#### **CURRICULUM VITAE**

# Constanza Inez C. de Dios

Louis A. Faillace, MD, Department of Psychiatry and Behavioral Sciences

Behavioral and Biomedical Sciences Building

1941 East Road BBSB 1306

Houston, TX 77054

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Office: (713) 486-2826

### PRESENT TITLE

2019-Present Postdoctoral Research Fellow

Center for Neurobehavioral Research on Addiction

Louis A. Faillace, MD, Department of Psychiatry and Behavioral Sciences

UTHealth McGovern Medical School University of Texas Health Science Center

Houston, TX

### **EDUCATION**

2016-2019 Ph.D. Psychology

University of South Florida, Tampa, FL

Concentration: Cognition, Neuroscience, and Social Psychology

2013-2016 M.A. Psychology

University of South Florida, Tampa, FL

Concentration: Cognition, Neuroscience, and Social Psychology

2008-2012 B.S. Psychology

Saint Mary's College of California, Moraga, CA

Concentration: Experimental/Neuroscience Psychology

Summa Cum Laude

### **PUBLICATIONS**

# **Peer-Reviewed Original Journal Articles**

#### In Press

Webber, H. E., Yoon, J. H., **de Dios, C.**, Suchting, R., Dang, V., Versace, F., Green, C. E., Wardle, M. C., Lane, S. D., & Schmitz, J. M. (2022). Assessing cocaine motivational reward value: Comparison of brain reactivity bias toward cocaine cues and cocaine demand. *Experimental and Clinical Psychopharmacology*. PMID: 36480395. DOI: 10.1037/pha0000622.

Webber, H. E., **de Dios, C**., Kessler, D.A., Schmitz, J.M., Lane, S.D., & Suchting, R. (2022). Late positive potential as a candidate biomarker of motivational relevance in substance use:

- Evidence from a meta-analysis. *Neuroscience and Biobehavioral Reviews, 141*. PMID: 36031010. DOI: 10.1016/j.neubiorev.2022.104835.
- Selvaraj, S., Aggarwal, S., **de Dios, C**., De Figueiredo, J., Sharrief, A.Z., Beauchamp, J., & Savitz, S.I. (2022). Predictors of suicidal ideation among acute stroke survivors. *Journal of Affective Disorders Reports*, *10*. DOI: 10.1016/j.jadr.2022.100410.
- Leung, E.\*, Lau, E. W.\*, Liang A.\*, **de Dios, C.**, Suchting, R., Ostlundh, L., Masdeu, J. C., Fujita, M., Sanches, M., Soares, J. C., & Selvaraj, S. (2022). Alterations in brain synaptic proteins and mRNAs in mood disorders: A systematic review and meta-analysis of postmortem brain studies. *Molecular Psychiatry, 27*(3), 1362-1372. PMID: 35022529. DOI: 10.1038/s41380-021-01410-9.
- **de Dios, C.**, Fernandes, B. S., Whalen, K., Bandewar, S., Suchting, R., Weaver, M., & Selvaraj, S. (2021). Prescription fill patterns for benzodiazepines and opioid drugs during the COVID-19 pandemic in the United States. *Drug and Alcohol Dependence*, *229*, 109176. PMID: 34808468. PMCID: PMC8595244. DOI: 10.1016/j.drugalcdep.2021.109176.
- Suchting, R., Green, C.E., **de Dios, C.**, Vincent, J., Moeller, F.G., Lane, S.D., & Schmitz, J.M. (2021). Citalopram for treatment of cocaine use disorder: A Bayesian drop-the-loser randomized clinical trial. *Drug and Alcohol Dependence*, *228*, 109054. PMID: 34600245. PMCID: PMC8595787. DOI: 10.1016/j.drugalcdep.2021.109054
- Yoon, J., Suchting, R., **de Dios, C.**, Vincent, J., McKay, S., Lane, S., & Schmitz, J. (2021).

  Decreased cocaine demand following contingency management treatment. *Drug and Alcohol Dependence*, *226*, 108883. PMID: 34198136. DOI: 10.1016/j.drugalcdep.2021.108883
- Yammine, L., Green, C. E., Kosten, T. R., de Dios, C., Suchting, R., Lane, S. D., Verrico, C. D., & Schmitz, J.M. (2021). Exenatide adjunct to nicotine patch facilitates smoking cessation and may reduce post-cessation weight gain: a pilot randomized controlled trial. *Nicotine and Tobacco Research*, 23(10), 1682-1690. PMID: 33831213. PMCID: PMC8517504. DOI: 10.1093/ntr/ntab066
- Nakano, H., Rosario, M-A. M, & **de Dios, C.** (2021). Experience affects EEG event-related synchronization in dancers and nondancers while listening to preferred music. *Frontiers in Psychology, 12*, 611355. PMID: 33912101. PMCID: 8071982. DOI: 10.3389/fpsyg.2021.611355
- de Dios, C., Suchting, R., Webber, H. E., Yoon, J. H., Yammine, L., Vincent, J., Weaver, M. F., Stotts, A. L., Schmitz, J. M., & Lane, S. D. (2021). Cocaine-specific speed-accuracy trade-off during anti-saccade testing differentiates patients with cocaine use disorder who achieve initial abstinence during treatment. *Journal of Psychopharmacology*, 35(5), 611-614. PMID: 33586502. PMCID: 8480541. DOI: 10.1177/0269881121991566
- Webber, H. E., de Dios, C, Wardle M. C, Suchting R., Green C. E., Schmitz, J. M., Lane, S. D., & Versace, F. (2021). Electrophysiological responses to emotional and cocaine cues reveal individual neuroaffective profiles in cocaine users. *Experimental and Clinical Psychopharmacology*, XX, xx-xx. PMID: 33630644. PMCID: 8406778. DOI: 10.1037/pha0000450.

- Suchting, R., Tirumalajaru, V., Gareeb, R. M., Bockmann, T., **de Dios, C.**, Aickareth, J., Pinjari, O., Soares, J. C., Cowen P. J., & Selvaraj, S. (2021). Revisiting monoamine oxidase inhibitors for the treatment of depressive disorders: A systematic review and network meta-analysis. *Journal of Affective Disorders*, *282*, 1153-1160. PMID: 33601690. DOI: 10.1016/j.jad.2021.01.021
- Yoon, J. H., **de Dios, C.**, Suchting R., Vincent J. N., McKay S. A., Lane S. D., & Schmitz J. M. (2020). Initial development of a brief assessment of cocaine demand. *Behavioral Pharmacology*, *32*(4), 351-355. PMID: 33394690. PMCID: 8119298. DOI:10.1097/fbp.000000000000017
- Hunt, C., Macedo, T., Suchting, R., **de Dios, C.**, Cuellar Leal, V. A., Soares, J. C., Dantzer, R., & Teixeira, A. (2020). Effect of immune activation on the kynurenine pathway and depression symptoms a systematic review and meta-analysis. *Neuroscience and Biobehavioral Reviews*, 118, 514-523. PMID: 32853625. PMCID: 8087452. DOI: 10.1016/j.neubiorev.2020.08.010
- Soder, H. E., **de Dios, C.,** & Potts, G. F. (2016). The role of the neural reward system in attention selection. *NeuroReport*, *27*(10), 787-790. PMID: 27232519. DOI: 10.1097/wnr.000000000000017

### **Under Review**

- **de Dios, C.**, Suchting, R., Green, C., Klugh, J.M., Harvin, J.A., Webber, H.E., Schmitz, J.M., Lane, S.D., Yoon, J.H., Heads, A., Motley, K., & Stotts, A. (Under review). An opioid-minimizing multimodal pain regimen reduces opioid exposure and pain in trauma injured patients at high risk for opioid misuse: Secondary analysis from the MAST trial.
- Webber, H.E., **de Dios, C.**, White, K., & Potts, G.F. (Under review). Effects of valence, prediction, and delivery of emotional images on the feedback-related negativity/reward positivity.

# **Book Chapters**

- Lane, S. D., Yoon, J. H., Heads, A. M., de Dios, C., Yammine, L., Hong, J. H., Webber, H. E., Weaver, M. C., Schmitz, J. M., & Walss-Bass, C. (2023). Biomarkers of substance use disorders. In: A. L. Teixeira, N. P. Rocha, & M. Berk (Eds.), Biomarkers in Neuropsychiatry (XX-XX). New York, NY: Springer Publishing.
- Soder, H. E., Hoffman, J. L., **de Dios, C.**, & Webber, T. A. (2021). Best practices for studying addiction. In D. F. Ragin & J. P. Keenan (Eds.), *Handbook of research methods in health psychology* (73-86). New York NY & Abingdon, Oxon: Routledge.

**MyBibliography**: ncbi.nlm.nih.gov/myncbi/constanza%20inez.de%20dios.1/bibliography/public/ **ORCID**: orcid.org/0000-0003-0230-5222

### **PRESENTATIONS**

# **Conference Presentations**

(Presenter/s underlined)

- <u>de Dios, C.</u>, Suchting, R., Green, C., Klugh, J.M., Harvin, J.A., Webber, H.E., Schmitz, J.M., Lane, S.D., Yoon, J.H., Heads, A., Motley, K., & Stotts, A. (2022, September). *Reducing opioid exposure and pain in trauma patients at high risk for opioid misuse* [Poster session]. 81<sup>st</sup> Annual Meeting of the American Association for the Surgery of Trauma and Clinical Congress for Acute Care Surgery, Chicago, IL, USA.
- Hong, J.H., <u>de Dios</u>, C., Balderas, J.C., Tonkin, S.S., Suchting, R., Walss-Bass, C., & Meyer, T.D. (2022, June). *Types of traumatic experiences in drug overdose-related deaths: an exploratory latent class analysis* [Poster session]. College on Problems of Drug Dependence 84<sup>th</sup> Annual Meeting, Minneapolis, MN, USA.
- Hong, J.H. de Dios, C., Gilmore-Thomas, A., Lathan, E., Hamilton, J.E., & Heads, A.M. (2022, June). The association between potentially-traumatic events and cocaine, cannabis, and alcohol use differs by race [Poster session]. College on Problems of Drug Dependence 84<sup>th</sup> Annual Meeting, Minneapolis, MN, USA.
- Webber, H.E., <u>Yoon, J.H.</u>, **de Dios, C.**, Suchting, R., Green, C.E., Lane, S.D., Vincent, J., Dang, V., Wardle, M.C., Kypriotakis, G., Versace, F., & Schmitz, J.M. (2022, June). Brain reactivity bias toward drug versus pleasant cues is associated with drug demand in individuals with cocaine use disorder. In J.H. Yoon & G. Naudé (Chairs), *Behavioral Economics* [Symposium]. College on Problems of Drug Dependence 84<sup>th</sup> Annual Meeting, Minneapolis, MN, USA.
- de Dios, C., Schmitz, J.M., Lane, S.D., Suchting, R., Green, C.E., Kosten, T.R., Leidy, H.J., Verrico, C.D., & <u>Yammine, L.</u> (2022, March). A pilot trial of exenatide once-weekly adjunct to nicotine patch for smoking cessation and mitigation of post-cessation weight gain. In E. Herrmann (Chair), *Promising New Smoking Cessation Pharmacotherapies* [Symposium]. Society for Research on Nicotine and Tobacco 28<sup>th</sup> Annual Meeting, Baltimore, MD, USA.
- Cohen, A. S., Potestas, J. A., Sha, N., Almohamad, M., Jeong, J., Buddha, M., Spellman, M.L., Schmitz, J., Stotts, A.L., Lane, S.D., **de Dios, C.**, Walss-Bass, C., Savitz, S., Green, C. & Sharrief, A. Z. (2022). Abstract TP206: Vascular risk factors and stimulant use among stroke patients. *Stroke*, *53*(Suppl\_1), ATP206-ATP206. DOI: 10.1161/str.53.suppl\_1.TP206
- Hong, J.H., de Dios, C., Gilmore-Thomas, A., Lathan-Powell E.C., Hamilton, J.E., & Heads, A.M.
   (2021, July). The association between potentially-traumatic events and cocaine, cannabis, and alcohol use differs by race [Poster session]. 11th Annual Postdoctoral Science Symposium, Houston, TX.
- Webber, H. E., **de Dios, C.**, Kessler, D. A., Lane, S. D., Schmitz, J. M., & Suchting, R. (2021, October). *Error and reward processing in substance use disorders: evidence from a meta-analysis on event-related potentials* [Poster session]. 61<sup>st</sup> Meeting of the Society for Psychophysiological Research, Virtual.
- <u>Schmitz, J.,</u> Green, C., Suchting, R., **de Dios C.**, Vincent, J., Lane, S., & Moeller, F. G. (2021, June). Citalopram for treatment of cocaine use disorder: A Bayesian drop-the-loser randomized clinical trial. In *Stimulant Med Development* [Symposium]. College on Problems of Drug Dependence 83<sup>rd</sup> Annual Meeting, Virtual.

- Cohen, A., Jeong, J., Hinojosa, E., Schmitz, J., Spellman, M., Lane, S.D., Stotts, A., Walss-Bass, C., de Dios, C., Savitz, S., & Sharrief, A. (2021, June). *Assessing illicit drug use in the follow-up care of stroke survivors* [Poster session]. College on Problems of Drug Dependence 83<sup>rd</sup> Annual Meeting, Virtual.
- de Dios, C., Suchting, R., Soder, H., Yoon, J.H., Kessler, D., Kapoor, S., Stotts, A. L., Heads, A. M., Harvin, J. A., Green, C. E., Lane, S. D., Schmitz, J. M. (2020). Identifying predictors of opioid misuse in adult trauma patients using a Bayesian data science approach. Oral presentation given at University of Texas MD Anderson Cancer Center PostDoctoral Association, "10th Annual Postdoctoral Science Symposium" (first place, Applied Science). DigitalCommons@TMC, MD Anderson Cancer Center Postdoctoral Association, MD Anderson Cancer Center Postdoctoral Association Annual Postdoctoral Science Symposium Abstracts. Paper 3. https://digitalcommons.library.tmc.edu/mda\_postdoc\_symabs/3
- <u>Yammine, L.</u>, Green, C., Kosten, T. R., Suchting, R., **de Dios, C.**, Verrico, D, & Schmitz J. (2020, June). Pilot randomized controlled trial of exenatide combined with nicotine patch to promote smoking cessation and prevent weight gain. In *Late Breaking Presentation* [Talk]. College on Problems of Drug Dependence 82<sup>nd</sup> Annual Meeting, Virtual.
- Soder H. E., Kessler, D. A., McKay, S. A., Wardle, M. C., Suchting, R., **de Dios, C**, Green, C. E., Lane, S. D., Schmitz, J. M., & Versace, F. (2020, October). *Electrophysiological individual differences to cocaine-related and other emotional stimuli in individuals with cocaine addiction* [Poster session]. 60<sup>th</sup> Meeting of the Society for Psychophysiological Research, Virtual.
- <u>de Dios, C.</u>, Ford, S., & Potts, G. F. (2019, September). *Comparing reward and instructional relevance in target detection* [Poster session]. 59<sup>th</sup> Meeting of the Society for Psychophysiological Research in Washington DC, USA.
- Soder, H. E., de Dios, C., Akula, V. K., McDonald, R. V., & Potts, G. F. (2019, September). Feedback-related negativity reflects unexpected presence or absence of emotional images [Poster session]. 59<sup>th</sup> Meeting of the Society for Psychophysiological Research in Washington DC, USA.
- <u>de Dios C.</u> & Potts, G. F. (2018, October). *Learning to associate reward values with cues* [Poster session]. 58<sup>th</sup> Meeting of the Society for Psychophysiological Research in Quebec City, Quebec, Canada.
- <u>de Dios, C.</u> & Potts, G. F. (2017, October). Reward's impact on attention: Cue-like or target-like? [Poster session]. 57<sup>th</sup> Meeting of the Society for Psychophysiological Research in Vienna, Austria.
- <u>Dell, J., de Dios C,</u> Horner, C., Martinez, R., & O'Brien, J. (2017, October). *Value learning and early visual processing* [Poster session]. 57<sup>th</sup> Meeting of the Society for Psychophysiological Research in Vienna, Austria.
- de Dios, C., & Potts, G. F. (2016, September). *Does incentive salience direct early attention? An ERP investigation* [Poster session]. 56<sup>th</sup> Meeting of the Society for Psychophysiological Research in Minneapolis, MN, USA.

- <u>de Dios, C.</u>, Horner, C., Martinez, R., & O'Brien, J. (2016). Can value learning modulate early visual processing? [Abstract] *Journal of Vision, 16*(89), DOI:10.1167/16.12.89.
- <u>de Dios, C.</u> & Potts, G. F. (2016, April). Incentive salience produces early attention allocation: An ERP investigation [Poster session]. 23rd Cognitive Neuroscience Society Meeting in New York, NY, USA.
- <u>de Dios, C.</u> & Potts, G. (2014, September). *The effect of error monitoring systems on spatial attention* [Poster session]. 54<sup>th</sup> Meeting of the Society for Psychophysiological Research in Atlanta, GA, USA.
- Rosario, M.-A., Nakano, H., & **de Dios, C.** (2014, April). *Identifying an EEG spectral response to preferred music* [Poster session]. 21<sup>st</sup> Cognitive Neuroscience Society Meeting in Boston, MA, USA.
- <u>de Dios, C, Wan, N. J. A.</u>, Rosario, M.-A. M., & Nakano, H. (2012, March). *Music processing in experienced dancers and non-dancers: An EEG spectral analysis* [Poster session]. 19<sup>th</sup> Cognitive Neuroscience Society Meeting in Chicago, IL, USA.
- de Dios, C., Wan, N. J. A., Rosario, M.-A. M., & Nakano, H. (2011, April). Music processing in dancers and non-dancers: A preliminary EEG frequency analysis [Poster session]. 41<sup>st</sup> Western Psychology Conference for Undergraduate Research at Saint Mary's College of California, Moraga, CA, USA.

# CURRENT GRANT AND CONTRACT SUPPORT

2021-2023 A randomized, phase 2 clinical trial of HIF activator vadadustat for prevention

or treatment of ARDS in hospitalized COVID-19 patients

U.S. Department of Defense I W81XWH-21-10032 PI: Holger Eltzschig, PhD, & Bentley Bobrow, PhD

Role: Co-Investigator I 0.86 cal

\$2,994,147 direct/year

2021-2022 Removing Barriers to Effective HIV Prevention Strategies for Individuals with

Problematic Substance Use Disorders

NIH Texas Developmental Center for AIDS Research I

Pilot Project for NIH P30Al161943

PI: Angela Heads, PhD

Role: Co-Investigator I 2.4 cal

\$50,000 direct/year

2021-2023 Assessment of pioglitazone to address stress reactivity and alcohol use

disorder

National Institute on Alcohol Abuse and Alcoholism I NIAAA R21 AA027274

PI: Jin Yoon, PhD

Role: Co-investigatorl 0.24 cal

\$143,750 direct/year

2020-2024 Pioglitazone as an adjunct to CBT for cocaine relapse prevention

National Institute on Drug Abuse I NIDA R01 DA048026

Pls: Joy Schmitz, PhD & Scott Lane, PhD

Role: Co-investigator I 0.29 cal

\$449,353 direct/year

2021-2024 Development and pilot testing of a mental health clinic-based PrEP uptake and

adherence intervention for women in treatment for trauma-related conditions

National Institute on Drug Abuse | NIDA R34 DA55496

PI: Angela Heads, PhD

Role: Co-investigator I 0.17 cal

\$150,000 direct/year

2021-2025 Development and pilot testing of an addiction clinic-based PrEP adherence

intervention for women with substance use disorders

Centers for Disease Control and Prevention I CDC U01 PS005209

PI: Angela Heads, PhD

Role: Co-investigator I 0.29 cal

\$220,573 direct/year

2022-2023 Hope Biosciences (Contract)

PI: Constanza de Dios, PhD

Role: Statistical Design and Analysis Consultant I 1.98 cal

\$12,000 direct/year

**AWARDS** 

2020 First Place, Oral Competition, Applied Science Division, 10th Annual

Postdoctoral Science Symposium hosted by University of Texas MD Anderson

Cancer Center Postdoctoral Association

(Title: Identifying predictors of opioid misuse in adult trauma patients using a

Bayesian data science approach.)

2014-2018 Conference Presentation Grant, University of South Florida

(Grant to fund travel and presentation expenses in CNS and SPR

conferences)

2012 Undergraduate Student Research and Professional Development Fund, Saint

Mary's College of California

(Grant to support completion and presentation of EEG study on music

processing)

2012 Frederick Whelan Psychology Department Award, Saint Mary's College of

California

(Given to a graduating senior with an outstanding scholastic record as a

psychology major)

2011 Summer Research Award

School of Science Summer Research Program, Saint Mary's College of

California

(Stipend and award to conduct own research under mentor's supervision)

**TEACHING** 

2018-2019 Cognitive Psychology

Instructor of Record

University of South Florida

2016-2017 Physiological Psychology

Instructor of Record

University of South Florida

2013-2018 Research Methods in Psychology

Lab Instructor

Instructors: Marina Bornovalova, Ph.D., William Sacco, Ph.D., Michael

Brannick, Ph.D.

University of South Florida

2014-2016 Introduction to Psychological Science

Lab Instructor

Instructors: Jane Noll, Ph.D., Jennifer Bosson, Ph.D., Alaina Talboy, M.A.

(Online)

University of South Florida

2015, 2018 Cognitive Psychology

Teaching Assistant

Instructor: Kenneth Malmberg, Ph.D. (Online)

University of South Florida

### **MENTORING ACTIVITIES**

# **Graduate Students**

2021-current Sarah Tonkin, MA, Clinical Psychology Intern

HIV testing barriers among Black and Latina Women: An examination of

medical mistrust, discrimination, and substance use

Role: Statistics Mentor

UTHealth Faillace Department of Psychiatry and Behavioral Sciences

2021-current Jessica Balderas, MA, Clinical Psychology Intern

Types of traumatic experiences in drug overdose-related deaths

Role: Statistics Mentor

UTHealth Faillace Department of Psychiatry and Behavioral Sciences

2021-current Danielle Kessler, BS

Late positive potential as a biomarker of motivational relevance in substance

use: Evidence from a meta-analysis

Role: Statistics Mentor

UTHealth Faillace Department of Psychiatry and Behavioral Sciences

2015-2016 Carlene Horner, BS

Masters Thesis: The effect of value learning on attentional resources during

top-down processing: An ERP study

Role: Dissertation Committee Member (External Reviewer)

University of South Florida

# **Undergraduate Students**

2019-2021 Kaitlin White

Feedback-related negativity responds to presence or absence of

motivationally salient images regardless of valence

Role: Primary Mentor University of South Florida

2018-2019 Vamshi Akula

Bachelors Thesis: Medial frontal cortex responses to positive and negative

emotion prediction
Role: Primary Mentor
University of South Florida

2018 Joelle Castle

Mark Zimmer

The effects of reward on attention: An investigation of reaction time and

accuracv

Role: Primary Mentor University of South Florida

2018-2019 Steven Ford

Bachelors Honors Thesis: Independent Effects of Reward on Attention

Role: Primary Mentor University of South Florida

### **SERVICE**

2021- Ad-hoc Reviewer

Drug and Alcohol Dependence, JAMA Network Open, Journal of Affective Disorders, Journal of Psychoactive Drugs, Nicotine and

Tobacco Research

2017-2018 Graduate Representative to the Executive Committee

Department of Psychology, University of South Florida

2015-2017 Secretary and United Faculty of Florida Senator (Elected)

USF Graduate Assistants United, United Faculty of Florida

2014-2015 Brown Bag Lecture Committee Co-Chair

Department of Psychology, University of South Florida

# PAST RESEARCH EXPERIENCE

2013-2019 Graduate Research Assistant

Cognitive Electrophysiology and Clinical Neuroscience Lab

PI: Geoffrey Potts, Ph.D. Department of Psychology University of South Florida

Tampa, FL

2012-2013 Research Assistant

Affective Cognitive Neuroscience Lab

PI: Sonia Bishop, Ph.D. Department of Psychology University of California

Berkeley, CA

2010-2012 Undergraduate Research Assistant

EEG Lab

PI: Hiroko Nakano, Ph.D. Department of Psychology

Saint Mary's College of California

Moraga, CA

# TECHNICAL SKILLS

Statistical Analyses: R (brms, rstan, lme4, poLCA, multinom, metafor, nnet, mgcv, tidyverse); Python

(scikit-learn); SPSS

Signal Processing: EEGLAB (via MATLAB), Net Station

Experiment Design: E-Prime 2.0 Data Management: REDCap

# PROFESSIONAL MEMBERSHIPS

Cognitive Neuroscience Society
Society for Psychophysiological Research
Vision Sciences Society
Psi Chi Honor Society
American Psychological Association
Alpha Mu Gamma Foreign Language Honor Society