Amar Ojha

Center for Neuroscience University of Pittsburgh amo80@pitt.edu

EDUCATION & TRAINING

2019- Center for Neuroscience

University of Pittsburgh

Ph.D. Student

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

| 2023 | Pitt Psychiatry Research Day Poster Award |
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| 0000 | ONDOT |

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 (10 total: 3 first, 7 co-author)

- 1. 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.
- 2. **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.
- 3. **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.
- 4. 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.
- 5. 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.
- 6. **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.
- 7. 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.
- 8. 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.
- 9. 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.
- 10. 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.

MANUSCRIPTS UNDER REVIEW

- 1. **Ojha, A.**, Jones, N.P., Henry, T., Versace, A., Lindstrom, R., Gnagy, E.M., Pelham Jr., W.E., Joseph, H.M., Molina, B.S.G.*, Ladouceur, C.D.* (invited resubmission). "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*.
- 2. Cabral, L., Calabro, F., Foran, W., Parr, A., **Ojha, A.**, Rasmussen J., Ceschin, R., Panigrahy, A., Luna, B. (submitted resubmission). "Multivariate and regional agerelated change in basal ganglia iron in neonates." *Cerebral Cortex.*
- 3. Ravindranath, O., Perica, M.I., Parr, A.C., **Ojha, A.**, McKeon, S.D., Montano, G., Ullendorf, N., Luna, B., Edmiston, E.K. (submitted resubmission). "Adolescent neurocognitive development and decision-making abilities regarding genderaffirming care." *Developmental Cognitive Neuroscience*.
- 4. Belov, V., Erwin-Grabner, T., Gonul, A.S., Amod, A.R., **Ojha, A.**, Aleman, A., Dols, A., Schrantee, A., Uyar-Demir, A., Harrison, B.J., Mwangi, B., Besteher, B., Klimes-Dougan, B., Phenninx, B.W.J.H., Mueller, B.A., Zarate, C., Davey, C.G.,

Ching, C.R.K., Connolly, C.G., Fu, C.H.Y., Stein, D.J., Dima, D., Linden, D.E.J., Mehler, D.M.A., Clotet, E.P., Pozzi, E., Melloni, E., Benedetti, F., MacMaster, F.P., Grabe, H.J., Völzke, H., Gotlib, I.H., Soares, J.C., Evans, J.W., Sim, K., Wittfield, K., Cullen, K., Reneman L., Oudega, M.L., Wright, M.J., Portella, M.J., Sacchet, M.D., Li, M., Aghajani, M., Wu, M., Jaworska, N., Jahanshad, N., van der Wee, N.J.A., Groenewold, N., Hamilton, P.J., Sämann, P.G., Bülow, R., Poletti, S., Whittle, S., Thomopoulos, S.I., van der Werff, S.J.A., Koopowitz, S., Lancaster, T., Ho, T.C., Yang, T.T., Basgoze, Z., Veltman, D.J., Schmaal, L., Thompson, P.M., Goya-Maldonado, R. (invited resubmission). "Multi-site benchmark classification of major depressive disorder using machine learning on cortical and subcortical measures." *Scientific Reports*.

CONFERENCE PRESENTATIONS (21 total: 13 first, 8 co-author)

- 1. **Ojha, A.**, Jones, N.P., Shirtcliff, E.A., Ladouceur, C.D. (accepted). Pubertal Maturation and Hormones Influence Mesocorticolimbic Development in Youth: Implications for Sensitivity to Rewards and Punishments. American College of Neuropsychopharmacology.
- 2. **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.
- 3. Belov, V., Erwin-Grabner, T., Zeng, L., Aleman, A., Amod, A.R., Basgoze, Z., Bendetti, F., Besteher, B., Brosch, K., Bülow, R., Colle, R., Connolly, C.G., Corruble, E., Couvy-Duchesne, B., Cullen, K., Dannlowski, U., Davey, C.G., Dols, A., Ernsting, J., Evans, J.W., Fisch, L., Fuentes-Claramonte, P., Gonul, A.S., Gotlib, I.H., Grabe, H.J., Groenewold, N.A., Grotegerd, D., Hahn, T., Hamilton, J.P., Han, L.K.M., Harrison, B.J., Ho, T.C., Jahanshad, N., Jamieson, A.J., Karuk, A., Kircher, T., Klimes-Dougan, B., Koopowitz, S., Lancaster, T., Leenings, R., Li, M., Linden, D.E.J., MacMaster, F.P., Mehler, D.M.A., Meinert, S., Melloni, E., Mueller, B.A., Mwangi, B., Nenadić, I., Ojha, A., Okamoto, Y., Oudega, M.L., Penninx, B.W.J.H., Poletti, S., Pomarol-Clotet, E., Portella, M.J., Pozzi, E., Radua, J., Rodríguez-Cano, E., Sacchet, M.D., Salvador, R., Schrantee, A., Sim, K., Soares, J.C., Solanes, A., Stein, D.J., Stein, F., Stolicyn, A., Thomopoulos, S.I., Toenders, Y.J., Uyar-Demir, A., Vieta, E., Vives-Gilabert, Y., Völzke, H., Walter, M., Whalley, H.C., Whittle, S., Winter, N., Wittfeld, K., Wright, M.J., Wu, M., Yang, T.T., Zarate, C., Veltman, D.J., Ching, C.R.K., Schmaal, L., Thompson, P.M., Goya-Maldonado, R., ENIGMA Major Depressive Disorder Working Group. (submitted). DenseNet and Support Vector Machine Classification of Major Depressive Disorder with Vertex-Wise Cortical Features. Society for Neuroscience.

- 4. **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 2022.
- 5. **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.
- 6. 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.
- 7. **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.
- 8. 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.
- 9. **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.
- 10. 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.
- 11. **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.
- 12. 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.

- 13. **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.
- 14. **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.
- 15. 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.
- 16. 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.
- 17. **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.
- 18. 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.
- 19. **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.
- 20. **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.
- 21. 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

AWARDS/GRANTS REVIEW

Reviewer: 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 <u>General</u>: Shell scripting, R, Matlab

Neuroimaging: AFNI, FreeSurfer

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

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

MENTORSHIP

2022- Natalie Phang, B.S. (expected 2025)

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

^{*}awarded full membership

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 2017-2018 Neel Rao, B.S., M.S. Computer Science (2021), Stanford University Symbolic Systems (2022), Stanford University Current: Teach for America

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.

Associate Professor Departments of Psychiatry and Psychology University of Pittsburgh ladouceurcd@upmc.edu

lan H. Gotlib, Ph.D.

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

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