Amar Ojha

Center for Neuroscience University of Pittsburgh amo80@pitt.edu

EDUCATION & TRAINING

2019- Center for Neuroscience

University of Pittsburgh

Ph.D. Candidate

2019- Center for the Neural Basis of Cognition

Carnegie Mellon University and University of Pittsburgh

Graduate Certificate Training Program

2013-2017 Bates College

B.A. in Neuroscience

B.A. in Philosophy (Honors)

RESEARCH EXPERIENCE

2019-present University of Pittsburgh

Graduate Student Researcher

Advisors: Beatriz Luna & Cecile Ladouceur

2017-2019 **Stanford University**

MRI Research Coordinator

Advisor: Ian Gotlib

2016 **Georgetown University**

Undergraduate Research Assistant

Advisor: Adam Green

2015-2016 Mandell Center for Multiple Sclerosis

Part-time Research Assistant Advisor: Elizabeth Triche

AWARDS

| 2024 | Wisconsin | Symposium o | n Emotion [*] | Travel Award |
|------|-----------|-------------|------------------------|--------------|
| | | | | |

Award: \$300

2023 Pitt Psychiatry Research Day Poster Award

2023 CNBC Travel Award

Award: \$500

2022-2023 Behavioral Brain (B2) Research Training Grant (T32GM142630)

Award: \$26,352 (one year of stipend support)

2021-2022 Behavioral Brain (B2) Research Training Grant (T32GM081760)

Award: \$25,826 (one year of stipend support)

2019 AAAS/Science Program for Excellence in Science

2017 Bates College Honors Program

2017 Bates College Dean's List

PUBLICATIONS (15 total: 4 first, 11 co-author)

- 1. Tse, N.Y., Ratheesh, A., Tian, Y.E., Connolly, C.G., Davey, C.G., Ganesan, S., Gotlib, I.H., Harrison, B.J., Han, L.K.M., Ho, T.C., Jamieson, A.J., Kirshenbaum, J.S., Liu, Y., Ma, X., **Ojha, A.**, Qiu, J., Sacchet, M.D., Schmaal, L., Simmons, A.N., Suckling, J., Wei, D., Yang. T.T., Tang, X., Cash, R.F.H., Zalesky, A. (invited resubmission). "A mega-analysis of functional connectivity and network abnormalities in youth depression." *Nature Mental Health*.
- 2. **Ojha, A.**, Jones, N.P., Henry, T., Versace, A., Lindstrom, R., Gnagy, E.M., Joseph, H.M., Molina, B.S.G.*, Ladouceur, C.D.* (2024). "Altered lateral prefrontal cortex functioning during emotional interference resistance is associated with affect lability in adults with persisting symptoms of ADHD from childhood." *Biological Psychiatry: Cognitive Neuroscience and Neuroimaging*.
- 3. Ravindranath, O., Perica, M.I., Parr, A.C., **Ojha, A.**, McKeon, S.D., Montano, G., Ullendorf, N., Luna, B., Edmiston, E.K. (2024). "Adolescent neurocognitive development and decision-making abilities regarding gender-affirming care." *Developmental Cognitive Neuroscience*, 101351.
- Belov, V., Erwin-Grabner, T., Aghajani, M., Aleman, A., Amod, A.R., Basgoze, Z., Benedetti, F., Besteher, B., Bülow, R., Ching, C.R.K., Connolly, C.G., Cullen, K., Davey, C.G., Dima, D., Dols, A., Evans, J.W., Fu, C.H.Y., Saffet Gonul, A., Gotlib, I.H., Grabe, H.J., Groenewold, N., Hamilton, J.P., Harrison, B.J., Ho, T.C., Mwangi, B., Jaworska, N., Jahanshad, N., Klimes-Dougan, B., Koopowitz, S., Lancaster, T., Li, M., Linden, D.E.J., MacMaster, F.P., Mehler, D.M.A., Melloni, E., Mueller, B.A., Ojha, A., Oudega, M.L., Pozzi, E., Reneman, L., Sacchet, M.D., Sämann, P.G., Schrantee, A., Sim, K., Soares, J.C., Stein, D.J., Thomopoulos, S.I., Uyar-Demir, A., van der Wee, N.J.A., van der Werff, S.J.A., Völzke, H., Whittle, S., Wittfeld, S., Wright, M.J., Wu, M., Yang, T.T., Zarate, C., Veltman, D.J., Schmaal, L., Thompson, P.M., Goya-Maldonado, R., & the ENIGMA Major Depressive Disorder working group (2024). "Multi-site benchmark classification of major depressive disorder using machine learning on cortical and subcortical measures." Scientific Reports. 14(1), 1084.
- 5. Cabral, L., Calabro, F., Foran, W., Parr, A., **Ojha, A.**, Rasmussen J., Ceschin, R., Panigrahy, A., Luna, B. (2023). "Multivariate and regional age-related change in basal ganglia iron in neonates." *Cerebral Cortex*, *34*(1), bhad456.

- 6. Ladouceur, C.D., Henry, T., **Ojha, A.**, Shirtcliff, E.A., Silk, J.S. (2023). "Fronto-amygdala resting state functional connectivity is associated with anxiety symptoms among adolescent girls more advanced in pubertal maturation." *Developmental Cognitive Neuroscience*, *60*, 101236.
- 7. **Ojha, A.**, Parr, A., Foran, W., Calabro, F., Luna, B. (2022). "Puberty contributes to adolescent development of fronto-striatal functional connectivity supporting inhibitory control." *Developmental Cognitive Neuroscience*, *58*, 101183.
- 8. **Ojha, A.**, Teresi, G.I., Slavich, G.M., Gotlib, I.H., Ho, T.C. (2022). "Social threat, fronto-cingulate-limbic morphometry, and symptom course in depressed adolescents: a longitudinal investigation." *Psychological Medicine*, 1-15.
- 9. Richie-Halford, A., Cieslak, M., Ai., L., Caffarra, S., Covitz, S., Franco, A.R., Karipidis, I.I., Kruper, J., Milham, M., Averlar-Pereira, B., Roy, E., Sydnor, V.J., Yeatman, J.D., **The Fibr Community Science Consortium**, Satterthwaite, T.D., Rokem, A. (2022). "An analysis-ready and quality controlled resource for pediatric brain white-matter research." *Scientific Data*, *9*, 616.
- 10. van Velzen, L.S., Dauvermann, M.R., Colic, L., Villa., L.M., Savage, H.S., Toenders, Y.J., Zhu, A.H., Bright, J.K., Campos, A.I., Salminen, L., Ambrogi, S., Ayesa-Arriola, R., Banaj, N., Başgöze, Z., Bauer, J., Blair, K., Blair, R.J., Brosch, K., Cheng, Y., Colle, R., Connolly, C.G., Corruble, E., Couvy-Duchesne, B., Crespo-Facorro, B., Cullen, K.R., Dannlowski, U., Davey, C.G., Dohm, K., Fullerton, J.M., Gonul, A.S., Gotlib, I.H., Grotegerd, D., Hahn, T., Harrison, B.J., He, M., Hickie, I.B., Ho, T.C., Iorfino, F., Jansen, A., Jollant, F., Kircher, T., Klimes-Dougan, B., Klug, M., Leehr, E.J., Lippard, E.T.C., McLaughlin, K.A., Meinert, S., Miller, A.B., Mitchell, P.B., Mwangi, B., Nenadić, I., Ojha, A., Overs, B.J., Pfarr, J., Piras, F., Ringwald, K.G., Roberts, G., Romer, G., Sanches, M., Sheridan, M.A., Soares, J.C., Spalletta, G., Stein, F., Teresi, G.I., Tordesillas-Gutiérrez, D., Uyar-Demir, A., van der Wee, N.J.A., van der Werff, S.J., Vermeiren R.R.J.M., Winter, A., Wu, M., Yang, T.T., Thompson, P.M., Renteria, M.E., Jahanshad, N., Blumberg, H.P., van Harmelen, A., Schmaal, L. (2022). "Structural brain alterations associated with suicidal thoughts and behaviors in young people: Results across 21 international studies from the ENIGMA suicidal thoughts and behaviors consortium." *Molecular Psychiatry*, 1-11.
- 11. **Ojha, A.**, Miller, J.G., King, L.S., Davis, E.G., Humphreys, K.L., Gotlib, I.H. (2022). "Dispositional and parental empathy are differentially associated with mothers' brain activation and toddlers' social behavior." *Developmental Psychobiology*, 64, e22313.
- 12. Ho, T.C., Teresi, G.I., Segarra, J.R., **Ojha, A.**, Walker, J.C., Gu, M., Spielman, D.M., Sacchet, M.D., Jiang, F., Rosenberg-Hasson, Y., Maecker, H.T., Singh, M.K., Gotlib, I.H. (2021). "Higher levels of pro-inflammatory cytokines are

- associated with higher levels of glutamate in the anterior cingulate cortex in depressed adolescents." *Frontiers in Psychiatry*, 12.
- 13. Ho, T.C., Teresi, G.I., **Ojha, A.**, Walker, J.C., Kirshenbaum, J.S., Singh, M.K., Gotlib, I.H. (2020). "Smaller caudate gray matter volume is associated with greater implicit suicidal ideation in depressed adolescents." *Journal of Affective Disorders*, 278, 650-657.
- 14. Walker, J.C., Teresi, G.I., Weisenburger, R.L., Segarra, J.R., **Ojha, A.**, Kulla, A., Sisk, L., Gu, M., Spielman, D.M., Rosenberg-Hasson, Y., Maecker, H.T., Singh, M.K., Gotlib, I.H., Ho, T.C. (2020). "Study protocol for Teen Inflammation Glutamate Emotion Research (TIGER)." *Frontiers in Human Neuroscience*, *14*, 414.
- 15. Camacho, M.C., King, L.S., **Ojha, A.**, Garcia, C.M., Sisk, L.M., Cichocki, A.C., Humphreys, K.L., Gotlib, I.H. (2019). "Cerebral blood flow in 5- to 8-month-olds: Regional tissue maturity is associated with infant affect." *Developmental Science*, 23(5), e12928.

CONFERENCE PRESENTATIONS (27 total: 19 first, 8 co-author)

- Ojha, A., Sydnor, V.J., Foran, W., Sorrells, S.F., Calabro, F.J., Luna, B. (accepted). Nuclei-Specific Functional Maturation of Fronto-Amygdala Circuitry Through Adolescence: Longitudinal Insights from 7 Tesla fMRI. Society for Neuroscience.
- 2. **Ojha, A.**, Foran, W., Calabro, F.J., Sydnor, V.J., Phang, N., Sista, A., Sorrells, S.F., Luna, B. (accepted). Nuclei-specific functional maturation of fronto-amygdala circuitry through adolescence: longitudinal insights from 7 Tesla fMRI. Flux: Society of Developmental Cognitive Neuroscience.
- 3. **Ojha, A.**, Sydnor, V.J., Foran, W., Phang, N., Sista, A., Sorrells, S.F., Calabro, F.J., Luna, B. (accepted). Nuclei-Specific Functional Maturation of Fronto-Amygdala Circuitry Through Adolescence: Longitudinal Insights from 7 Tesla fMRI. University of Pittsburgh Psychiatry Research Day 2024.
- 4. **Ojha, A.**, Jones, N.P., Shirtcliff, E.A., Ladouceur, C.D. (2024, May). Pubertal Maturation and Hormones Influence Mesocorticolimbic Development in Youth: Implications for Sensitivity to Rewards and Punishments. Society of Biological Psychiatry.
- 5. Droeger A., Coury, S., **Ojha, A.**, Yuan, J.P., Gotlib, I.H., Ho, T.C. (2024, May). Higher Levels of Inflammation are Associated with Accelerated Brain Age in Adolescents. Society of Biological Psychiatry.

- 6. **Ojha, A.**, Henry, T., Diler, R., Ladouceur, C.D. (2024, April). Anhedonia is Associated with Altered Striatal Neurophysiology and Function in Adolescents Varying in Levels of Depression. Wisconsin Symposium on Emotion.
- 7. **Ojha, A.**, Jones, N.P., Shirtcliff, E.A., Ladouceur, C.D. (2023, December). Pubertal Maturation and Hormones Influence Mesocorticolimbic Development in Youth: Implications for Sensitivity to Rewards and Punishments. American College of Neuropsychopharmacology.
- 8. **Ojha, A.**, Jones, N.P., Shirtcliff, E.A., Ladouceur, C.D. (2023, November). Pubertal Maturation and Hormones Influence Mesocorticolimbic Development in Youth: Implications for Sensitivity to Rewards and Punishments. Developmental Affective Neuroscience Symposium.
- 9. **Ojha, A.**, Perica, M.I., Phang, N., Foran, W., Calabro, F., Luna, B. (2023, September). Characterizing Fronto-Amygdala Functional Connectivity Across Adolescent Development: A High-Field Longitudinal Investigation. Flux: Society of Developmental Cognitive Neuroscience.
- 10. Ojha, A., Perica, M.I., Foran, W., Calabro, F.J., Luna, B. (2023, June). Amygdala Nuclei Resting-State Connectivity with Cortex is Associated with Cingulate Glutamate as a Function of Age in Adolescents: A High-Field Longitudinal Investigation. University of Pittsburgh Psychiatry Research Day 2023.
- 11. **Ojha, A.**, Jones, N.P., Henry, T., Versace, A., Lindstrom, R., Gnagy, E.M., Pelham Jr., W.E., Molina, B.S.G., Ladouceur, C.D. (2023, April). Altered Lateral Prefrontal Cortex Functioning During Emotional Interference Resistance is Associated with Affect Lability in Adults with Persisting Symptoms of ADHD from Childhood. Society of Biological Psychiatry.
- 12. Coury, S., **Ojha, A.**, Teresi, G.I., Gotlib, I.H., Ho, T.C. (2023, April). Lower Striatal Morphometry and Higher Levels of Inflammation Among Depressed Adolescents with Anhedonia. Society of Biological Psychiatry.
- 13. **Ojha, A.**, Calabro, F., Foran, W., Perica, M., Luna, B. (2022, September). Characterizing Fronto-Amygdala Circuitry Development During Adolescence: Implications for Internalizing Symptoms. Flux: Society of Developmental Cognitive Neuroscience.
- 14. Ho, T.C., **Ojha, A.**, Teresi, G.I., Slavich, G.M., Gotlib, I.H. (2022, September). Social Threat, Fronto-Cingulate-Limbic Morphometry, and Symptom Course in Depressed Adolescents: A Longitudinal Investigation. Flux: Society of Developmental Cognitive Neuroscience.
- 15. **Ojha, A.**, Parr, A.C., Foran, W., Calabro, F., Luna, B. (2022, June). Puberty-Related Maturation of Adolescent Fronto-Striatal Resting-State Functional

- Connectivity is Implicated in the Development of Inhibitory Control. University of Pittsburgh Psychiatry Research Day 2022.
- 16. Ladouceur, C.D., Brosseau, P., Henry, T., **Ojha, A.**, Diler, R. (2021, December). Alterations in the functioning of striatal subregions are associated with anhedonia as a function of striatal dopamine concentrations in adolescents with depression. American College of Neuropsychopharmacology Annual Meeting.
- 17. **Ojha, A.**, Parr, A.C., Foran, W., Calabro, F., Ladouceur, C.D., Luna, B. (2021, October). Characterizing puberty-related changes in fronto-striatal resting-state functional connectivity in adolescence. University of Pittsburgh Psychiatry Research (Half) Day 2021.
- 18. Brosseau, P., Henry, T.R., **Ojha, A.**, Diler, R., Ladouceur, C.D. (2021, October). Alterations in the Functioning of Striatal Subregions are Associated with Anhedonia as a Function of Striatal Dopamine Concentrations in Adolescents with Depression. University of Pittsburgh Research (Half) Day 2021.
- 19. Ojha, A., Parr, A.C., Foran, W., Calabro, F., Ladouceur, C.D., Luna, B. (2021, September). Characterizing puberty-related changes in fronto-striatal resting-state functional connectivity in adolescence. Flux Society of Developmental Cognitive Neuroscience.
- 20. **Ojha, A.**, Miller, J.G., King, L.S., Davis, E.G., Humphreys, K.L., Gotlib, I.H. (2021, April). Dispositional and Parental Empathy are Differentially Associated with Mothers' Brain Activation and Toddlers' Social Behavior. Society for Research in Child Development.
- 21. Segarra, J.R., **Ojha, A.**, Rosenberg-Hasson, Y., Maecker, H.T., Gotlib, I.H., Ho, T.C. (2020, May). Elevated Concentrations of Inflammatory Cytokines Are Associated with Cortical Thickness of the Rostral Anterior Cingulate Cortex in Adolescents. Society of Biological Psychiatry.
- 22. Teresi, G., **Ojha, A.**, Walker, J.C., Singh, M.K., Gotlib, I.H., Ho, T.C. (2020, May). Dorsal Striatal Gray Matter Volume is Associated with Implicit Suicidal Ideation in Depressed Adolescents. Society of Biological Psychiatry.
- 23. Ojha, A., Rosenberg-Hasson, Y., Maecker, H.T., Gotlib, I.H., Ho, T.C. (2019, September). Higher Concentrations of Interleukin-6 are Associated with Smaller Nucleus Accumbens Gray Matter Volume and More Severe Symptoms in Depressed Adolescents. Center for Neuroscience at the University of Pittsburgh Annual Retreat.
- 24. **Ojha, A.**, Walker, J.C., Ho, T.C., Gotlib, I.H. (2019, September). Experiences of Abuse and not Neglect are Associated with Decreased Amygdala Gray Matter

Volumes in Depressed Adolescents. Flux Society of Developmental Cognitive Neuroscience.

- 25. **Ojha, A.**, Rosenberg-Hasson, Y., Maecker, H.T., Gotlib, I.H., Ho, T.C. (2019, May). Higher Concentrations of Interleukin-6 are Associated with Smaller Nucleus Accumbens Gray Matter Volume and More Severe Symptoms in Depressed Adolescents. Society of Biological Psychiatry.
- 26. **Ojha, A.**, Camacho, C.M., King, L.S., Humphreys, K.L., Gotlib, I.H. (2018, May). Infant Regional Cerebral Blood Flow is Associated with Maternal Sensitivity During Social Stress. Social and Affective Neuroscience Society.
- 27. Santos, S., **Ojha, A.**, Tuttle, L., Olson, K.M., Ruiz, J.A., Lo, A.C., Triche, E.W. (2015, September). Plan for the Development and Validation of Patient Centered Electronic Symptom Diary for Persons with MS. Saint Francis Hospital and Medical Center Annual Research Day 2015.

REVIEWER

JOURNAL REVIEW

Ad-hoc Reviewer: Psychological Medicine, Current Research in Neurobiology, Children, Biological Psychiatry: Cognitive Neuroscience and Neuroimaging; Journal of Mental Health and Clinical Psychology, Developmental Cognitive Neuroscience

AWARDS/GRANTS REVIEW

Reviewer: 2024 BGSA Travel Award Committee, 2024 Flux Travel Award, 2022 APS Student Grant Competition, 2021 APS Student Grant Competition, 2020 APS Student Research Award

PROFESSIONAL MEMBERSHIPS

Society for Research in Child Development, Flux Society for Developmental Cognitive Neuroscience, Social and Affective Neuroscience Society, Society of Biological Psychiatry, American Association for the Advancement of Science (AAAS)*, Association for Psychological Science (APS)*

RESEARCH SKILLS AND QUALIFICATIONS

Programming & Software General: Shell scripting, R, Matlab

Neuroimaging: AFNI, FreeSurfer

^{*}awarded full membership

Neuroimaging Techniques SPGR/MPRAGE, DWI, qT1, BOLD (task/rest) fMRI,

ASL, MRS (clinical + nonclinical, infants to adults)

MENTORSHIP

2017-2018

| 2023- | Arshia Sista, B.S. (expected 2027) Neuroscience, University of Pittsburgh |
|-----------|--|
| 2022- | Natalie Phang, B.S. (expected 2024) Neuroscience, University of Pittsburgh |
| 2018-2019 | Julia Gillette, B.A. Psychology (2020), Stanford University Current: M.D. Candidate at Brown University |
| 2017-2019 | Artenisa Kulla, B.S. Human Biology (2020), Stanford University Current: M.D. Candidate at UFCOM |
| 2017-2019 | Victoria Franco, B.A. Psychology (2020), Stanford University |
| 2018 | Serena Wu, B.A., M.Sc. Neuroscience and Behavior (2020), Columbia University Neuroscience (2021), McGill University |
| 2018 | Symona Stans, B.A. Psychology (2020), Cornell University Current: UCLA Public Affairs M.A. Student |
| 2017-2018 | Tammie Hsu, B.A. Post-Baccalaureate Research Assistant, Stanford University Current: Web Producer at Gap Inc. |
| 2017-2018 | Johanna Walker, B.A. Post-Baccalaureate Research Assistant, Stanford University Current: Research Coordinator at Stanford University |
| 2017-2018 | Melanie Ngan, Post-Baccalaureate Research Assistant, Stanford University |

Neel Rao, B.S., M.S.

Current: Teach for America

Computer Science (2021), Stanford University Symbolic Systems (2022), Stanford University

TEACHING

| 2020 | Graduate Teaching Assistant , Brain and Behavior, University of Pittsburgh |
|-----------|---|
| 2020 | Guest Lecturer , Brain and Behavior ("Stress, Emotions, and Neurodevelopment"), University of Pittsburgh |
| 2017-2019 | Verbal Tutor, Compass Prep Education |
| 2017 | Redesigned Course , Intro to Neuroscience (faculty advisor: Jason Castro), Bates College |
| 2017 | Writing & Teaching Assistant, Biomedical Ethics, Bates College |
| 2015 | Tutor, Intro to Neuroscience, Bates College |

MISCELLANEOUS

| 2016-2017 | Editor-in-Chief, The Bates Student |
|-----------|---|
| 2015-2016 | Managing Forum Editor, The Bates Student |
| 2014-2015 | Assistant Forum Editor, The Bates Student |

REFERENCES

Beatriz Luna, Ph.D.

Staunton Professor of Psychiatry and Pediatrics Professor of Psychology University of Pittsburgh lunab@upmc.edu

Cecile Ladouceur, Ph.D.

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lan H. Gotlib, Ph.D.

Majorie Mhoon Fair Professor Department of Psychology Stanford University ian.gotlib@stanford.edu

Tiffany C. Ho, Ph.D.

Assistant Professor
Department of Psychology
University of California, Los Angeles
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