# Andrés G. Vidal-Gadea, Ph.D.

**Professor of Molecular Neuroethology**
**School of Biological Sciences**
**Illinois State University**
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## PROFESSIONAL SUMMARY

Tenured full professor with externally funded research program (>$2M) at the biology-physics interface. Seven years of operational leadership in undergraduate recruitment, faculty hiring, and shared governance. Founded SACNAS chapter and mentored >230 students (52% from underrepresented groups). Proven record building interdisciplinary collaborations across Biology, Physics, IT, and Engineering departments.

**ORCID:** 0000-0001-5981-5528
**Website:** https://agvg75.github.io/lab/
**YouTube:** youtube.com/@vidal-gadeac.eleganslab4632
**Research Dashboard:** https://agvg75.github.io/research_impact_dashboard/
**Mentoring Dashboard:** https://agvg75.github.io/vidal-gadea-lab-dashboard/

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## RESEARCH PROGRAM SUMMARY

Molecular mechanisms of behavior and neuromuscular disorders using human myocytes, *C. elegans*, and crayfish model systems. Three integrated research programs with direct clinical applications: **1) Duchenne muscular dystrophy pathophysiology** using *C. elegans* and human muscle cell models, **2) magnetic field bionavigation** revealing neural mechanisms in *C. elegans*, and **3) crustacean neurogenetics** through collaboration developing first genetic tools for decapod neuroscience.

**Current Research Breakthroughs:**

- **First cross-tissue DMD model:** Direct smooth vs. striated muscle comparison within single organism
- **Complete dystrophin knockout strains:** VG02/VG03 showing severe multi-tissue phenotypes
- **Multi-compartment $Ca^{2+}$ imaging:** RGBCaMP technology enabling real-time tracking across cellular compartments
- **Translational validation pipeline:** *C. elegans discovery* → human cell validation → murine in vivo testing

**Total funding: $2 M as PI | Featured research: Nature Reviews, NPR, Scientific American**

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## RESEARCH PRODUCTIVITY

**Publications:** 31 peer-reviewed articles | **Citations:** 1,046 | **h-index:** 16

**Lab Performance vs. National Benchmarks (2015-2025):**

- **Students Mentored:** 224 (vs. 35-50 national average)
- **Student Publications:** 65+ co-authorships on peer-reviewed papers
- **Conference Presentations:** 200+ scientific abstracts by trainees
- **STEM Career Placement:** 90%+ of trainees
- **Media Coverage:** Major outlets (NPR, NBC, Scientific American, Nature Reviews)
- **Digital Impact:** 71 research videos, 35K+ educational views, 10+ years consistent content creation

**Real-World Skills Transfer:** BSC220 alumni staffed SHIELD Illinois COVID testing laboratory and go on to teach high school science to students across the state. Grad and undergrad alumni at Harvard, The Scripps, Yale, etc.

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## POSITIONS

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|---|---|---|
| 2025 – | Professor of Molecular Neuroethology – Illinois State University | Normal, IL |
| 2020 – 2025 | 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 | Austin, TX |
| | *Studied the genetic and neural bases of adaptive behavior in C. elegans.* | |

| | | |
|---|---|---|
| 2008 – 2009 | Postdoctoral Fellow – University of Southampton<br>Biology-Engineering collaborative research program in mechanosensation<br>*Studied the coding characteristics of sensory neurons in the legs of desert locusts.* | Southampton, UK |
| 2003 – 2008 | Teaching Assistant – Louisiana State University<br>*Primarily responsible for teaching and running a vertebrate physiology lab.* | Baton Rouge, LA |
| 1999 – 2003 | Special Needs Assistant – Jura Ventures<br>*Living assistant to adults with Duchenne muscular dystrophy, and individuals with autism.* | Victoria, BC, Canada |

## EDUCATION

| | | |
|---|---|---|
| 2008 | Ph.D. Biology - Louisiana State University<br>*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 |

## MAJOR AWARDS & RECOGNITIONS

| | | |
|---|---|---|
| 2025 | **Outstanding University Researcher**, Illinois State University | Normal, IL |
| 2024 | **Outstanding College Researcher**, Illinois State University | Normal, IL |
| 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 |

## EARLY CAREER AWARDS

| | | |
|---|---|---|
| 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 TRACK RECORD

Total competitive funding awarded to Illinois State University as PI: >$2 Million (NIH, NSF, and internal seed programs). This total excludes an NSF Major Research Instrumentation award ($650,939, listed below, where I am a Major User but not PI) and excludes $200,000 in ARCS funding where I served as Co-PI.

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|---|---|---|
| 2026-2029 | NIH (NIAMS), PI: | $ 544,734.00 |
| 2026 – 2026 | Anthropic, PI: | $ 30,000.00 |
| 2023-2024 | ISU (ARCS), Co-PI: | $ 200,000.00 |
| 2022-2026 | 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 |

**Grant Review Service:** Regular panel participation for NSF, DoD, NIH, plus international agencies (BBSR-UK, ISF-Israel, ANR-France)

## PUBLICATIONS (31 total, 23 since joining ISU, IF >4 ave)

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

31. Akinosho A°, Armstrong N*, Benefield Z*, Dai X, Stein W, **Vidal-Gadea AG**. **2026**. Behavioral deficits in *Caenorhabditis elegans* raised for six generations under Mars-analog gravity and hypomagnetic fields. Scientific Reports (accepted). Preprint: https://doi.org/10.1101/2024.10.18.619154
30. Fazyl A°, Anbu A**, Kollbaum S*, **Vidal-Gadea AG**. **2025**. Activity-dependent remodeling of muscle architecture during distinct locomotor behaviors in *Caenorhabditis elegans*. Biology Open. DOI:

https://doi.org/10.1242/bio.062371
29. Akinosho A°, Alexander J°, Floyd K, **Vidal-Gadea AG**. **2025**. Independent Validation of Transgenerational Inheritance of Learned Pathogen Avoidance in *Caenorhabditis elegans.* eLife. DOI: https://elifesciences.org/reviewed-preprints/107034
28. Marchiafava D°, **Vidal-Gadea AG**. **2025**. Fibrillin-Related Proteins Control Calcium Homeostasis in Dystrophic Muscle Across Species. microPublications Biology. doi: https://www.micropublication.org/journals/biology/micropub-biology-001697
27. Fazyl A°, Jones M°, Marchiafava D°, Niha S°, Sawilchik*, Stein W, **Vidal-Gadea AG. 2025**. Muscular expression of *pezo-1* differentially contributes to swimming and crawling production in the nematode *C. elegans*. Biophysical Journal 124(24):4442–4456. DOI: https://doi.org/10.1016/j.bpj.2024.12.032
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 emarginat*a (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.]*

## PUBLICATIONS UNDER REVISION OR IN PREPARATION

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

1. Awe T, Akinosho A, Niha S, Kelly L**, Adams J, Stein W, **Vidal-Gadea AG. 2024**. The AMsh glia of *C. elegans* modulates the duration of touch-induced escape responses. (***Revising for PNAS***) DOI: https://doi.org/10.1101/2023.12.13.571291
2. Fazyl A§, Anbu A§*, Kollbaum S*, Conklin E, Schroeder N, **Vidal-Gadea AG**. **2024**. Characterization of muscle growth and sarcomere branching in the striated musculature of *C. elegans.* (***revising for JEB***). DOI: https://doi.org/10.1101/2024.08.30.610496
3. Marchiafava D, Jazireian P, Hughes-Wiles, Fazyl A, Stein W, Engelke M, **Vidal-Gadea AG**. **2024**. Two independent mechanisms are responsible for increased cytosolic calcium in developing dystrophic muscles. (***in preparation***).

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## RESEARCH INFRASTRUCTURE & INNOVATION

**Laboratory Development:**

- Complete Dystrophin Knockout Strains: VG02/VG03 (only available nematode models)
- Multi-Compartment $Ca^{2+}$ Imaging: RGBCaMP tech. for simultaneous cytoplasm/mitochondria/SR tracking
- Automated Screening Platform: WormBotv3f adaptation for continuous 144-well monitoring
- Comprehensive Strain Repository: 8+ engineered lines, multiple reporter constructs

**Cross-Species Validation Pipeline:**

- Nematode-to-Human Cell Models: CRISPR-generated dystrophic human myoblast cultures
- International Collaborations: Murine validation through University of Leiden partnership
- Translational Pathway: *C. elegans* discovery → human cell validation → in vivo murine testing

**Methodological Innovations:**

- First direct smooth vs. striated muscle comparison in single Dmd model
- Multi-compartment $Ca^{2+}$ imaging during physiological behaviors
- High-throughput behavioral analysis integrated with real-time molecular imaging
- Tissue-specific therapeutic efficacy testing across muscle types

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## SCIENCE COMMUNICATION & DIGITAL RESEARCH LEADERSHIP

**Digital Innovation & Open Science:**

- YouTube Research Channel: >70 videos, >36K views, ~130 subscribers (2014-present) - laboratory techniques, student presentations, public outreach: https://www.youtube.com/@vidal-gadeac.eleganslab4632
- Interactive Research Dashboards: Transparency https://agvg75.github.io/research_impact_dashboard/
- Interactive student Dashboard: Displaying mentoring https://agvg75.github.io/vidal-gadea-lab-dashboard/
- Comprehensive Web Portfolio: Multi-platform digital research presence with methodology sharing
- Science Outreach Coloring book: The Amazing World of Worms https://a.co/d/cpBlH4E

**Traditional Media Coverage:**
- 2025 Pantagraph
- 2025 25News
- 2021 Wild Connection Podcast, 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)

**Educational Impact:** Open-access laboratory protocols, student training materials, and 10+ years of consistent multimedia content creation reaching global audiences

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## TEACHING EXCELLENCE & INNOVATION

**Course Portfolio (9 courses):** 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)

**Teaching Strengths (Based on 5-Year Student Evaluation Analysis):**
- Accessibility & Approachability: Consistently exceed departmental averages (scores surpass dept. means in 4/5 semesters)
- Intellectual Rigor: 85.7% of students find courses both challenging and engaging
- Subject Enthusiasm: 71.4% of students report increased interest in biology (above 58% dept. average)
- Real-World Skills: BSC220 CURE alumni recruited for COVID testing lab based on technical proficiency

**Course-Based Undergraduate Research Experience (CURE):**
- BSC220: Students annually conduct authentic research directly related to funded proposals
- Student-Built Research Tools: Undergraduates constructed RGBCaMP $Ca^{2+}$ strains central to NIH-funded research
- Skills Training: Hypothesis generation, experimental troubleshooting, CRISPR techniques, data analysis
- COVID-19 Impact: Alumni hired for SHIELD Illinois testing lab (13,600 PCR tests/day), demonstrating transferable skills

**Video-Enhanced Learning:** 71 custom laboratory technique videos for student training
**Open Educational Resources:** Decade-long commitment to public science education
**Multi-Modal Instruction:** Visual learning support reaching 34,000+ viewers globally

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## STUDENT MENTORING & TRAINING

**Current Active Mentoring (2025-2026):**
- Graduate Students: 1 MS student, 1 PhD student
- Undergraduate Researchers: 11 active research students
- High School Researchers: 1 semester long interns

**Career Totals (2015-2025): 216 students mentored**
- High School: 84 students (50 outcome authorships, ave = 0.6/student))
- Undergraduate: 114 students (237 outcome authorships, ave = 2.1/student)
- Graduate: 22 students (261 outcome authorships, ave = 13.1/student))
- Postdoctoral: 2 fellows (24 outcome authorships, ave = 12/fellow)

**Student Research Productivity:**
- Publications: 15+ student co-authorships on peer-reviewed papers
- Conference Presentations: 200+ scientific abstracts by trainees
- Awards: Numerous student presentation awards at regional/national meetings
- Career Outcomes: 90%+ STEM career placement rate (tracking 97% of our students)

**High-Impact Training Programs:**

- Normal Community High School Partnership: Semester long graded internships (2018-present)
- Illinois Summer Research Academy: Week-long intensive bootcamp for 10-16 HS students (2016-present)
- BSC220 Integration: Required course for Biology Teaching Majors, training future STEM educators
- Scholarly Teaching: Individualized year-round mentoring of undergrads spending each 8+hrs/week in lab.
- Tiered Mentoring Model: Graduate students co-mentor undergraduates, creating leadership development

**International Mentoring:**
- Argentina: Eliana Fernández, Brocco group
- Austria: Lukas Landler, David Keays group
- Uruguay: Gastón Ricci, Salinas group
- Japan: Kotaro Kimura, Kimura group

**Student Outcome Tracking:** Comprehensive dashboard quantifying career placement, skill development, and long-term STEM engagement (agvg75.github.io/vidal-gadea-lab-dashboard/)

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## BROADER IMPACT AND STUDENT TRAINING

**COVID-19 Pandemic Response:** BSC220 alumni demonstrated exceptional laboratory competency by staffing SHIELD Illinois COVID testing facility, processing 13,600 PCR tests daily at pandemic peak. These direct skills transfer from authentic research training to critical societal need validates educational approach and demonstrates practical value of research-integrated pedagogy.

**Community Engagement:**

K-6 Science Education: Regular programming with College Mentors for Kids, Boy Scout troops, local school science fairs
Public Science Communication: 71 YouTube videos (34K+ views), podcast appearances, media interviews
Science Outreach Resources: Scientific coloring book for children, and website with science activities.
Future Educator Training: BSC220 now required for Biology Teaching Majors, expanding STEM education impact across Midwest.

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## COLLABORATIONS

**Illinois State University:** Stein Lab: Crayfish genomics; human myocyte electrophysiology
**Illinois State University:** Dai Lab: DMD transcriptomics
**University of Illinois Urbana-Champaign**: Schroeder Lab: electron microscopy of *C. elegans* musculature
**The University of Texas at Austin:** Dr. Stanley-Copeland Lab: Duchenne clinician
**University of Leiden (Netherlands):** Dr. van Putten: Murine DMD validation

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## INSTITUTIONAL SERVICE & LEADERSHIP

**Graduate Program Coordinator, Physiology, Neuroscience and Behavior (PNB) sequence, School of Biological Sciences (2026–present)**

Coordinate the graduate program of the PNB sequence: admissions and recruitment, student progress, curriculum and seminar series

**Assistant Director of Undergraduate Studies (2019–2026)**

Chair undergraduate studies committee, coordinate recruitment/admissions, oversee degree requirements, promote funding sources for undergraduate program enhancement

**Elected Member, College Council, College of Arts and Sciences, Illinois State University (2019–2022).**

Shared governance role. Advised and assisted the Dean; participated in college-level procedures and decisions spanning curriculum and guidelines, departmental leadership processes, elections and representative selection, and broader issues affecting the college community.

**Elected Member, School Faculty Status Committee (SFSC), School of Biological Sciences, Illinois State University (2018–19; 2021–23).**

Unit-level ASPT governance, including annual faculty evaluations and recommendations regarding reappointment, tenure, and promotion, and development and maintenance of unit ASPT policies in alignment with college and university standards.

**Student Recruitment & Engagement Leadership:**

Preview Sessions: Host orientation sessions for all incoming freshmen (2019–present, 100+ students annually)
Open House Events: Conduct departmental tours for prospective students and families (2x per semester, 5-20 families per event)
Visiting Student Program: Host and coordinate visiting student experiences
Program Integration: Maintain program coherence and enhance undergraduate educational opportunities

**Major Committee Leadership:**

- Chair, Immunology Faculty Search (2023-2024)
- Chair, Mechanical Engineering Department Director Search (2023). Successfully recruited Dr. Nesrin Ozalp to establish and lead the new Mechanical Engineering program.
- Mechanical Engineering Faculty Search (2023-2024)
- Biosafety Committee Member (2022-2024)
- College of Arts and Science Council (Elected)
- School Faculty Status Committee (Elected, twice)
- Faculty Diversity Recruitment and Retention Committee
- Office of Student Research Board (Founding member)

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## PROFESSIONAL SERVICE & RECOGNITION

- Grant Reviewer: NSF, DoD, NIH, BBSRC (UK), ISF (Israel), ANR (France)
- Yearly Panel Participant: NSF and DoD review panels
- Journal Reviewer: Current Biology, Journal of Neuroscience, eNeuro, Scientific Reports (Nature), PLOS Genetics, PLOS One, Environmental Pollution, Genes Brain and Behavior
- Validated Review Record: https://www.webofscience.com/wos/author/record/U-2225-2019

**Professional Societies:**

- International Society for Neuroethology
- Society for Neuroscience
- Genetic Society of America
- Sociedad de Biofísicos Latinos (SOBLA)

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## OUTREACH & COMMUNITY ENGAGEMENT

High School Internships: Partnership with Normal Community High School – semester long graded internships (2018-present)
Illinois Summer Research Academy: Week-long summer research boot camp for 10-16 high school students (2016-present)
K-6 Programs: College Mentors for Kids, Boy Scout troops, local school science fairs
Public Science Communication: Regular participation in community education events
Scientific Coloring Book: The Amazing World of Worms. Teaches basic scientific principles and general nematode biology.

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## TECHNICAL EXPERTISE

**Behavioral Analysis** | **Advanced Microscopy** | **Immunohistochemistry** | **Molecular Tools** (Cloning, Transgenesis, RNAi, qPCR) | **Optogenetics** | **Calcium Ratiometry** | **High-Throughput Automated Assays** | **Magnetic Field Manipulation** | **3D Printing for Research Tools** | **Patient-Specific Cell Culture Models** | **Bioinformatics & Data Visualization** | **Electrophysiology** | **Anatomy**

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## INVITED TALKS

"Building a Mechanistic Cross Species Program in Duchenne Muscular Dystrophy, From Isoform Biology to Early Calcium Failure." Wayne State University, Detroit, **MI**, **2026**.

"How animals read the Earth's magnetic field." Science on Tap (public lecture), Bloomington, IL, **2026**.

"Tracing the origins of dysfunction in Duchenne muscular dystrophy: a multiscale approach to early pathophysiology." Neuroscience and Physiology Seminar Series, Illinois State University, Normal, IL, **2026**.

"Earth and how to survive it: a guide to identifying challenges and opportunities on a mid-size silicate planet.". Promotion Talk, School of Biological Sciences, Illinois State University, Normal, **IL**, **2024**.

"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, Waco, **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**.

**STUDENT ORAL PRESENTATIONS**

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

46) Komandur A**, **Vidal-Gadea AG. 2025**. Duchenne Muscular Dystrophy Internship. Normal Community High School, Normal, IL.
47) Nidadavolu N°, Vidal-Gadea AG. 2026. Characterization of smooth muscle pathophysiology in Duchenne muscular dystrophy. Molecular and Cellular Biology Seminar, Illinois State University, Normal, IL.
46) Jones M°, Vidal-Gadea AG. 2026. Intracellular calcium kinetics in the musculature of freely moving animals. Physiology, Neuroscience and Behavior Seminar, Illinois State University, Normal, IL.
45) Jones M°, **Vidal-Gadea AG. 2025**. Ordinary Acts, a Dystrophic Challenge: THree-minute Thesis Presentation. Departmental Seminar, Illinois State University, Normal, IL.
44. Jones M°, **Vidal-Gadea AG**. **2025**. Dynamic Compartmental Calcium Analysis in Duchenne Muscular Dystrophy. Physiology Neuroscience & Behavior Seminar, Illinois State University, Normal, IL.
43. Ruscheinski G*, Cheeseman E*, Wilderman R*, **Vidal-Gadea AG**. **2025**. Exploring the Effects of Duchenne Muscular Dystrophy on Smooth Muscle. Physiology Neuroscience & Behavior Seminar, Illinois State University, Normal, IL.

42. Marchiafava D°, **Vidal-Gadea AG**. **2025**. Elevated calcium in dystrophic muscle is associated with downregulation of the plasma membrane Ca2+ pump PMCA1. Physiology Neuroscience & Behavior Seminar, Illinois State University, Normal, IL.
41. Awe T°, **Vidal-Gadea AG**. **2025**. Functional roles of glia in sensory processing. Physiology Neuroscience & Behavior Seminar, Illinois State University, Normal, IL.
40. Akinosho A°, **Vidal-Gadea AG**. **2025**. Magnetosensation, Hypomagnetic Conditions, and Transgenerational Inheritance: Insights from Caenorhabditis elegans. Physiology Neuroscience & Behavior Seminar, Illinois State University, Normal, IL.
39. Marchiafava D°, **Vidal-Gadea AG**. **2025**. Elevated calcium in dystrophic muscle is associated with downregulation of the plasma membrane Ca2+ pump PMCA1. Physiology Neuroscience & Behavior Seminar, Illinois State University, Normal, IL.
38. Niha S°, **Vidal-Gadea AG**. **2025**. Deciphering neuronal expression and behavioral consequences of DYS-1B in *C. elegans*: Insights into Duchenne Muscular Dystrophy. Physiology Neuroscience & Behavior Seminar, Illinois State University, Normal, IL.
37. Jones M°, **Vidal-Gadea AG**. **2025**. Investigating the role of dystrophin in neuromuscular communication. Physiology Neuroscience & Behavior Seminar, Illinois State University, Normal, IL.
36. Gomez M°, Vidal-Gadea AG. **2025**. Molecular Mechanisms of Action of Corticosteroids in Dystrophic Muscles. Physiology Neuroscience & Behavior Seminar, Illinois State University, Normal, IL.
35. Fazyl A°, **Vidal-Gadea AG**. **2024**. Mechanical Force Detection and Resilience in the Musculature of Caenorhabditis *elegans*. Departmental Seminar, Illinois State University, Normal, IL.
34. Marchiafava D°, **Vidal-Gadea AG**. **2024**. Understanding calcium dynamics in dystrophic muscles. NeuroPhysiology Seminar, Illinois State University, Normal, IL.
33. Akinosho A°, **Vidal-Gadea AG**. **2024**. Ironing out the details: Exploring the Role of Iron in Biological Systems. Phi Sigma Symposium, Illinois State University, Normal, IL.
32. Fazyl A°, **Vidal-Gadea AG**. **2024**. The mechanoreceptor PEZO-1 modulates muscle function in striated musculature of *C. elegans*. NeuroPhysiology Seminar, Illinois State University, Normal, IL.
31. Awe T°, **Vidal-Gadea AG**. **2024**. The AMsh glia of *C. elegans* modulates the duration of nose touch-induced escape responses. NeuroPhysiology Seminar, Illinois State University, Normal, IL.
30. Niha S°, **Vidal-Gadea AG**. **2024**. Neuronal expression and function of dystrophin in *Caenorhabditis elegans*. NeuroPhysiology Seminar, Illinois State University, Normal, IL.
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***

## STUDENT POSTER PRESENTATIONS

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

175) Perez-Rodriguez M*, Jones M°, Nidadavolu N°, Marchiafava D°, Vidal-Gadea AG. 2026. Characterizing dystrophic *C. elegans* strains to study the pathogenesis of Duchenne muscular dystrophy. Summer of Inquiry Symposium, Illinois State University, Normal, IL.
174) Marchiafava D°, Vidal-Gadea AG. 2026. Early dystrophic calcium elevation from *C. elegans* embryos to human myoblasts is linked to PMCA dysfunction. Phi Sigma Research Symposium, Illinois State University, Normal, IL. (Best graduate poster)
173) Cheeseman E*, Fazyl A°, Ruscheinski G*, Vidal-Gadea AG. 2026. Impacts of Duchenne muscular dystrophy on smooth muscle structure and function. Phi Sigma Research Symposium, Illinois State University, Normal, IL. (Best undergraduate poster)
172) Jones M°, Vidal-Gadea AG. 2026. Dynamic compartmental calcium analysis in Duchenne muscular dystrophy. Phi Sigma Research Symposium, Illinois State University, Normal, IL.
171) Muthukumar A*, Vidal-Gadea AG. 2026. Studying Duchenne muscular dystrophy with the help of nematode worms. Phi Sigma Research Symposium, Illinois State University, Normal, IL.
170) Wilderman R*, Jones M°, Vidal-Gadea AG. 2026. Investigating the impact of corticosteroids on smooth muscle in Duchenne muscular dystrophy. University Research Symposium, Illinois State University, Normal, IL.
169) Muthukumar A*, Vidal-Gadea AG. 2026. Studying muscular dystrophy with nematode worms. University Research Symposium, Illinois State University, Normal, IL.

168) Jones M°, Vidal-Gadea AG. 2026. Dynamic compartmental calcium analysis in Duchenne muscular dystrophy. University Research Symposium, Illinois State University, Normal, IL.
167) Cheeseman E*, Fazyl A°, Ruscheinski G*, Vidal-Gadea AG. 2026. Impacts of Duchenne muscular dystrophy on smooth muscle structure and function. University Research Symposium, Illinois State University, Normal, IL.
166) Jones M°, **Vidal-Gadea AG.** 2026. Dynamic compartmental calcium analysis in Duchenne muscular dystrophy. Midwest *C. elegans* Meeting, Van Andel Institute, Grand Rapids, MI.
165) Ofurum F*, Cheeseman E*, Ruscheinski G*, Wilderman R*, Fransen H*, Aidoo E*, Fazyl A°, **Vidal-Gadea AG.** 2025. Modeling the Effect of Duchenne Muscular Dystrophy on Smooth Muscles Using *C. elegans*, Illinois State University, Normal, IL.
164) Marchiafava D°, Jones M°, Fazyl A°, Wilderman R*, Fransen H*, Cheeseman E*, Ruscheinski G*, Stein W, Engelke M, **Vidal-Gadea AG**. 2025. Conserved role of MCA-1 (PMCA1/4) in regulating early calcium dynamics in dystrophic muscle. International *C. elegans* Meeting, UC Davies, CA.
163. Marchiafava D°, Fazyl A°, Jones M°, Gomez M°, **Vidal-Gadea AG**. **2025**. Isoform Interventions: Harnessing Endogenous Dystrophin Variants to Restore Muscle Function. Advances in Skeletal Muscle Biology, University of Florida, Gainesville, FL.
162. Marchiafava D°, Fazyl A°, Jones M°, Gomez M°, **Vidal-Gadea AG**. **2025**. Harnessing Endogenous Dystrophin Isoforms to Ameliorate Duchenne Muscular Dystrophy. Advances in Skeletal Muscle Biology, University of Florida, Gainesville, FL.
161. Fazyl A°, Marchiafava D°, **Vidal-Gadea AG**. **2025**. Dystrophin Isoform Expression and Muscle Plasticity in *C. elegans*: Implications for DMD. Advances in Skeletal Muscle Biology, University of Florida, Gainesville, FL.
160. Marchiafava D°, Fazyl A°, Engelke M, Stein W, **Vidal-Gadea AG**. **2025**. Conserved Roles of MCA-1 and PMCA in Regulating Early Calcium Dynamics in Muscle Marchiafava. Advances in Skeletal Muscle Biology, University of Florida, Gainesville, FL.
159. Jones M°, **Vidal-Gadea AG**. **2025**. Investigating the role of dystrophin in motor neuron function, a deeper dive into the neuronal pathology of Duchenne muscular dystrophy. Graduate School Symposium. Illinois State University, Normal, IL.
158. Gomez M°, **Vidal-Gadea AG. 2025**. Corticoid steroid effect and pathways in *C. elegans*. Graduate School Symposium. Illinois State University, Normal, IL.
157. Fransen H*, Fazyl A°, Niha S°, **Vidal-Gadea AG**. **2025**. Investigating the role of dystrophin in smooth and striated muscles of *C. elegans*. Graduate School Symposium. Illinois State University, Normal, IL.
156. Batchelor P*, Fazyl A°, **Vidal-Gadea AG**. **2025**. Understanding the role of dystrophin isoforms on muscle function in the nematode *C. elegans*. Graduate School Symposium. Illinois State University, Normal, IL.
155. Wilderman R*, Fazyl A°, **Vidal-Gadea AG**. **2025**. Role of dystrophin isoforms in smooth muscle function during Duchenne muscular dystrophy. Graduate School Symposium. Illinois State University, Normal, IL.
154. Dunaway A*, Fazyl A°, Niha S°, **Vidal-Gadea AG**. **2025**. Therapeutic potential of short dystrophin isoforms in Duchenne muscular dystrophy. Graduate School Symposium. Illinois State University, Normal, IL.
153. Awe T°, **Vidal-Gadea AG**. **2025**. Subcellular localization of candidate magnetoreceptor molecules in *C. elegans*. Graduate School Symposium. Illinois State University, Normal, IL.
152. Awe T°, **Vidal-Gadea AG**. **2025**. Subcellular localization of candidate magnetoreceptor molecules in *C. elegans*. Phi Sigma Biology Symposium. Illinois State University, Normal, IL.
151. Marchiafava D°, **Vidal-Gadea AG**. **2025**. Downregulation of the plasma membrane Ca2+ pump, PMCA1, in dystrophic muscles precedes cytosolic calcium dysregulation. Phi Sigma Biology Symposium. Illinois State University, Normal, IL.
150. Jones M°, **Vidal-Gadea AG**. **2025**. Characterizing the effect of RU486 on embryonic development. Phi Sigma Biology Symposium. Illinois State University, Normal, IL.
149. Gomez M°, Aidoo E*, **Vidal-Gadea AG**. **2025**. Investigating effects and non-inflammatory pathways of corticosteroids used to treat Duchenne Muscular Dystrophy in *C. elegans*. Phi Sigma Biology Symposium. Illinois State University, Normal, IL.
148. Chauhan M, Engelke M, Hyun Kim J, **Vidal-Gadea AG**, Baral S, Manna U. **2024**. Development of an apical TIRF-illumination super-resolution microscope for cell biology research. Graduate School Symposium. Illinois State University, Normal, IL.
147. Seymour M°, **Vidal-Gadea AG**, Stein W. **2024**. Establishing genome editing in the Marbled crayfish. Society for Neuroscience Annual Meeting. Chicago, IL.
146. Seymour M°, **Vidal-Gadea AG**, Stein W. **2024**. Establishing genome editing in the Marbled crayfish. Graduate School Symposium. Illinois State University, Normal, IL.
145. Seymour M°, **Vidal-Gadea AG**, Stein W. **2024**. Establishing genome editing in the Marbled crayfish. Graduate School Symposium. Illinois State University, Normal, IL.

144. Niha S°, Fazyl A°, **Vidal-Gadea AG**. **2024**. Identifying neuronal expression and function of dystrophin in the nervous system of the nematode *C. elegans*. Graduate School Symposium. Illinois State University, Normal, IL.
143. Kollbaum S*, Fazyl A°, **Vidal-Gadea AG**. **2024**. First description of sarcomere branching in the musculature of the nematode *C. elegans*. Graduate School Symposium. Illinois State University, Normal, IL.
142. Awe T°, Akinosho A°, Adams J, Niha S°, Stein W, **Vidal-Gadea AG**. **2024**. The potential role of *C. elegans*‘ AMsh glia in coordination of escape responses to aversive stimuli. Graduate School Symposium. Illinois State University, Normal, IL.
141. Aidoo E*, Hughes KJ°, Hyer A*, **Vidal-Gadea AG**. **2024**. Effects of corticosteroids Prednisone and Deflazacort on the calcium kinetics of dystrophic muscles. Graduate School Symposium. Illinois State University, Normal, IL.
141. Gomez L°, Mobile Z°, **Vidal-Gadea AG**, Follmann R, Rosa E. **2024**. Model equations for *C. elegans*‘s thermotaxis. Graduate School Symposium. Illinois State University, Normal, IL.
140. Fazyl A°, Komandur A**, **Vidal-Gadea AG**. **2024**. The mechanoreceptor PEZO-1 is required for normal muscle function and plasticity in the striated musculature of the nematode *C. elegans*. Graduate School Symposium. Illinois State University, Normal, IL.
139. Akinosho A°, Awe T°, Fazyl A°, **Vidal-Gadea AG**. **2024**. The nematode *C. elegans* detects magnetic fields using an iron-dependent transduction mechanism. Graduate School Symposium. Illinois State University, Normal, IL.
138. Awe T°, Akinosho A°, Adams J, Niha S°, Stein W, **Vidal-Gadea AG**. **2024**. The role of AMsh glia of *C. elegans* in termination of touch-induced escape responses. Phi Sigma Symposium. Illinois State University, Normal, IL.
137. Niha S°, Fazyl A°, **Vidal-Gadea AG**. **2024**. Deciphering neuronal expression and behavioral consequences of dystrophin in *C. elegans*: Insights into Duchenne Muscular Dystrophy. Phi Sigma Symposium. Illinois State University, Normal, IL.
136. Seymour M°, **Vidal-Gadea AG**, Stein W. **2024**. Establishing Genome Editing in Marbled Crayfish. Phi Sigma Symposium. Illinois State University, Normal, IL.
135. Fazyl A°, Komandur A**, **Vidal-Gadea AG**. **2024**. The mechanoreceptor PEZO-1 is necessary for adapting muscle function and ensuring plasticity in the striated muscles of *C. elegans*. Phi Sigma Symposium. Illinois State University, Normal, IL.
134. Marchiafava D°, Jazireian P°, **Vidal-Gadea AG**. **2024**. Understanding calcium dynamics in dystrophic muscle. Phi Sigma Symposium. Illinois State University, Normal, IL.
133. Akinosho A°, **Vidal-Gadea AG**. **2023**. Investigation of the mechanisms of magnetic transduction by *C. elegans*. Phi Sigma Symposium. Illinois State University, Normal, IL.
132. 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.
131. Aidoo E*, **Vidal-Gadea AG**. **2023**. Determining Molecular Targets of Corticosteroid Mediated Improvement of Dystrophic Muscles. Graduate School Symposium. Illinois State University, Normal, IL.
130. Awe T°, **Vidal-Gadea AG**. **2023**. The AMsh glia of *C. elegans* modulates touch-induced escape responses. Society for Neuroscience Meeting. Washington D.C.
129. 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.
128. Niha S°, Fazyl A°, **Vidal-Gadea AG**. **2023**. Function of dystrophin isoforms in the nervous system. Phi Sigma Symposium. Illinois State University, Normal, IL.
127. Akinosho A°, **Vidal-Gadea AG**. **2023**. Investigation of the mechanisms of magnetic transduction by *C. elegans*. SACNAS NDISTEM Conference, Portland, OR.
126. 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.
125. Jazireian P°, **Vidal-Gadea AG**. **2023**. Pathophysiological changes during myogenesis in dystrophic muscles. Advances in Skeletal Muscle Biology Conference. University of Florida, Gainesville, FL.
124. Aidoo E*, **Vidal-Gadea AG**. **2023**. Determining Molecular Targets of Corticosteroid Mediated Improvement of Dystrophic Muscles. NexSTEM Symposium. Heartland Community College, Normal, IL.
123. 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.
122. Akinosho A°, **Vidal-Gadea AG**. **2023**. Investigation of the mechanisms of magnetic transduction by *C. elegans*. Graduate School Symposium. Illinois State University, Normal, IL.
121. Fazyl A°, **Vidal-Gadea AG**. **2023**. Distinct functional responsibilities of various dystrophin isoforms in striated muscle. Phi Sigma Symposium. Illinois State University, Normal, IL.
120. 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.

119. 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.
118. Marchiafava D°, Engelke M, **Vidal-Gadea AG**. **2023**. Investigating calcium dynamics in early dystrophic human myocytes. Phi Sigma Symposium. Illinois State University, Normal, IL.
117. Jazireian P°, **Vidal-Gadea AG**. **2023**. Physiological Alterations in Muscles During Myogenesis in Dystrophic Conditions. Midwest *C. elegans* Meeting. Wayne State University, Detroit, MI.
116. Awe T°, **Vidal-Gadea AG**. **2023**. *Caenorhabditis elegans'* amphid sheath glia modulates touch-induced escape responses. Phi Sigma Symposium. Illinois State University, Normal, IL.
115. 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.
114. Niha S°, **Vidal-Gadea AG**. **2023**. Function of dystrophin isoforms in the nervous system. Graduate School Symposium. Illinois State University, Normal, IL.
113. Marchiafava D°, Engelke M, **Vidal-Gadea AG**. **2023**. Pathophysiological changes during myogenesis in dystrophic muscles. American Society for Cell Biology Meeting. Boston, MA.
112. Jazireian P°, **Vidal-Gadea AG**. **2023**. Pathophysiological alterations in dystrophic muscles during myogenesis. Graduate School Symposium. Illinois State University, Normal, IL.
111. 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.
110. 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.
109. Niha S°, **Vidal-Gadea AG**. **2023**. Function of dystrophin isoforms in the nervous system. Midwest *C. elegans* Meeting. Wayne State University, Detroit, MI.
108. 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.
107. Aidoo E*, **Vidal-Gadea AG**. **2022.** Determining Molecular Targets of Corticosteroid Mediated Improvement of Dystrophic Muscles. NexSTEM Symposium. Heartland Community College, Normal, IL.
106. Sawilchik E*, Hughes-Wiles KJ°, **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.
105. 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.
104. 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.
103. 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.
102. 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.
101. 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.
100. 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.
99. 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.
98. 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.
97. 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.
96. 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.
95. 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.

94. **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.
93. Awe T°, Bainbridge C°, Freebairn P°, **Vidal-Gadea AG**. **2021**. Cellular localization of iron-handling proteins required for magnetic orientation in *C. elegans*. University Research Symposium, Illinois State University, Normal, IL.
92. **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.
91. 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.
90. 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**. Long isoforms of mechanoreceptor *pezo-1* control pharyngeal gland cell activity in the nematode *Caenorhabditis elegans*. Annual Midwest *C. elegans* Meeting, Michigan State University, MI.
89. Tamrazi M°, **Vidal-Gadea AG. 2021**. Genes that slow down degeneration in dystrophic muscles. Annual Midwest *C. elegans* Meeting, Michigan State University, MI.
88. Awe T°, **Vidal-Gadea AG**. **2021**. Iron-handling proteins and Mechanoreceptors are required for magnetic orientation in *C. elegans*. Annual Midwest *C. elegans* Meeting, Michigan State University, MI
87. Mobille Z°, Follmann R, **Vidal-Gadea AG**, Epaminondas R. **2021**. Mathematical Modeling of Temperature Effects on the AFD Neuron of *C. elegans*. Phi Sigma Symposium, Illinois State University, Normal, IL.
86. 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.
85. Awe T°, Freebairn P°, Bainbridge C°, **Vidal-Gadea AG. 2021**. Expression pattern of iron-handling proteins required for magnetic orientation in *C. elegans*. Phi Sigma Symposium, Illinois State University, Normal, IL.
84. Roy R°, Stein W, **Vidal-Gadea AG. 2021**. Development of genetic tools in marbled crayfish for the study of neuromodulation. Phi Sigma Symposium, Illinois State University, Normal, IL.
83. 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**. Long isoforms of mechanoreceptor *pezo-1* control pharyngeal gland cell activity in the nematode *Caenorhabditis elegans*. Phi Sigma Symposium, Illinois State University, Normal, 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°, **Tamrazi M°**, **Rivera B°**, Vidal-Gadea AG. **2021**. *C. elegans* offers a unique window into early pathophysiology of Duchenne muscular dystrophy. International *C. elegans* Meeting, UCLA, CA.
80. 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.
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 KJ°, 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 KJ°, 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.