

## Executive Summary

Dr. Ken Dawson-Scully is a transformative leader in higher education and research, bringing almost two decades of experience in academic administration, scientific innovation, and entrepreneurship. Currently serving as the **Senior Vice President for Research and Economic Development** and **Associate Provost** at **Nova Southeastern University (NSU)**, Dr. Dawson-Scully has been instrumental in guiding NSU's rise to **Carnegie R1 classification for 2025**, the highest tier of research activity designation. His leadership has not only strengthened the university's research capabilities but also expanded its industry partnerships, including pivotal collaborations in clinical research and healthcare systems.

Dr. Dawson-Scully's administrative expertise spans research development, strategic planning, and institutional growth. He has managed portfolios exceeding \$160 million in active grants, positioning NSU as a key player in interdisciplinary research and innovation for its 22,000 students, ~1000 faculty and ~5000 staff across 8 campuses with a \$700M+ annual budget and \$6M economic impact. His strategic vision has facilitated the development of industry partnerships that have accelerated growth in clinical research, and his leadership laid the groundwork for collaboration between NSU and major healthcare systems—ensuring broader impact in the fields of health sciences.

Before joining NSU in 2021, Dr. Dawson-Scully served as the **Associate Vice President for Strategic Initiatives** at **Florida Atlantic University (FAU)**, where he directed interdisciplinary research programs, secured external funding, and built strategic partnerships, including a key role in developing numerous joint programs including an MD/PhD program, PhD Program, a MSc program, an undergraduate research program, and university high school program that endures today. His work with the **Max Planck Florida Institute for Neuroscience** as **Head of Institutional Partnerships** allowed him to lead international research collaborations and elevate FAU's standing in the global neuroscience community.

An accomplished scientist, Dr. Dawson-Scully has led a highly productive externally funded laboratory focused on neuroprotection and stress responses in neural systems. His research, which has produced **over 40 peer-reviewed publications**, explores the molecular mechanisms that enable organisms to adapt to extreme stress, such as anoxia and hyperthermia. His work has led to the development of novel antiepileptic compounds with profound therapeutic potential. These compounds are currently being evaluated through the **Epilepsy Therapy Screening Program** at the National Institutes of Health.

In addition to his scientific achievements, Dr. Dawson-Scully is deeply committed to education and mentorship. He has directly mentored **14 PhD students**, many of whom have gone on to successful academic and industry careers. His dedication to cultivating the next generation of scholars is reflected in his leadership roles in graduate education and his development of innovative graduate programs at FAU and NSU. Recognized internationally for his contributions to science and higher education, Dr. Dawson-Scully was elected as a **Fellow of the Royal Entomological Society** in 2023 and as a **Fellow of the National Academy of Inventors** in 2024. His ability to integrate research, education, and economic development makes him a dynamic and visionary leader, capable of advancing the mission and reputation of any institution he leads.

# Summary of Experience

## Academic Leadership

- 2021- present      Senior Vice President for Research and Economic Development and Associate Provost, Nova Southeastern University, Ft. Lauderdale, FL**
- 2018-2021      Associate Vice President for Strategic Initiatives, Divisions of Academic Affairs and of Financial Affairs, Florida Atlantic University, Boca Raton, FL.
- 2018-2021      Head of Institutional Partnerships, Max Planck Florida Institute for Neuroscience, Jupiter, FL.
- 2018-2021      Director, FAU Max Planck Honors Program, Jupiter, FL.
- 2018      Associate Dean for Graduate Studies, Charles E. Schmidt College of Science, Florida Atlantic University (I was also acting AD w/signing authority from 2016-2018).
- 2016-2018      Associate Director, FAU Brain Institute, Florida Atlantic University, Boca Raton, FL.
- 2013-2016      Associate Director, Integrative Biology PhD Program, Florida Atlantic University, Boca Raton, FL.
- 2010-2013      Director, Honors Program, Biological Sciences, Florida Atlantic University, Boca Raton, FL.

## Faculty/Affiliate Positions

- 2021-present**  
**Professor**  
**Nova Southeastern University**  
**College of Psychology**  
**Dept. of Psychology and Neuroscience**  
**Davie, FL**
- 2012-present**  
**Visiting Investigator**  
**The UF/Scripps Research Institute,**  
**Dept. of Metabolism and Aging (2012-2017),**  
**Dept. of Neuroscience (2017-present),**  
**Jupiter, FL 33458 USA**

**2021-present**

**Visiting Scientist/ IMPRS faculty  
Max Planck Florida Institute  
Jupiter, FL.**

**2021-present**

**Affiliate Professor  
Florida Atlantic University  
Department of Biological Sciences  
Boca Raton, FL**

2020-2021

Professor, tenured  
Florida Atlantic University  
Department of Biological Sciences  
Boca Raton, FL 33431 USA

2014-2020

Associate Professor, tenured  
Florida Atlantic University  
Department of Biological Sciences  
Boca Raton, FL 33431 USA

2008-2014

Assistant Professor, tenure track  
Florida Atlantic University  
Department of Biological Sciences  
Jupiter, FL 33458 USA

### **Industry Positions**

2015-2019    Founder/Chief Scientific Officer  
Neuro Pharmacology Inc, FAU Tech Runway,  
Boca Raton FL

2013-2016    Founder/Chief Scientific Officer  
Eco Neurologics LLC, FAU Research Park,  
Boca Raton FL

2003-2004    Scientific Imaging Consultant  
Olympus Canada, Toronto, Ontario.

### **Education**

Heart and Stroke Post-Doctoral Fellow  
Department of Biology  
University of Toronto

Completed 2008

Ph.D.	University of Toronto Department of Physiology, College of Medicine	Completed 2003
M.Sc.	Queen's University Department of Biology	Completed 1998
B.Sc. (Hon.)	Queen's University Department of Biology	Completed 1996

## **Administrative Appointment Details**

2010-present in reverse chronological order

***Senior Vice President for Research and Economic Development & Associate Provost at Nova Southeastern University***  
**2021-present**

*Responsibilities:* I am a key executive leader and Cabinet Member that reports directly to the Provost with a dotted line to the President to lead and manage research administration through the Division of Research and Economic Development (DoR), university wide. The DoR has more than 30 staff across 8 offices including Office of Sponsored Programs, Office of Technology Transfer, Office of Research Development, Office of Research Integrity and Compliance, Institutional Review Board, Office of Clinical Research, and the Office of Scientific Services which manages several scientific cores and the 215k sq/ft NSU Center for Collaborative Research. The research portfolio for NSU is currently \$160M in active funding for 270+ grants in 2024. Importantly, my team successfully transformed NSU's research expenditure tracking process, resulting in our National Science Foundation Higher Education Research Data (HERD) expenditures reaching \$50.173M for 2023, more than double the \$24.5M recorded in 2021 when I joined NSU. This achievement has significantly elevated NSU's standing in national rankings.

My responsibilities involve providing visionary leadership to align research activities with the university's strategic business plan and goals, fostering a culture of innovation and excellence, and integrating research with academic programs to enhance NSU's national and international standing. Beyond managing the research portfolio, I actively support faculty in developing competitive research proposals and securing external funding, while ensuring compliance with all federal, state, and university regulations. I regularly report to the Board of Trustees and oversee the effective utilization and expansion of research infrastructure, including advanced laboratories and core facilities, to support cutting-edge research. Additionally, I play a pivotal role in driving initiatives that translate research outcomes into economic opportunities, including technology transfer and commercialization, and in strengthening relationships with industry partners.

*Initiatives*

1. Strategic Campaign for \$500M in Cumulative Research Funding (2010-2025)
  - a. Research Infrastructure Expansion: Increased active research projects with new labs and top-tier researcher recruitment.

- b. Philanthropy Partnerships: Working closely with NSU Advancement, I facilitated record donations, establishing new research center and endowed chair >\$20M.
  - c. Research Collaborations: Fostered interdisciplinary projects, resulting in high-impact publications, patents, and startups.
  - d. Long-Term Vision: Positioned NSU to exceed the \$500M funding goal, ensuring lasting research excellence.
- 2. Reorganization, Branding, and Communications
  - a. Strategic Rebranding: Enhancing NSU Research's identity and visibility.
  - b. Efficiency Overhaul: Streamlined office operations, improving communication and responsiveness.
  - c. Research Expansion: Broadened research scope beyond STEM, encouraging interdisciplinary collaboration.
  - d. Vision-Driven Events: Led key events highlighting NSU's strengths in Cancer, Neuroscience, Autism, and Resiliency.
  - e. Modern Communications: Launched newsletters, annual reports, and a dynamic web presence.
- 3. Moving NSU in Research Rankings
  - a. Towards Achieving R1 Carnegie Foundation Ranking: Created a task force to track expenditure data, driving consistent NSF ranking improvements year after year.
  - b. PhD Program Development: Collaborated with Deans to create competitive, research-intensive PhD programs.
  - c. Healthcare Partnerships: Recruited research-driven physicians and accelerated clinical research funding.
  - d. Data Access Enhancements: Implemented NIH All of Us and streamlined EMR/REDCap systems for research excellence.
- 4. Economic Development Through Strategic Partnerships
  - a. Industry Partnerships: Facilitated technology licensing with external partners, creating new revenue streams.
  - b. Levan Center Collaboration: Partnered with the Levan Center to attract industry partners, driving regional economic growth.
  - c. Healthcare Collaboration: Established research collaboration avenues with healthcare partners, advancing new research revenue and growing clinical research.
  - d. Tri-County Engagement: Actively engaged in regional economic development events, positioning NSU as a key player.
- 5. Current Strategic Planning and Priorities
  - a. National Leaders in Research: Focus on leveraging NSU's core strengths in health care, marine science, and technology. Initiatives include expanding research in cancer, neuroimmune diseases, autism, and environmental sciences.
    - i. Centers and Institutes: Develop and enhance specialized research centers such as the AutoNation Institute for Breast and Solid Tumor Cancer Research and the David and Cathy Husman Neuroscience Institute, which are pivotal in driving cutting-edge research and attracting top-tier talent.

- ii. **Competitive Research Degree Programs:** Strengthen and expand NSU's research-intensive PhD and master's programs, focusing on disciplines that align with NSU's strategic research areas, ensuring these programs are competitive nationally and internationally.
- b. **Research Investment and Expenditure Strategies:** Increase strategic investments in research infrastructure and faculty recruitment to elevate NSU's research profile. This includes targeted funding for new research initiatives and fostering an environment that encourages innovation and discovery to benefit students and faculty.
- c. **Prominent Research Faculty:** Attract and retain distinguished faculty with a strong track record of research excellence and innovation. Focus on recruiting leaders in fields where NSU is poised to make significant impacts, such as biotechnology, environmental sciences, and health care.
- d. **World-Class Research Training Programs:** Develop world-class research training programs that provide students with the skills and knowledge needed to excel in academia, industry, and beyond. This includes hands-on experience in NSU's state-of-the-art research facilities and opportunities for interdisciplinary collaboration.
- e. **State-of-the-Art Research Infrastructure:** Continue to enhance and expand NSU's research infrastructure, including the development of new labs and research spaces equipped with the latest technologies. The goal is to support cutting-edge research that addresses global challenges.
- f. **Distinguished Collaborations and Partnerships:** Forge and strengthen partnerships with industry leaders, government agencies, and other academic institutions to drive collaborative research efforts. This includes working with the Alan B. Levan | NSU Broward Center of Innovation to attract industry partners and support startup companies.

***Associate Vice-President for Strategic Initiatives, Office of the Provost FAU  
2018-2021, 50% appointment (shared)***

*Responsibilities:* Reported directly to the Provost to develop, drive, and maintain special projects at the University to advance international prominence, recruit and retain top students including National Merit Scholar finalists, attract advancement opportunities, and programmatically bridge the University to world renowned external institutes. Served on the Provost Advisory Council and lead the development of university-wide strategic academic programs through facilitating collaborations at the level of the Colleges through the Deans. Developed a task force to facilitate the successful movement of laboratory instruction to remote but facilitating the most FAU-specific and immersive experience for the student. Strategically develop a long-term roadmap for the University to become the top choice of Nation Merit Scholars (NMS) by creating and managing a pathway for unique opportunities unmatched by other universities. Intersected with donors, stakeholders, and government to garner increased financial support to increase student success.

*Initiatives*

1. Worked in partnership with the Max Planck Florida Institute
  - a. see ***Head of Institutional Partnerships*** below
2. Developed unique academic pathways for NMS through Deans and Colleges
  - a. To date, we have increased the University NMS from 6 in 2018 to 50 for Fall 2020
  - b. Med Direct Pathway (BS/MD program)

- c. Business Pathway (BA/MBA program; in development)
  - d. Numerous 4+1 (BA/MA, BS/MS programs)
  - e. Health Administration (BS/MHA; in development)
  - f. BS/PhD programs (in development)
3. Collaborated with local, state, national and international government to increase student success.
  4. Enhanced opportunities with advancement and development team by active as a facilitator for the needs of the donor across academic, research and facility units
  5. Special projects to accommodate global needs of the University through the Provost
    - a. Develop University-wide strategic academic programs
      - i. BS in Data Science and AI spanning 5 Colleges
    - b. Lead task force for bringing laboratories online due to COVID while maintaining FAU-specific curriculum and student immersion
    - c. Develop office for exceptional students to support numerous initiatives such as NMS, external Scholars applications/programs, and grant facilitation.

#### Strategic Planning and Priorities

1. Lobbied for the University in Tallahassee to inform government officials of the strategic strides for FAU's accelerating programs for national merit scholar recruitment through our world-class academic programming.
2. Developed international strategic partnerships in Israel as legislative sister institutions
3. Supported the University's School of Distinction in AI and Data Science through the collaborative development of the Bachelor of Science in Data Science and Analytics across five colleges.
  - a. The collaborative development and project management of the Gruber Sandbox as a University-wide plan for AI and Data Science which was initiated through a \$1M gift.
4. Policy development of shared scientific core infrastructure across multiple institutions on Jupiter campus.
5. Developed internal fiscal methods for enhancing graduate student stipends
6. Served on internal fiscal group to facilitate health insurance for graduate students.

#### Increase student success and graduation rates

1. Supported Key Performance Indices through the reduction of DFW rates, retention rates of high performing students, increased GPA, increased % of graduation in 4 years through the recruitment and retention of high performing students into programs such as the FAU Max Planck Honors Program and the incentive of a Presidential Grant managed through Strategic Initiatives.
2. Worked closely with the FAU Highschool to recruit and retain these students to complete the BS at the University.
3. The collaborative development and project management of a dual enrollment high school, the FAU Max Planck Academy, on the Jupiter campus. Academic flight plans were developed across two colleges and four degree programs, renovations of a student support center were completed over a 12 month renovation phase, and a unique research driven curriculum was developed.

4. Created and managed a presidential grant for the recruitment of NMS.

***Head of Institutional Partnerships at Max Planck Florida Institute (MPFI)  
2018-2021; 50% appointment (shared)***

*Responsibilities:* Reported directly to the CEO and Scientific Director to closely working with the Executive Leadership Team of MPFI to develop, plan, and then lead the implementation of key initiatives that emerge from the strategic planning process. Collaborated to secure funding for these initiatives as well as other Institutes and University priorities by leading, developing and sustaining strong relationships with foundations, corporations, government, and community groups nationally and internationally. Strived for increased funding, international recognition, increased recruiting of world class students and faculty, and increased student success.

*Initiatives*

1. Developed umbrella entity for training within the Max Planck Florida Institute (MPFI)
  - a. Created the Max Planck Academy which houses all training programs within the institute
  - b. Postdoctoral Fellows
  - c. Graduate Student Programs (MS and PhD)
  - d. Post-Bac Program
  - e. FAU Max Planck Honors Program
  - f. Research internships in laboratories
  - g. Highschool Programs
  - h. Specifically manage any program that falls into partnership between FAU and MPFI
2. Strategically develop co-branding initiatives between MPFI and FAU
3. Developed and manage multiple relationship touchpoints between MPFI and FAU
4. Served on the Senior Management Team to advise on partnership initiatives, challenges, and SOPs
5. Served on COVID crisis committee to advise on synergies and “news” between institutions
6. Participate in outreach and marketing
7. Energized the Board of Directors twice a year on accomplishments and plans for partnerships
8. Interfaced with administration in the Max Planck Society to apprise of traditional and novel advances in MPFI practices
9. Interfaced the FAU high school with enrichment from the Max Planck Academy

*Strategic Planning and Priorities*

1. Developed and managed educational programs between FAU and MPFI to enhance student success and world class training
  - a. Integrative Biology PhD (Neuro)
  - b. IMPRS
  - c. MD/PhD Program (in dev)
  - d. FAU MP Honors Program
  - e. FAU Data Science Enrichment Program
  - f. FAU Highschool in Jupiter in partnership with the Max Planck Academy
2. Advised and serve on the Education leadership team at MPFI



3. Advised on co-branding opportunities and challenges
4. Worked with legal for Contract, MoU, and consulting development

*Development/Advancement, Outreach, Public Affairs, Government Affairs*

1. Interfaced with local, state, national and international government leaders to inform and advise on state University and MPFI partnership success
2. Worked with advancement teams from both FAU and MPFI for SOP for partnership opportunities
  - a. Work with Foundation Board members from both institutions
  - b. Directly interact with donors on partnership opportunities for fundraising
  - c. Collaboratively create materials to enhance outreach and donor interests
3. Managed and develop legislative funding projects between MPFI and FAU
4. Interfaced between Public Affairs of both institutions to develop marketing campaigns.
  - a. Successful digital campaign in 2018 for record 2019 recruitment

***Director, FAU Max Planck Honors Program  
2018-2021, 50% assignment (shared)***

*Responsibilities:* Reported Directly to the Provost to tactically build and currently direct the undergraduate FAU Max Planck Honors Program across the college of science and the honors college, and across four-degree programs including majors in Biology, Psychology, Neuroscience and Behavior, and a variety of concentrations in a liberal arts and/or science degree.

*Initiatives*

1. Developed framework for upper division undergraduate Honors Program across two Colleges and 4 Departments.
  - a. Facilitated collaboration between the Honors College and the College of Science.
2. Engaged and collaborated with faculty to embrace and support program with top-rated cutting-edge enrichment courses co-taught by FAU and Max Planck scientists/
3. Successfully integrated and facilitated program proposal through departmental, college, University and senate program committees.
4. Successfully integrated NMS recruitment with FAU Max Planck Honors Program.

*Strategic Planning and Priorities*

1. Created and chaired Max Planck Honors Program development committee
2. Developed and implemented recruitment program for upper year undergraduates and freshmen NMS as a recruiting tool for the University
3. Increase retention and graduation rate through immersion into undergraduate research using academic program paradigms, including a thesis and defense onsite at the Max Planck Institute
4. Increase graduate student recruitment from top-ranked students in undergraduate pool where 50% of the students in the program are NMS

### Increased student success and graduation rates

1. The FAU Max Planck Honors Program is the only undergraduate program in the world officially sponsored by the Max Planck Society, and the students that matriculate through this program are given this designation
2. Students in this program enhance their network across the world
3. Students are exposed to state-of-the-art research and individuals such as Nobel Laureates
4. Students perform research and disseminate this at the Max Planck Florida Institute as a defense of their thesis
5. Increase the recruitment of exceptional students thereby increasing graduation rates and student retention.

### ***Associate Dean of Graduate Studies, College of Science, FAU***

**Jan-May 2018 (responsibilities and signing authority from 2016-2018 due to faculty retirement).**

#### **50% Assignment**

*Responsibilities:* Reported directly to the Dean as an administrative officer for 350+ PhD and MS graduate students across 8 departments managing a budget of ~\$2Million. The associate dean for graduate studies provides vision, leadership and strategic direction, including the management of the College of Science graduate program administration and faculty governance. Responsibilities include fiscal management, student success and retention, curricular management and development, assessment, advising, coordinator supervision, enrollment management, and executive leadership. Served on the executive committee for the College of Science. I also managed a Program Coordinator.

### Initiatives

1. Development and execution of the Master of Science in Marine Sciences degree program. This is a multi-college/campus MS degree centralized at with the research pillar: The Harbor Branch Oceanographic Research Institute (HBOI).
2. Aggregated current Master-Teacher resources through the College and developed strategic plan for enhancing this group
  - a. Developed application for a Master-Teacher grant from the Provost office which was successfully awarded to develop strategic plan.
3. Worked across administrative hierarchy to develop proper management of university credit-hours to enhance fiscal efficiency.

### Strategic Planning and Priorities

1. Development of the PhD for Neuroscience through the integration of portions from three existing PhD programs in the College of Science. This is a strategic initiative to align the College of Science with the Neuroscience research pillar, the FAU Brain Institute, which will use an enormous influx of monetary resources to pay higher stipends, health insurance, and relocation costs to recruit the best students across the nation.
2. Strategic committee leadership across the University in the University Senate, University Graduate Council, University Graduate Programs Committee (chair).

3. Developed a streamlined method for research non-tenure track faculty from the HBOI to become full rather than associate graduate faculty to allow our students the freedom to choose their thesis chair.

#### Increase student success and graduation rates

1. Worked with departments to create streamlined process for MS degree along the way of the PhD matriculation. This increased the number of graduate degrees in the college by over 30% in a single year.
2. Developed a centralized master teacher program incentivized by a successful internal grant.
3. Streamlined credit usage for graduate students. Worked with program directors to reduce number of credit hour overages in programs and reduced this by 20% leading to an overall savings in tuition dollar utilization and allowing us to grow our graduate programs on a flat budget. Further developed policies with the registrar for full-time enrollment categorization when credit hours were reduced for full-time thesis students.

#### ***Associate Director FAU Brain Institute***

#### **2016-2018, 50% Assignment, Directly Reporting the Executive Director**

#### Leadership

1. Hired, trained, and managed FAU Brain Institute Program Coordinator

#### Initiatives

1. Promoted the education and research programs of the Institute to members of the State of Florida Legislature and local government groups, business associations, companies and foundations
2. Coordinated broad advertising of the FAU Neuroscience PhD and affiliated programs at national meetings, scientific conferences and to potential donors
3. Identified opportunities for coordination and integration of the Neuroscience PhD Program with MPFI and Scripps
4. Served on the Brain Institute Internal Advisory Committee comprised of faculty holding other leadership positions within the Institute (e.g. Director of Administrative Operations, Director of Research Operations, Director of Community Outreach)

#### Strategic Planning and Priorities

1. Represented the Director at FAU programmatic meetings and at off-campus events in the event that the Director is unable to represent the Institute and FAU.
2. Advised the Director on the formation of a Neuroscience PhD steering committee, which the Associate Director will oversee, with the Director serving ex officio
3. Oversaw the recruitment and matriculation of graduate students for the Neuroscience PhD Program
4. Advised the Director on appointments of faculty to serve as mentors within the PhD Program and work with the Director on formal procedures for review of the training faculty.

5. Worked with the Director to insure opportunities for entrance and training of underrepresented populations across all Institute-sponsored training programs.

#### Fiscal Resource Management

1. Worked with Director to identify sources of support (e.g. TAs, RAships, external fellowships) for Neuroscience PhD students from institutional, federal, foundation and industry sources.
2. Worked with the Director on the construction, administration and funding of a summer program to attract and mentor future neuroscience researchers whose exposure to FAU can enhance matriculation of talented trainees into the Neuroscience PhD program, as well as increase awareness of Institute educational programming nationally.

#### Increase student success and graduation rates

1. Worked with the Director to develop a new, comprehensive FAU Neuroscience PhD Program, merging existing programs, unifying existing coursework, identifying opportunities to enhance state-recognized performance metrics, identifying needs for new courses and didactic roles for existing and newly recruited faculty, developing procedures for academic advancement, qualification, and the tracking of student performance in accordance with approved academic practices of the University and under the oversight of the office of the Provost.
2. Worked with the Director to develop formal procedures for graduate student mentoring (e.g. committee meetings) and ensure students are informed of needs and opportunities for Responsible Conduct in Research compliance.
3. Developed and served as advisor to a Neuroscience Student Organization (NSO) comprised of Neuroscience PhD program students and other students pursuing Masters and PhDs on neuroscience-relevant projects
4. Worked with Director to determine opportunities to facilitate growth and visibility of the undergraduate neuroscience major.
5. Advised the Director on the structure and execution of an integrated FAU Neuroscience seminar series organized for the benefit of the graduate students and Brain Institute-associated faculty
6. Worked with the Director, NSO and staff on the organization of an annual Neuroscience program retreat

#### ***Associate Director, Integrative Biology PhD Program*** **2013-2016, 25% Assignment, Directly Reporting to the Chair**

#### Initiatives

1. Broadened the accessibility and utility of IB PhD program to students and faculty across numerous scientific areas.
2. Consolidated stakeholders into a fulfilling membership of program
  - a. Develop concentrations that could be managed by nontraditional units
3. Increased visibility of program across the University and the state.
4. Leveraged joint PhD program between Max Planck Florida Institute for national and international recognition, marketing and recruiting

- a. Develop one of the few International Max Planck Research Schools in North America (IMBRS in Brain and Behaviour)
5. Created a program inclusion environment for faculty and students with an annual retreat.

Strategic Planning and Increase student success and graduation rates

1. Built out concentrations in different areas of biological science as concentrations within the IB PhD program
  - a. Successfully expanded from one concentration in Neuroscience to Environmental Science, Marine Science, Biomedical Science, and lastly having core IB as a separate option for students (no concentration).
  - b. Electives were managed by concentration steering committees
  - c. Streamlined committee hierarchy and management across IB degree
2. Deepened partnership with Max Planck Florida Institute for Neuroscience to create program layer (IMPRS) of existing IB Neuroscience PhD.
  - a. Brought in \$1M euros/year to support two PhD program
  - b. Created partnership between FAU, Max Planck Florida Institute, Max Planck Caesar Institute, Bonn, and the University of Bonn Germany.
3. Developed annual Integrative Biology PhD Retreat Day
  - a. Created a “home” for all faculty and students across our numerous disciplines across Integrative Biology.
  - b. Facilitated IB student driven steering committee
  - c. Promoted ownership of event and evolved into a deeper relevance for student leadership within the program.
  - d. Faculty were dragged to this by their students in the beginning years, but now faculty too have a feeling of responsibility and ownership to participate in retreat.
  - e. Successfully worked with students to bring high-end speakers to even such as Nobel Laureates and international prize winners.

***Director, Biological Sciences Honors Program***  
**2010-2013, 10% Assignment, Directly Reporting to the Chair**

Initiatives

1. Developed framework for upper division undergraduate Honors Program in the Department of Biological Sciences
2. Engaged and collaborated with faculty to embrace and support program.
3. Successfully integrated and facilitated program proposal through departmental, college, University and senate program committees.

Strategic Planning and Priorities

1. Created and chaired Honors Program development committee
2. Developed and implemented recruitment program for upper year undergraduates
3. Increase retention and graduation rate through immersion into undergraduate research using academic program paradigms, including a thesis and defense.
4. Increase graduate student recruitment from top-ranked students in undergraduate pool.

### Broader Impact

1. Drove the co-development of the Quality Enhancement Plan (QEP) for University Accreditation that incorporates research plans from successful honors program for the entire University
  - a. This became OURI exemplifying undergraduate research and scholarship as a platform initiative at FAU
2. Coordinate with University Honors Council to develop framework and SoP for upper division Honors Programs at FAU and begin to recruit cross-College and Departmental support.
  - a. We grew the upper division honors programs from 7 to 45 across the University over five years with a framework predicated on the Department of Biological Science honors program.

## Scholarship/Research/Creative Activity

### Summary of Research Area

Adapted animals, such as insects, employ genetic, molecular, and physiological strategies to prevent specific neurological pathologies resulting from stressors such as low oxygen (anoxia), high temperatures (hyperthermia), and high levels of free radicals (oxidative stress). My research program is poised to take advantage of this through the use of a genetically tractable model systems including the fruit fly *Drosophila melanogaster* and the nematode worm *C. elegans*. Our goal is to develop novel methods for maintaining both neural function and survival during such instances.

### Patents

**Dawson-Scully, K; Stille, S;** Lepore, S; Maki, S.L. (2022) BRIDGED BICYCLIC COMPOUNDS AND THEIR DERIVATIVES AS ANTIEPILEPTIC AGENTS AND METHODS OF USE THEREOF. **Provisional** August *United States Patent Office*, Serial number 63/399,312

**Dawson-Scully, K.;** Lepore, S. D.; St. Germain, E. J., **Bollinger, W.;** Maki, S. L. **Sial, N.** (2020) BRIDGED BICYCLIC COMPOUNDS AND THEIR DERIVATIVES AS NEUROPROTECTIVE AGENTS AND METHODS OF USE THEREOF. **Granted** July 2020 *United States Patent Office*, Serial number US10759735B2

**Dawson-Scully K,** Armstrong GAB, Robertson RM., Sokolowski MB (2011). COMPOSITIONS AND METHODS FOR TREATING NEURAL ANOXIA AND SPREADING DEPRESSION **Granted** Sept. 27<sup>th</sup>, 2011. *United States Patent Office*, Serial number US 8,026,217.

**Dawson-Scully K,** Armstrong GAB, Kent C, Robertson RM., Sokolowski MB (2005). THERMOPROTECTIVE COMPOSITIONS OF PKG PATHWAY INHIBITORS AND METHOD

OF USE THEREOF. **Granted** Dec 28<sup>th</sup>, 2010. *United States Patent Office*. Serial number US 7,858,579, B2.

**Refereed Journal Publications (my laboratory underlined)**

Simonson A, Naraine A, Maki S, Nugent K, Lepore S, Dawson-Scully K. 2024 Resveratrol natural product inspired compound as a potent neuroprotectant against acute oxidative stress. *MicroPubl Biol.* 2024 Sep 3;2024:10.17912/micropub.biology.001127. doi: 0.17912/micropub.biology.001127.

Stilley SE, Naraine AS, Yadavalli KP, Maki SL, Jutte EM, Kahn JM, Surtel AA, Lepore SD, Dawson-Scully K. 2023 Bridged bicyclic compounds: Comprehending a novel compound class as potential anti-seizure agents. *Epilepsia. Nov;64(11):2958-2967*

Suthakaran N, Brock T, Naraine A, Gonzalez-Lerma P, Hopkins C, Dawson-Scully K. 2022 Atropine reduces aldicarb-induced sensitivity to *C. elegans* electroshock model. *MicroPubl Biol.* 2022 Aug 8;2022:10.17912/micropub.biology.000621. doi: 10.17912/micropub.biology.000621. eCollection 2022.

Naraine AS, Aker R, Sweeney I, Kalvey M, Surtel A, Shanbhag V, Dawson-Scully K. 2022 Roundup and glyphosate's impact on GABA to elicit extended proconvulsant behavior in *Caenorhabditis elegans*. *Sci Rep.* 2022 Aug 23;12(1):13655. doi: 10.1038/s41598-022-17537-w.

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Douglas S, Dawson-Scully K, and Sokolowski MB. 2005 (Peer Review Review). The neurogenetics and evolution of food-related behaviour. *Trends Neurosci.* Dec; 28(12):644-52.

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Dawson-Scully K, Bronk P, Atwood HL, and Zinsmaier KE 2000. Cysteine-string protein increases the calcium sensitivity of neurotransmitter exocytosis in Drosophila. *J Neurosci.* 20(16): 6039-6047.

Dawson-Scully K, and Robertson RM. 1998. Heat shock protects synaptic transmission in flight motor circuitry of locusts. *NeuroReport* 9(11): 2589-2593.

Dawson JW, Dawson-Scully K, Robert D, and Robertson RM. 1997. Forewing asymmetries during auditory avoidance in flying locusts. *J. Exp. Biol.* 200(17): 2323-2335. [Cover Art]

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## **Books**

**Dawson-Scully K.**, et al. 2015 Neurophysiology (Lab Manual), 102 pages, Dept. of Biological Sciences, FAU Boca Raton, FL – 2<sup>nd</sup> edition distributed 2017

**Dawson-Scully K**, Roy A. 2004. Medical Alert, 47 pages, Bold Print (Learning Through Literacy), *Harcourt Publishing*, Toronto, Ontario - ISBN: 1897096518 [Secondary School Publication]

## **Research Grants Received**

### ***Current Funding:***

#### **NIH R15 GM110651-03**

Synthesis of a Bridged Bicyclic Natural Product Using Allenyl Esters (2020-2024)

Total Award Value: **\$448,000 (Direct \$298,000)**

co-PI (PI: Salvatore Lepore)

### ***Completed Funding:***

#### **NSF 1829243**

Type I - Florida Atlantic University National Science Foundation I-Corps Site

Advancing Entrepreneurship and Innovation (2019-2021)

Total Award Value: **\$254,000 (Direct \$179,000)**

PI: Dawson-Scully

**NSF 1829243**

Type I - Florida Atlantic University National Science Foundation I-Corps Site

**COVID-19 Supplement:** Advancing Entrepreneurship and Innovation (2020-2021)

Total Award Value: **\$44,231**

PI: Dawson-Scully

**Max Planck Florida Institute for Neuroscience**

**Postdoctoral Supplement:** Characterizing the Molecular Mechanisms for Neuroprotection in *D.melanogaster* and *C.elegans*.

Administrative Grant (non-competitive)

Total Award Value: **\$359,703 (2020-2025; deferred 2021)**

PI: Dawson-Scully

**Max Planck Florida Institute for Neuroscience**

Characterizing the Molecular Mechanisms for Neuroprotection in *D.melanogaster* and *C.elegans*.

Administrative Grant (non-competitive)

Total Award Value: **\$625,000 (2018-2023; deferred 2021)**

PI: Dawson-Scully

**Ariel University and FAU Division of Research**

Use of increased HSP expression to reduce seizure activity in *C. elegans*. (2019-2021)

**Total Award Value: \$30,000** (50% to D-S, 50% to Sherman)

PIs: Ken Dawson-Scully and Michael Sherman (Ariel)

**NIH R15 GM110651-02**

Synthesis of a Bridged Bicyclic Natural Product Using Allenyl Esters (2017-2020)

Total Award Value: **\$450,000 (Direct \$300,000)**

co-PI (PI: Salvatore Lepore)

**Pfizer WI225058:** Compound Transfer Program Grant (CTP) (2017-2019)

Establishing a role for Viagra® as an antiepileptic drug using two invertebrate model systems

PI: Dawson-Scully

**Aker Foundation:** Medical Scholars Foundation Grant for Post-Bac N. Sial. (2017-2019)

Total Award Value: **\$10,000**

PI: Dawson-Scully

**FAU Brain Institute Seed Grant:** Synthesis of a Bridged Bicyclic Natural Product Using Allenyl Esters (2018-2019)

Total Award Value: **\$15,000**

PI: Dawson-Scully (Co-PI Lepore)

## **FAU Brain Institute**

Administrative Brain Institute (non-competitive) (2016-2017)

**Total: \$30,000...** \$20k/yr (1.5yrs)

PI Dawson-Scully

Eco Neurologics Inc., Neuroprotection via the PKG Pathway (2013-2018)

**\$353,000 (Direct \$353,000)**

Lead Investigator: Ken Dawson-Scully

## **Service Contributions (since 2010)**

Department level (Biological Sciences, FAU)

- Budget Committee, Biological Sciences, FAU, 2019-2021
- Admissions Committee: Integrative Biology (IB) PhD, FAU, 2013-2021 (Chair 2013-2016)
- Program Committee: Integrative Biology Neuroscience (IBNS) PhD, 2013-2021
- Premedical BS Committee, Biological Sci, FAU, 2018-2020
- Admissions Committees Biological Sciences MS Program, 2013-2017
- Program Committees (3): IB, IBES, MS Programs, FAU, 2013-2017 (Chair IB 2013-2016)
- Environmental Science Program Committee 2016-2017
- Personnel Committee, Biological Sciences, FAU, 2014-2017
- Integrative Biology PhD Retreat Committee, FAU, 2013-2016

College level (Charles E. Schmidt College of Science, FAU)

- Graduate College Dean Advisory Committee, 2019-2021
- Promotion and Tenure Committee, College of Medicine (2018-2021)
- Associate Dean Search Committee, College of Science (CoS), 2018 (Chair)
- College of Science Executive Committee, CoS, 2017-2018
- College of Science Frontiers Speaker Committee, 2016-2020
- Undergraduate Appeals Committee, CoS, 2017
- M.Sc. Marine Science Degree Planning Committee, CoS, 2017-2019
- Graduate College 3MT Steering Committee, FAU, 2016-2020
- College of Science Honors Committee, FAU, 2015-2018
- College Graduate Program Committee, FAU 2014-2019 (Chair 2016-2019)
- Center for Biotechnology Advisory Board (CMBB), FAU, 2013-2018
- College Research Resource Committee, CoS, FAU 2010-2017
- College of Science Disciplinary Appeals Committee, FAU 2016
- Strategic Planning (Goal #1) Undergrad. Education, CoS, FAU 2012
- Undergraduate Neuroscience Curriculum Committee, CoS, FAU, 2010-2011
- Brain Damage and Repair Steering Committee, CoS, FAU 2010
- Undergraduate Academic Steering Committee, CoS, FAU 2010-2011

University level

- NSU Executive Committee 2022-present

- NSU President's Council 2021-present
- NSU Dean's Council, Provost 2021- present
- NSU Faculty Research Advisory Council 2021- present
- NSU Assoc. Dean Research Committee 2021- present
- NSU Academic New Program Committee 2022- present
- FAU Circle of Chairs and Directors, Provost, 2020-2021
- FAU Task force for bringing laboratories to remote learning, Provost, 2020-2021 (Chair)
- FAU Provost Advisory Committee, Provost, 2019-2021
- FAU Jupiter Campus Life Science Initiative Budget Committee, Provost, 2019-2021
- FAU Jupiter Campus Advisory/Coordination Council, President FAU, 2018-2021
- Research Core Oversight Committee, Division of Research FAU, 2017-2021
- National Merit Scholar Recruitment, Provost, 2018-2021
- FAU Max Planck Program Committee (Chair 2018-2021)
- FAU Max Planck Admissions Committee (Chair 2018-2021)
- NSF LEARN Advisory Board, FAU, 2015-2021

#### External

- Palm Beach BDB, Economic Development Committee, 2021-present
- Palm Beach North Chamber Education Committee, 2021-present
- County Life Science Advisory Board, Palm Beach, FL, 2018-present (2021 NSU rep)
- Senior Management Team, Max Planck Florida, 2018-2021
- Max Planck COVID Crisis Committee, 2020-2021
- Education Team, Max Planck Florida, 2018-2021
- International Max Planck Research School (IMBRS) for Brain and Behavior Steering Committee, Selection Committee,
- Teaching Committee, Max Planck, Bonn Germany, 2015-2021
- Legislative Committee, BioFlorida FAU representative, 2012-present
- Max Planck Institutional Biosafety Committee (IBC), MPFIN, 2013-present
- Scripps NSF REU Advisory Board, TSRI, 2013-present
- adhoc Tenure and Promotion U Saskatoon, CANADA (year withheld)
- Business Growth Committee, BioFlorida FAU representative, 2012-2018
- Neuroscience Exchange Program, Max Planck, Gottingen Germany, 2011-2015

#### **Reviewer**

#### **Editorships and Editorial Boards**

Review Editor: *Frontiers in Genomic Physiology*, 2012-2013

#### **Book Reviews**

Neuroscience Textbook (name withheld), Garland Science, Taylor & Francis Group, 2016

#### ***Journals***

American Chemical Society, Neuroscience

American Journal of Physiology-Regulatory, Integrative and Comparative Physiology

Comparative Biochemistry and Physiology

Communicative & Integrative Biology  
eNeuro  
eLife  
Frontiers in Bioscience “Molecular pathways of aging and longevity”  
Fly  
Genes, Brain and Behavior  
Integrative and Comparative Biology  
International Journal of Development Neuroscience  
Journal of Comparative Physiology A  
Journal of Insect Behavior  
Journal of Insect Physiology  
Journal of Neurogenetics  
Journal of Neurophysiology  
Journal of Neuroscience  
Journal of Neuroscience Methods  
Journal of Visual Experimentation  
Neuroscience  
PLoS ONE  
Pharmacology, Biochemistry and Behavior  
Psychopharmacology  
Reproductive Toxicology  
Royal Society Open Science

### ***Funding Agencies***

National Institutes of Health (**NIH**), NCATS Study Section, 2022, 2023, 2024  
Natural Science and Engineering Research Council of Canada **NSERC**, 2014-2017, 2020  
National Aeronautics and Space Administration **NASA**, 2013-2015, 2022  
National Institutes of Health (**NIH**), CSR Study Section, Synapses, Cytoskeleton and Trafficking, 2020  
Biotechnology and Biological Sciences Research Council (**BBSRC**), UK, 2019  
Medical Research Council (**MRC**), UK, 2020  
College of Medicine Biomedical Seed Grants, FAU, 2018  
FAU Brain Institute Seed Grants, 2017  
i-Heal FAU Internal Seed Grants, 2017  
Puerto Rico Science Trust Grants, Puerto Rico, 2016  
FONDECYT, Chile, Research Grants, 2016

### **Other Relevant Activities**

<b>Fellow</b>	Royal Entomological Society 2023- <b>present</b> National Academy of Inventors 2024- <b>present</b>
<b>Member</b>	Society for Neuroscience 1998- <b>present</b> American Physiological Society 2018- <b>present</b> Council of Colleges of Arts & Sciences 2018- <b>present</b>

- Organizer** Protein Kinase G Integrative Symposium, University of Toronto, Toronto, Canada (2013), 35+ attendees
- 3 Exhibits at Tiger Woods Foundation, STEM Honors Conference (2014)
- Co-Organizer** South Florida Drosophila Research Consortium Meeting, Florida Atlantic University (2009, 2012, 2015), 60+ attendees

### **Community/Guest Non-Research Lectures**

- 2022 Keynote: NSU Honors College – The keys to mentorship
- 2020 Keynote: FAU Division of Research Speaker for Postdoctoral Fellows
- 2020 Career Panelist, Max Planck Outreach, Jupiter FL
- 2019 American Heritage Science Complex Opening Speaker, Delray FL
- 2018 Keynote: FAU Division of Research Speaker for Postdoctoral Fellows
- 2018 CoS panel Meeting of the Minds, FAU Student Organization
- 2018 Welcome Speaker, CGPSA, FAU
- 2018 BioFlorida Jupiter Life Science Outreach Speaker
- 2017-2019 National Merit Recruitment American Heritage School
- 2017 FAU High School Speaker: Drug Discover Techniques
- 2016 FAU Tech Runway Business Competition Pitch – Winner: Neuroscience Designee
- 2015 Association of Biology and Biotechnology in Science, FAU, Boca Raton FL
- 2015 Public Seminar to the Palm Beach Business Group: What’s Happening at FAU in Jupiter and Why Flies Like Viagra Too. Jupiter, FL.
- 2014 FAU Foundation Board, Jupiter, FL
- 2014 Angel Forum, Jupiter, FL
- 2013 Waterford Community Center, Jupiter, FL
- 2013 Academic Leadership Symposium, Scripps Research Institute, FL
- 2012 Choosing Academia over Industry, Scripps Research Institute, FL
- 2011 Protecting the effects of Stroke through the use of the fruit fly, Boca Raton Rotary Club.
- 2011 Protecting the effects of Stroke through the use of the fruit fly, The Boca Thinkers Club, Boca Raton FL.
- 2008-2012 Introduction to research in the Dawson-Scully lab, Biomedical Freshmen, FAU.
- 2008-2012 Introduction to research in the Dawson-Scully lab, Premedical Students, FAU.
- 2010 CMBB last minute class filler: Anoxia research and Drosophila, FAU.
- 2010 Cellular Neuroscience and Disease: 1 week of basic neurophysiology lectures, FAU.

### **Invited Scientific Presentations**

- 2020 Controlling the stress tolerance of the nervous system through innovation, Hamilton Health Sciences, Hamilton, Canada.

- 2020 Controlling the stress tolerance of the nervous system through innovation, College of Biological Sciences, Guelph University, Guelph, Canada.
- 2019 Protein Kinase G modulates seizure duration in *C. elegans* using a novel electroconvulsion assay, Bar Ilan University, Israel, June 23<sup>rd</sup>, 2019
- 2019 Protein Kinase G modulates seizure duration in *C. elegans* using a novel electroconvulsion assay, Ariel University, Israel, June 25<sup>th</sup>, 2019
- 2019 Protein Kinase G modulates seizure duration in *C. elegans* using a novel electroconvulsion assay, Hebrew University, Jerusalem, Israel June 24<sup>th</sup>, 2019
- 2019 Drug Discovery Using Invertebrates: Insects as a model system for dissecting mechanisms of migraine. Life Science South Florida Conference Keynote Speaker, FL
- 2018 Keynote and Moderator: BioFlorida Annual Conference: Drug Discovery Panel, FL
- 2018 Novel Models for Drug Discovery for Epilepsy, Epilepsy Foundation, Fort Lauderdale,
- 2018 Use of a PP2A inhibitor to arrest spreading depolarization as a clinical treatment, SIGA, NY
- 2016 Invertebrates, Drug Discovery, and Neuroprotection, BioFlorida Expert Panel (Neurodegeneration), Jacksonville, FL
- 2016 PODCAST People Behind the Science: The Science Behind the Survival Skills of Cells Under Stress, interview, Episode 218, Marie McNeely.
- 2015 Eco Neurologics Inc., Novel drug targets for Migraine: Exploiting PP2A. Pivotal Therapeutics Inc, Toronto, Canada
- 2015 Invertebrate Models of Epilepsy: Uncovering Drugs and Targets for Febrile and Electroconvulsive Seizure. Department of Biology, Florida International University, Fort Laud FL.
- 2014 Invertebrate Models of Epilepsy: Uncovering Drugs and Targets for Febrile and Electroconvulsive Seizure. Department of Neuroscience, TSRI Scripps, Jupiter FL
- 2014 Ca<sup>2+</sup> dynamics in the glia of the NMJ of *Drosophila melanogaster*. CSHL, Summer Course, NY.
- 2013 From Genes to Drugs: The fruit fly as a model system for the discovery of molecules to rescue neural dysfunction and survival from stroke-like injury. Neurons & Networking, Life Science Technology Hub, Max Planck, Jupiter FL
- 2013 Eco Neurologics Inc., a novel drug discovery company exploiting the adaptations of organisms to harsh environments to produce human therapeutics. MAKO Surgical Corporation, BioFlorida, Ft. Lauderdale, FL



- #2013 From Bench side to Bed side, a novel drug discovery platform for drug discovery for neuroprotection. University of Toronto, Department of Zoology, PKGIS, Toronto, Canada
- 2013 From Genes to Drugs: The fruit fly as a model system for the discovery of molecules to rescue neural dysfunction and survival from stroke-like injury. Florida Atlantic University, Department of Chemistry and Biochemistry, FL
- 2012 A novel approach for the treatment of neurological disease. Pivotal Therapeutics, Toronto Ontario, Canada
- 2011 Gleaning *Drosophila* Adaptations: A model for anoxic and hyperthermic neuroprotection., Ave Maria University, Immokalee, FL
- 2011 Neuroprotection: Using *Drosophila* for Drug Discovery, Enterprise Development Corporation, Boca Raton, FL
- 2011 Rescuing Stroke-Like Injury in Adult *Drosophila*, Max Planck Institute, Gottingen, Germany
- 2011 Controlling Environmental Stress on the Nervous System, Scripps Institute, Jupiter, FL
- 2010 Controlling Stress: The Spineless Sheds Light on the Vertebrate, Max-Planck Florida Institute and FAU Neuroscience Symposium, FAU, Boca Raton, FL.
- 2010 Function vs. Survival: Neuroprotection and the cGMP-PKG Pathway, Department of Biology, University of Miami, Miami, FL.
- 2010 Drug delivery and screens using a novel volatilization technique: Torrey Pines Research Institute, Port St. Lucie, FL
- 2009 The PKG pathway and its overlap with preconditioning during anoxic stress, SE Florida *Drosophila* Consortium, Florida Atlantic University, Boca Raton, FL.
- 2008 Rapid mechanisms for the protection of neural function during hyperthermic stress, Department of Biology, Florida Atlantic University, Boca Raton, FL.
- 2007 Uncovering endogenous protection mechanisms of neural function during hyperthermic stress, Department of Biology, York University, Toronto, ON.
- 2006 Genes to Behaviour: Testing the Limits of Neural Function during Stress, Department of Biology, University of Western Ontario, London, ON.
- 2006 The Inheritance and Genetic Analysis of Complex Phenotypes, Department of Biology, University of Western Ontario, London, ON.

- 2006 Protein Kinase G (PKG) Pathways Mediate Neural Thermoprotection as well as Foraging Behaviours in *Drosophila*, Division of Cell Biology, MRC Laboratory of Molecular Biology, Cambridge UK.
- 2006 Upper Body Motion Analysis and Anatomy of Over-arm Throwing, Brock University, Department of Physical Education and Kinesiology.
- 2006 Perspectives on Rapid Thermoprotection of Synaptic Transmission. University of Toronto, Department of Physiology, Neuroscience Grouping.
- 2005 Beating the Heat: Rapid Thermoprotection of Synaptic Transmission. University of Toronto at Mississauga (UTM), Biology Department.

### **Conference Presentations**

- 2021 Nirthieca Suthakaran, Jonathan Wiggins, Andrew Giles, Karla Opperman, Ken Dawson-Scully, Brock Grill, O-GlcNAc Transferase OGT-1 and the Ubiquitin Ligase EEL-1 Modulate Seizure Susceptibility in *C. elegans*, FASAB, Experimental Biology [Oral Presentation]
- 2021 Akshay Naraine, Isis Sweeney, Rebecca Aker, Venkatesh Shanbhag, Ken Dawson-Scully, Roundup® and Glyphosate Exposure Elicits Proconvulsant Behavior in *C. elegans*, FASAB, Experimental Biology [Poster Presentation]
- 2019 Kelly, S and Dawson-Scully K. Assessing locomotion and survival of *Drosophila melanogaster* in an age-related hypoxia tolerance assay IBANGS 21<sup>st</sup> International Behavioral and Neural Genetics Society, Edinburgh, Scotland.
- 2019 Sial N, Bollinger W, St. Germain E, Maki S, Lepore S, Dawson-Scully K. A novel resveratrol analog protects synaptic transmission from acute oxidative stress at the *Drosophila* neuromuscular junction, Jupiter FL, Scripps Research Institute *Drosophila* Research Consortium [ORAL]
- 2019, John C., Nambu, J., Dawson-Scully K, Flies on Fire: Capsaicin mediated grooming in *Drosophila melanogaster* Flies on the Beach 2019, May 2019; Scripps Research Institute; Jupiter, FL [Poster]
- 2019, John C., Nambu, J., Dawson-Scully K, Capsaicin mediated grooming in *Drosophila melanogaster* FAU Graduate Association Research Day 2019, April 2019; FAU; Boca Raton, FL [Poster]
- 2019, John C., Nambu, J., Dawson-Scully K, Flies on Fire: Capsaicin mediated grooming in *Drosophila melanogaster* Max Planck Sunposium 2019, March 2019; Max Planck Florida Institute for Neuroscience; Palm Beach, FL [Poster]
- 2019, John C., Nambu, J., Dawson-Scully K, Analysis of pruritogen induced grooming behavior in *Drosophila melanogaster* Synapse 2019, January 2019; Max Planck Florida Institute; Jupiter, FL [Poster]

2019, John C., Nambu, J., Murphey R.K. Dawson-Scully K, Flies on Fire: Capsaicin mediated grooming in *Drosophila melanogaster* FAU Graduate Association Research Day 2019, April 2019; FAU; Boca Raton, FL [Poster]

2018 Sial N, Bollinger W, St. Germain E, Maki S, Lepore S, Dawson-Scully K. A novel resveratrol analog protects synaptic transmission from acute oxidative stress at the *Drosophila* neuromuscular junction, Society for Neuroscience (SfN), San Diego, CA. [POSTER]

2018 Sial N, Bollinger W, Dawson-Scully K. BK channels and cGMP-dependent protein kinase (PKG) function via independent mechanisms to protect synaptic transmission from acute oxidative stress, Synapse, Max Planck Florida Institute for Neuroscience. [POSTER]

2018 Maki S, Bollinger W, St. Germain E, Sial N, Dawson-Scully K, Lepore S. Bridged bicyclic compounds and their derivatives as neuroprotective agents, Tech Runway Inaugural Research Showcase, Florida Atlantic University. [POSTER]

2018 Gurtejpal Ghuman, Samantha Maki, Elijah St Germain, Wes Bollinger, Ken Dawson-Scully, Salvatore Lepore Synthesis and optimization of [3.2. 1] bicyclic compounds as potential neuroprotective agents Abstracts of Papers of the American Chemical Society 256. [POSTER]

2018, Samantha\*, Wesley Bollinger, Ken Dawson-Scully, Pradip Maity, Salvatore Lepore. "Studies toward the total synthesis of vitisinol D and evaluation of its analogs as neuroprotective agents." Abstracts of Papers of the American Chemical Society 255. [POSTER]

2018, John C., Nambu, J., Murphey R.K. Dawson-Scully K, Flies on Fire: Capsaicin mediated grooming in *Drosophila melanogaster* Flies on the Beach 2018, May 2018; Florida International University; Miami, FL [Student Talk]

2018 Murphey, K., Ja, WW., Dawson-Scully, K. 2018 Using light to control meal size, Frontiers in Science Public Lecture Series, Osher Lifelong Learning Institute, Boca Raton FL [(Student Talk)]

2018 Kelly S. Dawson-Scully K., Flies on the Beach Symposium Assessing locomotion and survival of *Drosophila melanogaster* in an age-related hypoxia tolerance assay [POSTER]

2018 Kelly S. Dawson-Scully K., Synapse, Society for Neuroscience Chapter Conference at MPFI, Jupiter, FL Assessing locomotion and survival of *Drosophila melanogaster* in an age-related hypoxia tolerance assay [POSTER]

2018, John C., Nambu, J., Murphey R.K. Dawson-Scully K, Analysis of pruritogen induced grooming behavior in *Drosophila melanogaster* Integrative Biology PhD Retreat 2018, February 2018; FAU; Boca Raton, FL [Poster]

2018, John C., Nambu, J., Dawson-Scully K, Analysis of pruritogen induced grooming behavior in *Drosophila melanogaster* Synapse 2018, February 2018; Max Planck Florida Institute; Jupiter, FL [Poster]

2017 Singh S, Nambu R., Dawson-Scully K., Investigating the role of SoxN in the development of adult nervous system development, Max Planck Sunposium, Florida

2017 Risley M, Dawson-Scully K Modulating behavior in *C. elegans* using electroshock and antiepileptic drugs Max-Planck Florida Institute (MPFI) Sunposium, West Palm beach, FL: Poster

2017 Mahneva O and Dawson-Scully PKG Fest International Meeting, Boca Raton, oral presentation

2017 Mahneva O and Dawson-Scully Sunposium Neuroscience Conference, West Palm Beach, Florida, poster presentation

2017 Mahneva O and Dawson-Scully 3MT Heat Competition participant, oral presentation "Oxygen: life, death, and flies"

2017 Mahneva O and Dawson-Scully Integrative Biology Course at FAU, invited speaker

2017 Bollinger, Wesley\* and Ken Dawson-Scully. 2017. "Protein Kinase G (PKG) Functions Through Downstream K<sup>+</sup> Channels to Modulate Synaptic Transmission's Tolerance for Acute Oxidative Stress at the *Drosophila* Neuromuscular Junction". Sunposium, West Palm Beach, Florida, February, 2017.

2017 John C., Nambu, J., Dawson-Scully K, Analysis of pruritogen induced grooming behavior in *Drosophila melanogaster* Brain Institute NSO 2017, December; FAU; Boca Raton, FL [Poster]

2017 John C., Nambu, J., Dawson-Scully K, Analysis of pruritogen induced grooming behavior in *Drosophila melanogaster* Integrative Biology Retreat 2017, February; FAU; Boca Raton, FL [Poster]

2017 John C., Nambu, J., Dawson-Scully K, Analysis of pruritogen induced grooming behavior in *Drosophila melanogaster* Max Planck Sunposium, February; Max Planck Florida Institute; Palm Beach, FL [Poster]

2017, John C., Nambu, J., Dawson-Scully K, Analysis of pruritogen induced grooming behavior in *Drosophila melanogaster* Flies on the Beach, May; Jupiter, FL [Poster]

2016 John C, Rodney K. Murphey and Ken Dawson-Scully and John R. Nambu, 2016, Analysis of pruritogen induced grooming behavior in *Drosophila melanogaster*, Genetics Society of America (GSA), Orlando FL [Poster]

2016 Singh S, Ken Dawson-Scully and John R. Nambu, 2016, Investigating the role of Sox Neuro in the development of adult nervous system, Genetics Society of America (GSA), Orlando FL [Poster]

2016 John C., Nambu, J., Murphey R.K. Dawson-Scully K, Pruritic (Itch) response in the nervous system of *Drosophila melanogaster* Max Planck Sunposium, March, Palm Beach FL [Poster]

2016 Murphy KR, Sonali A. Deshpande, James P. Quinn, Jennifer L. Weissbach, Alex C. Keene, Ken Dawson-Scully, Robert Huber, Seth M. Tomchik, William W. Ja, 2016, Postprandial sleep mechanics in *Drosophila*. Genetics Society of America (GSA), Orlando FL [Poster]

2015 Singh S, Nambu R., Dawson-Scully K., Expression and function of Sox Neuro (a Group B Sox gene) in the development of the *Drosophila* adult nervous system, Society of Neuroscience, Chicago-IL.

2015 Singh S, Nambu R., Dawson-Scully K., Expression of Sox Neuro in the development of the adult nervous system, Max Planck Sunposium, Jupiter-FL

2015 Singh S, Nambu R., Dawson-Scully K., Expression and function of Sox Neuro (a Group B Sox gene) in the development of the *Drosophila* adult nervous system, Genetics Society of America *Drosophila* Research Conference, March, Orlando, FL [Poster]

2015 Caplan S, Zheng B, Krill J, White C, Dawson-Scully K, West L, 2015, Discovery of marine natural products using *Drosophila* Calcium Imaging and Optogenetics. American Society for Pharmacology (ASP), Boulder, CO [Poster and Oral]

2015 Risley M, Dawson-Scully K Bonn International Symposium 2015, Invited Talk November 2015 Awarded Presentation and DAAD Travel Grant. Controlling electroconvulsion in *D. melanogaster* and *C. elegans* Diez, Germany [Funded Invited Talk]

2015 Risley, M, Kelly S, Minnerly J, Jia K, Dawson-Scully K, 2015, PKG decreases electroconvulsive seizure recovery time in *D. melanogaster* and *C. elegans* NEURIZONS, Max Planck, Gottingen, Germany [Poster]

2015 Risley M, Dawson-Scully K Controlling electroconvulsive seizure recovery time in *D. melanogaster* and *C. elegans* Max-Planck Florida Institute (MPFI) Sunposium, Palm Beach Gardens, FL: Poster

2015 Risley M, Dawson-Scully K Controlling electroconvulsive seizure recovery time in *D. melanogaster* and *C. elegans* Synapse, Society for Neuroscience Chapter Conference at MPFI, Jupiter, FL: Poster

2015 Kelley T, Snyder S, Dawson-Scully K, 2015 Assessment of Neuroprotective Properties of Trans-Resveratrol and Its Oligomeric Natural Products in *Drosophila melanogaster*, *Drosophila* SE Consortium, Jupiter FL [Poster]

2015 Krill J., Dawson-Scully K. 2015 Glial and neuronal contributions to neuroprotection during acute stress March Max Planck Florida Institute Sunposium: Poster Presentation

2015 Krill J., Dawson-Scully K. 2015 Glial and neuronal mechanisms of neuroprotection via PKG pathway modulation, November BIGS Neuroscience Symposium, Diez Germany: Invited International Talk

2015 Krill J., Dawson-Scully K., Characterization of novel stimulus-induced glial Ca<sup>2+</sup> waves in the *Drosophila* peripheral nervous system Flies on the Beach (*Drosophila* Neuroscience) Jupiter FL: Poster Presentation

2015 John C., Nambu, J., Murphey R.K. Dawson-Scully K, Pruritic (Itch) response in the nervous system of *Drosophila melanogaster* Society for Neuroscience, October, Chicago IL [Poster]

2015 John C., Nambu, J., Murphey R.K. Dawson-Scully K, Behavioral Analysis of Pruritus Response in *Drosophila*, Synapse Conference, January, Jupiter FL [Poster]

2015 John C., Nambu, J., Murphey R.K. Dawson-Scully K, Analysis of Pruritic (Itch) Response in *Drosophila* Genetics Society of America *Drosophila* Research Conference, March, Orlando, FL [Poster]

2014 Risley M, Dawson-Scully K, Electroconvulsive seizure duration is mediated by the cGMP/PKG pathway Flies On The Beach (*Drosophila* neuroscience), The Scripps Research Institute, Jupiter, FL: Talk

2014 Risley M, Dawson-Scully K, Electroconvulsive seizure duration is mediated by the cGMP/PKG pathway Graduate and Professional Student Association Research Day: Poster

2014 Risley M, Dawson-Scully K, Electroconvulsive seizure duration is mediated by the cGMP/PKG pathway FAU College of Science Research Day: Poster

2014 Murphey K, Bruce K, Dawson-Scully K, Ja, W 2014 Core clock genes modify sleep-feeding axis, TSRI Scripps, Jupiter FL [Poster]

2014 John C., Nambu, J., Murphey R.K. Dawson-Scully K, Behavioral Analysis of Pruritus Response in *Drosophila* Genetics Society of America *Drosophila* Research Conference, March, San Diego CA [Poster]

2014 Singh S, Nambu R., Dawson-Scully K., Characterization of Group B Sox genes in Development of *Drosophila* Adult Nervous System, Genetics Society of America, San Diego-CA.

#2014 Risley, M, Kelly S, Minnerly J, Jia K, Dawson-Scully K, 2014, PKG decreases electroconvulsive seizure recovery time in *D. melanogaster* and *C. elegans* HORIZONS, Max Planck, Gottingen, Germany [Funded Invited Talk]

2014 Krill J., Dawson-Scully K Glial and neuronal mechanisms of neuroprotection via PKG pathway modulation Max Planck Florida Institute Symposium: Poster Presentation

2014 John C., Nambu, J., Murphey R.K. Dawson-Scully K, Behavioral Analysis of Pruritus Response in *Drosophila*, College of Science Research Day, March, Boca Raton FL [Poster]

2013 Murphy, KR, JL Weissbach, CF Trivigno, A Amador, BE Hunter, M Madrigal, KD Dawson-Scully, WW Ja. 2013 *Drosophila* prandial behavior—a new paradigm for invertebrate feeding. SSIB, New Orleans, LA [Poster]

2013 Trivigno, CF, Murphy, KR, Amador, A, Hunter, BE, Madrigal M, Dawson-Scully K, and Ja WW 2013 Genetic dissection of adult *Drosophila* prandial behavior. Cell Symposia: Genes, Circuits and Behavior, Toronto ON [Poster]

2013 Krill J, Rossano A, Macleod GT, and Dawson-Scully K. 2013 The characterization of glial and neuronal mechanisms in the modulation of neuroprotection via the PKG pathway. Cell Symposia: Genes, Circuits and Behavior, Toronto ON [Poster]

2013 Makhnyeva, O, Dawson-Scully, K and Milton, SL, Effects of cGMP-dependent protein kinase signaling in *Drosophila* S2 cells subjected to anoxia and oxidative stress, Cell Symposia: Genes, Circuits and Behavior, Toronto ON [Poster]

2013 Risley M, Murphey K., Dawson-Scully, Automated measurement of the modulation of anoxia tolerance in adult *Drosophila* via protein kinase G (PKG), Cell Symposia: Genes, Circuits and Behavior, Toronto ON [Poster]

2013 Murphy, KR, JL Weissbach, CF Trivigno, A Amador, BE Hunter, M Madrigal, KD Dawson-Scully, WW Ja. 2013 *Drosophila* prandial behavior—a new paradigm for invertebrate feeding. PKGIS, Toronto [Oral]

2013 Krill J, Rossano A, Macleod GT, and Dawson-Scully K. 2013 The characterization of glial and neuronal mechanisms in the modulation of neuroprotection via the PKG pathway. PKGIS, Toronto [Oral]

2013 Makhnyeva, O, Dawson-Scully, K and Milton, SL, Effects of cGMP-dependent protein kinase signaling in *Drosophila* S2 cells subjected to anoxia and oxidative stress, PKGIS, Toronto [Oral]

2013 Risley M, Murphey K., Dawson-Scully, Automated measurement of the modulation of anoxia tolerance in adult *Drosophila* via protein kinase G (PKG), PKGIS, Toronto [Oral]

2013 Benasayag R and Dawson-Scully K. 2013 Neuroprotection during anoxic stress in *Drosophila melanogaster*: the role of PKG Pathway on protection of function and survival. South Florida *Drosophila* Consortium Meeting, University of Miami [Oral]

2013 Caplan S, Milton, SL, and Dawson-Scully K. 2013 A cGMP-dependent kinase (PKG) controls synaptic transmission tolerance to acute oxidative stress at the *Drosophila* larval neuromuscular junction. Harbor Branch, FL. Center of Excellence in Biomedical and Marine Biotechnology Symposium. [Oral]

2013 Caplan S, Milton, SL, and Dawson-Scully K. 2013 A cGMP-dependent kinase (PKG) controls synaptic transmission tolerance to acute oxidative stress at the *Drosophila* larval neuromuscular junction. Sunposium, Max Planck FL [Poster]

2013 Krill J, Rossano A, Macleod GT, and Dawson-Scully K. 2013 The characterization of glial and neuronal mechanisms in the modulation of neuroprotection via the PKG pathway. Sunposium, Max Planck FL [Poster]

2013 Benasayag R and Dawson-Scully K. 2013 Neuroprotection during anoxic stress in *Drosophila melanogaster*: the role of PKG Pathway on protection of function and survival. Sunposium, Max Planck [Poster]

2013 Rios L, Dawson-Scully K, and Stackman, W. 2013 Modulating rodent spatial memory by altering hippocampal PKG. Sunposium, Max Planck FL [Poster]

2012 Makhnyeva, O, Dawson-Scully, K and Milton, SL, Effects of cGMP-dependent protein kinase signaling in *Drosophila* S2 cells subjected to anoxia and oxidative stress, Sunposium, Max Planck FL [Poster]

2012 Benasayag R and Dawson-Scully K. 2012 Neuroprotection during anoxic stress in *Drosophila melanogaster*: the role of PKG Pathway on protection of function and survival. South Florida *Drosophila* Consortium Meeting, Boca Raton [Poster]

2012 Krill J, Rossano A, Macleod GT, and Dawson-Scully K. 2012 The characterization of glial and neuronal mechanisms in the modulation of neuroprotection via the PKG pathway. South Florida *Drosophila* Consortium Meeting, Boca Raton [Oral]

2012 Caplan, SL., Milton, SL., Dawson-Scully K, 2012, Rapid Neuroprotection from Acute Oxidative Stress. South Florida *Drosophila* Consortium Meeting, Boca Raton [Poster]

2012 Benasayag R and Dawson-Scully K. 2012 Neuroprotection during anoxic stress in *Drosophila melanogaster*: the role of PKG Pathway on protection of function and survival. IBRO Max Planck Symposium, FL [Poster]

2012 Krill J, Rossano A, Macleod GT, and Dawson-Scully K. 2012 The characterization of glial and neuronal mechanisms in the modulation of neuroprotection via the PKG pathway. IBRO Max Planck Symposium, FL [Poster]

2012 Caplan, SL., Milton, SL., Dawson-Scully K, 2012, Rapid Neuroprotection from Acute Oxidative Stress. . IBRO Max Planck Symposium, FL [Poster]

2011 Caplan, SL., Milton, SL., Dawson-Scully K, 2011, Rapid Neuroprotection from Acute Oxidative Stress. Enterprise Development Corporation, Boca Raton, FL [Poster]

2011 Krill, C. Xiao, R. Robertson, K. Dawson-Scully, 2011, Expression of Hsp70 in neurons or glia protect neural function during acute hyperthermia, South East Neuroscience Conference, St. Augustine, FL. [Poster]

2011 Benasayag-Meszaron, R, M. Fendrich, R. Murphey, K. Dawson-Scully, 2011, Temperature and aging: Factors that affect the “protective coma” adaptation during drowning of adult *Drosophila*, South East Neuroscience Conference, St. Augustine, FL. [Poster]



2011 Chen, A.J. E. Kramer, L. Purpura, J. Krill, J. Atallah, J. Levine, T. Zars, K. Dawson-Scully, 2011, Natural variation at the foraging locus influences thermotolerance in adult *Drosophila melanogaster*, South East Neuroscience Conference, St. Augustine, FL. [Poster]

2010 Caplan, SL., Milton, SL., Dawson-Scully K, 2010, Rapid Neuroprotection from Acute Oxidative Stress. South Florida *Drosophila* Consortium Meeting. University of Miami. [Oral].

2010 Bartlett, R., Dawson-Scully K., Milton SL., 2010., The Effects of Manipulating the PKG Pathway in the Anoxia Tolerant Freshwater Turtle (*Trachemys scripta*). South Florida Biomedical Conference, Miami [Poster]

#2010 Milton, SL., Dawson-Scully K., 2010, Neuroprotection by cGMP/PKG mechanisms in two anoxia tolerant animal models: fruit fly and freshwater turtle. Society for Experimental Biology, Prague. [Oral]

2009 Trivigno, C., Haerry, T.E. and Dawson-Scully, K., 2009 Mutations in the *Drosophila* mitochondrial translation elongation factor iconoclast result in developmental abnormalities and increased sensitivity to acute stress. Neurobiology of *Drosophila* Meeting, Cold Spring Harbor Laboratories. [Poster]

2009 Trivigno, C., and Dawson-Scully, K., 2009 Identification and characterization of the *Drosophila* mitochondrial translation elongation factor iconoclast. 1st Annual South Florida *Drosophila* Consortium Meeting, Boca Raton. [Oral]

2009 Krill, J., Xiao, C., Robertson, R.M., Dawson-Scully, K, 2009 Expression of HSP70 in neurons or glia protect neural function during acute hyperthermia, Society for Neuroscience, Chicago: 776. [Poster]

2009 Kesaraju S, Weissbach H, Dawson- Scully K, Ayyanathan K 2009 SULINDAC ENHANCES DCA MEDIATED CANCER KILLING THROUGH INCREASED OXIDATIVE STRESS, Poster, Cell Death Meeting, Cold Spring Harbor. [Poster]

2008 Armstrong, Gary A.B., Juan Lopez-Guerrero, Ken Dawson-Scully, Fernando Pena, Meldrum Robertson. 2008 PKG ACTIVATION INCREASES SENSITIVITY OF MOUSE RESPIRATORY RHYTHM GENERATION TO HYPOXIC AND HYPERTHERMIC STRESS. Second Annual Meeting of the Canadian Association for Neuroscience. Abstract No.: A-E1168 [Poster]

2007 Dawson-Scully K, Ferreira F, Sokolowski MB. 2007 Coping with Stress: Comparative analyses of stress tolerance of neural function and survival in adult *Drosophila melanogaster* due to natural alleles of the *foraging* gene. Cold Spring Harbor Meeting of *Drosophila* Neurobiology: p.55.

2006 Dawson-Scully K. Kent C, and Sokolowski MB, 2006, Protein Kinase G (PKG) pathways mediate neural thermoprotection as well as foraging behaviours in *Drosophila*, The University of Manchester UK, 2<sup>nd</sup> Annual Conference on the Neurogenetics of Behaviour (Manchester Maggot Meeting). P.5.

2005 Dawson-Scully K, Kent C, Armstrong GAB, Robertson, RM, Sokolowski MB. 2005 Rapid protection of neural function via PKG inhibition. Cold Spring Harbor Meeting of *Drosophila* Neurobiology: p.51.

2002 Dawson-Scully K, P. Bronk, Z. Nie, H.L. Atwood, KE. Zinsmaier 2002 Functional domains of *Drosophila* cysteine string protein mediate differential effects at nerve terminals. Heat Shock Protein Symposium, Erindale, University of Toronto: p.32.

2001 Bronk P, KD. Dawson-Scully, Z. Nie, HL. Atwood, KE. Zinsmaier. 2001 Opposing functions of *Drosophila* cysteine string protein at nerve terminals. Cold Spring Harbor meeting of *Drosophila* Neurobiology. p.22.

2001 Song W, R. Ranjan, P. Bronk, Z. Nie, K. Dawson-Scully, Y. Lin, L. Seroude, HL. Atwood, S. Benzer, and KE. Zinsmaier 2001 Methuselah, a putative G protein-coupled receptor, regulates excitatory neurotransmitter exocytosis at the larval neuromuscular junction of *Drosophila*. Cold Spring Harbor meeting of *Drosophila* biology, p.251.

2001 Macleod GT, S. Karunanithi, KD. Dawson-Scully, MP. Charlton, HL. Atwood. 2001 New calcium imaging techniques for the neuromuscular junction of *Drosophila*: Testing the need for synaptic vesicles in calcium channel function. Cold Spring Harbor meeting of *Drosophila* Neurobiology. p.35.

2001 Bronk, P, K Dawson-Scully, J. Wenniger, X Guo, HL. Atwood, and KE. Zinsmaier. 2001 Cysteine-String Protein Cooperates with Hsc70-4 in Neurotransmitter Exocytosis. 42nd Annual *Drosophila* Research Conference, Washington, D.C.

2000 Bronk, P, K Dawson-Scully, J. Wenniger, HL. Atwood, and KE. Zinsmaier. 2000 Cysteine-String Protein Cooperates with Hsc70 to Mediate Multiple Functions in Neurotransmitter Exocytosis. Gordon Conference: "Cell Biology of the Neuron", Plymouth, NH.

2000 Dawson-Scully K, AG. Millar, KE. Zinsmaier, P. Bronk, and HL. Atwood 2000 Resting intracellular calcium levels increase with temperature in boutons of the neuromuscular junction of *Drosophila* lacking cysteine string proteins. Society for Neuroscience. 398.2.

2000 Dawson-Scully K, AG. Millar, KE. Zinsmaier, P. Bronk, and HL. Atwood 2000 Resting intracellular calcium levels increase with temperature in boutons of the neuromuscular junction of *Drosophila* lacking cysteine string proteins. University of Western, Southern Ontario Neuroscience Association, London, Ontario, June. p. 16.

2000 Bronk P, KD. Dawson-Scully, HL. Atwood, KE. Zinsmaier 1999 The loss of evoked neurotransmitter release in *Drosophila* cysteine string protein null-mutants cannot solely be attributed to a defect in calcium entry. Cold Spring Harbor meeting of *Drosophila* Neurobiology. p.37.

1999 Dawson-Scully K, KE. Zinsmaier, H. Kwan, and HL. Atwood 1999 Lack of calcium influx does not explain temperature sensitive block of synaptic transmission in *Drosophila* lacking cysteine string proteins. Society for Neuroscience. 694.7.

1999 Dawson-Scully K, Zinsmaier, K., Robertson, RM., Atwood, HL. 1999 Lack of calcium influx does not explain temperature sensitive block of synaptic transmission in *Drosophila* lacking cysteine string proteins. *Frontiers in Physiology*, University of Toronto, Toronto, Ontario. p.15.

1998 Dawson-Scully K. 1998 Protective effects of heat shock on synaptic transmission in the flight circuitry of *Locusta migratoria*. Meeting of the East Coast Nerve Net, Woods Hole, MA.

1996 Robertson RM., Gray, JR. and Dawson-Scully, K. 1996 Adaptive responses to heat stress in the neural system controlling locust flight. Proceedings 17th Annual conference: European Society for Comparative Physiology and Biochemistry. p.60.

## **Courses Taught while at FAU and a Brief Course Description**

### **Cold Spring Harbor Laboratory (2014)**

In 2014 I coordinated the Ca<sup>2+</sup> imaging component of the **Drosophila Neurobiology course at CSHL as an invited Speaker**. This was a two-day component that taught 15 students advanced neurophysiological and behavioral preparations. Experts in the field are invited to this course each year to teach such components and our travel, accommodations, and expenses were paid.

### **BSC 6936: Advanced / Neurophysiology, Spring 2012-2017 (Instructor)**

This is an advanced course developed and taught with Max Planck designed to teach graduate students both the theory and the actual practice of using complex neurophysiological techniques. This is likely one of the only courses in the state of Florida where students can learn the skill of recoding from a single cell using patch-clamp and sharp electrodes, but as well as recording from the brain of a freely moving mouse at the hippocampus.

### **PSB 6345: Neuroscience 1, Fall 2010-2013 (co-Instructor)**

This course gives graduate students the foundation to understand Neuroscience from the single cell to the whole brain. This is a critical gateway course for all graduate neuroscience students.

### **PCB 4843C/BSC 6936: Practical Cell Neuroscience, Spring/Summer 2010-2019 (Instructor)**

I developed this course to incorporate both cellular neurophysiological theory with practical application using computer lab simulations. This course is designed to give the students a foundation of cellular neuroscience along with a tool to test their scientific inquiries. A major component of this course is the novel development of a research question the students test and write a major report on. Topics have varied from the attempt to cure multiple sclerosis to the effect of climate change on fish behavior.

### **BSC 6905: Neuroscience Journal Club, Summer 2010-2011 (co-Instructor)**

This course was co-developed to introduce graduate students pursuing neuroscience degrees to the most cutting-edge research in the field through the review of current manuscripts.

**BSC 6905: Neuroscience Seminar, Fall 2009, Fall 2010, Spring 2011 (co-Instructor)**

Neuroscience Seminar is a responsibility of neuroscience faculty on a voluntary rotating basis to expose both students and faculty to cutting edge unpublished research through external speakers.

**BSC 4917/4918 Honors Research/Thesis Program: Spring 2009, Fall 2009, Spring 2010, Fall 2010, Spring 2011, Fall 2011 (co-Instructor)**

I co-developed this program with Rod Murphey and Evelyn Frazier to build a resilient Honors Program in Biological Sciences that teaches undergrads the techniques and skills required to perform independent laboratory research. This program was extremely successful and used as a model for the University-wide QEP now implemented.

**BSC 4930/6936: Cellular Neuroscience and Disease, Fall 2008, Fall 2009 (co-Instructor)**

CN&D was taught to expose students to the basis of a number of neurological diseases in both humans and animals. This course had a mixed curriculum of standard lectures, manuscript discussions, proposals, and final reports.

## **Mentoring and Training (bold = current)**

**Post-docs, visiting Fellows, post Bacs**

<b>Scarlet Park</b>	<b>(Fall 2023 – present; postdoc lab head)</b>
Anant Jain	(Fall 2019 – Fall 2021; postdoctoral fellow)
Shweta Singh	(Fall 2016 – Fall 2018; postdoctoral fellow)
Nadia Sial	(Fall 2017 – Spring 2020; post-bac)
Stacey Lee Caplan	(Dec 2015 - Spring 2017; postdoctoral fellow)

**Chair for Ph.D. Students**

<b>Paul Scarpinato</b>	<b>(Fall 2019- present)</b>	<b>IB PhD Student</b>
Samantha Stilley	(Fall 2020 – Spring 2023)	IBNS PhD Graduated
Paola Gonzalez	(Fall 2020 – Fall 2024)	IBBS PhD Graduated
Nirthieca Suthakaran	(Spring 2019 – Fall 2022)	IB PhD Graduated
Akshay Naraine	(Fall 2018 – Spring 2023)	IBNS PhD Graduated
Ciny John	(Fall 2014 – Summer 2019)	IB Student Graduated
Rachel St. Clair	(Fall 2018-Spring 2019)	Rotation
Wesley Bollinger	(Fall 2016 – Summer 2018)	IBNS Graduated
Stephanie Kelly	(Fall 2014 – Spring 2019)	IB Graduated
Monica Risley	(Fall 2012 - 2018)	IBNS/IMPRS Graduated
Keith Murphy	(Fall 2012 - 2018)	IBNS Graduated
Olena Maknyeva	(Fall 2010 – 2018)	IB Graduated
Jennifer Krill	(Spring 2009 - 2018)	IB Graduated

Shweta Singh	(Spring 2012 - Fall 2016)	IB Graduated
Camilo Yepes	(Fall 2015)	Rotation
Stacey Caplan	(Spring 2009 – Summer 2015)	IB Graduated
Catherine Trivigno	(Spring 2009 – Fall 2011)	IB Graduated
Lauren Purpura	(Fall 2008-Spring 2010)	IB Transferred to W.Shen lab

**Chair for M.Sc. Students**

Nicole Jimenez	(Fall 2020 – Spring 2022)	Biological Sciences non-thesis)
Christina Sanchez	(Fall 2020 – Spring 2022)	Biological Sciences Thesis
Yasmine Zerrouki	(Fall 2020 – Spring 2022)	Biological Sciences
Alec Simonson	(Fall 2019 – Spring 2021)	Biological Sciences Thesis
Julieta Di Mase	(Fall 2015-Spring 2018)	Transferred to Guthrie lab
Shannon Dougherty	(Fall 2015-Fall 2018)	Graduated/Non-Thesis
Kent Fairchild	(Spring 2013 – Summer 2016)	Graduated/Non-Thesis
Tanya Kelley	(Fall 2013 – Fall 2015)	Thesis Chemistry Dept.
Raquel Benasayag	(Fall 2011 – Spring 2013)	Graduated/Thesis
Richard Barrett	(Fall 2012 – Spring 2013)	Graduated/Non-Thesis
Zachary Anderson	(Fall 2012 – Spring 2013)	Graduated/Non-Thesis

**Undergraduate Students in Lab**

**Carina Pavlov** (Fall 2022-present)  
**Jeremy Ignatio** (Fall 2012-present)  
**Emma Hickey** (Fall 2018-Spring 2021)  
Andrew Simonson (Fall 2020-Spring 2022)  
Isis Sweeny (Fall 2018-Spring 2021)  
Jonathon Wiggins (Fall 2018-Spring 2021)  
Madison Caldwell (Spring 2019-Fall 2020)  
Yasmine Zerrouki (Fall 2018-Fall 2020)  
Natasha Ramnauth (Fall 2018-Fall 2020)  
Alec Simonson (Fall 2018-Spring 2019)  
Yichen (Ruby) Huang (Fall 2017-Spring 2018)  
Zacharia John (Fall 2018-Fall 2020)  
Taylor Selman (Fall 2016-Spring 2020)  
Samantha Berner (Fall 2016-Spring 2019)  
Justin Xie (Fall 2018-Spring 2022)  
Amanda Devoto (Fall 2017-Spring 2019)  
Leonor Matilda (Summer 2016-Spring 2017)  
Claudia Tinoco (Summer 2015-Summer 2016)  
Leslie Cutting (Fall 2015-Spring 2016)  
Jonathon Kovacks (Fall 2015-Spring 2016)  
Mckenzie Merritt (Fall 2012-Spring 2016)  
Camilo Yepes (Spring 2015-Fall 2015)  
Rafaela De Negri (Fall 2013-Spring 2015)  
Stephanie Kelly (Summer 2013-Summer 2014)  
Natalie Builes (Spring 2013-Fall 2013)  
Kent Fairchild (Summer 2013-Spring 2013)  
Priscilla Hernandez (Fall 2011-present)  
Jennifer Weissbach (Spring 2013-present)  
Colin Leach (Spring 2012- Summer 2012)

**NSF U-RISE**

**Psychology and Neuroscience**  
**Psychology and Neuroscience**  
Max Planck Honors Program  
Biological Sciences  
Biological Sciences  
Biological Sciences  
Biological Sciences  
Biological Sciences  
Max Planck Honors Program  
NSF Learn  
Biological Sciences  
RESEARCH Honors Program  
RESEARCH Honors Program  
Max Planck Honors Program  
Biological Sciences  
THESIS Honors Biology  
Biological Sciences  
Biological Sciences  
Biological Sciences  
THESIS Honors College Thesis  
Biological Sciences  
University of Kentucky (DVM)  
Psychology  
THESIS Honors College  
Biological Sciences  
Honors Biological Sciences  
Dartmouth/Scripps SURF  
USF

Matthew Lovelace	(Spring 2011-Fall 2011)	Biological Sciences
Adam Chen	(Fall 2010-Summer 2011)	THESIS Honors Biology
Rachel Leeman	(Summer 2011)	UF
Arleen Apotella	(Fall 2010-Spring 2011)	Honors Biological Sciences
Raquel Benasayag	(Summer 2010-Fall 2011)	Penn State
Sohail Karram	(Fall 2009-Spring 2010)	Biological Sciences
Marianna Borges	(Fall 2009-Spring 2010)	Biological Sciences
Bonnie Edwards	(Fall 2009-Spring 2010)	Biological Sciences
Guilhermie Favero	(Fall 2009-Fall 2010)	Biological Sciences

**High School Students in Lab**

Mary Elizabeth Gabrielle	(Summer 2019)	Pine Crest
Isaac Lifert	(Summer 2019)	Pine Crest
David Baldwin	(Summer 2017 & 2018 & 2019)	Broward
Navan Parthasarathy	(Summer 2019)	American Heritage
JD Baldwin	(Summer 2015 & 2016)	Broward
Matthew Dardet	(Fall 2015-Spring 2016)	Pine Crest, Ft. Laud, FL
Charlotte Barock	(Summer 2015)	Benjamin, Jupiter
Madison Schmidt	(Summer 2015)	Sun Coast, FL
Samantha Stilley	(Summer 2014)	Benjamin, Jupiter
Anastasia Hediger	(Summer 2011, 2012)	Pine Crest, Ft.Laud
Mo Markowitz	(Summer 2012, 2014)	Donna Estridge, Boca
Sofia Karabas	(Summer 2011)	Sun Coast, FL
Kailine Lambert	(Summer 2010)	Atlantic HS, FL
Margo Fendrich	(Summer 2010)	Pine Crest, Ft Laud
James Peng	(Summer 2009)	American Heritage