

## **WILLIAM (BILL) STEPHEN GRIESAR**

**March, 2024**

### **EDUCATION**

*Ph.D.*, Behavioral Neuroscience, 2001, Oregon Health & Science University

*Bachelor of Science (Sc.B.) with honors*, Neural Sciences, 1987, Brown University

### **EMPLOYMENT**

*Teaching Assistant Professor*, Portland State University, 9/22 - present

*Senior Instructor II*, Psychology, Portland State University, 9/19 – 9/22

*Neuroscience Coordinator and Founder*, Northwest Noggin (nwnoggin.org), 5/12 – present

*Affiliate Graduate Faculty*, Behavioral Neuroscience, OHSU, 10/12 – present

*Adjunct Instructor*, University Studies, Portland State University, 6/17 – present

*PSU Chapter representative*, Society for Neuroscience, 1/16 – present

*Board Treasurer*, Northwest Noggin (nwnoggin.org), 11/16 – present

*Member*, American Brain Coalition, 11/17 – present

*Member*, Grants Evaluation Committee, The Roundhouse Foundation, 2022 – 2024

*Member*, Teacher Advisory Council, Portland Art Museum, 2021– 2023

*Senior Instructor I*, Psychology, Portland State University, 9/16 – 9/19

*Instructor & Outreach Coordinator*, Neuroscience, WSU Vancouver, 9/14 – 6/17

*Fixed term Instructor*, Psychology, Portland State University, 9/14 – 6/16

*Adjunct Instructor*, Psychology, Portland State University, 9/11 – 6/15

*Adjunct Instructor*, Psychology, Washington State University Vancouver, 9/01 – 6/14

*Adjunct Instructor*, Alcohol & Drug Counseling, Portland Community College, 6/09 – 6/13

*Adjunct Instructor*, Speech & Hearing Sciences, Portland State University, 9/01 – 6/12

*Lecturer*, Workforce Training Center, Portland Community College, 6/99 – 8/99

*Coordinating Officer*, Oregon Partnership for International Education, 4/95 – 5/96

*Director*, West Coast Office, Beaver College Center for Education Abroad, 9/90 – 4/95

*Author and Researcher*, Intercultural Press, 8/88 – 3/92

*High School English Teacher*, Japanese Ministry of Education, 8/87 – 8/88

### **DISSERTATION**

*Cognitive effects of nicotine in non-smokers* (2001, April). Barry Oken, Thesis director.

### **REFEREED PUBLICATIONS OR OTHER CREATIVE ACHIEVEMENTS**

Griesar, W.S. (2020), *Catastrophic Landslide in California: Can We Stop the Unstoppable?*

Video taken and provided for PBS “Weathered” documentary. Part of an investigation into the neuroscience of preparedness. Video retrieved from: <https://youtu.be/q1hj9RCWuH0>

Griesar, W.S., Leake, J. (2017). *Smell, Memory, and Place*. Portland, OR: Portland Art

- Museum. Booklet for “Pitchering Oregon” exhibit; text by Griesar, illustrations by Leake.
- Griesar, W.S., Leake, J. (2016). *Nature of Seeing* (gallery installation). Washington DC: Phillips Collection. Developed a NW Noggin “Nature of Seeing” gallery space, to describe and explain the physiology of vision, as part of the “Seeing Nature” exhibit. Wrote text for a series of four large panels featuring brain images from the Allen Institute for Brain Science.
- Griesar, W.S., Leake, J. (2016), *The Nature of Seeing: Explore connections between art and your brain*. Washington DC: Phillips Collection. A guide to help visitors explore paintings in the Allen Family Foundation Seeing Nature exhibit, and consider what’s happening in their own brains as they experience aspects of perception.
- Griesar, W.S., Leake, J. (2015). *Nature of Seeing* (gallery installation). Portland, OR: Portland Art Museum. Developed NW Noggin “Nature of Seeing” gallery space, to describe and explain the physiology of vision, as part of the “Seeing Nature” exhibit. Wrote text for a series of four large panels featuring brain images from the Allen Institute for Brain Science.
- Griesar, W.S., Leake, J., Nolting, M. (2015), *The Nature of Seeing: Explore connections between art and your brain*. Portland, OR: Portland Art Museum. A guide to help visitors explore paintings in the Seeing Nature exhibit.
- Griesar, Bill (2015). Acknowledgement for editing assistance on paper. Ignacio Díaz-Franulic, Romina V. Sepúlveda, Nieves Navarro-Quezada, Fernando González-Nilo, and David Naranjo (2015). Pore dimensions and the role of occupancy in unitary conductance of Shaker K channels. *The Journal of General Physiology* 146(2): 133.
- Griesar, W.S., Zajdel, D.P. & Oken, B.S. (2002). Nicotine effects on alertness and spatial attention in non-smokers. *Nicotine & Tobacco Research*, 4(2), 185-194.
- Finn D.A., Patterson B., Douglass A.D., Mair J.J., Boehm S., Griesar W., Mitchell S.R., Washington S., Gionet S., Gallaher E.J. (1998). Genetic analysis of neuroactive steroid sensitivity. *Alcoholism: Clinical and Experimental Research*, 22, 44A.
- Griesar, Bill (1992). *The Underground Guide to University Study in Britain and Ireland*. Yarmouth, ME: The Intercultural Press.

### **NON-REFEREED PUBLICATIONS OR OTHER CREATIVE ACHIEVEMENTS**

Griesar, Bill (2012 – present). Blog posts, lesson plans and pictures for Northwest Noggin, the arts-integrated neuroscience outreach nonprofit (EIN: 81-3885713) I co-founded with artist Jeff Leake. We’ve listened to and worked with over 70,000 academic priority K-12 students and members of the public. <https://nwnoggin.org/outreach-opportunities/>

Instagram (2200+ followers): [nwnoggin](https://www.instagram.com/nwnoggin)

Bluesky (130+ followers): [@nwnoggin.bsky.social](https://bsky.app/profile/nwnoggin.bsky.social)

- Griesar, W.S. & Leake, J. (2024, February). [\*Permanent Standard Time is best for your brain.\*](#) Northwest Noggin was honored and stoked by an invitation from the Oregon State Senate to present neuroscience research on the clear community and individual health benefits of making standard time – not daylight savings time – permanent in Oregon. Salem, OR.
- Griesar, W.S. & Leake, J. (2023, October). [\*Noggin Takes DC.\*](#) We escorted eight

- accomplished interdisciplinary neuroscience minor undergraduates to our nation's capital, to present original posters at the SfN conference, support a free public Neuroscience Night at a local brewery, present to the House Neuroscience and STEAM caucuses in the U.S. House of Representatives, and hear from K-8 students in DC public schools.
- Griesar, W.S. & Leake, J. (2023, October). [\*Listening at MacLaren\*](#). Northwest Noggin returned to the MacLaren Youth Correctional Facility, to meet young people curious about the brain, and policy implications of ongoing neuroscience research on adolescent development, bias, trauma, drugs, and mental health in terms of education, healthcare, criminal justice and the law.
- Griesar, W.S. & Leake, J. (2023, February). [\*We are all neural networks\*](#). Invited talk and workshop at the Portland Art Museum's "Evening for Educators" event, that accompanied the Hito Steyerl: This is the Future exhibit. Portland, OR.
- Griesar, W.S. & Leake, J. (2022, November). [\*Observing Art & Brains @ SfN\*](#). Invited presentation at The Brain Observatory, a public repository of neuroscience research and art founded by Dr. Jacobo Annese, the neuroscientist who dissected the brain of amnesia Patient H.M. Society for Neuroscience conference, San Diego, CA.
- Griesar, W.S. & Leake, J. (2022, October). [\*Brains, The Beatles, Television & Art\*](#). Invited talk with David Hattner, Director of the Portland Youth Philharmonic on the impact of drugs on creativity and in particular on the work of John, Paul, George and Ringo. University Club, Portland, OR.
- Griesar, W.S. & Leake, J. (2022, March). [\*Northwest Noggin: Letting Knowledge Serve through interdisciplinary neuroscience, art and a few extra brains!\*](#) Invited talk at the Gordon Museum of Pathology at Kings College London, London, UK.
- Griesar, Bill & Leake, J. (2022, January). [\*@ This Moment: Gray Matters\*](#). Panel discussion about how Portland State faculty and students work alongside community partners to bring neuroscience research and philosophy into local K-12 schools. Video retrieved from <https://www.facebook.com/PDXCLAS/videos/326927499295583/>
- Griesar, Bill & Leake, J. (2020, September). *Action and Potential in Education, Outreach and Research*. Webinar presented in collaboration with the Society for Neuroscience and BrainFacts.org. Global attendance. Video retrieved from <https://www.brainfacts.org/for-educators/programs-and-events/action-and-potential-in-education-outreach-and-research-090220>
- Griesar, Bill & Leake, J. (2020, May). *Reconnecting Our Brains, One Cell at a Time*. Webinar presented in collaboration with the Society for Neuroscience and BrainFacts.org. Global attendance. Video retrieved from <https://www.brainfacts.org/for-educators/programs-and-events/reconnecting-our-brains,-one-cell-at-a-time>
- Griesar, Bill (2020, April). *COVID-19 on the Brain: Portland State senior instructor Bill Griesar on how neuroscience can help us understand the novel coronavirus*. Article by Gabriel Granillo. Portland, OR. Portland Monthly magazine. Article retrieved from <https://www.pdxmonthly.com/news-and-city-life/2020/04/covid-19-on-the-brain>
- Griesar, Bill & Leake, J. (2020, March). *An Oregon nonprofit brings an actual brain, and brainpower to classrooms*. News report on NW Noggin by KGW. Portland, OR. KGW News. Video retrieved from <https://www.kgw.com/article/news/education/nonprofit-neuroscience-students-portland/283-d0d11c0e-d137-4d10-9895-0ff709504a77>

- Griesar, Bill & Leake, J. (2020, February). *Sewing, Memories & Brains*. Interview on arpillera crafting as a means of processing trauma and preserving memory by Cindy Price. Astoria, OR. KMUN 91.9 FM. Retrieved from <https://coastradio.org/podcast/friday-feb-7th-at-3-pm-arts-live-local-with-guest-host-cindy-price/>
- Griesar, Bill & Leake, J. (2019, December). *Brains, trains and homelessness: How public transit can respond to neuroscience*. Article on NW Noggin by Latisha Jensen. Portland, OR. Street Roots. Retrieved from <https://www.streetroots.org/news/2019/12/06/brains-trains-and-homelessness-how-public-transit-can-respond-neuroscience>
- Griesar, Bill & Leake, J. (2019, March). *Combining Neuroscience and Art*. Interview by Jeff Norcross. Portland, OR. Think Out Loud, Oregon Public Broadcasting. Audio file retrieved from <https://www.opb.org/radio/programs/thinkoutloud/segment/brains-mother-road-teaching-the-holocaust/>
- Griesar, Bill & Leake, J. (2017, September). *Noggins + Education*. Interview by Shane Mauss. Portland, OR: *Here We Are* (Episode 136). Audio file retrieved from <http://www.herewearepodcast.com/episode/136/bill-griesar-and-jeff-leake>
- Griesar, Bill & Leake, J. (2017, September). *Noggins + Networking*. Interview by Shane Mauss. Portland, OR: *Here We Are* (Episode 134). Audio file retrieved from <http://www.herewearepodcast.com/episode/134/bill-griesar>
- Griesar, W.S. & Leake, J. (2017, March). *Brain Awareness Week Partner Interview: NW Noggin*. Interview by Dana Foundation. Retrieved from <https://danablog.org/2017/03/08/brain-awareness-week-partner-interview-nw-noggin/>
- Griesar, W.S. & Leake, J. (2016, June). *Brief: Outreach Group Spreads Love of Science in the Nation's Capital*. Video summary of NW Noggin "Brains + Art" briefing to members of the House Neuroscience and STEAM caucuses in Congress (2016, April). Washington DC: Society for Neuroscience. Video file retrieved from <http://www.brainfacts.org/neuroscience-in-society/supporting-research/2016/brief-outreach-group-spreads-love-of-science-in-the-nations-capital-060816>
- Griesar, W.S. (2016, March). *Bringing Communities Together Through Neuroscience and Art*. Neuronline (Society for Neuroscience). Retrieved from <https://neuronline.sfn.org/Articles/Outreach/2016/Bringing-Communities-Together-Through-Neuroscience-and-Art>
- Griesar, Bill (2015, September). *8 Things: Advice for raising two teenage boys*. True Parent Magazine. Portland, OR: Index Newspapers LLC.
- Griesar, Bill & Duehmig, Bob (2015, September). *On being gay parents in a world that needs to meet more gay parents*. True Parent Magazine. Portland, OR: Index Newspapers LLC.
- Griesar, Bill (2014, April). *Neuroscience Outreach*. Observer (Association for Psychological Science). Retrieved from <https://www.psychologicalscience.org/observer/collaborative-neuroscience-outreach>

### **PRESENTATIONS AT PROFESSIONAL MEETINGS**

- Griesar, W.S. & Leake, J. (2024, March). *Las neuronas son bacanes: interdisciplinary neuroscience in Valparaíso Chile*. Thirty minute Saturday morning keynote at the annual Society for Neuroscience Oregon/SW Washington Chapter meeting, Troutdale, OR.

- Griesar, W.S. & Leake, J. (2023, November). [\*Signal from Noise on the Oregon Coast\*](#). In person poster session at international Society for Neuroscience conference, Washington DC.
- Griesar, W.S. & Leake, J. (2023, September). [\*Brains in Boise\*](#). NW Noggin/TRIO presentation at the Northwest Association Educational Opportunity Programs conference in Boise, ID.
- Griesar, W.S. & Leake, J. (2023, May). [\*Sharing interdisciplinary neuroscience paywall-free at SfN\*](#). In person poster session at annual Society for Neuroscience Oregon/SW Washington Chapter meeting, Troutdale, OR.
- Griesar, W.S. & Leake, J. (2022, November). [\*Sharing interdisciplinary neuroscience paywall-free at SfN\*](#). In person poster session at international Society for Neuroscience conference, San Diego, CA.
- Griesar, W.S. & Leake, J. (2022, April). [\*Reconnecting our brains one cell at a time in a pandemic\*](#). Virtual poster session at annual Society for Neuroscience Oregon/SW Washington Chapter meeting.
- Griesar, Bill & Miyamoto, K. (2021, October). [\*Forward Thinking about STEAM with \(actual, extra\) Brains!\*](#) NW Noggin/TRIO presentation at the Northwest Association Educational Opportunity Programs (NAEOP) conference in Bellevue, Washington.
- Griesar, W.S. & Leake, J. (2021, April). [\*NW Noggin: Axons & Arpilleras – Addressing trauma and supporting community across disciplines & national boundaries\*](#). Virtual poster session at annual Society for Neuroscience Oregon/SW Washington Chapter meeting.
- Griesar, W.S. & Leake, J. (2019, October). *NW Noggin: Corrections, Bias & Brains*. Poster session at annual Society for Neuroscience conference, Chicago, IL.
- Griesar, W.S. & Miyamoto, K. (2019, August). [\*Brains, Beavers & STEAM\*](#). Invited talk and art making with high school Psychology teachers, sponsored by the American Psychological Association. Dinner workshop, Oregon State University, Corvallis, OR.
- Griesar, W.S. & Leake, J. (2019, April). *NW Noggin: Synapses Stories and Song!* Poster session at annual Society for Neuroscience Oregon/SW Washington Chapter meeting, Troutdale, OR.
- Griesar, W.S. (2019, February). [\*Carry on my wayward son\*](#). Invited panel presentation on the neuroscience of the television series *Supernatural*, covering alcoholism, trauma, PTSD, post-traumatic resilience, and aspects of sensation and perception. Also presented real brains and art projects at this Wizard World Convention, Portland, OR.
- Griesar, W.S. & Leake, J. (2019, January). *Ducks Fish, Art & Brains: Action and Potential in Outreach, Education and Research*. Invited talk on arts-integrated neuroscience outreach and the history and impact of art and science for connecting with diverse communities at the Institute of Neuroscience, University of Oregon, Eugene, OR.
- Griesar, W.S. & Leake, J. (2018, December). [\*The Tracks We Leave\*](#). Invited talk and art making presentation on outreach with Native American tribal communities at Intel Corporation, Hillsboro, OR.
- Griesar, W.S. & Leake, J. (2018, November). *Action and Potential in Outreach, Education and Research*. Invited by the Society for Neuroscience and the Dana Foundation to offer the keynote address on brain awareness at the national conference, San Diego, CA.
- Griesar, W.S. & Leake, J. (2018, November). *NW Noggin: homelessness and the brain – seeing us all through research and art*. Poster session at annual Society for Neuroscience conference, San Diego, CA.



- Griesar, W.S. & Leake, J. (2018, April). *The art of neuroscience: creating networks for innovative engagement at sfm, schools, local communities & congress*. Poster session at annual Society for Neuroscience Oregon/SW Washington Chapter meeting, Troutdale, OR.
- Griesar, W.S. & Leake, J. (2017, November). *NW Noggin: synaptic community connections in the rural pacific northwest*. Poster session at Teaching/Brain Awareness Campaign Event, annual Society for Neuroscience conference, Washington DC.
- Griesar, W.S. & Leake, J. (2017, November). *One landscape contains the other*. Invited talk on olfaction, and its influence on brain networks that underlie perception, emotional response and memory. Part of "[Pitchering Oregon](#)" event, where craft brewers paired beers with specific landscape works in the collection. Portland Art Museum, Portland, OR.
- Leake, J. & Griesar, Bill (2017, October). *STEAM Ahead! Using Art and Science to Engage Underserved Communities*. Workshop presented for Oregon Arts Education Association (OAEA) conference participants, Wilsonville, OR.
- Griesar, W.S. & Leake, J. (2017, May). *NW Noggin: connecting sfm outreach volunteers and schools in San Diego and DC*. Poster session at annual Society for Neuroscience Oregon/SW Washington Chapter meeting, Troutdale, OR.
- Griesar, W.S., Leake, J., Kandasamy, R. (2017, February). *Art, Pain & Cannabinoids: Results from Research*. Invited talk at Cannabis Collaborative Conference, Portland OR.
- Griesar, W.S., Leake, J., Kandasamy, R. (2017, January). *Marijuana: Fact or Fiction?* Workshop presented at Washington Academy of General Dentistry conference, Seattle WA.
- Griesar, W.S. & Leake, J. (2016, November). *NW Noggin: arts-integrated neuroscience outreach from the northwest to DC*. Poster session at annual Society for Neuroscience conference, San Diego CA.
- Griesar, W.S. & Leake, J. (2016, November). Invited participants in focus group on STEM/STEAM outreach organized by Brainfacts.org, a public information initiative of The Kavli Foundation, Gatsby Charitable Foundation, and Society for Neuroscience. Session held at the annual Society for Neuroscience conference, San Diego, CA.
- Griesar, W.S. & Leake, J. (2016, October). *White House Frontiers conference*. Invited as one of 500 "innovators" identified by the Obama White House Office of Science & Technology Policy to meet fellow innovators in brain science and other fields, and hear from President Barack Obama (who told me he "loved" our pipe cleaner neurons ☺). Pittsburgh, PA.
- Griesar, W.S. & Leake, J. (2016, October). *The Art and Neuroscience of Change*. Presented cutting edge research and art concerning the neuroscience of behavioral change. Organized additional presentations highlighting work from neuroscience and psychology labs, and arranged for high school students from Fort Vancouver High to create pipe cleaner neurons which hung as a dramatic network at the museum. Change Connect 4 conference, Association of Change Management Professionals. Portland Art Museum, Portland, OR.
- Griesar, W.S., Leake, J. & Kandasamy, R. (2016, September). *Art, Pain & Cannabinoids*. Workshop presented at Washington State Psychological Association conference, Seattle, WA.
- Griesar, W.S. & Leake, J. (2016, May). *NW Noggin: arts-integrated neuroscience outreach from the northwest to DC*. Poster session at annual Society for Neuroscience Oregon/SW Washington Chapter meeting, Troutdale, OR.
- Griesar, Bill & Leake, J. (2015, November). *In Dialogue: Art, Drugs and the Nature of Seeing*. Two hour workshop delivered as part of the museum's "In Dialogue" series,

linked to the “Seeing Nature” landscape art exhibit. Portland Art Museum, Portland, OR.  
 Griesar, W.S. & Leake, J. (2015, November). *There’s an app for that: Can neuroscience education lead to better health decisions?* Spoke on effectiveness of STEAM outreach efforts, and introduced student-developed myBrain! app, which superimposes a brain image on live video of someone looking at a screen. Presentation at Jay D. Miller conference, Vancouver, WA.

Griesar, W.S. & Leake, J. (2015, October). *NW Noggin: Collaborative neuroscience outreach in Portland & Vancouver - students, scientists and artists teach and learn about neuroscience through art.* Poster session at annual Society for Neuroscience conference, Chicago, IL.

Leake, J. & Griesar, Bill (2015, October). *Why art - and brains?* Noggin workshop on arts integration in STEM presented at Oregon Arts Education Association, Ashland OR.

Griesar, Bill & Leake, J. (2015, October). *This is your brain on Vortex: The neuroscience (and art) of alcohol.* Presentation at Ales and Ideas Clatsop Community College lecture series. Delivered at the Fort George Brewery, Astoria, OR.

Leake, J. & Griesar, Bill (2015, May). *Remixing the Museum: STEAM and New Media.* Along with NW Noggin Arts Coordinator Jeff Leake, I was a featured speaker at this Noggin event for arts educators. Portland Art Museum, Portland OR.

Griesar, Bill & Leake, J. (2015, March). *This is your brain on (legal) drugs: The neuroscience and art of cannabis and alcohol.* Science on Tap lecture with NW Noggin Arts Coordinator Jeff Leake at the Kiggins Theater, Vancouver, WA.

Griesar, W.S., Leake, J., Hadenfeld, S., Miller L., Miller, M., Smith M.L., Tremaine E., Wescom R., Wirthlin M. (2014, November). *NW Noggin: Collaborative neuroscience outreach in Portland & Vancouver - undergraduates, graduates, scientists, middle and high school students work together to learn about the brain.* Poster session at annual Society for Neuroscience conference, Washington DC.

Griesar, Bill (2014, July). *Drugs and the Brain.* Delivered eight hour training for the Chemical Dependency Training Consortium, Clark County Department of Corrections, Vancouver, WA.

Griesar, W.S., Shaw, E., Lehman, K., Rudolph, M., Leake, J. (2013, November). *Cross-institutional collaboration in neuroscience outreach: Undergraduates, graduates, middle and high schoolers get together to learn about the brain.* Poster session at annual Society for Neuroscience conference, San Diego, CA.

Griesar, W.S., Mayko, Z.M. (2012, October). *Cross-institutional collaboration in outreach: Undergraduates, graduates, middle and high schoolers get together to learn about the brain.* Poster session at annual Society for Neuroscience conference, New Orleans, LA.

Griesar, W.S., Morgan, M.M. (2010, November). *Promise and Peril of Online Courses.* Poster session at annual Society for Neuroscience conference, San Diego, CA.

### **HONORS, GRANTS, AWARDS AND FELLOWSHIPS**

UNDERGRADUATE RESEARCH MENTOR OF THE YEAR AWARD (March, 2024). In recognition of outstanding success mentoring undergraduate students at Portland State.

GRANT (2024, March, \$1500), *PSU College of Liberal Arts and Sciences*. Money provided for art and science supplies to use in spring NW Noggin outreach efforts.

GRANT (2024, January, \$1500), *PSU College of Liberal Arts and Sciences*. Money provided for art and science supplies to use in winter NW Noggin outreach efforts.

GRANT (2023, July, \$1200), *OHSU Portland Alcohol Research Center*. Money provided for art and science supplies to use in fall NW Noggin outreach efforts.

RONALD E. MCNAIR POST-BACCALAUREATE ACHIEVEMENT PROGRAM  
MENTOR APPRECIATION AWARD (August, 2023).

HONORS THESIS ADVISOR AWARD (June, 2022), *Portland State University Honors College*. Award recognizes outstanding faculty advising of an Honors College thesis.

PSU HONORS COLLEGE HONORABLE MENTION, MENTOR AWARD (2021-2022).

GRANT (2022, May, \$1200), *OHSU Portland Alcohol Research Center*. Money provided for art and science supplies to use in fall NW Noggin outreach efforts.

GRANT (January, 2022, \$1500), *Dana Foundation*. Money provided for art and science supplies and activities associated with NOGGINFEST, the largest public celebration of art, music, neuroscience research and brains in the Pacific Northwest!

GRANT (2021, November, \$7500), *OHSU Portland Alcohol Research Center*. Money provided for art and science supplies, including a new 3D printer for NW Noggin outreach.

GRANT (February, 2021, \$1500), *Dana Foundation*. Money provided for art and science supplies and activities associated with NOGGINFEST, the largest public celebration of art, music, neuroscience research and brains in the Pacific Northwest!

GRANT (February, 2021, \$1500), *OnPoint Community Foundation*. Money for art and science supplies and activities associated with NOGGINFEST.

PEAR 2020 COMMUNITY PARTNER OF THE YEAR AWARD (2020, June). PEAR. For sharing with homeless youth in Portland, Oregon current neuroscience research on sleep, bias, adolescent brain development, drugs, stress, anxiety, mental health – and for listening, learning, advocating and making art.

JOHN ELIOT ALLEN OUTSTANDING TEACHING AWARD in Psychology (2020, 2017, 2013). *Portland State University*. To recognize exceptional teaching and leadership in the College of Liberal Arts and Sciences at PSU.

GRANT (2020, May, \$2500), *OHSU Portland Alcohol Research Center*. Money provided for art and science supplies, and video equipment to use in spring NW Noggin pandemic outreach efforts in Portland Public Schools.

GRANT (2019, September, \$7500), *OHSU Portland Alcohol Research Center*. Money granted for art and science supplies to use in fall NW Noggin outreach efforts, including six \$750 travel awards for sending PSU undergraduates and faculty to the annual Society for Social Neuroscience and Society for Neuroscience conferences in Chicago, IL.

GRANT (2019, July, \$7500), *Society for Social Neuroscience*. Money granted for art and science supplies, travel and accommodations for PSU faculty and undergraduate outreach volunteers to participate in a Social Neuroscience Fair at the Chicago Museum of Science & Industry, and work with 500+ K-12 students in Chicago Public Schools.

GRANT (2018, September, \$1250), *OHSU Portland Alcohol Research Center*. Money granted for art and science supplies to use in fall NW Noggin outreach efforts, including a



- daylong session with incarcerated youth at the MacLaren Youth Correctional Facility for discussion of neuroscience research pertaining to bias, anxiety and development.
- JUICE AWARD (2018, March). *Regional Arts & Culture Council (RACC)*. Award (non-monetary) for outstanding achievement in expression, support and service in arts and culture in the tri-county area (Clackamas, Multnomah & Washington, OR).
- GRANT (2018, March, \$2500). *OHSU Portland Alcohol Research Center*. Money granted for art and science supplies to use in NW Noggin outreach efforts, including a multi-day visit to public schools in rural Morrow County, OR, the OHSU Brain Fair at OMSI, and the March for Science in Portland's Pioneer Square.
- GRANT (2017, December, \$5000). *Spirit Mountain Community Fund*. Money granted to develop and implement a "Native Storytelling and the Brain" outreach program in Grande Ronde and Siletz Valley tribal schools in Lincoln and Yamhill Counties, OR.
- FUNDRAISER (2017, October, \$7000). *Noggin Fest!* The first annual student volunteer run celebration of music, art and research at the Alberta Rose Theater in Portland, OR. Money for NW Noggin to transport eight undergraduates and house 21 at the 2017 Society for Neuroscience conference in Washington DC.
- FACULTY COMMUNITY PARTNER OF THE YEAR AWARD (2016-17). To recognize outstanding support for the Neuroscience Club at PSU, and engagement with the broader community. Awarded by the Student Activities & Leadership Program (SALP) at PSU.
- GRANT (2017, March, \$2500). *OHSU Portland Alcohol Research Center*. Money granted for art and science supplies to use in NW Noggin outreach efforts, including a multi-day visit to Fort Vancouver High School in Clark County, WA.
- GRANT (2016, March, \$4000). *OHSU Portland Alcohol Research Center*. Money granted for three travel grants for graduate participants from OHSU Behavioral Neuroscience, and educational supplies in neuroscience outreach.
- GRANT (2015, November, \$5000). *US Bank Foundation*. Money granted to support outreach efforts through NW Noggin spring/summer, 2016. Fiscal agent WSU Vancouver.
- GRANT (2015, May, \$5000). *Pacific Northwest College of Art*. Money granted to support eight PNCA undergraduate and graduate outreach participants, and educational/art supplies for a NW Noggin summer program in Portland and Vancouver public schools. Fiscal agent was PNCA.
- GRANT (2015, May, \$7500). *Washington State University Vancouver*. Money (\$6000) granted by WSU College of Arts & Sciences to support NW Noggin science and art outreach efforts in spring/summer, 2015. Additional \$1500 contributed by Neuroscience department.
- GRANT (2015, April, \$5400). *Southwest Washington MESA*. Money granted to support a NW Noggin summer program for academic priority students from Evergreen and Vancouver Public Schools on the WSU Vancouver campus.
- GRANT (2015, March, \$4000). *OHSU Portland Alcohol Research Center*. Money granted for three travel grants for graduate participants from OHSU Behavioral Neuroscience, and educational supplies in neuroscience outreach.
- GRANT (2014, March, \$5000). *OHSU Portland Alcohol Research Center*. Money granted for five travel grants for graduate participants from OHSU Behavioral Neuroscience, and educational supplies in neuroscience outreach.
- GRANT (2013, June, \$5000). *Association for Psychological Science*. Money granted to

support neuroscience education efforts involving graduates and undergraduates from multiple institutions who developed and delivered cross-disciplinary brain and behavior courses at three Portland Public Schools.

JOHN ELIOT ALLEN OUTSTANDING TEACHING AWARD in Speech & Hearing Sciences (2010, 2007). *Portland State University*. To recognize exceptional teaching and leadership in the College of Liberal Arts and Sciences at PSU.

Bike Train Coordinator of the Year Award (2011) biketrainpdx.org. Bike Train leader, Sabin K-8, Portland Public Schools (2009 – 2013).

National Research Scholarship Award (NRSA) (1998 – 2001). *NIDA/NIH*. #F32DAO5903

National Institute on Drug Abuse (NIDA) Training Grant (1997 – 1998). *NIDA/NIH*.

OHSU Tartar Fellowship (1997). *Oregon Health & Science University*.

National Institute of Alcohol Abuse & Addiction (NIAAA) Training Grant (1996 – 1997).

## **TEACHING, MENTORING AND CURRICULAR ACHIEVEMENTS**

### ***Teaching***

*Developed/teach neuroscience courses at Portland State University since 2000 in Speech & Hearing Sciences, University Studies and Psychology; from 2001-2017 at WSU Vancouver in Psychology and Neuroscience; from 2011 in Behavioral Neuroscience at OHSU; at Portland Community College, Lower Columbia College, and diverse settings (K-12 academic priority classrooms, tribal schools, homeless youth centers, art museums, urban/rural communities, breweries, coffee shops, correctional facilities and bike shop pubs) since 2012 through outreach with nwnoggin.org. A sampling of courses below.*

*NOTE: Updated currently taught courses for remote instruction, beginning with spring term 2020. Integrated extensive new video reviews, text descriptions, online assessments, original artwork and relevant research links for PSY 200, 347, 450, 451 and 452 at Portland State.*

*Contributed to the establishment of an innovative new minor in interdisciplinary neuroscience at Portland State University. Helped students advocate, and collaborated with faculty from multiple departments to develop the minor, which took effect in fall term 2021.*

*Created, along with my PSU colleague Jeff Leake, a new four-credit interdisciplinary neuroscience international course through the PSU Education Abroad Office and Academic Programs International. This new course, Cerebrarte: Arte y Neurociencia en Chile, involves immersive homestays, along with visits to historic and current neuroscience research labs, museums, galleries and other relevant sites in and around Valparaíso, Chile.*

### ***PORTLAND STATE UNIVERSITY***

***Introduction to Physiological Psychology*** (PSY 451): The study of the nervous system and how it underlies behavior. This course introduces students to the structure and function of the

nervous system, methods used to study the brain and behavior, and specific cognitive functions (attention, memory, language) that are currently under study.

***Advanced Neurophysiological Psychology*** (PSY 452): This course teaches students to gather, evaluate and present scientific information, and aims to promote better understanding of the nervous system through discussion and presentation of current topics in neuroscience, a visit to the Oregon National Primate Research Center, and exposure to graduate students directly involved in original research. Organized and coordinated (2011-2018) with OHSU Behavioral Neuroscience to integrate graduate students into Advanced course.

***Psychology as Natural Science*** (PSY 200): one of two introductory psychology courses at PSU. Developed the “master class” resources (slides, syllabus, etc). for this course in 2016. Course covers the scientific foundations of human behavior in areas such as physiological and biological psychology, cognitive, ethical, and emotional development, sensation and perception, learning, consciousness, and memory. This course also focuses on experimental design and teaches students how to critically evaluate psychological research.

***Perception*** (PSY 347): This course, co-taught with an artist, covers biological mechanisms that underlie sensory detection of specific categories of stimuli (visual, auditory, chemical, mechanical,...), and CNS networks involved in perceptual discrimination, interpretation, and complex cognitive responses. We look at how these critical, adaptive networks develop, and how they are influenced by drugs and decay. Through visits to the Portland Art Museum and opportunities for students to create objects that help them reflect on and explore concepts, we learn how artists have approached, understood and integrated aspects of sensory detection and perception into often extraordinary works that compel, move and inspire.

***Psychopharmacology*** (PSY 450): Neuropsychopharmacology is the study of how drugs affect the nervous system, and how drug actions alter physiology and behavior. This course introduces students to the structure and function of the nervous system, techniques used to study drug actions and effects, treatment strategies, law enforcement approaches, and the specific molecular and behavioral influence of alcohol and other drugs (including opioids, cocaine, methamphetamine, nicotine, caffeine, cannabinoids and hallucinogens).

***Cognitive Neuroscience of Memory*** (PSY 410): Memory is inherent in the structure of our neural networks, and depends on changes in how neurons communicate. This course explores various forms of memory, and their reliance on distinct networks in the brain. We investigate memory disorders, including amnesia, PTSD and drug addiction, and memory consequences of stroke, trauma, alcoholism and Alzheimer’s disease.

***Neuroscience Outreach: The Brain in Real Life*** (PSY 410): A practicum course designed to get students out of their undergraduate classrooms, and into the local community, along with other undergraduates and graduates from Portland State University, WSU Vancouver, Oregon Health & Science University, and the Pacific Northwest College of Art. Students collaborate and prepare three week courses on the brain and behavior for K-12 students in

Portland and Vancouver Public Schools, directly participate in introducing topics in neuroscience, and lead arts-integrated classroom projects and activities.

***Neurology of Speech & Hearing*** (SPHR 461): This course teaches students how the nervous system underlies communication, from how neurons communicate with each other to how they form networks that carry out complex behaviors such as hearing and speech/sign. Topics covered include electrical and chemical transmission, the structure and functional divisions of the nervous system, the central auditory system, and brain regions that participate in the production and comprehension of speech and language.

***Science of Creativity and Learning*** (University Studies Freshman Inquiry (FRINQ)): Three course sequence. Creativity is one of the most complex and uniquely human behaviors that we exhibit. By exploring the biological drives behind our aesthetic experiences, and by examining physically what happens when we engage in creative activities, we learn a great deal about how we perceive and interact with the world. In this course students examine how vision, touch and other stimuli support perception, explore the history of anatomical study and the depiction of brains and bodies in medical texts and art, the neurobiological mechanisms that generate behavior, and how stimuli affect the nervous system, driving conscious and unconscious responses that lead us to create and learn.

***Cerebrarte: Arte y Neurociencia en Chile*** (PSY 410): We directly examine sensation and perception through the vibrant art and neuroscience research traditions around Valparaíso, Chile. We explore how neurons carry information, and how research in Chile (involving the giant axons of the Humboldt squid) led to our understanding of the electrical signaling that links our experiences to the world. We delve into the rich history and exciting present of research at the Universidad de Valparaíso, make art and contribute to interdisciplinary neuroscience engagement through Ciencia al Tiro, a local STEM outreach nonprofit.

## ***OREGON HEALTH AND SCIENCE UNIVERSITY***

***Teaching Practicum*** (BEHN 650): This course offers post-quals graduate students immersive, short term experience in an undergraduate classroom, to promote development of teaching skills by creatively preparing and presenting information about current research efforts, and by effectively conveying relevant background material, including neural mechanisms, and techniques, required to understand the work.

## ***WASHINGTON STATE UNIVERSITY VANCOUVER***

***Foundations of Neuroscience*** (NEURO 301): Introduces students to the exciting field of neuroscience. Neurons link up in distributed networks, and advances in our understanding of physiology (structure) and its relationship to cognition/behavior (function) is accelerating. Course covers electrochemical transmission of information, structural/functional divisions of the nervous system, sensory systems, anatomical techniques, techniques aimed at assessing behavior, and the specific neural basis of stress, pain, learning and memory.

***Biological Basis of Behavior*** (PSYCH 372): Physiological psychology, cognitive neuroscience, biology of behavior - all describe the study of the nervous system and how it underlies what we do. This course introduces students to the structure and function of the nervous system, methods used to study the brain and behavior, and some specific cognitive functions (including decision making, language and emotion) under research.

***Advanced Biological Basis of Behavior*** (PSYCH 473): This course teaches students to gather, evaluate and present scientific information, and aims to promote better understanding of the nervous system through discussion and presentation of current topics in neuroscience, a visit to the Oregon National Primate Research Center, and exposure to graduate students directly involved in original research. Organized and coordinated (2011-2017) with OHSU Behavioral Neuroscience to integrate graduate students into Advanced course.

***Art & Brain*** (NEURO 150): The first UCORE approved cross-disciplinary art and science course in the Washington State University system. Co-taught with an artist, the course brought in close to half of all new Neuroscience undergraduates in its first two years. Art & Brain covers biological mechanisms that underlie sensory detection of specific categories of stimuli (visual, auditory, chemical, mechanical,...), and CNS networks involved in perceptual discrimination, interpretation, and complex cognitive responses. We look at how these critical, adaptive networks develop, and how they are influenced by drugs and decay. Course integrates visits to the Portland Art Museum and opportunities for students to create objects that help them reflect on and explore concepts. We learn how artists have approached, understood and integrated aspects of sensory detection and perception into often extraordinary works that compel, move and inspire.

***Affective Neuroscience*** (PSYCH 409): This course focuses on the fundamental organization of the nervous system and the nature of emotions and feelings. Topics include how the nervous system represents and deploys emotions and feelings, the neuroscience of anxiety and depression, and emotion and the body, decision making, and society.

***Neuroanatomy*** (NEURO 404): Neuroanatomy is the study of the nervous system and its various parts, in terms of position, shape and size, connections, functions, pathology and clinical significance. This class introduces students to the structure and function of the nervous system, and its constituent components, networks, and systems through lecture, discussion, video, internet resources and laboratory dissection.

***Cognitive Neuroscience of Memory*** (PSYCH 490): This course explores how the nervous system stores, retrieves and consolidates memory. Topics include (1) Connection: how memory is inherent in the structure of neural networks and depends on changes in how neurons communicate; (2) Cognition: psychological theories of memory and its various forms; (3) Compartmentalization: how different forms of memory rely on separate, interacting networks of brain regions; and (4) Consolidation: the transfer of short term memories into a more long term store.



***Biopsychological Effects of Alcohol and Other Drugs*** (PSYCH 265): Course covers the structure and function of the nervous system, and the specific molecular and behavioral influence of alcohol and other drugs (including opioids, MDMA, nicotine, caffeine, cocaine, amphetamine, methamphetamine, marijuana, LSD), along with treatment strategies and law enforcement approaches to drugs of abuse.

### ***Mentoring***

*I have taught thousands of undergraduates, graduates and K-12 students, and provided informal mentoring to many during courses and outreach with NW Noggin. In Psychology at PSU, Psychology/Neuroscience at WSU Vancouver, and NIH BUILD EXITO/U-RISE at PSU and OHSU, I have served as a formal mentor for many more. I've also helped placed students in lab internships at OHSU and Legacy Research Institute. A sampling below.*

***Faculty Advisor***, PSU Neuroscience Club (2014 – present). The Club has won two Student Activities & Leadership Program awards (SALPies); in 2014 for “Student Organization of the Year,” and in 2017 for “Service Organization of the Year.”

***Interdisciplinary Neuroscience Outreach Mentor*** (2022-2024). Portland State University. Undergraduates Brooke Searle, Hannah Shawo, Roman Cimkovich, Mackenzie Wang, Anna Traylor, Kristin Preston, Allonté Barakat, Julian Rodriguez, Asha Powell-Stormberg, Mina Sattari, Jadyn Harris, Hosanna Broderick, Regina Warila, Natalie Partipilo, Andy Ng, Sami Wagner, Nathalie Rios Carreon, Becky Hunt, Veronika Carranza, Cameron McGrew, Alexandria Bills, Rebecca Chevrel, Kasey Judd, Dan Jang, Abubakar Nur and Zach Salcido.

***Honors thesis advisor*** (2024). Emilee Brnusak, Psychology, Portland State University. *Providing incarcerated youth with a community of their peers, providing resources, and modeling healthy attachment may lead to prosocial behaviors.*

***Research By Arrangement Mentor*** (2024). Connie Tran, Biology, Portland State University. Connie worked in Dr. Martin Schreiber’s lab in the Donald D. Trunkey Center for Civilian and Combat Casualty Care at OHSU. Learn more: [My Pathway to Research](#)

***Research By Arrangement Mentor*** (2024). Becky Martinez, Psychology, Portland State University. Becky worked in the Advancing Research in Pediatric Pain (ARPP) Lab at OHSU. Learn more: [What Happens to a Young Brain on Opioids?](#)

***Research By Arrangement Mentor*** (2024). Frederick Schemel, Psychology, Portland State University. Frederick worked in the Developmental Brain Imaging Lab run by Dr. Bonnie Nagel at OHSU. Learn more: [More Than One Path to Research](#)

***Honors thesis advisor*** (2023). Marc Chenard, Psychology, Portland State University. *Let Kids Sleep: The Role of Interdisciplinary Neuroscience Outreach in Stimulating Brains and Developing Research-Informed Approaches to Community Concerns.*

***Research By Arrangement Mentor*** (2023). Conner Corbett, Psychology, Portland State University. Conner worked in the OHSU research lab of Dr. Matt Lattal. Learn more: [Curiosity for the Noggin](#)

**Research By Arrangement Mentor** (2023). Lorenzo Nungaray, Biology, Portland State University. Lorenzo worked as a research technician in the Sleep and Health Applied Research Program (SHARP) at OHSU, under the direction of Dr. Miranda Lim.

Learn more: [The Significance of Sleep](#)

**Research By Arrangement Mentor** (2023). Natalie Robison, Biology, Portland State University. Natalie worked with Dr. Carolyn Quam at the Child Language Learning Center, located within the Speech & Hearing Sciences Department at Portland State University.

Learn more: [A Brain without Glia](#)

**Research By Arrangement Mentor** (2023). Olivia Monestime, Biology, Portland State University. Olivia worked in Dr. Nora Gray's research lab at the Portland Veterans Administration Medical Center. Learn more: [When a Western Blot Goes SOUTH](#)

**Research By Arrangement Mentor** (2023). Jasmine Loeung, Psychology, Portland State University. Jasmine worked as a research technician in the Sleep and Health Applied Research Program (SHARP) Lab at the Portland Veteran's Affairs Medical Center and OHSU. Learn more: [A Vignette of Voles](#)

**Research By Arrangement Mentor** (2023). Asha Powell-Stormberg, Psychology, Portland State University. Asha worked in Dr. Adie Rae Wilson-Poe's cannabinoid research lab at Legacy Research Institute, and published a literature review paper.

Learn more: [A Lit Review of Cannabis Vaping for Pain](#)

**Research By Arrangement Mentor** (2023). Kayla McDaniel, Psychology, Portland State University. Kayla served as a Research Assistant in Dr. Miranda Lim's Sleep & Health Applied Research Program (SHARP) laboratory at the Portland VA Medical Center and OHSU. Learn more: [You Belong in Research](#)

**Research By Arrangement Mentor** (2023). Jonathan Palacios, Psychology, Portland State University. Jonathan is a BUILD EXITO and U-RISE scholar who worked in Dr. Angela Ozburn's substance use disorder research lab at OHSU.

Learn more: [My Journey to Research](#)

**Research By Arrangement Mentor** (2023). Citaly Vasquez, Public Health Clinical Sciences, Portland State University. Citaly worked with Dr. Derek J. Lam, an ENT otolaryngologist at OHSU.

Learn more: [Dreaming of Better Sleep for Children with Down Syndrome](#)

**Research By Arrangement Mentor** (2022). Chaya Krieg, Psychology, Portland State University. Chaya worked in Dr. Andy Mashburn's lab, contributing to The Mindfulness Pre-K Project at PSU. Learn more: [Mindful Research](#)

**Research By Arrangement Mentor** (2022). Savanah Gipson, Psychology, Portland State University. Kerry worked in Dr. Tori Crain's RESET lab at Portland State University. Learn more: [A Scientific Journey: The Value of Subjective Data](#)

**Research By Arrangement Mentor** (2022). Brittani Wallsten, Psychology, Portland State University. Brittani worked in Dr. Barb Sorg's lab at Legacy Research Institute.

Learn more: [To the Lab!](#) Also: [Research & Practice: The Human Element](#)

**Research By Arrangement Mentor** (2022). Kerry Barahona, Psychology, Portland State University. Kerry worked in Dr. Laura Villasana's lab at Legacy Research Institute.

Learn more: [From combat boots to lab coats.](#)

**Research By Arrangement Mentor** (2022). Tiarra Jacoby, Psychology, Portland State University. Tiarra worked in Dr. Haiying Shen's epilepsy lab at Legacy Research Institute. Learn more: [Here's what I gained from my experience in a neurobiology lab.](#)

**Research By Arrangement Mentor** (2022). Bradley Marxmiller, Biology, Portland State University. Bradley worked in Dr. Atheir Abbas's neuroscience lab at OHSU and the Veteran's Administration Hospital. Learn more: [Learning with light.](#)

**Research By Arrangement Mentor** (2021). Elana Kananykhina, Psychology, Portland State University. Elana worked in Dr. Adie Rae Wilson-Poe's cannabinoid lab at Legacy Research Institute. Learn more: [What's it like to volunteer in a neurobiology lab?](#)

**Interdisciplinary Neuroscience Research/Outreach Mentor** (2021-2022). Portland State University. Undergraduates Kilsa Naanee, Tonia Bautista, Grace Taylor, Annabella (Bella) Showerman, Lauren Kuiper, Yasaman Farhand and Zoie Harpole.

**Career Mentor**, NIH BUILD EXITO (2017-present). Portland State University. Undergraduates Rebekah Alexander, Heather Hamilton, Sulema Rodriguez, Deza' Rae Collins, McKenzie Figuracion, Kayla Townsley, Maverick Johnson, Isabella Maranghi, Sawyer Perry, Mikah Brandes, Andrea Rano, Jasmin Mabry.

**Honors thesis advisor** (2022). Britta Harbury, Psychology, Portland State University. *Neuroscience-Informed Self-Advocacy for Individuals with Psychiatric Disorders.*

**Honors thesis advisor** (2022). Madeline R. Armendariz Sullivan, Psychology, Portland State University. *Literature Review: the Relationship Between Art and Anxiety.*

**Honors thesis advisor** (2021). Danny Leister-Gray, Psychology, Portland State University. *Internet, Music, and Activism During Crisis — LGBTQ Communities in 2020.*

**Honors thesis advisor** (2021). Ronan Peck, Psychology, Portland State University. *The Psychedelic Renaissance: a convergence of Indigenous knowledge and science.*

**Honors thesis advisor** (2020). Jesus Martinez, Psychology, Portland State University. *The Effects of Neuron Degeneration and Methods of Neurogenesis.*

**Honors thesis advisor** (2018). Jesse Hamlin, Psychology, Portland State University. *Music and the brain: Piloting arts integration with homeless youth.*

**Honors thesis advisor** (2018). Aaron Eisen, Psychology, Portland State University. *Exploration of ayahuasca's mechanisms in the treatment of stimulant use disorder.* Presentation at 6<sup>th</sup> annual Student Research Symposium, PSU, Portland, OR.

**Master's thesis committee member** (2017). Emily Weiss, Psychology. *Sleep and Young Children's Development of Self-Regulation and Academic Skills.*

**Honors thesis advisor** (2017). Kayla Townsley, Biology. *From STEM to STEAM: The Neuroscience Behind the Movement Towards Arts Integration in K-12 Curricula.*

**Informal mentor** (2017 – present). Sulema Rodriguez, an NIH BUILD EXITO scholar, helped develop a Noggin presentation on the Hispanic/Latino heritage of neuroscience and benefits of multilingualism for staff at the nonprofit Latino Network. Sulema accompanied Noggin for outreach in Washington DC, presenting to the House Neuroscience and STEAM caucuses on arts-integrated STEM education. During a Noggin tour of brain-related art at the NIH, she reached out to Dennis Drayna, a top researcher on genetics of stuttering. Sulema, a person who stutters, and she completed a 2018 summer internship in Dr. Drayna's lab!

**Faculty Advisor**, WSU Vancouver Neuroscience Club (2014 – 2017).

## **COMMUNITY OUTREACH ACHIEVEMENTS**

*Along with my artist colleague Jeff Leake, I co-founded NW Noggin in 2012, which became a 501(c)(3) nonprofit on November 15, 2016. Through NW Noggin, I regularly make free, volunteer outreach visits to K-12 public schools and events. A LIMITED sampling below: **more details on ongoing activities @ [www.nwnoggin.org](http://www.nwnoggin.org)***

**Noggin outreach at P:ear** (Ongoing). NW Noggin organizes students from OHSU, PSU and other campuses to develop Noggin sessions at this homeless youth center, where our volunteers engage in science activities and art projects that help teach about brains.

**Noggin Old Town Talks** (Ongoing). NW Noggin brings together brain researchers and artists to collaborate on free public presentations of their work at popular Portland venues, including Velo Cult, Floyds Old Town and Honey Latte Café.

**NOGGINFEST** (Ongoing). NW Noggin brings together local musicians, artists and neuroscience researchers annually to celebrate interdisciplinary creative endeavors in our community. Entirely free to the public, and run by student volunteers.

**Thank you for letting us touch your brains** (June, 2023). Noggin visited high school students at David Douglas High School for a deep exploration of the neuroscience of habits and how to change them.

**Long skinny lightning in Siletz** (May, 2023). With support from the Roundhouse Foundation, the Portland Alcohol Research Center (PARC) at OHSU, and Siletz Valley School, we brought nine faculty, undergraduates and graduate students from Portland State University, OHSU, the Pacific Northwest College of Art and the University of Oregon to Siletz, Oregon for three days of neuroscience, storytelling and art.

**How does Narcan save a life?** (May, 2023). Noggin visited high school students at Oregon City High School for a day of neuroscience and art, and compelling questions.

**Signal from Noise on the Oregon Coast** (April, 2023). Noggin brought together a cardiologist PA, a Columbia River bar pilot, and a graduate student in neuroscience from OHSU to discuss the nature of wave energy in hearts, rivers and brains. We collaborated with the TRIO Program, the Roundhouse Foundation, Fort George Brewery, and public school districts in Astoria and Knappa, Oregon. We followed the free community talk with three days of visits with K-12 students.

**Learning through mistakes!** (February, 2023). Noggin joined 4<sup>th</sup> graders at Sunnyside Elementary in Portland Public Schools to explore how we learn and acquire skills.

**Lightning in a Berry** (April, 2022). Noggin visited high school students at Franklin High School in Portland Public Schools, along with Kilsa Naanee, an undergraduate in

interdisciplinary neuroscience at Portland State University and a Biology teacher at Franklin, who helped organize the outreach.

**Gathertown, Gathertown and hear the tale of the Netherlandic Noggin** (February, 2022). Noggin presentation at The Hersenolympiade 2022 (Dutch for ‘brain olympiade’).

**An Axonal Alliance** (December, 2021). During finals week, ten volunteer undergraduates and faculty from Portland State University arrived at Alliance High School in North Portland, a small, supportive Portland public high school with day and evening hours for students ages 16 to 21 who are within twelve credits of graduation, to discuss brains and make art.

**Pathways Under Change** (November, 2021). Noggin volunteers traveled to rural St. Helens, Oregon, to spend a morning with clients at the Pathways Residential Treatment Facility, a program of Columbia Community Mental Health, discussing substance use disorders (SUDs), memory, sleep, stress and how traumatic experiences in childhood might influence the development of adult brains.

**How to visit public schools** (October, 2021). Volunteer outreach over two days in a safe, outdoor setting at Sunnyside Environmental School, Portland (Oregon) Public Schools.

**Viking, Shark, Fishermen & Bandit Brains!** (2021, October). Noggin volunteers spent four days in Astoria and Seaside public schools answering questions about neuroscience research, making brain-related art and holding brains. Local businesses provided all housing and meals in a successful collaboration with the federal TRIO Program.

**Gresham Cool** (2021, August). Our Noggin volunteers arrived at the Center for Advanced Learning in Gresham, Oregon, where a free summer program for rising 9th graders in the Gresham-Barlow Public School District was underway.

**Hillsboro Heat** (2021, August). As temps soared to triple digits in our formerly mild Pacific Northwest, a network of undergraduates, graduate students, neuroscientists and artists arrived in Hillsboro, Oregon to talk brains and make art.

**Hosford, Hippocampi & Hope** (2021, June). We made two virtual online visits to Portland’s Hosford Middle School to consider some incredible questions from 200+ 6th graders in Jane Van Dam and Kevin Marquardt’s biology classes, and then followed up with two LIVE campus visits!

**Clatsop Community Cortex** (2021, May). NW Noggin collaborated with the federal TRIO Program at Clatsop Community College and with teachers in Astoria High School, to bring brains, art and volunteers both virtually (three visits) and live (one more) to high school Psychology students on the Oregon coast.



[\*\*A crayon in Homer's brain\*\*](#) (2021, April). NW Noggin volunteers met with 4<sup>th</sup> grade students at Sunnyside Elementary School, a Portland Public School with a focus on environmental education for four separate online visits to discuss neuroscience.

[\*\*Ho brah, he lolo maoli kēlā!\*\*](#) (2021, February). NW Noggin traveled virtually to Waikiki Elementary School in Hawaii to talk neuroscience with 5<sup>th</sup> grade students.

[\*\*Returning to find a voice\*\*](#) (2020, October). NW Noggin collaborated with p:ear houseless youth center in downtown Portland for several live, masked, physically distanced outreach visits related to voting, public engagement, art and brains. We raised over \$1000 to prepare and distribute “noggin vesicles” - screen-printed shoulder sacks filled with hand-stitched brain masks, KN95 masks, first aid kits, 3D printed brains and emergency blankets.

[\*\*Pandemic connections\*\*](#) (2020, May). NW Noggin collaborated with Creative Science in Portland Public Schools to answer middle school student questions, examine brains and make art with found objects in an online setting during the COVID-19 pandemic.

[\*\*Sewing Memories, & Brains\*\*](#) (2020, February). NW Noggin collaborated with Chilean artist and educator Cecilia Araneda to present arpilleras, compelling woven depictions of traumatic experiences, along with research on trauma, resilience and memory in a public Art Walk in Astoria, OR and in a workshop for houseless youth at p:ear in Portland, OR.

[\*\*Brains & Change\*\*](#) (2020, February). NW Noggin volunteers collaborated with Portland State University professor Deb Arthur on a visit with women incarcerated at the Coffee Creek Correctional Facility in Wilsonville, OR to discuss neuroscience research on development, trauma, “metamorphosis” and change.

[\*\*North Coast Noggins: Art, Alevins & Brains!\*\*](#) (2020, January). NW Noggin volunteers collaborated with Clatsop Community College for two days of outreach visits with students in both Astoria and Warrenton High Schools.

[\*\*Everything but guns\*\*](#) (2019, December). NW Noggin volunteers explored the neuroscience of trauma, drugs, sleep, gun violence and other topics with high school students during lockdown drills at David Douglas High School in Portland, OR.

[\*\*Being there means something\*\*](#) (2019, December). NW Noggin testified before the Tri-MET Board of Directors regarding neuroscience research related to homelessness, trauma and fare enforcement. Profiled in Street Roots: [\*Brains, trains and homelessness: How public transit can respond to neuroscience\*](#)

[\*\*Noggins in CHICAGO!\*\*](#) (2019, October). NW Noggin partnered with the Society for Social Neuroscience and Chicago Public Schools to introduce brains and make art with 500 students from Chicago Public Schools for a Social Neuroscience Fair at the Chicago Museum of Science & Industry. We also collaborated with the International Museum of

Surgical Science, and brought the first real human brain specimens to the Society for Neuroscience conference in its 50 year history.

[Let's Talk at YouthLine](#) (2019, October). NW Noggin visited YouthLine, a free, confidential, teen-to-teen 24/7 crisis helpline to meet and learn with youth counselors.

[Mvelinating @ MacLaren!](#) (2019, September). NW Noggin returned to explore neuroscience with young people incarcerated at the MacLaren Youth Correctional Facility and consider the state of *all* our changing, developing brains.

[Tennis Balls & Brains](#) (2019, June). NW Noggin volunteers brought brains and art projects to kindergarten – 3<sup>rd</sup> grade students at nonprofit Portland Tennis and Education, which serves low income Latinx students in St. Johns, Portland, OR.

[LTP in La Grande](#) (2019, June). NW Noggin volunteers spent three days in the rural eastern Oregon community of La Grande. I collaborated with the Northeast Oregon Area Health Education Center and with Greater Oregon STEM, engaging 150 3<sup>rd</sup> – 12<sup>th</sup> graders with brains and art.

[Empowerment through Art & Brains](#) (2019, June). Brought volunteers and real (extra!) human and animal noggins to visit the [Portland Art & Learning Studios](#) in NE Portland last month – to draw and sculpt brains with developmentally disabled adults.

[Accumbens in Astoria](#) (2019, May). NW Noggin volunteers spent two days in the rural Oregon community of Astoria, engaging with about 150 9<sup>th</sup> – 12<sup>th</sup> graders in the public Astoria High School with brains and art.

[Brains to the Streets!](#) (2019, May). Organized 15 undergraduate volunteers for a “march for science” through downtown Portland, OR with real brains and art projects to directly engage the public on their investment in neuroscience research and the arts.

[Thankful for brains](#) (2019, April). Noggin volunteers spent two days in Ardenwald Elementary (Milwaukie Public Schools), engaging 500+ K-5 with brains and art.

[Bringing BRAINS to Brain Fair :\)](#) (2019, March). Noggin returned to one of the nation's largest Brain Fairs at the Oregon Museum of Science & Industry (OMSI) to continue vigorous efforts at brain awareness with THREE long tables piled high with pipe cleaners, ink jars, sketch pads, electrodes, Mindflex Duels, formalin-fixed human and other animal cerebrums – *and more than 30 informed and eager volunteers!*

[Gray Matter in Grants Pass!](#) (2019, March). Noggin volunteers spent two snowy days in the rural Oregon community of Grants Pass, engaging with about 300 6<sup>th</sup> – 8<sup>th</sup> graders in the public North Middle School with brains and art.

[Honest selves @ Hosford](#) (2019, March). Spent a full day at Portland's Hosford Middle School with more than 250 6<sup>th</sup> – 8<sup>th</sup> grade students, and more brains, art and volunteers.

[Making our own boxes, and brains!](#) (2019, February). Volunteers spent a morning at Portland's Bridges Middle School introducing brains and making art with 5<sup>th</sup> – 8<sup>th</sup> grade students with ADHD and/or on the autism spectrum.

[Community Neuroscience: Interview with Dana](#) (2019, February). Video interview with the Dana Foundation after NW Noggin presented the keynote address on Brain Awareness at the 2019 Society for Neuroscience conference in San Diego, CA.

[All is in motion, is growing, is you](#) (2019, January). Noggin invited to share research and show brains with incarcerated youth at MacLaren Youth Correctional Facility. Profiled by the Oregon Youth Authority: [Youth Get Visual, Hands-On Experience With the Brain](#)

[Noggin at Velo Cult](#) (2014 - 2018). NW Noggin brought together brain researchers and artists to collaborate on free public presentations of their work at this popular bike shop & pub.

[What is brain surgery like?](#) (2018, November). Noggin was honored to bring 30 high school students, teachers and our own PSU undergraduate volunteers to Providence St. Vincent hospital to view an actual surgery on a living patient's brain.

[Synapsing in San Diego @ SfN!](#) (2018, November). Arranged for 11 PSU Neuroscience Club undergraduates to attend the national Society for Neuroscience conference in San Diego, CA to present their own posters during delivery (by Jeff Leake and myself) of the keynote address on brain awareness. During the conference we collaborated with UC San Diego to discuss brain research, examine real brains and make brain-related art for two days with 400 K-8 students in three San Diego Unified Public Schools.

[Synapses, Stories & Song!](#) (2018, October). Arranged (through a partnership I developed with the Confederated Tribes of the Grande Ronde, Oregon Pacific Area Health Education Center, the Intel Native American Employees Network and school districts in both Lincoln and Yamhill counties) for 13 PSU, OHSU and other area students to spend three days in Siletz and Grande Ronde tribal majority schools for a Spirit Mountain Community Fund supported outreach effort aimed at making connections between figures in tribal stories (including Coyote, Crow and Grizzly) and their relevant neuroanatomy.

[Noggin at MacLaren Youth Correctional Facility](#) (2018, September). Noggin invited to share research and show brains with incarcerated youth at MacLaren studying the law and aspects of neuroscience (e.g., bias, adolescent brain development) relevant to how our justice system operates, to develop a case for changes to Oregon's Measure 11.

**Siletz Stories, Singing, Dancing & Brains!** (2018, July). Noggin invited to share stories (and brains) at Kalapuya/Coos tribal camp in Oregon's Rogue Valley, along with celebrated Siletz storyteller Esther Stutzmann.

**Adventure A-Head** (2018, June). Noggin teamed up with BioGift Anatomical to dissect cougar, bear, badger, squirrel and fox brains for use in outreach to tribal majority schools.

**Reaction Time at Reynolds** (2018, April). Noggin teamed up with NIH BUILD EXITO, the Equity & Empowerment Corps (EEC) at PSU, and the Alliance for Visible Diversity in Science at OHSU. We brought volunteers, enthusiasm, research background, diversity, empowerment and BRAINS to Reynolds High School for a lively introduction to neuroscience in a senior Human Anatomy Class.

**Gray Matter Marching** (2018, April). Noggin staffed tables filled with real human brains and art projects for the second annual March for Science. Outreach volunteers also crafted an enormous, anatomically accurate styrofoam brain that was featured on local news.

**Women in Science (& Art!)** (2018, March). Volunteers introduced brains and art projects to hundreds of 5<sup>th</sup> – 8<sup>th</sup> grade girls at the 2018 Women in STEM event in Vancouver, WA.

**Brains are xumxum @ Willamina** (2018, March). Volunteers spent a morning at Willamina High School to discuss autumn plans for "Synapses & Stories," an exploration of Grande Ronde and Siletz Valley tribal storytelling, the characters that feature in Native tales (including Crow, Grizzly and Coyote), and current brain research related to animal skills and behaviors that were recognized long ago.

**Basal ganglia @ Beaumont!** (2018, March). As part of a collaboration between Noggin and the Latino Network, a nonprofit dedicated to culturally-specific practices and services to support Latino youth and families in reaching their full potential, we examined brains, answered questions, and made brain-related art at Beaumont Middle School in PPS.

**Putting the brains in Brain Fair!** (2018, March). Noggin returned to one of the nation's largest Brain Fairs at OMSI to continue efforts at brain awareness with THREE long tables piled high with pipe cleaners, ink, sketch pads, electrodes, Mindflex Duels, formalin-fixed human and other animal cerebrums – *and ~30 informed and eager Noggin volunteers!*

**Black Art, School & Dreams** (2018, March). Graduate student Emily Weiss from Psychology at Portland State University, who explores how sleep impacts African-American children entering school, and Jamaali Roberts, a recent graduate of PNCA and a talented painter using different media to rethink how Black culture is represented in U.S. society, took the stage at Velo Cult to present intriguing research, hypnotic music, surrealistic storytelling and compelling Black art.

**High Desert Noggins: Brains & baby goats!** (2018, February). Noggin volunteers spent three snowy days in the rural Morrow County, Oregon communities of Heppner and Ione, engaging with about 300 4th – 12th graders in local public schools with brains and art.

**Trickster Brains @ Shahala** (2018, February). Noggin brought undergraduates and graduates from multiple local universities to Shahala Middle School in Vancouver, WA to answer questions about neuroscience research, and a host of brain related topics.

**Race, Bias & Brain: You Can't Control Art** (2018, January). Teresa Raiford, founder of Don't Shoot Portland, and Binyam Nardos, a postdoctoral researcher at OHSU, collaborated on a NW Noggin presentation at Velo Cult about current brain research on racial prejudice, and the art and activism essential for shifting the climate towards equality and justice for all.

**From classrooms to Congress!** (2017, November). I organized a group of 21 graduate and undergraduate Noggin volunteers, and arranged for funded travel and participation in several high profile art and neuroscience outreach events during a full week in Washington DC. We visited 750+ students in two schools (Sidwell Friends and Turner Elementary), ran a “Brains + Art” briefing for the Neuroscience and STEAM caucuses in the U.S. House of Representatives, staffed a very popular Art of Neuroscience booth at the Society for Neuroscience conference, and enjoyed an informative NIH tour of Cajal prints and other research-inspired art.

**Homelessness & the Brain: Seeing us all through research & art** (2017, October). Collaboration with pear homeless youth center to put on this day long event, which welcomed graduate researchers studying sleep, stress, anxiety, depression, emotional regulation, racial bias, methamphetamine, alcohol, brain development and resilience, plus clinicians and policy makers – as well as data, art and testimony from community members without a home, to illuminate links between a lack of affordable housing and all our brains.

**Transmitters @ TEDx** (2017, October). NW Noggin at TEDx Mount Hood; information table for TedX participants

**Latino Network Learning & Lobes** (2017, October). NW Noggin training for Latino Network teachers and staff; presentation on research concerning changes in adolescent brain development, the neural benefits of bilingualism, and other relevant topics. Integrated (via Skype) Latino neuroscientist from the Centro Interdisciplinario Neurociencia de Valparaíso (CINV), Chile.

**Noggin Fest 2017!** (2017, October). Helped organize and inaugurate the first annual student-run Noggin celebration of music, art and research at the Alberta Rose Theater, Portland, OR. Raised \$7000 for “From Classrooms to Congress” outreach at the SfN conference in DC.

**Astoria Noggins: Tipsy Buzzed Mice @ Street 14** (2017, September). Free public Noggin presentation on links between two local favorites – caffeine and alcohol – and the combined actions and effects of these popular drugs on human and rodent behavior and brains.



**Awe, Amazement & Delight** (2017, July). *Mad Pursuit: Exploring Science through the Lens of Art*, Ford Gallery, Portland OR. Noggin arranged for a live musical performance by the band Shannon Entropy with simultaneous EEG recording and display, plus late night post-art show salon discussion of neuroscience and art at The Mechanical.

**Synapsing with Summer @ SAIL!** (2017, July). NW Noggin organized a brain and art-infused outreach session for the Summer Academy to Inspire Learning (SAIL), a PSU program that partners with Youth Engaged in Science (YES!) in the Fair Neuroimaging Lab at OHSU

**Science Reddit AMA** (2017, June). Took questions from 3000+ active Reddit participants (21,000+ viewers worldwide) on arts integration in STEM (STEAM). Briefly the top Science Reddit AMA (“Ask Me Anything”) online session globally. Retrieved from [https://www.reddit.com/r/science/comments/6gzgss/science\\_ama\\_series\\_were\\_bill\\_griesar\\_and\\_jeff/](https://www.reddit.com/r/science/comments/6gzgss/science_ama_series_were_bill_griesar_and_jeff/)

**Blue Mountain Brains!** (2017, May). Outreach in La Grande, Oregon with 15 Noggin volunteers and about 90 6<sup>th</sup> – 12<sup>th</sup> graders from six rural/frontier counties. Partnered with Northeast Oregon Area Health Education Center. We were joined by staff from Democratic U.S. Senator Ron Wyden’s office.

**Frequencies @ Franklin: Your brain on sax!** (2017, April). Noggin brought volunteers, cerebrums and sax player Wenzl McGowan from the band Moon Hooch to Franklin High School (Portland Public Schools) to explore the electrophysiology of our brains response to music.

**Dopamine in Davenport** (2017, March). We spent three days in the rural Washington community of Davenport, meeting with every K-9th grader! We discussed research on the brain and drugs, anxiety, depression, Parkinson’s, Alzheimer’s, genetics of parenting behavior, the mathematical modeling of brain activity, adolescent brain development and other compelling topics. We made our own pipe cleaner neurons, and created brain cell prints. We were joined by the Manager for Constituent & Community Relations for Rep. Cathy McMorris-Rogers, GOP co-Chair of the House Neuroscience caucus.

**Living brain, successful surgery** (2017, January). Noggin was honored to bring 30 high school students, teachers and our own volunteers to Providence St. Vincent hospital to view an actual surgery on a living patient’s brain.

**A network grows in San Diego** (2016, November). I organized a group of 10 Noggin outreach participants at the Society for Neuroscience conference to visit two Title I San Diego public schools, who engaged students in discussion of brain research. We brought the many pipe cleaner neurons these students created back to the conference, for a popular installation of colorful, networked brain cells!

**Noggins in Washington DC** (2016, May). I organized 26 graduate and undergraduate volunteers, and arranged for funded travel and participation in high profile art & neuroscience outreach events during a full week in Washington DC. This effort included visits to two Title I DC public schools, a “Brains + Art” briefing for the Neuroscience and STEAM caucuses in the U.S. House of Representatives, another “Brains + Art” briefing for the Health, Education, Labor and Pensions (HELP) committee in the U.S. Senate, a meeting with the Office of Science and Technology Policy at the White House, “Neuroscience Night” at the Phillips Collection, where we displayed brain-related art created by DC public school students earlier in the week, and a tour of Cajal prints and other research-inspired art at the National Institutes of Health.

**Noggin at Skyview Storm** (2016, May). Arranged for four days of neuroscience outreach at Skyview High School in Vancouver, WA. Funded partnership with GEAR UP (federal program aimed at preparing low income students for college), the Portland Alcohol Research Center and YES! Outreach at OHSU.

**Spies, Scouts & Scribes at Bonny Slope** (2016, March). Arranged for PSU undergraduates to receive stipends for three days of exciting art and neuroscience engagement with students at Bonny Slope Elementary, Beaverton, OR.

**Brain Watch Wednesday** (2016, January). Arranged brain surgery experience with academic priority K-12 students through Providence St. Vincent hospital.

**Beethoven, Brains & Bloody Mary’s** (2015, November). Delivered talk on the power of music and the brain in Alzheimer’s dementia for the Vancouver Symphony. Arranged for classical guitarist Ryan Walsh to perform. Brickstone Ballroom, Vancouver, WA.

**Brains on Art: Member Night @ the Museum** (2015, November). Brought student volunteers and human brains to the NW Noggin “Nature of Seeing” gallery, as part of the ongoing “Seeing Nature” exhibit. Portland Art Museum, Portland, OR.

**Noggin Summer Program** (2015, June – July). Supervised volunteer educational outreach effort, funded by grants from MESA, Boys & Girls Club, SUN, OHSU Portland Alcohol Research Center, PNCA & WSU, involving graduates and undergraduates from OHSU, PSU, WSUV & PNCA, who developed and delivered courses on the brain and behavior to academic priority K-12 students at five locations. Portland, OR & Vancouver, WA.

**Gray Matter @ McCoy** (2015, May – June). Organized outreach volunteers for four days of neuroscience/art engagement with academic priority students at McCoy Academy, a school serving students who have left Portland Public Schools. Portland, OR.

**Caldera Arts and Brains in central Oregon** (2015, April). NW Noggin partnered with Caldera Arts, an innovative educational organization serving academically at risk youth with year-round art and environmental programs in central Oregon. We met with 6th through 8th graders at Elton Gregory Middle School. Redmond, OR.

Griesar, Bill (2015, February). *The Science of E-cigarettes*. Public panel presentation at Portland State University, hosted by the Neuroscience Club, Portland, OR.

Griesar, Bill (2015, February). *Gender Love and Sex*. Public panel presentation at PSU, hosted by Sociology Club, Psi Chi, Psychology Club, Neuroscience Club, Portland, OR.

[NW Noggin visits DC!](#) (2014, November). Secured housing, support, and supervised eight undergraduates from PSU and WSU-V presenting on neuroscience outreach efforts through NW Noggin at the Society for Neuroscience conference, Washington, DC.

Griesar, Bill (2014, November). *Marijuana and the Brain*. Public lecture presented at Portland State University, on behalf of the PSU Neuroscience Club, Portland, OR.

[Noggin Summer Program](#) (2014, June – June). Supervised volunteer neuroscience educational outreach effort, funded by grants from the Portland Alcohol Research Center, Regional Arts and Culture Council (RACC), and WSUV, involving undergraduates and graduates from OHSU, PSU, WSUV and PNCA, who developed and delivered courses on the brain and behavior to middle and high schoolers at five Portland Public Schools.

Griesar, Bill (2014, May). *Bicycling and the Brain*. Public lecture delivered at Velo Cult, at a fundraiser for neuroscience outreach. Portland, OR.

Griesar, Bill (2014, April). *Alcohol and the Brain*. Public panel discussion at Portland State University, on behalf of the PSU Neuroscience Club. Portland, OR.

Griesar, Bill (2014, February). *Gender Love and Sex*. Public panel presentation at PSU, hosted by Sociology Club, Psi Chi, Psychology Club, Neuroscience Club, Portland, OR.

[Noggin Summer Program](#) (2013, June – July). Supervised volunteer neuroscience educational outreach effort, funded by Association for Psychological Science grant, involving graduates and undergraduates from OHSU, PSU, WSUV and PNCA, who developed and delivered courses on the brain and behavior to middle/high schoolers at three Portland Public Schools. Portland, OR.

Griesar, Bill (2013, January). *Marijuana and the Brain*. Public lecture delivered at Portland State University, on behalf of an undergraduate student group, Scholars for Awareness of Neuroscience Education (SANE). Portland, OR.

**Noggin Summer Program** (2012, June – July). Supervised collaborative volunteer neuroscience educational outreach effort at one Portland Public school (Sabin K-8). Partnership with Schools Uniting Neighborhoods (SUN) Program. Portland, OR.

Griesar, Bill (2012, September). Volunteer lecturer on the brain and nervous system at Volunteers of America, a residential drug rehabilitation program, Portland, OR.