

Curriculum Vitae

Gregory L. Powell, Ph.D.

Animal Biosafety Officer, Registered Biosafety Professional (ABSA)

Environmental Health and Safety
1551 S. Rural Rd.
Tempe, AZ 85281

GPOWELL6@ASU.EDU
602-860-4716

Education

- 2014 – Doctor of Philosophy in Physiological Sciences, University of Arizona
 - Thesis: *The Effects of Developmental Nicotine Exposure on Respiratory Motoneuron Morphology and Electrophysiology*
 - Mentor: Dr. Ralph F. Fregosi
- 2008 – Bachelor of Science in Biomedical Engineering, The Catholic University of America, Washington, DC

Experience

POSITION	START DATE	END DATE	AREA	INSTITUTION	SUPERVISOR
ANIMAL BIOSAFETY OFFICER	05/2021	Current	Environmental Health and Safety, Biosafety and Biosecurity	Arizona State University	Current: Mary Turlington-Powell Previously: Rob Ott
SENIOR COORDINATOR	10/2018	05/2021	Neuroscience	Arizona State University	Dr. Janet Neisewander
POSTDOCTORAL RESEARCH SCHOLAR	01/2016	12/31/17	Psychology	Arizona State University	Dr. Cassandra Gipson-Reichardt
POSTDOCTORAL RESEARCH SCHOLAR	07/2015	10/2018	Neuroscience	Arizona State University	Dr. Janet Neisewander
GRADUATE RESEARCH ASSISTANT	05/2009	09/2014	Physiological Sciences	University of Arizona	Dr. Ralph Fregosi
GRADUATE RESEARCH ASSISTANT	01/2009	05/2009	Computational Neuroscience	University of Arizona	Dr. Jean Marc Fellous
GRADUATE RESEARCH ASSISTANT	08/2008	12/2008	Physiological Sciences	University of Arizona	Dr. Ralph Fregosi
RESEARCH ASSISTANT	01/2008	05/2008	Biomedical Engineering	Catholic University of America	Dr. Otto Wilson
RESEARCH ASSISTANT	08/2007	12/2007	Biomedical Engineering	Catholic University of America	Dr. Joseph Hidler
INTERN	05/2006	08/2006	Biomedical Engineering	University of Arizona	Dr. Stuart Williams
INTERN	05/2005	08/2005	Biomedical Engineering	University of Arizona	Dr. Jay Hoying

Specialized Skills

- *Biosafety*: Biological risk assessment; BSL-3 training; Select Agent program experience (Alternate Responsible Official); Application of Federal, state, and local regulations for research; Protocol review; Lab inspections (BSL-1, -2, -3; ABSL-1,-2,-3; ACL-1, -2, -3); Field Safety; Developed trainings for biosafety and biosecurity, field safety, B-Virus, and other agent-specific trainings.
- *Environmental Health and Safety*: Work with university staff, faculty, and administrators on animal biosafety and biosecurity guidance, codes, policies, and procedures; advise construction projects for work with biological materials; analyze accidents and incidents relating to biological materials and complete necessary reporting; liaise with the Institutional Animal Care and Use Committee, the Institutional Biosafety Committee, and the Emerging Infectious Disease Committee
- *Management*: Mentoring graduate and undergraduate students; Project Design; Grant and Protocol Submission; Protocol Development; New Employee Training; Lab Administration; Budget Administration; Program Administration
- *Neuroscience*: Statistical analysis; PCR; Western blots; RNA-seq; Bioinformatics; R; MATLAB; Computational Neuroscience; Patch Clamp Electrophysiology; Microsoft Excel
- *Animal Behavior*: Rodent surgery; Injections (IV, IP, IM, SC, intracranial); Tissue Extraction
- *Public Speaking*: Oral Presentations; Teaching
- *Writing*: Manuscript Preparation and Publication; Editing; Manuscript Peer Review
- *Laboratory*: Technical and Mechanical Troubleshooting; General laboratory duties

Certifications

- EMBER Emerging Supervisors Pilot Program Participant, University Business Services, Arizona State University – Summer 2024
- Biosafety Level 3 Training – University of California, Irvine BSL3 Training Program – April 2024
- Registered Biosafety Professional (ABSA International) – March 2024 to present
- 40 hour Radiation Safety Officer technical short course – Nevada Technical Associates, Inc. – April 2023
- HazWOPER Certification – April 2023, March 2024, May 2025
- NIMS IS-100.B, IS-200.B, IS-700.A, IS-800.D Certification – June 2022

Professional Memberships and Volunteering

- ABSA International
 - Scientific Programming Committee, member, November 2023 – Present
 - Local Arrangements Committee, member, February 2024 – November 2024
- Arizona Biosafety Alliance (AZBA), an affiliate of ABSA International
 - Secretary 2022
 - President-elect 2023
 - President 2024
 - Secretary 2025
- Flag Football Coach, Mesa Youth Sports, Winter 2023-2024

Awards and Teaching

- 2011 – 2013: National Institute of General Medical Sciences (NIGMS) Computational Modeling of Biomedical Systems Training Grant Fellowship
- 2008 – 2010: Science Foundation of Arizona, Graduate Fellowship
- Guest Lecturer: “Neurobiology”, “Psychopharmacology”, “Systems & Behavioral Neuroscience”

Publications and Presentations

1. Gilman Duane, E., Frank, H. K., Smith, C. A., Aguilar-Setién, A., Aréchiga-Ceballos, N., Cárdenas-Canales, E. M., ... & **Powell, G. L.** (2025). Field Safety Considerations During Work with Bats: Returning to the Laboratory Environment. *Applied Biosafety*.
2. Lauer, E., Kim, K. N., Dettmann, R. A., Fleming, A. E., **Powell, G. L.**, Rice, A. D., ... & Gillum, D. R. (2023). Lessons learned from the design, construction, and commissioning of a retrofitted arthropod containment level 3 insectary. *The American Journal of Tropical Medicine and Hygiene*, 109(1), 126.
3. **Gregory L. Powell**. "Considerations of Field Biosafety Principles and Working with Animals". Southern Biosafety Associate Fall Symposium; Virtual; November, 15, 2023. Speaker.
4. **Gregory L. Powell**. "Considerations of Field Biosafety Principles and Working with Animals". ABSA International Conference; Omaha, NE; October 18, 2023. Speaker.
5. **Gregory L. Powell**. "Field Research Safety Considerations for Working with Animals, Including Bats". CSHEMA Spring Symposium; Santa Barbara, CA; February 28, 2023. Speaker.
6. **Gregory L. Powell**. "Biosafety Practices when Working with Bats: A Guide to Field Research Considerations". ABSA International Conference; Milwaukee, WI; October 19, 2022. Speaker
7. Aguilar-Setién, A., Aréchiga-Ceballos, N., Balsamo, G. A., Behrman, A. J., Frank, H. K., Fujimoto, G. R., Duane, E. G., Warner III, T. W., Jones, S. M., Ochoa Carerra, L. A., **Powell, G. L.**, Smith, C. A., Van Sickle, J. T. & Vleck, S. E. (2022). Biosafety practices when working with bats: a guide to field research considerations. *Applied Biosafety*, 27(3), 169-190.
8. Nora Perrone-Bizzozero, Michael Johnson, Michela Del'Orco, Amir Elyaderani, Winnie Liang, **Gregory Powell**, Annika Vannan, Nikolaos Mellios, Janet Neisewander. ACNP 60th Annual Meeting, December 2021. "Developmental nicotine exposure induces persistent alterations in accumbens glutamatergic circuitry". Poster presentation.
9. Scott, S. N., Garcia, R., **Powell, G. L.**, Doyle, S. M., Ruscitti, B., Le, T., ... & Neisewander, J. L. (2021). 5-HT1B receptor agonist attenuates cocaine self-administration after protracted abstinence and relapse in rats. *Journal of Psychopharmacology*, 35(10), 1216-1225.
10. Dell'Orco, M., Elyaderani, A., Vannan, A., Sekar, S., **Powell, G.**, Liang, W. S., ... & Perrone-Bizzozero, N. I. (2021). HuD regulates mRNA-circRNA-miRNA networks in the mouse striatum linked to neuronal development and drug addiction. *Biology*, 10(9), 939.
11. Vannan, A., **Powell, G. L.**, Dell'Orco, M., Wilson, M. A., Perrone-Bizzozero, N. I., & Neisewander, J. L. (2021). microRNA regulation related to the protective effects of environmental enrichment against cocaine-seeking behavior. *Drug and alcohol dependence*, 221, 108585.
12. Namba, M. D., Kupchik, Y. M., Spencer, S. M., Garcia-Keller, C., Goenaga, J. G., **Powell, G. L.**, ... & Gipson, C. D. (2020). Accumbens neuroimmune signaling and dysregulation of astrocytic glutamate transport underlie conditioned nicotine-seeking behavior. *Addiction biology*, 25(5), e12797.
13. **Powell, G. L.**, Namba, M. D., Vannan, A., Bonadonna, J. P., Carlson, A., Mendoza, R., ... & Neisewander, J. L. (2020). The long-acting D3 partial agonist MC-25-41 attenuates motivation for cocaine in sprague-dawley rats. *Biomolecules*, 10(7), 1076.
14. **Powell, G. L.**, Vannan, A., Bastle, R. M., Wilson, M. A., Dell'Orco, M., Perrone-Bizzozero, N. I., & Neisewander, J. L. (2020). Environmental enrichment during forced abstinence from cocaine self-administration opposes gene network expression changes associated with the incubation effect. *Scientific reports*, 10(1), 11291.
15. **Powell, G. L.**, Beckmann, J. S., Marusich, J. A., & Gipson, C. D. (2020). Nicotine reduction does not alter essential value of nicotine or reduce cue-induced reinstatement of nicotine seeking. *Drug and alcohol dependence*, 212, 108020.
16. Goenaga, J., **Powell, G. L.**, Leyrer-Jackson, J. M., Piña, J., Phan, S., Prakapenka, A. V., ... & Gipson, C. D. (2020). N-acetylcysteine yields sex-specific efficacy for cue-induced reinstatement of nicotine seeking. *Addiction biology*, 25(1), e12711.
17. **Powell, G. L.**, Cabrera-Brown, G., Namba, M. D., Neisewander, J. L., Marusich, J. A., Beckmann, J. S., & Gipson, C. D. (2019). Economic demand analysis of within-session dose-reduction during nicotine self-administration. *Drug and alcohol dependence*, 201, 188-196.

18. Namba, M. D., **Powell, G. L.**, Del Franco, A. P., Goenaga, J. G., & Gipson, C. D. (2019). Brain Gene Expression in the Context of Nicotine Rewards: A Focus on Cholinergic Genes. In *Neuroscience of Nicotine* (pp. 321-328). Academic Press.
19. **Powell, G. L.**, Leyrer-Jackson, J. M., Goenaga, J., Namba, M. D., Piña, J., Spencer, S., ... & Gipson, C. D. (2019). Chronic treatment with N-acetylcysteine decreases extinction responding and reduces cue-induced nicotine-seeking. *Physiological reports*, 7(1), e13958.
20. Foster Olive, M., **Powell, G.**, McClure, E., & Gipson, C. D. (2018). Neurotransmitter Systems: Glutamate. In *The therapeutic use of N-acetylcysteine (NAC) in medicine* (pp. 19-28). Singapore: Springer Singapore.
21. **Powell, G.**, McClure, E. A., Foster Olive, M., & Gipson, C. D. (2018). Clinical treatment of addictive disorders with N-acetylcysteine. *The therapeutic use of N-acetylcysteine (NAC) in medicine*, 219-233.
22. **Powell, G. L.**, Bonadonna, J. P., Vannan, A., Xu, K., Mach, R. H., Luedtke, R. R., & Neisewander, J. L. (2018). Dopamine D3 receptor partial agonist LS-3-134 attenuates cocaine-motivated behaviors. *Pharmacology Biochemistry and Behavior*, 175, 123-129.
23. Overby, P. F., Daniels, C. W., Del Franco, A., Goenaga, J., **Powell, G. L.**, Gipson, C. D., & Sanabria, F. (2018). Effects of nicotine self-administration on incentive salience in male Sprague Dawley rats. *Psychopharmacology*, 235(4), 1121-1130.
24. Vannan, A., **Powell, G. L.**, Scott, S. N., Pagni, B. A., & Neisewander, J. L. (2018). Animal models of the impact of social stress on cocaine use disorders. *International review of neurobiology*, 140, 131-169.
25. Cassandra Gipson-Reichardt, Mark Namba, **Gregory Powell**, Julianna Goenaga, Armani Del Franco, Joseph McCallum. American College of Neuropsychopharmacology, Palm Springs, CA. December 4, 2017. "N-Acetylcysteine Inhibits Cue-Induced Nicotine Seeking in a GLT-1-Dependent Manner and Suppresses Proinflammatory TNF α Expression in the Nucleus Accumbens Core". Poster presentation.
26. Janet Neisewander, **Gregory Powell**, Madeleine St. Peter, Annika Vannan, Trisha Chaudhury, Thomas Benson, Daniela Alcazar, Ryan Bastle, Nora Perrone-Bizzozero. American College of Neuropsychopharmacology, Palm Springs, CA. December 4, 2017. "Environmental Enrichment and Length of Abstinence Alter Motivation for Cocaine Revealing Novel RNA Expression Changes in the Nucleus Accumbens Correlated With Cocaine Seeking". Poster presentation.
27. C. D. Gipson, **G. L. Powell**, J. G. Goenaga, A. P. Del Franco, M. C. Holter, R. Garcia, A. Vannan, J. L. Neisewander. Society for Neuroscience Conference, Washington, DC. November 15, 2017. "Developmental nicotine exposure induces persistent alterations in accumbens glutamatergic circuitry". Poster presentation.
28. J. G. Goenaga, J. J. McCallum, M. D. Namba, A. P. Del Franco, **G. L. Powell**, M. F. Olive, C. D. Gipson. Society for Neuroscience Conference, Washington, DC. November 15, 2017. "Nicotine relapse-induced rapid potentiation of excitatory synapses is regulated by GluN2B-containing NMDA receptors in the nucleus accumbens core". Poster presentation.
29. M. D. Namba, **G. L. Powell**, J. G. Goenaga, A. P. Del Franco, J. J. McCallum, C. D. Gipson. Society for Neuroscience Conference, Washington, DC. November 15, 2017. "N-acetylcysteine inhibits cue-induced nicotine seeking through a glutamate transporter GLT-1-dependent mechanism and decreases neuroinflammatory I κ B kinase expression in the nucleus accumbens core". Poster presentation.
30. **G. L. Powell**, M. St. Peter, T. Chaudhury, D. Alcazar, R. M. Bastle, R. J. Oliver, N. I. Perrone-Bizzozero, J. L. Neisewander. Society for Neuroscience Conference, Washington, DC. November 13, 2017. "Environmental enrichment during abstinence from cocaine self-administration alters cocaine-seeking behavior and addiction-related gene expression in female rats". Poster presentation.
31. J. A. Marusich, **G. L. Powell**, J. S. Beckmann, J. L. Neisewander, A. P. Del Franco, J. Goenaga, C. D. Gipson. Society for Neuroscience Conference, Washington, DC. November 11, 2017. "Analysis of economic demand for nicotine using an abbreviated behavioral economics protocol in rats". Poster presentation.
32. **G.L. Powell**, M. St. Peter, T. Chaudhury, T. Benson, D. Alcazar, R. Bastle, N. Perrone-Bizzozero, J.L. Neisewander. Conference on Problems of Drug Dependence, Montreal, Canada. June 21, 2017. "The effects of environmental enrichment during abstinence from cocaine on RNA expression within the nucleus accumbens". Oral presentation.
33. **Powell, G. L.**, Goenaga, J., Del Franco, A., Holter, M. C., Garcia, R., Vannan, A., Neisewander, J. L., Gipson, C. D. Society for Research on Nicotine and Tobacco Conference, Florence, Italy. March 10, 2017.

“Developmental nicotine exposure induces persistent alterations in glutamatergic circuitry”. Oral presentation.

34. **Powell, G. L.**, Neisewander, J. L., Beckmann, J. S., Marusich, J. A., Del Franco, A. P., Goenaga, J., Gipson, C. D. Arizona State University – Barrow Neurological Institute Neuroscience Symposium, Phoenix, AZ. January 5, 2017. “Analysis of a new behavioral economics protocol for examination of consumption of drugs of abuse”. Poster presentation.
35. St. Peter, M., **Powell, G. L.**, Benson, T., Chaudhury, T., Alcazar, D., Bastle, R., Perrone-Bizzozero, N., Neisewander, J. L. Society for Neuroscience Conference, San Diego, CA. November 16, 2016. “Effects of environmental enrichment and abstinence on cocaine seeking and RNA expression within the nucleus accumbens shell”. Poster presentation.
36. Bonadonna, J. P., **Powell, G. L.**, Carlson, A., Mendoza, R., Mach, R. H., Luedtke, R. R., Xu, K., Neisewander, J. L. Society for Neuroscience Conference, San Diego, CA. November 16, 2016. “Effect of a dopamine D₃ receptor partial agonist on cocaine-induced locomotion and self-administration”. Poster presentation.
37. **Powell, G. L.**, Kupchik, Y. M., Spencer, S., Garcia-Keller, C., Stankeviciute, N., Schwartz, D., Del Franco, A., Goenaga, J., Gipson, C. D. Society for Neuroscience Conference, San Diego, CA. November 13, 2016. “N-Acetylcysteine inhibits cue-induced nicotine seeking and relapse-associated rapid, synaptic plasticity”. Poster presentation.
38. Neisewander, J. L., Cheung, T., Nolan, B., Bonadonna, J. P., **Powell, G. L.**, Carlson, A., Xu, K., Mach, R. H., Luedtke, R. R. Dopamine Conference, Vienna, Austria. September 5-8, 2016. “Comparison of dopamine antagonists and partial agonists: Selectivity for dopamine D₃ receptors produces selective effects on motivation for cocaine in rats”. Poster presentation.
39. Cholanian, M., **Powell, G. L.**, Levine, R. B., & Fregosi, R. F. (2017). Influence of developmental nicotine exposure on glutamatergic neurotransmission in rhythmically active hypoglossal motoneurons. *Experimental Neurology*, 287, 254-260.
40. Del Franco, A., **Powell, G. L.**, Pagni, B., Goenaga, J., Scofield, M., Gipson, C. D. College on Problems of Drug Dependence, Palm Springs, CA. June 13, 2016. “Role of accumbens nicotinic acetylcholine receptors in cue-induced nicotine seeking and synaptic plasticity”. Poster presentation.
41. Bonadonna, J.P., **Powell, G.L.**, Carlson, A.K., Mendoza, R., Mach, R.H., Luedtke, R.R., Neisewander, J.L. College on Problems of Drug Dependence, Palm Springs, CA. June 12, 2016. “Effect of dopamine D₃ receptor partial agonist on cocaine-induced locomotion and self-administration”. Oral presentation.
42. Gipson, C. D., **Powell, G. L.**, del Franco, A., Pagni, B., Goenaga, J., Scofield, M. Society for Research on Nicotine and Tobacco, Chicago, IL. March 5, 2016. “Role of accumbens nicotinic acetylcholine receptors in cue-induced nicotine seeking and synaptic plasticity”. Poster presentation.
43. **Powell, G. L.**, Gaddy, J, Xu, F, Fregosi, R. F., & Levine, R. B. (2016). Developmental Nicotine Exposure disrupts dendritic arborization patterns of hypoglossal motoneurons in the neonatal rat. *Developmental Neurobiology*.
44. **Powell, G. L.**, Del Franco, A., Pagni, B., Goenaga, J., Scofield, M. D., Gipson-Reichardt, C. D. Arizona State University – Barrow Neurological Institute Neuroscience Symposium, Phoenix, AZ. January 7, 2016. “Role of accumbens nicotinic acetylcholine receptors in cue-induced nicotine seeking and synaptic plasticity”. Poster presentation.
45. **Powell, G. L.**, Levine, R. B., Frazier, A. M., & Fregosi, R. F. (2015). Influence of developmental nicotine exposure on spike-timing precision and reliability in hypoglossal motoneurons. *Journal of neurophysiology*, 113(6), 1862-1872.
46. **Powell, G. L.**, Rice, A., Bennett-Cross, S. J., & Fregosi, R. F. (2014). Respiration-related discharge of hypoglossus muscle motor units in the rat. *Journal of Neurophysiology*, 111(2), 361-368.
47. **Powell, GL**, Levine, RB, & Fregosi, RF. Federation of American Societies of Experimental Biology Conference, San Diego, CA. April 28, 2014, Poster Presentation. “The effects of developmental nicotine exposure on hypoglossal motoneuron morphology and electrophysiology”.
48. Wollman, LB, **Powell, GL**, Levine, RB, & Fregosi, RF. Federation of American Societies of Experimental Biology Conference, San Diego, CA. April 27, 2014, Poster Presentation. “Leptin acutely inhibits respiratory function in neonatal rats”.

49. David Margolis, **Gregory Powell**, David Bennett, Ralph Fregosi, and Lisa Truchan. "Decreased Nerve Conduction Velocity in Peripheral Nerves Following Exposure to Bone Morphogenetic Protein²". *Arizona Orthopaedic Society*. June 2013.
50. **Powell GL**, Pilarski JQ, Fregosi RF, Fellous JM. Society for Neuroscience Conference, Chicago, Ill. October 21, 2009, Poster Presentation. "Computational neural model of the alterations in respiratory rhythm generation caused by developmental, environmental, and genetic abnormalities".