**Linnea Sepe-Forrest**

(510) 725-0450

lisepe@iu.edu

# EDUCATION:

Ph.D. in Clinical Science and Neuroscience

Indiana University Bloomington

August 2020 - Present

B.S. in Neuroscience

University of California, Los Angeles

September 2014 - June 2018

# HONORS AND AWARDS:

# National Science Foundation Graduate Research Fellowship Program 2020 - Honorable Mention

Outstanding Poster - Postbaccalaureate Poster Day 2019, National Institutes of Health

Outstanding Poster - Neuroscience Poster Day 2018, UCLA

Dean’s List - Winter 2015, Fall 2016, Fall 2017, Winter 2018, Spring 2018, Fall 2020, Spring 2021

**GRANTS/FUNDING:**

Fall 2021, Spring 2022 Indiana University Neuroscience Travel Award

2021 Indiana University Provost’s Travel Award for Women in Science

2021 Ruth L. Kirschstein National Research Service Award Predoctoral Fellowship

2021 Sharon Stephens Brehm Excellence in Research Award

2020 Rebec Family Neuroscience Fellowship

2019 National Institute of Mental Health (NIMH) Intramural Research Program Travel Award

# PUBLICATIONS:

**Sepe-Forrest, L.**, Carver, F.W., Quentin, R., Holroyd, T., Nugent, A.C. (2021). Spatiotemporal dynamics of reward processing in basal ganglia and cortex revealed by magnetoencephalography. *Neuroimage: Reports*, *1*(3), 100034.

Lichtenberg, N. T., **Sepe-Forrest, L.**, Pennington, Z. T., Lamparelli, A. C., Greenfield, V. Y., & Wassum, K. M. (2021). The medial orbitofrontal cortex - basolateral amygdala circuit regulates the influence of reward cues on adaptive behavior and choice. *The Journal of Neuroscience*, JN-RM.

Lundin, N. B.\*, **Sepe-Forrest, L.\***, Gilbert, J. R., Carver, F. W., Furey, M. L., Zarate, C. A., Jr, & Nugent, A. C. (2021). Ketamine Alters Electrophysiological Responses to Emotional Faces in Major Depressive Disorder. *Journal of affective disorders*, *279*, 239–249.

\*These authors contributed equally to this work

# MANUSCRIPTS:

# Submitted:

# Sepe-Forrest, L., Kim, D., Quinn, P.D., Bolbecker, A.R., Wisner, K.M., Hetrick, W.P., O’Donnell, B.F. “Evidence of familial confounding of the association between cannabis use and cerebellar-cortical functional connectivity using a twin study”

# In Preparation:

# Sepe-Forrest, L., Bailey, A.J., Carver, F.W., Quinn, P.D., Hetrick, W.P., O’Donnell, B.F. “Working memory task analyses reveal positive association between alcohol consumption and attentional performance: a twin study”

# Sepe-Forrest, L., Holder-Dixon, A., Epping, G. P., Quinn, P.D. “Psychological and demographic correlates of alcohol use among United States youth”

# Carver, F.W., Sepe-Forrest, L., Quentin, R., Holroyd, T., Nugent, A.C. “Cerebellar high gamma activation during performance of a reaching task in MEG”

# ORAL PRESENTATION:

“Spatiotemporal dynamics of reward processing in basal ganglia and cortex revealed by magnetoencephalography” (2019) MEG North America. Bethesda, MD

# POSTER PRESENTATIONS:

# Sepe-Forrest, L., Kim, D., Quinn, P.D., Bolbecker, A.R., Wisner, K.M., Hetrick, W.P., O’Donnell, B.F. “Evidence of familial confounding of the association between cannabis use and cerebellar-cortical functional connectivity using a twin study” (2021) Society for Research in Psychopathology. Virtual Conference

Carver, F.W., **Sepe-Forrest, L.**, Quentin, R., Holroyd, T., Coppola, R., Nugent, A.C. “Cerebellar high gamma activation during performance of a reaching task in MEG” (2019) Society for Neuroscience Annual Meeting. Chicago, IL

**Sepe-Forrest, L.**, Carver, F.W., Quentin, R., Holroyd, T., Nugent, A.C. “Spatiotemporal dynamics of reward processing in basal ganglia and cortex revealed by magnetoencephalography” (2019) Society for Neuroscience Annual Meeting. Chicago, IL

Shrout, K., **Sepe-Forrest, L.**, Carver, F.W., Chung, J.Y., Nugent, A.C. “Visualizing neural characteristics of response inhibition using magnetoencephalography” (2019) National Institutes of Health Summer Poster Day. Bethesda, MD

**Sepe-Forrest, L.**, Lundin, N.B., Gilbert, J.R., Carver, F.W., Zarate, C.A. Jr., Nugent, A.C. “Effects of ketamine on emotional face processing in major depression: a magnetoencephalography study” (2019) Society of Biological Psychiatry Annual Meeting. Chicago, IL

Lundin, N.B., **Sepe-Forrest, L.**, Gilbert, J.R., Carver, F.W., Zarate, C.A. Jr., Nugent, A.C. “Emotional face processing in depressed and healthy individuals: behavior and magnetoencephalography findings” (2019) Society of Biological Psychiatry Annual Meeting. Chicago, IL

**Sepe-Forrest, L.**, Lichtenberg, N.T., Wassum, K.M. “Investigating the role of amygdala-cortical circuitry in associative decision making” (2018) UCLA Neuroscience Poster Day. Los Angeles, CA

Lichtenberg, N.T., **Sepe-Forrest, L.**, Pennington, Z.T., Holley, S.M., Greenfield, V.Y.

Cepeda, C., Levine, M.S., Wassum, K.M. “Amygdala-cortical circuitry in reward-expectation guided behavior” (2018) Society for Neuroscience Annual Meeting. San Diego, CA

Lichtenberg, N.T., Pennington, Z.T., Greenfield, V.Y., **Sepe-Forrest, L.**, Cepeda, C., Levine, M.S., Wassum, K.M. “Amygdala-cortical pathways that enable hidden state expectations” (2018) Computational and Systems Neuroscience (Cosyne) Annual Meeting. Denver, CO

Lichtenberg, N.T., Pennington, Z.T., Greenfield, V.Y**.**, **Sepe-Forrest, L.**, Cepeda, C., Levine, M.S., Wassum, K.M. “The role of basolateral amygdala output pathways in reward expectation-guided behavior” (2017) Society for Neuroscience Annual Meeting. Washington, DC

# RESEARCH EXPERIENCE:

Graduate Student, Department of Psychological and Brain Sciences | Bloomington, IN

*Supervisors: Patrick Quinn, PhD, William Hetrick, PhD, and Brian D’Onofrio, PhD*

August 2020 – Present

* The overarching aim of the current research projects is to assess causal relationships between substance use and psychiatric outcomes or brain-based changes after accounting for measured and unmeasured confounding factors
* Performed data processing and manipulation in Python
* Used SAS to run linear mixed models in MZ and DZ twin pairs to measure familial influences on the relationship between resting-state functional connectivity and cannabis or alcohol use
* Developing project focused on investigating the influence of multiple substances of abuse on risk for psychosis symptoms and diagnoses after accounting for genetic, trauma, personality, and other related confounds

Postbaccalaureate Fellow (IRTA), Magnetoencephalography (MEG) Core - NIMH | Bethesda, MD

*Supervisors: Allison Nugent, PhD and Joyce Chung, MD*

Clinical Trials: NCT00397111, NCT00088699, NCT03304665, NCT00024635

August 2018 – August 2020

* Designed Go-No-Go and novel reward tasks in Python
* Conducted neuroimaging and behavioral analyses using Linux, Analysis of Functional Neuroimages (AFNI), Python, SPSS, and Synthetic Aperture Magnetometry (SAM)
* Measured differences in cortico-striatal response during reward processing
* Analyzed differential effects of ketamine in patients with depression and healthy volunteers
* Performed clinical interviews with inpatients with depression before and after participating in research

Student Researcher, Department of Psychology – UCLA | Los Angeles, CA

*Supervisor: Kate Wassum, PhD*

May 2016 – July 2018

* Conducted an independent research project on neural circuitry underlying behaviors that are implicated in addiction
* Used chemogenetics to look at amygdala-cortical projection involvement in cue-guided decision making
* Performed rat husbandry, behavioral training, transcardial perfusions, tissue collection, slide mounting, fluorescence microscopy for retrograde tracing, immediate early gene expression analysis, stereotaxic surgery, post-operative animal care
* Conducted literature review, data analysis, and data visualization in Prism

Resilience Peer, Resilience Peer Network | Los Angeles, CA

*Supervisor: Elizabeth Gong-Guy, PhD*

September 2016 – January 2018

* Worked as a peer counselor in the Resilience Peer Network, a clinical trial in The Depression Grand Challenge at UCLA aimed at providing students with internet delivered Cognitive Behavioral Therapy (CBT) along with peer-facilitated support groups
* Received training in CBT and taught cognitive techniques under close supervision of licensed professionals
* Co-facilitated support groups for UCLA students with mild to moderate depression and anxiety

Student Researcher, Department of Psychology – UC Berkeley | Berkeley, CA

*Supervisor: Linda Wilbrecht*

June 2017 - September 2017

* Worked on a project looking at pubertal hormone’s influence on decision-making
* Analyzed changes in bouton density in cortex and amygdala to study brain development during adolescence using MATLAB
* Ran behavioral tests, including four choice behavioral tests, elevated plus mazes, and open field tests to assess levels of anxiety in mice

**PROFESSIONAL MEMBERSHIPS:**

August 2021 – Present: Society for Research in Psychopathology, Associate Member

April 2021 – Present: Psychological Clinical Science Accreditation System, Student Representative

August 2020 – Present: Psychological and Brain Sciences Diversity Advancement Committee

August 2020 – Present: Program in Neuroscience Diversity Equity and Inclusion Committee

# REFERENCES:

# Patrick Quinn, PhD

# Assistant Professor

# School of Public Health

# Indiana University Bloomington

# 809 East Nineth Street

# Bloomington, IN 47405-7007

# 812-855-9789

# [quinnp@iu.edu](mailto:quinnp@iu.edu)

William Hetrick, PhD

Department Chair and Professor

Department of Psychological and Brain Sciences

Indiana University Bloomington

1101 East Tenth Street

Bloomington, IN 47405-7007

(812) 855-2620

[whetrick@indiana.edu](mailto:whetrick@indiana.edu)

Allison Nugent, PhD

Director, MEG Core

National Institute of Mental Health

10 Center Drive

Bethesda, MD 20814

(301) 451-8863

[nugenta@nih.gov](mailto:nugenta@nih.gov)