.
3. Bainbridge C, Bracht B*, Barickman L*, **Vidal-Gadea AG**. **2016**. Investigating neuromolecular and behavioral strategies for magnetic orientation in *C. elegans*. Presented at the Animal Behavior Conference at Indiana University, Bloomington, IN.
2. Bainbridge C, Barickman L*, Bracht B*, **Vidal-Gadea AG**. **2016**. Investigating neuromolecular and behavioral strategies for magnetic orientation in *C. elegans*. Presented as at the School of Biological Sciences' Phi Sigma Research Symposium, Normal, IL.
1. Khalil M*, **Vidal-Gadea AG**. **2016**. Loss of function in the nematode UBE3A ortholog leads to neurological impairments in a *C. elegans* model of Angelman syndrome. Presented as an Honor's Thesis defense and at the School of Biological Sciences AND at the Phi Sigma Research Symposium, Normal, IL.

Presented since joining Illinois State University